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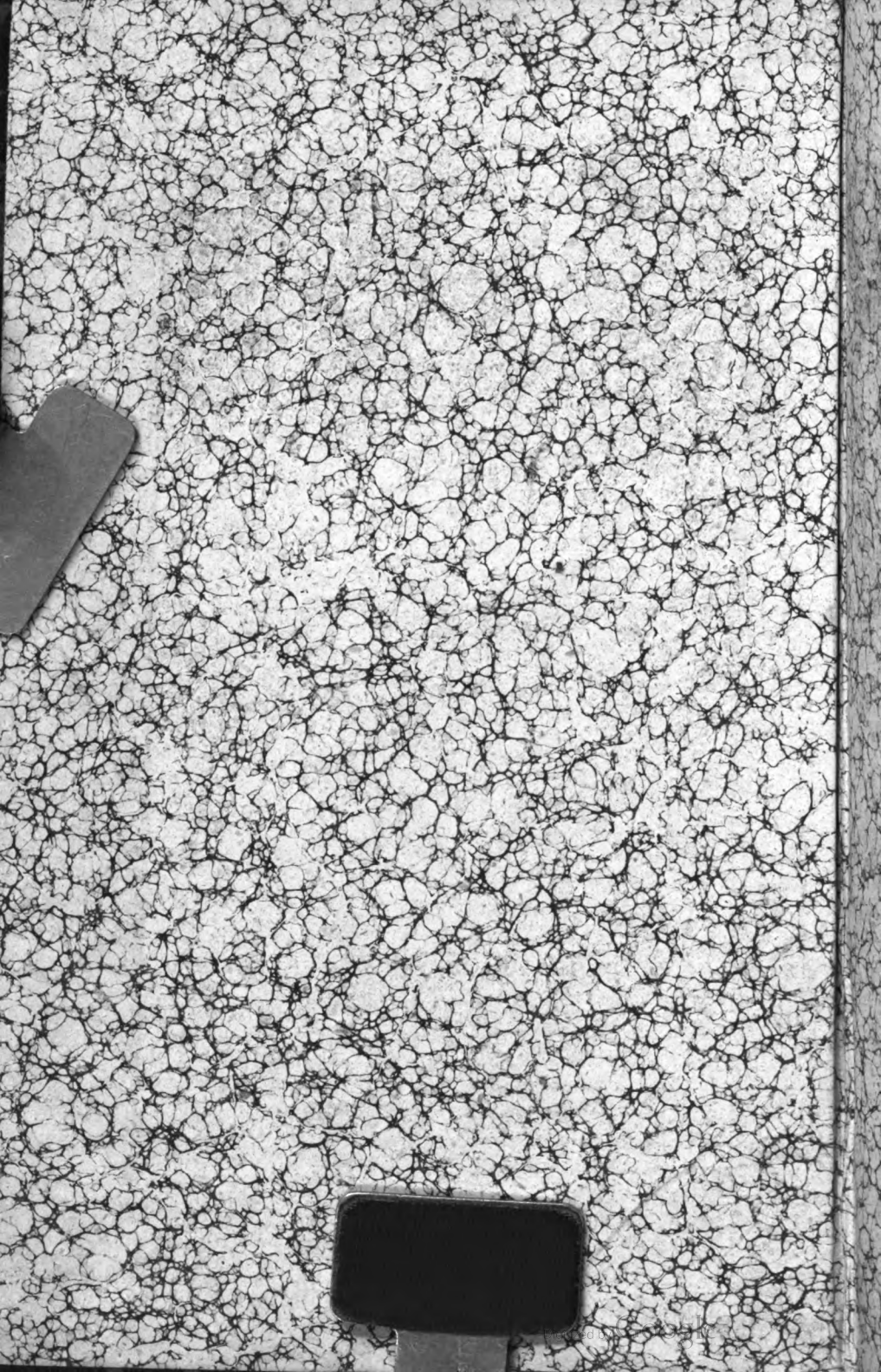
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**THE**  
**NAUTICAL MAGAZINE.**





THE  
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AND

**Naval Chronicle,**

FOR 1840.

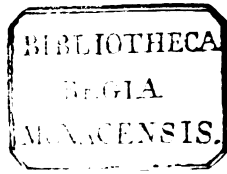
**A JOURNAL OF PAPERS**

ON SUBJECTS CONNECTED WITH

**MARITIME AFFAIRS.**



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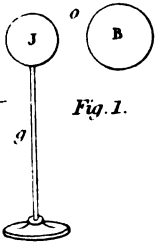


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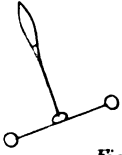
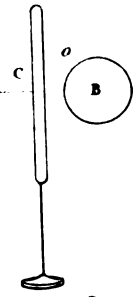


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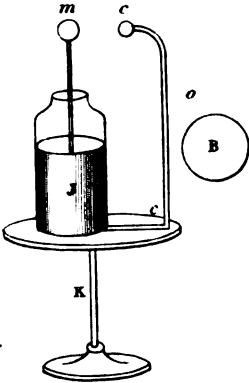


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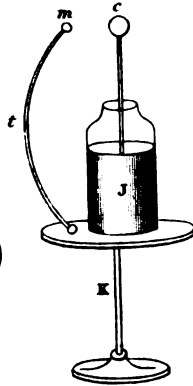


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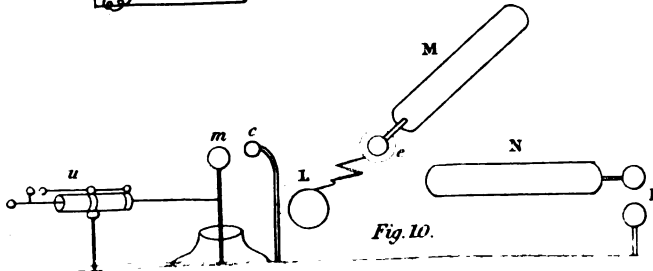
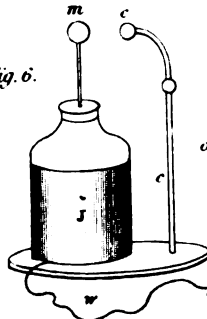
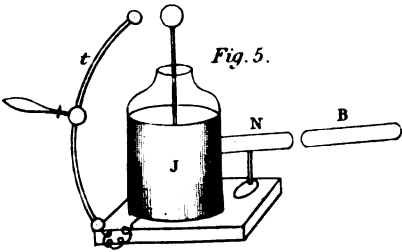
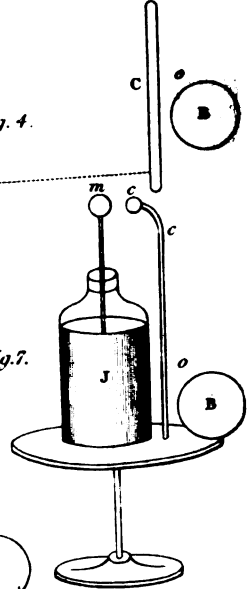
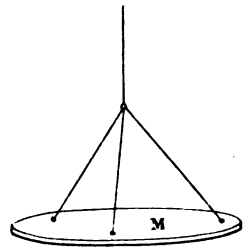


Fig. 10.



THE  
NAUTICAL MAGAZINE.

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ORIGINAL PAPERS.

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JANUARY 1840.

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DIRECTIONS FOR PORT ESSINGTON,

*Northern Coast of Australia;—By Mr. J. Jackson, R.N., Master of H.M.S. Alligator,—Captain Sir Gordon Bremer, R.N., C.B*

MINTO HEAD, the northern extreme on the starboard hand going in, is in lat.  $11^{\circ} 21' 45''$  S., long.  $132^{\circ} 8' 0''$  E. The variation of the compass, is  $1^{\circ} 20'$  E. Time of high-water at full and change 3h. 30m. P.M.; the flood runs to the southward, the ebb to the northward: the rise and fall is ten feet at spring tides; neaps are very irregular.

Ships coming from Torres Strait to Port Essington, after passing about ten miles to the northward of Cape Wessel, should steer a course that would carry them about the same distance north of New Year's Island, which is in lat.  $10^{\circ} 55'$  S., and long.  $133^{\circ} 1'$  E.; from thence a course, that would take them at least twelve miles to the northward of Cape Croker, for there is a dangerous shoal, not laid down in Capt. King's charts, with less than ten feet water on it, about seven miles to the northward of that cape, on which two ships have lately struck. There is a channel between this shoal and the cape, but it cannot be recommended to strangers as a safe passage, for its breadth and soundings are not yet known.

Having brought Cape Croker to bear south, distant at least twelve miles; a direct course should be steered for Point Smith, which is the east point of the entrance to Port Essington. This point is low and sandy: it should be rounded at the distance of one mile and a half in nine fathoms, to avoid a reef extending in a W.N.W. direction from it, but which generally shews itself. By borrowing on Point Smith, as

above directed, and avoiding the mid-channel, ships will keep clear of a very dangerous shoal, unknown, but now named "Orontes reef \*," from the ship Orontes, of London, having struck on it on the 18th of December, 1838. This ugly reef lies nearly in mid-channel, and has only five feet on the middle of it at low water springs. The following compass bearings are taken from it:---

Vashon Head, S.W.b.S. 5·9 miles; Point Smith, S.E.b.S. about six miles; and Turtle Point, S.S.E.

After rounding Point Smith in nine fathoms, steer about S.b.E.  $\frac{1}{2}$  E. thirteen miles, and you will be abreast of Point Record, which is low and sandy, but steep to. In that track will be found 9, 8, 7, 6, and 5 fathoms at low water spring tides; muddy bottom.

Working in after passing Point Smith, as above directed, ships may stand in, on either side, to about three-quarters of a mile off shore; remembering always that Turtle Point and Oyster Head on the west side, and Rocky Point, Table Head, and Observation Cliff on the east side, are all foul. Off the latter in a N.W. direction lies a rock, which dries at half-tide, and is three quarters of a mile off shore. This cliff may be known by its being the northern extremity of the southernmost red cliff outside Point Record. Off Table Head lies the Tamar Rock, but it is quite out of the way working in. When off Point Record, the water will deepen to ten or twelve fathoms at less than a cable's length from the Point. Great care should be taken in passing between Point Record and the opposite shore, called Spear Point, for the distance across is only one mile, and a very dangerous bank with rocks at its S.E. extremity, that dry at low water, stretches nearly half-way across from Spear Point. To avoid this shoal all ships should pass about a cable's length off Point Record, steering about S.b.E. until half a mile to the southward of the Point. A S.S.W. course from thence, allowing for tide, will carry them to the anchorage of Victoria. In that track will be found 7, 6, 5, 4 and 3 fathoms at low water spring tides, muddy bottom; the distance being about two miles and a quarter. Working up to the anchorage of Victoria, from Point Record, being well clear of the shoal off Spear Point, stand to the eastward, until Point Record bears north. By not standing farther in, a shoal will be avoided, which runs more than a mile north of Middle Head; standing to the westward tack on the first shoal coast.

The settlement of Victoria is on the Western shore, and may be known by standing on a promontory, which is the highest piece of land on that side of the harbour. The northern part of this promontory is now named Minto Head, and is in lat.  $11^{\circ} 21' 45''$  S., long.  $132^{\circ} 8'$  E.;

\* See account of it in p. 806 of our last December number.

its height from the level of the sea is about seventy-five feet. The southern part is a remarkable red cliff, the one inside Point Record; and it can be seen more than two miles outside that point, and will always be a good leading mark to the anchorage off the settlement. With a leading wind steer directly for it, when inside Point Record.

The best anchorage for ships not drawing more than sixteen feet water, is with Minto Head bearing W.  $\frac{1}{2}$  N., Point Record N.b.E.  $\frac{1}{2}$  E., and the end of the red cliff S.W.  $\frac{1}{2}$  S., in three fathoms low water on a muddy bottom. This anchorage is only half a mile off a very good pier, which has been just built, where all cargoes may be landed with convenience and safety.

Ships of greater draught should anchor about a mile and a half to the N.N.E. of the above berth. It is high water at full and change, at three hours thirty minutes p.m.; the rise and fall, at spring tides, ten or eleven feet, but the neaps are very irregular; the floods run to the southward, the ebbs to the northward. The variation of the compass is  $1^{\circ} 20'$  E.

Excellent water and wood can be obtained in abundance. The soil is of first rate quality, and the climate extremely healthy. This fine port must, ere long, become one of very great importance to all ships from Sydney and Van Diemen's Land, bound to India.

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## WEST INDIA WANDERINGS—BAHAMAS.

(Continued from p. 601 of our last Volume.)

GREAT FISH CAY has clumps of mangrove trees, 35 feet high, growing in a swamp in the centre of the sand-bores which form it. Part appear to have been struck by lightning, as there is a dead strip running through them. Shags, or Cormorants, breed here in great numbers, their nests being a few sticks on the mangrove trees: their wing-feathers are quite equal to crow-quills.

The Northern Cay is joined to this by a dry sand-bore, which has only samphire and bay cedar on it, about eight feet high. Jonas Cays are two dry spots, on an extensive sand ridge, convexing to the northward; only one has grass and bay cedar on it, at six feet elevation, being the southernmost. Jonas Cay is in lat.  $23^{\circ} 34' 30''$  N., long,  $77^{\circ} 47' 40''$  West. Good shooting may be had on it, chiefly of plovers and sand-pipers. Top Cay, at the entrance of Curly Cut, appears to derive its name from some remarkable Palmetto trees, about 60 feet high. This Cut is much frequented by small vessels fishing for bone fish, and they

find it a secure harbour, five or six feet, as many miles up. The shoals are avoided by eye.

The Cays at the N.E. mouth are named Ratmans, terminating in some remarkable mangrove bluffs, very conspicuous from outside. Nothing larger than a punt can get above these bluffs, and off them a sand-spit dries more than a mile. Two meridian altitudes of stars, and one of the sun, gave the lat. of Snap Point,  $23^{\circ} 43' 25''$  N.

The shore from Snap Point to Grassy Creek is rocky, with a few sandy coves near the former. The mouth of this creek is a good boat harbour, and has a well of excellent water. About a cable's length above the small rock off the S.E. point, the creek trends from this to the north, and is said to run through the island. Grassy Creek Cays are a range of four, with several small rocks among them, composed of rock and generally covered with samphire and prickly pear bushes: their average height is from forty to fifty feet. The southern one has a few stunted trees, and one meridian altitude gave the lat.  $23^{\circ} 45' 40''$ . Under these Cays, in twelve or fifteen feet, vessels may find shelter from northerly winds. The tide runs very strongly through between the Cays, and boats can pick their way between most of them: that which is close to the northern rock has tolerable deep water, although somewhat intricate: the shore is sandy between Grassy Creek and Long Bay Cays. The mouths of the creeks appeared blocked up by sand-bores, so that a small vessel would not find shelter in strong northerly winds, on the whole line, a distance of eighteen miles. As we could not enter any of the creeks, we concluded that the small craft lying there must have gone over the bars at spring tides only.

The remarkable promontory, named High Point, is formed of a strip of black bluff rocks, the top covered with trees and shrubs, about sixty feet high, and joins the main land at low water. The bay to the southward is fit for very small boats only, and the flats dry half a mile off. The deserted plantation of Mr. Swairs is remarkable, from its lofty cocoa-nut trees.

The Great Bank here suddenly shoals from ten to three fathoms, and small vessels only can pick a channel inside the reef. Probably, the best direction for strangers is, to keep the main close on-board, and a good look out for rocky heads. The reef is so unconnected between this and the Southern Bight that it does not afford shelter with the prevailing winds.

Mr. Kemp's large white barn is the most conspicuous object on this coast. The negroes on the property are employed raising corn, vegetables, and stock for the Nassau market. The ridges of high land bounding the shore, from Grassy Creek to the Northern Bight, are woody elevations, about 100 feet high. Although the ground is very rocky,

it is used as plantation grounds, and every thing common to the country appears to thrive well on them.

Near the mouth of Deep Creek is a ruin, the white walls, formed of lath and plaster being still visible. There is no doubt of water being in the neighbourhood, but we only saw the well at Mr. Kemp's. It is a few feet from high-water mark, and quite dry at low water. Long Bay Cays are generally low and rocky, with a few stunted trees, averaging about fifteen feet high: secure anchorage may be found inside them between the numerous rocky heads. The latitude of the south rock is  $24^{\circ} 5' 5''$  N. The shore continues sandy to the Southern Bights, the entrance of which is more intricate than either of the others.

The north end of Golding Cay,  $24^{\circ} 13' 40''$ : this Cay is covered with brushwood, of a uniform height of forty feet; abreast it, and half a mile distant, is Hatchell Hill. The ruins of some stone buildings near the top of the hill can still be seen between the trees. As mud shoals are numerous, vessels should anchor in the deep hole, (five fathoms) between them. The lanes of deep water in this bight are very apparent. Lisbon Creek and the coast between the bights is much resorted to by wood-cutters. The range of hills three miles south of Middle Bight is the highest of the whole, being about 120 feet high. The deep water at the entrance of Middle Bight runs up into secure anchorage between Rechley's houses and the west end of Gibson's Cay in  $2\frac{1}{4}$  fathoms. It is rather narrow, so that square-rigged vessels would have to warp out with easterly winds; but there is a greater depth of water there than in any harbour of the Bahamas. Strangers may run in with confidence by following the deep blue water by eye, and referring to the particular plan. Mr. Rechley's people on the plantations around the houses rear corn, vegetables, and stock; and are sometimes employed in cutting wood. Fish are in great abundance on the whole east coast.

Ringwood Cay divides the middle and southern bights. The sea face has rocky points and sandy beaches alternately. The N.E. point of it is in  $24^{\circ} 2'$  N. The mark for the opening into the northern bight is with the small dry rock nearly on with the North Cay. The water is deep to six miles up, when the mud flats off Pine Cay render it intricate. All are plainly seen in moderately fine weather.

The reef lining the shore from Northern Bight to Morgan's Bluff, is more compact, and affords shelter to small vessels inside it, the general depth of water being from six to nine feet; but the numerous rocky heads, as usual, prevent a vessel running at night, except with moonlight.

Northern Bight Creek close to Point St. Salvador extends a considerable distance in the interior, the mud bar at the mouth having four feet on it. About three-fourths of a mile to the north of this, is Cargills-

house, known by a few cocoa-nut trees. The cisterns of fresh water here are rather indifferent in dry weather. The small barren rocks on the edge of the reef are named Bristol Galley. About three-quarters of a mile to the northward is another nearly covered at high-water, and on a prominent elbow with an opening of twelve feet.

Man-of-war Sound is a secure retreat in bad weather, having soft muddy holding ground; five feet may be carried in northward of Gun Rock: the cays forming it are of the same name, and abound with pigeons from June to September. Green Cay is formed of rock, and covered with shrubs and cabbage trees, about twenty feet high. There are several openings in the reef between this and High Cay, and tolerable shelter under either with the prevailing winds. Fresh Creek, however, appears to be the favourite resort for small vessels that cannot enter Man-of-war Sound.

At High Cay anchorage will be seen, the best berth is close under it, and there is also anchorage in sixteen feet, tolerably sheltered from all winds. The Cay is composed of rock, with palmetto and other trees, fifty feet high: it stands on a very prominent elbow of the bank, and is steep to on the outside.

The straggling mangrove Cays inside this, forming Young's Sound, are shoal for a considerable distance, and the Sound itself is a mass of dry sand at low water. To the northward of Somerset Creek is the small plantation of Mr. M——. The house, as most others in this country, may be found by the cocoa-nut trees. All the shore is sandy to Fresh Creek. To the southward of the low range of rocks is the channel, which must be taken by eye. Bring the low rock, named Channel Rock, on the Black Bluff, and run until within two cables of it, when the shoals may be avoided by eye. Fresh Creek is near the south extreme of some dark perpendicular cliffs: two white chimneys, on the north side, will point it out to strangers. There is three fathoms inside, and about nine feet on the flats of the bars. The tide sets rapidly in and out, as much as three and a half and four knots. The first reach trends about S.W. by W., one mile and a half, when it branches off into extensive salt and fresh water lakes, with the name of Greenish Waters.

The opening in the reef, a mile and a half N.W. of the Fresh Creek Cays, is named Haine's Channel, it is broader than either that or Staniard's Rock Cut: like them, it may be taken by eye, and there is deeper water in the cuts than any part inside. Strangers should never attempt them when the sun is low, or in the direction of the channels to be taken.

The shore continues sandy from Calabash Bay to Lunnun Creek. The small rocky spots are generally at the mouths of creeks. Staniard's

Rock is abreast the creek of that name, which is rocky and covered with grass. The channel is about two cables to the north, and is plainly seen.

Blanket Sound has four feet at high water on the bar. Between the houses and east point is a secure retreat in the hurricane months. Seminets, a liberated African, in 1828, got a grant of this spot from the acting governor, Mr. Manning; her great industry has bought her husband's time, built a very comfortable house, and every thing is in a thriving prosperous way. The lat. is  $24^{\circ} 52' 50''$ . The highest of the range off this is named Calabash Cay, about 90 feet high.

About a mile to the northward is Stafford Creek, reported to extend up twenty miles: all have shoal bars at the mouth.

Mastic Point is broad and rounding, having a clump of cocoa-nut trees on it, surrounding a deserted house, three quarters of a mile from the south extreme; they are at least eighty feet high, and certainly the highest on this side of Northern Bight. Small vessels resort to these sounds for taking bone fish, which serve for dried cod in the Bahamas. A meeting-house has been erected on the north side of Conch Sound, and a coloured man officiates on Sundays to the stragglers in the neighbourhood. There are several boat-channels in the reef, between this and Staniard's Rock; the whole, on the outside, has a dark green appearance, and there is not sufficient warning to approach it by the lead.

Nicol's Town is formed on the coarse sandy beach, one mile to the southward of Morgan's Bluff: the reef off it is not sufficiently connected to break the sea with easterly gales: the anchorage is therefore exposed, and it will be advisable to take sailing craft round to Evan's Harbour, or Hog Cay, on any appearance of bad weather. Stock and vegetables will no doubt, be plentiful here in a few years.

Morgan's Bluff is a black perpendicular cliff, thirty feet high, and the hill to the southward seventy feet: this is covered with stunted wood. The anchorage in the cove is unsafe with northerly winds.

Riding Rocks are the southernmost of the range extending from Gun Cay: they are small narrow strips of rocks; one only having any verdure, in lat.  $25^{\circ} 16' 15''$  N., is chiefly covered with mangrove bushes, bay cedar, and prickly pears. The smaller rocks are quite barren; none of the channels between them should be attempted in any vessel of more than eight feet draught, as the bars of sand and coral are numerous, and continually shifting. The bank to the southward and westward is clear, with good anchorage in five or seven fathoms, well sheltered from northerly winds; hence probably the name.

The edge of the bank is little more than a mile from the south of Riding Rock, and continues parallel to the prominent Cays: up to Sandy



Good clear anchorage will be found with easterly winds, in from five to twelve fathoms. With S.E. winds it would be advisable to anchor wherever you can fetch, between the Great Isaac and Orange Cays, as the gulf stream sweeps close to the edge, and would prevent the fastest sailing vessel from beating against it. There are times when a counter or eddy is experienced, but it is of very rare occurrence, and you find captains of vessels that draw less than fourteen feet, endeavouring to cross the bank from Little Stirrup Cays to the Orange Cays. We have seen twenty or thirty in one day.

The chain of small rocks are connected by sunken ones up to Beak's Cay, which is three-quarters of a mile long, and has some loose sand and dead conch-shells thrown up near the top of it, which gives it the appearance of sand hills. It has also a few shrubs about sixteen feet high on it; indeed, most of the larger Cays are the same. Between this and Brown's Cay is the channel of that name, through which there is ten feet at high water, avoiding Sand Bores by eye.

The tides are very regular through the whole flood, which runs about east, and the ebb west. About a mile and a half N.N.W. of this is Sandy Cay, so called from having a mound of sand fifteen feet high covered with rush grass and shrubs. The sea face is rocky. A cask is sunk near the centre, which being cleared of the loose sand produces several hogsheads of excellent water. We thought it quite as good as that on the Cat's Cay: being also much more convenient small vessels may anchor on either side, sheltered from all but westerly winds.

The bay between this and the Cat Rocks has a clean sand with gradual soundings, decreasing towards the dry sand-bores. Here there is sufficient room to stand well in on the bank, taking care not to get within the line of the Cays.

Dollar Harbour on the south side of Little Cat Cay, is sheltered by the S.W. Cat Rocks, and round to the eastward by dry sand-bores. There is a little swell at high water over these banks, but nothing in strong easterly winds to prevent a vessel riding here. It is the only place worthy the name of a harbour in this neighbourhood. Vessels of twelve feet may find shelter by giving the point of Cat Cay a berth of one cable, and avoiding the shifting sand-bores by eye.

Great Cat Cay is the largest, and has the best land of the group. It is now surrounded by a belt of sand thrown up about thirty feet. Inside are some good trees, notwithstanding the quantity cut yearly. Near the S.E. point are several casks sunk, which yield an abundant supply of excellent fresh water for the small wrecking vessels; thirteen of which we found here in March 1836.

Grassy Bay on the west side is much frequented in the prevailing winds, but vessels should be ready to start on their shifting to the west-

ward. The term here is "round-about;" and the wind may be so expected once a week. In the winter months from November to March heavy gales are not uncommon, and are often preceded by dirty weather, and southerly winds.

Gun Cay Light is near the south extreme of this very prominent elbow; I do not know a spot where a light was required more than this: it is of more importance than the whole on the Florida shore together. It ought at all times to be made, (as the bank extends sufficiently for striking it,) by running obliquely on the edge, (say about N.N.E.,) and attending carefully to the lead, to prevent accident, even should the weather be thick, and the light not seen. There is an intricate channel round the south end of this Cay with twelve feet over the bars; all however is a sheet of breakers with westerly winds.

Barnett's Harbour is so badly sheltered with westerly or easterly winds that it is seldom used. The string of rocks between Gun Cay and the Beminis are black and barren, the highest being about eighteen feet high. There is generally a swell in the channel which throws in a cross sea through most of the openings. The Beminis are narrow sandy strips covered with shrubs and stunted trees from thirty to forty feet high. The greatest and best body of land is on the S.E. part, and the highest trees about fifty feet, which growing in swamps render them inaccessible. The bar at the mouth is liable to shift generally: the best entrance is near the small rocky point three-fourths of a mile to the southward of it, conspicuous from having a white sandy beach between them. Here five and six feet may be found. The harbour's mouth closes when bearing N.E., but can be made out from the mast-head when bearing more easterly; much of what land there is, is overrun with salt water ponds, in which are great quantities of flamingo, curlew, and diving widgeon. Wild hogs are also found here. These islands are at present uninhabited, and I think will remain so, from the great annoyance of the musquitos in the summer months. The high sandy beaches on the western shores are celebrated for the quantity of turtle turned in the season. Thirty have been taken in one night. The well is on the beach a quarter of a mile to the southward of the harbour, and about sixty yards from the sea, the water is sometimes brackish after heavy westerly gales.

It is worthy of remark, that the only part of the Bahamas in which I saw the gulf weed growing, was on Andros Island. It was generally found in from three to five feet water. The plants having the small round berries, were perpendicular in the water; and, I think it probable, when they increase in size, the confined air in them wrenches the stalk from the root, and they float bouyantly. They are of a paler transparent yellow than when found at sea.

## ON CERTAIN PHENOMENA OF ELECTRICITY,

By Mr. Snow Harris, in reply to "*A Memoir on Marine Lightning Conductors*,"  
by William Sturgeon, Lecturer on Experimental Philosophy, &c."

HAVING so frequently occupied the pages of the "*Nautical Magazine*," with observations on Lightning Rods, I should not again call the attention of its readers to the subject, were it not in reply to a paper in a recent number of a Periodical work, called "*Annals of Electricity, and Guardian of Experimental Science*."

This production is entitled, "*Experimental and Theoretical Researches in Electricity, &c.—Fourth Memoir*." It professes to treat of Marine Lightning Conductors, and stands so high in the opinion of its author, that he thinks it worthy the especial attention of "the principal scientific bodies in Europe and America, in order that the subject may be fully sifted and clearly explained by the ablest electricians which the world can at this time produce.\*" It is, accordingly, addressed in the first place, to the British Association for the Advancement of Science, and submitted for the further consideration of a number of scientific bodies too numerous here to detail; the names of these are paraded in all due and appropriate form at the head of the paper, under two grand divisions of "British Dominions," and "Foreign," and have certainly an imposing effect.

2.—Notwithstanding the high pretension to excellence which such a loud announcement necessarily implies, and that this memoir is the production of a Lecturer on Experimental Philosophy at the Honourable East India Company's Seminary, at Addiscombe, I have no scruple in affirming, after a patient and candid examination of its contents, that as a scientific paper, it has not the slightest claim to our confidence; it is calculated to convey false views of the nature and effects of electrical discharges, and greatly to mislead the public, upon many important points connected with the use of Lightning Rods.

3.—"Truth and the welfare of our fellow men," is the professed motive "which has led the author to arrange the results of his investigations on this occasion, in a somewhat regular order.†"—His *main* object however, is, to set aside, without the least regard to those principles, my method of protecting shipping from lightning, successfully tried in the British Navy for upwards of twelve years, in order to substitute for it an *untried* system of his own, proposed now for the first time, at a venture, and found inconsistent in its details, with the duties of ships, masts, and yards, even before the account of it was fairly dry from the press ‡.

4.—Such being the real object of this memoir, it is not surprising to find a very large portion of it devoted to an *ex parte* discussion of my system, and to

\* *Annals of Electricity*, p. 191.

† *Ibid*.

‡ "Since my fourth memoir was printed, I have been favoured with the opinions of several naval officers respecting my plan, and having availed myself of their suggestions as to the probability of those branch conductors before the shrouds of each mast being liable to injuries by pressure from the yards, I have dispensed with them altogether."—*Annals of Electricity*, p. 235. This is quite sufficient to show the undigested and crude state of Mr. Sturgeon's ideas.

the placing of my scientific labours in the meanest possible light. No pains have been spared, no trouble thought too great—no means deemed too poor—which under the cover of a deceptive courtesy would be likely to attain the object; even the fears and prejudices of the illiterate and uninformed have not been considered as undesirable allies. Mr. Sturgeon may, however, find himself mistaken in the general intelligence of our seamen and naval officers, if he fancies, that a mere display of verbiage signifying nothing, is likely to be received by them as reasoning on a question of Practical Science, and with the merits of which they are better acquainted than himself.

5.—Being fully convinced of the truth of all I have advanced concerning the application of Lightning Rods, and that the view I entertain of the nature and effect of discharges of lightning, is sound in science, and based upon the strongest evidence which observation and experiment can furnish,—I shall at no time shrink from submitting my opinions to the most rigid scrutiny, and meet in a spirit of free and *fair* discussion any objection brought against them.

6.—The author professes to enter *First* on the experiments Mr. Harris has occasionally exhibited in illustration of his system of conductors: *Secondly*—On an examination of the effects of lightning on shipping: *Thirdly*—On a detail of phenomena similar to those effects: *Fourthly*—On the observed effects of lightning compared with the *probable* effects of Mr. Harris's conductors: *Fifthly*—On a *new* system of conductors.

It is not my intention to offer, at present, any further remark on those parts of the memoir levelled at myself; I shall confine my views in this communication to what the author has advanced under the title "Experimental and Theoretical Researches," and his claims to our confidence as a writer on Experimental Philosophy.

7.—The great theoretical point insisted on in these researches, and upon which the author takes his stand as an experimentalist, is this: he says, "A metallic rod, at the time of transmitting an electrical shock, will always produce lateral explosions, not only on *near*, but on *very distant bodies*. These explosions," he says, "are in the case of a lightning rod, greatly to be feared." If this be true, it is certainly fatal to the use of lightning rods under whatever form applied, let us therefore proceed to examine the experiments and reasoning which has led the author to such a conclusion; and, in order that those who have not given the subject particular attention may at once comprehend the essence of the question, we will take it up in a purely elementary way.

With this view, we have first to observe, that so long since as the years 1728 and 1729, Mr Grey observed the curious phenomena of electrical conduction and insulation.

(a) Thus a metallic ball, J, Fig. 1, supported on a rod of glass, *g*, is said to be insulated; and, if electrified, will cause a spark to take place in the opening, O, when a metallic body, B, is brought near it. If we connect the ball, J, with any distant body, C, by means of a wire, still the spark will occur in the opening, O, between the body, B, and the distant body, C, the electricity being conducted along the wire.

The effect is increased by connecting the body, B, with the ground, and greatly decreased, or destroyed, by connecting J with the ground. The spark may be obtained between B and J, at almost any distance. Mr. Grey obtained it on

electrifying the ball, J, at a distance of 765 feet.\* I am desirous to call very particular attention to these facts, because, as we shall presently see, they are nothing more or less than the essence of Mr. Sturgeon's *new* researches, submitted by him for the consideration of all the learned societies of Europe and America.

Having premised this, we have now to observe, that a glass Jar, J, Fig. 3, coated on its inner and outer surface with sheets of metallic leaf, leaving a portion of the Jar exposed, and projecting from between the two coatings has been termed the Leyden or Electric Jar. We perceive here that the inner coating being everywhere surrounded by glass, is very perfectly insulated, whilst the outer coating in the case of the Jar resting on the ground is uninsulated and free. If the Jar, however, be placed on an insulator, K, Fig. 3, then both the coatings are insulated; and the whole may be taken as an insulated conductor similar to the ball, J, Fig. 1.

(c) When we attempt to charge this Jar by throwing electricity on the inner coating from an electrical machine, through the rod (*m*, Fig. 3.), then for every spark communicated to the knob *m*, a similar spark leaves the outer coating, J, and without this double effect can take place, we fail to charge the jar effectually. That is to say, we cannot place any more electricity on the inner coating, than if we had placed it on a glass rod, as in Fig. 1.

(d) If we insulate the Jar, as represented in Fig. 3, 4, the effect above described will be immediately apparent, and we may obtain the exterior sparks either immediately from the coating, or from any body, CC, connected with it, at any distance, on the principle already mentioned, (*b*, Fig. 2.) so that a spark will always occur in the opening O, between the outer coatings, or other bodies, CC, connected with it; and a metallic body, B, connected with the ground, whenever we attempt to charge the Jar.

The spark which leaves the outer coating is said to be forced off from it, by the influence of the accumulating charge on the interior, acting through the intervening glass; and hence the condition of a charged Jar, is said to be an accumulation of electricity on the one coating, and a corresponding deficiency on the other.

(e) When we restore the balance by allowing the accumulation to distribute itself again equally on both sides by means of a connecting conductor, CC, Fig. 3, then we are said to discharge the Jar, and the path through which the electricity passes in its course is called, a circuit.

(f) We need not, however, discharge the Jar in one dense explosion. If we place it on an insulator, as in Fig. 3, we may discharge it gradually, that is, by constantly drawing off a spark from the overcharged side, and adding one to the undercharged side, until we have nearly exhausted the whole accumulation: we may hence always take a finite spark from one side, so that the neutralizing electrical states of the opposite coatings, are never exactly equal—there will always be upon the whole an excess of free electricity on one of them.

(g) When we discharge the Jar, therefore, in one dense shock (*e*), we do not altogether destroy both the electrical forces, since there will always be one of them in excess. This excess expanding over the charging rod *m*, the outer coating, J, the discharging rod *c*, or any other insulated body, *c c*, connected

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\* Priestly's History of Electricity.

with it, as in Fig. 3, 4, 5, will as in the case of the simple insulated bodies in Fig. 1 and 2, cause a spark to appear in the opening, O, between any of these points, and a metallic body, B, brought near them. The intensity of this spark with the same quantity of electricity will be *greater*, as the *Jar is less in size*, by a well-known law of electrical distribution on extended surfaces.

(h) If we continue to press quantities of electricity upon a small Jar of only a quart capacity, by means of a powerful machine, so as to overcharge it, then, at each explosion, a new quantity of free electricity from the machine itself will be added to the residuary charge, and the final spark be made very vigorous: we may, in fact, as well take a spark from the prime conductor at once.

(i) The residuary spark may be obtained even though the Jar be *not* insulated provided we seize it before the connecting conductors can carry off the residuary charge. Professor Wheatstone having shown, by his unrivalled experiments on the transmission of electricity through metals, that a short portion of time is requisite for this purpose. By placing a metallic ball, B, therefore, Fig. 3 and 4, rather near the discharging rod, the outer coating, or any other body connected with it previously to making the discharge, we seize the residuary electricity at the first instant of its accumulation, and the spark *appears to occur* at the time of the discharge. The effect, however, as may be imagined, is the most perfect when the Jar and appendages are all insulated.

(j) After this residuary spark has left the outer coating the Jar will be found again slightly charged as at first: this secondary charge is sometimes very considerable. The phenomenon of the exterior spark therefore is merely a repetition of the effect observed at the time of charging the Jar, (*d.*)

10.—Now these very elementary results are precisely the same as those described by Mr. Sturgeon, in which he calls the residuary spark a lateral explosion, produced by the passage of the electricity along the discharging rod: he appears to consider it a novel and important fact, and calls upon the "Principle Scientific Bodies in Europe and America, and the ablest Electricians the world can produce" to give them all due consideration, in order that they may be *fully sifted* and explained: he takes great credit for placing the subject before them in a "proper light," and "cannot account for the circumstance of my having overlooked them." As the whole matter, however, resolves itself into one or two simple facts (*a*) (*b*) known to philosophers for more than a century since, "the ablest electricians the world can produce," may perhaps think such an occupation of their time quite unnecessary, and the several "learned societies of Europe and America" consider it would have been quite as well for Mr. Sturgeon's credit, as a lecturer on Natural Philosophy, at the Honorable Company's seminary, if he had not troubled them on the occasion.

11.—The following is the author's version of these experiments:—

Exp.—"If a Leyden Jar, Fig. 3, be discharged through a rod, *c c*, a spark will appear at the opening, O, between the metallic body, B, and the conductor, *c c*. This is, he says "a lateral discharge, produced by the passage of the electricity down the discharging rod."

Exp.—"If, instead of discharging the Jar through the rod, *c c*, Fig. 3, we discharge it by a direct application of the discharging rod, *t*, Fig. 4, still the spark will appear at O, as before."

12.—"The effect," he says, "is much increased by connecting the body, B,

with the ground, and diminished, to a certain extent, (it is extremely diminished) by connecting the outside of the Jar with the ground." Of course; because in the first case, we confine the force of the residuary electricity to a single point, B, in which the electrical capacity, by connection with the ground, has become the greatest possible. In the latter, we divide the force as it were between the mass, B, and the earth; the action on B, therefore, is no longer exclusive, it is consequently diminished; and if, at the same time, we insulate B it becomes almost nothing.

The Author further observes, "I have produced the spark between c and the body, B, Fig. 4, when placed fifty feet from the direct discharge," which is again a very simple affair, the distance which electricity can traverse a conducting wire being almost indefinite. Mr. Grey obtained a similar spark at a distance of 765 feet. (b)

13.—The way in which these experiments were conducted is not precisely stated; but the nature of the manipulations would have a material effect on the result: if for instance discharges were produced in the way already explained, (h,) by pressing electricity upon a small Jar from a powerful machine, so as to produce spontaneous explosions, as implied in the author's description, see page 196,\* then it is clear we may obtain sparks of any magnitude, producible by the machine; the intervening Jar is in this case quite unnecessary.

14.—It is clear, I think, from this analysis of the experiments described in Mr. Sturgeon's memoir, that the results he considers of such extraordinary importance, are really very common-place, and very irrelative to the action of a Lightning Rod; even the form under which they are developed is little dissimilar from that employed by Priestly above half a century since, as any one may see, who will take the trouble to examine Priestly's Works, or Cavallo's Electricity, Vol I. p. 282. "When a Jar," (J, Fig. 5,) observes Dr. Priestly "is charged, insulate a metallic rod, N, place it contiguous to the outside of the Jar, and within half an inch of its other end, place a body, B, six or seven feet in length," &c. &c.

On making the discharge, he goes on to state, by means of the discharging-rod (t) "a strong spark will appear between the insulated rod, N, and the body B, near its extremity." How nearly this corresponds with the author's experiments, as in Fig. 4, I leave any one to judge.

15.—Mr. Sturgeon has given two or three additional illustrations of this phenomenon of the residuary spark, or, lateral explosion as it is termed; but, as they are only tedious repetitions of those already described, and have nothing to do with the great question at issue, it is quite unnecessary to notice them further. A few observations, however, on the experiment he mentions, see c. 201, may not be altogether unnecessary, in order to explain a result which he appears to think novel, and of consequence. This experiment is represented in Fig. 6.

Exp.—"When the body is connected with the conductor C, by a wire, *sc.*

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\* "If the knuckle be presented to the conducting rod, instead of the metallic body, B, a pungent spark would be felt at every discharge of the jar through the circuit.—"Annals of Electricity, p. 175

twenty feet long, only a *short* lateral spark is obtained; but, as the wire is lengthened the spark is *longer* and *denser*, the spark is *increased* by an *increase* in the quantity of metal between the body, B, and the Jar, without lengthening the conducting distance." Such is the amount of the Author's statement. It is still however, his first experiment over again. The intermediate wire, *w w*, or any quantity of metal in mass, must necessarily increase the capacity of the body, B, upon the same principle, as it is increased by connecting B with the ground, and this effect will be greater in proportion to the *length* of the wire, or dimensions of the interposed metal, inasmuch as we increase in this way the inductive susceptibility.

15.—It is quite evident, that if the body, B, were placed *immediately* on the same insulated base with the discharging rod, C, as in Fig. 7, then no residuary spark could possibly appear in the opening, O, since both the discharger, *c*, and body, B, would be in the same electrical state. When, however, we begin to *separate* the body, B, from the outer coating, by an intervening recipient mass, or a long wire, as in Fig. 6, we begin to place it nearer the conductors under which the spark is readily obtained, (12,) consequently, the longer the wire, and the more extended the intervening mass the better, inasmuch as either by giving it a greater inductive capacity, tends to free the body, B, and change its electrical state, in respect of the discharging rod, just as the mass of the earth would do when B is connected with it. There is, therefore, nothing in all this to call for particular remark, and the circumstance of its attracting the author's especial notice, is alone sufficient to show how little real attention he has given to the subject.

The nature of these results being so very apparent, it would be a waste of time to combat the author's strained application of them to the case of a conductor applied to the mast of a ship, and the different metallic masses in the mast and hull, such as straps, iron knees, &c., &c., inasmuch as they have clearly no relation to it whatever.

16.—With a view of investigating more completely, the laws of electrical action, connected with the residuary spark, I instituted the following experiments, which are for the most part new, and bear immediately on the question we have been considering.

(*k*) Charge a Jar, J, Fig. 3, positively; remove it from the conductor, and having first placed it on the insulating stand, K, discharge it, which may be easily effected by connecting the balls, (*m c*), with the insulated straight rod, *r*. Examine now the electrical state of knob, *m*, rod, *r*, vertical rod, *c*, outer coating, J, or any distant body, as *c c*, Fig. 4, with which the coating may be connected, it will be found the same as that exhibited by the knob and coating, J, whilst charging, and the residuary spark will be positive.

(*l*) Charge the jar as before, but, previously to discharging it, take a spark from the knob, *m*, communicating with the inner coating (*f*). The electrical state of the residuary spark, &c. will be now negative.

(*m*) Charge and discharge the jar, as in the previous experiment; and immediately after the discharge apply a metallic body, P, Fig. 3 and 4, either to the outer coating, J, or any body, *c c*, connected with it. A residuary spark will take place, the magnitude of which with a given quantity of electricity will vary with the size of the jar.



(n) Place an uninsulated metallic body near the discharger or outer coating previously to making the discharge, the spark will then appear to take place at the time of the discharge.

(o) Examine the jar after this residuary spark has passed, it will be again slightly charged as at first (i).

(p) Charge a jar, exposing about two square feet of coating, Fig. 8. Measure the quantity of electricity by means of the unit jar, *u*; connect an insulated brass rod, terminating in a ball, *r*, with the outer coating, and place the ball of the Electroscope, *E*,\* at about one-tenth of an inch or less distant from it, or otherwise in connection with two conductors, *N B*, Fig. 5, as in Dr. Priestley's arrangement. Discharge the jar through the rod, *c c*, as before. A small spark will pass and cause the Electroscope to diverge; observe the amount of the divergence. Let the same quantity be now discharged from a jar, exposing twice the surface; the divergence will be diminished by full one half. If we treble and quadruple the surface by adding other jars, the divergence will become less and less, and will at last be insensible. If we connect the jars with the ground, it will be in no degree apparent, even when the surface is only trebled.

(q) Discharge a given quantity from a given surface as before, and observe the divergence of the Electroscope. Let the quantity and surface be now increased together; that is to say, for a double quantity employ two equal jars, for a treble quantity three equal jars, and so on. The effect on the Electroscope will not change.†

(r) The quantity and surface being the same, vary the dimensions of the discharging rod, *c c*, Fig. 3, from a stout rod down to a fine wire, which the charge can make red hot. The effect on the Electroscope in each case will be nearly the same, being somewhat less where the tension in the discharge is greater.

(s) Connect the jar with the ground, and place some percussion powder enclosed in thin paper, between the discharging rod, *c c*, and metallic body, *B*. This powder will not inflame by any lateral discharge, even if the conductor, *c c*, be a fine wire, and be made red hot by the discharge. If the paper be sufficiently thick, to protect it from the burning metal, it will not inflame, although the metal undergoes complete fusion, and burns in brilliant sparks.

(t) Insulate a circular conducting disc of about 4 feet in diameter, *M*, Fig. 9, and oppose to it a similar disc, *N*, at about 6 inches distance, and connected with the ground. These discs may be of wood covered with tin foil. Stand a conducting rod, terminating in a ball, on the lower disc, and place near the metallic body, *o*. Electrify the upper disc, *M*; dense sparks may be caused to fall on the rod, *c*, but no effect is observable on *o*, even if percussion powder be placed in the opening between them, which readily inflames by a very slight spark.

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\* This Electroscope is described in the Philosophical Transactions for 1834, Part II, p. 214. For a more accurate measurement we may employ the Electrometer, p. 215.

† In these experiments we must be careful to connect the outer coating with the ground, or the negative conductor of the machine whilst charging the jar, and remove this connection at the time of discharging, if we mean to observe the effect in its insulated state.

17.—These experiments are conclusive of the nature of Mr. Sturgeon's lateral explosion.

Exp. (*k*) (*l*) determine the electricity of the spark, and shew that it is the same with that of the coatings.

Exp. (*m*) shews that the spark may be obtained after the discharge has taken place, it is not therefore the result of any lateral discharge from the rod.

Exp. (*o*) shews that the spark is merely a residuary accumulation.

Exps. (*p*) (*q*) prove that the same quantity produces sparks of different degrees of force, when discharged from different surfaces; and that double, treble, &c. quantities produce a spark of the same intensity, when discharged from double, treble, &c. surfaces. Now as no one can doubt that the effect of a double, treble, &c. quantity should be greater than a single quantity, it is further evident that the spark is not caused by any lateral action of the electricity passing down the rod, *c c*, Fig. 3, it being a well-established law that the same quantity has the same heating effect on wires, whether discharged from a large surface or a small one, from thick glass or from thin, some little allowance being made for the greater number of rods when the surface is increased by an additional number of jars.\* The effect depending on the jar, the small jar employed by Mr. Sturgeon would be better for his purpose than a larger one.

Exp. (*r*) shews that the degree of tension in the rod is not of any consequence.

Exp. (*s*) (*t*) prove that no lateral action arises during the passage of the charge.

18.—Mr. Sturgeon confounds this residuary accumulation with the Earl of Stanhope's experiments on induction, since he observes, p. 176,—“Viscount Mahon studied this kind of lateral discharge very extensively;” but any one who considers his Lordship's work will immediately detect the fallacy of such a conclusion.

Lord Mahon shews that when an electrical charge is about to pass from a body, *M*, Fig. 10, in the direction *CL*, the action upon a near body, *N*, will displace some of its electricity, hence a spark will appear at *e*, between this body and another connected with the ground whenever the discharge takes place from *M*, in consequence of the return of the displaced electricity. This effect his Lordship called the “returning stroke.” Now to apply this to the operation of a thundercloud:—let *M*, Fig. 9, represent a mass of charged clouds, covering a portion of the earth's surface, *N*; let *cc* be a discharging rod, and *o* a body near it; then, by Lord Mahon's experiment, the charged cloud *m* will displace from the surface *N*, and all the bodies on it, as *cc*, *o*, and a portion of their natural electricity, which will again return when the cloud has discharged upon any other body.

The conditions of Lord Mahon's experiment cannot apply between the conductor, *c c*, and the body, *o*, considered abstractedly, since by the induction of the cloud *M* they are both in the same forced state. It is very easy to see that the electrical relation of two bodies, *o* and *c*, between the boards, alike influenced by the cloud, must be essentially different from that between a charged conductor, *J* Fig. 1, and a body, *B*, in its natural state, or of a conductor, *C*, Fig. 9, transmitting the displaced electricity of the lower plate, and a body *B* neutral.

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\* Philosophical Transactions for 1834, part 2, p. 225; and Faraday's Researches.

In Lord Mahon's experiment, Fig. 10, the electricity of the return spark at E, is different from that of the primitive charge in M, whereas in Mr. Sturgeon's experiment it is of the same kind (*k*). Indeed, so little did his Lordship anticipate any objection to the use of lightning rods in consequence of his experiments, that he declares his conviction of their passive operation, and reproves those who "ignorantly conclude" they are of a dangerous nature.

19.—We have been here discussing what the author calls "a *third kind of lateral discharge*." He describes, however, two others, which he terms a *first* and *second kind*.

The first kind, he says "takes place at every interruption of a metallic circuit; it displaces loose bodies, &c. &c." Now this is a simple effect of mechanical expansion, and is precisely the effect we avoid, by applying a lightning rod. He quotes Dr. Priestley as authority on this point—how unfortunate for the whole doctrine! Let us consider for a moment what Dr. Priestley says on this subject. "That the cause of this dispersion of bodies in the neighbourhood of electrical explosion is *not their being suddenly charged with electric matter*, is I think evident. I never observed the least attraction of these bodies towards the brass rods through which the explosion passed, although I used several methods which could not fail to shew it. I even found that the *explosion of a battery, made ever so near a brass rod, did not so much as disturb its electrical fluid*; for when I had insulated the rod, and hung a pair of pith balls on the end opposite to that near which the explosion passed, I found *the balls were not in the least moved at the time of the explosion*."<sup>\*</sup>

We have seen how little support Mr. Sturgeon derived by quoting Lord Mahon. He has obtained still less from Dr. Priestley, who, without any compromise, sweeps away the whole theory. Lord Stanhope and Dr. Priestley, eminent amongst the philosophers of their age, will be surely considered as good authority as Mr. Sturgeon.

20.—It is somewhat curious to observe how little the author is himself satisfied with these authorities, for he observes in a supplementary notice, † "Perhaps the experiments of Professor Henry would be *more to my purpose*." These experiments are, however, no more to his purpose than the preceding, as any one may perceive who will examine Professor Henry's communication to the British Association. ‡ The experiments he mentions relate to minor electrical discharges, very similar to those already described (*i*). These were obtained by throwing sparks from an electrical machine, on small wires or rods, either insulated or not; the wires became luminous, and the rods emitted sparks. In this case, as Professor Henry observed, the electricity was free electricity, and as the bodies on which it fell were all in a natural state, the spark is immediately thrown off as a lateral discharge. Now whether the rods receiving the spark be insulated or not, they are evidently acted on by induc-

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\* The reader will not fail to distinguish between this experiment and the experiment mentioned by Lord Mahon. The latter relates to the influence of a charged body on a body neutral. Dr. Priestley's applies to the very essence of Mr. Sturgeon's experiment, viz., the action of wires transmitting vanishing discharges of electricity. Dr. Priestley, had he brought his rod within the influence of the free side of his battery, would not have told us that then his balls were not affected.

† Annals of Electricity, p. 235.

‡ Seventh Report, p. 252.

tion, before the electricity can be distributed upon them or the earth; hence when sparks of about an inch long are thrown upon the upper end of a lightning rod, or other metallic body in a neutral state, passing into the earth, the induction upon the rod and earth, causes at the instant of the passing of the electricity a spark to appear on any adjacent conductor in a state to receive it, and sufficiently near the rod. This experiment consequently applies only to small quantities of electricity suddenly thrown upon neutral bodies, which, as I have already shewn, (18) may be considered a distinct case from that in which a conductor is transmitting a vanishing charge between two oppositely-electrified surfaces, as in Fig. 9. One might be led to infer from Mr. Sturgeon's allusion to these experiments, that sparks had been obtained from a lightning rod whilst carrying a shock of lightning.\*

It is proper to observe, that Professor Henry does not consider these experiments as applicable to lightning rods, and that in accordance with the opinion of Biot, he thinks the spark observable at the time of discharging a Jar merely the result of a small quantity of redundant electricity, *always existing on one side of the Jar*, as I have already shewn, (*g*), and not to the whole charge.

21.—The second kind of lateral explosion is, we are informed, "a radiation of the electric matter from conductors carrying the primitive discharge." "It takes place," says the author, from edges, and that hence "sharp edges of metal carrying a flash of lightning would discharge necessarily a great quantity of fluid into neighbouring bodies." Mr. Sturgeon does not mention any authority here, and for the best possible reason; the phenomenon, as applying to a lightning rod, is not, so far as I know, treated of by any accredited writer on electricity; it in fact only applies to common electrified conductors. Thus ragged or pointed rods, when attached to the prime conductor of a powerful machine, will exhibit brushes of light, or cause luminous stars to appear on other similar bodies within the sphere of their influence. The lights on steeples, and on the sail yards and masts of ships, as mentioned by Pliny, are phenomena of this kind. We are indebted to Franklin for a philosophical explanation of them. This celebrated philosopher soon discovered that pointed bodies were favourable to the rapid dissipation of dense electrical accumulations, and availed himself of the important fact in his invention of the pointed lightning rod. "In great lightning storms," says Mons. Binon, "the three pointed extremities of the cross of the steeple appear surrounded by a body of flame; when this phenomenon is seen the storm is no longer to be dreaded."† This effect, then, is rather favourable than dangerous. How it could by possibility be mixed up with the transmission of a charge through a lightning rod, I must really leave to the author to explain. His aptitude at this sort of philosophical confusion is not a little remarkable. Surely the state of a rod whilst transmitting a vanishing charge must be very different from that of a permanently-electrified conductor.

22.—Although there appears no good authority in favour of this novel electrical explosion, we have a sufficient number of facts subversive of it.

\* "This philosopher (Henry) informed the British Association that he had taken sparks from a lightning rod when that rod was carrying a discharge of electricity." Sturgeon's Memoir, supplementary note, p. 235.

† Priestley's History of Electricity, p. 73.

(u) Thus Dr. Priestly caused a powerful battery to discharge over a circuit of wire, in one case *straight*, in the other, passing *around pins*, driven into a board, so as to cause a number of sharp angles. The angular portions, however, did not affect the transmission of the charge; it fused, in each case, the same length of wire.\*

(v) If a given quantity of electricity be discharged through a circuit consisting either of a round rod or a bar with ragged edges, it will, in either case, have the same heating effect on a wire, which could scarcely be, if any of the electricity had been thrown off the edges, it being well known, that the least diminution of quantity is fatal to an accurate experiment on the heating of wires.

It is not difficult to distinguish in these experiments the difference of the condition of the discharging current, and that of a mere electrified conductor. Had Dr. Priestly insulated his board, and simply electrified his wire, then, doubtless, the brushes, &c. would have appeared at the angles; but, under the form of a discharging circuit, it was quite impossible for such appearances to arise.

23.—These facts completely overturn Mr. Sturgeon's three kinds of lateral discharges, which, he says may be produced by a lightning rod; and clearly prove that, the phenomena he has adduced in support of his conclusions, have no relation to such discharges whatever. His experimental and theoretical researches, in this case, being destitute of any good foundation are utterly worthless, as I think has been fully shown by a fair appeal to the experiments themselves.

24.—The great end of these researches being to set aside my method of fixed lightning conductors for ships, successfully tried in the British Navy for upwards of ten years, with a view of substituting an untried system proposed by the author, it may be, therefore, worth while, before concluding this communication, to see whether the objections he so captiously urges against my system, do not equally apply to his own; and in short, to lightning conductors generally. In the first place he tells us (see 191) "that it is possible for the most specious conductor that can be applied to a ship to be rendered sufficiently hot by lightning to ignite gunpowder."

In the next place he says (202) "That the lateral discharge will always take place when the vicinal bodies are capacious, and near the principal conductor or any of its metallic appendages. This was the case," he says, "when *only his small Jar was used*; and with this small Jar, he could produce lateral discharges at a distance of fifty feet from the direct discharge."

Thirdly, he tells us (203) that "the magnitude and intensity of a flash of lightning being infinitely greater than any thing which can be produced artificially, the lateral discharges must be *proportionably greater*," that is to say, *infinitely great*.

Taking these data as true then, it follows that any lightning conductor, carrying a flash of lightning, would, at an *infinite* distance, produce a lateral explosion *infinitely great*; and, of course, do an *infinite deal* of mischief. Hence every powder magazine having a lightning conductor, every ship with a lightning chain in her rigging should, whenever lightning struck the conductor, be

destroyed, for in no case is the conductor at one third the distance from the inflammable matter, of that at which Mr. Sturgeon can produce a lateral discharge with a Jar of "only a quart capacity,"—viz. "fifty feet."

25.—Notwithstanding this he proposes to apply cylindrical copper rods in the rigging, "their upper extremities to be attached to the tops, &c., &c., their lower extremities to the chains of the shrouds," and to be united by "broad straps of copper to the sheathing:" that is to say, by conductors with edges, which he says throw off the charge into neighbouring bodies. This too, after having told us, that the most spacious conductor may become red hot, and that lateral discharges *always* take place when the vicinal bodies are *capacious*, and near the principal conductor, or *any of its metallic appendages*. Under such circumstances what is to become of the rigging, sails, and masts? Will they not be set on fire? Are not the massive iron hoops and other metals about the masts, the chains of the shrouds, bolted through the ship's side, and other metallic bodies in the hull, such as bolts, tanks, chain cables, &c. &c., *vicinal capacious bodies*, and reaching, by interrupted metallic circuits, up to the very magazines Mr. Sturgeon talks so much about? Must not a ship with such conductors be necessarily destroyed? Surely, he must give the British Association, and the learned bodies of Europe and America very little credit for philosophical penetration, if he thinks they will not immediately discard such philosophy as this.

Either his "theoretical and experimental researches" are true, and his system of conductors fatal and absurd; or otherwise, if his conductors be good for any thing, then his "theoretical and experimental researches" are good for nothing. He may adhere either to the one or the other, but he cannot have both. Such is the *reductio ad absurdum* in which he is involved.

26.—Mr. Sturgeon's anxiety to arrive at conclusions unfavourable to my conductors, has led him to conclusions subversive of *all* conductors, his *own especially*.

The mere circumstance of finding his "third kind of lateral explosion" decrease in power by uninsulating his Jar, might alone have led him to doubt the accuracy of his deduction. On so important a point, and before he ventured to awaken the prejudices and fears of the uninformed, we had a right to expect at his hands a profoundly scientific enquiry.

He should at least have tried whether he could not get this spark after the main charge had passed (*m*) as well as at the apparent time of passing. The quantity of electricity should have been accurately measured, and its effects in producing the spark determined, both in relation to the quantity and surface over which it was distributed (*p*). The form and dimensions of the discharging conductor should have been varied (*r*); the final electrical state of his apparatus, as also the electricity of the spark should, in common prudence, have been examined, (*k*), together with many other manipulations, quite inexcusable to have neglected on such an occasion. He has, however, failed in everything calculated to give value to his enquiries, as I think has been fully shewn. They are hence not entitled to the smallest confidence, and it is not a little remarkable that he should have done so whilst taking credit to himself for superior sagacity, and an acquaintance with facts of which he says I did "not seem to be aware;" *e. g.* the most common-place fact in electricity.

27.—Mr. Sturgeon's inconsistency does not terminate here. Having endea-

voured to show in every possible way, and in the face of the clearest evidence to the contrary, that my method of protecting shipping from lightning is not only ineffectual, even so far as the masts only are concerned, but absolutely dangerous; that the conductors being placed on the masts, induce oblique flashes of lightning to strike the ship in the direction of the yards, thereby causing damage to the sails, rigging, &c., and destruction to the lives of the sailors; \* he, unconsciously I suppose,—and certainly as if he had not really any faith in his own principles, makes the following singular admission. He says, (see 221) on discovering that his rods could not be conveniently applied above the mast head, “As, however, every chance of danger to the men, and every species of damage to the vessel, ought strictly to be avoided, it still appears desirable to furnish the top-gallant rigging with conductors; and perhaps those which would give the least trouble to the men would be strips of copper, let into grooves in the masts, according to the plan proposed by Mr. Harris; but instead of having one strip, I would have three.” Not long before this, he states, amongst other objections, “that a conducting slip of copper, closely jointed within a groove, would be burst asunder, and peeled from the wood.” † Now, I think, it must be clear to any impartial person, that, if my method be so objectionable, as Mr. Sturgeon would have it believed, for the masts and top-masts, on the grounds above stated, it must be equally so for the top-gallant and royal masts. The rigging, yards, and sails, and the lives of the sailors, are as much, perhaps more exposed there, than on any other point. He has himself stated, that two men were killed by lightning, in the top-gallant cross-trees, on board the Rodney. It seems, however, by his admission just quoted, that my method is not objectionable there, but is, on the contrary, calculated to avoid “every species of damage to the vessel, and every chance of danger to the men.” If so, it must be just as efficacious on the top mast, on the lower mast, &c., &c. This sort of traverse sailing, to use a nautical phrase, is somewhat amusing, if not ridiculous. We can only well account for it, by supposing what is probably not far from the truth,—that the author does not clearly understand the subject upon which he has ventured to write. I shall return to other parts of Mr. Sturgeon’s Memoir in a future number.

*Plymouth, December 1, 1839.*

P. S.—Since the above was sent to the press, I have observed Lieutenant Sullivan’s Letter, in the last number of the *Nautical Magazine*, to which I would beg to call attention, in evidence of what I have stated, and for which I feel obliged.

**DISTRESSED SAILORS ASYLUM.**—The institution called the Shipwrecked and Distressed Sailors’ Asylum, Cannon-street-road, affords a place of refuge to all shipwrecked and distressed seamen, and supplies clothing to such as may have been wrecked and lost their all, taking due care that such men shall remain in the establishment no longer than absolutely necessary: lodging free of expense to seamen, who on their arrival, bring their chest and bedding to the asylum, and prefer such accommodation to the haunts of vice and plunder, which await them on their arrival in port. This establishment is founded upon the same principle as that proud monument of British philanthropy, the seamen’s hospital ship “Dreadnought” opened to receive the distressed of every clime and country,

\* Annals of Electricity, p. 178, sec. 205.

† Ibid, sec. 206.

## PROPOSED LIGHT FOR FALSE BAY.

*To the Editor of the Nautical Magazine.*

SIR,—The article "Proposed Light for False Bay," which appeared in your useful Magazine of February last, has called forth a reply from the Port Captain of Table Bay, a gentleman so deeply interested in the subject that one can easily pardon his lawyer-like adhesion to "words" mere "words," and his skilful endeavours to put down mine *a mauvais jeu*.

As the involuntary aggressor, I refrain from a display of facts, involving the interests of others, which that reply merits, while I am bound to refute Lieut. Bance's statements, injurious to the unoffending. He has published as "not a bad criterion of the merits of the two bays," the following comparative statement of vessels which have entered Table Bay and Simon's Bay in

	Year	Vessels		Year	Vessels
Table Bay,	1834	. . . 304	Simon's Bay,	1834	. . . 42
		up to			up to
	1838	. . . 465		1838	. . . 60

Now, Sir, if this statement were faithful, it is obviously fallacious. False Bay is not lighted! Simon's Bay has been without a safe public Jetty for five years past,—Ladies are thrown constantly on the kindness of the Admiral for permission to land at the Royal Dock-yard, and the road to the capital, which might be rendered very good, at a trifling expence, is in a most discreditable state in many parts. This is no reflection on the Government, but on the "one" individual whose public duty it is to regulate these things. Finally it is to be expected that Cape Town agents will have no objection to disgust their clients with the artificial expensiveness of a rival anchorage.

Therefore, if faithful, it would be fallacious; but it is not faithful. In the year 1838, 432 vessels entered Table Bay, and 96 entered Simon's Bay. I have not the means of scrutinizing the remainder, but assuming *E.G.* that Mr. Bance's statement for 1834 be right, it will be perceived that the increasing ratio is much in favour of the best anchorage in spite of its neglected state. One passage alone of my former paper needs explanation: of the four vessels stated to be wrecked in 1837, one went ashore on the 31st of December, 1836, another after being sold on the beach, was subsequently got off.

There are doubtless, among the Commanders of the Mercantile Marine, as many excellent persons (I believe more,) as among any other class of equal extent and pretensions; but it would be equally foreign from truth and experience, to say that there are no tyrannical "persons" among them, as to assert that the ablest, the kindest, do not find the ill-disposed of their crews unusually troublesome near H.M. pendants.

But, Sir "*revenons a nous moutons,*" since my last, two more ships have been sacrificed on the Muizenberg beach, the "Protee," French, and the "Cockburn," English whaler; the Indiaman "Tweed," had a narrow escape. No professional man on the spot now doubts the utility of a Light for False Bay. As the trade of the East increases, defects become more prominent in the Coast of the Cape colony. Lloyd's and the Ship Insurance Companies can state that



cal losses: I could myself present a frightful list;\* but am unwilling to upset Mr. Bance's letter by a statement which might appear invidious.

It is serious trifling, which affects the "right arm of our power," and if the Naval Commander-in-Chief be of opinion that a Light-house is required; and it should be considered by the authorities at home, as more properly a Colonial undertaking; the subject should be urged on the attention of Her Majesty's Secretary of State for the Colonies—the real ruler and scape-goat for all political sins of omission and commission in the Colony; and "apart from the merits or demerits of his Colonial advisers," justly held responsible; for there is an official majority in the Legislative Council, and the whole are nominees "of the Government." It is clear, therefore, that the Colonial purse-strings are held in Downing-street, to which alone we can look for the execution of this work, as a few troops of cavalry, &c., &c., *pro bono publico* of course, [?], are absorbing attention here.

The Owners and Underwriters of the Eastern Trade should press this subject; it is their interests which principally suffer by the absence of a Light in False Bay.

I am, Sir, your humble Servant,

T. P. BARROW, Licut. R.N.

*Simon's Town, Aug. 17, 1839.*

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THE RECHERCHE.—The return of the Recherche corvette, Captain Fabvre, which sailed from Havre last June, on an exploring expedition to the North Sea, is announced by the *Journal du Havre*, with the following details of her voyage:—On leaving Havre she steered to the Feroe Islands, the geographical position of which was ascertained with great precision, geological observations made, and notes taken on the commerce, industry, manners, and habits of the inhabitants. On July 1st, the Recherche left Thorshaven, arrived on the 12th at Hammerfest, and after staying a few days, proceeded towards Spitzbergen. She found Cherry Island surrounded by ice to the extent of ten leagues from every part of its coast, and unapproachable. Captain Levaux then made for one of the ports north of Spitzbergen, but being opposed by contrary winds, attended with snow and fogs, could not get beyond 80., N. lat., and on July 31st came to an anchor in Magdalen Bay. During her stay in this latitude, where the ship was constantly surrounded by icebergs, her boats visited Smerenberg and Halcuit's point, the northern extremity of Spitzbergen. Notwithstanding the snow, the hydrographers made charts of Magdalen and Hamburgh Bays, and magnetic and meteorologic observations were taken on shore. Not a single ship was in the Bay. On August 13th the Recherche left Spitzbergen on her return, surveying in her way the western coast of the island. On August 29th, the members of the scientific commission who were on board left the ship to return to Lapland. In her passage homewards the Recherche visited Bergen, Mandahl, and Christiana. Her reception at these ports, being the first French ship-of-war that ever entered them, was most cordial. The crew behaved well during the whole of the cruise, and preserved their health.

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\* This list ought to be published. In such matters no feelings of delicacy should conceal the truth. We were not desirous of disturbing the Harbour-Master's self-satisfied conclusions respecting the *great advantages* of Table Bay; but to institute a comparison between the tonnage by which this, and Simon's Bay are frequented is manifestly absurd.—ED. N.M.

## ÆOLIAN RESEARCHES.

No. I.\*

THE origines of winds are no lesse various then their motions, and we ought not to determine positively concerning those appearences in nature, which may be rationally explicated severall ways.

Though we consult the *placits* of the learned ancients, and consider also what we owe to the improvements of the latter times, yet I question whether any theory was ever yet started on this argument, which will adequately resolve the whole phenomenon of winds; and we must never expect to confine their originall to any one determinate cause.

Most of the Grecian Philosophers agreed in the same definition of wind, till the prince of Peripatetiques † was not only ambitious to establish a new hypothesis of his own, but likewise undertook the confutation of his master Plato, and the rest of his predecessors. The philosophical monarch thought he could never reign securely in the minds of men, unlesse, like the family of the Ottomans he destroyed all his bretheren first.

I have no intention to disparage the authority of the ancients, but I cannot be so injurious to the many noble productions of our present age, to think that all science is only to be sought for in the urns of the dead: we have a more intimate converse with nature than heretofore, which displays her beautifull bosome, and every day affords new dis-

\* Under this title will appear successively, a series of papers on the phenomenon of wind. An old work, by a Fellow of the Royal Society, having been lately met with, it appeared to possess so much curious matter, some original sound opinions, and, withal, so much correct observation, which holds good down to the present day, that it was resolved to introduce it afresh to the world; and to lay it before seamen (in the "*Nautical*,") whom of all others "it do'th most concerne," in all the purity of its original garb. In adopting this course, it is not meant to support the writer's view throughout. The phenomenon of electricity does not appear to have been at all considered by him as an agent in producing wind; and, probably, was little known in those days: but the whole series, while shewing what was known so long as a hundred and seventy years ago, must rather be considered as a useful general view of winds, offered with the view of arriving at more facts, by courting discussion on this interesting subject. We shall therefore, be glad if any of our readers may feel so far interested in it, as to offer us the result of their own observation, in confirming or refuting the opinions advanced. The pages will run through twelve numbers, in which the subject of hurricanes will be duly discussed; and the orthography of the author will be strictly observed throughout.

† The person alluded to here is Aristotle, who after studying twenty years under Plato, opened a school for himself. But the term "Peripatetique" alludes to a sect of philosophers (Peripatetici) who were disciples of Aristotle at Athens. The name originated, it is supposed, from Peripaton, the place where they were taught in the Lyceum, or because they received the philosopher's lectures whilst walking.

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coveries of useful knowledge, and further conducing to the benefits of human life.

If we consider the successes that philosophy has met with in the world, we shall find that those opinions, which obtained most in one age, had their fatal periods, and were as much exploded and decried in the next; and it's as impossible that any one hypothesis should be calculated to the *gusto* of all persons, when the sentiments of men are as different as their complexions. I have, therefore, taken a large compass of the generality of writers, and deriv'd the origins of winds from several causes; which I rather endeavour to prove from accounts of our sea-voyages and relations of matters of fact, then to refine on them by any nice speculation of my own. For this philosophy is not to be had in colleges or books, but must be fetch't from both Indies; we must traverse the wide seas, and be tost to as many points of the compass as Columbus or Drake: we must climb into the regions of the air, and descend into the caverns of the earth, to detect the innumerable causes and qualities of winds. They are diffus'd like the universal mind, and it requires a kind of ubiquity to understand them. How small a portion is it of the vast system of the world that we inhabit, and how much less of it that we comprehend? How extravagant are the phenomena of the large American tracts; their tydes, winds, and other æriall impressions, how different and irreconcilable to ours? How many noble discoveries have been made in these countries, which the Athenian sages could never think of in their narrow porches and gardens. They might spin fine webs out of their own bowels; but for want of a closer inspection of nature, their texture and materials are slight. And we must acknowledge that even the Stagirite • himself has left us no very perfect theory of winds, though this province of late years has been more successfully undertaken by the Lord Verulam, Galileo, De Cartes, and other illustrious moderns.

Aristotle constituted two species of exhalations; the one vapid or moist, the other fumid or terrene; and as the first is employ'd in rain, hail, or snow, &c.; so the other furnishes materials for winds.

The ancients understood no more by wind than a motion of the air: Anaximander † and others alluded to by Seneca, says "*Ventus est aer*

\* "Stagirite." The same philosopher, Aristotle, is here alluded to, who was called the philosopher of Stagira, a town on the borders of Mesopotamia, founded 665 years before the time of our Saviour. This being the birth place of Aristotle he was thence called the "Stagirite." He died in the year 322, B.C., and the people of Stagira instituted festivals to his honour.

† It is worthy of remark, that Anaximander, who was a Milesian philosopher, taught that men were born of earth and water mixed together, and heated by the beams of the sun, which he considered a circle of fire like a wheel about 28 times bigger than the earth. He first asserted that the earth was of a cylindrical form.

*Æuens.*” But neither the prince of the Peripateties ever supposed them to consist of earth (though it was always to be most predominant) nor the ancients of air alone, without some alloy of other heterogeneous elements.

WIND, in the most general acceptation, is any sensible motion of the air : By air the vulgar understand almost any invisible matter, whether rarify'd vapours or water ; though it consists of much grosser parts than that which is employed in respiration.

Des Cartes computes, that rarify'd air requires only thrice, but dilated vapours no lesse than 3,000 times as much space, as before their expansion : wherefore in the generation of winds, he prefers them before fumid exhalations or air.

It seems to me lesse probable that winds should be always made up of heterogeneous exhalations distinct from the body of the air ; For certainly, they are sometimes no more than streams or currents of air itself, shifting from one part of the atmosphere to another. So that the air, while it continu'd placid and calme, may be compar'd to a pond or lake ; and when it's violently agitated and mov'd, it resembles a current or river.

I have already declar'd that no one hypothesis, how comprehensive soever, hath yet been able to resolve all the incident phenomena : so various are their efficientes, and the matter of which they consist. I shall therefore comprise the locall origines of wind under three generall heads.

1. They are generated in the intermediate space between the earth and clouds ; and that either by rarefaction, or repletion ; and sometimes happily by the pressure of clouds, elasticall vertue of the air, &c.

2. From the earth, or seas, as by submarine, or subterraneanl eruptions.

3. By descension or resiltion from the middle region. But I shall explain myself, how I desire to be understood of all these in the following discourses ; and then descend to the matter of which they are form'd, their limits and qualities, &c.

My Lord Bacon complains that the first species, has been too much neglected by most writers ; while some seek for them in the clouds, and others in the caverns of the earth, when as they are more frequently generated in the intermediate space, which they call the lower region of the atmosphere.

The universall efficient of this sort is the sun ; the matter, air, or whatever vaporous effluxions from the earth.

Now, imagine, those vapours, or fumes, that are continually hovering in this lower region, (which being dilated will possesse so many hundred

times more space than they did before the expansion) to be attack'd by the quick and penetrating beams of the sun, what a tumult, and meeting must this necessarily cause in the atmosphere? When all places were full before, at least the voids no way proportionable to the dilatation, whither must the ejected particles retire? the spaces they should possess are overstock'd already, they must be forc'd to send out colonies to other parts, where equivalent compressions and condensations are made; where the spaces lye waste, and in a manner destitute of inhabitants. But what seditions, eddies, and undulations must this cause in the whole body of the air? How will the atmosphere fluctuate, and be harrast to and fro, and (as it were) curled with waves? the rarify'd vapours still flying to seek new habitations, and so doe impell, and bear along with them all they encounter in the way; some condens'd bodies deserting their seats, and others as farr expanded, hasting to take possession; that there can be no tranquillity, or rest, till the influences of the sun cease, or the vapours be exhausted: and what is all this struggling and commotion of the air, but wind?

For either the dilatation of the former, or too great an accession of of new matter, will inchoate the collateral agitation of winds, as the Lord Verulam experimented from a crosse of plumes in a turret closely shut up; when meanes were us'd by the evaporation of water to overstock the space; and afterwards by fire, to thinne and rarify the vapours, the plumes began to tremble by degrees, and at last the motion grew rapid, *Instar turbinis*: the water affording multitudes of vaporious steams, and the fire resolving them into wind.

It likewise appeared from another of the Verulamian experiments, that air of itself when other vapours are wanting, will be sufficiently agitated by rarefaction: For though without some other auxiliary exhalations, air alone might seeme able to create but a very feoble and languid wind; yet when it's dilated into at least sixty times the extent it possess'd before the expansion, it must needs by this crow'd and superonerate the former spaces, and so cause a considerable motion of the atmosphere; so that, if there be much superfluous matter, and the protrusion violent, it causes storms and tempestuous winds; if it be lesse, then are only engend'red those mild and refreshing airs such as use to come off from the banks of rivers and ponds at day-break.

De Cartes will scarce admit, that dilated air exceeds above a quadruple proportion; yet a person \* not lesse sagacious in the contemplation of nature, has prov'd in a late discourse, that air without heat, will be dilated to 13,000 times the former extent, though with it Mersennus never arrived to an hundred: and questionlesse in the atmosphere, without the assistance of art, we may suppose it rarefiable by the heat

\* This was Mr. Boyle, who made experiments on the rarefaction of air.

of the sun to incomparably larger dimensions than De Cartes allows it; at least sufficient to create very impetuous winds, which may be occasion'd from any extraordinary expansion of the air: as we usually observe, that in conflagrations it blows manifestly fresher thereabout than it did before; and, the people of Gascoigny (at that time subject to the crown of England) are said to have petition'd the king against the burning of heath in Sussex and Hampshire, which afterwards raised a wind very pernicious to their vines.

Another cause which generates wind is the Superoneration of the Atmosphere. Democritus and other ancient atomists, supposing, if there were too many particles of matter crowded in little space they must necessarily jostle and arietate each other, thought winds to be nothing else but the struggling or agitation of atoms: on the contrary, if there chance to be few atoms in much space, so that there be no pressure, or co-arctation in a free and spacious heaven, this (they say) begets tranquillity, and a serene temperature of the Heavens.

Lastly, beside this superoneration, these flatulent emotions may proceed from any other cause which alters the equilibrium of the atmosphere; so that it will be sufficient to generate winds, if the air be only denser in one part than another, by the unequal distribution of vapours: Therefore, we have commonly a gentle brise breathing off from ponds or lakes, where the cold more especially condenses the air, at least the vapours arise in greater plenty than from humid bodies. Thus we sometimes see a large collection of clouds in one quarter, which being afterwards discharged in showers there oftentimes follows a wind from the immediate conflux of the vapours to that place.

For the currents of air imitate the motions of water, and by the just laws of hydrostatiques, according to their respective gravity, mount higher or descend; so that there is a perpetuall inquietude till it come to an exact equilibrium; and what cause soever it be, which varies the counterpoise of the atmosphere, must needs occasion winds.

The second cause which produces these intermediate winds is compression: when two, or more clouds impetuously pressing or falling upon each other, drive out a wind from between them.

The purest and most ætherial matter is not without some degree of gravitation; though we want instruments to make such nice discoveries in nature: however the grosser vapours, and air which inhabits the middle region, gravitate more sensibly, of which we can be able to give some account by our barometers, when the quicksilver rises higher or subsides in the tube.

Winds may be generated from pressure alone. Suppose the motion or stream of air be not directly downwards, but sloping, and there be resisted by some closer winds or denser parts of the atmosphere, it often

reverts and so generates whirlwinds and tornados. Sometimes you shall have a suddain puffe of wind, driven from between two clouds with a violent disposure of the air, that descends almost perpendicularly to the earth. Wee have a lively resemblance of this in the common bellows; when the sides closing presse the included air; and force it to issue out impetuously at the nose, or pipe.

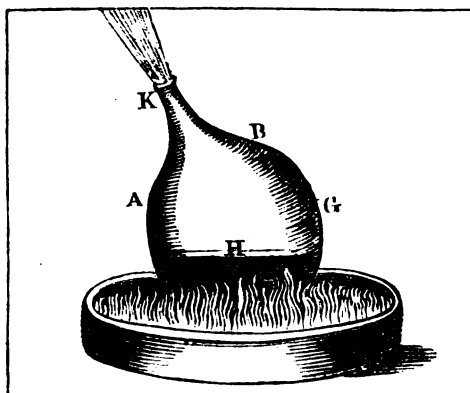
I have oftentimes observed, that stiffe gusts of wind happen immediately before rain; because the clouds being overcharg'd and teeming with showers, presse more than at other times; and when the atmosphere begins to thicken and grow ponderous over our heads; we seldom fail of a wind, some small distance from thence; which likewise ceases when the shower is fallen.

Moreover the elasticity of the air which the Peripatetiques make little regard of; and those ingenious moderns who have demonstrated its elasticall force, from many noble experiments; yet never apply'd it particularly to this phenomenon of winds, though it prove oftentimes, the most immediate cause of their production. For the air, whether from the gravity of incumbent vapours and clouds, superfluity of matter, or however straiten'd and oppress'd do's as soon expand itself, (like a fleece of wool after the compression,) till it arrive at the former dimensions again; and being dilated, explicated, and as it were unbent, must needs agitate and propell the contiguous bodys, that reduc'd it to such straits before: as we see the elasticall power of it in wind guns; how impatient it is of restraint, and willing to regain its liberty when the first opportunity is offer'd; how easily suscepible of the least impressions; as appears from the propagation of sounds; when the noise of bells, or canon is heard; that is to say they shake the air, for many miles in almost an imperceptible time: and the elasticall reciprocations of the atmosphere, (by whatever species of co-arctation the ærial spring is bent,) though they are not obvious to our senses, yet are both consonant to reason, and agreeable to the actings of nature in such cases; And if this struggling or emotion of the air necessarily results from its elasticity or repletion, this moved or agitated air is wind. *Ventus enim est, ubi fit agitando percitus aer.*

A second locall origine of winds in generall, is from Earth or Seas: either by resolution of their superficial parts; or from submarine, or subterranean eruptions. The Terrheinos, or land brises between the tropics which last from the first approaches of night, till morning, consist for the most part of terrestrial fumes, perspiring from no greater depth, then the solar rays did before penetrate: and those which alternately blow in the day time, are the ofsprings of the sea, when the celestial warmth attenuates the liquid surface into winds. For humid bodys are soon agitated, and volatilis'd by heat; as might appear from that vulgar, but

very considerable experiment, of the Æolipile;\* by which the strangeness of art do's so clearly interpret to us the operations of nature that we may without difficulty conceive, the most forcible emotions of wind to be generated from the rarefaction of water.

Suppose A, B, G, the figure of the vessell which you may fill with water to H: then setting it on the fire, the water when thoroughly heated will be rarify'd into wind: and issue out through the neck K with great violence.



Some have us'd them instead of bellows and contriv'd pneumattick inventions of this nature to blow the fire: Others have made them large enough to turn the wheels of spits; for the force of the wind will be greater or lesse, proportionably to the bigness of the vessell.

Thus we may imagine the atmosphere to be as one immense æolipile, continually dilating the vapours, and air, and the sun likewise to exhale many flatulent steams out of the marshes and lakes, especially from the sea, (which is the most universall parent, not only of fountains and rivers, but winds). And though the subtlety of nature will still exceed the most accurate researches of human wit, yet wee have little more to enquire concerning the naturall, then may be advantageously expli-cated from the artificial winds.

Nor doe they only exhale from the superficies; but emerge sometimes from the gulfs of the ocean, and profoundest caverns of the earth. The

\* Æolypile, Æolipile, *Æolipila* the ball of Æolus, an instrument made use of formerly in experimenting, consisting of a hollow ball with a small orifice in which a tube might be screwed. It served to boil water in for the purpose of creating steam. This instrument is mentioned by Des Cartes in his Treatise on Meteors, chap. IV. as used in his time. It is now entirely out of use, unlesse we choose to consider the boiler of a steam engine as an Æolipile. It is not the only toy which has been used in philosophy.—*Penny Cyclopaedia*.



earth is the first mother of meteors; and contains the principles of them all in her fruitfull womb: In these subterraneall kingdomes are the spirits, minerals, and juyces, that afterwards raise storms by sea; winds and thunders in the air; and earthquakes under ground. These that have been conversant in colepits, and mines, will frequently predict tempests, from their damp; the burning blue of their candles; and other infallible signes. From hence these subterraneall storms break prison to disturbe the peace of the atmosphere, and raise mutinyes and commotions in the whole body of the air. My Lord Bacon mentions a rocky and mountainous place in Wales, called Aber Barry, which had many caverns, and recesses under ground; where is a continuall noise of winds, that resound and tumultuate within: And in another place of Denbighshire there are so vehement eruptions of wind out of some cavityes, and spiracles of the earth, that repell cloths and other injected bodies, and for a great way together, dally and play with them in the air.

But among innumerable examples I could produce of this nature, one out of the Philosophical Transactions quadrates exactly to our purpose. It was in 1637 given to the Royall Society as the result of twenty yeer's experience from a person well vers'd in mineral affairs. He affirm'd: if in digging under ground the workmen meet with water, they never want air or wind: But if they misse it, they are destitute of convenient air, either to breathe in, or make their candles burn. Sometimes there happens to be a great quantity of winter's standing water in their mines; but as soon as the levell is made, and any part of the water begins to run away, the men must secure themselves as well as they can: For the included air or wind breaks forth with violence, to carry all before it.

They have burning mountains in China that are said to raise tempests: The same accounts we have of the grottos in Calabria, Sicily, and many places about the Alps. And I think it not lesse considerable what the learned Peter Gassendus\* assures us of a mountain in Provence, which had a *visto* through it (like Pausilypo near Naples,) from whence a northerly wind on one side, and a southerly on the other have been

\* He was one of the most distinguished of the naturalists, mathematicians, and philosophers of France, born near Digne in 1592, and died in 1655. At a very early age he evinced a taste for astronomy. A dispute having arisen between some children of his own age whether the Moon or clouds were moving, and his companions maintaining that the apparent motion was that of the Moon but that the clouds were stationary, Gassendus proceeded to undeceive them by ocular proof: placing his playfellows beneath a tree, he bade them notice that while the moon was steadily visible between the same branches, different clouds were constantly appearing in succession. Before his fifth year he had given many indications of extraordinary powers.—*Penny Cyclopaedia*.

observed to break forth at the same time. I have heard that in Cornwall they have so sure prognosticks of storms at sea from their mines, that fishermen never presume to tarry out, when the signal is given, by the eruption of certain meteors which immediately presage a tempest. There are almost as many instances of this kind, as we find crannies or receptacles of air under ground: Questionlesse these cavernous retreats are very often the locall origin's of wind (where the poets feign the kingdome of Æolus,) not unphilosophically alluding to their mode of production. Winds that are generated in the cloisters of the earth are for the generality, made up of waters diluted by the subterraneall fires: Kircher \* among other romantick suggestions on this argument, adds, that colliquated snows, and raine sinking into the ground, doe sometimes expell, and force out the winds and air.

Yet not only water, but most bodys will be mov'd, and volatilis'd by heat; especially the nitro-sulphureous, and other minerall or metallic concretes, that are easily resoluble into fumes; either by rarefaction from some intestine vulcano, or by that glowing and potentiall heat, which is nowhere wanting in the bowels of the earth.

If you mingle together nitre, sal ammoniac, crude antimony, &c. and macerating them all in salt water set the vessel over the fire: the fumes will issue out much after the manner of our Æolipiles: which shews what may likewise be effected when the same causes concur in the subterraneall world. Some have conjectur'd that winds break from under the ocean: because the waves are observed to rise, and gently to curl, and furrow the seas on that side, whence it is next to blow.

Or, if the included spirit be in greater plenty it sometimes dashes the waves against the rocks, with so great violence, that the noise may be heard in some places, no lesse than eight or ten leagues.

I am credibly inform'd that in St. Owens bay belonging to the Isle of Jersey, the sea is often strangely disturb'd before the western storms, even when the air is very calme: and though no wind be stirring, yet the roaring of the waves may be heard, not only over the whole isle, but into France, about thirty miles distance; which is the certaine prognostique of an ensuing tempest. And those suddain tumors, which happen in the rivers of Garonne or Dourdongu, neer Bourdeaux, seem to be the effects of intestine winds, swelling them into ridges and mountains of water which they call *Mascarets*; and are so terrible to them that sayl in that river, that when they perceive them coming the people cry out; *Garde le Mascaret*; and then the watermen immediately make to the shoare to save their lives; for it inevitably threatens the over-

\* He was born at Geysen in 1602, entered at an early age the order of Jesuits made great progress in various branches of learning. He died at Rome in 1680.

turning of their boats. It happens only in summer, and in the greatest tranquillity of the air; but is often follow'd by wind. Something like these *Mascarets*, though from a different cause, are the sudden turgences of the river Severn, which they call'd Higram. Scaliger in his *Exercit* speaks of a sea towards the Gulfe of Lions, which is frequently so raging, when there is no sensible wind to irritate it, that the adjacent countrys might justly fear a deluge: the waves seeming to rise above their shoars. In like manner the Italian Benacus, or Lago de Garde, and more especially that near Geneva, is oftentimes troubled in the calmest days; which is questionlesse nothing but an included spirit or wind, though the inhabitants ignorantly impute it to witchcraft.

This sub-marine tempest, is by some called *Procella Cæca*; and by the Portugals *La Manca*; when they see it break out in a cloud or mist, from under the water.

I supersede many remarks from our sea voyages; and some others out of Beregard and Kircher, and shall instance only two: the one recited by Fromundus, from the testimony of the learned Pienus, who in a calme and serene day, diverting himself on the Belgique shoare, perceiv'd a dense mist suddenly to rise from the ocean, which though very inconsiderable in the beginning, he saw it encrease and diffuse itself by degrees, till it cover'd the face of the Heaven, and ended in a most dreadfull tempest at last: And what can be more admirable in the whole history of nature, then that so small a vapo'r should fill the spacious atmosphere, swell the seas into mountains, and mingle all things with horro'r and night?

The other is set down by Mr. Boyle (to whom the learned world is so much obliged for his curiosity in all naturall inquiries,) and I shall insert it from the pen of the honourable author. Some years since, near the strong fortress of Duncannon, where divers of the ships Royall of England lying at anchor, in a place where they apprehended no danger from the wind: there seemed suddainly to ascend out of the water, not farr from them, a black cloud, in shape and bigness not much unlike a barrell: which was, not long after, followed (as the most experienc'd pilot foretold,) by so hideous a storme, as forc'd shose shippes to goe to sea again; and had like to have cast them away: and this account was written by the principall officers to their superiors in England.

We can by no means distrust the matter of fact, which had almost as many witnesses to confirme it, as there were men in the Navall Army: and we are sufficiently informed from this memorable event, how farr the sub-marine eruptions may be concerned in the production of stormy winds.

## RAMBLES AT HOME.—WINDERMERE—AMBLESIDE.

My Dear Mr. Editor,

July 17th, 1839.

I HAVE now the pleasure of addressing a few lines to you from the banks of the beautiful Lake of Windermere.

I took my departure from Kendal on the morning of the 15th. The clouds were thick, heavy, and lowering: I could not forget that it was St. Swithin's day, proverbially the most unpropitious day in the whole calendar, and particularly so, you will allow, to commence a "tour to the Lakes." Bad as my memory is, had I chanced to have forgotten St. Swithin, a very smart shower, just as I was on the point of starting, could not have failed to recall him forcibly to my mind. Having waited patiently till this passing cloud had expended its fury, and pretty well drenched the streets of Kendal, I stepped into my car, a little four-wheeled phaeton, for the hire of which I paid at the rate of a shilling the mile, the usual charge in the district of the Lakes: and as the different cars will always accommodate two persons, and what little baggage they may have with them, the Lakes may be pleasantly visited in this manner at a trifling expense. Unfortunately I was alone, which greatly detracts from the enjoyment of a "Ramble," besides adding very considerably to the expense. The distance to Bowness, whither I proceeded, is nine miles. This is a delightful little spot, situated upon a sloping bank, on the east side of Windermere, and commanding a beautiful view of the lake. It consists of a few houses, and two large hotels, at one of which, the "White Lion," I took up my quarters.

Being anxious to make the most of my time, and to visit Eastwaite and Coniston Waters, I immediately made arrangements for the trip, and shall therefore attempt to describe my "day's work," before I tell you anything of Windermere, the largest of the English lakes.

Greatly preferring to ride on these sort of excursions than to be stuck in a vehicle of any description, I requested to be furnished with a horse, when, to my great surprize, I was informed that there were no saddle horses let out on hire. How different at Killarney! where the difficulty is to avoid being furnished with more ponies than one wants, so eager are the good folks to persuade you to hire their steeds. The landlord however, was a civil obliging person, and though he had no regular saddle horses, was willing to do the best he could to meet my wishes. Accordingly a rough long-backed raw-boned poster was trotted out of the stables, and having first scrutinized his fore-legs, and ascertained the most important fact that he had never been down, I was soon seated in the saddle. He was exceedingly uncouth in his gait, and, when put

in motion, yawed about uncommonly, probably missing the rattling noise at his heels, and wondering, no doubt, what had become of the chaise. Arriving at the Ferry, which is nearly half a mile from the inn, in the narrowest part and about the centre of the lake, my poster was somewhat shy of the water, and had evidently never crossed it before; but a little coaxing soon persuaded him to walk into the ferry-boat. Once afloat, he was sorely puzzled to get out, and sufficiently sagacious not to make the attempt. The wind being rather high, the boat was tossed about a little, which appeared to be anything but agreeable to the quadruped. We were soon landed in safety on the opposite bank the lake being very contracted at this spot. I now proceeded to Hawkshead, skirting along the banks of a pretty sheet of water, called Easthwaite, at the head of which the little village is situated. This little lake is about two miles in length, and half a mile in breadth, and is one of the feeders of Windermere. As there seemed to be nothing to attract attention at Hawkshead, I trotted on, and leaving Easthwaite water, and pursuing a westerly course, soon came upon Coniston water, the object of my ride. The road passes close to the very end of the lake, and is washed by its waves. It is about six miles in length, and, viewed from "Braithwaite's inn, Waterhead," is certainly a fine expanse of water discharging itself at its southern extremity in a little river called the Crake, which flows into the Leven. I now went on to the little village of Coniston, at the head of the valley, where, having obtained luncheon, curiosity led me to stroll on horseback up to the recesses of the mountains, to see if there might not be a waterfall.

Tracing the stream, I came to a small one, and higher up, to another and owing to the late heavy rains, the fall of water was here very pretty, but the channel would no doubt be dry, or nearly so, at other times. I found, at the upper fall, a copper mine, and several people employed washing the ore, &c. but it is carried elsewhere to be smelted,

I did not, upon this occasion, go into the bowels of the earth but contented myself with picking up two or three specimens of the ore, which seemed to be abundant, and of a good rich quality. On the right of the mountain stream rises Coniston Old Man, the highest point of land, at the summit of which there appeared to be a large heap of stones; and I am told they are going to increase it, and to make a place of shelter at the same time.

I regretted that I could not possibly afford time to make an ascent being particularly fond of climbing hills; and, as an additional inducement, there is a large slate quarry opened on the side of the Old Man, which I should liked to have seen.

The mountains at the head of this valley are denuded and wild in their appearance, and were sufficiently high to intercept the clouds in

their progress, which ever and anon curled over their summits, obscuring them in a mist from the view.

The other hills which surround Coniston Water, being verdant enough, formed a pleasing contrast, and the digitalis was everywhere most abundant, and in full blossom. The heaths too were numerous and very beautiful, as also the wild geranium.

Retracing my steps to Eastwaite Water, I again had to cross the Ferry at Windermere, to which my long-back raw-boned poster had now got more accustomed, and so returned to dinner, pleased with my ride though somewhat a rough one, the distance, there and back, being about twenty miles, and my steed requiring much of the persuasive and somewhat irresistible argument of the heel to move along, which added not a little to the fatigue of the rider. The weather was remarkably fine for the trip; and, notwithstanding St. Swithin, not a drop of rain fell during the day, although I am informed it seldom does any thing else but rain in these parts, the truth of which assertion seems borne out by the large wooden clogs, two inches thick in the sole, tipped at the toe and heel with iron, with which the women and children in all the towns in Lancashire, go clattering over the pavements, to the no small annoyance of strangers like myself.

After dinner I strolled up to the top of a barren rock, above the little village, from whence there is a fine view of the lake, which is almost ten miles in length, a noble sheet of water surrounded by gently sloping hills, verdant and well wooded, and studded with several pretty little islands. Like Coniston Water, Windermere, discharges itself at its southern extremity, and joins the Leven.

Curwen's Island, so named after it's proprietor, is the largest island on Windermere, and lies immediately opposite to Bowness. The others indeed, are of small extent. They all lie in a cluster in this part of the lake; and both above and below them, appears one uninterrupted sheet of water.

Having procured a boat across I walked round the island. It is said to consist of about thirty-six acres of land; and, tracing the gravel walk the distance performed may perhaps be about two miles. Owing to the late heavy rains, the lake had made considerable encroachments upon the foot path, which was here and there completely under water; but a little detour through the swampy grass brought me again upon terra firma. There are some fine trees upon the island, particularly oaks and chestnuts, the latter of which were almost equal to any of those in the noble avenue of Bushy Park, one of the finest avenues in existence, and probably the most beautiful in the spring of the year, when the trees, being one mass of blossom, seem as if sprinkled with the purest snow. The house on Curwen's Island is of an octagonal

form, and has been compared, not inappropriately, to a beehive, to which, at a little distance, it certainly bears the resemblance.

These islands, I believe, all belong to different proprietors, and one was pointed out to me, just large enough for a small pic-nic party, and which, I learned, was purchased for that especial purpose, for the sum of 300l.

The view of the head of the lake, in crossing the water, was very striking. It was a lovely morning, and the lights and shades upon the mountains (for so I shall call them,) were really enchanting, not a cloud concealed their summits; they were floating far above the earth, and just in sufficient quantity to cast every now then, the most pleasing shadows on different parts of the heights, while the bright sun shone forth in all its splendour upon the remainder of the landscape.

It may be as well to mention here that the highest point of land in the lake district scarcely exceeds 3000 feet, which I must request my readers to bear in mind, as everything is by comparison; and a traveller over the Andes might consider my *mountains* nothing but *mole-hill*.

The little boat in which I crossed to Curwen's Island was a rowing boat: there was in this, as in the other boats upon the lake, a peculiarity which I have seen no where else; the oars, instead of being worked in the common rullocks, are worked on an iron pin, which pierces them, and upon a circular piece of iron extending beyond the gunwale. This gives a good purchase, and enables one man to pull the boat with great rapidity. My boatman was one of the char fishermen, and has followed the occupation three and twenty years, "and his father and grandfather before him," as I was duly informed.

The char fishing is only carried on during the winter months, when the several landlords of the inns in the vicinity of the lakes, purchase the fish for the purpose of poting. There were, altogether, about a dozen fishermen upon Windermere, and it seemed generally to be a tolerably lucrative occupation. Upon my inquiring of the boatman how far it might answer his purpose, he replied, that during the winter, for instance, the landlord of the White Lion, to whom he supplied his fish, could not have paid him less than 60l: this, with what he may pick up during the summer, by the hire of his boat, must afford him a tolerable livelihood. The greatest quantity of char he had ever taken in one day was, he told me, twenty-four dozen and a half; and fifteen dozen the most in one haul.

It has been stated in some of the Guide Books that there are no Char in Eastwaite Water, the shallowness of the lake being attributed as the cause; but my informant laughs at this, and says that they are caught in various depths, and that the assertion in the guide-book that

they are only taken in deep water, is quite nonsense. The fact of there being no Char in Eastwaite Water is undoubted, but he assigns as the far more probable reason, the great number of Pike, who have there the dominion of the waters of the lake.

Pike are also very abundant in Windermere. I was treated with some for my dinner, but it seemed to me to be a perfectly tasteless fish.

There were a few small yachts and cutters lying off Bowness, and several little pleasure boats. In some parts the lake is very shallow with rocks, sand-banks, &c., although deep enough in others. In many of the shallow parts staves have been driven in to mark them, but these marks have apparently been much neglected, and either from the rising of the lake, or settling of the staves, they appear in some parts just above water, and are really very dangerous.

My boatman told me that he and another were pulling along at a quick rate, and ran their boat upon one of them: it was through her in a moment, and they had to pull for their lives, but fortunately they were near the shore, and reached it up to the thwarts in water, one of the men having had the sagacity to place his foot over the hole, and thus to a certain extent keep out the water.

My visit to Curwen's Island was early yesterday morning (the 16th). The day being remarkably fine, I was determined to make the best of it, and to proceed to Ullswater, through the valley of Troutbeck, and thence to retrace my steps a portion of the way and return to Ambleside, at the head of Windermere, from whence this letter is addressed to you.


For this purpose I hired a gig. Shortly after leaving Bowness, at a distance of about a quarter of a mile, there is a little green hillock on the left of the road, which I ascended on foot, and from whence there is a delightful view of Windermere, and particularly of the range of hills at the head of the lake, which I had so much admired when crossing to Curwen's island.

I do not suppose that the lake is anywhere to be seen to greater advantage than from this spot; the view from which includes the whole extent of it. The first part of the road is a pleasant drive a little above the lake, and at a short distance from it. It then takes an easterly direction, leaving Windermere behind, and enters the contracted and picturesque valley of Troutbeck, I shut in on either side by lofty hills, through which it proceeds to the very head of the valley. The lower part nearest to the lake is well wooded, and verdant: and a rapid stream flows through it.

Proceeding up the valley, we passed the little village of Troutbeck, a long straggling row of houses, extending probably about a mile, and built on the brow of the hill, a little above the right bank of the stream,



with a church on the opposite side, detached from the village. The character of the valley now begins to change, and approaching towards the head of it, the mountains are lofty and denuded, their sides being covered with the debris. The road continues to ascend till it attains a considerable elevation, and the scenery becomes wild: no houses nor huts are any where to be seen: all is solitude. On reaching the furthest point, where the valley terminates, the road winds round the mountain, and on looking back, down a valley which lied beneath us, there is a very pretty peep of the head of Windermere, near the little village of Ambleside. The road comes in at the head of this valley, upon which our backs were for the present turned, which was of little moment however, as, on returning from Ullswater, whither I was proceeding, it was necessary to retrace my steps, and pass through this valley. We continued still to ascend, winding round a mountain called Kirkstone, till the road had attained its highest point, when we entered upon another valley through which there is a somewhat rapid descent to Ullswater. The view that bursts upon the sight on entering this latter valley is very imposing. On either side are lofty precipitous mountains, with many a silvery streamlet trickling down their sides, which crossing under the road in some parts fall into a rapid stream at the foot of the mountains, hurrying onwards to a little placid lake, called Brother Water, which is seen on entering the valley, apparently backed by the lofty mountain of Placefell. This little sheet of water, from whence a stream flows into Ullswater, is one of the principal feeders of that lake, which, discharging itself at its northern extremity into a river called the Eamont, joins the Eden, and pursuing a north-west direction flows into the Solway Frith.

Nothing can be prettier than the disposition of the hills at the head of this lake where there is a little village called Patterdale, and a small inn for the accommodation of visitors. They are really lofty some of them being upwards of 2,000 feet. Placefell which I have mentioned before, stands in an imposing manner on the right shore, at the head of the lake. Herds of red deer are said to frequent it; and foxes are plentiful in the neighbourhood. I walked up the side of Placefell to a spot where they are working a slate quarry, from whence there is a fine view of the other mountains and Helvellyn towering above them in the following form . In one of the recesses of the mountains opposite to Placefell there is a lead mine, and the white smoke arising from the smelting of the ore, and ascending into the air, amidst the surrounding darkness of the ravine, added not a little to the effect. There are one or two other lead mines which we had passed in the valley descending to the lake.

I now procured a little pony at the Inn, scarcely bigger than a Shet-

land, and rode along the margin on the west side of the lake, some four or five miles, to look at a waterfall called Airey Force, the situation of which, in a deeply-wooded glen in Gowbarrow Park, at a little distance from the lake, is pleasing enough. The path that leads to it is only wide enough for one person. I took my little poney up to the fall, but had some little difficulty in turning him round in so narrow a place. There is no road on the side immediately opposite, the mountains sloping abruptly down into the lake. The ride back from the fall, towards the head of the lake, well repaid me, and I should imagine that Ullswater cannot be seen from any better point of view.

Having gratified my curiosity, and satisfied my appetite, which the mountain air had rendered rather more than usually craving, I hired another gig and horse, and retraced my steps to the head of the valley. They are here building a little Inn, probably one of the wildest spots in the neighbourhood. The road now enters another valley, at the extremity of which lies Ambleside. This truly may be called a beautiful vale, embracing as it does a rich view of verdant fields and fine sloping woods, with a small portion of Windermere, terminated by several ranges of mountains, of somewhat regular formation; and beyond them I fancied I caught a glimpse of the sea. The descent to this little village is very pretty, the houses not being visible till you come close upon them. It is situated at the foot of the hills, some little distance from the lake, of which there is no view from Ambleside, without ascending the hills. Behind the Inn where I am staying, the "Salutation," there is a pretty little cascade, some half mile off, called Stock Gill Force.

As I had missed a favourite spot on the left bank of Windermere, about a mile and a half from Ambleside, called Low Wood Inn, by going through the valley of Troutbeck, I walked to look at it. The inn is prettily situated near the lake, and commands a fine view of the upper part, with the surrounding mountains. There were several little pleasure yachts moored off this place.

Fearing that I shall already have tired both you and your readers; and, having little else to say of the spots I have visited, I shall conclude my present epistle, intending to address my next to you from Edinburgh, and to continue my rambling account of my progress through the district of the lakes.

I remain, your obedient servant,

A MIDDY ASHORE.

## Nabal Chronicle.

### SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.

THE season of the year has rendered the demands upon the funds of this Society both numerous and heavy, since we last gave a report of the cases relieved by the Institution. We feel much pleasure however, in mentioning that the finances have increased so as to enable the Committee of Management promptly to render the required aid.

The Society extended assistance to the surviving relatives of five fishermen of Staithe, who were lost in their cobsles while they were out-fishing. Two men out of the five left widows and children; the other three left aged parents, who had been entirely dependent upon these sons for support. In some of these cases nets were given to the sufferers to enable them to gain a livelihood by letting them out. In others, the parties were assisted towards paying a year's rent of their cottages.

Relief has been afforded to two pilots of Redcar, subscribers to this Society, who had their boat, whilst in tow by a steam-tug, run down by a brig, and lost.

The crew of the Cleveland of Hull, who were wrecked on the Scroby Sand, narrowly escaped from drowning, and saved nothing but the clothes they had on. They were supplied with clothing and food, and forwarded to their homes.

The Yarmouth Auxiliary Society have relieved a lad, who was serving on board the William and Jane of Cromer, when the vessel was wrecked on the Scroby Sand. He was supplied with provisions, and forwarded to Ipswich.

The Secretary, Mr. West, having read in the public papers an account of a melancholy accident at Dunure, on the coast of Ayr, wrote to inquire of the resident clergyman, if the facts were properly stated, and he obtained a reply that all the particulars were correctly given. The Secretary then laid the case before the Board: the details are as follows; "Three fishermen were out in a boat for the purpose of lifting their nets; and while close upon the shore, a sudden squall overturned the boat. One of the three reached the shore completely exhausted; the other two sank to rise no more. They were both married men: one left a widow and four children; the other, a widow and eleven children, ten of the number being daughters. A sum of money was remitted to the clergyman to be expended by him in the relief of the widows and orphans.

Auxiliary Societies have been formed, and Honorary Agents appointed at the undermentioned places since our last report:

Beumaris,	Derby,	Harwich,	Maryport,	Westhaven,
Bodedern,	Dumfries,	Kirkaldy,	Newport,	Weymouth,
Bridgewater,	Dundalk,	Kilrush,	Pembroke,	Wick,
Brecon,	Dunbaff,	Killybegs,	Penryn,	Wisbeach,
Cambridge,	Epsom,	Leigh,	Rochford,	Workington,
Chester,	Fishguard,	Llanelly,	St. Ives,	and
Cromer,	Galway,	Minehead,	Southampton,	Wainfleet.
Dartmouth,	Hartlepool,	Maldon,	South Shields,	

## SHIPWRECKS AND UNDERWRITERS.

The following letter appears to refer to the brig *Bure*, No. 20, of our table of wrecks, and may be of importance:---

Gentlemen,---In your esteemed Publication, No. 11, of November, 1839, p. 747, I read the following words: "Weed, &c." I do not think it necessary to transcribe the whole sentence, written by a master of a British merchant vessel. I cannot but agree with these words, the more so, as shortly after having read them, the following circumstance took place with a British vessel, at the eve of her entering in our Port of Texel: it was the brig *Bure*, loaded with a cargo of iron, cotton, &c., bound from Liverpool to Amsterdam. This vessel sailed from Liverpool on the 11th of September last, in company with several other ships having the same destination: all these latter had a short voyage, whilst the former alone first ran into the Port of Poole, and then into that of Harwich: at last she came to anchor at five fathoms, near the coast of the Isle of Eyerland. Here the Master looked out for a pilot; but, as he states, (and I am inclined to believe it) there was none to be found. He then went on shore, with two men of his crew, leaving the vessel under charge of the mate and four sailors, *instead of sending the mate and remaining himself on board of the brig, as was his duty.* On his arrival at Texel he applied to the Vice Consul of Great Britain, who advised him to hire a boat for assisting him in bringing his vessel in deep water, and into the New Deep, which he did accordingly. On coming however, on the spot where he had left his vessel, he found the buoy with the anchor and chain, (the latter slipped) but no brig. He returned to the Consul with this intelligence, and intimated to him that as there was no vessel to be found there where he had left her, he had now made an agreement with another fisherman to bring him to the Vlie and Terschelling, to ascertain whether the brig had arrived there; but, neither was the brig in these ports. He is now, at this moment, still looking out for his brig, not knowing to what part of the globe she has gone. As the cargo of the brig has been insured in Amsterdam, you will conceive that our underwriters are, on the one hand, very anxious to get some information respecting the vessel, whilst on the other hand, they cannot refrain from condemning, in the strongest terms, the unwarrantable conduct of the aforesaid Master of the Brig, *Bure*, who left his vessel to his mate, in order to go on an errand, which a second officer might, and according to my humble opinion, ought to have fulfilled. Although, by making this circumstance known to the public, the loss, in the present instance, cannot be averted; yet, I have thought it might answer this purpose for the future, to the benefit of my fellow underwriters abroad. Trusting you will not refuse to admit these lines in your valuable publication, I have the honour to remain, respectfully, Gentlemen, your obedient servant,

J. C. CHILCHER, one of the Underwriters.

*Amsterdam, Nov. 20, 1839.*

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 THE CYCLOPS STEAM FRIGATE.

ON Friday, the 13th of December instant, this splendid vessel left her moorings at Blackwall for a trial trip down the river, and to proceed

to Sheerness, to take in her guns and equipments. This, being the largest Steam Frigate in the world, attracted much attention, and throughout her passage down the river was an object of great curiosity and admiration.

The trial was made under the directions of the Lords of the Admiralty and their officers, several of whom were on board, viz., Sir C. Adam, the Secretary of the Admiralty Mr. Moore O'Ferrall, Sir E. Parry, Sir Wm. Symonds, Captain Nott, Captain Austin, &c., &c.

Her performance was most excellent; the speed was found to be about 10 knots or  $11\frac{1}{2}$  miles in still water, her engines working 21 strokes; and it was universally remarked that there was an entire absence of the unpleasant tremulous motion, so generally found in other Steamers.

After proceeding close to the Nore Light, she turned and met the "Fearless" Admiralty Steamer, which accompanied her down, and their Lordships embarked in that vessel to return to Woolwich, while the Cyclops proceeded up the Medway, and made fast to the buoy off Sheerness Dock Yard.

This vessel was designed by Sir William Symonds, and built under his immediate superintendence, at Pembroke Dock Yard. She combines in a most eminent degree the qualities of both sailing and steaming, together with such improvements as have suggested themselves to her designer from the experience of the "Gorgon."

She is propelled by two engines of 160-horse power each, made by Messrs. J. and S. Seaward and Capel, on the new principle adopted by them, by which they dispense with the large cast iron side frames and sway beams, the cross heads, side rods, &c. &c., and thus bring the weights of these engines to 70 tons less than they would have been if they had been made on the common beam principle, and thereby also effect a very important saving of space in the length of the engine room. These engines are fitted with a contrivance (which is protected by patent) for warming the feed-water on its passage to the boiler, by causing it to pass through a number of copper pipes around which the spent steam from the cylinder circulates on its way to the condenser, by which means the heat of the feed-water is elevated about 60 degrees above the usual temperature, and a saving thereby effected in the consumption of fuel of 7 per cent.

There are four copper boilers for supplying the above with steam, made entirely of copper, and placed in pairs, back to back with a fore and aft stoke hole; these boilers are clothed on the system first used by Messrs. Seawards, and since introduced into the Navy for H. M. Steam Ships, for the prevention of the radiation of heat, the advantages of which were evident in the surprising coolness of the engine room. A barometer placed against the side of the boilers only rose to  $68^{\circ}$ , and another in the stoke hole to only  $72^{\circ}$ .

The boilers are fitted with a patent apparatus for detecting and indicating the state of saltness of the water in the boilers, and with a receiver and apparatus for blowing out, when the time for that operation has arrived, by means of which all danger from salting the boilers or blowing out the water too low is entirely obviated, and the boilers may be worked as long with salt water as with fresh.

There are coal boxes placed on each side of the vessel the whole length of the engine room, and holding when full about 450 tons of coals.

Her consumption of fuel by actual weight (the coals being weighed during the trial) was 17 cwt. per hour, equal to 6 lbs. of coal per horse per hour.

The "Cyclops" is commissioned by Post-Captain Austin, late of the "Medea," being the only Steam Frigate in the Navy besides the "Gorgon" of that rank. Her engine room crew will consist of 4 engineers, 12 stokers, and 4 coal trimmers. The actual number of hands, including officers and a Lieutenant's party of Marines will be about 210 men.

Her Dimensions in feet and inches are as follows:—

Extreme length . . . . .	217 9	Engines:—	
Length of upper deck . . . . .	195 2	Diameter of cylinder . . . . .	5 4
Width across paddle boxes . . . . .	57 0	Length of stroke . . . . .	5 6
Length of engine room . . . . .	62 0	Diameter of paddle wheel . . . . .	26 0
Width of beam . . . . .	38 0	Width of wheel . . . . .	8 0
Depth of hold . . . . .	23 0		

Weight of engines, boilers, and water . . . . .	280 tons	Weight of coals for 25 days consumption . . . . .	450 tons
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Draught of water with all her guns, ammunition, engines, coals and stores for six months, 16 feet 6 inches.

Power of engines . . . . . 320 horses | Tonnage . . . . . 1,200 tons

Her Armament will consist of, on the Upper-deck two 98-pounders; one at the stem, and the other at the stern: and four 48-pounders. On the Gun-deck, sixteen 32-long pounders.

**ST. IVES BANK.**—We understand Lieut. Sheringham has been lately engaged in ascertaining, by direction of the Admiralty, the nature and position of an extensive shoal-bank of foul ground, reported to be lying in a N.W. direction from St. Ives; and, also in enquiring what foundation there is for the alarming statement of some local fishermen, who assert that they have discovered a dangerous rock in its neighbourhood.

The survey, it appears, is concluded for the season; but, it is expected, will be resumed on the return of fine weather. We are happy, however, to inform our nautical readers that, although the examination is not yet completed, sufficient has been done to warrant the doubt that any such very high rock as was supposed exists; and therefore the great anxiety and alarm that such a report is calculated to create, may now be very reasonably dispelled.

The bank is said to lie N.N.E. and S.S.W., (*mag.*) is about three miles long and less than half a mile broad, composed of rock with very irregular soundings on it, varying from nineteen to thirteen fathoms at low water, and between it and the coast is twenty-six fathoms.

North extremity of it bears from Longships, N. 11° E., 11.6 miles Ditto; from St. Ives Head. N. 54 W. 13.7.

South extremity of it bears from Longships, N. 7½ E. 8.8. Ditto. Ditto, from St. Ives Head. N. 66¼. W. 13.4. *Magnetic Bearings.*

**BIRD CAY SHOAL.**—It is stated in the "South Floridian," printed at Cay West, that the Bird Cay Shoal, bearing S.S.W. from the light-house on the Portugasses, extends six miles from land, instead of two, as laid down on most of the charts of the gulf. Navigators from northern ports, who have examined the shoal, confirm this statement.—*Shipping Gazette*

**LIGHT ON THE LEMAN AND OWER SHOALS.**---It appears by the following Notice of the Trinity House, dated 26th November, 1839, that a light-vessel will be placed thereat, previously to Wednesday the 1st day of January next, and the lights exhibited therein on the evening of that day, and thenceforth continued every night from sun-set to sun-rise.

This light vessel will be placed in 16 fathoms at low water spring tides, about two miles to the westward of the shoal part of the Ower, and in latitude  $53^{\circ} 9'$ , N., and longitude  $2^{\circ}$  east of Greenwich.

The lights will be exhibited from two lanterns, placed on separate masts, the foremost of which will revolve, and burn at an elevation of 38 feet above the water's edge, while the aftermost will be a fixed light, and burn at an elevation of 27 feet above the same level.

Mariners are to observe that the light at the Lemman and Ower is to be used only as a warning light to indicate the position of those dangerous shoals, and the vessel must not be approached in any direction, either by night or by day.

Note.---From this light vessel the shoalest part of the Ower will bear N. by W.  $\frac{1}{2}$  W., distant about 2 miles.

And the shoalest part of the Lemman W. by N., distant about 4 miles.

By Order.

J. HERBERT, Secretary.

**St. ANNA LIGHT, MARANHAM.**---We have already cautioned, (p. 659) seamen against the disappearance of this light. The following has been received at Lloyd's:---"The Santa Anna Lighthouse.---Maranham, Oct. 16.--The president of this province has given orders to discontinue the lighting of the Santa Anna Lighthouse, on account of the persevering attacks of the rebels; so that as long as disturbances continue in this province, captains ought to place no reliance upon the Santa Anna light."

**SKERVUILE ROCK.**---The Commissioners of the northern lighthouses hereby give notice, that a beacon has been erected upon the Skervuile, or Iron Rock, of the position and appearance of which the following specification is given by Mr. Stevenson, their engineer.

The Skervuile, or Iron Rock lies  $2\frac{1}{2}$  miles East by compass from the small isles of Jura, from Mackermac Island three miles W. by N.  $\frac{1}{2}$  W., and from the western end of Gigha Island N. by E.  $\frac{1}{2}$  E, distant thirteen miles. Skervuile lies in the fair way of the Sound between the Island of Jura and Knapdale in Argyllshire.

The Beacon which is erected upon this rock is of masonry. The lower part is the frustrum of a cone, measuring twelve feet in diameter at the basement course, and seven feet six inches at the top. This cone is surmounted by a cornice with three steps, which terminate in a ball six feet in diameter, elevated about thirty feet above high water of spring tides.

By order of the Commissioners of the Northern Lighthouses.

(Signed)

C. CUNNINGHAM, Sec.

Edinburgh, Nov. 8.

**STEAM NAVIGATION AT THE CAPE.**---The following is an extract from the Report of the Steam Navigation Company. The vessel \* is per regis-

\* She appears to be the only one owned by the Company.

ter 194 tons, exclusive of the space occupied by the machinery. She stows about 115 tons of cargo, and has sleeping accommodation for 24 passengers in the saloon, and 14 in the fore-cabin, besides berths for a few deck passengers.

Since her arrival, the Directors have, with the exception of one trip to Saldanha Bay, kept the "Hope" constantly running between Table Bay and Algoa Bay, touching occasionally at intermediate ports: and she has been found to answer all reasonable expectations as regards her capability of contending with the severe gales of wind and heavy seas met with off this coast, in the winter season.

From her arrival to the 30th June, (the date to which her accounts have been made up in conformity to the Trust Deed), she has made eleven voyages to Algoa Bay and back, conveying 178 adult passengers and 15 children in the saloon; 77 adults and 22 children in the fore-cabin: and 92 deck passengers, exclusive of passengers to Simon's and Saldanha Bays. She has likewise, at the same time, conveyed 1,055 tons of cargo to Algoa and Mossel Bays, and 250 tons from those ports to Cape Town, delivering the same in excellent order.

The Directors regret to inform the Share-holders, that, owing to the neglect of the London Committee, in not keeping them properly supplied with coals, and from the two cargoes sent proving of very inferior quality, an otherwise unnecessary expense has been incurred in purchasing fuel in Cape Town and Algoa Bay, at high prices. They have also had many difficulties to contend with, and prejudices to overcome, in introducing Steam Navigation on our coasts, before they could get the business of the vessel into a proper train of management.

Your Committee beg further to state, that great delays have taken place, both in Table Bay and at Port Elizabeth, owing to the difficulty of landing or shipping in bad weather in our open roadsteads.

The contemplated construction of a jetty at Port Elizabeth, and the additional wharfs in Table Bay, will, it is hoped, remove this complaint.

**BRITISH QUEEN AND PRESIDENT.**---Dimensions of the Steam Ships British Queen and President, belonging to the British and American Steam Navigation Company.

	British Queen.	President.
Length extreme from figure-head to taffrail . . . . .	275 ft 0 in.	268 ft. 0 in
— on upper deck . . . . .	245 0	243 0
— on main deck . . . . .	.. ..	224 0
— of keel . . . . .	223 0	220 0
Breadth within paddle boxes . . . . .	40 0	41 0
— over bends . . . . .	40 4	41 4
— over all . . . . .	64 0	68 0
Depth . . . . .	27 0	.. ..
— from spar deck . . . . .	.. ..	32 9
— from main deck . . . . .	.. ..	23 6
Tonnage . . . . .	2016 tons	2366 tons
Power of engines . . . . .	500 horses	600 horses
Diameter of cylinder . . . . .	77½ in.	80 in.
Length of stroke . . . . .	7 ft.	7 ft. 6 in.
Diameter of paddle wheels . . . . .	81 ft.	30 ft.

The British Queen and President are believed to be the longest ships in the world.



**THE PRESIDENT.**---Yesterday afternoon, at half-past three o'clock, this magnificent steam ship was floated out (not launched) from the dock where she was built, at Messrs. Curling and Young's ship-builders, at Limehouse, into the Thames, amidst the cheers of many thousands of spectators. The tide was not sufficiently high on Saturday to float her, and great was the disappointment to the people assembled; but since that time a great quantity of ballast has been taken out of her, and yesterday, half an hour before high water, she was towed out of the dock by three Greenwich steamers, and proceeded down the river to Blackwall, where she was safely moored. She will remain in her present situation for a few weeks, when she will proceed to Liverpool to take in her engines and machinery.

A table appears in p. 858 of our last volume, in which the dimensions of the President are stated differently from the above, owing we presume to alterations that have been made since the report in which they were given was drawn up.

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**THE BRITISH FLAG AT MONTE VIDEO.**---A letter from Monte Video, dated September 3, states that Her Majesty's schooner, "Spider, six guns, Lieut. J. O Reilly, (a) while working up the River Plate, in the night time, was fired into by a French row boat, and the leadsman wounded. Information was immediately forwarded to Captain Herbert, of the "Caeliope" Frigate, the senior British officer on the station, of the circumstance; and he instantly demanded of the French Admiral an explanation. It appeared the boat was without an officer, and Capt. Herbert therefore requested that an inquiry might be immediately instituted into the conduct of the captain of the French ship to which the boat belonged, for allowing his boat to be without an officer, while on such duty. To this request the French Admiral demurred; but said, he would write home for instructions, at the same time offering to indemnify or reward the wounded man. This was promptly refused by Capt. Herbert, with true English spirit, who tersely answered, the British government could and would reward all who suffered in its service. Thus the matter rests.--*Hants Telegraph.*

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#### THE BRITISH FLAG AT MAURITIUS.

(From the *Liverpool Mail.*)

We have been exclusively favoured with the following copies of a correspondence which took place in the month of September, at Port Louis, in the Isle of France, between Sir W. Nicolay, the governor, and Captain Thomas Driver, of the British ship, "Greenlaw," then lying in the harbour there. On Saturday, the 7th instant, the French ship-of-war "Isere," also at anchor there, with several other ships belonging to the French navy, hoisted at her mizen peak, uppermost, the French flag, then the flags of different nations, but, under all, the revered flag of our beloved country, the glorious ensign of St. George. This was perceived and resented by Captain Driver. On the following Sunday, at 8 a m., he converted the telegraph flag into a French one,

and stopped it under the bowsprit. At 10 a boat from the French man-of-war came alongside, and desired that he would haul the flag down. This he refused to do, unless the port captain should come on board. The next morning two of the French officers went on board the "Greenlaw" to demand private satisfaction. Captain Driver consented to meet one of them, but finding he was an inferior officer, he withdrew his consent, and offered to meet either of the captains with pistols, and referred them to captain King as his second. This was not accepted, and a complaint was made to his excellency the governor, by the Frenchmen, which led to the correspondence in question. The French captains insisted that, in addition to the apology which Captain Driver was called on, in the name of his Sovereign, to make, he should go on board the French ships and make his obeisance there on the quarter deck. This he would not do, and told the governor that before he would submit to such a degradation he would bare his breast to a file of soldiers and be shot; and, as the Frenchmen could not prevail on him to suffer the indignity which they wished to confer, they expressed themselves satisfied with the apology dictated by the governor, and which Captain Driver dared not refuse to sign, as he was ordered in the name of her Majesty the Queen, to subscribe to the document presented to him. It appears to be quite clear that the British flag was hoisted as stated, on board the "Isere;" but no notice would have been taken of the insult but for the chivalric determination of Captain Driver. The governor, it seems, has pledged himself to take the conduct of the French officers in hand, and we hope he will do his duty.

"CAPTAIN THOMAS DRIVER, SHIP GREENLAW."

"Colonial Secretary's Office, Sept. 11, 1839.

"Sir,—Your conduct in offering a deliberate and gross insult on the French flag on the morning of Sunday having been brought to the notice of the governor, as well as the grounds upon which you have attempted to justify it, his excellency feels it incumbent on him to make the following observations on the matter.

"It cannot be admitted that every individual subject in a British colony has a right to take upon himself to resent what he may consider to be an offence to the national honour, which is there placed in the keeping of the representative of the Sovereign; and your duty in the present case, therefore, obviously was to have made a representation on Saturday, to his excellency the governor, directly, or through the proper local officer (the harbour master), when it appeared to you that an insult had been offered to the British flag by the manner in which the national ensigns were displayed on board the French ship of war Isere.

"If, on enquiry, your complaint had been found to be substantiated, the governor would have lost no time in calling for explanation, and for such reparation as the case required. But, by adopting the course you have done, this reparation, supposing it to be due, can neither be demanded nor obtained, unless proper amends be made by you for the more offensive act on the British side; and which being, in his excellency's opinion, most unquestionably due, he calls upon you in the Queen's name to make such further reparation as your offence requires.

"His excellency takes the honour of the British flag under his own charge, in regard to the position in which it was hoisted on board the Isere: and, if fully corroborated, he will require, and feels assured that he will obtain, just reparation for the disrespect so shown to it. But, what he directs me to call for from you is an acknowledgment that you will abide by the decision which the governor may adopt in this matter, and that you will fulfil the conditions of it fairly and fully. From any British subject his excellency considers that he would have a right to call for this act of confidence; but as an officer in the naval service of her Majesty, he thinks that you are specially bound to accord it, and to leave the adjustment of this unfortunate occurrence entirely in his hands.

"I have the honour to be, sir, your most obedient servant,

(Signed)

Geo. P. DICK, Colonial Secretary."

“TO THE HON. G. F. DICK, COLONIAL SECRETARY.

“Greenlaw, Sept. 12, 1839.

“Sir,—I have the honour to acknowledge the receipt of your letter of yesterday, relative to the insult offered to the British nation by the French man-of-war *Isere*, and resented by me.

“I am compelled to acknowledge the course I adopted was not proper. I ought, as you have stated, to have brought it to the notice of his excellency the governor, through the proper channel, and I feel extreme regret at not having done so, and beg to offer to the representative of my most gracious Sovereign all the reparation in my power—my most humble apology for this unintentional mark of disrespect, which I hope he will be pleased to accept.

“I have offered to the French nation all the reparation I should consider they have a right to demand, by letter sent to Captain Royer, yesterday afternoon, which I think you had not seen when you despatched yours to me.

“I beg most respectfully to bring to your recollection that the French ship offered the first insult to the British nation. I most sincerely hope that his excellency the governor will consider what I have offered to be as much as the French nation can possibly expect.

“I have the honour to be, sir,

“Your most obedient servant,

“THOMAS DRIVER,

“Commanding the *Greenlaw*.”

(Signed)

“TO CAPTAIN THOMAS DRIVER, COMMANDING THE GREENLAW.

“Colonial Secretary’s Office, 12th Sept., 1839.

“Sir,—I have had the honour to lay before the governor your letter of this date, and am directed by his excellency to inform you that he does not consider it an answer to the communication made to you by me yesterday, by his orders.

“His excellency, therefore, desires me again to call upon you to state distinctly whether it is your intention to agree to the conditions there proposed, and to abide by the decision of his excellency, as to the reparation you are to make for the insult offered to the French flag.

“The governor directs me to add, with respect to what passed on board the *Isere*, that that matter having now been brought to his knowledge, is one which concerns him alone, and not you. And he cannot admit any right on your part to make any stipulation whatever in regard to it.

“I have the honour to be, sir, your most obedient servant,

(Signed)

“GEO. F. DICK, Colonial Secretary.”

“CAPTAIN THOMAS DRIVER, SHIP GREENLAW.

“Port Louis, 13th September, 1839.

“Dear Sir,—In compliance with your request, I hereby transmit you an authenticated copy of the apology, which, at the governor’s dictation, you this day made, in his presence, to the senior French naval officers.

“I remain, dear sir, your’s truly,

(Signed)

“F. H. ROBZ.

“CAPTAIN DE LA ROGUE DE CHANPAY.

“Government House, Port Louis, 13th September, 1839.

“As the senior officer of the French royal Navy in this port, I now, in the presence of the governor of this colony, the representative of my Sovereign, and by his excellency’s desire, hereby offer to you the fullest and most ample apology for having on the morning of the 8th instant, offered a gross insult to the flag of your nation.

“I can only say, in my justification, that I did it under strong feelings of resentment, for that which appeared to me, as well as to many others of my countrymen, an intentional insult offered to the revered flag of my Sovereign.

“All the reparation for the offence I have committed, that may be due from a subject of Great Britain to his Majesty the King of the French, I now make without hesitation or equivocation.—I have the honour to be, sir, your most obedient servant,

(Signed)

“THOMAS DRIVER,

“Master, ship *Greenlaw*.”

Post-office, September 9.

“Sir,—As the ship under your command lays in such a direction as to enable you to see any flags hoisted on board the French ship *Isere*, I have to request you will

be pleased to inform me what flags were hoisted on board that ship, on Saturday, and, if any, what they were, and how placed. I shall be obliged by your being as particular as possible. And am, sir, your very humble servant,

“CHAS. ROYER, Harbour Master.”

“To Captain Stroyan, ship Caledonia.”

“Ship Caledonia, Sept. 11, 1839.

“Sir,—In answer to your letter of this date, I beg leave to state that, being on board my ship at the time of the English colours being hoisted on board the French ship (Isere), I can with confidence speak of their position, viz.,—Underneath the French flag, on one line, was hoisted, first the American; secondly, flags of different nations, of which I cannot recollect the names. On the other halyards were hoisted, in conjunction with other flags, the British colours, but lowest of them all St. George’s ensign, scarcely clear of the taffrail.

“I should have called on you personally to have stated my disapprobation of such insulting conduct in a British port, towards her Britannic Majesty, but the multiplicity of business has prevented my doing so.—I have the honour to remain, sir, yours, &c.

“Capt. Royer, R.N., &c.”

“J. R. STROYAN.”

#### REPORT ON STEAM-BOAT ACCIDENTS.

SHOULD the decision of the board be objected to, on the report of the surveyor (if the objection regard the machinery), it shall call in the aid of one or more engineers to survey and report in conjunction with such official surveyor.

Special surveys to be paid for by the owner or owners of the vessel, according to a fixed scale.

The first survey of the hull of a new vessel to be made during its construction, and a specification of it transmitted to the board, as is now done by the surveyor of Lloyd’s to the committee.

A survey of the hull to be made during each of the first two years, and a survey every six months subsequently. All steamers to be docked, beached, or laid on the gridiron (as circumstances permit,) and surveyed, after sustaining any injury by taking the ground, or otherwise, under penalty.

The first survey of the boilers, engines, and machinery to be made whilst they are being fixed in the vessel, and the requisite details of them to be reported to the board.

Boilers, engines, and machinery to be surveyed every six months after the first year, and all serious accidents to be reported.

The surveyors to report on the fitness of a vessel, whether as a sea-going, or river steamer.

3. License to express whether it be granted for cargo only; for towing-vessels; for the conveyance of passengers; or for these purposes combined; also whether the vessel be intended to apply as a river or sea-going steamer.

License to ply with passengers to be granted, or withheld, as aforesaid; a duplicate of which, or certificate to the same effect, signed by the board, to be exhibited in the cabin or other conspicuous part of the vessel. All public advertisements of steamers to state whether licensed to carry passengers or not.

An annual charge for each license to be made on all steam-vessels, varying according to a scale of size and capacity, such charge to be in no case less than 1*l.*, nor exceeding 5*l.*

4. That the surveyor shall ascertain that the safety-valves be suffi-

cient to pass all the steam which the boilers can generate in their ordinary state of work, at the pressure determined by the weight on the valves; the maximum of which pressure shall be fixed by the maker of the engines, or boilers, and the valves be loaded accordingly.

5. That, after an assigned period, no passenger license can be granted to any vessel having safety-valves whose spindles or levers are exposed on deck, or capable of being loaded externally, unless satisfactorily protected. Penalty on engineers, masters, or others, for loading valves beyond the weight ascertained by the surveyor, and regulated as above.

6. That in all new steamers, and, after an assigned period, in all steamers now afloat, glass water-gauges, and mercurial pressure-gauges, shall be required to be fitted to the boilers, to entitle the vessel to a license to ply with passengers.

No perfect mechanical substitute can be found for care in the management of the steam-engine at sea or on land; nor do we think that the use of the fusible discs enforced by the French laws would be productive of additional security; nor, indeed, that any complexity of apparatus, attached to boilers, would contribute to the attainment of that object.

Apparatus, however, for indicating the level of water and pressure of steam in boilers is essential to their safe and economical management, and is of far greater import to the boilers of marine than of land engines; accidents to the former, or failure in their supply of steam, being attended with peculiar dangers and disasters at sea, from which land boilers are exempt. Yet, it is a fact, accounted for, perhaps, by the circumstance of steam vessels being owned and managed, generally by persons unacquainted with the nature of the steam engine, that these simple instruments are much more rarely to be found attached to marine than to land boilers, which latter are usually under the direction of parties of mechanical education or knowledge.

7. That, in the event of the surveyor having information that any boiler be deteriorated in strength, or unsafe at its working pressure, in the interval of his periodical surveys, he shall be empowered by the board, on his representation, to examine it; and in the event of the boiler proving faulty, the board shall suspend the passenger license, until satisfied of the safety of such boiler.

8. That no steam-vessel be permitted to ply which is not furnished with a binnacle and compass, in good order.

9. That, after an assigned period, no sea-going steam-vessel which carries coals on the tops, or about the sides of the boilers shall be entitled to a passenger license, unless the boilers be protected by a shell of metal, or other sufficient security.

10. All river steamers to carry one effective boat---coasting and Channel-steamers two or three boats, according to their size---and ocean steam-ships four *minimum*.

The surveyor to ascertain that these boats are kept in serviceable condition, and ready for use on emergency.

11. All steamers to be provided with sufficient hoses to convey water to any part of the vessel, with a serviceable outfit of water-buckets; and a moveable fire-engine to be carried in all coasting, channel, and ocean-going steamers.

The proposed system of registration should include a classification of

steamers; and, as the character to which each would be entitled in its class would depend on its general state of efficiency, we are disposed to think that many other important requisites for attaining the utmost practicable degree of security would gradually be adopted by owners, without compulsion, such as water-tight bulk-heads in new vessels; powerful extinguishing pumps, worked by the engines; connexion of the condensers with the bilge-water; disengaging apparatus for the paddle-wheels; heavier and more effective ground-tackling, &c. The publication of accidents, and of their causes, would also warn steam-vessel owners, commanders, and engineers, and instruct them how to guard against disasters.

In framing these recommendations, our object has been to suggest practical means for further securing public safety, without inflicting vexatious rules on steam-vessel owners; we believe that their adoption would tend materially to promote, and in no respect to cripple the progress of navigation by steam. We are confirmed in these views by finding them so much in accordance with the majority of opinions expressed in the appendix, and they correspond with several of the regulations enacted by foreign states. They are, however, much less stringent in their nature than those proposed by many of our correspondents; and we consider them much less onerous, and more suitable to the peculiar character of the British steam-marine, than the laws of other countries. An abstract of these laws is annexed, and the whole are given in the appendix.

There is one additional measure strongly advocated, but we feel great doubts of its practicability---viz., that of compelling the engineers employed on board steam vessels to undergo preparatory examination, and to find surety for their good behaviour. There is no existing board at the different ports competent to determine the fitness of this class of men for their occupations; and we think it would be difficult for any local surveyor to decide on individual qualifications. Important as we think it to raise the grade of engine men, who have, in fact, in their hands, the lives of all on board, we are of opinion their means of doing injury to life or property, would be so much abridged by the foregoing regulations, that it would suffice to impose a penalty upon them for any wilful abandonment of duty, gross negligence, or drunkenness.

We feel considerable hesitation in offering any suggestions as to limiting the number of passengers in steam vessels, a measure which has been strongly urged upon our attention. Cabin passengers take care of themselves, and will not go on board unless there be adequate accommodation; not so, however, deck passengers, from the increased number of whom alone danger is to be apprehended.

Legislation with respect to the number of passengers must have reference to the tonnage, either by builder's measurement, or by register; but the stability of the vessel in carrying a load of passengers on deck, or in carrying a due proportion of sails, is materially affected by the weight and condition of the cargo under deck. Our difficulty on this subject is, therefore, much increased by the circumstance that a vessel carrying cargo under deck is, for that very reason, better qualified to take a deck-load of passengers with safety, than vessels, although exclusively appropriated to passengers, in consequence of the greater stability which vessels acquire, in a sea way, by reason of the weight of cargo carried below.

In order to diminish the frequency and danger of collisions, and being convinced of the necessity for establishing a definite "rule of the road," and an uniform system of signals, for the government of steam vessels, we should have introduced into the foregoing outline, distinct provisions on the subject, had it not been that a measure of this kind has been advised in the Report of the Commissioners appointed to inquire into the Laws and Regulations relating to the Pilotage of the United Kingdom, to be incorporated in a new Pilot Act. Referring, however, to the tenour of our instructions, as to "the nature of the accidents in steam vessels, and to the means of preventing them," and on a review of the valuable information supplied to us on this head, we cannot avoid recommending the adoption of a system which has for so many years been found practically efficient, against which no objections have hitherto been urged, and which has met the concurrence of so numerous a body of steam-navigators. The system we advise is:

1. As to the "rule of the road;" that steam vessels approaching and passing each other should starboard their helms, with the view of keeping on the starboard side of each other, respectively, as far as practicable.

2. As to night-signals.---The want of an uniform and sufficient system of lights has been so fruitful a source of collision and injury: we recommend a system similar to that now practised by a numerous class of commanders of private steamers (described p. 48), and which has been substantively approved of and adopted by the commanders of Her Majesty's steam packets at Liverpool, viz., that in all sea-going steam vessels there be a white light attached at the foremast head, visible in clear weather from eight to ten miles; a white light attached to the fore part of the starboard paddle-box, which can be seen six miles in clear weather; and a third light, which is red, attached to the fore part of the larboard paddle-box, visible about three miles. The three lights can only be seen at one and the same time when right ahead, or nearly so; in any other position, before the beam, two only are visible, and their colours define the position of the vessel.

3. That the obligation to carry some powerful steam whistle, bell, or gong, be part of the proposed law, as regards steam vessels; also that their rate through the water be defined, during fog, and thick weather, in crowded waters, whether plying by day or night.

It is also obvious that some regulations are essential to determine the nature and enforce the carrying of lights in river steamers, sailing vessels, and vessels at anchor.

In submitting these recommendations, we are justified in our expectations of their producing the desired effect by the concurrent opinions of two select committees of the House of Commons; and we cannot more satisfactorily conclude our report than with the following extract from the report of the last committee, dated the 14th of October, 1831, since which period we have shown such numerous and calamitous disasters to have occurred:

"Your Committee submit that the legislative enactments to the foregoing extent cannot prove onerous or detrimental to the proprietors of steam vessels in any degree to counterbalance the security and satisfaction they are likely to afford the public; but that, on the contrary, it is probable they will eventually prove advantageous to the steam boat proprietors themselves, from the increased confidence which will thereby be created in this mode of conveyance."

## ABSTRACT OF THE LAWS AND REGULATIONS OF FOREIGN AFFAIRS.

### UNITED STATES OF AMERICA.

1. A special enrolment is required of every steam vessel, and a license to ply must be obtained, under penalty.

2. Inspectors are appointed, whose business is to examine and report on the hulls of steamers once every 12 months, and upon the boilers and machinery once every six months; they are to grant certificates of ascertained sea-worthiness to the owner or master, and cause a copy to be posted up in the most conspicuous part of the vessel.

3. Owners or masters must apply for this inspection within the periods prescribed, under the pain of forfeiting their license; owners and masters are held responsible for all damages to property or passengers, if they have not a competent number of experienced and skilful engineers on board.

4. Safety valves are to be raised (to ease the boilers) at every stoppage made to take in cargo or passengers, under penalty.

5. Vessels of 200 tons are to be provided with at least two boats, and those above that tonnage with at least three boats, capable of carrying 20 persons each. All steamers to be provided with a fire engine and hoses, and to use iron rods or chains instead of wheel or tiller ropes; also one or more signal lights, under penalty.

6. Captains, engineers, pilots, &c., are deemed guilty of manslaughter, in the event of any life or lives being destroyed through their negligence; and upon conviction, to be sentenced to hard labour for not more than ten years; and in all suits against proprietors of steamers for injury to persons or property, arising from the explosion or collapse of boilers, the fact of such escape of steam is to be taken as full *prima facie* evidence, sufficient to charge the defendant.

Since the passing of these enactments, Mr. Levi Woodbury, Secretary to the Treasury, has been charged by Congress to examine into and report upon the whole subject of the nature, number, and causes of accidents.

We are enabled to give Mr. Woodbury's report (p. 171), which contains, with much useful statistical matter, the heads of additional legislative measures recommended by him.

### HOLLAND.

Surveyors are appointed to test the strength of all boilers according to a prescribed scale, on whose favourable report permission is granted to work.

Two safety valves, at least, are required to each boiler, and the mode and degree of loading them determined.

Leaden plugs of certain dimensions are to be fixed in the boiler plates over the furnaces.

Cast iron boilers are prohibited, except they be made to a given scale of substance, and various regulations are enacted as to the position of the boilers in the vessel, their separation from the cabins, &c.

Surveys to be repeated annually, and special surveys to be made on demand or occasion.

Certificates of sea worthiness are renewed or refused, according to the reports of surveyors.



## BELGIUM.

The laws of this country are very similar to those of Holland.

## FRANCE.

Cast iron boilers prohibited.

High pressure boilers to be proved by the hydraulic press, to at least three times the degree of pressure at which it is intended to use the steam. The owners to find the press and labour.

Rectangular boilers exempted from proof when used to raise low pressure steam: *i. e.*, steam not exceeding 7lb. pressure per square inch above the atmosphere.

All cylinders and cylinder jackets of steam engines, whether using high or low steam, to be proved to three times the working pressure.

The above rules apply to all engines and boilers, whether employed on land or water. The following are special laws as to steam vessels:

1. No steamer to ply until certified to be seaworthy in hull, boilers, and machinery: to undergo subsequent inspection every three months.

2. No certificate granted but on the express condition of the engine man being a skilful mechanic, and possessed of sufficient knowledge to maintain the machinery in good order, and repair it, if necessary. No fireman allowed to act as engine man, but to be subject to the orders of the latter. The engineer to observe precautionary rules, to be hung up for his guidance in the engine room.

3. Every boiler to be provided with a water float and index, two glass water tubes, three gauge cocks, and an open ended mercurial steam gauge. It is also recommended to apply a safety pipe with a whistle at the end of it, to give notice when the water is too low.

4. Two safety valves required to each boiler, of not less than a certain area. High pressure valves to be loaded by means of a lever, low pressure with a solid weight upon them. All additional weight, after the survey prohibited. The prescribed pressure stamped on the valve boxes.

5. Two discs of fusible metal to be fixed on all the boilers, in the steam space or chest, having different degrees of fusibility, and different dimensions; the smallest and most fusible to have an area equal to that of one of the safety valves; the largest and least fusible to have an area equal to four times that of the valve. These discs are supplied after proof of the boilers, and according to the pressure at which it is intended to work: all change of them prohibited, and duplicates to be carried in every vessel.

6. Instructions given for the management of the fires and for the conduct of the engineer and captain reciprocally, when the vessel has to stop, &c.

7. Captains to be personally responsible for all accidents arising from excessive velocity; and owners for all accidents which may arise from the non-observance of the laws and regulations.

8. A ruled log-book or diary to lie open in the cabin, in which passengers are requested to write their observations concerning the events of their journey, and the performance of the vessel: these books to be examined by the police authorities and commissioners on their periodical visits. In the cabin is to be placed a table, indicating,

1. The mean duration of a trip.
2. The time allowed for stoppages.

3. The maximum number of passengers permitted by the law.
4. The right given to passengers to inscribe their remarks in the log-book.
9. The minutiae of the *proces verbaux* by the commissioners, &c., are particularized.
10. Tables of the elastic force and temperature of steam, from 1 to 50 atmospheres of pressure, are given, together with the areas of safety valves and fusible discs proper for each pressure, as determined by a commission of the Royal Institute.

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### LAW DECISIONS.

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**ANNA MARIA.**—*Insurance.*—Plaintiff, Mr. Gronon, in Denmark, represented by Danish Consul, at Hull. Vessel sent over by him, as owner, in October last, from Zetland, compelled by stress of weather to put into Elsinore. Insurance then effected by owner's agent in Hull; extra premium offered and taken. Pursuing her voyage, vessel got on shore, and threw overboard part of her cargo; remainder said to have received some injury in consequence. Arrived at Hull; cargo found wet, insurance claimed. The Jury found verdict for plaintiff; damages 301l. 1s. 8d.

**IBERIA.**—*Collision.*—About 4, A.M., on the 16th of April, the Iberia, with good lights, going free about nine knots; fishing smack, the John and Polly, lay in her course, without steerage way. Hailed Iberia and shewed a light; collision took place. Damage laid at 550l. Decided, that a good look out had not been kept in Iberia, and court pronounced against her accordingly, notwithstanding she had good lights.

**THE PROTECTOR.**—*Collision.*—The Protector, a British ship, with a pilot on board, run foul of *Brazilius* at anchor, bound to Monfleur. As ships are compelled to take pilots by law, the owners are of course exempt from any damage resulting from the measures of the pilot, but amenable for any occasioned by the neglect of their own crew. The protest (for the Protector) grounded on the pilot being on board, but deficient in imputing neglect, default, or incapacity to him was therefore untenable, and decision was accordingly given against the owners of this vessel.

**THE SWAN.**—*Salvage.*—This vessel was fixed in the ice from Oct., 1836, to May, 1837: lost 21 out of a crew of 47, from scurvy. Princess first relieved the crew of Swan, when she had only three men capable of going aloft, and nine more days' provisions on board. Other vessels assisted Princess in getting Swan out of ice and bringing her home. Salvage refused on ground of custom among whalers to render mutual assistance, also that salvors had been already rewarded by Treasury (our readers will remember the rewards offered by Government for assistance to these vessels left in the ice), and also that a moderate salvage should be demanded, as the Swan would soon have

floated out with the assistance of her crew, as the ice, when Princess arrived, was breaking up. The court awarded 700*l.* to the salvors, the services rendered not being customary.

**WAGES.**—*Thames Office.*—8th October, Captain John Cullen, of the James Watt Steamer, summoned for wages claimed by J. Downey, seaman, for voyage from Hamburgh to Leith and London. Proved and admitted that articles of contract were duly signed and performed, but Captain, who was desirous of paying wages, had been served with a legal process from a creditor of the seaman, at Leith, to withhold them against the seaman's consent. Decided that Captain had done right in thus withholding the wages, and that by a passage in the merchant seaman's act, the wages must be paid to him, notwithstanding any attachment previous to their being earned or assignment by him. The wages and expenses were then paid accordingly.

**WAGES.**—Captain Simpson, master of the *Ida*, summoned by Thomas Voysey, a seaman, for amount of wages due for services on a voyage to Jamaica and back. Voysey had been sentenced to 14 days imprisonment, by magistrates at Jamaica; after suffering it he had returned to his ship, and next morning was sent on shore, having said he would not sail in the ship again; and being discharged with his own free will and consent, according to the testimony of the two mates of the *Ida*. The case was therefore dismissed.

**MURDER.**—John Wentworth Fairbank, the steward of the *Secret*, was tried for the wilful murder of Arthur White, the commander of the vessel, on the 14th of April last. After a lengthened trial, the jury were occupied five hours in deliberation, and returned the verdict of manslaughter. He was sentenced to transportation for life.

George Mintz, the mate of the *Secret*, who was the principal witness, against Fairbank, was indicted for the wilful murder of James Shaw and after a short trial, acquitted.

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#### NEW BOOKS.

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**THE MARINE OFFICER, OR SKETCHES OF SERVICE**, by Sir Robert Steele, *Knt. K.C.B., &c.* In two vols. London: Colburn, Great Marlborough Street.

"By land and sea" is the motto of the gallant corps of Royal Marines' and accordingly, by land and sea, the narrative of our Marine Officer's "Sketches of Service," alternately proceeds. Sir Robert Steele is a very pleasant and agreeable writer; he relates his own historical "Sketches" in a racy off-hand style, no less at home with himself and his subject, than with his reader, and with scrupulously honest, even to his own failings; he fights the battles of the last war over afresh, throwing in sprinklings of useful information, is rich in adventures of love and daring, and carries off the attention of the reader fairly through his two little octavo volumes. The chances of service having thrown him into such ships as the *Princess Royal* and the *Victory*, at the meridian of our naval career, his observations are entitled to attention, and their style renders them far more acceptable than the quotations from the *Gazette*, with which he favours

his reader. Some important questions are touched on which we have not room here to discuss. Our author has a warm heart, and he launches the whole of his displeasure at the system of pressing, of flogging, and withal at the neglect of the corps of Royal Marines. Our very limited space will not allow us to say much more than that we fully concur with him, (as all must do) on the horrors of the two first, but consider him entirely mistaken in his views when he would deprive the country of such a resource as the former affords in her last extremity. With respect to the second, we should not have expected from his experience such proposals as he has advanced. We are not of the *Martinet* school, and know that seamen, when they can be made to esteem their officers and respect themselves, can be governed with kindness. But the idea of depriving the captain of a man-of-war of power in his ship, and delegating it to his officers, is a doctrine so fatal to that high discipline which is so essential to our navy, that it is to be regretted it should find an advocate in Sir Sobert Steele.

In our opinion he is entirely mistaken in his views on this subject; and we tell him the country would soon rue the hour in which this should ever take place; a long farewell might England then bid to the efficiency of those wooden walls which have shed lustre on her name, and rendered her hitherto invulnerable! But her naval rulers know better than Sir Robert Steel does.

*THE FLYING DUTCHMAN, by the author of Cavendish. Colburn: Great Marlborough Street.*

Is it utterly impossible to link such a popular superstition as that of the Spectre Ship with aught but scenes of violence, bloodshed, and cruelty? Perhaps it is, and perhaps when fancy roams through those shadowy vales that floats in the mists of Ocean, it is by some mystic law of Ocean's realm prohibited from finding other garb save that of some departed pirate or murderer. Stories of the Flying Dutchman genus abound in our day, written with more or less "power," as it is called, to do evil. It surely is not wise in the sea novelist to engage all the sympathies of his readers in the success of mutineers and robbers on the great "highway of nations." It creates an unhealthy excitement in the mind; induces it first to detest the deeds of pirates, and then to find reasons for rejoicing in their escape from punishment.

The "author" appears to be ambitious of the character of a useful writer. If we may judge from many incidents scattered through his work, he aims at shewing that seamen should be acquainted with certain branches of surgical and other scientific knowledge. But it must diminish the respect which we may feel for such judicious efforts to find him placing men in such situations that they are obviously compelled, in self-defence, to go on, from the commission of one crime to another, until the hand of justice overtakes and annihilates them, undeniably without the concurrence of the reader who has had the patience to follow them through their adventures. Captain Livingstone personifies a monster, now we should hope, at least, out of nature. If any such were fostered into existence, by the improper degree of power entrusted to commanding officers in former years, we will believe for the honour of our own period that we may rejoice over the extinction of the race.

We do not hesitate to award to Mr. Neil's work the praise of eloquent and vivid description, and of exciting that breathless interest in his reader which always attaches to hair-breadth escapes, and a rapid succession of incidents, perilling at every turn the life and honor of his hero. But we object to the waste of all these good qualities in a story, the construction of which has inherent in it the great fault of confounding our moral principles with our human sympathies. All men's hearts are united against the oppressor; and the crimes of which he is the first cause, are viewed of necessity rather with compassion than with horror. The fiction is obviously ill planned that forces this contradiction of feeling upon our moral nature.

Mr. Neil's mode of introducing the missionary character also deserves rebuke. Why should it be placed contemptible? What object is thus to be gained?

It may be that the author intends to satirize some veritable "Jeremiah Hold-out" in his portraiture, but why should he—

"Pleas'd at his heart, because on holy ground,  
Sometimes a canting hypocrite is found,  
Reproach a people with his single fall,  
And cast his filthy raiment on them all?"

In the records of missionary life, Mr. Neil might have found *truthful* characters that would have adorned his pages. Without being at the trouble of inventing so miserable a compound of cowardice and treason, he might have met, ready pictured to his hand, men assuming the missionary office, as capable of heroism, even in the naval or military sense of the word, as any that ever traversed the deep, or stood in the breach. How can it be admitted for the sake of "spicing up" the work to the vitiated palates of some sea-going readers, to weaken the influence of a body of men, to whose christian benevolence and faithful admonitions we may confidently expect our seamen on distant shores may be often indebted.

Mr. Neil has fertile invention, and considerable power of language;—Why should not these talents be employed answerably to their value?

**INLEIDING TOT DE THEORIE, &c.—INTRODUCTION TO THE THEORY OF NAVIGATION AND NAUTICAL ASTRONOMY, by Dr. P. Van Galen. Harderwijk, Rotterdam. 1839.**

A small but comprehensive volume (under 200 pages), in Dutch and English, the former occupying the left hand, and the latter the right hand pages, throughout. The subjects are very simply and clearly treated, and although from its algebraical character the book will be almost, if not quite, unintelligible to the mass of our seamen, yet to those who are enabled to follow its reasoning, it will be found a very compendious and useful repository of those principles and formulæ with which every enlightened navigator should aim to become familiar. Although our copy is without diagrams, we cannot but suppose, from the frequent reference in it by letters to lines and angles, that these most necessary accompaniments do somewhere exist—perhaps in a separate volume. They should have been in the body of the work, affording the obvious advantage of ready reference. The book before us is also without an index, an omission scarcely to be excused in the present day, and one which should assuredly be remedied in the next edition.

**ORIENTAL OUTLINES; or, a Ramblers Recollections of a tour in Turkey, Greece, and Tuscany, in 1838, By William Knight.—Sampson Low, Lamb's Conduit-street.**

This unpretending, but really interesting book is dedicated to the members of the Royal Yacht Club; perhaps as a note book for their pleasure voyages; or, to give a few hints for the direction of their prows. The author has collected much information within a small compass, and has imparted it in a light agreeable style of Writing, well suited to the general subjects of his remarks. His impression of the Turkish Character is highly favourable, and must be received with pleasure, as our relationship with Turkey is too important to our commercial prosperity to allow us to be indifferent to her national disposition. Many incidents in the volume are pleasing and so is the easy, undeclamatory character of the author's descriptions of scenery; but we have no room for extracts, except of the melancholy sketch of the English Hospital at Constantinople: this, as a matter of duty, we place before our readers, in the hope that public attention may be drawn to the subject, and British generosity, or rather humanity may be at once engaged, in removing the dishonour which its condition now inflicts on the British name,

"I call with confidence," says our Tourist, "on every British traveller, into whose hands this humble volume may fall, to visit, if he touch at Constanti-

nople, the English Hospital. Far be it from me to say who is to blame: but I fearlessly assert that this establishment in the Turkish capital is a disgrace to the British nation: it is, or was in 1836, and 7, little better than a dog-kennel, and therein, during the winter of the latter year, I saw the shipwrecked crews of the *Lyra*, *Trio*, and *Midas*, three English merchantmen lost in the Black Sea, shivering with cold, badly fed, scarcely covered with decent clothing, and almost without beds, when the snow was some feet deep in the capital. I can, by witnesses substantiate, if necessary, more than I have set down. Other nations are not so careless of their seamen, the French and Austrians especially, their Hospitals require no reform."

We hope to hear that this state of things is to be altered. Similar descriptions have been given by other voyagers to the East, and they cannot fail to awaken, very strong feelings in the minds of those who are jealous of our national honour, and anxious for the well being of our seamen, when exposed to shipwreck and sickness on distant shores."

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### ADMIRALTY ORDER.

*Admiralty, 10th Dec., 1839.*

The Lords Commissioners of the Admiralty are pleased to direct, that all boys who may volunteer for Her Majesty's service after the 31st inst. shall be entered subject to the condition of remaining in the service for a period of not less than three years after they shall have obtained, under the existing regulations, the rating of landman, ordinary, or able seaman, provided their services may be so long required; and all second class boys, already in the service, on being advanced to the first class, shall be subject to the same conditions.

*By Command of their Lordships,*

**R. MOORE O'FERRALL.**

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ROYAL ARSENAL, WOOLWICH.—On Tuesday, twenty-six pieces of ordnance, thirty-two pounders, were proved at the butt, and they were all found perfect. These handsomely constructed pieces were cast from the Royal Arsenal patterns introduced by Mr. Monk, and present a chaste and light appearance, combined with great strength. Compared with those formerly in use the saving in weight of metal is considerable, there being a difference of 26 cwt. less in a thirty-two pounder on Mr. Monk's plan; and the experiments made at Walmer Castle during the summer have decided their superiority, as the most effective pieces ever introduced in the British army. A piece of eight inches bore, from which a ball weighing about eighty pounds was fired, carried a distance of three miles and a quarter, and would, consequently, do great execution before our opponents could come within the range of their differently constructed pieces of ordnance. Two large pieces, constructed from Mr. Monk's patterns, weighing about 85 cwt., having a bore of ten inches, and carrying a ball of one cwt. a distance of upwards of three miles, have been labelled "Vesuvius," and two of the smaller calibre "Stromboli." They are intended for two steamers about to ply in the Indian Ocean, and will soon be removed from the arsenal for their destination.—*Globe.*

## SHAKINGS.

As the readers of the *Nautical* are equally concerned in the New Post-office regulations we subjoin a table shewing the rates of postage for any weight under sixteen ounces.

Weight not exceeding	$\frac{1}{4}$ ounce	0 4	do.	9 do.	6 0
do.	1 do.	0 8	do.	10 do.	6 8
do.	2 do.	1 4	do.	11 do.	7 4
do.	3 do.	2 0	do.	12 do.	8 0
do.	4 do.	2 8	do.	13 do.	8 8
do.	5 do.	3 4	do.	14 do.	9 4
do.	6 do.	4 0	do.	15 do.	10 0
do.	7 do.	4 8	do.	16 do.	10 8
do.	8 do.	5 4			

N.B.--All letters exceeding one ounce to be pre-paid, or charged double postage.

*Twopenny and Threepenny Post.*

Letters not exceeding half an ounce, if pre-paid, will be charged one penny. Letters exceeding that weight, and not exceeding four ounces, will be charged as formerly. No letter weighing more than four ounces can be forwarded.

AFRICAN DISCOVERY, we understand is likely again to be prosecuted in nautical style, and on an extensive scale by an expedition up the Niger, to carry out Mr. Buxton's views with regard to the civilization of, and trade with the natives.

Captain Trotter, R. N, already so well experienced in the African climate, in an iron steamer, accompanied by two others, it is reported, will proceed on this service as soon as the vessels can be equipped for it. So interesting an expedition, arising from the geographical discovery with which it cannot fail to be attended, is looked forward to with great anxiety.

SAILORS' HOMES.---We wish much that we could see established in every sea-port of this country. The thing could be easily done, and we can assure those who lay their money out on a large scale, in many trashy ways, that they would be doing more good than they are aware of, by throwing it into a fund for the erection of asylums for worn out seamen. Sooner or later perhaps it will be done; Plymouth we see is stirring itself under the management of Capt. Wise, R.N., C.B., who has nobly taken on himself the office of President, and Admiral Thomas that of Treasurer. We understand that this is a branch of the Well Street Home; and we say again, that the sooner the example is followed in other seaports the better.

Docks are at length to be formed we perceive at Gosport for mercantile purposes on a scale of magnitude commensurate with the present advanced state of trade, and steam communication. Our readers will remember a notice of this intended measure in our volume for 1838, to be adopted at Langston with entrance at Southsea Castle, the original intention of which was that they should be at Gosport: we are glad

to perceive that this original intention is to be carried forward on the north side of Haslar wreck, opposite the Royal Hospital. The docks will be capable of receiving ships of the largest size, and a steam boat basin will also be added. The plan is most decidedly a good one. Thus while Portsmouth will enjoy the advantages of its arsenal, Gosport will enjoy the superior benefit of those docks, and the ready communication with the metropolis by the railway, and both plans will be sunk together by the floating bridge which is now being fitted for facilitating the intercourse between them, constituting them at once a grand central point of foreign communication.

**NEW IRON STEAMER.**---The largest iron steam vessel yet built was launched, on Saturday week, from Mr. Laird's yard, at Birkenhead, and hauled into the Clarence Dock Basin, where her engines have been put on board. It is expected she will be ready for sea before Christmas. Her length is 165 feet, breadth of beam 29 feet, and tonnage, per admeasurement, 660. She was built by Mr. Laird, of Birkenhead, and her engines were made by Messrs. George Forrester and Co.—*Liverpool Mercury.*

**BANK IN DURAZZO BAY.**---Her Majesty's ship Talbot, in coming out of the Bay of Durazzo (coast of Albania) on the 26th of October, passed over a mudbank, which lies in the very centre of the bay, not laid down in the charts, but fortunately did not receive the least injury, it having 15 feet water on it.

**LIEUT. T. KISBEE.**---In the late violent gales the conduct of Lieut. Kisbee, coast guard service, North Yarmouth, has been most zealous and praiseworthy. By his exertions the crew of a brig, driven on shore near his station on the beach, were saved. The vessel was dashed to pieces. Many other poor seamen owe their lives to this officer's humane exertions. The crews of three other vessels were saved by the North Yarmouth life-boat.—*Naval and Military Gazette.*

**PENTLAND SKERRIES LIGHTHOUSE, ORKNEY ISLANDS.**---It is very common for birds to flock about sea lights under night, in certain states of the weather, but we have not met with an occurrence of the same extent with the following:—the lighthouse return for October states, that on the night of the 11th they had light airs of wind with hazy weather, when nine dozen of larks, snipes, and woodcocks were caught fluttering about the lantern; and had more assistance been at hand, double that number might have been secured.

**LIGHT ON KENTISH KNOCK**---It is intended by the Trinity Board, at instigation of the Shipping Owners, to place a Floating Light Vessel immediately in the vicinity of the Kenish Knock.

**ACCIDENT TO HER MAJESTY'S BRIG CURLEW**---The following is an extract of a letter received by Captain Owens, of Liverpool:—"Bonny, Aug. 20.-- Four poor fellows have just come on board us (the Mansfield, Edmons, of Liverpool,) belonging to H. M. B. Curlew, now outside, waiting to come in. She sent a boat off yesterday for pilots, with fourteen hands and an officer, after losing her best bower anchor and ninety fathoms of chain. The sea was running high, and the boat got into the



breakers, swamped, and all perished but the four; they got to the beach last night on oars, quite exhausted. Our boat brought them off this morning, and we have clothed them. The weather has been terrific here. We expect the Curlew up to kick up a bit of a blaze if the King does not come to his senses shortly.—*Liverpool Albion*.

**NOBLE CONDUCT**—A severe gale was experienced at Valparaiso, on the 24th and 25th of July, in which the Chilian ship of war *Monteagudo* was totally wrecked. The crew were saved by the daring efforts of Lieutenant Craven, of the U. S. navy, and Lieut. Collinson, of the British navy. The *Valparaiso Mercury* says:—The number saved was nineteen, including the pilot, Mr. Steadman, who displayed great coolness. The American lieutenant Mr. Craven, accompanied by three captains of English and American vessels, went at midnight to the captaincy of the port and asked for a boat to rescue the men exposed to death on the fragments of the *Monteagudo*. The boat at last put off, with four gentlemen on board, and a Chilian seaman, and half an hour afterwards Mr. Collinson, lieutenant of the frigate *President*, accompanied by other seamen, obtained permission to go to the support of the first boat, with the same noble object of saving the wrecked crew of the *Monteagudo*. This being ascertained by the first boat, and being unable to rescue them all, she proceeded to the English corvette, *Fly*, whose commander, the Hon. Captain Loche, gave them a large launch, well equipped, in which to return and save the men. In the mean time the second boat had arrived at the place of the wreck, and at great risk of being entangled with the fragments, or swept away by the waves which beat upon them, had begun to save some men to the number of three, when Lieutenant Craven arrived with the timely aid from the *Fly*, and these deserving friends of humanity had the pleasure of rescuing from the waves 19 of our compatriots.—*Shipping Gazette*.

**COURTS MARTIAL**.—Mr. Lee, mate of *H. M. S. Castor*, to serve two years longer, by sentence of the Court, for being found by his captain off deck in his watch, sentries and quartermaster asleep.

**ROYAL MARINES**.—We understand, that by a recent order from the Admiralty, candidates for commissioned officers in this corps, are to undergo an examination at the Royal Naval College at Portsmouth, on the Monday following the first Wednesday of the month, on the following subjects:—

1. Common and Decimal Arithmetic.
2. First six books of Euclid.
3. Algebra as far as Simple Equations.
4. A portion of Plane Trigonometry, and the use of Logarithms.

Having him examined in the above subjects, the candidate will be required to produce a certificate of his proficiency therein.

No.	VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM	TO	WRECKED.	PARTICULARS.
1	Aeolus		Patten	Shields	London	Cromer	Oct. 28, crew saved.
	Aid-de-Camp	N. Brunswick	Innis	Londonderry	N. Bannawick	Frier Island	June 18
	Albion	Exeter	Southwell	Newport		Ram Head	Sept 27
	Albion	Jersey	Bourne	Gosport	London	Abandoned	April 16, c s
5	Amity		Gill	N.S. Wales		Forces Straits	May 15, c s
	Ann Scott	Sunderland		Miramichi	St. Johns	Newfoundland	Sept 10, c s
	Amble		Daton			Fezal	April 14
	Arab		Robertson	Lianelly		African Coast	June 26
10	Arctel			Dublin		At sea	Sept 6, lost
	Ariel	So. Shields				St. Shotts	Sept 13, 1st lost
	Arve	Sunderland					Nov. 30, 1st
	Assistance					Newfoundland.	Sept 13
	Bellrock		Parker			West Port	April 15, 1 c s
15	Bethel		Phillips		Waterford	At sea	Nov 23, c s
	Brilliant	Boston	Marshall			At sea	July 17, abandon'd
	Britannia		Dickinson			Off Whitby	Nov 29, c s
	Britannia			Archangel	Hull	By fire	October 27, c s
20	Brothers	No. Shields	Robinson			Australia S.	July, foundered
	Bure		Meadows	Liverpool	Amsterdam	C. Holland	3 lost
	Bvram	Shields	Smith	N. Shields	Inverness	E. Coast	September, 1 s
	Catharine	Shields	Prewitt	Cardiff	Liverpool	Rimdown	April 17
25	Catharine Mitchell	Glasgow	Robson	Lyon	London	West Rocks	April 20, c s
	Ceres		M'Cormick			At sea	Nov 22
	Ceres			London	Ramski	Bird Island	Sept 18, fill lost
	Ceres			London	Bamski	Bird Island	Oct 13, 12 lost
	Charlotie			Melia	London	G. St. Laur.	October 3, saved
30	Charlotte			London	Dantzig	N. Cape	Nov 14, c s
	Children		Browne	St. John's	Mimichi	Portland B.	Jan 15, 16 lost
	Clinax			Sidney	S. Australia	Brest	April 5, c s
	Cornwall			Antwerp		Off Mumble	Sept 21, c s
	Cape		Chilton	Riga		Aurum	March
35	Delta	Sunderland	Lambert	New York			
	Defted	Sunderland	Murray				
	Despatch						
	Despatch	Salcombe	Fritchard	Salcombe	Denia	Devon C.	May 1
40	Duke of Richmond	American	Adams				Aug. all 1
	Dreftous		Bruce				March
	Eleonor					Off number	
	Elixa		Fittock	London	Hull	Port Natal	July 28
	Ellen			Newport	Cork	E. Coast	July 19th c s
45	Enterprise						
	Exposition		Wade			Gundlect	
	Exfield					Australia	April 18, c s
	Fenwick	St. John's	Keating	Liverpool	Australa	Abandoned	April 8
	Fisher			St. John's	Pascel	Obaney	April 8, c s
50	Fortitude		Pearson	London	Dantzig	At sea	Feb. 13, c s
	Friendship	Shields	Neabitt	London	Stockton	Run down	Sept 2, 3
	Gatehead Park		Dickson	Newcastle	London	Dorking S.	Novem 29, c s
	George IV.			Odesa	Cork	Marsala	April 3, c s
	Gertrude					C. Denmark	July 31, c s
55	Glasgow		Miller	Stigo		not heard	August, c s
	Hannah		Hodge	Liverpool	Para	of since	January
	Hazard			New Quay	Miford	At sea	July 18, c s
	Hero		Thomas	Christersond		found abund.	March
60	Industry			Stanraa	Cornwall		July 19, c s
	Isabella		Triplett	Gaspé	C. Newfoundland		Nov 11, 1st lost
	James	Waterford	Garrett	Peuzance	C. Cornwall	Off Galloway	Oct 4, c s
	James McInroy	Glasgow		Maryport	At sea		Sept 13, c s
65	June	Glyth	Cleland	Bombay	Calcutta	Maldives	April 19
	June		Shepherd	Newcastle	Glasgow	Ambolt	April 21, c s
	John Stafford	Newcastle	Randell	Newport	Havana	Fortugas	June 11, c s
	John and Anne	Sunderland	Clarke	Bangor	Newcastle	C. Ireland	May 9, c s
	Kellie Castle	Boston	Brown	Sunderland	London	C. Coast	November 5, c s
	Kingston	London	Johnston	Calcutta	China	Whitby	Nov 29, c s
70	Kitty	Whitby	Main	Bristol	New York	Louis Sh.	Nov 10, c s
	Lady Ann	Newcastle		Middlebro'	London	At sea	April, abandoned
	Lady Carnrhmore					Gundlect	Sept 14, c s
	Lady Margaret		Beaton	Dungarvon	Swansen	Antiochi	September
	Lavins			Liverpool	Borra	Lylther	July 20 c s
75	Leondes			Castlehill	Glasgow	C. wrath,	Sept 25, abandon'd
	Lord Hamilton			London	Ghent	not heard	of since Oct 4
	Lord Wellington	Chepstow				Wicklow	Oct 4, c s
	Manchester	stomper		Bangor	Sunderland	Long Land	April 16, c s
	Margaret		Wilson	Bombay	Liverpool	At sea	Aug 2, 6 lost
	Mathew	Perth	Simpson	Hull		J. Sunderland	Oct. Sunderland, 28
80	Mary			Newcastle	Trieste	Proparte	April 6,
	Melora	Bristol	Murphy	Cork	Jamaica	Sully	October
	Monera		Hunter	Whitcharca		P. Royal	Nov 3, c s
	Myle		Devinne			Langness P.	Nov 21, c s
85	Nancy	Inverness	McKenzie	Liverpool	Dundalk	Wicklow	Oct 3,
	Nancy Givan	London	Morris	Parseoay	Valparaiso	Antiochi	Oct 13, 1st
	Neon	Newcastle	Weathreine	Bristol	B. C. Horn	Whitby	Previous to May
	Noptine			Bordeaux	London	Sept 3, 8 W.	Sept 3, c s
90	Nov Era	Salcombe	Bull	Salcombe	London	Beachly Hd.	March 15, c s
	Northern	Sunderland	Ferguson	Quebec	Banham	foundered	pt
	Oneya			logged and		Chitt	October
	Onalago	Beitast		abandoned		S. S. Swrren	Nov 21, c s
	Orelia	Aberdeen		and went		27 W.	on September 15th
9	Orouer	Sunderland	Stonehouse	Seabon	London	S. Bay	October 14
	Ottomberg	Stockton	Wilson	Stockton	N. Holland		May
	Pauc	Don rose			Quebec	Estimaton	September 4 c s
	Prince Leopold		Kit-hu	W Hitchaven	Cardiff.	S. Cape	June 24, c s
						Ten Bay	May 1
							April 4, c s

VESSEL NAME.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	PARTICULARS.
Prince Regent		Sterling		Cork	Ulloa Bay	Feb. 28
101 Providence	London				St. David H.	Aug. 3
Providentia			Hull		North	November, 28
Procia		Frost		Quebec	Newfoundland	August, 28
Queen						May
Richard and Thomas			N. Shields	Holland	N. Sea	April, 28
Rival		Fitz Simons	Quebec		St. Paul's	Sep. 28
Sabina	Sunderland	Smart	St. Basils	Petersburg	Offield Island	Aug. 28
Scott			Yarmouth, N.S.	Barbadoes	at sea abroad	September, 28
10 Siam		Boudee	Liverpool		Java	June
Sir Colin Campbell					Bermuda	Sep. 28
Sophia Smith			Petersburgh		Ridding	Oct. 28
Speculation				Hull	Asiborg	Sep. 28
Standard	Sunderland			London	C. Bay	August, 1 lost
Star					St. Lucia	Nov. 28
15 Stirlingshire		Schollay	Liverpool	Quebec	St. Antonio	Oct. 10 lost
Superior	London	Bell	Wewinatie	Uma		Nov. 28
Tiber		Porringer		Zuamp		Nov. 28
Phames	Scarborough		Wegadore	driven out to sea	Whitby	Sep. 28
Theodorick			Newport		Scilly	Aug.
Thomas and Ann	Sunderland	Rook			Off Newhorn	Oct. 28
Thornton		Turner	Cardif	Hartlepool		Dec saved
Three Sisters		Smith	Quebec	Lerwick	Newfoundland	Sept. 21
Thule		Fretter	Liverpool	Swinley	Table Bay	28
15 Tordagar		Fordyce	Liverpool	Swidney	run down	28
Trotter		Forster	Newcastle	Arbroath	Scotland	Nov. 15, 28
Two Friends	Spey			N. Brannawick	Barbadoes	Oct. 28
Two Partners			Toby	Hull	North Sea	
Venus			London	Gabraltar	Channel	
30 Waterloo steamer		Spence	low on Aug. 28	from Gambler	from Gambia	
Weston	found bottom	up by Cur	London and	Water logged		
Wicklow	Timber B.	passed aban	London	Yamouth	Shipwashed	
Wills Increase			Belfast	New York	abandoned	
Will Ritchie		Rodgers				

WILLIAM NICOL.- -Sunday afternoon a large East Indiaman, called the William Nicol, was towed into the St. Katharine docks, shortly after which four of the crew, apparently in a dying state, were placed in a hackney coach, and conveyed to the house of Mrs. Reay, Queen's Head-alley, Wapping, where they were put to bed. About an hour afterwards one of the men, named John Musgrave, a sailmaker, sixty-one years of age, breathed his last. In the course of the next half hour another of the men, named Frederick West, the boatswain of the William Nicol, aged forty-two, expired. Mr. Retson, a surgeon, was promptly sent for, and administered some medicine to the other two men, who are now considered out of danger. There are, at the present time, two men on board the ship in too dangerous a condition to be removed, their death being hourly expected. Another of the seaman who was removed from the ship expired at a house in East Smithfield, on Monday morning. The William Nicol is a large ship of about five hundred tons' burden. She sailed from Calcutta about five months ago, having sixteen hands on board, but such was the mortality during the voyage, that when the ship touched at Deal there were only three persons on board capable of working, all the rest being either dead or disabled through illness. Accordingly fresh hands were obliged to be shipped at Deal to bring the vessel into the river. It was said the men died of cholera, but the real cause of death is stated to be scurvy, which the survivors attribute to the extreme saltness of the provisions on which they were fed during the homeward voyage. The affair has created a great sensation at the east end of the metropolis. The St. Katharine docks' authorities have been greatly censured for allowing the William Nichol to enter the dock, as it was generally supposed she was infected with the cholera, as it was known that that dreadful scourge was raging in the East Indies when the vessel left Calcutta. It is expected that a coroner's inquest will be held on the bodies of the deceased.

TABLE LII.

For reducing Lubeck Feet to English, and English Feet to Lubeck.

1 Lubeck Foot 0·9547432118 English Feet.

1 English Foot 0·47402043 Lubeck Feet.

1. 05740204

Lubeck or English feet	English feet and Decimal parts.	Lubeck feet and Decimal parts.	Lubeck or English feet	English feet and Decimal parts.	Lubeck feet and Decimal parts.	Lubeck or English feet	English feet and Decimal parts.	Lubeck feet and Decimal parts.
1	0·955	1·047	40	38·190	41·896	79	75·425	82·745
2	1·909	2·095	41	39·144	42·943	80	76·379	83·792
3	2·864	3·142	42	40·089	43·991	81	77·334	84·840
4	3·819	4·190	43	41·054	45·038	82	78·289	85·887
5	4·774	5·237	44	42·009	46·086	83	79·244	86·934
6	5·728	6·284	45	42·963	47·133	84	80·198	87·982
7	6·683	7·332	46	43·918	48·180	85	81·153	89·028
8	7·638	8·379	47	44·873	49·228	86	82·108	90·077
9	8·593	9·427	48	45·828	50·275	87	83·063	91·124
10	9·547	10·474	49	46·782	51·323	88	84·017	92·171
11	10·502	11·521	50	47·737	52·370	89	84·972	93·219
12	11·457	12·569	51	48·692	53·418	90	85·927	94·266
13	12·412	13·616	52	49·647	54·465	91	86·882	95·314
14	13·366	14·664	53	50·601	55·512	92	87·836	96·361
15	14·321	15·711	54	51·556	56·560	93	88·791	97·408
16	15·276	16·758	55	52·511	57·607	94	89·746	98·456
17	16·231	17·806	56	53·466	58·655	95	90·701	99·503
18	17·185	18·853	57	54·420	59·702	96	91·665	100·551
19	18·140	19·901	58	55·375	60·749	97	92·610	101·598
20	19·095	20·948	59	56·330	61·797	98	93·565	102·645
21	20·050	21·995	60	57·285	62·844	99	94·520	103·693
22	21·004	23·043	61	58·239	63·892	100	95·474	104·740
23	21·959	24·090	62	59·194	64·939	150	143·211	157·110
24	22·914	25·138	63	60·149	65·986	200	190·949	209·480
25	23·869	26·185	64	61·104	67·034	250	238·686	261·851
26	24·823	27·232	65	62·058	68·081	300	286·423	314·221
27	25·778	28·280	66	63·013	68·129	350	334·160	366·591
28	26·733	29·327	67	63·968	69·176	400	381·897	418·961
29	27·688	30·375	68	64·923	71·223	450	429·634	471·331
30	28·642	31·422	69	65·878	72·271	500	477·372	523·701
31	29·597	32·469	70	66·832	73·318	550	525·109	576·071
32	30·552	33·517	71	67·787	74·366	600	572·846	628·441
33	31·507	34·564	72	68·742	75·413	650	620·583	680·819
34	32·461	35·612	73	69·696	76·460	700	668·320	733·181
35	33·416	36·659	74	70·651	77·508	750	716·157	785·552
36	34·371	37·706	75	71·606	78·555	800	763·995	837·922
37	35·325	38·754	76	72·560	79·603	850	811·532	890·292
38	36·280	39·801	77	73·515	80·650	900	859·269	942·662
39	37·235	40·849	78	74·470	81·697	1000	954·753	104·7402

Comparative amount of custom duties received at the principal ports in the United Kingdom, during the years 1836-7-8: ---

	1836.	1837.	1838.
Hendon	12,156,279l.	11,188,036l.	11,254,734
Liverpool	4,450,426	4,351,496	4,458,621
Bristol	1,112,812	1,154,817	1,169,554
Dublin	898,630	859,758	850,932
Hull	801,628	741,600	758,432
Glasgow	289,702	394,152	403,904
Greenock	374,467	380,703	417,672
Belfast	366,718	324,869	316,175
Newcastle	307,274	413,796	379,360
Cork	230,904	221,410	237,117
Gloucester	166,187	132,879	138,093
Waterford	137,126	146,669	151,283

The above statement is compiled from the latest official sources that have been published.

**DUNGEFESS LIGHT.**—The directors of the Trinity House intend to place another row of lamps in the lighthouse as an addition to the present ones, which will increase the brilliancy of the light, and assist the mariners in avoiding the dangers of the coast in stormy nights. The lighthouse has been much improved by the present proprietors.—*Globe*.

Mehemet Ali, in compliance with the desire of the Royal Society of London, had ordered the construction of an observatory, for the meteorological and magnetical experiments intended to complete the series of observations about to be made under the auspices of that learned body in different parts of the globe. Mr. Lambert, Director of the School of Civil Engineering at Cairo, was to be charged with those observations. The Pasha had ordered the necessary instruments and materials from London, and the observatory was to be erected in the Island of Boulac, which is contiguous to the school.

**SHOAL TRINIDAD.**---Nov. 6. Captain Ross, of the brigantine Delaware, from Charleston, arrived here on the 23d September, reports that on the 16th September, in the observed latitude 10 deg. 48 min. N., at noon, struck soundings in 37 fathoms, with shells and sandy bottom, steering south at 3 p. m., passed over a rocky bank, having 5, 7, and 10 fathoms, and that he saw the bottom quite plain; from the distance run should suppose the true latitude of the shallow part of the bank 10 deg. 37 min., and longitude by chronometer 60 deg. 3 min. W.;  $\frac{1}{4}$  at past 3 p. m. had 70 fathoms water.---*Ship. Gaz.*, No. 252.

## PROMOTIONS AND APPOINTMENTS.

### APPOINTMENTS.

BEACON, surveying vessel;—*Assistant Surgeon*, D. J. R. Robinson. FELLERO PHON, 80,—*Lieutenant*, F. S. M'Gregor. BENBOW, 72, *Midshipmen*,—C. Wake, F. A. B. Crawford. BLONDE, 42,—*Lieutenant*, G. H. Coulson, A. H. Ingram; *Master*, H. N. Thomas; *Surgeon*, G. H. Brown; *Mate*, J. F. C. Hamilton, J. B.

Christopher, G. Walker, A. Anderson, W. R. Rolland; *Master's Assisrnt*, C. Fox; *Assistant Surgeon*, J. S. Stanley; *Midshipman*, C. F. Coventry; *Midshipmen*, Hon. O. Lambert, C. F. Coventry; *Clerk*, Mr. T. Sidney; *Volunteer*, 1st Class, R. Purvis. BRITANNIA, 120,—*Assistant Surgeons*, A. Mitchell, M.D., J. Dunbar; *Captain*, J. W. Montague; *Mate*, W. E. Bate. BRISK, 3,—*Lieutenant Commander*, W. Armitage. COAST GUARD,—*Commander*, T. V. Watkins at Pembroke, E. B. Westbrook at Brillington; *Mates*, H. B. Gray, R. J. Bevians, J. S. W. Grandy, J. A. Pritchard. CRESCENT, *Receiving Ship at Rio Janeiro*,—*Lieut.-Commander*, M. Donellan. CYCLOPS, Steam vessel,—*Captain*, H. T. Austen; *Lieutenant*, J. Greenfell; *Purser*, J. Pinhorn. EXCELLENT,—*Mates*, A. Wilmshurst, G. Briggs. FANTOME, 16,—*Lieutenants*, W. T. Cooper, W. Clayton; *Master*, T. R. Lord; *Clerk*, G. S. Singer. GANGES, 84,—*Lieutenant*, C. H. Hamilton. GORGON, Steam vessel,—*Mate*, J. Maling. HARLEQUIN, 16,—*Purser (assistant)*, Smedman. HASLAR HOSPITAL,—*Assistant Surgeons*, T. Denvir, T. Hart, A. Mitchell, M.D.; *Second Surgeon and Lecturer*, J. Liddell; *Junior Surgeon*, J. Allen. HYDRA, Steam vessel,—*Lieutenants*, J. Fitz James, N. Morway. MALTA Hospital,—*Surgeon*, W. Martin (b) MELVILLE, 72,—*Assistant Surgeon*, W. T. Rgers. NIMROD, 20,—*Commander*, C. A. Barlow; *Lieutenant*, J. Fox; *Master*, J. Cater; *Surgeon*, W. Hamilton; *Purser*, F. Siddall; *Assistant Surgeon*, J. S. Davidson; *Clerk*, H. H. Gilbert. PEKBROBE, 74,—*Lieutenant*, C. B. Warren. PIQUE, 36,—*Lieutenants*, H. P. Galw y, J. Fellowes; *Master*, J. C. Barlow; *Assistant Surgeon*, A. D. Milne. PORTSMOUTH DOCKS,—*Surgeon*, J. Mason. PYLADES, 18,—*Commander*, T. V. Anson. PRESIDENT, 50,—*Lieutenants*, N. S. Knott; N. H. Pipon. PROMETHEUS, Steam vessel,—*Surgeon*, F. Le Grande; *Clerk in Chief*, H. L. Sutherland. REVENGE, 76,—*Lieutenant*, H. D. Rogers; *Master's Assistant*, J. Thomas; *Purser*, B. Jennings; *Midshipman*, G. A. Seale; *Clerk*, R. Simmonds. RODNEY, 72,—*Assistant Surgeon*, J. Forbes. SEA-FLOWER, 4,—*Mate*, E. E. Turnour. SPIFFIRE, Steam vessel,—*Lieutenant Com.*, R. Currie. SAN JOSEF, 110,—*Lieut.*, J. P. Wells. TYNE, 26,—*Purser (assistant)*, J. Lyall. WANDERER, 16,—*Coamander*, Hon. J. Denman; *Lieutenant*, T. Chaloner; *Surgeon*, J. W. Elliott; *Purser* J. M. Jeffrey; *Mate*, T. E. Symonds. WEAZLE,—*Assistant Surgeon*, D. Ritchie; *Secretary*, Benjamin Chimmo, Esq., *Purser*, R.N., to be Secretary to Admiral Sir Edward Codrington; *Lieutenant*, Charles Foreman Brown, (son of the late Admiral Brown, who died in command on the Jamaica station) to be Flag-Lieutenant to Admiral Sir E. Codrington. WILLIAM AND MARY,—*Purser*, J. Luther. MIDSHIPMEN PASSED FOR LIEUTENANTS,—R. M. E. M'Leod, *Coll.*; W. R. G. Johnson, *Coll.*; A. W. J. Heath, *Coll.*; A. R. Ryder, *Coll.*; E. A. Inglefield, *Coll.* NAVAL INSTRUCTORS,—A. A. Bridgman, R. Oram.

## MOVEMENTS OF THE ROYAL NAVY IN COMMISSION AT HOME.

*Ætna*, 6, Lt. Com. J. Wilson, 20th Dec. arrived at Woolwich. *Andromache*, 26, Captain R. J. Baynes, 14th Dec. arrived at Portsmouth. *Blenheim*, 72, Captain Sir H. Stenhouse, K.C.H., 12th Dec. arrived at Portsmouth; 14th int. harbour. *Bozer*, St. V. Dec. arrived at Sheerness. *Fairy*, Sur V., Captain W. Hewett, 11th Dec., arrived at Woolwich from North Sea survey. *Mastiff*, Sur V., Mr. G. Thomas, Dec., arrived at Woolwich, from survey of Orkneys. *Haven*, 4, Lieut. D. Mapleton, Falmouth. *Talavera*, 74, 10th Dec. arrived at Plymouth.

AT PORTSMOUTH,—*Britannia*, Excellent, *Pique*, Victory, Royal George *Blenheim*, Rover, Messenger. AT PLYMOUTH,—*Nimrod*, *Pylades*, *Talavera* Impregnable, *San Josef*, *Carron*. AT SHEERNESS—*Howe*, *Ocean*, *Cyclops*. AT WOOLWICH.—*William and Mary*, *Fairy*, *Mastiff*, *Ætna*, *Lightning*, *Firebrand*, *Meteor*,

## ABROAD.

*Acheron* st. v., Lt.-com., A Kennedy, 4th Nov. arrived at Marseilles from Malta. *Acorn*, 16, Com. J. Adams, 14th November, left Malta for Gibraltar and England. *Actron*, 26, Captain R. Russell, 23rd September from Buena Ayres. *Algerine*, 10, Lieut.-com. T. H. Mason, 4th October, left Madras for Bombay. *Alligator*, 26, Captain Sir J. G. Bremer, K.C.H., 1st August, at Sidney. *Basilisk*, 6, Lieut.-com. J. Russell, 3rd August, arrived at Callio from Islay. *Beagle*, st. v. Com. J. C. Wickham, 9th June, arrived at P. Stevens. *Benbow*, 72, Captain H. Steward, 10th Nov., arrived at Vourla. *Blazer*, st. v. Lieut.-com. J. M. Vaugh, 30th November, at Malta. *Buzzard*, 3, Lieut.-com. C. Fitzgerald, 17th November at Bermuda. *Calliope*, 26, Capt. S. Herbert, 23rd September, at Monte Video. *Childers*, 16, Com. E. P. Halstead, 29th September, Simons Bay. *Cleopatra*, 26, Captain J. Lushington, 17th November, at Bermuda. *Clio*, 16, Com. J. Freemantle, 9th October, left Rio. *Confiance*, st. v. Lieut.-com. E. Stopford, 30th Nov. at Malta. *Curacao*, 24, Captain J. Jones, 7th November, spoken in 27. N. 22. W. from Jamaica for Rio. *Dee*, st. v., Com. J. Sherer, 22nd October, left Jamaica. *Dido*, 18, Captain L. Davies, 13th October, arrived Basikia B. from Smyrna. *Donegal*, 78, Capt. J. Drake, 30th Nov. at Lisbon. *Edinburgh*, 72, Captain W. Henderson K.H. 3rd November, arrived at Vourla. *Erebus*, Captain J. C. Ross, 20th Nov. arrived at Madeira. *Favorite*, 18, Com. W. C. Croker, 11th Oct. left Madras for Calcutta. *Fawn*, Lieut.-com. J. Foote, 10th October, arrived at Rio. *Fly*, 18, Com. G. Loch, 31st of August, at Valparaiso. *Ganges*, 84, Captain B. Reynolds, C. B. 18th October, arrived at Basikia B. from Smyrna. *Grecian*, 16, Com. W. Smyth, 17th October, left Rio for R. Plate. *Hecla*, s., v. Lieut.-com. J. B. Cragg October 25th, arrived at Jamaica from Barbados. *Herald*, 26, Captain J. Nias, 29th July, left Sydney for China. *Hermes* st. v. lieut.-com. W. S. Blount. 30th Nov., arrived at Malta. *Hornet*, 6, Lieut.-com. R. B. Miller, 22nd October, left Jamaica for Chagres. *Hydra*, st. v. Com. A. W. Milward, Nov. 10, arrived at Malta. *Implacable*, 74, Capt. E. Harvey, 18th October, arrived at Basikia B. from Smyrna. *Inconstant*, 36 Captain D. Pring, 9th October, left Jamaica for Vera Cruz. *Larne*, 18, Com. P. Blake, 6th October, left Madras for Bombay. *Melville*, 72, Captain Hon. R. S. Dundas, 29th Sept. Simons B. *Minden*, 72, Captain A. R. Sharpe, C.B. 30th Nov. at Malta. *Modeste*, 18, Com. H. Eyres, 29th Sept. Simons B. *Orestes*, 18, Com. P. Hambley, 23rd September at Monte Video. *Pelorus*, 16. Atct.-com. A. J. Kuper, 29th July, left Sydney for Port Essington. *Pembroke*, 72, Captain F. Moysesby, C.B., 30th Nov. at Malta. *Pilot*, 16, Com. G. Ramsay, 17th Oct., Bermuda. *Powerful*, 84, Capt. C. Napier, C. B., 18th Oct arrived Basikia, B. from Smyrna. *President*, 50, Capt. J. Scott, arrived a Callao from Valparaiso. *Racer*, 16, Com. G. Byng, 10th October, arrived a Barbados. *Revenge*, 76, Captain Hon. W. Waldegrave, (a) 2nd Dec., left Portsmouth for Tagus. *Rhadamanthus*, st. v. Com. A. Wakefield, 30th Nov. at Malta. *Rover*, 18, Com. T. W. Symonds, 20th October at Vera Cruz. *Samarang*, 26, Captain Broughton, 31st August, at Valparaiso. *Satellite*, 18, Com. J. Robb, 18th Oct., 32, arrived at Jamaica, from Barbados. *Scorpion*, st. v. 30th November at Malta. *Serpent*, 16, Com. Hon. R. Gore, 17th Nov. at Bermuda. *Skipjack*, 5, Lieut. Com. H. Wright, 21st Oct, 39, arrived at Jamaica from Carthageua. *Terror*, Com.R. Crozier, 20th Oct. arrived at Madeira. *Tribune*, 24, Captain C. H. Williams, 28th November, driven on shore at Tarragona in a hurricane. *Vanguard*, 80, Capt. Sir T. Fellowes, C. B. 18th October, arrived at Basikia, B. from Smyrna. *Vestal*, 26, Capt. T. W. Carter, 13th Oct. left Trinidad. *Volcano*, st. v., Lieut.-Com. J. West, 14th November arrived at Malta. *Waxley*, 10, Lieut.-com., J. Simpson (a) 14th Nov., left Malta for Corfu. *Wellesley*, 72, Capt. T. Maitland, 6th September left Madras for Bombay. *Winchester*, 50, Capt. J. Parker, 21th November at Bermuda.

**Births.**

17th inst. the lady of Lieutenant Jones, R. N., of H.M. cutter Defence, of a son. At Lyme Regis, on 9th instant, the lady of Commander Samuel Mercer, R.N., of a daughter

The lady of Captain Horatio T. Austin, R.N. of a son.

At Bray, the residence of her father sir S. S. Hutchinson bart, the lady of the Hon. Koote Hely Hutchinson, Capt. R.N., of a son.

At Titchfield, on the 1st Dec. the lady of Captain Anderson, R.N., of a daughter At Holyhead, Isle of Anglesea, North Wales, on the 9th Dec, the lady of Gambier Charles Becher, Esq. late of St. Mary's, Southampton, of a son

The lady of Mr. Brenan, surgeon of H.M.S. Romney, of a daughter

**Marriages.**

On 4th instant, at St. Pancras, G. Slyth Esq. to Elizabeth, fourth daughter of Mr. G. Hummerston, and niece of the late Admiral Scott of Southampton

At Lyme Regis, S. Knott, Esq., R.N., grandson of Major Knott, to Jane, second daughter of J. Drayton, Esq.

At St. George's, Hanover-square, Richard Verity, M.D., of Dean Lodge, near Kimbolton, to Susan, daughter of Admiral Sir H. Baynton.

At Dover, Mr. J. M. Boxer, R.N., to Miss Elizabeth Kingston, of Deal.

At St. Clement's, M. Garnier Esq., to Harriet Jane, daughter of Capt. Thomas, R.N., and niece of Colonel Morgan.

At Iver, Bucks, on the 30th October, Lieut. H. Rice, R.N., to Miss Ann Berry of Chawton, near Alton, Hants.

At Bangor, Vice-Admiral Lloyd, of Tregavan, Anglesea, to Ellen, daughter of the late T. Roberts, Esq.

At Bath, R. H. Douglas, Esq., son of Commodore Douglas, and grandson of the late Admiral R. Douglas, to Mary Selina, daughter of Capt. R Langslow, of Hatton, Middlesex.

At Budock Church, on the 3d. Dec. Charles, William, eldest son of Captain Pengelly, R. N. of Truro, to Margaret, only surviving child of the late Captain William Rogers, of the Holyhead station

At Heavitree, Deven, on the 10th Dec., Thomas Pittman Haffner, Esq., to Charlotte Rachel, daughter of the late Lieut. William Henry Whittle, R.N

At Ahmedabad, on 29th August, H. R. Stracy, Esq., to Barbary Elizabeth Robertson, eldest daughter of Capt J. B. Robertson, R. N.

On 26th Nov, Rev. T. D. H. Wilson, second son of the late Admiral Wilson,

to Barbara, e'dest daughter of the late J. Hales, Esq.

On the 29th November, J. F. Berwick. M.D., to Eliza, second daughter of the late Captain Porteous, R. N.

**Deaths.**

At Bathurst, on the 17th September last, Major W. Mackie, lieutenant-governor of the settlements on the Gambia.

F. 30th, ult, at Brixton, Harriet, wife of Captain Thomas Warrand, R.N., in her 50th year.

At Wareham, suddenly, Admiral Joseph Hanwell, aged 79 years. He was promoted to the rank of Vice-Admiral on the 19th July, 1821, and became an Admiral of the Blue on the coronation of her present Majesty.

On the first inst., at the Royal Marine Infirmary, Woswice, J. Rankin, Esq., M.D., Surgeon R.N.

At Sierra Leone of Fever, in August last, Mr. A. L. Panchen, master, R.N., late of H.M.B. Forester, second son of the late Mr. John Panchen, master R.N. aged 26 years.

Ht Edinburgh, Mrs. Stewart, relict of Rear Admiral Wm. Duddingston.

At Worcester, Anna, wife of Captain G. Williams, Royal Engineers.

At Devenport, on 2nd inst., John Collins, Esq., purser RN (1804), aged 57.

Lately, on board H.M.S. President, T. Gliddon, Esq, purser (1808)

At Wareham, very suddenly, Admiral Joseph Anwell, aged 80

Nov. 22, near Boulogne, Lieut. James Tuson, R. N. aged 40.

June 16, at Sydney, N.N.W., J. J. Cory, Esq. Lieut. R.N.

At Park Terrace, Gaenwich, on the 18th inst., Mary, relict of Charles Duncan, Esq. R.N.; her life was one of true piety and benevolence.

At Cork, Elizabeth, widow of Lt. A. Herbert, R.N.

At his residence, Royal Crescent, Bath, on the 12th instant, after a long illness, admiral Sir William Hargood, G.C., B and G.C.H.

Nov. 18, at his residence, Grand Parade, Brighton, Robert Rolles, esq. Vice-admiral of the Red, aged 75 years

At West Lulwrth, Dorseti Lieut. Nicholas Gould, royal navy, aged 55 At Fareham, on the 10th December, after a long illness, Anne, fourth daughter of the late Vice-admiral Francis Parry

On the 4th December, at Islington, Captain Richard Dorrill of the royal navy aged 84 years

On the 15th November, at his residence, in Laurence-place, Newcastle-upon-Tyne, Captain Innes, royal navy



METEOROLOGICAL REGISTER.

From the 21st of November, to the 20th December, 1839.

Kept at Crooni's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory

Month Day.	Week Day.	BAROMETER.				FAHR. TEMP. In the Shade.				WIND.				WEATHER.	
		9 A.M.		3 P.M.		9 A.M.		3 P.M.		Quarter		Street		A. M.	P. M.
		In Dec	In Dec	o	o	o	o	A. M.	P. M.	A. M.	P. M.				
21	Th	29.45	29.45	41	42	35	45	SE	E	6	6	qor (2)	qor (3)		
22	F	29.86	29.98	40	43	34	46	NE	NE	3	4	bc	bc		
23	S	30.18	30.21	34	40	32	42	NW	NE	2	2	of	bcm		
24	Su	30.14	29.94	39	47	30	52	SW	SW	2	3	or (2)	o		
25	M	29.68	29.56	50	53	49	56	SW	SW	5	6	o	or (4)		
26	Tu	29.41	29.37	38	41	35	42	SW	SW	2	2	bcp (1)	o		
27	W	29.40	29.41	28	35	25	37	SE	SE	1	1	bf	oor (3) (4)		
28	Th	29.53	29.55	38	42	34	44	SE	E	1	2	or (1) (2)	o		
29	F	29.25	29.17	41	44	36	50	SE	SE	4	6	or (2)	or (3) (4)		
30	S	29.59	29.64	39	44	38	46	S	SW	3	3	bc	bcp (4)		
1	Su	29.67	29.70	30	36	29	39	NE	NE	2	2	bf	b		
2	M	29.86	29.86	36	40	31	41	NE	NE	1	1	o	of		
3	Tu	29.94	29.90	34	36	33	37	W	SW	1	1	ofg	ofg		
4	W	29.81	29.76	29	35	27	36	NE	N	2	3	bcm	o		
5	Th	30.08	30.12	34	35	31	37	W	SW	3	3	bc	omr (4)		
6	F	30.35	30.33	34	36	32	37	N	E	1	1	f	of		
7	S	30.30	30.26	34	38	32	40	E	E	2	2	bef	bc		
8	Su	30.10	30.00	33	33	28	34	E	E	4	3	og	og		
9	M	29.80	29.72	33	33	30	35	NE	NE	2	2	od (2)	od (3)		
10	Tu	29.60	29.56	31	35	31	38	SE	E	1	1	bc	o		
11	W	29.55	29.41	41	42	38	44	SE	E	3	4	o	or (4)		
12	Th	29.24	29.16	42	46	41	47	SE	SE	6	6	oqr (2)	b.p (4)		
13	F	29.30	29.25	39	45	37	46	S	SW	3	4	bc	or (3) (4)		
14	S	29.22	29.28	41	44	40	45	S	SW	4	4	bcp (1) (2)	bc		
15	Su	29.58	29.50	37	43	36	44	S	E	1	2	o	or (4)		
16	M	29.70	29.80	39	40	38	42	NW	NW	2	2	bcm	o		
17	Tu	30.06	29.96	35	39	34	41	SE	SE	2	2	bc	bc		
18	W	29.50	29.40	33	38	32	38	E	SE	4	4	o	or (3) (4)		
19	Th	29.42	29.41	47	50	37	51	S	S	3	3	bc	or (4)		
20	F	29.28	29.30	50	52	49	53	SW	SW	3	3	or (1) (2)	bcp (3)		

NOVEMBER—mean height of the barometer—29.679 inches: mean temperature—46.0 degrees: Depth of Rain fallen—4.60 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

"The letter from the General Palmer and that of Mr. R. C. Allan have this moment reached us."

"Mr. Stutchbury in our next."

"Having been obliged to send Mr. Harris's paper in reply to Mr. Sturgeon to the press before revised by that gentleman the reader is requested to make in it the following corrections."

CORRECTIONS IN THE PLATE.

Put in letter r in fig. 3 to strength rod. In fig. 4 letters m c are misplaced, they should be as in all the others. Put in letter K to the instructor, fig. 3. Put in letter c m in fig. 5 as in the other figures. Page 11, 12th line from the bottom, insert 8 at commencement of the paragraph. 2nd line from the bottom, read decreased or destroyed, by connecting J with the ground, instead of decreased J, &c. Page 12, 6th line from the top insert 9 at commencement of the paragraph. Page 16, 16th line from the top—for conductors read conditions. Page 16, 16th line from the bottom—for discharge read discharger.

"Mr. Tawse's subject is a sufficient passport for his letter to our pages.

We have not room to spare for "Mr. Eicke's" communication. It will be returned to him at 21, Poultry.

Thanks to "Mercator" for his services; they will be available in that way.

HUNT, Printer, Lower Street, Islington.

## ORIGINAL PAPERS.

FEBRUARY, 1840.

### THE COAST OF MEXICO IN THE PACIFIC.\*

*Notes on Huamitulu—Rosario—Tehuantepec. By Merchant-Captain P. Masters of Liverpool.*

FROM the island of Tangolotangola to the bay of Rosario there are several small headlands, which do not project much beyond the general line of coast, with the exception of Morro de las Salinas de Rosario. Most of them have a steep cliff facing the sea, with fine sandy beaches between them; at the back of which are scattered a few small trees and bushes, the land rising in very irregular shaped hills towards the Cordilleras. Abreast of the beaches between the heads, I found the anchorage quite clear, and when in from nine to twelve fathoms water, the distance off shore is about a mile, with sandy bottom.

The west side of the Bay of Rosario is formed by the Morro de las Salinas de Rosario, and is in lat.  $15^{\circ} 50' 25''$  N., long.  $96^{\circ} 2'$  W., by four sets of lunars taken E. and W. of the moon. It projects about a mile beyond the line of coast. On its western side is a beach four or five miles in length to the next head. When abreast of Morro de las Salinas it appears like an island with two large rocks abreast of its eastern and western part; but the whole is connected to the main. What appears to be the eastern rock, is a broken rocky head, about 160 feet high. The western is about half the elevation. Both these heads terminate with a broken cliff; the tops of them are bare, and of greyish colour; the lower part is quite black, caused by the sea washing against them. Between these heads is a small sandy bay, which is at the foot of the Morro, and rises gradually from the beach to the top of the hill, and is about 180 to 200 feet high. It has a few straggling bushes on it, but its general appearance is very barren. The beach of Rosario is ten miles long from Morro de las Salinas to Morro de la Laguna Grande, which is its eastern extremity. About half the distance between the Morros, is a rock on the beach, about forty feet high, and nearly the same diameter at spring tides. The water flows round it.

\* Concluded from p. 809 of our last Volume.

During the time of our lying in the Bay of Rosario, which was from the 12th of February to the 1st of April, we had three smart northers. These came on at the full and change of the moon. At this time the surf runs very heavy on the beach. Our boat was capsized several times whilst we lay here, in landing and coming off. At times the sea broke very heavily in all parts of the bay, that is on the beach. I was caught on shore, a few days after arriving here, during the first norther, which came on suddenly with a parching hot wind. A cross confused sea hove in from the south and north-east. The wind must have blown strong out in the gulf, from the same direction, and though it blew very heavily for three days, with the wind at times to the westward of north, the sea kept up until some time after the norther had ceased blowing. This is not generally the case, for a strong norther, (and in particular if it veers into N.N.W.,) beats the sea down, at which time landing is attended with little, or no risk, which was the case when we had the last two northers. I was informed (and judging from appearances I think correctly,) that very often when the wind is in N. or N.N.W. close in shore, it is N.E. in the offing, which makes it impossible to land on the coast. I remarked whilst lying here, at the full and change of the moon, when no norther was blowing, that although the surf ran so high that no boat could land, the vessel lay without any motion. We were moored less than 300 fathoms from the shore. The surf appeared not to be caused by a swell rolling in, and agitating the sea at the surface, but to rise from below, and without any apparent cause, as we had light winds and fine weather the most of the time we lay here. On another occasion I was caught on shore with a boat's crew for three days. In attempting to get off to the ship, the boat was capsized and stove. It was then, and had been for a week previous, nearly a calm. The heavy ground swell invariably hove in from the S.S.W. We fortunately escaped from this beach without losing any of our people, which was more than I expected, having had three laid up at different times, who were saved from being drowned by a mere chance.

Had our cargo been shipped off from the western part of the bay, which is well sheltered from the south-western swell by the Morro de las Salinas, we should have been loaded in one-third the time. It is intended, by the parties who are cutting the wood, to take the next cargo there. The place where our cargo was piled was at the most exposed part of the beach. It was three miles and a half to the eastward of the Morro de las Salinas, and was open to every swell. Our only hope of getting the cargo off, was by mooring our long boat outside the surf, and having a messenger passed from her to the shore. A capstan was fixed on the beach, which hove off the wood as it was made fast to

the messenger from the long boat, and we had two small canoes which brought it to the ship.

In the event of a vessel coming here, or any other part of the coast to load, (excepting at the port of Acapulco,) the great expense of getting the cargo off should be considered. The whole of our cargo was little less than ninety tons, equal to about 235 tons measurement of 40 feet. It cost the shipper upwards of 8000 dollars, and if the labour of getting the cargo off had fallen on the ship it would have cost a great deal more; for independent of the deficiency of system and energy on the part of the people who sell the wood, working people cannot always be got, even by themselves, who are well known; so that a stranger would stand but a poor chance of getting any work done, the Indians are so idle.

The nearest habitation to the part of the bay which we loaded at was the Hacienda de Rosario, about two leagues off. But it scarcely deserved the name of a Rancho, yet this was where my consignees lived. In consequence of a little chapel being built there, dedicated to the Virgin, in which mass is said once or twice a year, it has the title of Hacienda. The dwelling-house is built by a few poles driven into the ground, and it is thatched with palm leaves. About one-half of it was enclosed by the same material, the remainder was left open for the free circulation of air: in the dry season this was very comfortable. There were three other large sheds covered merely with a palm leaf across.

The land is poor, and the soil is very thin, at a trifling elevation above the coast, and also very rocky. The low land is well covered with trees, and in places appears to be fertile; as there had been no rain every thing was parched up. The Nicaragua, or Brazil wood does not grow on land which is fit for cultivation: It is mostly found where the soil is very thin, and where the ground is rocky, and at an elevation not more than four hundred feet above the level of the sea; at least such was the case here.

About five leagues, in a north-easterly direction from the Hacienda de Rosario, is the Indian town of Huamilulu, from which we got a few supplies. I expected on our arrival here, that every thing could be procured that we wanted. It is true that we had promises enough, not only from the Indians, but also from the parties who loaded the vessel. As to the Indians about here, that is those from the towns of Huamilulu and Ystapa, they care not how little they work: I mean the male portion of the population; but the women are seldom idle; the chief part of the labour is done by them. Almost every family has a piece of ground, where sufficient corn is raised to last them the year, It wants but little labour, and a small quantity of sugar cane is also grown here, but not sufficient for their own consumption. Although

near Huamilulu is a rich black loam, I should think it capable of raising almost anything which grows within the tropics. I only saw a few patches cultivated. Many of the inhabitants are very well off: their chief riches consist in cattle, of which there are a great number in the woods. Twice a year they are all collected; or, as many as they can get, when each owner marks his own beast. This occasion is considered a great feast with them, and men, women, and children come out of the village to assist in driving the cattle into an enclosure. There is abundance of food, &c. provided on these occasions, which are finished in the evening with sports peculiar to themselves. These holidays last about a week each.

The Indians do not make much use of animal food; not but what they are fond of it, when it is cost free. Those we had to work on board gave a convincing proof of it. On shore, their chief food is the tortilla, (cakes of Indian corn,) and Indian meal mixed with water. On shore there were several at different times, which came from the Cordilleras to work; and, as they had to find their own food, each came loaded with tortillas and Indian corn. When this is nearly expended they receive their wages and return to their homes for a fresh supply: many of them come from villages twenty leagues off. This race of Indians are greatly to be preferred to those of Huamilulu, and, although they are of the same origin, and their language and dress precisely the same. They are very reserved in their manner, even among themselves. The dress of these Indians, and also those of Huamilulu, is a large broad-rimmed felt hat, leather calçons, (breeches,) a short shirt, not reaching to the waistband, leaving a part of the body exposed, and sandals of raw hide. I did not see shoes, except amongst the rich, who dress a little more in the Spanish style, particularly on the feast days. The women's dress consists of a piece of common blue check, of a large pattern, folded round them just above the hips. I saw numbers on a feast day, who had nothing more on them; but in general, they wear a sort of chemise which barely covers their breast, leaving part of the body naked, in the same manner as the men. Their hair is made up into two braids, with the ends fastened together, and brought up round the head in the form of a chaplet. Wild flowers are sometimes added, or a piece of bright coloured silk. My consignee informed me that he had seen them ornament their hair with the fire-fly,\* which must have a very fine effect after sunset; but, with all their ornaments, I did not see one whose hair was not done up in a slovenly manner. The men are, with very few exceptions, quite slight, and about five feet three inches in height; the women are generally robust, which is probably owing to their hav-

\* This custom seems to be peculiar to the Mexicans.

ing exercise. Their complexion is a dark copper colour. I saw two or three women at Huamilulu with features rather passable; but generally, they have pretty decent-sized mouths, and high cheek bones, but scarcely any that has not well-formed limbs. The Indians of Tehuantepec, are a better looking race, their features nearly approaching the European and almost as fair: their language is very different from that of Huamilulu; it is quite harmonious. With regard to the liquid sounds, it resembles the Spanish, though decidedly it is a language quite different. The dress of the Indians of Tehuantepec is similar to the people of Huamilulu; but, at the town of Tehuantepec, I was informed, their dress is often very expensive, on account of so many ornaments that are used. As I saw none of their gala suits I can say nothing about it. Although the distance from Huamilulu to Tehuantepec is not more than fifteen leagues, and there are villages a great deal nearer, yet, I think there cannot be the least doubt, but that they are of different origin. The manner in which a Huamilulu Indian would pronounce the word "Tehuantepec," for instance, is this: each syllable is pronounced in a middling uncouth manner, until the p is on the lip, in order to pronounce the last syllable; then he finishes with a sound as near as possible like a person who has the hiccough; whereas, the Tehuantepec Indian finishes the "e" of "pec" as if it were a "pee."

The town of Huamilulu is a straggling built place, the houses all of mud, and thatched with the palm leaf: it is situated in a large valley, surrounded by lofty mountains, with timber growing nearly to their summits. The road to it, from the westward, is through a narrow pass, through which also runs a small river. In the rainy season it must be often impassible, as the bed of the river is nearly as high as the road. This is about a league and a half from Huamilulu. The mountains rise, on each side, almost perpendicularly, upwards of a thousand feet. On the eastern side of this pass is a celebrated cave, in which the Indians formerly had a god, who it appears, was in great repute among them. Previous to the conquest, the people from all the country round, came here to worship him. I attempted to get into the cave; but, as it was stopped up with large stones, and a complete thicket had grown up round it, which would have taken some time to clear away, I gave it up. The entrance, as well as could be made out, is very small, and now has a few crosses stuck up in front of it. It is said that the cave is very large inside. From this place, towards Huamilulu, the scenery improves, and as the road is, in parts, well elevated above the bottom of the valley, there are some very good views of the river of Ayuta, though now a small stream, which we had to cross several times. This river skirts the town of Huamilulu, which it supplies with water, I saw several fish in the stream, but all of a small size. In the dry season

this river is lost in its sandy bed, before it reaches the coast, after passing through the village of Ystapa, which is to the south-westward of Huamilulu about two leagues and a half, and situated in another valley. In this season of the year it had a very arid appearance. The population of Huamilulu is about 1,200. Ystapa contains about 700, or 800. The chief part of their riches consist of cattle; as to commerce, there is not even the sign of any among them. I saw one shop in Huamilulu, with a small quantity of European goods in it, the whole worth of which would not exceed 400 dollars. It was considered the best stocked in the place. A sort of bad rum was sold there also, at a very high price. This belonged to the party who were loading the brig. The men have a great deal of low cunning with them; but the women are more frank in their manners. It is a rare thing to see them either dirty in their persons or clothing: they are very fond of bathing. With regard to civilization I do not think they have advanced much; the only good that the Spaniards did for them was, by introducing the Catholic Religion, which has put a stop to human sacrifices, if it does not prepare them for the true one.

The day I was at Huamilulu happened to be a grand festival, which was also kept by their forefathers, previous to the conquest. The rich inhabitants provide a large quantity of food; that is, tortillas and beef guisado, (stewed,) and every poor traveller that enters the town on that, and the two following days, is supplied with a large quantity of each. I saw several instances of this. Every widow has also a large quantity given to her, in proportion to the number of her family. The diversion of the young men, during the day, is, to chair every man they can catch, not excepting the *Gente grande* as they call their Alcalde, &c. I entered the town just in time to see the commencement of it. Every one was dressed out in his best. The two first were the Judge and Alcalde; each had a tremendous large military cocked hat on, decked with a quantity of ribbon of the national colour, red, white, and green. The Padre Cura followed; but these, and a few others, were only taken on four men's shoulders, and carried round the market place, where they had to deposit, with an old woman (who was standing ready to collect it,) a Medio real, value nearly three-pence. If this was not paid, (which seldom happened,) the poor wretch who was in the chair got delightfully soused with soap suds, of which she had a large supply at hand for the occasion. This money (since they have become Christians,) is set apart for the following Sunday, to pay the priest for giving them an extra mass. In chairing their companions they pass off a number of jokes on them, to the amusement of the spectators. Disturbances seldom take place on these occasions, as the authorities are lookers on; and as spirituous liquors are very dear and scarce, there

are but few instances of intoxication; not but that they are extremely fond of it.

I dined with the priest the day I was in town. He is an Indian, and had but lately been appointed to the curacy: he is a native of another part of the country, and was as great a stranger as myself to the customs, &c. of Huamilulu. He treated me with great hospitality: he also sported his wine; but, as I knew it was a scarce article I did not prove it. One of our dishes, was a large iguana guisada, (a very favorite dish among the Indians, as he told me,) at first I thought it was a chicken, it was so white and tender, but when one of the fore paws stuck itself up in the dish, it put me too much in mind of an alligator to eat it with any great relish.

The padre informed me, that he was curate of fourteen towns, and had no one to assist him in his duties, and that the population of each averaged from 1,200 to 1,500. He visited each in its turn. The greatest part of the towns were several leagues from each other. This would take most of his time in riding from one place to the other, which it appeared he did; seldom remaining more than a day or two in each town. This could not be more than sufficient time to collect the loaves and fishes!

After dinner several Indians came to kiss the hand of the padre cura: he told me he was an Indian, which was plainly to be seen; and that now they could be priests, and enjoy other situations of respectability since the Spanish government in Mexico was overthrown.

In the woods about Rosario I saw a number of very fine deer. It is said there are also a large quantity of tigers and wild boars, and if all that is said of them be true, they are very fierce, but I rather think the contrary, as no person that I spoke to on the subject, remembered any of their acquaintances being attacked by them. For my own part I saw none. The woods also abound with parrots, parrots, macaws, and a number of other birds of most beautiful plumage. There were more doves than any other species. A few squirrels are caught occasionally. On the beach we saw a few snipes, curlews, and plovers; also an immense number of zapalates and pelicans. The people who were working about the cargo caught a number of iguanas, in one of which there were fifty-four eggs as large as those of pigeons. The price of a live ox is from five to six dollars: sheep are very scarce; indeed, I saw neither sheep, nor goats, whilst we lay here. Fowls are three dollars per dozen; turkeys are from six to eight reals each; rice and sugar (panache) are moderately reasonable. This is sent here from Tehuantepec and the neighbourhood. Plaintains and tamarinds are also cheap, and other things equally reasonable. The difficulty is to get it from the towns, although I employed a person to procure what



trifling supplies we were in want of, yet we came away short of many things; the constant excuse was, when desired to get the articles, which had been ordered, that they would be at the beach in a day or two.

In the bay there is an immense quantity of fine large fish: we tried every method, without success, to catch them with hook and line. We caught a few messes with grains, but the most of them were caught by going in the boats after dark, and having a large torchlight in the bows of her, striking them as they came towards the light. A small scine would pay well for itself here, as there is plenty of salt to be had to cure them, from a lake about a mile from the beach, which is nearly dry. In April it had a crust of excellent salt over it, about six inches thick, and has a very pretty appearance. There are two guards stationed here in the dry season, to prevent its being made use of, as it would injure the Government. Salt \* is a Government monopoly; but nevertheless, the salt of Rosario is sold by the guards themselves. When the rain sets in the salt dissolves: the sea also breaks into it during heavy gales of wind, and fills the lake up, which again evaporates in the dry season.

There was an immense number of rayas in the bay, commonly called by sailors devil-fish: these fish are very dangerous to the pearl divers. We struck several of them, but did not succeed in getting any on board. We killed one of them, but in hauling him alongside the harpoon drew. In coming from the shore one day, a very large one came under the fore part of the boat, and attempted to clasp her with its fins; it could not have been less than eight feet across, as the fins were above the gunwale of the boat, and lifted her bows more than a foot out of the water. They make tremendous leaps at times, and allow the boat to approach quite near, so that there is no difficulty in striking them. The raya we had alongside weighed not less than six hundred pounds. They are said to be very good eating; their shape is very like the skate, excepting that their tails are smaller. We saw several lobsters in the western part of the bay: they were most plentiful near the Morro de las Salinas. We tried several methods to catch some, but without success.

In addition to what has already been said about this part of the coast, it can be known by the low land at the back of the beach of Rosario. This runs in from one to two and a half leagues before there is much rise in it, and is thickly covered with trees. From north to northwest of Morro de las Salinas, nearly two leagues from the shore, the rising ground is formed by a number of small barren hillocks. From our anchorage where we loaded at, the following bearings were taken, lying in  $9\frac{1}{2}$  fathoms water, sandy bottom. There are two large patches

\* Salt is a monopoly of the British Government in India.

of a whitish appearance, the farthest range of the Cordilleras, the eastern is also the lowest, and bore N.  $59\frac{1}{2}^{\circ}$  W. The appearance cannot be seen, unless from a little to the westward of Morro de las Salinas. This has every appearance of being a waterfall, and rises from the other patch in a N.W. direction at a about an angle of  $45^{\circ}$ . It issues from a small valley in the Cerro del Chonga. The highest point of this range has but a small elevation above it, and is covered with trees. The waterfall inclines towards the south, and can be seen for several hundred feet descending before it is lost sight of amidst the forest below. Cerro de Zadan bore N.  $89^{\circ}$  W., and the extreme bluff of Morro de las Salinas, S.  $33^{\circ}$  W., three miles and a half. The eastern point well within the bearings, and Punta de la Laguna Grande, N.  $71^{\circ}$  E. six to seven miles, and rock on the beach, (already mentioned as forty feet high) N.  $65^{\circ}$  E., and the galena or shed, under which the cargo was piled, N.  $26^{\circ}$  W. half a mile; bearings by compass.

At the western part of the bay are four palm trees close to the beach. The distance from the Morro de las Salinas is about half a mile, and between these trees and the Morro is a larger cluster of palms. Between these two clusters is at all times the best place to land, as a boat can beach here with comparative safety, when at every other part of the bay the sea runs very heavy. At the neaps we found the place quite smooth, with the exception of a sea heaving in at about every ten or fifteen minutes; but it causes no risk to a boat, provided she is kept end on.

At the south-western part of the beach, and where a small pathway leads to cross the Morro de Salinas, close to the sea-side in the cliff of a rock, is a small spring of excellent water. We always found it clear and cool, even at noon; my consignee said we could fill the ship's stock of water from it with dispatch, but I soon found out that he knew nothing about it. The quantity that could be filled in a day did not exceed thirty gallons, and after having landed all our water casks, we had to re-ship them, through a great deal of surf, and land them at the galena abreast the ship. We filled our water at a well about a mile from the beach, but the supply was very limited, it being the only well that had water in it up to the day of our sailing. We did not complete our stock.

A captain of a ship should trust to no promises when he comes here, either with regard to supplies, or any thing else; no matter by whom made; and, as water and fuel are indispensable articles, the filling the one, and cutting the other should be immediately commenced with on their arrival, by some of the crew. It is useless to employ Indians to work for the ship, (that is on shore,) the greatest part of them will neither be led nor driven. On board they answer better (that is a few

of them) to haul the wood about in the hold. I found the promises of Indians, and as they called themselves "*Gente decente y Civilizado*" on a par. Near the Morro de la Laguna is a large lake, from which the headland takes its name. A few miles farther, to the eastward, is the Morro de Santiago de Ystapa, (in the chart it is called Morro de Ayuta,) near which is the entrance of the small river of Ayuta, the stream that runs by Huamilulu and Ystapa. There is a bar runs across the entrance of it. The canoes land on the beach in preference to going over it, as this is attended with danger.

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### NAUTICAL SURVEYS AND NAVAL SURVEYORS.

In the *United Service Journal* for April last, there appeared a letter from the pen of our talented naval author, Captain Basil Hall, entitled "Naval Hydrography, and the Surveys at present in hand." Captain Hall in dealing with his subject soon found out that it is a difficult one; but with the laudable motive of awarding merit where merit is due, he was not deterred from the object which he had in view, and although conscious of the want of a Surveyor's experience, to duly appreciate a Surveyor's works, he fearlessly grappled with his task. Now approving, as we do most heartily, of the motives, which influenced Capt. Hall in writing his letter; and like him, laying no claim to surveying experience, we shall, nevertheless, take up his subject and respectfully follow his steps. Our object will be to endeavour to supply where he has left us room, and to assist him in doing justice to the efforts of those who are conducting "an important branch of the public service, the extent and value of which," as he justly expresses it, "few people are aware."

In silent, modest perseverance, are our naval surveyors carrying forward their respective useful labours, on the various parts of our coasts: their annual produce is gathered, as a harvest of precious store, into the archives of Hydrography at the Admiralty; and it is only, when they are given to the world, from the hands of the hydrographer that their names are published, and that the public can know not only that so much useful labour has really been performed, but *who* have been the labourers. Capt. Hall says, "I do not pretend, by any means, to have exhausted the subject, as that is a task which could be performed only by a person actually engaged in the service alluded to, and who at the same time should have ready access to all the official documents connected with the multifarious works in hand." Our purpose, in a few words will be in this, and some subsequent numbers, while we enlarge

on Capt. Hall's sketch, to second him in explaining the objects of a surveyor's duties, and to show with how much skill and perseverance those objects have been effected; and thence "to claim the national gratitude for high duties well performed, but which, up to this time, have been little known except to the hardy labourers themselves, and their immediate employers."

And first of a Surveyor's duties. The duties of a Surveyor may be briefly summed up in one single sentence; namely, *to find out the dangers of navigation, and to provide seamen with the means of avoiding them.* This language may perhaps appear new to some:—new to those of our readers, who may have hitherto considered surveying, as a sinecure, or a kind of holiday operation; and those entertaining such an opinion are unfortunately not a few. They are not few, we mean, who, in their ignorance of what it really is, have looked on it as a pleasant mode of servitude, in which the hardships of a naval life are not to be found; a kind of service they consider it in which there is no exposure, no watching, no privations to which those who follow the profession of the sea are necessarily subject. And is it really so? If so it be, how comes it, that our surveying ranks are so thin? How comes it that there are barely sufficient officers in the extended columns of the navy list of Great Britain, who have stepped aside from the common routine of duty to carry on surveys? How was it that three of our surveying vessels were lately sent out in command of lieutenants, which vessels, at least from their size, were the legitimate commands of commanders? What other reason can be found for this departure from rule, than that, there were no commanders to put into them! The *Ætna* left Portsmouth, some little time ago, under the command of the late Lieut. Arlett, to survey the coast of Africa; the *Thunder* only a year or so ago, was under the command of Lieut. Barnett, (since promoted;) and the *Meteor* is, at this moment, under the command of Lieut. Graves; all of which vessels are, at least, the fit commands of commanders; and one of which had been, and another since has been, commanded by a Post-captain. This is not stated to the discredit of the navy; but, it certainly is recorded to the honor of these young officers, that notwithstanding in the surveying branch of the service, officers of due rank could not be found to fill those commands, the high duties of these stations could be performed by lieutenants: and so performed let us add, as to secure them their well-earned advancement.

It will be admitted then, even by the sinecurists, that this is no favorable ground on which to make their objection against the surveying service; to the same effect, might we add, of the junior officers of this branch of the navy, but we shall follow up our introductory view of the subject by tolerable proof in the sequel, which will shew what the

Naval Surveyor has to do, and the difficulties he has to overcome in making a Nautical Survey; and we may then turn round and ask, where lies the sinicure?

But the real fact is, that the lofty character of nautical surveying exacts so much from him who undertakes it, an acquaintance with so many branches of science, that when it is once commenced, his whole and sole occupation, every thought of his mind, dreaming or waking, must be naturally turned to some part of his vocation: in fact, a surveyor's work is never done until long after it has left his hands. Responsibility keeps alive the mind of the surveyor incessantly to exertion in all the various branches of science, from which his duties exact contribution, in the same manner as responsibility frequently keeps alive the mind of the captain of a ship, or the commander-in-chief of a squadron, to the duties which he is ordered to execute in that exertion of nautical tact and ability which these duties require for their due execution. Of the surveyor's duties, Captain Hall speaks thus: "It may indeed, be safely said, that in some respects, no case is harder than that of our naval officers, who are employed as hydrographical surveyors, and are sent to examine and make charts of the different coasts of the globe; though it might be difficult to point out any service of more real or more lasting utility. Upon it, not only depends the security of navigation at its most difficult and dangerous stage, but it greatly contributes to the well-being of commerce; and thus, besides involving so many of the comforts of those who 'sit at home at ease,' it most essentially tends to lessen the hardships and dangers of a sea life; which, manage it as we may, must still have enough to encounter in the winds and waves that no science can lull, no skill evade."

Of the "lasting utility" of the service, here so justly urged by Captain Hall, let those who form charts for our mercantile navy bear testimony. Whence their hydrographical details? Whence their coast lines? whence their soundings? whence their accompanying directions, all so *vauntingly* put forth under the titles of *new and correct charts, from the latest surveys*, and the manifold new editions of sailing directions? The answer is obvious. Such materials cannot be collected by any private individual for the purposes of mere trade. The necessary outlay would far exceed the return. A voyage even to the nearest foreign shore, would be impossible, with such views. Whence then comes all this information? but from the *naval officers*, who are employed as *hydrographical surveyors*; whose labours are not only of real "lasting utility" to the ships of the Royal Navy, but supply the manufacturers of charts for the merchant shipping with materials for their calling.

And here a word or two more may be said. The safety of commercial shipping must ever be a grand object of a paternal government, but

by a perverseness which belongs to human nature, the benefits which ought to arise, from this source, to our merchant seamen, are too often frustrated. It is well known that the charts of the Admiralty, which contain the works of our naval officers, are sold at a price, which is little short of giving them away, so small is it. One would suppose, that charts that would suit Her Majesty's ships, would surely be suitable for the merchant shipping of this land. But no! theirs is altogether a different taste:—We do not mean to say there are not exceptions, and that among the commanders of our merchant shipping there are not to be found persons, who have as good pretensions to treading their own quarter-deck as officers and men of science, and gentlemen, as are to be found in the royal navy. But what is the too general taste of these sea-captains? True it is “living artists must live, and tickle up their ware to the taste of those who buy;” and, therefore, their charts must be backed with blue paper; never mind how rotten it be; and the more they are crossed and re-crossed by lines, representing compass bearings, called rhumbs, or rhumb lines, fairway tracks, &c., so as to be actually confusing, in fact, the more mysterious they look, the better. These tobacco charts constitute the hydrographical researches of the generality of our merchant ships; and, indeed, (if any they have at all,) few they have even of these. And whence come these? they are purchased at a far higher price than the Admiralty charts are sold for from the manufacturers. Those genuine, irresponsible monopolizers of the results of our surveyors' works, seizing them like cormorants of hydrography, and retailing them, with their own manufactured additions, to the honest, but too gullible John Bull merchant skippers, thereby sapping the springs of that return for providing them, to which government is justly entitled, and which, most assuredly, for the good of the public at large, ought to be secured to the government alone, because, obtained at the government expense. But the evil rests not here. The manufacturer, in his calling, to catch the eye of a customer, must needs take on himself to supply, as “new and correct,” what the Admiralty charts express as doubtful; and, (to say nothing of Admiralty information being incorrectly introduced into these charts,) erroneous descriptions of coast-line, harbours, &c., appear laid down from documents out of date in these very charts which are patronized by merchant captains, too often to their destruction. So important a subject is this considered by other governments, that no charts are allowed to be published for sale at all in their lands, but by the government depots, a measure which may, at first sight, appear an extreme one; but it is, at all events, erring on the safe side. Maps are different things: the traveller may err a few miles without risking his life on *terra firma*, but with navigation, which requires the assistance of charts, it is quite

a different matter. Here life and property are at stake. Nay, the very springs of a nation's greatness are concerned in the safety of her maritime commerce, and the lives of her seamen, and an error of a few miles of latitude in the position of a shoal, or outline of a coast, will, (as it too often has done,) yet prove fatal to many a goodly ship. Looking on the subject in the important light which it demands, in a maritime country such as England is, the measure of foreign governments, we are compelled to admit, is at least a wholesome one. If one great depot of hydrography were established for the reception and publication of hydrographical information, in the shape of charts, plans, and directions for all the known parts of the world, the result would be; first, a well digested system of these documents, corroborated by the repeated observation of all navigators, and free from all extraneous trash which we see every day, while they would contain every desirable information of which seamen stand in need. We should then no longer hear of the inaccuracy of the charts of places, long well known; and the bungling work of irresponsible persons as their constructors, such as have figured of old in fine flourishing characters in their titles, and which, with those of more modern times, have all in their turn, been held out to the public, in the newspapers of the day, first in enticing characters, and then reflected on, as causing the loss of ships. These names would no longer serve such a purpose. The charts on board would be known to be those of the government, a sufficient guarantee for their correctness; and all charts, at the end of a voyage, should be returned with such additions or corrections as the captain, (returning home,) might be capable of making to them, and complete ones taken again on his departure.

Of the value of such a general hydrographical depot to a maritime country like this, we say again, there can be but one opinion; but to treat on the arrangements necessary for its establishment, and its full and active operation, would require more space than we can now devote. This is a subject, however, which we may look into another time; and, notwithstanding we have certain misgivings as to such scrutinizing measures being welcomed by certain parties, we shall not be deterred from hereafter taking it up. Certain it is, that of the twin sisters, geography and hydrography; the former emphatically called the "first cause of all our knowledge, and the parent of all science," languished in this country for want of a foster friend, till a few years ago, when the Geographical Society sprang up, and became a legitimate source whence to look for genuine information on that subject. Previous to that era in the annals of science in this country, where were the accounts of geographical discoveries to be found, but in the columns of newspapers, depending, for their appearance, on the taste and caprice

of the editors. And does hydrography, that really "terraqueous maid," yield in importance to her sister science in this maritime land? Surely not; hydrography, if not the "first cause," at least is the safeguard of our seamen, and should therefore meet with the same high protection; and where so worthy a protector of so worthy a *protegee* as the government?

However to leave this digression, we may be satisfied that it was not of such loose information as the chart manufacturers give, that Capt. Hall alludes to when he says, "even those who have never been afloat, or have made no voyage beyond their own well-known shores, can understand of what vital importance it is when visiting remote coasts, (or indeed any coasts far or near, whether in the British channel, or in the Japan seas,) to be well acquainted with the nature of the shore along which their ships may be navigating. Even in the finest weather with the fairest wind, and in the districts most free from dangers, there is still a constant risk, even in the day time, unless the position of the headlands, the depth of the water, the set of the tides, the variation of the compass, the direction and force of the prevalent winds, and various other items, be more or less fully known, and carefully taken into account. But when the region, over which a ship is steering, is but imperfectly known, is seamed with partially examined shoals, or is fretted with insulated sunken rocks, or barred up with insidious coral reefs, over which currents run, the speed and course of which are uncertain; and if the winds be irregular in their force, and the local laws by which they shift unsettled; and if, to these causes of distraction, the fearful addition of darkness be added during a long and dreary winter's night; the anxiety which besets the mind of the commander of a ship must have been often felt to be fully appreciated.

In like manner the sort of buoyant confidence, and even pleasure with which he sails along a *well surveyed coast*, can be duly understood only by those who have made many voyages. Let him be but sure of his position by the infallible means now in the hands of every well supplied navigator; and let him be sailing on a properly-laid-down coast, however dangerous, and in whatever weather, he feels no alarm, but only pride, that in the darkest night, he can make his way with certainty, guided by his chart, his lead-line, his well-corrected compass, his occasional reference to the stars, and by the help of those greatest of all earthly comfort to the sailor—lighthouses. But as we said, to render Nautical Science useful, to impart the least advantage to the lead-line, or to render this or that course steered by the compass at all available in practice, or to render even the sight of a lighthouse a blessing, the coast along which a ship is navigating must be accurately traced; the soundings must be well determined, not merely at one time of tide, but



at all times, and the quality of the ground must be ascertained and recorded; the rate at which the tides flow, and what are their devious courses, must be specified: some acquaintance, too, with prevalent winds must be added, in order to enable a ship to profit by all these combinations which determine her position, not to mention such drawings of the land as may enable strangers to recognize points on the coast which they had never seen before. To any one who understands what has just been said, the heavy responsibility which falls on the hydrographical surveyor will also be duly allowed for.

In defining a surveyor's duties, we spoke of danger which he was to search out, and to give his brother seamen the means of avoiding. The kinds of danger to which we alluded, has been conveyed in the above extract from Captain Hall's letter, and from which it will be readily seen, that the surveyor runs some risk of danger in the performance of his duty. We certainly did not allude to the danger of an enemy, but rather to that from the elements; not that as a naval officer, he is exempt from these, as well as the dangers of a sickly climate. The late Captain Hurd, while hydrographer to the Admiralty, made a survey of the Bay of Brest, in the midst of war; and, in the same war, the present hydrographer, Captain Beaufort, was directed to survey the coast of Karamania, in the Mediterranean, on which service he was severely wounded.\* We have besides, the partial examinations of Mr. Thomas, on the Dutch coast about the same time; but these remarks are merely adduced to shew that the surveyor has to overcome obstacles of every kind. The late survey by Com. Belcher, of Oporto, although this country was not at war with either party, was made under the most unfavourable circumstances, at a time when the armies of the two brothers, Don Miguel and Don Pedro were actually occasionally engaged, and the fire from each of whose troops was ranging over the heads of the surveyors. The late Captain Skyring lost his life in surveying, from the treacherous and murderous disposition of the uncivilized African; and, if we were to look aside from the ranks of the surveying officers, to the general naval service, we might find many instances of tolerable exposure in the occupation of surveying. The late veteran, Sir Thomas Hardy, gave Lord Nelson a plan of the approaches to Copenhagen, which differed so much from that with which his Lordship had been supplied, (we suppose from the government,) that he rejected it at once, and acted on Sir Thomas's survey, which, we are told, extended so near to the Danish ships, that the dropping of the lead might have been heard from the headmost of them. The importance of such

\* It is not generally known that he receives a pension for his wounds thus so honorably received in surveying.

information as was contained in this rough sketch had its due weight in regulating the proceedings of that day. Again, in the surveying service, we might adduce instances of boats being lost in shewing that surveying operations are no *sinecure*. The "Shamroc" lost a boat's crew and her officer on the coast of France, during Captain White's survey, in the violent races about the Channel Islands. The "Thunder" had a boat capsized some time ago, on the Bahama Bank, happily without loss; and the "Sulphur" has recently lost two boats, unfortunately with several lives, over which a classical officer might say, *Dulce et decorum est pro patria mori*, for the enlightenment of those who look upon surveying as a sinecure, and from which they might have no difficulty in concluding that there is such a thing as scientific glory, as well as the glory of arms, *pour encourager les autres*.

If we turn to the effects of climate, the West Indies, and the coasts of Africa, the surveys of which we shall have occasion to treat, will afford ample records of their ravages on the surveying service. *Palmas qui meruit ferat*, we might exclaim then with Captain Hall, for our naval surveyor, "The laurel for him who deserves it." The hero of the fight is not more worthy of honour than the naval surveyor, who, in the face of a foe, be that foe in the shape of man, the sickly pestilence, or the strife of elements, pursues his task with energy and zeal unshaken, and enduring to its accomplishment.

But there are other parts of this subject, which, as we are now engaged on it, must not be lost sight of. Captain Hall says, "in many other departments of the naval service, there occur long periods of duty, of which the details may be performed, with more or less slackness, without any material detriment to the public service; and often some of the highest exploits in war are dependent on transient contingencies, which it is the province of genius to seize hold of at the moment, in order to command that ultimate success, by which alone, the public are in the habit of judging merit. Even in making voyages, especially distant ones, a very loose kind of navigation will get a ship safely along the open seas; and though, of course, a well conducted ship will always in the long run, beat one which is handled in a slovenly way, if at last both vessels reach their port in safety, nobody cares much about anything else, however indifferently the service may have been performed during the voyage. But the hydrographical surveyor has no such seasons of relaxation in the performance of his duty, since he can never, for one moment, intermit the utmost stretch of his vigilance, without incurring a risk so serious, that, if he have a single spark of the feelings of an officer in him, he will shrink, as from a crime, at the slightest deviation from the most rigorous exactness, which his means are capable of attaining. Every cast of the lead, which is taken on board his

ship, or in his boats, is loaded with its separate specific responsibility : every angle, taken from every station, whether on land, or rolling about in a boat ; every compass bearing, every measured base, every part and parcel of his work, in short, must be executed with the maximum degree of care ; or, it is altogether worthless. To explain this in a single instance, it may be stated, that where the tide rises and falls considerably, each sounding taken at any moment but that of low water, has to undergo a correction. In like manner, the direction and velocity of the tides have to be computed for every hour of the ebb and flow, and every anomaly faithfully recorded, whether it be understood or not. No one operation, indeed, in the whole course of a survey, can be negligently performed without deteriorating all the rest, and rendering it a great deal worse than useless : for, it must be recollected, that, when navigators come afterwards to make use of the charts, which have been constructed under the high sanction of a government survey, they rely implicitly (since they have no means of judging of it for themselves,) upon the fidelity with which the surveying service has been performed."

This passage corroborates the truth of our definition of a surveyor's duties:—viz., to "search out dangers, and to provide seamen with the means of avoiding them." Hence it is evident, that, the means provided for avoiding them must be genuine, or they are worse than useless, as Captain Hall says. We will add, they are to all intents and purposes wicked ; for, after saying "danger is here, and you may avoid it," by certain directions, if there be no observance of good faith in what is laid down, those very directions will, in all probability, mislead a ship to her destruction. Well may Captain Hall continue then, "And this leads me to speak of the primary importance of good faith on the part of a surveyor, not only in making but in recording his observations ; and also in what is called reducing them, that is, computing the results, and finally projecting his chart from the raw materials laboriously accumulated in the course of the operation. Unless all this be done with the strictest fairness, unless every care be taken in making the proper allowances for the error of his instruments, and for the time of tide ; and, unless in the multifarious, and often complicated calculations, by which even the least important part of the plan is to be settled, the utmost pains be taken to avoid error, the whole becomes a mass of mischievous confusion. The temptations indeed to avoid difficulties, to cut across to the results, by the short roads, and to make the show without the substance of a chart, are so numerous, and lie so far out of the way of ordinary detection, that indolence, or indifference, or ignorance, or bad faith, will be too apt to accept the compromise, and fall into slovenly habits. Accordingly we do not know any branch of the public duty, which more imperiously demands, for its due performance, all the most

honorable requirements of an officer and a gentleman than that of a maritime surveyor." Our remarks on this passage we must reserve for our next number.

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ÆOLIAN RESEARCHES.—No. II.

(Of the seventeenth century.)

I PROCEED to the third generall cause which is their descension or repercussion from the middle region of the air.

This opinion seems most ajusted to the vulgar hypothesis, though the Prince of Schooles rather ascribes the oblique progression of winds, to the rapidity and circumgyration of the Heavenly motions: which he expressly asserts in the second book of his meteors.

Yet Alexander Aphrod urges against the sense of Aristotle, that upon this supposition, the whole current of air would always be carried from east to west by the diurnal revolution of *primum mobile*; and so the wind could never change to any other point of the compass; with many insupportable difficulties, which put the moderns upon new methods of resolving the phenomenon.

The Peripatetiques though by no encouragement from the text of Aristotle, hold that the repulse or Antiperastasis, which the hot and dry exhalations meet with by rancounting the cold clouds causeth their resilitation downwards, and impresses that oblique motion on the winds.

But the most learned of our present age have so little regard for the doctrine of Antiperastasis, as it's usually maintain'd in the schooles; that they endeavour to explicate this, and all other appearances in nature without it; and the Lord Verulam himself being averse to this caprice of the scholastic Doctors, declares the repercussion of winds from cold of the middle region, to be of all other the vainest and most irrational hypothesis.

However, I deny not but winds are frequently generated in the second region of the air, sometimes from vapor's before, and otherwhile after their coalition into clouds. The prognostics of these, is a trembling, and murmur of the woods, the shooting of starrs: halos about the moon: all which indicate repletion of the atmosphere with exhalations that afterwards descend and are converted into wind: yet the cause of their relapse to the earth, is no repercussion from that imaginary Antiperastasis, but the ingenit gravity of the vapors themselves; at least the pressure and detrusion of the superincumbent air; which I suppose to ly in severall fleeces, or storys one above another, and presse down the inferior; that when the winds chance to gravitate compara-

tively more than the vapors near the surface of the earth, they to preserve the just counterpoise of the atmosphere must necessarily descend of of their own accord.

The gravity of air (especially wind which is a body farre more heterogeneous and impure) can be no paradox to the learned of our times; since the many noble disquisitions about the pressure and weight of the atmosphere made by Mr. Boyle and other curious persons.

Our seamen commonly observe it to blow from that quarter where they see one or more clouds gather above the horizon: either that they presse more then at other times, or because the matter of which they consist is afterwards dissolvable into winds.

Those clouds, from the rupture and dissolution of which wee are to expect suddain gusts, hang more loose and floating being commonly of a brighter colour, and neither so dense or opacous as the other which are pregnant with showres.

It appears from the precedent discourses, that winds do not only emerge from the Æolian causes, but have a much sublimer origine in the kingdome of meteors, being generated both in the lower and middle regions; at least consist of the gross air, and vapors that are driven from them: and though after their relapse to the earth, they are indifferently dispos'd to whatever species of agitation, yet generally they began their march towards that quarter, whither the most violent impulse is made; at least where they find the medium more yielding, and fittest to propagate their motions. As sometimes the atmosphere is thinnest towards the south, which begets a north wind: otherwhile in the west, and then the protrusion is likewise made westward: or if the whole current bend with too great violence towards one point; it oftentimes recoyls back again, and begets a quite contrary wind to the former. Thus wee often observe, that when one wind ceases, the opposite begins; and the atmosphere, which in many things bear a great resemblance to liquids, has these kind of fluxes and refluxes like the rivers and seas: For air is a body so fluid, and tractable, so easily susceptible of them, and long retentive of the least impressions; that if it once be set a going it is a kind of perpetuall automat, continues the motion, is drawn into consort with the vapors and it selfe converted into wind. If we make a further enquiry into the cause of their motions, we shall find they proceed likewise according to the disposition of the aliment; and those which have no durable fonds, dwindle away and are soon exhausted in their course: sometimes they condense into clouds; and otherwhile, being too much attenuated and refin'd, they vanish and dissipate in the air.

Those winds which are nearest their locall originies blow hardest; especially such as are reinforc't by other auxiliary vapors as they passe.

Acosta observed they were always most turbulent neer the shoares and promontories of the Indies, because the flatulent steams were then more impetuous neer their rise; which afterwards became languishing, and broken by a long passage in the ocean. So that there are severall accidents which may occasion the greater rage and impetuosity of winds; as first the plenty of matter which constitutes them: secondly the rarity of the medium that affords no considerable obstacles to stop their career. Or lastly, because the protrusion of the air is more forcible and stronger than at other times.

Thus farre we have employ'd our thoughts concerning their first fountains, or locall origin's in gener.all.

The formall cause, or essentiall attribute of winds is their transverse motion: for air is no longer wind then it's agitated and mov'd, and therefore Homer was not so good a philosopher as some of his scholiasts would make us believe, who shut them up in Ulysses' bottle:

“ And the swift course of the tempestuous wind,  
Close in a leathern bottle he confin'd.”

The causes of their oblique progression has so farre engag'd the most philosophicall geniuses of former times; that Bodinus at length not knowing what to determine among variety of opinions, ascribes it to the energy of angels: and the college of Coimbra to the immediate influx of the Divine Power. Kepler will needs have the earth animated and to breath out winds from the subterraneall caverns as from it's nostrils or mouth.

Theophrastus phancy'd the winds to be partly of an igneous nature still aspiring upwards and partly made up of terrestriall exhalations which endeavour to descend; that by this means they were forc'd to direct their course obliquely, between two contrary motions: which seems to me lesse plausible than the doctrine of Aristotle; though I think it would be equally difficult to explain how the rapid gyration of the celestiaall bodys could create those violent impressions on the air, and winds at that immense distance from the earth.

It would be tedious to write the dissents of the Greek interpreters with the Latines; how many nauseating and frivolous contests arose upon this argument between Theophrastus, Aphrodisæus, and the school of Alexandria: and in the more flourishing reign of Perpetetisme, how strangely did Albertus Magnus, Thomas Aquinas, Cajetan, and Contarenus, with many others of the Seraphic and *Angelicall* Doctors, torture their wits, either to find out some new salvo for the hypothesis of Aristotle, or invent a worse of their own. Bonaventure writ a whole book, wherein he treats of little else beside the severall opinions concerning the transverse motion of wind. And we must needs esteeme it a great

effect of their leisure, who have employed so much time in such empty and jejune speculations.

Yet not only the Peripatetiques have fail'd in their attempts: but we have as little satisfaction from Epicurus, or the Severe Porch: and may as justly question whether the theories which shall be started hereafter, must hope for any better success. Yet I think we may thus farre rationally conclude, that as causes of winds are various, so the reason of their transverse motion is not always one and the same.

I have frequently observed that not only the north but most other winds, seem many times rather somewhat to descend, then blow in exact perpendicular line to the horizon: yet we must acknowledge that even those which relapse from the middle region or are generated by the rarefaction of vapors in the intermediate space between the earth and clouds, have for the most part an oblique or semi-circular motion; for although their ingenit weight would rather precipitate them to the earth; yet they are born up and repel'd by the continuall effluxions of ascending steams; or at least can descend no lower then where they come to the just counterpoise of the air. So that if the flatulent vapors have gravity enough (especially after they are condens'd in the colder regions) to invite them downward, and yet the resistance of the atmosphere sufficient in a great measure to check and retard their descent; this must necessarily divert them from their precipice, inclining them rather to a mixt and collaterall motion. For though winds are generally heavier than the air below, yet they are supported in it during their career; till by degrees falling downwards to the earth, they at length cease, or languish in their course.

We must note likewise, that the whole body of the air settles about the earth in a sphericall figure; so that the protrusion is made from all parts to the center; that the winds, being resisted by the pressure of the atmosphere above, and the earth or sea below, move as in a channell, between both, wherefore they soare highest in a serene skye, when the depression of the air, and the winds is much lesse than in cloudy weather. And the reason why they blow obliquely (or which is all one) perpendicularly to the horizon is not to be suppos'd because the vapors are naturally determin'd to any such particular species of agitation; but that being dilated by the Sun, they require a larger space, and find the medium most dispos'd to admit of their motions in that manner.

Lastly those winds which emerge from the caverns under ground, may sometimes have that transverse motion impress'd on them from their fountains at the time of their eruption. For those volatile spirits of salts, being once mov'd in the hollows of the earth, by the subterranean warmth; are still roving up and down, and restlesse, till they get vent; and after their release protrude the contiguous air, and propa-

gate the same kind of agitation in whatever bodies occur in the way: and then all auxiliary vapors will be sure to have an intermediate recourse whither the strongest current bends.

But besides these primitive and original, there are secondary causes and affections of winds: as, their undulation; repercussion from promontories; opposition, &c.

We have thus far enquir'd into the progression; but the undulating motions are no less considerable in winds: for they blow not in one constant flur, or stream, but in gusts, that have their starts and intervals intermitting like our pulse; which is call'd the undulation of wind or air from the resemblance it bears to the wavings and fluctuations of waters.

Some of them are *Indigenæ* or natives, and others adventitious to the places where they blow: yet the question still recurs; for those which are externs, and either come from beyond the sea, or rove from farre countrys have the same locall origine with the rest, though remoter from our observation.

The motions of winds as indeed all other bodies whatever, are propagated in right lines; if nothing intervene to check and retard their course: but usually so many impediments occur, that are able to make resistance in the way, that they seldom proceed in one uninterrupted perpendicular from their fountains: especially in mountainous places, forrests, and other eminencies, and inequalitys of ground, but they are repuls'd and recoyl'd back again, and being sometimes imprison'd in the straits or creeks of promontories, they are tost and banded to and fro like tennis balls, till they find their passage out: so that after severall diversions it may happen at last that a wind may be distracted to a quite different point of the compasse: and otherwhil: so far befriended by the advantageous situations of the places where they blow, that they run streaming between two mountains as in a channel or trough; and are guarded on all sides from the inroads of other exotique winds and air. Upon this account its no very unusuall thing to have one wind blow on the top of a mountain, and a quite contrary in the vally below. In the main sea they keep the same quarter a long time, when nothing occurs that can controle them: but neer mountainous islands, or shoares, they whiffle up and down and shift from one point of the compasse to another, by severall repercussions from the promontories or hills; and these our seamen call eddy winds: for as water once dismiss'd from the fountain's head is not only tinctur'd with the qualities it receiv'd from them, but must afterwards conforme to the course of the channell or banks through which it glides: so the winds (which are torrents, or rivulets of air) have their meanders and deflections in their journey, and are in a great measure obnoxious to the situation of the countrys in



which they blow: they also meet with frequent oppositions from the repletion of the atmosphere with multitudes of fresh exhalations that check and crosse them in their way; but especially by their rancounters with contrary winds; which must necessarily engage, and strive for mastery, till one overcomes, so that from two contrary winds there sometimes results a third compounded of both extremes; and otherwhile if they meet in the eye of each other from diametrically opposite points of the compasse they ballance one another and there ensues a calme.

The matter of winds according to Aristotle, is a dry and fumid exhalation. We have his sentiments more particularly in the seconde Book of Meteers, on which the succeeding peripatetics seem to ground their doctrine, that nevertheless may admit of a farre greater latitude than the moderne schooles allow: for he never altogether excluded moist bodys though the degrees of siccity were always to be most prevalent. I acknowledge that winds may sometimes consist of hot and dry exhalations; but the humid and aqueous are much better adjusted to the design. For this reason, rain\* is the usual prognostick of winds, because the plenty of moisture, then floating upon the superficies of the earth, is afterwards dilated and put in motion by the heat of the sun: as Lucretius instances in wet clothes, and Aristotle in moist wood, that assist greater quantities of steams, and wreke more than dry: for the fumid and terrene concretions, especially those earths and salts in the caverns and spiracles under ground, being agitated by the subterraneall fires, require a farre intenser heat to resolve them into winds being of much more tenacious figures then water and other liquids, which hang loosely together, and are sooner expanded into larger dimensions. Wherefore the definition of Meteodorus in Plutarch seems to excell that wind is *Aquosi anhclitus æstus*. And though Aristotle declares they consist of hot and dry exhalations, at least, the earthy parts to be always most predominant; yet by travelling o're lakes or snowy mountains, he allows they may become moist or cold; and wee find that almost any stirring or ventilation of the air do's refrigerate.

Neither did the Stagirite himself so strictly confine his hypothesis to the hot and terrestriall exhalations; for in the 2d booke of his meteors, he acknowledgcs the Etesians to be generated from the colliquation of ice,

\* There is an old saying that "When the wind is down the rain will come down," and as far as our observation goes, there is much truth in it. But it by no means accords with the opinion of this ancient author. Wind, we should say, is oftener than otherwise the harbinger of rain, and degenerates into rain, if the expression may be allowed, more readily when it proceeds from a rainy quarter. In London, if the S.W. wind blows with a certain violence, it will be attended with rain; but when from the eastward, or north-eastward with the same strength, there will be no rain with it, and none unless it blows considerably harder.—ED.

and snow in the polar regions. But why should I longer dispute their materials and properties? Winds are hot, dry, cold, have the greatest diversity of qualities, and accidents: They may consist of almost infinite variety of salts, spirits, juices, and minerals, subterraneous damps, agitated air, dissolv'd snows, broken and dissipated clouds, rarify'd vapors, and what not? For most bodies being sufficiently dilated and put in motion are convertible into wind.

Next as to their limits and seasons: Some spread many thousand leagues, and others not above 2 or 3 miles from the fountains; I call that the country, or fountains of wind, where are the causes or other local origins which gave them birth.

Wee cannot easily determine of their altitude: My Lord Bacon delivers his sense, that they not only aspire to the confines of the middle region, but soar above the generality of clouds as wee oftentimes observe the clouds move, and a gentle breath fanning the top branches of trees, and yet not the least brise of wind stirring neer the surface of the earth: which shows, they sometimes prevayle most in the lower, and otherwhile in the remoter stations of the air, and so accordingly mount higher or descend, as they happen to be more or lesse depress'd by the gravity of the atmosphere.

Varenius perceiv'd the smoake issuing from the top of Mount *Ætna*, to be agitated and tost up and down, as from the tunnells of chimneys; which though it lifts up its snowy head into the second region, yet it is not altogether exempt from the incursions of winds. However, Acosta travelling o're the Peruvian hills, discover'd no violent motion of the air; but rather an æther so subtilis'd and ignite, that it caus'd heavings and convulsions in animals, so that they were forc't to thicken it with sponges, to prevent immediate suffocation. In like manner the the highest eminencys or peak of Teneriffe is always at peace, nor expos'd to those storms which sometimes infest the lower parts or neck of the mountain.

The Alps, and Pyreneans, or whatever hills beside that, are covered with perennial snows, are also liable to winds from their resolution in the summer; but the Peruvian, and some others which may be reckon'd as the extravagancys of nature, that threaten the sky, and overlook the clouds with their prodigious height, are I suppose, never disturb'd by tempests; though I question whether any of our European world can pretend to this privilege, yet all the Grecian historians who took all opportunities to advance the miracles of their country, relate of the Macedonian Athos;\* that it was customary when they sacrific'd on the

\* Mr. Urquhart, in his valuable work, the "Spirit of the East," published by Colbourne, Great Marlboro'-street, makes allusion to this tranquil state of the air on Mount Athos.

top of the mountain, to inscribe their names in the ashes, and the characters are said to have remain'd all the yeere round, without being in the least defac'd by the winds.

The spring and autumn, especially about the time of either Æquinox, are the most flatulent seasons of the yeere.

It is observable the complexion of the air is generally more silent at mid-day and in soultry weather; when the exhalations are too much attenuated to constitute winds, which require a very considerable density and refrigeration: For this reason the south winds usually blow in the night, the air being overmuch refined in that quarter by the heat of the day, till it condense again by the moderate cold of the night. The spring is generally more windy then the violent heats of summer; both from the liquefaction of snows; and because the pores of the earth are then loosen'd, and the vaporous effluxions releast from their former imprisonment, during the frost; and therefore those winters which have least frost, and the vapors suffer'd freely to transpire, are expos'd to the most boystrous winds: as for example the last in the yeere 1670.

Likewise in autumn wee have commonly very blustering weather; most about the other Æquinox, when the sun principally dilating the air between the tropiques causes a more violent protrusion towards the poles of the world. Shall wee say that the luxuriant rains which fall at that time of the yeere, affor'd more plentifull materials for wind? Or is it by reason the reservs of the summer vapors are condens'd by the autumnall cold when the heat of the summer too much refines, and dissipates the exhalations, and the inclemency of the winter rather thickens them into snow or clouds. So that a just and moderate condensation is necessary to the constitution of winds: if it be too much they degenerate into rain, &c., if too little they become stagnant air.

But from their limits and seasons, I descend to the more remarkable species: As the generall or tropicall wind; the provinciall; the land and sea brises; the severall sorts of Etesians and Monsoons in the Indian seas, &c., and shall from thence proceed to their qualities, and prognostiques.

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#### DAVIS STRAIT WHALE FISHERY.

IN the "Nautical Magazine," for 1837, there appeared a letter by Capt. James Ross, R.N., addressed to Capt. F. Beaufort, R.N., hydrographer to the Admiralty, "on the expediency of a settlement on the western shore of Davis Strait." It was the opinion of Captain Ross that "much good would result from such an establishment, if judiciously planned and prudently conducted," and "that a good harbour, and an

eligible situation for a settlement might be easily selected on the *deeply indented northern shore of Cumberland Straits*, or in about 64° N., or between that and Cape Walsingham." This letter called forth an extensive correspondence, the general tone of which was in favour of the proposal. Captain Ross, in estimating the advantages which would result from such a settlement, founded chiefly on the probability of opening a traffic with the natives, in such mercantile products as "eider down, furs of land and sea animals, oil, and ivory," vast quantities of which "are generally collected by, and purchased from the Esquimaux of Greenland." And in respect of the whale fishery, he said, "unless some measure, calculated to give new encouragement to the pursuit, and to afford protection to the lives and projects of those engaged in the trade, as well as to prevent the recurrence of dreadful misery and suffering which have now repeatedly taken place, is speedily adopted, this best nursery for our seamen, and this important source of national wealth will inevitably be lost to the country." To this point it is now desired to call attention.

The precarious nature of the fishery on the east side, in the higher latitudes of the Strait, is well known, and has long been a subject of complaint by those interested in it; but the abundance of the fish there has hitherto been a sufficient inducement to run the hazard. Lately, however, the fish has become more plentiful on the west side; and judging from the experience of the last two or three seasons, it would appear the future success of the fishery, whether prosecuted as it is at present or by means of a settlement, depends almost, if not altogether, on the discovery of the bights, or inlets in which the whale harbours during the winter months, and nourishes her young. It has often been remarked by the Davis Strait fishers, that the whales on the west coast generally left about the middle of September, and made for Cumberland Straits, or some other locality in that direction; and that the male whales were always the last to quit the higher latitudes. An intelligent correspondent, at Hull, under the signature, "Baffin," in noticing Captain Ross letter, above alluded to, said "It is well known to all who have been to that country, that the whole of the western shore of Baffins Bay, and Davis Strait is an archipelago of islands; and that to the end of August, the whales usually make their way up the numerous large inlets and fiords, which, *doubtless, lead to some extensive beach, where undisturbed by the persecution of the whalers, they bring up their young;* and, it not unfrequently happens when the ships have been late in crossing to the western shore, that not a whale is to be found; so that I am pretty certain, that, before many years shall have passed away, *it will become necessary to follow the whales up these inlets, or else abandon the pursuit entirely.*" And farther, "Nothing has prevented our adopting

that measure on many occasions, but our total ignorance of the nature and extent of the inlets, the sets of the tides and currents, and the likelihood or otherwise of getting hampered therein by the ice."

These views were pretty generally held by other parties who had been at Davis Strait, and so long back as 1833, Capt. Simpson of the Traveller of Peterhead, when in Exeter Bay, lat.  $66^{\circ} 35' N.$ , took occasion to consult a tribe of natives whom he found located there, and obtained as much information as produced a strong impression on his mind that there was an unexplored bay at no great distance, where whales were plentiful at all seasons of the year. With a view to determine that point, Capt. Simpson's mate, Mr. Penny left the ship in one of the boats efficiently manned, and accompanied by two of the most intelligent natives which could be found among the tribes, they left the ship the 22d of September. After getting up the sound about thirty miles, a gale of wind came on, which obliged them to return, having discovered nothing farther than a few winter huts of the natives built close by the shore. In August 1837, several vessels chanced to be lying in Durban harbour, lat.  $67^{\circ}$ , when the same tribes of Esquimaux were fallen in with that were found at Exeter Bay in 1833. Following out the views of the geography of the country, which had been frequently talked of, they sought, as much intercourse as possible with the natives, and remarked that they often spoke incidently of crossing over in "two sleeps." This, and various other circumstances, revived the idea of exploring the country, and a partial exploration took place; but the season being too late to admit of any very "decisive effort being made; and having been misled on some preliminary points, by the false interpretations of an Orkney seaman, who professed to have an extensive acquaintance with the Esquimaux language, the idea was given up for the time.

In 1838 the ships got early through Melville Bay, and had a good fishing on the west coast; consequently there was little inducement to renew the attempt to explore the country; but, when in Durban harbour, the natives again alluded to "Tenudiakbeek," the name they applied to the bay in question. In 1839, the "Neptune," Captain Penny, with other vessels, was beset for fourteen days in Melville Bay; but, getting clear, they returned south, and crossed to the west side in the end of July, when a few whales were seen making along the shore to the south, where they disappeared; and, it is presumed, went round Cape Enderby, up Cumberland Straits, where fish had been frequently traced in previous seasons. Captain Penny being now more convinced than ever, that there must be some inlet to the west, where these whales harboured, again took Durban Harbour, where he found the same tribe of natives he had seen the previous seasons; and, after some consultation,

He persuaded four of them to accompany him, as pilots, in search of this supposed bay. The "Neptune" left Durban Harbour on the 4th of September, and on getting down as far as Exeter Sound, he plied her up the inlet he had partially explored in 1833, for a considerable distance, and then took to the boats, and after much anxious perseverance, found that the bight terminated in a point, without offering any prospect of an opening to the west. Thus disappointed, they returned to the Neptune, surveying the land as they came down, and noting its leading features. His pilots were now very anxious to return, and the season being so far advanced, Captain Penny thought it useless to persevere farther. This attempt occupied sixteen days, during which time the Esquimaux on board, and Captain Penny became able to communicate pretty freely with each other. On reaching Durban Harbour again, a consultation was held with several other shipmasters, whose vessels were lying there, and the Esquimaux he had in the "Neptune," with others of their tribe, were induced to disclose as much geographical knowledge as enabled Captain Penny to draw up a chart, which presents an outline of an extensive territory, sufficient of itself to awaken a strong desire in the public mind to have it further explored. Viewed in connexion with the foregoing opinions of Captain Ross and "Baffin," the question assumes a still more imposing attitude, and invites a strict inquiry into the facts on which the discovery rests.

The only point of interest which Captain Penny can vouch for, on personal observation, is the district between Cape Searle, Cape Durban, and Exeter Sound. In comparing the general outline here, with that laid down in the charts commonly used, a striking difference will be observed. This arises from the fact that the ordinary charts have been constructed from observations taken at considerable distances from the land, while Captain Penny's were taken on the spot, and the minuteness with which the islands in this sound are particularised, reflects much credit on Captain Penny's intelligence and perseverance. The rest of the drawing is founded on the testimony of the natives, and here the following questions naturally suggest themselves: How did the Esquimaux come to know the precise position of the coast, from the entrance to Teniakbeek, in Cumberland Straits, round Cape Enderby, to Cape Searle, the distance being, by this route, fully four hundred miles? How did they calculate distance, and describe locality, when they have no knowledge of our method of computing time and quantity?

In answer to the first question, it was satisfactorily ascertained that a few tribes, of a wandering disposition, left their native huts, on the shores of Teniakbeek, penetrated a considerable distance down the straits, and rounding Cape Enderby, keeping close to the land, accidentally fell in with some of the British whalers on the west coast. In this way,

"Eenooloopick," an intelligent Esquimaux, twenty years of age, who is now in Aberdeen, found his way to Cape Searle, where Captain Penny met with him. It will be observed that there are a few clusters of dots studded here and there along the coast in this direction: these represent the huts of several tribes of Esquimaux, who are now settled in the localities marked, having dropped off as it were, from the original and more adventurous of their friends with whom they first set out. It may appear surprising that such a distance as four hundred miles should have been travelled in their luggage boats, (large canoes,) by the water's edge; but those who are acquainted with the history of the Esquimaux are nowise dismayed at this, being satisfied that they ply almost incredible distances, and in the face of the greatest difficulties, in a very brief space of time.

In answer to the second question, the esquimaux measure distance by *sleeps*, one sleep being equal to fifteen miles; that is they travel fifteen by land between the time they go to sleep, when in ordinary health. With respect to the measurement of those localities where they had no opportunity of calculating by "sleeps," they fixed on a particular spot in the vicinity of Cape Searle, and taking that as a standard, gave an estimate to the extent of the quantity which they possess an idea of: this only extends to twenty the number of their fingers and toes. When these failed to describe fully any given quantity, they made a definite sign for the surplus, repeating that sign often, if the surplus quantity were large, and but seldom if it were small. Hence the chart must be very vague and indefinite.

Proceeding on these calculations the bay would measure about 160 miles in length by 60 in breadth, exclusive of the bights on the south-west side, which would stand about 15 miles inland by 5 in breadth. The isthmus between Kmgaithe to Durban harbour would be about 30 miles, the natives having crossed it from Cape Durban and back in 1837, in five days. In proof of this they went to Teniabeek for bone, in 1837, and brought it over at the request of Capt. Volum, of the Joseph Green, of Peterhead, and Capt. Kerr of the Clarendon of Leith. With respect to the bay itself, it was stated by the Esquimaux, that it freezes about December and breaks up in June, when it is literally filled with whales: the Esquimaux then pitch their tents on the land ice, and commence killing, or rather catching the whales; this they do by means of what they call *drags* attached to lines made of the skin of the walrus, and fixed to the whale by harpoons or darts. The way in which the whales are thus caught, as described by the esquimaux Capt. Penny has now with him, is most amusing.

When the whales leave the bay they take into the land bights, and ply among the islands on the west side. Here the tides run pretty

strong, but the fishing would not be so dangerous by any means, as it is in Davis Strait. There are a great many white whales in some of the bights, and the young ones are tame.

The lowlands on the west side contain plenty of deer; and there are numerous lakes containing abundance of salmon. The main land generally, is well stocked with animals and birds; and the climate appears to be comparatively mild and healthy. There are thousands of Esquimaux on the west side of the bay, a fact which proves clearly that the locality is one of vast extent and valuable resources. On the east side the land is high and bold, having two inlets deeply indented; from one of which there is access by a day's travel to a bight a little south of Loch-Ryan. It will be seen that there is a volcano marked on the chart. It has been assumed as such from the signs which the Esquimaux make, as if they looked down a crater, and felt a tepid disagreeable smell.

Looking carefully then at these facts, assuming them to be facts, there can be but one opinion as to the propriety of doing something to encourage the farther exploration of the country, and we doubt not this will be done. The esquimaux, Capt. Penny has with him, is said to be a clever and intelligent young man, and when once educated would be able to guide any party who might proceed in the investigation. The importance of the fishery to Great Britain is allowed on all hands, and nothing should be left undone which would tend, in any way, to revive it, and encourage its future progress.

[The chart alluded to has not reached us.—Ed.]

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## SCURVY AND ITS ANTIDOTES.

[The following remarks on the "Cause of Scurvy, and the means of curing it, by Dr. George Budd, F.R.S.,"\* appear so important to the readers of the "Nautical Magazine," that we are induced to transfer them to our own pages, from the small pamphlet published by that gentleman.]

Two centuries ago Scurvy was a common disease throughout all the northern countries of Europe. The writers, from whom we have derived accounts of it, agree in stating, that it generally showed itself towards the end of winter, or in the early part of spring, and that it uniformly disappeared during summer and autumn; but that it was at the close of long and severe winters, or when the country had been laid waste by war, and during long sieges, that its ravages were principally felt.

\* Also Fellow of Caius College, Cambridge, and Physician to the Seamen's Hospital, "Dreadnought."



As agriculture and gardening improved, Scurvy became gradually less frequent, and we have witnessed its almost complete extinction, *on Land*, as the influence of these arts has extended to the most remote parts of Europe and to the humblest classes. But, even in recent times, there are instances, in which, under the peculiar circumstances I have specified, it has produced disastrous effects on shore.

In the spring of 1795, it was general among the French soldiers in the army of the Alps; and in 1801, during the siege of Alexandria, it prevailed among the inhabitants and garrison to a most frightful extent. During the siege which was commenced by the English in May, and which lasted only to the end of August, 3,500 scorbutic patients were received into the military hospitals which the French had established in that city. But it is not only in armies, and during sieges, that we meet with even modern instances of scurvy arising on land. In the reports of the inspectors of prisons, for the years 1836, 7, and 8, there is frequent mention of its occurrence in our goals and prisons.

These examples are sufficient to show that Scurvy is not peculiar to sea-faring men; but it is, unquestionably, during long voyages that its fatal effects have been most felt, and its existence, as a prevalent disease, maintained.

The narratives of all our early navigators abound with descriptions of the frightful ravages of Scurvy. Vasco de Gama, who first discovered a passage to the East Indies by the Cape of Good Hope, in 1497, lost a hundred of his men, out of a hundred and sixty, by this distemper.

In the first voyage for the establishment of the East India Company the equipment, consisting of four ships, with 480 men, sailed from England on the 2nd of April, 1600; and by the time they arrived at Saldanha, on this side of the Cape of Good Hope, there had died of scurvy 105 men, nearly one fourth of their complement.

The memorable expedition under Lord Anson, in 1740 and the four following years, offers another example of the mortality formerly occasioned by Scurvy during long voyages. At the end of two years from their leaving England, the vessels engaged in the expedition had lost, from this disease, a larger proportion than four in five of the original number of their crews.

Scurvy continued to prevail in all the fleets of this country, until the year 1795, when an Admiralty order was first given for furnishing the navy with a regular supply of lemon-juice, which had been long known to be a remedy for Scurvy, and which some recent experiments had proved to be equally efficacious in preventing it. From this time we may date the extinction of Scurvy in the British navy. It has, indeed shown itself on several occasions since, especially in some of the expeditions

for the discovery of a north-west passage ; but it has prevailed only in a slight degree, and has almost always been suppressed by an additional allowance of lemon-juice.

This happy result is far, however, from being realised in the commercial marine of this country. The means, which experience has proved to be of such certain efficacy, and which are so easily adopted, are in many instances neglected. In the space of a year and a half, nearly fifty cases of Scurvy have been admitted into the Seamen's Hospital, Dreadnought ; and from information obtained from these patients, I am led to estimate the number of sailors who have entered the port of London, affected with Scurvy, during this period, at not less than double that number. The wretched condition of some of these men has convinced me, that the descriptions of the sufferings occasioned by Scurvy in voyages of the early navigators, have not been exaggerated. Most of the cases of Scurvy received into the Dreadnought are from vessels that have come from the Mauritius, Sidney, Ceylon, China, or some port in India.

CAUSES OF SCURVY.—*Salt Provisions.*—In consequence of the frequent occurrence of Scurvy at sea, and on shore in persons whose diet, like that of sailors, consisted chiefly of salt meat, it was at one time supposed to be occasioned by excessive use of salt. A more extended view of the circumstances under which Scurvy arises, is sufficient to show that this opinion is erroneous. The history of the disease furnishes us with numerous instances in which it has occurred in persons living entirely on fresh provisions. No longer ago than the autumn of 1836,\* Scurvy prevailed to a great extent among our troops stationed in the New Province of Queen Adelaide, at the Cape of Good Hope ; when, according to the report of Dr. Murray, the principal medical officer at the Cape, the men had no harrassing duties, and were abundantly supplied with good fresh meat, without having had an ounce of salt provisions. They had been, however, a long time without fruit or fresh vegetables.

The circumstance that Scurvy may occur among persons living solely on fresh meat ; and the fact, which the history of modern navigation has fully established, that it may be prevented for any length of time in persons who subsist on salt provisions, and can be readily cured even in those who continue the use of them, are sufficient to justify the conclusion that salt has no share whatever in producing it.

*Sea-Air.*—The frequency of this disease during long voyages, led

\* Autumn at the Cape corresponds to spring in the northern hemisphere. In the appearance of Scurvy at that season and in many other particulars mentioned by Dr. Murray, there is perfect agreement with some of the accounts left us of the occurrence of Scurvy in armies on the Continent in the early part of last century.

also to the supposition that the sea-air, or some unknown marine agency, had an especial influence in causing it. At present this opinion scarcely needs refutation. Modern experience has amply proved, not only the harmlessness, but the extraordinary salubrity of sea-air; the fact, that it exerts no particular influence in the production of the scurvy, was, however, first established by Captain Cook, who, in 1772, 3, 4, 5, in the *Resolution*, performed a voyage of three years and eighteen days, in all climates, from 52° N. to 71° S., with the loss of only one of his crew by disease.

*Cold: Moisture.*—The fact that scurvy when it first attracted attention, prevailed exclusively in northern countries, early led to the opinion, that cold and moisture had a considerable share in causing it, and this opinion has been maintained up to the present time by the highest authorities on this subject. An attentive consideration of the history of Scurvy, is, I believe, sufficient to show that the influence of these causes, if indeed they have any influence, has been much over-rated, and that the comparative immunity from this disease formerly enjoyed by fleets in warm latitudes, was mainly owing to supplies of oranges and other fruits, with which Cadiz, Madeira, or the Islands of the West Indies, furnished them.

Scurvy may occur in all climates; either on land or at sea; in persons who subsist on salt meat or fresh; and in situations in which the utmost attention is paid to cleanliness and ventilation. There is one condition, however, which is necessary for its production: namely, *prolonged abstinence from succulent vegetables or fruits, or their preserved juices, as an article of food.* When this condition is fulfilled, we find scurvy arising in persons whose situations are the most various in every other respect; while not a single instance can be cited of its occurring in a person well supplied with these vegetables or fruits. This circumstance, together with the fact, that scurvy is in all cases rapidly cured when a supply of such vegetables or fruits is furnished, lead us to consider the abstinence in question as its essential and sole cause. I have said that this abstinence must be prolonged: it would seem, indeed, that in a person previously well supplied with vegetable juices, privation of them from two to five months is necessary to produce the disease. On land, scurvy has shown itself generally at the end of winter, or in spring: at sea, it has appeared after voyages of very different durations—in some cases, at the end of a month or six weeks. in others, after the lapse of five or six months. This difference depended on the time of year when the vessel left port, or rather on the previous diet of the men. The fatal effects of scurvy have, in fact, been most felt during sieges commenced in spring, and in voyages entered on in spring from cold countries. The siege and the voyage have in these cases prolonged it to the inhabitants and the sailors, not

the cold of winter, but abstinence from fresh vegetables, which, in former times, the cold of winter always occasioned.\*

*Preventives.*—The most powerful means for the prevention of scurvy is the use of oranges, lemons, limes, shaddocks—in fact, of any fruits of the orange tribe. I have already stated that lemon-juice was first systematically introduced into nautical diet in 1795, by a general order of the Admiralty, and that it has completely realised the expectations of those who proposed it.†

The present allowance of lemon juice in the navy consists of a fluid ounce, which, after ships have been a fortnight at sea, is served daily with an ounce and a half of sugar, to each of the men.

It was originally sent to sea in the form of a *rob*, made by evaporating the juice by a slow heat to the consistence of a thick syrup. This, however, was found to be very inferior to the fresh fruit; and it was in consequence recommended by Sir Gilbert Blane, that the juice should be preserved by the addition of a certain portion of spirit, without the aid of heat. When prepared in this manner, its virtues seem unimpaired,

The juice with which the navy is supplied, is brought from Sicily, and kept good by the addition of one part of strong brandy to ten of the juice.

Most sour fruits are, in all probability, anti-scorbutic, and instances are well authenticated of the good effects of grapes and apples.

As the expense of lemon-juice offers some impediment to its employment in the merchant-ships of this country to the extent necessary for the complete extinction of scurvy, it deserves to be ascertained whether the juice of apples, preserved, like that of lemons, by the addition of a certain proportion of spirit, would not be an effective substitute.

All succulent vegetables that are wholesome are, perhaps, as well as fruits, more or less anti-scorbutic; and this property seems to be possessed, in a high degree, by many of the vegetables in common use, as the cabbage, turnip, radish, watercress, &c. In the earliest notices of scurvy, mention is made of the efficacy of herbs of this class in its treatment. The strongest proof of this efficacy is to be found in the fact that the disease, when it occurred on land, uniformly disappeared during summer

\* I have already noticed the great prevalence of Scurvy among the garrison at Alexandria, during the siege of that city, which was undertaken in May, and the dreadful mortality it occasioned in the first voyage for the establishment of the East India Company, which was commenced on the 2nd of April.

† In 1780, 1457 cases of scurvy were admitted into Haslar Hospital. In 1810, one of the physicians of that hospital stated that he had not seen a case of it for seven years; and in the four years preceding 1810, only two cases were received into the Naval Hospital at Plymouth.

and autumn, and that it gradually became less frequent, as the consumption of vegetables increased.

There seems to be no country naturally destitute of remedies for the scurvy. The fruits of tropical and temperate climates are replaced in countries within the polar circle by herbs of almost equal virtue. We are told that in Greenland, where scurvy was formerly very common, the natives employed sorrel and scurvy-grass together; and that, by the use of these herbs, which were put into broths, the most advanced cases were speedily cured; and Sir Edward Parry, in the narrative of his first polar expedition, has given, from his own experience, an instance of the good effect of sorrel, when, in consequence of a serious loss of lemon-juice from the bursting of the bottles by the frost, he was under the necessity of discontinuing the daily allowance of this article.

It appears that vegetables are most anti-scorbutic when eaten raw. Herbs in the form of salads are more efficacious than when boiled, or in any way prepared by heat; and their anti-scorbutic properties are entirely destroyed by drying. But when vegetables are preserved as pickles, their anti-scorbutic properties are retained. It was observed that Dutch ships were formerly much less subject to scurvy than our own; and in some instances, when our fleet has acted in concert with that of the Dutch, our sailors have become affected with scurvy, while the Dutch have continued free from it. This immunity on the part of the Dutch was owing to the use of *sour-kroust* which was regularly supplied to their ships.

In 1780, *sour-kroust* was furnished to the navy of this country; and in the history of our fleets about that time, we meet with many proofs of its good effects. The allowance was two pounds a week to each man.

*Sour-kroust* is prepared in the following manner: the soundest and most solid cabbages sliced, as we slice cucumbers, are put into a barrel in layers, hand high; over each layer is strewed a handful of salt and caraway seeds; the whole is then rammed down, and the process repeated till the barrel is full, when a cover is put over it, and pressed down with a heavy weight. After standing some time in this state, the cabbage begins to ferment, and it is not till the fermentation has entirely ceased, that the barrel is finally shut up. Vinegar is not, as some have imagined, employed in the preparation of *sour-kroust*.

In Austria and in several parts of Germany people formerly ate *sour-turnip*, which was prepared in the same manner as *sour-kroust*: in fact, most vegetables may be preserved by this process, and I most strongly recommend a trial of it, with scurvy-grass and sorrel, to navigators who may in future be compelled to winter in the Polar Seas.

The fir-tribe have long been noticed for their anti-scorbutic properties; and, from a very early period, a decoction of fir-tops has been a

popular remedy for scurvy in Sweden and other countries in the north of Europe. The common fir was first employed for this purpose, but other varieties of the tribe may be substituted for it; since they all, however various their mode of growth, seem to have similar medicinal virtues, and great efficacy in the prevention and cure of scurvy.

Onions, garlic, and vegetables of the same class, were at one time much used for the prevention of scurvy at sea; but they have been superseded by equally efficient and more economical means.

Potatoes, also, when raw, appear to be anti-scorbutic; and Sir Gilbert Blane informs us, that in 1780, they were used with advantage in the fleet. They will keep a considerable time in a warm climate, and, in point of economy, have an advantage over most articles employed as anti-scorbutics.

*Fermented Liquors.*—Spruce beer seems to be the most efficacious of fermented liquors. We have abundant proof that it is not only an effectual preventive of Scurvy, but an excellent remedy; and it has this advantage, that materials for it can often be procured at all seasons in countries in high latitudes, where the scarcity of fruits and vegetables renders a powerful anti-scorbutic valuable. These materials can also be carried about, and used occasionally; a plan adopted by Captain Cook with great advantage.

Malt liquors possess similar virtues. Frequent notices of the benefit derived from the use of small beer at sea are to be met with in the writings of our naval physicians; and instances are also to be found, which afford evidence of the anti-scorbutic properties of cider.

Wine ranks next to spruce beer and malt liquors in efficacy, and it is perhaps to the habitual use of it, that French fleets have been generally less subject to scurvy than our own. The superiority of wine over spirits in this respect has been frequently remarked: and Sir Gilbert Blane was so convinced of it, that, in a memorial presented to the Admiralty in 1781, he recommended the substitution of wine for rum in the victualling of the fleet.

*Vinegar.*—The good effects derived from the use of lemons and other sour fruits were naturally attributed to their most striking quality, acidity, and it was imagined that vinegar would prove of equal service. These expectations, however, have not been fully realized. I have met with many instances of the occurrence of scurvy in a high degree, in ships well supplied with vinegar, even in voyages of moderate duration; but in the cases in which I have witnessed the disease in the most aggravated form, the crews had no regular allowance of this article. From the facts that have fallen under my own notice, I am led to ascribe to it some anti-scorbutic virtue, greater perhaps than that of malt liquors or cider, but not sufficient to render it a substitute for lemon or lime-

juice. There is some discrepancy in the testimony of naval physicians respecting the anti-scorbutic properties of vinegar, which renders it probable that these vary in some degree with the material from which the vinegar is prepared.

All the substances which I have mentioned as preventives of scurvy are derived from the vegetable kingdom; and, it is probable that anti-scorbutic properties are possessed, exclusively, by substances of vegetable origin. These properties exist in very different degrees in different classes of vegetables and fruit; but, in the lowest degree, if at all, in those which are farinaceous. Fresh leavened bread has, indeed been supposed to be highly anti-scorbutic, and has, in consequence, been recommended by many writers on scurvy. But the good effects ascribed to its use, have been witnessed in sailors, on their return from a long voyage, who were supplied, not only with bread, but also with vegetables, the efficacy of which was probably not duly appreciated. The anti-scorbutic properties ascribed to bread seem incompatible with the fact, of which I could bring many proofs, that scurvy may occur in persons with whom bread forms the main article of subsistence.

*Fresh Meat*—The belief that scurvy arises from the use of salt, led to the opinion that it may be prevented or cured by fresh meat. I have already stated that this opinion is erroneous: it is, however, still held by persons by whom it is very important that correct notions on this subject should be entertained. I have known the most fatal effects result from the false ideas of captains of merchant vessels on this point. During the course of the present year, the captain of a vessel trading to the Mauritius furnished his men, while they staid at the island, with a plentiful supply of fresh beef, which being imported from Madagascar, is procured at considerable expense; but he neglected to provide them with vegetables or fruits, which abound in the island, and are sold at a price scarcely worth naming. The consequence was, that scurvy broke out soon after they set sail; and before the vessel arrived in this country, one half of the men before the mast, had died of it, and the rest were totally disabled.

*Symptoms of Scurvy*.—The first indication of the approach of scurvy is generally a change in the complexion, which loses its healthy tint, and becomes pale, slightly sallow, and dusky. This change is attended with lowness of spirits, and with aversion to any kind of exercise, which quickly induces fatigue: and the sailor complains of pains, especially in the legs and loins, like those produced by over exertion.

The gums soon become sore, and bleed on the slightest touch. On examination, they are found to be swelled and spongy, and of a dark red colour, especially at their edges, where they are in contact with the teeth.

Purple spots appear on the skin, particularly of the legs and thighs; but often also on the arms or trunk. These spots, which are sometimes very numerous, are generally small and circular, resembling flea-bites; but often, especially when the disease is a little advanced, we meet with other spots as large as the palm of the hand, sometimes much larger, in which the skin is of a variegated violet and green tint, and which resemble, in every respect, the marks produced by a severe bruise. These bruise-like marks occur without the infliction of any blow, or at least, of one sufficient to attract the sailor's attention, and often surround an old scar, or appear on a part which a long time previously has been the seat of some injury.

Another symptom indicative of scurvy is a swelling of the calf or ham of one or both legs, which causes stiffness and contraction of the knee-joint. The parts which are thus swelled, are painful when pressed or moved, and are exceedingly hard, so that they do not yield to the pressure of the finger. The skin covering them is thickened and adherent to the parts beneath, from which a fold of it cannot be pinched up: it sometimes retains its natural colour, but more commonly presents the appearance of a bruise.

In advanced stages of the disease, the complexion has a more dingy, and somewhat brownish hue; the gums are more swelled and more livid, forming, in some cases, a black spongy mass, which completely covers the teeth; the teeth themselves become loose and frequently drop out; and the debility is such, that the slightest exertion, even the erect posture, causes breathlessness and palpitation, and not unfrequently an alarming faintness.

*Treatment.*—After the details into which I have entered respecting the cause and the prevention of scurvy, little remains to be said of its treatment. The essential point is to give, in sufficient quantity, those articles of vegetable food, which have been distinguished for their anti-scorbutic qualities. Oranges, lemons, or fruits of that class, if they can be procured, should be preferred. The salutary effect of them is extraordinary, and such as would scarcely be imagined by persons who have not witnessed it.

If the state of the gums be such as to prevent the patient from masticating he should be kept, for two or three days, on milk diet or on soups, in addition to the anti-scorbutics; at the end of this time, or at the commencement, if the case be less severe, his diet should consist of fresh animal food, and vegetables, especially in the form of salads; and as long as he continues very feeble, wine, porter, or ale should be given him.

This is all the treatment required for the cure of scurvy.

*Bleeding should never be had recourse to, although feverishness or severe pain may seem to render it advisable.* It always produces ill



effects, and, in advanced stages of the disease, persons do not survive it.

Blisters are apt in scorbutic persons to produce mortification, and for this reason we should abstain from their employment.

Mercury, in every form, should be scrupulously avoided. In every instance it aggravates the disease; and very small quantities have been known to produce a dangerous salivation.

The points which I have endeavoured to establish in the preceding pages, are

- 1st. That scurvy, which, for a long time has been almost unknown in the navy, is still very common in the merchant ships of this country—especially in those trading with the Mauritius, Australia, China, and the different ports of India.
2. That the symptoms by which this disease may be recognised, are—a pale, sallow, dusky complexion; a listless, desponding, manner; swelled and spongy gums, of a dark red colour, and apt to bleed on the slightest touch; purple spots and bruise-like marks, particularly on the legs; and swelling and hardness of the calf or ham, with stiffness and contraction of the knee-joint.
3. That scurvy is not attributable to the use of salt meat, to sea-air, or to any marine agency, but that it is occasioned by prolonged abstinence from any succulent vegetables or fruits, or their preserved juices, as an article of food; and that by the use of these it may be prevented or cured.
4. That probably all succulent vegetables and fruits, which are wholesome, are more or less anti-scorbutic; and that generally those which are the most succulent are the most efficacious.
5. That the anti-scorbutic property resides in the juices of the plant, and that it is in some degree impaired by the action of a strong heat; and therefore,

That the juices of fruits, as lemons, limes, apples, for sea use, should be kept good by the addition of a certain proportion of spirit, without the aid of heat:

That vegetables, for the same purpose, should be preserved in the form of pickles, as in the preparation of *sour-kroot*.

6. That no vessel should be sent on a voyage of several months' duration, without a supply of lemon or lime-juice; and that on the arrival of a vessel in port after a long voyage, the captain should, if possible, provide his men with fresh succulent vegetables or fruits.

As in a subject like the present, particular examples are more impressive than general statements, I have subjoined the details of a case which occurred during the course of the past year. This case is certainly the worst I have ever met with; but I have chosen it, not on

that account, but from its being well adapted to show the circumstances, which have the chief influence in producing scurvy.

A vessel sailed from England on the 26th of August, and arrived at the Mauritius on the 1st of December; she again set sail for England on the 17th of the January following, and entered the port of London on the 1st of June. The crew were healthy when they left the Mauritius, and consisted of sixteen persons, of whom eight were before the mast, and formed one mess; the cook, carpenter, second mate, and boatswain, another mess: the captain, the first mate, the owner's nephew, (a boy,) and the steward, formed the remainder of the crew. Of the eight men before the mast, four died during the passage home, one near St. Helena, of dysentery, and three, after passing the line, before their arrival in this country, of scurvy. Of the remaining four, three were brought to the Dreadnought soon after they arrived in port, the fourth was taken to his friends; all these were in a dreadful condition from scurvy, but they all recovered, with the exception of one who died soon after he was brought to the Dreadnought. Of the four who formed the second mess, one was brought to the Dreadnought, the others went to their homes; all were in a very bad condition. Scurvy showed itself in these men about six or seven weeks after they left the Mauritius, and all of them, except two, had been confined to their hammocks since the latter part of April: of these two, one had been confined to his hammock only ten days; the other, though incapable of doing duty, continued to crawl about until they arrived in port. For ten days before their arrival, the vessel was worked entirely by the captain, steward, first mate, and boy, who messed together in the captain's cabin, and continued free from scurvy. The weather, during the voyage homeward, was fine; the vessel, a good one; and the work of the men before they became affected with scurvy was not severe. Their diet, after they left the Mauritius, consisted of salt beef or pork, with biscuit, and tea, for breakfast; beef two days, and pork one day, alternately, with biscuit for dinner; and during the first half of the voyage, flour, in puddings, twice a week, and pea-soup twice a week. One glass of grog was given daily to each man nearly all the passage. They had no vinegar, lemon, or lime-juice. The salt provisions were of bad quality, but not of the worst; and the diet was as good in every respect in coming home as in going out, yet none of the crew showed any symptoms of scurvy in their passage outward. While in the Mauritius, each man had two pounds of fresh beef daily; but no fruits or vegetables of any description.

The severity of the disease in this instance must be ascribed solely to *complete* and *prolonged* abstinence from vegetable juices. From the time of their leaving England, the men had been without vinegar,

lemon, or lime-juice ; and during their stay at the Mauritius, they had no fresh vegetables or fruits of any kind. In other respects, they were favorably circumstanced. They left this country in Autumn, the best season, as regards scurvy, for the commencement of a long voyage ; their vessel was a good one ; and, during the early part of the voyage homeward, the weather was fine and their work easy. The salt provisions were, indeed, of bad quality, but all the men agreed that they had met with worse ; and in addition to the salt meat and biscuit, they had flour twice a week, pea-soup twice a week, and a daily allowance of grog. It is worthy of remark that none of the men exhibited symptoms of scurvy in their passage out, which lasted between three and four months, yet all of them became affected with it in less than two months after they left the Mauritius, although the provisions were quite as good when they were returning as when they were going there, and during their stay at the island, they had been abundantly supplied with fresh animal food. This is explained by the circumstance that to produce scurvy there must be abstinence from vegetable juices, and this abstinence must be prolonged. Fresh animal food has, as I have before remarked, very little effect, either in preventing or curing it ; and, consequently, the time they staid at the Mauritius may be considered as so much time spent at sea.

I have since met with an instance in which the crew of a vessel, likewise from the Mauritius, were reduced by scurvy to a condition almost as bad as in the case of which I have given the details. In both instances the disease was owing, in part, to the want of lemon or lime-juice during the voyage : in part, to the circumstance, that while they remained at the Mauritius, they were unprovided with fresh vegetables or fruits.

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#### ATLANTIC STEAM NAVIGATION.

*To the Directors of the Royal Mail Steam Packet Company.*

GENTLEMEN,—I address this letter to you, with the view of preventing you, in such a magnificent undertaking as that projected by you promises to be, from falling into the errors committed by those preceding you in Atlantic Steam Navigation.

About two years ago I commenced holding out a warning on this subject, through the same channel as that which I have chosen now for addressing you. Whilst some of the great ships were building, which have now proved the fallacy of the principle on which they were constructed, I repeatedly went as far as it was well possible to do, in attempting to draw attention to the errors which I perceived were in pro-

gress: and, in doing so, I pretty plainly pointed at those of the "British Queen." I have awaited proof of this ship's performance, for confirmation of my opinions. The constructors of this ship, however, (if ever my observations reached them,) did, as was very naturally to be expected, that is to say, they went on in the preconceived perfection of their plans. That I have loudly proclaimed the want of strength, and the general faulty construction of the large steamers intended for ocean navigation, I only refer to on the present occasion, with a view of adding weight to what I now address to you, and which otherwise, I would omit any allusion to, as perhaps savoring somewhat of egotism. But I am so strongly convinced of the general erroneous forms and construction of sea-going steamers, that I do not fail to avail myself of reference to my former communications, predicting the present failures; nor shall I hesitate to speak out freely on the defects of the ships already constructed; considering the Companies they belong to in the nature of public trusts, advertising as they do, for public support and subscriptions; and as such, freely to be commented upon.

Steam navigation has been now so long progressing, from river-craft, gradually, to the size of such ships as we have seen attempt the passage of the ocean, in its most boisterous latitudes; and that, up to a certain point, with such universal success, that it is not very surprising that the public generally should have been misled; and, that the point to which the ordinary art of ship-builders could arrive, in constructing their fabrics of sufficient strength, in reference to their size, has been altogether lost sight of. Speaking of ship-builders generally, however, I can easily believe that they can have no possible conception of what these large ocean steamers have to contend with; difficulties so different altogether from those to be met with by a sailing vessel, that the difference, entire as it is, it is plain, has never been seen, in its proper light, by those to whom may belong the credit (?) of constructing the large ships of the present day; it is clear they do not understand it, by their forming the ships altogether after the fashion of sailing vessels.

There is little doubt but the British Queen, President, and Great Western, would be very fine vessels under canvas, and I dare say, that for this purpose would be found of sufficient strength; but, when the question becomes, the construction of ships to be driven "end on," against the seas of the ocean, the case is so entirely altered, that it is no wonder the great Companies and shipwrights should have committed the blunders we have witnessed, seeing that it is utterly impossible to convince those connected with shipping, by any thing short of actual facts, that any thing they have been accustomed to do can be wrong.

I have said that steam vessels have gone on increasing as to size, up to a certain point, with success. It is desirable that this point should be

ascertained : namely, the length of a steamer, to which the ordinary art of ship-building, applied in its best practice, has produced a ship fit to be forced against the seas of the ocean ; and, I have no hesitation in stating, that this point is short of 200 feet. This may seem an arbitrary conclusion ; and so, to a certain extent, it is ; it is like what I assert all rules of ship-building are, only to be assumed from nice observation, resulting from actual experience. Referring, however, to facts, there are ships approaching to that length, that have been employed in the passages from England to the Mediterranean, for a good many years, to say nothing of the practice in the East and West Indies, and the passages thereto ; and that these vessels must sometimes have had to contend "right on end," against the very heaviest seas of the ocean, and have done so without injury. This leads to the conclusion that the art of our ship-builders, (which I am perhaps too ready to undervalue,) has succeeded in forming ships, up to a certain size, of sufficient strength. I would have it here observed, that a wide distinction is to be drawn between the seas of the Mediterranean, those met with in an ordinary East or West India voyage, those of the monsoon in India, &c. ; and the seas which are to be encountered in gales of the great ocean of the world. I believe it to be necessary for a person to witness all this, to fully comprehend what a steamer has to encounter in passages between Britain and New York.

It may not be unlikely, Gentlemen, that here you may pause, and very naturally say, if ships of such dimensions, and such ships only, are to be made strong enough for the purpose, why, such ships let us have for the Royal Mail Service ! and this resolution would be a prudent one, were such ships to be depended upon for making a passage against the great seas of the ocean. But please to observe, that although I have said that such ships have probably contended against the highest seas, yet that I do not state them to *have made passages* against them ! The occasions have been temporary, not of the duration to be encountered by the Royal Mail Packets, the very name of which implies that *they are* to make their passages under all circumstances. To accomplish this end, there can be no doubt that there is no limit to the length of the vessels, to secure the greatest advantages, except the difficulty of constructing them of sufficient strength, and to accomplish this has so far lamentably failed ; the cause of which, in the first place, is a total misconception of the *form* necessary for a steamer for sea-going purposes, for although great perfection has certainly been attained in river craft, there seems the strongest infatuation to exist in preventing any approach to a similar fitness in the practice of sea-navigation. And the next reason is their constructors applying little in addition to the ordinary method in fastening them, than has heretofore been adopted in sailing

vessels; a mode, of which the present state of the "British Queen," is sufficient to prove the insufficiency. In fact such ships are wholly beyond the art of the ordinary shipwright; and as I have on other occasions said, require the skill and science of the engineer to be brought into operation, unprejudiced by the rules that have hitherto been adopted by the old-fashioned practice of the shipwright; the most able of whom it will, I believe, puzzle to re-secure the great steamer just named. But as it is not my intention, on the present occasion, to go fully into this part of the subject, nor to state the suggestions that occur to me for the improvement of the sea-going steamers' form, I limit myself to the general statements of defects, so as (if I am able,) to render them self-evident, trusting that other more able pens than mine may be at hand to point out the remedy. Nevertheless, I shall not shrink from giving publicity to my own views on the subject, unless some one else anticipates me.

Let us now come to the consideration of wherein consists the defects of form. To any one, in the least practically acquainted with sea affairs, it must, I think, be quite clear, that if a steamer of the length of the British Queen, is to be forced *right ahead against a sea* of great magnitude, and with such power as to make a passage against it, that probably *one-third nearly of her whole length will be unsupported*, on her fore-body emerging through the top of every sea! Now, I will suppose that, one-quarter only of her length is so unsupported; then the British Queen would have no support whatever *for about 50 feet of her keel!* Had the builders such confidence in the strength of their ship when completed that they durst have taken the blocks from under her, for one-quarter of her length from her forefoot? No, I will answer for it, they would not for any consideration, short of security against the consequences, have ventured to remove them for 20 feet! If then, this ship would not have supported her own weight when depending upon the main body, for such a distance from forward as this, and without any cargo, water, or stores, in the fore hold, how is it to be expected that when such a portion of her length becomes unsupported at sea, and the ship perhaps carrying some hundreds of tons of weight before the engine-room, that she should be able to bear such trial, as it is clear she is subject to in passing over every great sea she is forced against!! That these large ships have to contend against such a trial of their strength, will now, perhaps, for the first time become acknowledged. It is, however, a fearful consideration, and has been evaded too long, for it is no use disguising the fact, that there is an enormous amount of capital already invested in ships of this description, the whole of which will assuredly be failures! and, it is to be feared, next to total losses; for although, perhaps, if the ships were better *formed*, the expenditure

of large sums of money under skilful direction, might possibly remedy the want of strength, (which, however I doubt,) yet nothing short of re-construction will remove the original *defect of form*.

The next bad consequence of the error of the fore-body is, that if the sea is just long enough to hang the ship on the top of two, by both her extremities, the mid-ship part, bearing all the weight of her machinery, becomes without support! and thus, alternately, the fore-body from hanging unsupported in the air, becomes pressed *upwards*, by almost half the support of the whole ship being thrown thereon. The effect of which must be to twist and loosen the ship, destroy all connection, and render the fabric crazy! All this is the consequence of the full fore-body; a part of a steamer, in which it is evident, no weight whatever ought to be carried, that can be avoided; but a great amount of cargo and stores being so carried, (where the ship is incapable of supporting her own weight,) and the whole fore-body being made at least twice the weight that it ought to be; and all this added to by that useless appendage to a steamer, the knee of the head\*; the heavy bowsprit, (and its useless appendages); and the foremast of a large sailing vessel, to say nothing of deck lumber, anchors, &c. The wonder is, that the ships should have made even one voyage without complaining, not that they should be shaken to pieces the first time they really have bad weather to contend with.

That all this mischief should not sooner have come to light, only shows how many voyages may be made, without real bad weather being experienced, and accounts for the daily arrival of ships; many of which unquestionably unseaworthy in themselves, and more rendered so by unmerciful loading, being from one or both causes wholly incapable of contending with storms and high seas of the great oceans of the world. The weight of the fore-body of the large steamers, partaking as they do of all the qualities of a sailing vessel, causes them in like manner to pitch violently. Any one at all acquainted with the motions of sailing vessels when forced against a head sea, in stays, or upon sudden shifts of wind, will readily conceive that something very different in form is indeed necessary, in a great steamer, to admit of her being forced against what the sailor of any experience knows is, in practice, wholly impossible in the ordinary ship.

Trusting, Gentlemen, that the motive assigned at the outset of this letter is sufficient excuse for my intrusion upon you,

I am, Gentlemen, your most obedient servant,

MERCATOR.

London, January, 1840.

\* The knee of the head and its appendages, I never could see the use of, except for the security of the bowsprit, the convenience of washing, &c.; in these respects useless in a steamer.

## Nabal Chronicle.

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IN our last we laid before our readers, the temporary arrangement of the Post Office, for the charges on Letters, and we now annex the final regulations of that department. Our naval readers abroad should know that in future no private letters, of any kind, can be sent through the Admiralty, either from, or to, abroad; and, we understand that the covers and copies of letters from Commanders-in-chief, on foreign stations are abolished; and, in fact, every measure adopted which can reduce the weight of carriage. The following are the regulations issued for general guidance. We recommend every one to *pre-pay* their letters:—

On and after 10th January next, the Single Rate of Inland Postage, on all letters except those between the United Kingdom and the Colonies and foreign countries, will be the uniform Single Rate of One Penny.

The Scale of Weight at present in force for General Post Letters, will be applicable in future to Local Penny Post Letters, and those passing through the Local Posts of Dublin and London, the regulation therefore which restricts the Weight of these Letters to Four Ounces, is abolished, and they will be subject in future to the same rules and the same charges as General Post Letters. The postage, however, on all letters (whether Local or General Post Letters) between places in the United Kingdom, must be paid in advance: should the postage not be paid in advance they will be charged with Double the Rate to which they would otherwise be subject. Parliamentary Proceedings are an exception to this regulation.

The uniform Single Rate on all letters conveyed by Packet, between the United Kingdom and the British Colonies, and Possessions, will be One Shilling, with the exception of Letters between the United Kingdom and Malta, the Ionian Islands and India, when passing through France, the rates on which remain unchanged. Letters, therefore, intended to pass at the reduced Single Rate of a Shilling between these three last mentioned Places and the United Kingdom should be addressed *via Falmouth*.

Foreign Letters when transmitted by Packet, will be liable to the Single Rates of Packet Postage from Falmouth, Dover, and London, as given in the Table below, if posted or delivered at the Port. If posted or delivered at any other place, in the United Kingdom, they will be subject to the additional Single Rate of Two Pence as Inland Postage.

Letters however between France and the United Kingdom, and also those in transit through France, will be an exception to this rule; the British charge on such letters will be the uniform single rate now taken from London, except in those cases where the letters are at present subject to a less charge than the sum specified. This last provision also applies to letters between the United Kingdom and Belgium, the rates on which, were lower than the sum specified, will not be increased.

Letters also between the United Kingdom and the United States of America, and between the United Kingdom and Spain *via Falmouth*, form a further exception to this rule. No Inland Postage therefore will be taken on letters between the United Kingdom and France, and those in transit through France, or upon those between the United Kingdom



and the United States of America, or upon those between the United Kingdom and Spain, *viâ Falmouth*.

The single rate on all Foreign and Colonial Letters except in those cases where a lower rate is now taken, when conveyed by Packet will accordingly be as follows:—

## BY FALMOUTH PACKETS.

Between the United Kingdom and	Packet Rate from Falmouth.		Inland Postage, if not posted or delivered at the Port.		Total Single Rate.	
	s.	d.	s.	d.	s.	d.
Lisbon . . . . .	1	7	0	2	1	9
Spain (by Falmouth packet)	2	2	Nil		2	2
Greece and Egypt . . . . .	2	3	0	2	2	5
Madeira . . . . .	1	8	0	2	1	10
Brazil . . . . .	2	7	0	2	2	9
Buenos Ayres, Chili, and Peru	2	5	0	2	2	7
Hayti . . . . .	1	3	0	2	1	5
La Guayra, Mexico, and Cuba						
Carthagena . . . . .	2	1	0	2	2	3
United States . . . . .	1	0	Nil		1	0
Gibraltar, Malta, Ionian Islands, British North America, Ber- muda, Honduras, British West Indies, India, <i>viâ Falmouth</i> . . . . .	1	0	Nil		1	0

## BY DOVER PACKETS.

	From Dover.	Inland, &c.	Total.
Belgium . . . . .	1 4	0 2	† 1 6
France . . . . .	Uniform British rate to Calais of		† 0 10
* Switzerland, <i>viâ France</i> . . . . .	Uniform British rate of		† 1 2
* Germany, <i>viâ France</i> . . . . .	ditto		† 1 4
* Spain, Portugal, Italy, Turkey, &c. <i>viâ France</i>	ditto		† 1 7
Turkey, Greece, and Mediterranean, <i>viâ Marseilles</i> , if addressed by French Packet, Uniform British and French rate of	2 8 $\frac{1}{2}$		
India, <i>viâ Marseilles</i> , if addressed by French Packet ditto	3 8 $\frac{1}{2}$		
India, by Monthly closed Mail, <i>viâ Marseilles</i> ditto	2 8		
Malta, Ionian Islands, and Alexandria, by Monthly closed Mail, <i>viâ Marseilles</i> . . . . . ditto	1 8		

## BY PACKETS FROM LONDON.

	From London.	Inland, &c.	Total.
Holland . . . . .	1 4	0 2	1 6
Germany, Denmark, Sweden, and Russia . . . . .	1 8	0 2	1 10
Heligoland . . . . .	Uniform rate of		1 0

The single uniform rate on letters between the United Kingdom and places beyond Sea when conveyed by *private Ship* will be 8d. in whatever part of the United Kingdom they may be posted or delivered. This rate must be taken on letters between the United Kingdom and the East

\* These Rates do not apply to Letters intended to be paid to particular place of destination, which must be charged with the Uniform British Rate of 10d. in addition to the Postage from Calais, stated in the printed lists with which the Postmaster is furnished.

† Except in those cases where the present charge is made.

Indies. &c., &c., when conveyed by private ship, the distinction between these and other Classes of Ship Letters having been abolished.

It is clearly to be understood that the single rates of Postage given in the above instructions are applicable only to letters not exceeding *half* an ounce in weight. The charge for Postage on Letters exceeding half an ounce will advance in proportion to their weight in accordance with the scale of weight and number of Rates at present in operation as laid down in the instructions of the 21st November last. It must however be borne in mind that this Scale does not apply to *French Rates* on Letters to and from France, and through France as the present system of charging *French Rates* on such letters must continue in force: viz., a single French Rate for each quarter of an ounce exclusive.

No person will be permitted hereafter to send or receive Letters free of Postage. Members however of either House of Parliament will be entitled to receive free of charge, Petitions addressed to either House of Parliament, provided they are sent without Covers, or in Covers open at the sides, and do not exceed the weight of six ounces. Addresses to her Majesty will likewise go free of postage.

Printed Votes and Proceedings in Parliament will be charged at the following rate between places in the United Kingdom, and between the United Kingdom and the Colonies when conveyed by Packet, but not through France nor to the East Indies.

For any weight not exceeding two ounces . . . . .	1d.
For any weight exceeding two ounces and not exceeding four ounces . . . . .	2d.
For any weight exceeding four ounces and not exceeding six ounces . . . . .	3d.

and so on in proportion. No Additional Charge will be made upon them if the Postage is not paid in advance.

The Rates on Newspapers and Letters of Soldiers and Sailors will remain unaltered, with the exception, however, that the privilege now given to Soldiers' and Sailors' Letters will be restricted to the cases in which they shall not exceed Half an Ounce in Weight.

Letters and Packets exceeding Sixteen Ounces in Weight, with the exception of those Classes mentioned below, cannot be forwarded to their Destination, but must be sent to the Dead Letter Office according to the present Regulations.

The following are the exceptions to this Rule:—

- Parliamentary Petitions, and Addresses to Her Majesty,
- Parliamentary Proceedings,
- Letters and Packets addressed to, or received from, Places beyond Sea,
- Letters and Packets to and from Public Departments, and to and from Public Offices now Franking by virtue of their Office,
- Deeds, if transmitted under such regulations as the Postmaster General may consider necessary.

By Command,

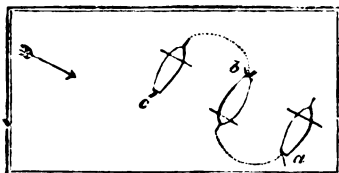
W. L. MABERLY, SECRETARY.

General Post Office, December, 1839.

## STEAM-BOAT EVOLUTIONS.

MR. EDITOR.—I have now been upwards of three years in Steam-Vessels, during which time I have had many opportunities of observing what may be done in them with regard to turning them round in a short space. Every one acquainted with the management of a steamer knows what can be done when going ahead. But not so when going "back turn," for I have asked many persons serving in steam-vessels, and found them unacquainted with the following facts.

I suppose a steam-vessel to be lying-to under bare poles, on the larboard tack, with a breeze, the strength of which is from 2\* to 6. She will lay-to with the wind a little abaft the beam as at *a* in the figure.



Put the helm a-port, and give her a back turn, and she will always come up with her stern to the wind. If the wind be light, say 2 or 3, she will generally come right round, and nearly to the spot from whence she started. If the wind be strong she will not come round until she brings it on the starboard beam, as at *b*; and then notwithstanding the helm being shifted to starboard as indicated by the double line, she will again present her stern to the wind, and attain the position *c*.

I shall here venture to insert the manner, in which, I have *endeavoured* to supply myself with a reason for this anomaly.

There are two forces, the wind and the paddle-wheels. If the wind acts equally on the fore and after parts of the vessel, and the paddle-wheels send her directly astern; then, by the resolution of forces, she will move along the diagonal of the parallelogram represented by those two forces. But the wind acting on the *fore* part of the vessel, which in most steamers presents a much larger surface than the *after* part, brings her stern to the wind: the paddle-wheels, as before, send her in the direction of her length. Now in going ahead, even with the assistance of the helm, the same vessel will take much more time as well as a much greater space to come into the direction of the wind than when she is going astern; and for a like reason:—the same surface forward acts against her head coming to windward, as before it tended to bring her stern to the wind.

I may seem to attach more importance to this subject than it deserves. I have been led to think that it may be interesting to some of your readers, and, useful to those who may hereafter serve in steam-vessels. With a knowledge of the line traced by a steamer when going stern foremost, a commander may turn his vessel with certainty (providing the wind is favorable and there be no tide,) in twice her own length, without the assistance of a rope.

I shall conclude with the following remarks. In any vessel going

\* See Nautical Magazine, Vol. 5, p. 64.

ahead with the helm hard over, suppose a ship tacking, or a steam-boat altering her course, the fore part of the vessel is steady, while the stern makes the movement. In a steamer going astern, the after part of the vessel is steady while the fore part makes the movement.

In a calm a steamer will sometimes obey her helm when going astern, but it is not at all to be depended on: it is as well perhaps, for the sake of pintles, to keep it a midships.

I have put the *Volcano* to the test so often, even in the crowded harbour of Alexandria, that I will venture to assert that it may be laid down as a certainty in steam-boat evolutions, that the stern will invariably come up into the wind with a back turn, and that in the stronger wind she will take less time and less space.

Perhaps, some of your Nautical readers will favour us with their ideas, as to how far efficacious the helm is in a sailing vessel, when she has got stern-way.

I am, &c.

ROBERT C. ALLAN.

*H.M. Steam-Vessel Volcano, Malta, Oct. 28th, 1839.*

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#### ENGLISH AND FRENCH FISHERIES.

Convention between her Majesty and the King of the French, defining and regulating the limits of the exclusive right of the oyster and other fishery on the coasts of Great Britain and of France.—Signed at Paris, August 2, 1839.

WHEREAS, his late Majesty the King of the United Kingdom of Great Britain and Ireland, and his Majesty the King of the French, appointed in the year 1837, a mixed commission, for the purpose of ascertaining and defining the limits within which the subjects of the two countries respectively should be at liberty to fish for oysters between the island of Jersey and the neighbouring coast of France.

And whereas the commissioners so appointed have agreed upon certain lines, as marked in a chart hereinafter referred to, as the limits above mentioned, and have also agreed upon certain arrangements which they conceive to be calculated to prevent the recurrence of disputes which have at various times arisen between the fishermen of the two countries:—

It has been deemed expedient by her Majesty the Queen of the United Kingdom of Great Britain and Ireland, and by his Majesty the King of the French, that the limits agreed upon, and the arrangements proposed by the said commissioners, should be recorded and sanctioned by a convention to be concluded between their said Majesties.

And whereas the high contracting parties have also considered it desirable to define and regulate the limits within which the general right of fishery on all parts of the coasts of the two countries shall be exclusively reserved to the subjects of Great Britain and of France respectively; the said high contracting parties have therefore named as their plenipotentiaries for this purpose, that is to say—

Her Majesty the Queen of the United Kingdom of Great Britain and Ireland, the Right Hon. Granville, Earl Granville, peer of the realm, Knight Grand Cross of the most Hon. Order of the Bath, a Privy Councillor, and her Britannic Majesty's Ambassador Extraordinary and Plenipotentiary to his Majesty the King of the French;

And his Majesty the King of the French, Jean de Dieu Sault, Duke of Dalmatia, Marshal and Peer of France, Grand Cross of his Royal Order of the

Legion of Honor, &c., his Minister and Secretary of State for the Department of Foreign Affairs, President of the Council of Ministers;

Who, after having communicated to each other their respective full powers, found to be in due form, have agreed upon and concluded the following articles:—

Article 1.—It is agreed, that the lines drawn between the points designated by the letters A, B, C, D, E, F, G, H, I, K, on the chart annexed to the present convention, and signed by the respective plenipotentiaries, shall be acknowledged by the high contracting parties as defining the limits between which and the French shore the oyster fishery shall be reserved exclusively to French subjects; and these lines are as follows, that is to say:—

The first line runs from the point A, three miles from low-water mark (Point Meinga bearing south,) to the point B, of which the landmarks are Agon tower on with a clump of trees upon Mount Huchon, and the summit of Gros Mont in a line with the signal-post on Grand Isle.

The second line runs from the said point B, towards Agon-tower, and the clump of trees upon Mount Huchon, in the direction north sixty four degrees east, until at the point C it brings the windmill at Lingreville, to bear due east.

The third line runs from point C, due east, towards Lingreville windmill, until the Grand Huguenante is brought to bear on the Etat Rock at point D.

The fourth line runs from point D northward, and keeping the Grand Huguenante in one with the Etat Rock, until it intersects at E a line whose landmarks are Agon-tower on with Coutances Cathedral.

The fifth line runs eastward from point E to point F, where the steeple of Pirou is brought to bear in a line with Senequet Rock.

The sixth line runs from point F due north to the point G, where the steeple of Blainville is brought in a line with the Senequet Rock.

The seventh line runs from point G (in the direction of Pirou Steeple) to point H, where the lighthouse on Cape Carteret bears north twenty-four degrees west.

The eighth line runs from point H to point I, nearly abreast of Port Bail, point I having for land marks the fort of Port Bail in a line with the steeple of Port Bail

And, finally, the ninth line runs from point I to the three grunes at point K, where Cape Carteret bears east ten degrees north, in a line with Barneville church.

It is further agreed and understood that all the bearings specified in the present article are to be taken according to the true meridian, and not according to the magnetic meridian.

Art. 2. The oyster fishery within three miles of the Island of Jersey, calculated from low-water mark, shall be reserved exclusively to British subjects

Art. 3. The oyster fishery outside of the limits, within which that fishery is exclusively reserved to the British and French subjects respectively, as stipulated in the preceding articles, shall be common to the subjects of both countries.

Art. 4. Between sunset and the ensuing sunrise, the subjects of both countries respectively, shall be prohibited from dredging for oysters between the coast of Jersey and the coast of France, from Cape Carteret to Point Meinga.

Art. 5. Inasmuch as the law of France requires that all French fishing boats shall be marked and numbered, it is hereby agreed that all British fishing boats dredging for oysters between Jersey and the coast of France, shall also be marked and numbered.

Art. 6. All British boats employed in the said oyster fishery, shall be registered at the office of the inspector of fisheries in the Island of Jersey; and the entry of each boat on the register shall state the number, description, and tonnage of such boat, and also the name of its owner. This entry must be repeated every year, on or before the commencement of the fishing season.

Art. 7. The right of shelter in the Islands of Chausey, shall be granted to English fishermen, on account of damage, or of evident bad weather.

Art. 8. Whenever the fishing boats of either of the two nations shall be carried within the limits established for the fishery of the other country, by contrary

winds, by strong tides, or by any other cause, independent of the will of the master and crew; or, whenever they shall have passed within those limits, in working back, to regain their fishing ground, the masters shall be bound immediately to hoist a blue flag of two feet long, and three feet broad, and to keep that flag at the mast-head, so long as they shall remain within the said limits.

The cruisers of each nation shall exercise their judgment as to the causes of such trespassings; and when they shall be satisfied that the said fishing boats have neither dredged nor fished within the limits above mentioned, the aforesaid cruisers shall not detain either the boats or the crews, nor use any measure of severity towards the latter.

Art. 9. The subjects of her Britannic Majesty shall enjoy the exclusive right of fishery, within the distance of three miles, from low-water mark, along the whole extent of the coast of the British Islands; and the subjects of the King of the French shall enjoy the exclusive right of fishery within the distance of three miles from low-water mark, along the whole extent of the coasts of France; it being understood that, upon that part of the coast of France, which lies between Cape Carteret and Point Meinga, French subjects shall enjoy the exclusive right of all kinds of fishery within the limits assigned in article 1, of this convention for the French oyster fishery.

It is equally agreed that the distance of three miles, fixed as the general limit for the exclusive right of fishery upon the coast of the two countries, shall, with respect to bays, the mouths of which do not exceed ten miles in width, be measured from a straight line drawn from headland to headland.

Art. 10. It is agreed and understood that the miles mentioned in the present convention are geographical miles, whereof sixty make a degree of latitude.

Art. 11. With a view to prevent the collisions, which now, from time to time, take place on the seas lying between the coasts of Great Britain and of France, between the trawlers and the line, and long-net fishers of the two countries, the high contracting parties agree to appoint, within two months after the exchange of the ratifications of the present convention, a commission consisting of an equal number of individuals of each nation, who shall prepare a set of regulations for the guidance of the fishermen of the two countries in the seas above-mentioned.

The regulations, so drawn up, shall be submitted by the said commissioners, to the two governments respectively, for approval and confirmation; and the high contracting parties engage to propose to the legislatures of their respective countries, such measures as may be necessary for the purpose of carrying into effect the regulations which may thus be approved and confirmed.

Art. 12. The present convention shall be ratified, and the ratifications shall be exchanged, within six weeks from the date hereof.

In witness whereof, the respective plenipotentiaries have signed the same, and have affixed thereto the seals of their arms.

Done at Paris, the 2nd day of August, in the year of our Lord, 1839.

GRANVILLE.

Marhal Duc DALMATIA.

*The Channel Fishery.*—Anthony Perrier, Esq. her Majesty's consul at Brest, and the commissioner appointed by Lord Palmerston on the part of this country to execute the convention between the English and French governments, signed in August last, for defining and regulating the limits of the oyster and other fisheries on the coasts of Great Britain and France, was here and at Worthing for several days last week, making inquiries among the fishery as to the causes of the collision between the trawlers and the line and long-net fishers of the two countries, with a view of preparing a set of regulations to be agreed to by both governments for the guidance of all fishermen in the Channel. The commissioner collected the statements of the owners of mackerel and herring boats and craft, as also those of the trawl boat and small boat fishery

separately, and is now, we understand at Hastings, intending to return shortly to this place to examine the Brighton men, before he proceeds farther to the westward. Mr. Perrier is the gentleman to whom the fisheries are indebted for the satisfactory arrangement of the disputes respecting the oyster fisheries in the Channel—an arrangement that was ratified by the convention above-named, and which has worked so well that no complaint has been made by either party concerned in that particular fishery since the rules and regulations for the guidance of the fishermen have been in force, though previously disputes and collisions had for very many years been even more frequent between the oyster fisheries of the two countries than between the French trawlers and English long-net fishers on this coast.—*Brighton Paper.*

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### RECORDS OF WRECKS.

*To the Editor of the Nautical Magazine.*

**THE MERCHANT CAPTAIN.**—MR. EDITOR,—Allow me, through the medium of your periodical, which I with great interest, regularly read, to make public the following courteous behaviour of the master of some, (I am ashamed to say,) English ship, whose name is as yet unknown. On the 11th of this month, in south latitude about  $34^{\circ} 0' 0''$ , and  $12^{\circ} 40' E.$  long., the "General Palmer," for Bombay, on board of which I was a passenger, passed a ship apparently homeward bound, the master of which, through the very useful signals of Captain Maryatt, (when in proper hands,) demanded, what ship is that? I believe the general manner of putting that question is, by showing your own number first; however Captain Elliott, of the "General Palmer," made his number, and returned the compliment, by asking the same question, of which the bear in command of the unknown ship took not the least notice, but proceeded on his course. The conclusion I immediately came to upon such, I trust, unusual behaviour, was, that seeing we were a crippled ship, (having lost our main-mast,) he may have imagined we should apply to him for assistance, which he was not inclined to render, and not doing so, had we known his name, he would naturally enough have been ashamed, that either it, or that of the ship should be made public. I am in hopes yet though of finding it out, as he may report the General Palmer; and I am very anxious to ascertain also, who has thus committed a breach of the mutual good feeling that should exist between the commanders of ships of all nations, and more particularly, I should say, between those of one and the same. I have the honour to be, Sir, your most obedient,

COURTNAY PHILLIPS,  
Major 15th Hussars.

Ship "General Palmer," at Sea, 15th October, 1839.

We regret having to record the foregoing, so different is such conduct from that of British seamen. However, as a set off, we are glad to have at hand the annexed letter from the Shipping Gazette, relating the loss of the "Huskisson" steamer. The noble and truly seamanlike behaviour of Captain Clegg, is beyond all praise, and we cordially congratulate him on being instrumental in saving the lives of so many of

his fellow beings. Nor must we omit to notice the praiseworthy conduct of the Underwriters of his ship on this occasion. In our next also, in the continuation of our Wrecks of British Shipping, we shall adduce another case, in which Captain Collins, of the "Roscius," saved the crew of the "Scotia," as another set off against the "bear" alluded to by Major Phillips.

WILLIAM HUSKISSON STEAM VESSEL.

The William Huskisson, steamer, with about 120 passengers, sailed from Dublin for Liverpool, on Saturday afternoon, Jan. 10th. During the whole of that evening it blew a gale of wind from S.S.W. to S.W. and about midnight it was discovered that the vessel had sprung a leak, which, notwithstanding the utmost exertions of the crew and passengers, gained so rapidly upon them, that before morning the vessel was half full of water, the fires extinguished, and the vessel altogether unmanageable. In this state of the utmost distress, expecting every moment to go down, they continued until 7 A.M. on Sunday, when, to the heartfelt joy of all on board, the ship Huddersfield, Clegg, belonging to Messrs. Horsfall and Son, which sailed from this port on Friday last, hove in sight.

Capt. Clegg, observing the signals of distress on board the steamer, immediately bore down to her assistance. On a nearer approach, the ringing of the bell, and the heart-rending shout which reached his ear, combined with the attitude of prayer of many on deck, satisfied him that no time was to be lost in endeavouring to save a large mass of human beings from immediate death. The sea was at this time running fearfully high, and any attempt to lower the boats seemed worse than useless. As the Huddersfield, however, neared the steamer, the boats of the latter were lowered, but immediately swamped. Captain Clegg saw at once that the only chance of saving the people was by endeavouring to run his ship under the stern of the steamer.

In this bold and hazardous attempt, with his crew mustered on the fore-castle ready to give any assistance; they providentially succeeded in snatching 23 individuals off the wreck, and although in doing so the Huddersfield carried away her bowsprit, lost two anchors and chains from the bow, and sustained other damage, the gratifying fact that they had so far succeeded, seemed to give fresh spirit to the officers and ship's company. The ship, with her gallant captain at the wheel, was immediately put about, and a second attempt made, in which about 20 to 30 more of the passengers and crew succeeded in getting on board. Encouraged by this success, the ship was a third time put about, and again brought under the stern of the steamer, when a further number succeeded in gaining the ship, making a total of 93, including 15 women and some children.

The gale, which had been on the increase, had now arrived at such a height, that Captain Clegg deemed it prudent for the safety of his own vessel, in her then crippled state, and those on board, not to remain longer by the wreck; as, however, there appeared to be still ten or twelve persons on board the steamer, he determined to make one more attempt; and accordingly again, for the fourth time, ran his vessel under the stern of the steamer. This attempt, as was anticipated, proved unsuccessful; and seeing that there was no prospect of



any abatement of the gale, and apprehensive of his mast going by the board, after remaining by the wreck until 10 A.M., they were reluctantly obliged to quit her.

The following is a copy of a letter addressed to Messrs. C. Horsfall and Son, the owners of the ship Huddersfield, by the underwriters of that vessel:—

“Gentlemen.—We beg to inform you, on the part of the underwriters on your policies, per Huddersfield, from this to Africa, that they very highly approve of the humane and courageous conduct of Captain Clegg, in rendering assistance to the passengers and crew of the steamer William Huskisson, by which means he saved ninety-three lives, at a considerable risk of his own vessel. And the underwriters further add, that under these circumstances, they will cheerfully pay for repairing the damages sustained by being in collision with the steamer, without requiring the usual deduction of one third for new, in place of old materials. Your obedient servants,

(Signed)

“JONES and HODGSON,  
 “W. ROTHERAN,  
 “THOMAS MORRIS,  
 “HEADLAM and RAWSON,  
 “MURRAY, SMITH, and BOGIE”-

Liverpool, January 17th, 1840.

#### NOTICE TO MARINERS.

*Hydrographic-Office, Admiralty, 1st Nov. 1839.*

NOTICE is hereby given, that at *Cape Coast Castle* all Vessels in the Roads may ascertain the errors and rates of their *Chronometers*, without exposing them to the risk of being carried on shore through the surf.

A Flag Staff with a Gaff has been erected on the Southern Turret of the Castle.

At 11h. 30m. Greenwich Mean Time, on each day after 1st of September, 1839, a *Red Flag* with a *White Ball* in the centre, will be hoisted at the Mast Head as a preparatory signal.

At 11h. 55m. Greenwich Time, a *Black Ball*, five feet in diameter will be hoisted to the Gaff end, and the Flag lowered.

At the instant of Noon, Greenwich Mean Time, the Ball will be dropped from the end of the Gaff, and will immediately disappear.

N.B.—The falling of the Ball must occupy upwards of a second of time, but the instant of Noon is to be reckoned from the separation of the Ball from the Gaff end.

The latitude of the Flag Staff of Cape Coast Castle is 5° 5' 25" N., the longitude 1° 12' 5" W.\*

Cape Coast Castle, 27th July, 1839.

GEORGE MACLEAN,  
 President of Council.

#### HEAUX-DE-BREIAT.

(Communicated by the French government.)

NOTICE is hereby given, that after the 1st of February, 1840, instead

\* In Capt. Vidal's Survey, the longitude of the Flag Staff on the West bastion of the Castle appears to be 1 deg. 13 min. 41 sec.

of the small fixed light which has been exhibited since 1832 of the highest rock of the *Heaux-de Brehat*, a fixed light of the highest power will be shewn on the Tower recently erected 220 yards S.E. of the present light.

The lantern of the new light is 147 feet above the level of high water at spring tides, and will be visible in fine weather at the distance of seven leagues.

*Admiralty, December 19th, 1839.*

### LAW DECISIONS.

**ALINE.—Collision.**—The following case being important, we record it entire as reported in the *Shipping Gazette*.

Dr. Lushington gave judgment in this case, which involved some legal points of considerable nicety. On the 22d of September, 1838, a collision took place between two vessels, the *Aline*, a foreign vessel, and the *Panther*, a British vessel, and next day the *Aline* put into Cowes to repair, in order to complete her voyage to Lisbon. On the 20th of October she was arrested by process from this court, in a cause of damage, by the owners of the *Panther*, and in January, 1839, the court condemned the *Aline* in the damage. The amount not being paid, the ship was sold by decree of this court, and Mr. William Stuart Day then intervened, preferring a claim against the proceeds, which were (even without such deduction) insufficient to discharge the claim for damage. Mr. Day alleged, supported by affidavit, that, being ignorant of any intention to proceed against the *Aline* for damage, he undertook to be answerable for the repairs, on the master agreeing to give him a bottomry bond. The disputed facts were, Mr. Day was not apprised of such proceedings being intended, and that the repairs were not completed until after the arrest of the vessel. A notice was given to the master on the 1st of October, but it was not proved that Mr. Day way privy to this notice, and he had denied that he was so, nor was it probable that if he had been he would have made himself responsible. As to the repairs, all but a small part (estimated in about 10*l.*) were completed before the arrest. In considering the rights by law and justice of a person who obtains a decree in this court in a cause of damage, it appeared plain that, independent of any municipal regulation, and according to those great principles which every municipal law is framed to carry into effect in a cause of damage, the owner is responsible for the acts of his servants. The proceeding *in rem*, by the arrest of the ship and freight, was not originally given as the measure of the damage, but as the best security for indemnity that could be obtained in all cases. All the rights of the owners were clearly a part of the fund to satisfy the successful suitor. Were there any other rights which could attach to the ship doing the damage, which would entitle the parties possessing such rights to a different consideration? Decisions on this point were wanting, and he (the learned judge,) was under the necessity of having recourse to principle and reason. He took the period when the damage was done, and considered the claims accruing before and after that period. There were only two kinds of claim which it was necessary for him now to consider, namely, mortgage and bottomry. Now the mortgagee and bondholder could not take any right greater than the owner could confer, namely, a security as against the owner and all who claimed under him, that is, a lien on the ship after the voyage, subject to all contingencies; neither could he be a competitor with the successful suitor in damage. The mortgage or bond might extend to the whole value of the ship, and, were the ship not first liable for damages, the party receiving the injury might be wholly without remedy. Moreover, the person suffering the wrong has no option; the creditor has and may advance his money or not, as he might think best. As against a mortgagee or bondholder, prior to the damage done, the suitor in a cause of damage had a claim to preferable payment: was a bottomry bond *bona fide* granted after the damage subject to the same consideration?

ENLARGED SERIES.—NO. 2.—VOL. FOR 1840.

The interest of a suitor in a case of damage may be said to be vested at the period when the damage was done; was he entitled to the benefit of a future increase of the value of the subject? Suppose a case of collision, where the vessel doing the damage is herself seriously injured, and forced to go into a foreign port for repairs, and there a bond was granted; what would be the effect of denying the validity of a bottomry bond granted afterwards, universally? Why, a serious impediment would be thrown in the way of all bottomry bonds; the lender would have not only to calculate on future contingencies, but to inquire into past transactions. Was not the interest of the party who had received the damage benefitted by the vessel being repaired and sent to her port of destination? He, (the learned judge,) could not say, therefore, that universally, all such subsequent bonds must give way to prior claims of damage. Against the owner repairing his ship, the claim of the suitor in damage went the whole length of the loss, against the ship and repairs subsequently done where there is no bond. When the repairs are done by a bondholder, it is totally different. How far did these principles apply to the present case? In common equity there appeared to be no difference between an agreement for a bond and a bond itself. Why should the owner of the Panther be benefitted at the expense of Mr. Day, because he had assisted *bona fide* the ship in distress? Though it might be that the court had not power to order the money to be paid to Mr. Day, he could say to what the owner of the Panther was entitled, and he could not in justice direct that he should be paid out of the proceeds, so far as they were the value of repairs done by Mr. Day prior to the arrest. With respect to the remainder of the money, the first question was, had this court jurisdiction, even if a bond had been granted, where the ship had never put to sea? Secondly, had it jurisdiction where there was no bond, but only an agreement for a bond? He was not aware of any decisions on this subject; but, on the supposition of the contrary, the bondholder might easily be defrauded of his remedy—a consequence inconsistent with the general interests of commerce. In the prize courts ameliorations had been allowed even where the purchaser had bought with a bad title, on the broad principle that he might not have known of the infirmity of his title, and that the former owner got all he lost. The present question, however, was between Mr. Day and the owner of the Panther, not the owner of the Aline. The course he should adopt was this; he held the owner of the Panther entitled only to the value of the ship before the repairs, and to the value of the repairs after the arrest. The residue he should direct to remain in the registry, not to be paid out without the consent of the owner of the Aline, or, at least, notice to him. With respect to the claim for freight, *pro rata itineris*, that demand must be rejected. With respect to costs, he regretted that such questions should occur in a case of so small a value; but he could not give costs where points of such difficulty arose.

**SEAMENS' WAGES.**—Among the appeals decided at this circuit was one of considerable interest and importance to mariners. The main fact on which the question turned were these:—The brig Hannibal was chartered in the year 1836, to sail from London on a voyage to Trieste, from Trieste to Odessa, and from Odessa back to England. On 28th March, 1836, she sailed from London with a general cargo, which she delivered at Trieste on the 18th May following, thereby earning freight. She then proceeded from Trieste to Odessa in ballast, and at the latter port she took in a cargo of linseed, with which she set sail for England on the 6th August. On the 12th of that month she was caught by a sudden squall in the Dardanelles, and instantly foundered and sank; and all hands on board perished, with the exception of one man and a boy. The British consul at the Dardanelles employed some divers or salvors, who succeeded in raising the vessel and towing her to land. Afterwards she was sold, and after paying expenses, the proceeds of the hull and materials were remitted to the owners, or to the underwriters in this country with whom the vessel was insured. In the year 1837, the representatives of Alexander Hood, one of the men who were drowned on board of the vessel, raised an action against the owners, before the sheriff of Forfarshire, contending for payment of the wages due to the

deceased for his services from the time the vessel left London, till the day of his death. After considerable discussion the sheriff-substitute gave judgment, sustaining the claim, and to this judgment the sheriff adhered. It was against these decisions that the present appeal was taken. It was admitted by the owners that freight was due down to Trieste, because up to that time the vessel had earned freight; but they denied their liability for wages beyond that point, on the strength of the doctrine, "freight is the mother of wages." The authority mainly relied on by the other party in opposition to this doctrine, was a decision pronounced by Lord Stowell in the Admiralty Court of England, by which wages were adjudged to the crew of a shipwrecked vessel called the Neptune, out of part of the wreck which they had saved. The owners of the Hannibal pleaded that that case was not a precedent, inasmuch as the crew of the Neptune were themselves the persons who saved the wreck, and claimed the wages in person, and that the wages were truly awarded to them on account of their exertions in saving the wreck; whereas the person in whose behalf the present claim was made perished in the wreck, and the vessel was saved by strangers. On the other hand, it was maintained for Hood's representatives, that the principle of Lord Stowell's decision was this:—that where part of a vessel is saved, no matter how, or by whom, the seamen, or their representatives, can come upon it for wages, in virtue of their lien or hypothec, which is preferable to all other claims. Lord Mackenzie, after hearing counsel at great length upon the point, gave judgment affirming the decision of the sheriffs, and thus sustaining the claim of the seaman's representatives. At the same time, his lordship stated that it was a point of great difficulty.—*Perth Courier.*

**SOPHIA.**—*Salvage.*—This was a suit brought by the owners of the Royal Adelaide steamer, for salvage service rendered to the Sophia, on the 14th and 15th September last. The steamer was on her voyage from Dublin to London, with a valuable cargo, and 150 passengers; the ship and freight were worth 60,000*l.* when she fell in with the Sophia, bound to New South Wales, with a freight, &c., valued at 30,000*l.*, and which had been run down by the Lord Goderich. The Royal Adelaide took the Sophia in tow, and brought her safely to Gravesend, for which service the owner tendered 650*l.*; this was refused, and the action was for 6,500*l.* Dr. Phillimore, with whom was Dr. Jenner, for the salvors, said the tender was insufficient, as the wind was blowing a gale at the time, and many lives had been saved from almost certain destruction. The Queen's Advocate, and Dr. Haggard, on behalf of the Sophia, contended that nothing but towage had been performed, and that the tender was most ample. Dr. Lushington, after going over the facts of the case, decided, that although no danger had been incurred, yet considering that steam-vessels of such great power as the Royal Adelaide could render prompt and efficient service, the salvors were entitled to 1000*l.*

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### NEW BOOKS.

**THE LETTER BAG OF THE GREAT WESTERN; OR, LIFE IN A STEAMER.**  
By the author of *Sayings and Doings of Sam Slick.* Bentley, New Burlington Street.

THE Letter Bag contains some vastly amusing and entertaining productions, fit for all hands, fore and aft, from the captain to the cook. Here is one from an old hand.

"My Dear James,—Just as I was embarking I received your letter requesting me to give you a full account of my voyage, and such hints as might be useful to you when you shall make the passage yourself. The first is unnecessary, for there is nothing to tell. Every man is alike, every woman is alike (they are more alike than the men, too much of the devil in them,) every ship is alike, especially steam ships, and the incidents of one voyage are common to all.—*Facies non omnibus una, nec tamen diversa.*"

"The company usually consists of young officers joining regiments, talk—

Gibraltar, Cape, Halifax, Horse Guards, promotion, and sporting; of naval men, talk—insults to flag, foreign stations, crack frigates, round sterns, old admiral; of speculators, talk—cotton, tobacco, flour; of provincials, talk—Durham, Head, Colborne, Poulett Thomson; of travellers, talk—Mississippi, Niagara, Mahon Bay; of women, talk—headache, amusements, and nonsense about Byron; of Yankees, talk—Loco Focos go-a head, 'dollars; of manufactures, talk—factors and machinery; of blockheads, who chatter like monkeys about every thing. The incidents are common to all; fall on the deck—wet through—very sick—bad wine—cold dinner—rough weather—shipt a sea, and a tureen of soup—spoke to a ship but couldn't hear—saw a whale, but so far off, only a black line—feel sulky. There is nothing, however, to tell you but what has been told a thousand times, and never was worth telling once; but there are a few maxims worth knowing.

"1st. Call steward, inquire the number of your cabin; he will tell you it is No. 1, perhaps, 'Ah, very true, steward; here is half-a-sovereign to begin with, don't forget it is No. 1. This is the beginning of the voyage, I shall not forget the end of it.' He never does lose sight of No. 1, and you continue to be No 1, ever after; best dish at dinner, by accident, is always placed before you, best attendance behind you, and so on. You can never say with the poor devil that was henpecked, 'The first of the tea and the last of the coffee for poor Jerry.' I always do this.

"2d. If you are to have a chum take a young one, and you can have your own way by breaking him in yourself. I always do.

"3d. If the berths are over each other, let the young fellow climb, and do you take the lowest one; it is better he should break his neck than you. I always do.

"4th. All the luggage not required for immediate use is marked 'below.' Don't mark yours at all, and you have it all in your own cabin, where you know where to find it when you want it. It is not then squeezed to death by a hundred tons of trunks. If you have not room in your cabin for it all, hint to your young chum he has too much baggage, and some of it must go 'below.' I always do.

"5th. Don't talk French, it brings all those chattering grimacing fellows about you. I never do.

"6th. Make no acquaintance with women, on many accounts; first, they have no business on board; and secondly, they are too troublesome. I never do.

"7th. Never speak to a child, or you can't get clear of the nasty little lapdog thing ever afterwards. I never do.

"8th. Always judge your fellow-passengers to be the opposite of what they appear to be. For instance a military man is not quarrelsome, for no man doubts his courage; a snob is. A clergyman is not over straitlaced, for his piety is not questioned—but a cheat is. A lawyer is not apt to be argumentative; but an actor is. A woman that is all smiles and graces is a vixen at heart; snakes fascinate. A stranger that is obsequious, and over civil without apparent cause, is treacherous; cats that purr are apt to bite and scratch like the devil. Pride is one thing, assumption is another; the latter must always get the cold shoulder, for whoever shows it is no gentleman; men never affect to be what they are, but what they are not. The only man who really is what he appears to be, is—a gentleman. I always judge thus.

"9th. Keep no money in your pockets; when your clothes are brushed in the morning, it is apt—ahem—to fall out. I never do.

"10th. At table see what wine the captain drinks; it is not the worst. I always do.

"11th. Never be 'at home' on any subject to stupid fellows, they won't call again. I never am.

"12th. Never discuss religion or politics with those who hold opinions opposite to yours; they are subjects that heat in handling until they burn your fingers. Never talk learnedly on topics you know, it makes people afraid of you. Never talk on subjects you don't know, it makes people despise you. Never argue, no man is worth the trouble of convincing; and the better you reason, the more

obstinate people become. Never pun on a man's words, it is bad as spitting in his face; in short whenever practicable, let others perform, and do you look on. A seat in the dress circle is preferable to a part in the play. This is my rule.

"13th. Be always civil, and no one will wish to be rude to you; be ceremonious, and people cannot if they would. Impertinence seldom honours you with a visit without an invitation; at least—I always find it so.

"14th. Never sit opposite a carving dish; there is not time for doing pretty. I never do.

"15th. Never take a place opposite a newly-married couple; it is a great many things—tiresome, tantalising, disgusting, and so on.—I never do.

"16th. Never sit near a subordinate officer of the ship, they are always the worst served, and are too much at home to be agreeable. I never do.

"17th. Never play at cards. Some people know two little for your temper, and others too much for your pocket. I never do.

"18th. There is one person to whom you should be the most attentive and obliging, and even anticipate his wants. His comfort should be made paramount to every other consideration, namely, yourself. I always do.

"There are many other corollaries from these maxims, which a little reflection will suggest to you; but it is a rule never to write a long letter. I never do.

Yours, always,

"JOHN STAGER."

We may possibly find room for another extract or two hereafter.

*THE EARTHQUAKE OF JUAN FERNANDEZ, as it occurred in the year 1835, authenticated by the retired governor of that island, to which is added a refutation of several mis-statements that have been published in the Nautical Magazine of 1837, and the public press.*—Manchester, 1839.

THE reader must not expect to find more about the earthquake here alluded to, than has long been known. The accounts of it just fill three pages out of two-and-thirty, the remainder being devoted to extracts relative to the insurrection at Juan Fernandez, the particulars of which interest few besides those immediately concerned, and the government to which the island belongs. One of those is the author of the pamphlet before us, Mr. T. Sutcliffe, the *ci-devant* governor alluded to in the title we have quoted. But this same title makes grave assertions about "mis-statements, that have been widely circulated" in the *Nautical*; and as they are considered injurious to the character of the late governor, it behoves us to look into them, and we must, therefore, request a little of our readers' patience. It appears that one of our correspondents, Capt. Masters of Liverpool, happened to touch at this island soon after the insurrection, and learned tidings of the affair which he communicated to us, with other important information for the benefit of his brother seamen.

Now, we have really been surprised at the general correctness of our correspondent, for the statements he makes are, in the main, confirmed, requiring only a little qualification; and this we shall find in the governor's own account. First; of the dry provisions destroyed, (not all in the island, as stated by Capt. Masters,) we learn that those of the government were saved, while the governor lost personal property to the amount of 3,000 dollars. (p. 31.) The next statement objected to of Capt. Masters, and quoted in italics in the pamphlet before us, is that during the insurrection "the soldiers rallied and attacked the prisoners, retook the fort, and recovered their arms." (p. 6.) the governor says, "I sallied out, and ordered my men to keep up the fire as they were advancing • • • and entered the castle. We killed two, wounded six, and took fourteen prisoners; the rest escaped with their fire-arms to the mountains." (p. 11—12.) Again Capt. Masters is quoted, saying, "The second in command put the commandant (an Englishman,) under an arrest, for inattention to his duty, and which neglect was considered the chief cause of the prisoners rising." (p. 6.) Different persons will always find different reasons to suit their own ideas of an affair, but here is an extract from the letter of the second in command, quoted by the governor; "I have considered it my duty to demand of V. S. • • • all the ammunition • in your house, • • • also that V. S. will remain under an

arrest in your habitation." (p. 14.) Again says Capt. Masters, "he was sent to Valparaiso to be tried;" (p. 6.) and, says Mr. Sutcliffe, "Immediately on disembarking in Valparaiso, I waited on the governor, Don Ramon Cavareda." (p. 28.) Now, the foregoing forms the substance of the objectionable passages related by our correspondent, and certainly they are pretty clearly corroborated by the retired governor's own words.

But as we said, the account requires a little qualification here and there. An insurrection, at the bottom of which was a friar! (verifying the Spanish proverb which says, "there never was mischief without a friar for the counsellor,") took place at Juan Fernandez, in which the second in command deposed the governor, who was subsequently put on his trial in Chili, and declared to have fulfilled the duties of his office with good faith and efficiency. Those who plotted and executed the affair, were also tried, and as might be expected from Spanish justice towards Spaniards, where an Englishman was accuser, escaped comparatively unharmed, instead of forfeiting their lives for their conduct. Now all these particulars were entirely unknown to our correspondent, Capt. Masters, and we have done our duty in adding them; a course which, we hope, will serve to remove impressions considered highly injurious to the character of Mr. Sutcliffe. For our own part, however, we are unable to see any such tendency in Capt. Masters' account: we can fully appreciate the difficult situation of Mr. Sutcliffe, in dealing with such persons as he had under his orders, and we trust that he may find the government just and generous enough to compensate him for his losses. He may then with truth say, "*Los pueblos no estau siempre ingratos.*"

The views and plan which accompany the work representing the bay during the earthquake, are useful and interesting.

V. S., "Vuestra Senoria," Your Excellency.

### SHAKINGS.

**ATLANTIC STEAMERS.**—It is estimated the repairs which the Great Western steam vessel is now undergoing will amount to 6,000*l.*, whilst the alterations and improvements about to be effected in the British Queen will not be less than 13,000*l.*

**LOBSTERS IN NORWAY.**—Next to timber, lobsters form one of the greatest articles of Norwegian export. On the rocky coast of Christian-sand they are found in greater numbers than in any other part of the world; and from Bergen, which lies further to the north, as many as 260,000 pairs have been exported in one year.—*Bremer's Excursions in Denmark, Norway, and Sweden.*

**DISAPPEARANCE OF AN ISLAND.**—A Vienna correspondent of a Paris paper, states that accounts have been received from Venice of the disappearance of a little island of the lagoons, in the waves of the Adriatic, twelve persons who were on it having been buried in the waters when the island was overwhelmed. The archduke, viceroy of the kingdom of Venetian Lombardy, had gone from Venice to inspect the ravages caused by the late inundations, and the clergy of Milan and Cremona were exerting themselves to relieve the sufferers.

**GRATITUDE.**—To Captain Codrington.—Sir, I embrace the first leisure which my business on arriving at this port affords me to express, as in duty most bounden, my unfeigned gratitude for that seasonable aid which, in the generosity of your truly British heart you afforded to me in the moment of peril and distress, and when my little all was at stake.

I know, Sir, that a mind like yours will abhor adulation, and I therefore refrain from what might seem to savour of it, though I should equally disdain to offer it. But permit me to express by most earnest prayer to Him who rules the ocean, that as long as you may traverse it in pursuit of that distinguished profession which you are engaged in, you may be under a Divine protection, and may never want a friend in need, such as you nobly proved yourself to me. I have the honour to remain, Sir, your grateful and most humble servant,

ORLANDO BULL.

Hull, Dec. 12.

To Captain Codrington, Commander of H.M.S. Talbot.

SLAVE DEPÔT.—The Crescent slave depôt is fitted with every convenience for the cleanliness and health of captured negroes at Rio Janeiro, and bears a skilful surgeon and assistant.

GOOD NEWS FOR JACK.—A first-class petty officer of the Dolphin, lately returned from the coast of Africa, paid off at Chatham last week, has received upwards of £700 prize-money, made during the term of three years' service on that station. The Dolphin is of Sir W. Symonds' construction, and owing to her superior sailing qualities has made more captures than any vessel on the coast. Her defects are very few, and she will be ready for commission again in a few days.—*Naval and Military Gazette.*

NAVAL OFFICERS.—The following Table contains the number of Officers on the Navy List of January in each of the years mentioned, from 1816 to 1840:—

	1816	1831	1834	1886	1837	1838	1839	1840
Flag Officers . . .	343	216	193	162	154	212	216	201
Captains: . . .	889	833	792	762	759	697	697	692
Coms. and retired .	891	1192	1144	1119	1105	1084	1087	1085
Lieutenants . . .	3776	3357	3155	3050	2994	2918	2871	2813
Marine Officers . .	1336	893	836	833	831	810	805	789
Masters . . .	693	524	485	477	454	439	469	462
Medical Officers . .	1537	1153	1017	1020	977	1042	1046	1056
Pursers . . .	957	646	619	593	578	570	558	557
Naval Instructors .							11	22
Chaplains . . .	62	71	63	61	69	72	70	69
Total . . .	10487	8885	8324	8077	7921	7814	7830	7746

REWARD.—We understand that a gold medal and appendages, about the value of forty guineas is to be presented to king Denny, on the African coast, by order of the Lords Commissioners of the Admiralty for rescuing four wounded British seamen from captivity.

THE BRITISH NAVIGATOR.—This forthcoming work of Lieut. Rapier is in a forward state in the press, and we may possibly have to give our opinion of it in our next number. We understand, that the delay in its appearance arises from a determination on the part of the author, to give the most perfect solution of every problem which belongs to Navigation, and to Nautical Astronomy.

THE ARMED STEAMER NEMESIS.—There is now lying in the half-tide basin of the Clarence Docks, Greenock, a very beautiful iron steamer, constructed by Mr. John Laird, of North Birkenhead, bearing the above name. She is fitted up with one engine of 120-horse power, from



the foundry of Messrs. Forrester and Co. and armed with two 32-pound carronades, the one fore and the other aft, which move on solid swivel carriages. Her draught of water is under four feet. Her crew will consist of 40 men. She will, it is said, clear out for Brazil; but her ultimate destination is conjectured to be the eastern and Chinese seas. On Monday last she made an excursion as far as the floating light, for the purpose of trying her machinery, which was found to work admirably.—*Shipping Gazette*.

**H.M.S. TRIBUNE.**—We understand that all hopes of recovering this ship are given up. Her stores are all saved, and her crew are about to return home. She lies buried in the sand, in three feet water. The following extract from the *Hants. Telegraph*, contains some account of the event.—“Tarragona, Nov. 30: We had been lying snugly moored here since the 8th inst. On the 28th about 7 P.M., a gale sprang up from the S.S.W., which shifted afterwards to the S.W. and W.S.W. We struck our topmasts and made every preparation. At half-past nine our small bower cable parted, and we let go the sheet anchor. At a quarter past ten the best bower parted, and immediately afterwards the sheet cable also. The sea had previously got up surprisingly, and washed our decks fore and aft. As soon, therefore, as we found ourselves adrift, we had nothing left for it but to make sail on the ship, and choose the best berth for her we could. She was accordingly forced through the heavy rollers, which kept constantly breaking over us till six o'clock yesterday morning, when, through the merciful interposition of Divine Providence, we found ourselves well up on the beach at the head of the harbour, just above the watering-place, where there is usually so little water that our boats have never been able to get there. This will give you an idea of the extraordinary quantity of water which must have been forced in by the gale. We are now lying in a bed of sand, which the ship has made for herself, and are about saving the stores, &c. but I much doubt whether there will be any possibility of getting the ship off, considering the unusual depth of water which enabled her to reach her present position, and she has suffered terribly by a whole night of thumping. If we had known the harbour thoroughly, we could not have chosen a better berth; for, had the ship gone ashore any where but near this spot, she could not have held together for two hours. We had not a man hurt.”

**COURTS-MARTIAL.**—On the 2nd of December, a Court-Martial was assembled on board the *Rodney*, to try a seaman of the *Powerful*, for striking the master-at-arms. The charge was proved, and he was sentenced to death; but recommended to mercy. On the 4th, another Court-Martial was to sit, for the purpose of trying two seamen of the *Ganges*, who were found secreted on board an American merchant vessel, with the intention of deserting. They had been on leave from the *Ganges*, but broke it, and were eventually found as above stated.

**BLACK ROCK.**—The beacon in course of erection on the Black Rock, by the Trinity Board, has attained ten feet from its basement, and four feet from the higher part of the rock. It is expected it will be completed in about twelve months.—*Falmouth Express*.

**STEAM.**—The communication between Halifax and Boston, as far as it has been tried, has proved completely successful. The first vessel which has attempted, the *North America*, had performed the voyage

from one place to the other in thirty-six hours, and on a second trip in twenty-nine hours, with very heavy weather, and when she resumes in regular journies next spring, it is expected the returns will be such as completely to compensate the great outlay.

DUBLIN and LONDON.—Colonel Conygham, R.E., Admiral Sir J. Gordon, Sir F. Smith, R.E., Captain Beechey, R.N., and Professor Barlow, are appointed by government to report on what harbour is best fitted for the purpose of facilitating the communication between London and Dublin.

ACCIDENT.—Lisbon, Dec. 23 —One night last week, a very young midshipman, named Porcher, belonging to her Majesty's ship, *Donegal*, in this port, had his skull fractured by a top-gallant yard which fell from the mast and grazed his head. The poor little fellow is in a very dangerous state, though his recovery is not despaired of.—*Hants Telegraph*.

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*To the Editor of the Nautical Magazine.*

ROGERS'S ANCHORS.—Mr. Editor: having been a subscriber to your valuable Magazine, for some time past, I feel surprised that so little notice has been taken of Lieut. Rogers's invaluable patent anchors; and having had opportunities of giving them many fair trials, I can speak from experience as to their being the best now in use. I will advert to a few circumstances, where this anchor has shewn its superiority over all others. I have no doubt that the gale of 25th October, 1835, is still remembered by many shipowners and underwriters. The only vessel that rode it out in the Downs, without driving, was the "Secret;" and strange to say, after making minute enquiries, was the only vessel, that had Lieut. Rogers's patent anchors. I likewise rode out a gale on board the "*Zenobia*," in September, 1839, when many were driving: some lost, others broke, their anchors. The *Zenobia* drove riding by one of the common anchors. I was informed by the officers, that the same anchor had held the ship in Table Bay, blowing a heavy gale, when she had lost one, and broke another, this anchor would not ride the *Zenobia* in the Downs, but she was brought up with Rogers's patent anchor, and rode the gale out. I broke one of the common anchors in the "*Lord Cochrane*," in a heavy gale; this anchor had been in the ship some time, but we brought her up again with one of Rogers's patent anchors, and rode the gale out.

I have no hesitation in stating, that if all ships were furnished with Lieut. Rogers's patent anchors, there would be much less demand for anchors from Deal. In proof of this, of the number of anchors that have been swept and carried ashore from the Downs, not one of Rogers's has come under my notice.

By inserting these few lines in your valuable Journal, if you consider them worthy of notice, you will much oblige,

Your &c.

J. SMALL, Trinity Pilot.

London, Jan. 18, 1840.

ENLARGED SERIES,—NO. 2.—VOL. FOR 1840.

TABLE LIII.

*For reducing Hamburg Feet to English, and English Feet to Hamburg.*

1 Hamburg Foot = 0.939945 English Feet.

1 English Foot = 1.06389 Hamburg Feet.

Hamburg of English ft.	English feet, and Dec. parts.	Hamburg feet, and Dec. parts.	Hamburg of English ft.	English feet, and Dec. parts.	Hamburg feet, and Dec. parts.	Hamburg of English ft.	English feet, and Dec. parts.	Hamburg feet, and Dec. parts.
1	0.940	1.064	40	37.598	42.556	79	74.256	84.047
2	1.880	2.128	41	38.538	43.620	80	75.196	85.111
3	2.820	3.192	42	39.478	44.683	81	76.136	86.175
4	3.760	4.256	43	40.418	45.747	82	77.075	87.239
5	4.700	5.320	44	41.358	46.811	83	78.015	88.303
6	5.640	6.383	45	42.298	47.875	84	78.955	89.367
7	6.580	7.447	46	43.237	48.949	85	79.895	90.431
8	7.520	8.511	47	44.177	50.003	86	80.835	91.495
9	8.460	9.575	48	45.117	51.067	87	81.775	92.559
10	9.399	10.639	49	46.057	52.131	88	82.715	93.622
11	10.339	11.703	50	46.997	53.195	89	83.655	94.686
12	11.279	12.767	51	47.937	54.258	90	84.595	95.750
13	12.219	13.831	52	48.877	55.322	91	85.535	96.814
14	13.159	14.894	53	49.817	56.386	92	86.475	97.878
15	14.099	15.958	54	50.757	57.450	93	87.415	98.942
16	15.039	17.022	55	51.697	58.514	94	88.355	100.006
17	15.979	18.086	56	52.637	59.578	95	89.295	101.070
18	16.919	19.150	57	53.577	60.642	96	90.235	102.134
19	17.859	20.214	58	54.517	61.706	97	91.175	103.198
20	18.799	21.279	59	55.457	62.770	98	92.115	104.261
21	19.739	22.342	60	56.397	63.834	99	93.055	105.325
22	20.679	23.406	61	57.337	64.907	100	93.995	106.389
23	21.619	24.470	62	58.277	65.961	150	14.0992	159.584
24	22.559	25.533	63	59.217	67.025	200	18.7989	212.778
25	23.499	26.597	64	60.156	68.099	250	23.4986	265.973
26	24.439	27.661	65	61.096	69.153	300	28.1984	319.168
27	25.379	28.725	66	62.036	70.217	350	32.8991	372.362
28	26.318	29.789	67	62.976	71.281	400	37.5978	425.557
29	27.258	30.853	68	63.916	72.345	450	42.2975	478.751
30	28.198	31.917	69	64.856	73.409	500	46.9973	531.946
31	29.138	32.981	70	65.796	74.472	550	51.6970	585.140
32	30.078	34.045	71	66.736	75.536	600	56.3967	638.335
33	31.018	35.108	72	67.676	76.600	650	61.0964	691.530
34	31.958	36.172	73	68.616	77.664	700	65.7962	744.724
35	32.898	37.236	74	69.556	78.728	750	70.4959	797.919
36	33.838	38.300	75	70.496	79.792	800	75.1956	851.114
37	34.778	39.364	76	71.436	80.856	850	79.8953	904.308
38	35.718	40.428	77	72.376	81.920	900	84.5951	957.503
39	36.658	41.492	78	73.316	82.984	1000	93.9945	1063.892

## LIST OF THE ROYAL NAVY

*In Commission on the 1st of Jan. 1840, specifying their respective Ratings, and present Stations.*

FIRST RATES.		Guns	Stn	Guns	Stn
Britannia, Cp J. W. Montague	120	po	Cleopatra, Cp S. Lushington	26	na
Howe, Cp Lord C. E. Paget	120	sh	Vestal, Cp T. W. Carter	26	wi
Impregnable, Cp H. Eden	104	pl	Curacoa, Cp J. Jones	24	sa
San Josef, Cp J. N. Taylor	110	pl	Tribune, Cp C. Williams	24	m
Prin. Charlotte, Cp A. Fanshawe	104	m	Ceylon, Lt W. R. Mends	22	ml
Victory, Cp F. E. Loch	104	po	Niagara, Cp W. Sandom	20	c
SECOND RATES.					
Rodney, Cp Hyde Parker, CB.	92	m	Ætna, Lt J. Willson	6	w
Asia, Cp W. Fisher	84	m	Comus, Cr E. Nepean	18	w
Powerful, Cp C. Napier, CB	84	m	Daphne, Cp J. W. Dalling	18	m
Ganges, Cp B. Reynolds, CB.	84	m	Dido, Cp L. Davis, CB	18	m
Bellerophon, Cp C. J. Austen	80	m	Electra, Cr E. R. P. Mainwaring	18	ai
Ocean, Cp Sir J. Hill, Kt.	80	sh	Favorite, Cr W. Croker	18	ei
Vanguard, Cp Sir T. Fellowes, CB.	80	m	Fly, Cr G. G. Lock	18	sa
THIRD RATES.					
Donegal, Cp J. Drake	78	l	Hazard, Cr J. Wilkinson	18	m
Revenge, Cp Hon W. Waldegrave	76	l	Hyacinth, Cr W. Warren	18	ei
Excellent, Cp Sir T. Hastings		po	Larne, Cr P. J. Blake	18	ei
Belleisle, Cp J. T. Nicolas, CB	72	m	Modeste, Cr H. Eyres	18	af
Benbow, Cp H. Stewart	72	m	Orestes, Cr P. S. Hambly	18	sa
Blenheim, Cp Sir H. Senhouse, KCB	72	po	Pylades, Cr T. V. Anson	18	pl
Edinburgh, Cp W. Henderson, KH.	72	m	Racehorse, Cr E. A. J. Harris	18	na
Hastings, Cp J. Lawrence, CB.	72	m	Rose, Cr P. Christie	16	rj
Magnificent, Cr P. J. Douglas	72	j	Rover, Cr T. M. C. Symonds	18	na
Implacable, Cp E. Harvey	74	m	Satellite, Cr J. Robb	18	wi
Melville, Cp Hon R. S. Dundas	72	ch	Childers, Cr E. P. Halsted	16	ei
Minden, Cp A. R. Sharpe, CB	75	on pas- sage home	Columbine, Cr G. Elliot	16	af
Pembroke, Cp F. Moresby, CB	72	do	Harlequin, Cr Lord J. F. Russell	16	af
Poitiers, Cp J. Clavell	72	ca	Jaseur, Cr F. M. Boulton	16	m
Walesley, Cp T. Maitland	72	ei	Nimrod, Cr C. A. Barlow	20	pl
FOURTH RATES.					
President, Cp W. Broughton	50	sa	Lily, Cr C. Deare	16	af
Winchester, Cp J. Parker	50	na	Pelorus, Cr A. L. Kupar, (acting)	16	ei
FIFTH RATES.					
Dreadnought, Cp Lord H. J. S. Churchill	44	ei	Racer, Cr G. Byng	16	wi
Seringapatam, Cp J. Leith	42	wi	Ringdove, Cr Hon K. Stewart (act)	16	o
Stag, Com T. B. Sullivan, CB	46	sa	Sappho, Cr T. Fraser	16	wi
Astræa, Cp J. H. Plumridge	42	fa	Serpent, Cr H. R. Gore	16	wi
Blonde, Cp T. Bouchier	42	po	Snake, Cr J. P. Hay (act)	16	wi
Castor, Cp E. Collier	36	m	Sparrowhawk, Cr J. Sheppard	16	sa
Inconstant, Cp D. Pring	36	on pas- sage home	Trinculo, Cr H. E. Coffin	16	l
Pique, Cp E. Boxer	36	po	Wanderer, Cr Hon J. Denman	16	sh
SIXTH RATES.					
Alligator, Cp Sir J. Bremer, CB, KCB	26	ai	Wasp, Cr Hon D. W. A. Pelham	16	m
Andromache, Cp R. L. Baynes, CB	26	o	Wolverine, Cr W. Tucker	16	af
Calliope, Cp T. Herbert	26	sa	Zebra, Cr R. F. Stopford	16	m
Conway, Cp C. R. D. Bethune	26	ei	BRIGS.		
Crocodile, Cp A. Milne	26	ai	Acorn, Cr J. Adams	16	af
Herald, Cp J. Nias	26	ei	Algerine, Lt W. S. Thomas	10	i
North Star, Com Ld J. Hay	26		Britomart, Lt O. Stanley	10	au
Samarang, Cp J. Scott	26	sa	Cameleon, Lt G. M. Hunter	10	sa
Talbot, Cp J. Codrington	26	m	Clio, Cr S. G. Freemantle	16	sa
Tyne, Cp J. Townsend	26	m	Cruizer, Cr H. W. Giffard	16	ei
Voyage, Cp H. Smith (a)	26	ei	Curlew, Lt G. Rose	10	af
Actæon, Cp R. Russell	26	sa	Espoir, Lt J. T. Paulson	10	l
Carystort, Cp H. B. Martin	26	m	Fantome, Cr E. H. Butterfield	16	po
			Grecian, Cr W. Smyth	16	sa
			Nautilus, Lt G. Beaufoy	10	af
			Partridge, Lt W. Norris	10	sa
			Pilot, Cr G. Ramsay	16	na
			Rolla, Lt C. Hall	10	af
			Saracen, Lt H. W. Hill	10	af

	Guns	Stn		Guns	Stn
<b>Savage</b> , Lt Hon E. Plunkett, 10 part ser.			<b>Sulphur</b> , Cr. E. Belcher	8	sa
<b>Scorpion</b> , Lt C. Gayton	10	m	<b>Terror</b> , Cr F. R. M. Crozier	10	sp
<b>Waterwitch</b> , Lt H. J. Matson	10	af	<b>Thunder</b> , Cr E. Barnett	6	wi
<b>Weazle</b> , Lt. J. Simpson (e)	10	m	<b>STEAM VESSELS.</b>		
<b>Wizard</b> , Lt T. F. Birch	10	sa	<b>Acheron</b> , Lt A. Kennedy		m
<b>Arrow</b> , (ketch) Lt W. Robinson	10	sa	<b>African</b> , Cp F. W. Beechey	100	ci
<b>Sparrow</b> , (ketch) Lt J. Tyssen	10	sa	<b>Alecto</b> , Lt W. Hoseason		pl
<b>Termagant</b> , (brigan.) Lt H. Seagram	10	af	<b>Blazer</b> , Lt J. M. Waugh	160	m
<b>Speedy</b> , (cutter) Lt J. A. Wright	2	sh	<b>Boxer</b> , Cr. F. Bullock (Capt.)	Part	ser.
<b>Cockatrice</b> , (sch.) Lt J. Douglas	6	sa	<b>Comet</b> , Lt G. T. Gordon	80	ditto
<b>Hornet</b> , (brigan.) Lt R. B. Millar	6	wi	<b>Confiance</b> , Lt Stopford	100	m
<b>Spider</b> , (sch.) Lt J. O'Reilly (a)	6	sa	<b>Dee</b> , Cr J. Sheerer, RN	220	wi
<b>Viper</b> , (brigan.) Lt W. Winniett	6	af	<b>Flamer</b> , Lt W. Robson		w
<b>Pickle</b> , (sch.) Lt F. Holland	5	wi	<b>Gorgon</b> , Cr. W. Henderson	320	m
<b>Skipjack</b> , (sch.) Lt H. Knight	5	wi	<b>Hecla</b> , Lt J. B. Cragg		wi
<b>Raven</b> , (cutter) Lt D. R. Mapleton	4	sh	<b>Hermes</b> , Lt W. S. Blount	140	m
<b>Seaflower</b> (cutter) Lt N. Robilliard	4	po	<b>Hydra</b> , Cr A. W. Milward		m
<b>Bonetta</b> , Lt J. L. R. Stoll	3	af	<b>Kite</b> , Lt G. Sheill		wi
<b>Brisk</b> , Lt W. Armitage	3	af	<b>Lightning</b> , Lt R. N. Williams,	100	home
<b>Buzzard</b> , (brigan.) Lt C. Fitzgerald	3	af	<b>Megara</b> , Lt C. Goldsmith	140	m
<b>Charybdis</b> , Lt E. B. Tining	3	wi	<b>Meteor</b> , Lt R. D. Pritchard	100	Falmo
<b>Fair Rosamond</b> , (sch.) Lt W. B. Oliver	2	af	<b>Phoenix</b> , Cr. R. S. Robinson	220	m
<b>Forester</b> , (brigan.) Lt G. F. Bond	3	af	<b>Pluto</b> , Lt. J. Luon	100	wi
<b>Griffon</b> , (brigan.) Lt J. G. D'Urban	3	wi	<b>Prometheus</b> , Lt T. Spark		sh
<b>Lynx</b> , (brigan.) Lt. H. Broadhead	3	af	<b>Rhadamanthus</b> , Cr A. Wakefield	220	m
<b>SURVEYING VESSELS.</b>			<b>Salamander</b> , Cr S. C. Dacre	220	Passages
<b>Beacon</b> , Lt T. Graves	8	m	<b>Spitfire</b> , Lt E. Kennett		wi
<b>Beagle</b> , Cr J. C. Wickham	10	au	<b>Tartarus</b> , Lt G. W. Smith	160	wi
<b>Erebus</b> , Cp J. C. Ross	12	sp	<b>Volcano</b> , Lt J. West		m
<b>Fairy</b> , Cp W. Hewett (b)	10	w	<b>YACHTS.</b>		
<b>Iark</b> , Lt T. Smith	4	wi	<b>Royal George</b> , Cp Lord A. Fitz-		
<b>Maggie</b> , Lt T. S. Brock		m	clarene		po
<b>Mastiff</b> , Master Com. C. Thomas	6		<b>Royal Sovereign</b> , Cp S. Jackson, cb.		po
<b>Starling</b> , Lt H. Kellet	sa		<b>William &amp; Mary</b> , Cp P. Hornby, cb.		w

## ABBREVIATIONS IN THE ABOVE LIST.

Cp Capt.; Cr Commander; Com Commodore; Lt Lieut.; po Portsmouth; sh Sheerness; pl Plymouth; m Mediterranean; l Lisbon; j Jamaica; ch Cape of Good Hope; af Coast of Africa; ca Chatham; ei East Indies; sa South America; na North America; wi West Indies; fu Falmouth; au Australia; w Woolwich; sp South Pole; ci Coast of Ireland; c Canada; ml Malta; o Ordered home; pe Pembroke.

## PROMOTIONS AND APPOINTMENTS.

## PROMOTIONS.

**Captain**, J. B. Mc Hardy; **Commander**, G. Palmer; **Lieutenants**, Lord W. Compton, J. Maling, W. R. Brooman, O. J. Jones, J. V. Williams, P. H. Somerville, E. Heathcote, Sir G. Webster; **Master**, R. B. Graham; **Purser**, J. M. Hobbs. BENDOW, 74,—**Surgeon**, A. Heastie.

## APPOINTMENTS.

**BLLENHEIM**, 74,—**Commander**, J. Pritchard; **Lieutenants**, J. Pearce, T. Wilson; **Master**, J. R. Fittock; **Mates**, J. Code, J. M. Cook, W. Lilley, R. C. Kerven, W. H. Simmons. **Midshipman**, R. L. Place; **Volunteer**, W. D. Loch, BLONDE—**Midshipman**, J. O. Johnson; **N. Instr.**, R. Oram; **Second Master**, J. M. O'Brien; **Volunteer**, Hon. H. J. Cole. BRITANNIA.—**Master**, R. Yule; **Assistant Surgeons**, A. Lillie, R. F. Cutter; **Clerk**, add. J. M. Hobbs. COASTGUARD.—**Lieutenants**, W. Seacole, to Carrickfergus, G. Colman, to Drogheda; **Mates**, appointed Chief Officers of Coast Guard; R. J. Beviens, and J. C. Pritchard, John Grandy, from Harpy. R.C. to the Cambear station at Rye; John Allen, from Came e n, R.C.; and J. B. Madden, from Delight, R. C. to stations in Ireland; J. C.

Hire, from Lapwing, R.C., to the coast of Kent; and Robert Synge, from Ranger, R.C., to the coast of Durham; C. M. Sharp, from Blenheim. **Crescent**,—Lieutenant Commander, M. Donnellan *Secretary*. M. D. M. Jago; *Surgeon*, J. Brooks; *Clerk*, W. Weaver. **DONEGAL**, 74—*Mate*, S. F. Short. **EXCELLENT**, *Lieutenant*, C. B. Warren, *Mate*, J. Borlase. **EXPRESS**, *Packet*,—Lieutenant Commander, E. Herrwick. **FLAMER**, st. v.—*Assistant Surgeon*, P. Bremen; *First Engineer*, J. Carr. **HAZARD**, 12,—*Master*, F. B. Graham. **JAMAICA**, *Hospital*,—*Surgeon*, E. Helditch. **MELVILLE**, 72,—*Lieutenant*, Lord W. Compton; *Midshipman* J. Dagnen. **NIMROD**, 26,—*Lieutenant*, H. Gaitskill; *Master*, W. E. Hyne. **ORDINARY**, at Portsmouth,—*Lieutenant*, A. J. Græme. **PIQUE**, 36,—*Mate*, J. C. Wharton; *Midshipman*, G. Kingsley; *Volunteer*, J. R. Harward. **PRINCESS CHARLOTTE**, 104,—*Lieutenant*, J. Maling. **PYLADES**, 16,—*Commander*, C. Anson; *Lieutenant*, J. M. Louzean; *Purser* W. Carrigan; *Surgeon*, W. Cambell; *Assistant Surgeon*, J. D. Tweedale. **ROYAL SOVEREIGN**,—*Lieutenant*, G. C. Leary. **VICTORY**, 104,—*Lieutenant*, N. Græme; *Master*, G. H. Cole; *Assistant Surgeon*, M. Coory. **WELLESLEY**, 74,—*Lieutenants*, J. C. Campbell, Hon. J. Shute, P. C. Helpman, C. H. Douglas, G. C. Adams, J. V. Williams, R. Collinson.

The following Midshipmen passed their examination at the Naval College, since our last:—C. H. Symons, (Blenheim); G. C. Hodson, and W. C. Young, (Pembroke); Harry Smith and David Robertson, (Talavera.)

#### MOVEMENTS OF THE ROYAL NAVY IN COMMISSION AT HOME,

**Etna**, 6, Lieut.-Com. J. Wilson, 3d Jan. left Sheerness for Shields. **Blonde**, 42, Captain J. Bouchier, at Portsmouth, fitting, said for East Indies. **Britannia** 120, Capt. J. W. Montague. **PORTSMOUTH**.—**Columbia**, st. v. Capt. A. Thompson, 8th Jan., 40, arrived Downs from river, 10th Jan. arrived Portsmouth, sailed for West Indies. **Crescent**, 42, 3d. Jan. left Sheerness for Rio, via Portsmouth. **Cyclops**, st. v. Capt. H. T. Austin, at Sheerness, fitting to be ready 1st February. **Dolphin**, 3, Lieut.-com. E. Holland, 20th Dec. 39, passed Sheerness, on way to Chatham, to pay off, 29th paid off. **Fantome**, Com. Butterfield, 22d Dec., arrived in the Downs from Sheerness, 26th sailed for Portsmouth. **Flamer**, st. v., 10th Jan. left Portsmouth for West Indies. **Imogene**, 26, Captain H. W. Bruce, 22d November arrived at Plymouth, from Portsmouth, and Jamaica, 6th Dec., paid off. **Annrod**, 20, Commissioned at Plymouth, by Com. C. A. Barlow. **Pembroke**, 72, Captain F. Moreby, C.B., 18th Jan. Portsmouth, **Pique**, 36., Capt. E. Boxer, 27th Nov. arrived at Portsmouth from Sheerness, refitting. **Pylades** 18, Com. at Plymouth, 17th Dec., by Com. T. V. Anson. **Raven**, 4, Lieut.-com. D. R. B. Mapleton, 24th Nov. left Plymouth for Falmouth. **Talavera**, 72, Captain W. B. Mends, 31st Dec. paid off at Plymouth. **Wanderer**, Com. Hon. J. Denman, 7th Jan. at Portsmouth from Sheerness, 13th sailed for Cape. **AT PORTSMOUTH**.—**Britannia**, Excellent, **Pique**, **Victory**, **Royal George**, **Blenheim**, **Raven**, **Messenger**, **Pembroke**, **Fantome**, **Crescent**, **Andromache**. **AT PLYMOUTH**.—**Nimrod**, **Pylades**, **Impregnable**, **San Josef**, **Carron**. **AT SHEERNESS**.—**Cyclops**. **AT WOOLWICH**.—**William and Mary**, **Fairy**, **Mastiff**, **Lightning**, **Firebrand**.

#### ABROAD,

**Acorn**, 16, Com. J. Adams, gone to Mauritius from Cape. **Acteon**, 26, Capt. R. Russell, 23d September, at Buenos Ayres. **Alecto**, st. v., Lieut.-com. W. Hoseason, 20th Dec. left Plymouth for Mediterranean. **Algerine**, 10, Lieut.-com., J. H. Mason, 2nd Nov. arrived Bombay. **Alligator**, 26, Captain Sir J. J. G. Cremer, K.C.H., 1st August, at Sydney. **Apollo**, troop ship, Mr. A. Carley, 7th December, Gibraltar. **Asia**, 84, Captain W. Fisher, 4th Dec. at Vourla. **Belleisle**, 72, Capt. J. T. Nicholas K.C., 4th Dec. at Vourla. **Belle-sophon**, 80, Capt. C. J. Austen, 4th Dec. at Vourla. **Benbow**, 72, Captain H.

Stewart, 4th Dec. Voula, *Brisk*, 3, Lieut.-com. A. Kellett, 14th Nov. St. Helena. *Buzzard*, 3, Lieut.-com. C. Fitzgerald, spoken with 10th Dec., in 24 deg N., 35 deg. W., for Sierra Leone. *Camelcon*, 10, Lieut.-com. G. M. Hunter, 28th October, arrived at Bahia. *Castor*, 36, Captain E. Collier, 4th Dec., Voula. *Charybdis*, 3, Lieut.-com. E. B. Tinling, 6th Dec. at Port Royal from Carthage. *Childers*, 16, Com. E. P. Halstead, 9th October, left Simons Bay for Ceylon. *Cleopatra*, 26, Captain S. Lushington, 3d Dec. at Port Royal, from Bermuda. *Columbine*, 16, Com. G. Elliott, 5th Nov. left Simon's Bay for west coast of Africa. *Comus*, 18, Com. E. Nepean, 6th Dec. at Port Royal, from Tampico. *Conway*, 26, Capt. C. R. D. Bethune, 15th August at Madras. *Crocodile*, 26, Capt. A. Milne, 30th Nov. left Jamaica on a cruise. *Cruizer*, 16, Com. H. W. Giffard, 9th Sept., left Singapore for Penang. *Daphne*, 18, Com. W. Dalling, 16th Dec. left Voula for Athens. *Donegal*, 78, Captain J. Drake, 10th December at Lisbon. *Druid*, 44, Captain Right Hon. Lord John Churchill, 30th Oct. arrived at Simon's Bay, 6th Nov. sailed for New Zealand, with Capt. Hobson, governor of New Zealand. *Edinburgh*, 72, Captain W. Henderson, K.C., 4th Dec. at Voula. *Ercbus*, Capt. J. C. Ross, 31st Oct. left Madeira for Southward. *Espoir*, 10, Lieut.-com. J. T. Paulson, 8th Dec., at Cadiz. *Favorite*, 18, Com. W. Croker, 27th Oct., at Calcutta, from Madras. *Fly*, 18, Com. G. G. Lock, 1st October arrived at Callao, 3d sailed for California. *Ganges*, 84, Captain B. Reynolds, C.B., 4th Dec. at Voula. *Gorgon*, st. v., Capt. W. H. Henderson, 8th Dec., arrived at Smyrna, from Voula Bay. *Harlequin*, Com. Right Hon. Lord J. F. Russell, touched at Sierra Leone, and sailed previous to 10th October. *Hastings*, 72, Capt. J. Lawrence, C.B., 4th Dec. at Voula. *Herald*, 26, Capt. J. Nias, 24th Sept. left Singapore for China. *Hornet*, 6, Lieut.-com., R. B. Milne, 30th Nov. at Jamaica from Chagres. *Hyacinth*, 18, Com. W. Warren, 24th Sept. left Singapore for China. *Hydra*, st. v., 24th Dec., arrived at Malta, from Voula, in 59 hours. *Implacable*, 74, Captain E. Harvey, 4th Dec., at Voula. *Inconstant*, 36, Capt. D. Pring, 25th October, at Vera Cruz. *Jupiter*, tr. ship, Master Com. B. Fulton, 14th Oct., arrived at Columbo, from Trincomalee. *Kite*, st. v., Lieut.-com., G. Snell, 2d Nov., left Barbados for Bermuda. *Larne*, 18, Com. J. P. Blake, 4th Nov., Bombay. *Megera*, st. v., Lieut. com. H. E. Goldsmith, 3d Jan., at Marseilles from Malta. *Melville*, 72, Capt. R. J. Dundas, 30th October, Simon's Bay, *Minden*, 72, Capt. A. R. Sharpe, 14th Dec., left Voula for Tarragona, to return home with crew of *Tribune*. *Modeste*, 18, Com. H. Eyres, 30th October, Simons Bay. *Pembroke*, 72, 5th Dec., left Malta for England. *Pickle*, 5, Lieut.-com., F. Holland, 15th Dec., at Havana, from Jamaica. *Powerful*, 84, Capt. C. Napier, C.B., 4th Dec., Voula. *Princess Charlotte*, 104, Capt. A. Fanshawe, 4th Dec., Voula. *Racchorse*, 18, Com. Hon. E. A. Harris, 21st Nov., left Jamaica for Havana. *Racer*, 16, Com. G. Byng, 20th Nov., left Barbados for Bermuda. *Revenge*, 74, Capt. Hon. W. Waldegrave, 24th Dec., Tagus. *Ringdove*, 16, Com. Hon. K. Stewart, 3d Dec., at Port Royal, from Bermuda. *Rodney*, 92, Capt. H. Parker, C.B., 4th Dec., at Voula. *Roter*, 18, Com. T. W. C. Symonds, 3d Dec., left Port Royal, for Carthage. *Sappho*, 16, Com. T. Frazer, 25th Oct., at Vera Cruz. *Satellite*, 18, Com. J. Robb, 3d Nov., left Jamaica, for Bermuda. *Scorpion*, Lieut.-Com. C. Gayton, 14th Dec., left Malta, for Gibraltar. *Seringapatam*, 42, Capt. J. Leith, 6th Nov., left Jamaica, for Grenada. *Serpent*, 16, Com. Hon. R. Gore, 2nd Dec., at Port Royal, from Bermuda. *Skipjack*, 5, Lieut.-com. H. Wright, 3d Nov., left Jamaica on a cruise. *Sparrouhawk*, 16, Commander J. Shepherd, *Trinoulo*, 16, Commander, H. E. Coffin, 28th Dec., left Lisbon on a cruise, 2d Jan. arrived at Cadiz. *Tyne*, 26, Capt. J. Townshend, 4th Dec., at Voula. *Vanguard*, 80, Captain Sir T. Fellowes, C.B., 4th Dec., at Voula. *Vestal*, 26, Capt. T. W. Carter, 31st Oct. left Barbados for Jamaica. *Volcege*, 26, Capt. H. Smith, 29th Aug., arrived at Macao, from India. *Volcano*, st. v., Lieut.-Com. J. West, 14th Nov., arrived at Malta, from Gibraltar. *Wasp*, 16, Com., Hon. D. W. A. Pelham, 31st Dec., arrived Gibraltar, from Tarragona. *Wellesley*, 72, Capt., T. Maitland, 4th Nov., arrived at Bombay. *Zebra*, 16, Com. R. F. Stopford, 16th Dec., left Voula, for Malta.

**Births.**

December 19th, at Margate, the lady of Lieut. Henry Harvey, R.N. of H.M.S. Winchester, of a daughter.

At Norwood, December 31st, the lady of Capt. H. V. Huntley, R.N. of a daughter.

Lately, Lady Selina Dent, wife of Com. Dent, R.N. of a still-born child.

At Red Cross, Isle of Wight, Jan. 3d, the lady of Lieut. G. M. Donlevy, R.N. of a son, who lived only a few hours.

**Marriages.**

January 8th, at St James's Church, Dover, Lieut. Frederick Coppin, R.N. to Laura Eliza, second daughter of P. Giorgi, Esq. of Smith-street, Chelsea.

December 28th, at Islington, Lieut. J. Lash, R.N. to Elizabeth Sarah, daughter of the late J. Harris, of Pentonville.

January 25th, at St. George's, Hanover Square, Mr. T. P. Gates, of Pimlico, to Laura Charlotte, second daughter of the late Mr. Powell of the Admiralty.

January 3d, at St. Mary's, Dover, Com. W. Igglesden, of the Indian Navy, to Mrs. R. Lovelock, of Hammond-Place, Guildford-lawn, Dover, youngest daughter of the late Capt. J. Shrewsbury.

January 16th, at St. George's, Camberwell, Richard George, eldest son of R. Hedgeman, Esq. of Greenwich, to Ann Marshall, eldest daughter of Commander T. Sherwin, R.N.

**Deaths.**

At Southampton, 1st January, Lieut. J. Curtis, R.N. aged 58.

On the 24th November, at Barbados, Mr. Hall, Master of H.M. ship Vestal.

On the 10th of December, of remittent fever, in the Gulf of Symrna, E. F. North, H.M.S. Princess Charlotte, aged 22, son of the late F. F. North, Esq. of Hastings and Rougham.

At Plymouth, on the 10th ult. Com. J. Yule, R.N. (1805,) in his 65th year, an out-pensioner of Greenwich Hospital.

At the Asylum, Haslar hospital, on the 13th ult. Retired-commander, S. M. Holliday, E.N.

On 15th January, Margaret, daughter of the late Lieut. Bird, R.N.

At the Cape of Good Hope, on the 9th of Sept. Adelaide, youngest daughter of Rear-admiral the Hon. G. Elliot, Naval Commander-in-chief, at that station.

At Lossit-house, Cambeltown, Argyleshire, Mary, the widow of Capt. J. Nash, R.N.

At South Efford-house, Devon, on the 19th December, Mrs. Forrest, wife of Capt. T. Forrest, C.B., R.N.

On the 8th ult. at her house in Cumberland-street, Charlotte, relict of the late Admiral John Leigh Douglass, in her 80th year.

Lately on the coast of Africa, on board of H.M. brig Curlew, Mr. M'Carthy, master of that vessel.

On the 17th September, of yellow fever on board the Satellite, off the island of Domingo, Chetwynd P. Wood, Esq. midshipman, R.N.

At Paradise-row, Stoke, C. Sedgwick, esq. R.N. purser, aged 82.

On Dec. 23d, at Haslar hospital, Mr. W. Radmore, R.N. 1839, aged 60 years.

In Glanville-street, Plymouth, Mrs. J. Nobbs, wife of Mr. J. W. Nobbs, purser, R.N.

On Jan. 9th, in Trafalgar-street, Ann, daughter of Mr. D. Meredith, R.N.

At Haslar hospital, Capt. W. Shepherd at Chatham, 1st ult. Mr. R. Webb, late clerk of HMS. Belleisle.

Lately Lady Warren, widow of Admiral the Right Hon. Sir B. Warren, G.C.B.

On Dec. 27th at Tottenham, Elizabeth wife of Capt. A. Timbrell, of the Trinity House.

At Plymouth, W. B. Page, Esq. late purser of H.M.S. Impregnable, aged 67.

At Plymouth, on Jan. 3d, Dr. Alex. C. Hutchinson, F.R.S.L. & E.

On September 27th, at Calcutta, aged 48, Captain W. Allen, formerly of H.I.C. ship Vansittart, and late Inspector of customs on the Hooghly.

At Fife-Keith, Scotland, in her 79th year, Margaret, widow of S. Tuckey, Esq. surgeon, R.N.

On the 1st of January, at Barrow-place, Regent's-park, Mary Christian, wife of Lieut. H. Woodruff, R.N.

On the 1st of January, Capt. R. Dickinson, C.B., R.N.

On the 31st of December, Frederick Drewe, youngest son of Lieut. Drewe, Commander, of the Harpy.

Lately, at an advanced age, Mrs. Smyth, Widow of the late S. Smyth, Esq. master, R.N.

On the 20th September, on his passage between Calcutta and Madras, Captain J. Walton, of the Larkins East Indian.

On the 7th January, at Stonehouse, J. Jackson, Esq., master-attendant of the Dock-yard.

On board H.M. brig Opposum, on the 30th October, on his passage to England, Mr. W. J. Scott, second-master of H.M. ketch Sparrow, Falkland Islands.

Nov. 11th, M. W. Maddock, clerk H.M. ship Serpent, youngest son of the late Mr. Maddock, Dock-yard, Plymouth.

Jan. 12th, Mrs. C. Bedford, sister to Vice-Admiral Sir Edward Blace, K.C.B.



METEOROLOGICAL REGISTER.

From the 21st of December, 1839, to the 20th of January, 1840.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

Month	Day	Week.	BAROMETR.		FAHR. THER.				WIND.				WEATHER.		
			J. A. M.	3 P. M.	In the Shade.				Quarter.		Stren.		A. M.	P. M.	
					9 AM.	3 PM.	Min.	Max.	AM.	PM.	AM.	PM.			
			In Dec.	In Dec.	o	o	o	o							
21	S.		29-54	29-54	44	48	43	50	SW	SW	5	2	b	omr (4)	
22	Su.		29-54	29-48	48	52	47	53	SW	S	2	6	bcm (1)	od (3)	
23	M.		29-57	29-51	47	52	46	57	SW	S	5	3	qbc	qor 3)(4)	
24	Tu.		29-25	29-29	53	51	52	55	SW	SW	6	5	qo (1)(2)	qbc	
25	W.		29-50	29-52	43	45	42	46	SW	W	4	3	bc	b	
26	Th.		29-71	29-51	35	38	32	49	SE	E	2	2	bc	or (3) (4)	
27	F.		29-35	29-47	48	43	43	53	SW	NW	3	3	or (1)(2)	o	
28	S.		29-72	29-78	33	36	30	37	SW	W	2	1	ber (1)	b	
29	Su.		30-27	30-33	29	35	27	36	SW	SW	2	1	b	b	
30	M.		30-36	30-30	27	36	25	39	SE	SE	2	2	bcm	om	
31	Tu.		29-95	29-83	45	48	40	50	SW	SW	3	4	o	bc	
1	W.		29-76	29-73	50	52	48	53	SW	SW	3	4	bc	bc	
2	Th.		29-74	29-80	49	48	45	50	SW	SW	4	4	b	bcp 3)	
3	F.		29-96	29-98	43	45	40	46	W	W	2	2	bcm	od 4)	
4	S.		29-95	29-87	40	39	39	41	E	E	3	3	or (1)(2)	or (3) (4)	
5	Su.		29-86	29-86	34	37	32	38	NE	N	3	2	bc	bc	
6	M.		29-96	30-08	31	33	27	34	N	NE	2	3	bc	beps 4)	
7	Tu.		30-25	30-19	25	29	22	30	E	NE	1	1	b	b	
8	W.		30-13	30-10	19	30	16	31	S	SW	1	2	b	bm	
9	Th.		30-20	30-28	31	34	27	35	W	E	2	1	o	om	
10	F.		30-45	30-47	31	33	29	34	NE	NE	2	2	bc	b	
11	S.		30-50	30-46	21	33	19	34	SW	S	2	3	b	b	
12	Su.		30-30	30-24	28	39	23	39	S	SW	3	3	bcm	bcm	
13	M.		30-14	30-04	32	41	27	42	SW	SE	2	3	b	b	
14	Tu.		29-94	29-94	39	41	30	42	S	S	3	3	or (2)	o	
15	W.		30-13	30-05	42	44	40	46	SW	SW	4	5	od 2)	qod 3)	
16	Th.		29-72	29-74	39	43	38	44	SW	W	4	4	bcp (1)	bcp 3)	
17	F.		29-49	29-59	38	42	36	43	NE	NE	2	2	ofd (2)	bc	
18	S.		29-95	29-75	33	43	28	49	S	SW	4	6	bc	qod 4)	
19	Su.		29-45	29-31	50	53	47	54	SW	SW	7	8	qr (1) (2)	qbcp 3)	
20	M.		29-61	29-71	41	43	39	47	SW	W	6	4	qbcp 1)	or 4)	

DECEMBER:—mean height of the barometer=29-700 inches : mean temperature=39-07 degrees : Depth of Rain fallen=2-45 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The continuation of Mr. Harris's paper in reply to Mr. Sturgeon is unavoidably deferred to our next.

Capt. Milnes useful papers received. Also the circular of Messrs. Gardner and Urquhart, and the report from Southampton.

The chart alluded to in p. 103 is on the eve of publication by the Admiralty.

Thanks for the letter from Brighton; and Mr. Corney's useful pamphlet.

The discussion on Longitudes by Lieut. Raper, R.N. will be continued in an early number.

We request the attention of our Correspondents to the Post-Office circular in our Naval Chronicle, and that they will pre-pay their communications.

PRIZE MONEY. H.M.S. Algerine—James Hutton, John Venables, Peter Tereneth, George Smith, William Bailey, William Gorman, James Robinson, Matthew Wyse, James Walker, William Young, and William Hamilton, who served in the above ship in 1832 at Cape Frio, are requested to call at Mr. Muspratt's Office, 34, Abchurch Lane, London.

## ORIGINAL PAPERS.

MARCH, 1840.

### ANTIPODES ISLAND.—By *Lieut. O. H. Wilson, R.N.*

WE present our readers with the annexed sketch of Antipodes Island in latitude  $49^{\circ} 32' S.$ , from a drawing by Lieut. Wilson, R.N., who makes the following remarks on its longitude.



*Antipodes Island W.N.W. 8 or 10 leagues.*

“I would wish to draw your attention to the following, as a guide to future navigators; viz. on two of my voyages from New South Wales, I came viâ Cape Horn, and in both instances (two pretty smart runs from Sydney) made the small, but high island of Antipodes, in lat.  $178^{\circ} 42' E.$ , being twenty minutes of longitude further west, than it is said to be in.\* I have conversed with some shipmasters, who had also made it, and they were of the same opinion.

I may at the same time remark, on referring to my journals, that running on a parallel between  $49^{\circ} 50' S.$ , and  $53^{\circ} 0' S.$ ; from the longitudes of  $172^{\circ} 0' E.$  to  $162^{\circ} 0' W.$ ; what we in Scotland call tangles, or trumpet weed, was observed daily floating past.

O. H. WILSON,  
*Lieut. R.N.*

### AUSTRALIAN NAVIGATION—BASS STRAITS;

*Bell and Reid Rocks—Harbingers—Pyramid—Tides and Weather; from the remarks of Commander Wickham, H.M.S. Beagle.*

In the sailing directions for Bass Strait, the entrance between Cape Otway, and King Island is very properly recommended, as it is un-

\* We perceive that Arrowsmith lays it down in  $179$  deg.  $30$  min., and Kruzenstern follows him.

questionably the best; the tides there are not so strong, and it is clear of danger. The soundings are also of some service, for when in the entrance, with more than fifty-five fathoms, a ship must be on King Island side. This depth increases to sixty fathoms, within a few miles of the Harbingers, on a bottom of fine brown sand with broken shells; it will therefore be more prudent to keep in a depth under fifty fathoms. A ship will then be near the middle of the entrance. From this position, to Cape Otway, the depth gradually decreases to thirty fathoms: a few miles from it, on the same kind of bottom, near the Harbinger Rocks, the sand is coarser, with pieces of dead coral, and some patches of rocks. The tide sweeps round the latter to the south, at full moon, nearly two knots an hour, commencing to do so on the full and change days, at 9h. 30m. A.M. High water, by the shore, at 1h. 0m.

Soundings are of no service on approaching the Harbingers; fortunately they are detached rocks, and may be passed on either side within half a mile.

Franklin Road is a safe anchorage, with easterly winds; and, for a single vessel, may be made so with all winds, by choosing a clear sandy spot for her anchors, close under the most northerly of the New Year Islets. The channel between the islands is free from danger; but cannot be recommended, as there are some scattered rocks in the inner entrance. The soundings are too irregular near the west side of King Island, to guide a ship on approaching it, which by no means should be done, as it is a low, rocky, ugly looking coast. Safe anchorage may be found with easterly winds, in a bay near its south, and named by us South West Bay: the *Beagle* anchored three different times in it. The passage into the Strait, south of King Island, would be better made by passing close to the southward of the Black Pyramid, to avoid the dangers seen by Capt. Drinkwater Bethune of the *Bell*, bearing N. 71° W., eleven miles, and N. 83° W. fifteen miles from the Pyramid. The position of these rocks being so nearly alike in latitude, would lead one to suppose they were the same, had not the bearing of Reid rocks been taken whilst near each. Lieut Lamb, R.N. prefers the passage north of Reid rocks, probably from not seeing the dangerous termination of King island, which is a low rocky point, projecting out nearly one mile and a half; and having a favourable tide, with the tide setting out of the strait, (which it does to the S.S.W. nearly three knots an hour between Reid rocks and King island,) and with a northerly wind, this passage should in no way be attempted. Capt. P. P. King, R.N., on his way to Sydney in the *Brothers*, was nearly lost on Reid rocks, using the passage north of them under the circumstances just mentioned.

The soundings between King island and the Pyramid are regular

from 32 to 28 fathoms, light fine brown sand with broken shells, and bits of dead coral: between the latter and Reid rocks is a flat of 35 and 37 fathoms, within three miles of the Pyramid on the N.E. and S.W. sides, the Beagle had less than 30 fathoms, bottom rocky. This noble mass of rock is 160 feet high with a black steep cliffy side to the west, and a sloping one to the east. Its position and truly bold appearance, must ever make this Pyramid an admirable spot to run for. Between it and Van Diemen Land, particularly near the latter, the tides run nearly three and a half knots, which cause when opposed to the S.W. wind and swell, a deep topping sea. Ships entering the strait on either side of King island, have generally done so without probably being aware of the strong tides that set in and out; great attention must be paid to them in using the passage south of King island. The observations made in the Beagle between Three Hummock and Barren islands make the time of high-water, full and change, 12h. 30m., but the stream changed to the eastward at 9h. 0m, and again to the westward at 5h. 0m. Again a single observation at New Year islet, Frankland road, gave 9h. 29m. the time of the change of the stream, full and change days. While at anchor near the north end of King island, the observation gave 9h. 38m. change of stream, full and change, high-water by the shore about one o'clock. There is a strange difference in the tides at Sea Elephant Bay, the time of high-water being three hours and a half earlier than at Three Hummock island; direction of the stream north and south, the former begins two hours after high-water, in all cases the rise is from five to seven feet.

Besides the anchorages on the west side of King island, there are also two on the east, the Bay of Seals near the south end, and Sea Elephant bay about the middle of the island. Sea Elephant rock or islet lying off the North point, points out the latter, and two small islets called the Seal rocks situated near the centre of the mouth shews the former, which is at all times, a wild roadstead, and *unsafe* with easterly winds, this is also the case in Sea Elephant bay, excepting for a small vessel. Sea Elephant rock with the reef west of it, affording sufficient shelter provided judgment is used in taking up a berth.

On the south side of the strait there are several good anchorages:— the first and best of them is immediately off the Sandy bay, on the S.W. side of Three Hummock island; the tide (which runs from 1 to 2.5 knots setting across the strong winds, prevent any sea getting up, and it is convenient for wooding and watering. Owing to the sudden shifts of wind anchorages should always be chosen with caution, for none are safe that are at all exposed from N.N.E. round by the west to E.N.E.

The Beagle found the weather so continually boisterous in Bass

strait last summer, that no fair statement of what it generally is can be given. Yet the barometer faithfully indicated all changes, and may truly be called the "sailor's best friend."

Expect bad weather when the barometer is 30·00, and be certain of having it when below 29·70.

Gales generally begin at north, sometimes N.N.E. blowing hardest between W.N.W. and W.S.W., which point it hangs between frequently for days: when to the southward of S.W. it moderates; and if with steady rising glass for a few days, sometimes the wind backs round to the northward, and moderates with also a rise of the glass, a fall soon follows, and the gale has only abated for a few hours.\*

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*To the Editor of the Nautical Magazine.*

SIR,—I beg to forward you the following extracts from a late Australian paper, as you may perhaps consider them worthy a place in your valuable pages.

I am, Sir, &c.

WM. DOUTTY.

*London, Feb. 5th, 1840.*

**PORT PHILIP.**

On entering the heads of Port Philip, keep as near mid-channel as possible, and on the starboard hand there is a red buoy, which buoy is on the southern end, and makes a leading mark for both channels, on a shoal called the Pope's Eye, in two and a half fathoms at low water.

Keeping Point Lonsdale open a sails breadth of Shortlands Bluff, will bring you up clear of the spit off Swan Point, where a small half nun black buoy, is laid in two fathoms at low water.

A white buoy is laid on the western fork of the Great Sand, or as some call it, the West Sand, in quarter less three fathoms; which must be left on the starboard hand.

A black buoy, is laid on the spit running off from the indented head, abreast of the Red cliffs, in two fathoms and a quarter, at low water; and is commonly known as the buoy of the ridge, which forms the entrance of the western channel from Melbourne, which must be left on the larboard hand.

These buoys are laid down well in, to prevent them shifting, and no vessel drawing more than nine feet, ought to approach them nearer than two cables length.

JOHN MANSEL SCOTT,

*Acting Harbour Master.*

*July 1st, 1839.*

\* The reader will find some further remarks on this navigation in our volume for 1834, and subsequently, and also some excellent remarks on the weather in our volume for 1835, to which we have before alluded.—ED. N.M.

TAHITI.

On the 24th April, the French frigate L'Artemise, Capt. Laplace, bound to this port, struck on a sunken rock, twelve miles E.N.E. from Point Venus, on this island, and three miles from the main land: she knocked away part of her false keel, part of her main keel, stern post, rudder, and part of larboard streak, and was towed into port by an American whaler's boats, leaking very bad. She is now hove down, and her repairing will be completed in about a month from this, at great expense.—25th May, 1839.

HOKIANGA RIVER.—NEW ZEALAND.

This is to give notice to all the captains of ships, or vessels, bound to the river Hokianga, that there is a flagstaff erected on the South Head, under the direction of Mr. John Martin, the pilot, with signal flags, to signalize to any ship, or vessel, appearing off the bar, and the under-mentioned signals are to be attended to. Mr. Martin will be in attendance with his boat also, at the entrance of the heads.

FLAGS.

MEANING.

- Blue Peter*..... Keep to sea, the bar not fit to take.
- Red flag*..... Take the bar, there is no danger.
- Blue flag with white cross* This flag denotes the ebb tide, then the bar not fit to take.
- White flag* ..... This flag when hoisted will be at the first quarter flood.

It is necessary when these flags are shewn, they should be answered from the ship, (if understood,) by a pendant or flag, where best seen. The flagstaff works on a pivot, and when a vessel is too far to the southward for entering, the flagstaff will droop to the northward; if too far to the northward, it will droop to the southward; and she should be particularly guided by the drooping of the flagstaff, for whatever way the flagstaff droops, the ship must keep in that direction, and by no means take the bar, until the flagstaff bears E.  $\frac{1}{4}$  N. per compass.

Time of high-water, full and change, at the bar, half-past nine, A.M. *Cornwall Chronicle, Van Diemen Land, Oct. 5th, 1839.*

NEW ZEALAND.\*

SIR,—I have the pleasure of sending for your useful Magazine the accompanying plans of some important harbours in New Zealand, with

\* The extent of New Zealand has been variously estimated. The distance between the North and South Capes is about 900 miles; the greatest breadth of the Northern Island, which is the wider of the two, is about 300 miles; diminishing to

observations I made on them during my sojourn in that distant country ; and I have also added to them some remarks characteristic of the natives, all of which may be of service to persons visiting that part of the world,

I am, Sir, &c.,

ORLANDO H. WILSON,

*To the Editor of the Nautical Magazine.*

*Lieut. R.N.*

GOULBURN HARBOUR, in Ruakua Island, contains a large block of that "Green Stone" so highly prized by the Aborigines being that with which the maces or stone-clubs are made, and those nondescript charms which they wear round their necks, all of which are handed down as heir-looms in families, and are more valuable than money amongst them. Schugeanga, or Hokianga, in which I loaded a cargo of Cowdie spars, flax, and potatoes, is a magnificent and easily navigable river.\* The Bar at Spring will admit vessels of 700 to 800 tons, if a proper attention be paid to the state of weather, before edging down towards it. Should there be much sea on, then keep a station off the three Kings, and dodge about them until the weather permits running down. The run is a short one from thence, and by strictly paying attention to the latitude, this will guide them to the harbour's mouth, which is remarkable for its bluff point to the south and the Sandy Bights to the northward. I should be inclined to suppose, that this bar may occasionally alter. The vessel I then commanded, the "Columbia," was about 300 tons. I beat her up the river backing and filling as occasion required, (the tides answering well for that purpose,) and got about 45 miles up, where I loaded. Two weeks before I left, a ship of 600 tons, the "Roslin Castle," came in to load spars, and safely moored in an elbow of the river, at the station of an excellent fellow, a Chief, named "Moaterra," who would render all assistance, he being well known as a friendly person, and partial to us all: this was about 5 or 6 miles above the entrance. Three joiners who formerly belonged to Captain Herds, partly lived under his pro-

200 and 100, and to greatly less towards the northern extremity, where at one point, distant about 150 miles from the North Cape, there is an isthmus of not more than three miles across. By the latest, and it is believed the most accurate account, the area of the Northern Island, is computed at 40,000 English square miles, while that of the Southern Island, of which Stewart Island may be considered an appendage, is considerably more than one-third larger. The extent of the two islands, it is thought, must be at least 95,000 English square miles, or above 60 millions of square acres. The voyage from Britain to New Zealand, although the distance is greater than to Sydney, occupies about the same length of time, in consequence of the prevalent state of the winds; while, in returning to Britain, the voyage from New Zealand is, of course, shorter than the voyage from Sydney by the distance between the two places, or about 1,200 miles.

\* See Directions for the Bar, p. 668 of our last volume.

tection, and carried on a good trade in sawing up plank, and making oars for the Sydney market.

The Hokianga river is in some places two or three miles wide, and not only is it in itself a magnificent stream, but its tributaries reach a long distance inland, some of them being navigable for vessels of 100 tons. One of these tributaries, the "Manga Muka," (the chief bearing the same name,) is broader than the Thames. Here are extensive forests of the Cowdie trees, and where my cargo came from, powder and muskets being at that time the articles of barter: these the natives are glad of for the purpose of going to war with each other. Lead, fish-hooks, tobacco, and pipes, will purchase labour, fish, or articles of small value. They are getting fond of the use of tobacco, but spirits they care little about. At the time of my visit recently, a musket would purchase from 300 to 500lbs. of flax, or from 5 to 9 pigs, or from 6 to 10 spars. The natives are very sagacious in trading. In dealing for a musket they will borrow a knife to take off the lock, examine its parts minutely, and make the person selling, fire it off, they in like manner demanding a charge of powder to do so in turn. According to the report which it makes, the chief's friends would set up a loud shout in ecstasy. There must be a considerable number of fire arms in these islands, particularly the North Island.

The natives of this part of New Zealand are very particular in their "Taboo," and over their burial grounds; when one dies, the huts, including the fire-arms and their clothing, "Kytuckie" (mats,) "Kakahows," worn by the deceased; in short, everything is allowed to go to waste, and the hut never entered. The canoe which carries a corpse to any part of the river, is allowed to rot on the beach; the widow, if she has had any children, is allowed to live, but her hands are tabooed for life: she never feeds herself, but is fed by her relatives, and a person passing will sometimes put a bit of food into her mouth. The hands of those who handle the body of the deceased, are in "taboo" for a month or two. The bodies of celebrated chiefs after death, are placed in something like a sentry-box, and being jammed around with flax, are made to stand upright above the ground with a railing round them. When considered sufficiently decomposed the relatives come and strip the flesh from the bones, which they remove as privately as possible, and deposit them in some concealed place, that their former enemies may not discover them.

One day I went up the river, a distance of 9 or 10 miles above my vessel, accompanied by our principal chief, "Pationa," to visit his farm and establishment: we also took several native youths with us, and canoe paddles in the stern boat, as we had to turn up a narrow creek some miles: anticipating a feed of potatoes from the hospitality of the



chief, I took care to provide a stock of salt, an article they never use. After going round his farm, and being introduced to his wife and friends, the pot of potatoes having been cooked, we were seated round the fire partaking of them, when suddenly he stripped himself naked and crawled into the hut of his deceased son. In a few moments he returned bringing out a fowling-piece which had belonged to him, but which was quite useless from rust—however, he wanted me to give him one of my muskets in exchange, but this I declined, rather assuring him I would give him one as a present. I observed, on retaking his place at the potatoe-pot, one of his "cookies," or slaves, fed him, his hands being in "taboo" by touching the goods of his deceased son, and this I understood would continue for a week or two. He had wisely saved his clothes from taboo by putting them off. Had one of the cookies performed the feat of his chief, the chances were, that he would have been killed by a blow from his "maree," by way of appeasing the "Evil One."

This supposed necessity of appeasing the Evil Spirit, is fatal to a widow, should she have no children, if she does not think proper for affection-sake to do it herself, as the following instance will show. On my arrival at the station at which I loaded, a Mr. Brown, from Sydney, whose company supplied me, and possessed the land and village there, took me round to see the place, but, first premised by saying, he did not know in what manner an old chief in his neighbourhood would receive him, not having spoken to him for some weeks. This was occasioned, it appears, by Mr. Brown having entered his hut by force, with a party of his sawyers, and taken therefrom a fowling-piece which he once sold him, in consequence of the chief having murdered his daughter-in-law, because the poor woman would not kill herself on the decease of her husband. But this Mr. Brown did under a plea, that such an act was revolting to his nation, and that this violation was committed on his property. The old fellow and his wife, however, received us very courteously, the latter urging Mr. Brown, (much to our amusement,) to influence the "Captain" to a matrimonial alliance with one of her daughters. Their immorality is great; indeed, I don't think they know what morality is, excepting in the married state. When I arrived the vessel or "Kypookie," became the scene of attraction, and in a few days was like a fair at the village, men and women flocked from all parts of the river to the theatre of attraction, and numbers of the ladies. I had been strongly urged by the matron, to allow the young ladies to come on board according to custom, but this I stoutly refused; however, on the fourth day, at a wooden wharf where I landed, I was surrounded by about forty women, young and old, singing, and clapping their hands after me. Mr. Brown on seeing

from his house on the hill, came down to meet me, laughing, and was much amused. I asked him what all this meant, he told me that they had made a song, "the cruel captain who would not let the ladies on board," he understanding their language had overheard the gossip of the village, together with their disappointment, and he urged that I should allow them, indeed intimated, he could not be responsible for the consequences if I insisted on preventing it, as it had always been customary of two evils choosing the least, I gave my assent. The women eagerly anticipating by our conversation, when the result was made known, the young girls flocked to the beach and swam on board.

I found that they behaved very orderly, getting supplies of potatoes from their friends to help the mess, and continued on board whilst we remained. By the time we took our departure, they had according to custom in weeping and mourning, at parting with friends, cut and scratched their faces with shells, which together with daubs of red and black ochre, so much disfigured them, that it was difficult to recognize them, but for a wreath of bay leaves or something similar, which they had tied round their heads.

A marriage took place whilst we were loading. The young man appeared to be desperately in love with his bride; but, alas!

"The course of true love never yet ran smooth."

And she did not shew an inclination to return love for love, and was sulken because she had been forced into the affair; and it was supposed would have preferred another young native instead of the bridegroom. But the fact was, she was disappointed at not getting on board the *Kypokie*, with the other favoured ladies. The young man did all he could to win her, and expressed himself as follows, "That to indulge her he would not object to allow her to go on board the English vessel; but would not suffer her to go with a 'Tangatamauree,' or New Zealander." They all left before evening, in their canoes, for their different homes, but on the following morning the canoes were coming up with the tides to the scene of attraction. I observed a great deal of laughing on our fore-castle among the young ladies, who were waving to me to join them. On reaching the fore-castle I found that the subject of their joke was, the poor bridegroom, who, with his canoe and marriage party were approaching us, but the bride had jumped overboard, and was making for the vessel. She caught hold of the gunwale of my long-boat, (then lying off at the boom alongside,) the tide being strong, and blowing fresh; and as her husband's canoe approached, she shifted round the stern, and got between it and the vessel's side. Her husband beckoning to me, and looking piteously at her all the time. This was too bad. I went down the side, with somewhat of an authoritative face,

and ordered her to go with her husband, which she did, most reluctantly; and when the party landed with their provisions to spend the day, she would not leave the canoe, but sat in the stern sheets, and sulked all the time.

Another characteristic circumstance took place at this village whilst we were there. This was a law plea, about a cockle bank, or right to it, which an old man, living about two miles above us, had used in his right for many years, as belonging to him, whilst the real proprietors were minors. This case was decided in a very ceremonial and judicial manner, for it would seem that all matters of importance were to be decided at the fair, where the vessel lay, and in the following manner: all the friends and next of kin of the old man were arranged face to face opposite those of the other party, squatted on their haunches, as is their custom in sitting. The plea was opened by an old priest, a person who considered himself of some note, and was really so, from the deference which was shown to him. But he was a lawyer, as well as a priest. He came to the appointed place in a very splendidly carved canoe, rowed by young chiefs. The plea occupied about three hours; and he commenced the business first by walking backward and forward with a hurried step, discussing the matter between the line of parties, carrying a cooper's iron cleaver in his hand instead of "maree," and flourishing it about with most violent gestures, that I sometimes thought he would use it in reality. The old man of the cockle bank replied in nearly the same manner, with maree in hand, using it in similar mimicry as his strength allowed him. After this display the priest set-to again, and concluded the suit against him. The ceremony was followed up by the different parties returning, talking immoderately on the result, whilst the old priest, standing on the beach, ordered the young chiefs into a wood adjoining, to bring a very large branch from a tree. With this branch they proceeded to the cockle bank, with his fine canoe and young chiefs; and as it was low water, they all landed and fixed the branch deep in the mud, thus tabooing the bank afresh according to ancient usage. I did expect, and it was generally supposed that he would have paid the Kypookie a visit, but he was a person of too great note and finesse for such condescension.

There are excellent cockles in this river, which the natives use, and plenty of good fish. I never wanted supplies, for a pipe and some tobacco, or a few fish hooks, by way of change. I always fed my men with fresh pork, and I salted several casks. The men had always pork chops for breakfast and dinner, the meat being sweet and well tasted, as the animals feed always on fern roots. I was particularly fortunate in being able to give the natives a change of potatoe for seed; which I got in Van Diemen Land, resembling the fine large Devonshire red

potatoe. I found it good policy to entertain the two chiefs, "Pationa," and "Ninæ," his brother, together with their children when they came, at my table; and Pationa seldom came without a little daughter to whom he was much attached. The fathers are very fond of their children, more so than the mothers, who rather disregard them, indeed, the children treat their mothers disrespectfully. These chiefs well knew the "sound of the kail pot;" and, I therefore, seldom dined without royalty. We generally had potatoes for breakfast, along with a mountain of pork chops. One morning having cooked some Hobart town potatoes, of which we had some remaining, when they were brought to the breakfast table, I thought Pationa would have gone out of his senses, when he found they were "Europa" potatoes. He called to his people, (some twenty or thirty being on deck,) "that the captain had potatoes as big as their heads," at the same time adding "it was a shame to boil them, and would I give him a dozen or two for seed." I had plenty of applicants as long as they lasted, to whom I served them out according to rank.

The New Zealanders are excellent swimmers, particularly the females, who are almost amphibious. They were in the habit of bathing in groups of eight or ten, abreast of our vessel; but always observing strict regard to decency by bathing with petticoats. They were enjoying this recreation one day, when some of my apprentices thought it an inviting opportunity for a piece of fun; and trusting to their powers of swimming, off they dashed from our side, thinking to put the girls to confusion. But the girls observing their object, allowed them to come forward: they then formed themselves in a circle, keeping under water until they had the fellows fairly in their power, when they laid hold of their legs, pulled them under water for some time by way of amusement, giving them a good ducking for their pains; and swimming and diving about them. The lads reached the vessel's side nearly drowned, abusing their shipmates for not coming to their help. But the others knew better, and that they had "caught a tartar;" so I told them they had been served right, and they did not try the experiment again.

I had frequent opportunity to witness their war dance, indeed, the young chiefs would exhibit for my amusement. In these displays they balance their spears with much dexterity, and work themselves into great agitation, making frightful faces. The missionaries from the Bay of Islands came over the isthmus of land, which is formed at the head of Hokianga river and the bay, to visit their brethren located two miles below our position. They seemed zealous in their vocation, performing the service and preaching on board my vessel every Sunday. With respect to their effect on the natives, they may try to bend the young, but, from my observations the old ones hearken to them only with ridi-

cule. They will tell you "their God lives at the North Cape." The term, "Go to God," is a very common expression amongst them, in their own language ridiculously applied. They well knew our Sunday or taboo day, and never ventured on board on that day. Even Pationa and his brother, Ninæ, when coming to their meals, would not venture up the vessel's side, without sending for me to get permission.

I made an excursion up that fine tributary the "Manga Muka," and I must say, that the banks and scenery are most beautiful, and inviting. After exploring a part of it, I got some fish out of a canoe, that we met; and, with my native youths, I landed. They obtained a light by rubbing a hard piece of wood horizontally against another, and soon made a fire: they then pulled some prickly branches, stuck the fish on them, planting them before the fire. They were thus cooked, and made us a comfortable picnic dinner. The climate appeared particularly healthy. The only complaint I observed, and of this a very few cases, was pulmonary, or apparent consumption; but this I am inclined to attribute to their huts being built low down on the banks of the rivers, as also their meagre diet, at certain periods of the year, when they live on fern root, after their potatoe crop, and "coomras," or sweet potatoes are expended. Their huts are not much more than four feet high, with a part of the roof projecting about two feet over the entrance, (under which they sit, out of the sun,) veranda fashion. The fern root is prepared, by first burning the outside well over a fire, it is then pounded between two stones, to be made fit for use: I found it not unpleasant to the taste, and should consider it nutritious.

They are fond of a "demonstration," by reports of fire arms, or fireworks; and when I saluted with my two 4-pounders on arrival, it produced much shouting; and they eagerly enquired whether I had any more guns. I thought it good policy to tell them I had more in the hold; and on Christmas-day, (by way of demonstration,) which soon followed, both Mr. Brown and myself, gave them another salute, he having some cannon round his house, with a trench and *chevaux de-freize*, made of long poles. This plan, I would recommend all settlers to adopt, round their houses, and also to keep powerful watch dogs for an alarm, particularly when inland. All settlers should have a few small pieces of artillery; and plenty of fire arms, as on this being known amongst them, would have good effect. It would not only impress the natives with their security, but superiority, occasionally to fire a salute on gala days, the noise of which would spread far and wide.

Their bargains are generally held sacred, and they frequently spoke of Capt. Herd, who had purchased land in this river, which land is strictly tabooed for him, and they wondered why he was not going to

settle among them, and take possession of it. Herd point is well known to all frequenters of this river, about half way up.

There certainly is a great difference in the stature, and appearance of the chiefs, in comparison to their slaves or cookies: the former being much taller, and many of them having a noble and warlike mien, particularly when attired in their war costume. This is a thick kytuckie, (mat,) with stripes of dog skin over it; mareae slung round the wrist of the right hand, spear in the left, and a long white feather stuck *en negligéé*, on the side front of the head.

I observed a tribe, which came to sell flax, very different in look, and stature, from some of them, and although a chief family, they were stout, but low in stature; their hair almost approaching to carroty. These people kept themselves very shy from the others, and had come a long distance from some branch of the river. You are aware that all chiefs are tattooed on the face, and also that part which we call the seat of honour is similarly ornamented on each side, but a man may be about 35 years of age, before he is finally tattooed. I once (through my interpreter,) asked a chief, why he was tattooed behind? to which he indignantly replied, "That he would look too much like a woman before his enemies, if he were not so." They are frequently at war with neighbouring tribes. A great warrior, when taken in war is invariably killed, for the purpose of keeping his bones, as trophies, and that his captors may shake them in the faces of their enemies, in defiance. The thigh bones are thus used in particular, and the heads are preserved by being baked; and when hostilities cease, there is a regular exchange of the bones and heads of fathers, brothers, and uncles. The inferior chiefs and cookies taken in war, are kept as slaves, and in time become reconciled to their new masters, not caring about rejoining their former friends, even when opportunity may offer at peace. By way of showing their superiority with each other, and to challenge to war, one party will set off well armed in their canoes to make a "raid" upon some weaker tribe, when their crops are ready. They will slay, and feed on his pigs, and potatoes for some days, when the weaker party must tamely submit, not daring to resent it, and the others when satisfied will take their leave.

One of these parties returning from a marauding expedition, boarded me when coming down the river, to satisfy their curiosity. Some remained squatted on the deck abaft, whilst others of them, observing my people aloft, setting topgallant-studding-sails, went aloft boldly to show their dexterity: the chief a very handsome young man, getting up to the truck, by way of showing off. This chief fell much in love with my hand-lead, lying over our quarter, ready for an occasional cast. He put it to his lips, pressed it to his bosom, intimating it would be sweet

to him, if I would part with it. This, I good humouredly declined, at the same time showing him the use I had for it. They departed after remaining about an hour, and pulled up the Manga Muka. I must confess I did not much like their presence, as they were a new tribe to me, and well armed; and I suspected it might prove a mischievous visitation, instead of a friendly visit. I have no doubt the only drawback to settling this colony, may for some time arise from some of the natives, who must not altogether be depended on. But I am certain after they find the advantages of trade amongst them, that this will wear off, and our superiority in war, in honourable dealings, and cultivating the soil, arts, sciences, &c. once shewn will be sufficient. I consider them to be most valuable acquisitions to our colonial possessions, both as regards soil and its fertility, its climate approximating to Italian, also its excellent inland navigation, the good supplies of fresh provision to our South seamen; and lastly, the ready supplies to our colony in New South Wales in a dry season. I have known a ton of potatoes purchased in New Zealand for a musket, invoiced at 29s., sold in Sydney for 20l. But, at the same time, I should consider it sound policy for some troops to be stationed there at different locations, as a protection to our settlers; and also a man-of-war brig or two, under the direction of the governor, for the purpose of keeping up a communication, and harmony amongst the chiefs; and for establishing, extending, and protecting the locations for settlers. The chiefs are very fond of going on migratory cruises in vessels, and this is done with its beneficial results to our traders: many of them visit Sydney, but only those principal chiefs are allowed whose flax for the season may be tabooed for the traders. The young men are smart and active, making good seamen, becoming very obedient and docile, and they get very fond of a seafaring life.

They expect a remuneration for an accident received in the service of their employers, as the following will show. Whilst loading, all hands were in the hold, the carpenter was caulking the topsides, and had left his pitch pot on the fire. My attention was suddenly called to some of the natives, observing the pitch pot had capsized and set the funnel in a blaze, they expressing a desire that I would allow them to get on the top of the cookhouse to put it out. I handed them up a tarpauling to cover it, and in the scramble to get up, one of them ran a splinter of wood into his hand. He came to me holding it up, and looking most piteously until I drew it out; he then called out "pipy, pipy," meaning, that I should give him a pipe of tobacco for the hurt. On mentioning this to one of Capt. Herd's joiners, he told me he was once shooting birds in a wood, and by accident wounded an old man. He was fearful of the consequences, but was agreeably surprised to find that

his tribe only demanded a musket as payment, to mend the matter. Settlers will find little difficulty in erecting habitations, getting good planks from the cowdie tree—a pine. The hard wood or “kykaterr,” with which the natives make their spears, is similar to lancewood. The mildest climate of New Zealand is that of the North Island, and as the two islands lie in nearly a north and south direction, any climate can be found in them, the South Cape being as cold as the north of Scotland. The natives make a pleasant effervescing drink, from a berry like wild raspberry, and they use several roots or vegetables, with which I am unacquainted. There is also a herb, which our men use for tea, and gets the name amongst sailors as the “tea-plant.” They preserve mackarel in a dried state without salt, not split up, being hard, I suppose, by being partly baked; they also preserve the sweet potatoe, “or coomra,” like a fig, for winter provision. The “coomra” being considered their best food, is only allowed to be cultivated by the chiefs’ daughters; it is always railed in and strictly “tabooed” for the chiefs’ use. There are several of the convict gentry on these islands who have assimilated themselves with the natives, some of them being tattooed. One of these characters lived at a place near where I loaded, and was considered by the Europeans as a dangerous person, and strange to say, this fellow had a native wife, the prettiest and most comely looking woman I had observed amongst them. I must say that most of the chiefs’ daughters are generally good-looking, mild in their manners, with good figures; cannibalism does prevail amongst them, but I never saw an instance of it—I have joked “Patiana” about this, but he sternly denied as if ashamed of it. The natives are taking more trouble in cultivating flax, finding it profitable to them, and much of this article is grown on the South Island. Sea elephants and seals, are also got on the southernmost part; the natives on the South Island are considered more fierce and not so tractable as to the northward, which, intercourse, time, and trade, may conquer; but, a vessel of war visiting them occasionally would tend much towards a friendly amalgamation, there being good harbours for them.

ORLANDO H. WILSON,

*Lieut. R.N.*

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*Departure of a New Zealand Princess for Her Native Country.—*

Lately an immense number of persons assembled in front of the Lord Lovet public-house, in Ratcliff-highway, for the purpose of witnessing the departure of a young New Zealand woman, who has been for some time staying at the public-house abovenamed, to embark on board the ship *Coromandel*, now lying at Gravesend, bound for New Zealand.



The woman in question has been in this country for several months, and was brought over by a seaman named Wilkinson, to whom she was married on their arrival in England. She is the daughter of one of the aboriginal chiefs, and during the time she has been in this country has been presented to the Lord Mayor, Lady Mayoress, and a great number of the nobility and gentry, and has excited considerable interest. The climate of England has agreed with her very well, it being very similar to that of her native country. Wilkinson, her husband, sailed from Scotland about four years ago in a whaling ship, and was shipwrecked off the Bay of Islands, and after great difficulties, managed, with three others, to reach the shore in safety. The New Zealanders at first mistook them for Frenchmen, and were about to sacrifice them, in consequence of the crew of a French whaler having murdered a number of New Zealanders a short time before, but, finding they were English, they were treated in the kindest manner, and employed themselves in capturing seals for a long time. One of the chiefs took a fancy to Wilkinson, who soon afterwards married his daughter according to the custom of the country. Wilkinson will accompany his wife back to New Zealand, and intends opening a warehouse for the sale of English commodities, their passage out being paid by the New Zealand Company. The Coromandel will carry out a great number of emigrants, and an immense quantity of English manufactured goods. A band of music and a vast concourse of persons accompanied the New Zealand princess and her husband to Blackwall, where they embarked on board a steam-boat, and were conveyed to Gravesend.

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### ÆOLIAN RESEARCHES.—No. III.

[Of the seventeenth century.]

THE generall or trade wind continues all the year round with little variation. It is likewise called the tropical, Levantine, and universall Brise: because it blows constantly from the eastern points: and makes no farre excursions beyond the tropiques; commonly meeting our ships about the 30, 34, and sometimes the 36 degree of N. latitude: always proportionably to the declination of the sun.

On this side the line they sit most at north-east; and on the other at south-east, or the points between the south and east. Now what universall cause can afford such immense magazins of vapors? Where can be the locall originés of these perennial winds which imitate the circulation of the Heavens? Or, happily the disciples of Copernicus will conclude that they depend on the diurnall motion of the earth; which passing from east to west in the space of 24 houres [query, from west to east is meant] may by that violent rotation seduce with it the adjacent

air in one constant flur or streame: For wee observe that the winds in some seas change with the currents or tydes; and if so small a force can vary the motions of the air; how much more may wee expect from the rapid circumgyration of the whole terraqueous globe? De Cartes speaking of these Levant winds in his discourse of meteors, says “*Commode ratio deduce nequeat nisi universi fabrica simul explicatur.*”

This opinion, I confesse, is wholly built on the Copernican hypothesis: yet, if the Heavens move and the earth stand still, according to the vulgar and more receiv'd system of the world, we may render a no lesse rationall account of the phenomenon from other solid grounds.

For supposing the heat to be farre more intense to exhale and sollicit vapors, between the tropiques when the sun is verticall, and the rays fall at right angles to the earth: This must needs set vast multitudes of vapors afloat, both from sea and land, which may be sufficient to furnish materials for the generall wind: but then an objection may as easily bee started, why these vapors, or winds, still keep in the road of the sun? why should they not sometimes slant aside, and make their deflexions towards the poles? I answer, the resistance is greater; being remoter from the middle of the world, and the immediate jurisdiction of the sun beams, that the winds are as it were wall'd in on both sides by the grosser vapors beyond the tropiques; and so forc'd to attend on the solar motions, where the channell is open, and the air more yielding and refin'd by the continuall heat.

Nay, even in our seas, when no other winds are stirring, you often perceive a small air still accompanying the course of the sun; and it's remarquable in dead calms, that both the fanes of ships, and weather-cocks by land generally hang westward. This may receive some elucidation from a very obvious experiment of an iron bullet, heated and drawn over the surface of water, that presently invites the ambient air to follow the same course, as wee may discover by a feather, or other versatil body suspended above the water; that will have an immediate tendency the same way when the medium being attenuated by the heated iron, becomes more pervious and rare: which methinks may be of some validity to explieate why these universall winds have that constant compliance and uniformity with the course of the sun. They are likewise accompany'd with a perpetuall motion of the seas, from east to west: for the currents of air and water are inseparable companions both in the South Seas, the Pacificque, and Indian Oceans. And as the tydes are driven from the shoars and returne in a thousand eddys, and tortuous meanders from the land; in like manner the winds, though they chance to be frequently repuls't by the promontorys, and higher islands, that like shoars impede the atmosphericall currents, yet generally between the tropiques the motions of the seas and winds make

their perennial progress the same way. Some are pleas'd to think that the sun in their zenith do's so farre excavate and absorb the parts of the subjacent ocean, that the waters immediatley follow as in a channel, from east to west. But Vossius (*De motu Maris et vent.*) on the contrary do's as eagerly contend, that the celestial beams doe, by dilating the waters rather cause a greater turgency and protuberance on their superficies; which therefore subside towards the occident, where the passage is more declive, till it be likewise elated by the approach of the sun: From the same principles he endeavours the solution of the universall winds that the air rises higher where the solar rays fall at more direct angles; and thus like the seas, begin their course westward: of which he assigns no other cause then as before: so perfectly analogous are the motions of air to those of water, that the winds are most universallly govern'd by the Hydrostatique Laws.

However, I shall no longer propose my conjecturall thoughts concerning the cause of this abstruse phenomenon: but chuse rather to entertain the curious with some nicer observations, which have been made both by the English and Dutch, that by this means, though I dare not boast the invention of new hypothesis, yet I may be able to cast in my mite towards perfecting an history of nature.

I was lately enquiring of a very skilfull navigator, what variations he observ'd in the trade winds in his voyage to the West Indies; who readily complying with my desires sent me the following account.

"The trade winds have their variations as well as others though not so much: For betwixt the tropiques where we are at the greatest certainty they differ two or three points.

"Their most certain points are N.E.b.N. and N.E.b.E. I have observ'd both outward and homeward, that as wee came northerly, so wee had the more easterly winds in the same latitude: As for example, outward bound in the latitudes of 20°, 21°, 22°, and 23°, neere the tropique of Cancer, and in the longitudes of 52°, 53°, and 54°, beginning the said longitude at the meridian of London; I say there wee found the winds at E.N.E. and E.b.N., and E., and sometimes E.b.S. and E.S.E., so likewise homeward bound, sayling along the north side of Cuba, in the same latitudes above mention'd, neere the tropique, wee found the winds upon the same points as aforesaid though there were 35 degrees of longitude difference; but after wee have pass'd these latitudes, and sayling neere the line, wee shall then find the trade winds to incline more towards the N.E. as is above declared."

But what I could not so particularly collect from many reviews of our seamen's journals, I find an inquisitive person has observ'd in two severall voyages to the East Indies; "That from the 24th degree of N. latitude, towards the coast of Africa, or about the meridian of the

Canaries; the winds seldom vary above two points from the north-east, and so last to the 7 or 8: though sometimes the tornado winds have been met with from the 12th degree of N. latitude, and generally continue till within 4 degrees of the line. Moreover from the African shoare 100 or 200 leagues west; the foremention'd north-east wind commonly inclines to the east, and 20 degrees off from the meridian of the Azores, will be most at E.N.E.; and as the winds neere the continent of Europe, are commonly between east and north, so at the meridian of the hithermost Azores they hang between the south-west and north-west.

“The south-east winds begin to take place between the Æquator, and the tropique of Capricorn: and the neerer you are to the coast of Africa they are the more southerly: and as you approach the coast of Brazile it inclines more and more to the east. And there is not only variation in respect of the longitude, but likewise of the latitude: so that neere the equator the wind is more towards the south, then it is in the same meridian neere the tropique of Capricorn, where it is constantly between S.E.b.E. and S.E.b.S.”

From hence wee may understand what variations happen to the generall winds in respect to the degrees of longitude: and for their latitude, or distance from the equator, it's for the most part govern'd by the course of the sun: which being excentrical from the earth, as it approaches, or deviates more or lesse from one tropique to another, so it alternately causes the same declinations in the universall winds: when it deflects towards the northern signs they likewise bend the same way: If the sun be just about the equinoctial, they have the same winds and tydes in the Pacifique, and so from Peru to the Moluccas: when it's in the summer solstice, the trade wind reaches to at last the 36th degree of Boreal latitude: and being in Capricorn, it not only declines to almost the 40th degree of S. latitude, but obliges them that navigate in the northern hemisphere, to fetch their wind much neerer the line. The same detrusion of the seas and winds happens, not only in the ocean between Africk and the West Indies; but in the South Seas towards the Phillipine Islands. For from March to October they hang towards the north; and they revert with the sun towards the southern parts of the world. Yet there may be some accidents intervene, that frequently impede the course of the tydes, and universall winds: as the situations of promontorys, or shoars, especially about the coast of Guiny, and other parts of Africk: but in the Indian seas sub-jacent to the Torrid Zone, from the 10 or 11 degrees of S. latitude to the 28, there are constantly the same motions of the tydes and winds, till the sun retiring towards the tropique of Cancer draws the winds 10 or 11 degrees more north, nay almost to the equinoctial

line: but as it describes a contrary arch towards the south, they in like manner make their excursions to about the 30th degree of south latitude.

The adjacent mountains that guard them from the east, likewise divert the Levants from the coast of Guiny: which occasions such tedious calms towards the equinoctial, that some ships have wayted several months for a wind before they could set sayl from their port. So Angola, Congo, and many other countrys along the Æthiopicque ocean from the line to neere the tropique of Capricorne; as Cape Negro, Carinba, &c. are sheltered from the generall brise: As likewise Peru, and some other western parts of America, which have vast ridges of hills that run for many thousand leagues from north to south, dividing Guinea and Brazile from Peru and the kingdome of Chili.

I shall only add that the Levants blow much stronger by day then night, (as is well known to all mariners who have sayl'd between the tropiques) which shews that they rather depend on the sun then the motion of the earth.\*

These are the most generall observations: but as I before suggested, the trade winds lose much of their sovereignty neere the shoars, and are frequently impeded by the intervention of islands and cross winds: and sometimes promontorys and land brises repell them from the coasts: yet these, or whatever extraneous accidents, can never alter the perennial motion, but it still recovers again: and blowing from Africk to the American continent, and so through the South Seas towards the East Indies, and from thence makes as it were a complete tour round the world.

The ocean between Jemiac (Jamaica,) and Carthagene is oftentimes very tempestuous: but neerer inclining to either shoars the fury of the trade winds is much abated, and for 20 leagues in length, at a place call'd the Keys of Cuba, it's interrupted by a westerly wind that blows all the yeere round. So that it prevayles most in the Pacificque and other spacious seas, where it runs streaming without impediment along the liquid plaines; that from New Spain to the Philippine islands, they steer the same course, for 60 days together, and from the Cape of Good Hope to St. Helen's, (Helena,) it likewise constantly swells their sayle with one secure and equal gale.

Wee might likewise venture at a better account, then has hitherto been given, why the western wind blows most commonly on this side

\* It is curious that the learned author did not perceive that he here gives the real cause of the trade wind without knowing it; the motion of the earth bringing each part of its surface under the sun within the tropics may be considered the secondary cause, the action of the sun being the primary.—Ed. N.M.

the tropiques; for the whole current of air being carry'd from east to west, it recoyls back again; and by reason of this repercussion from about 30 degrees latitude when the trade wind ceases the western begins. Here in England, the eastern usually govern the spring, and wee have sometimes variable winds, but generally the western ingrosse the greatest part of the yeere, which indeed are no more then the tropicall wind at rebound: for not being able to return back against the streame, (the trade winds still raining in the torrid zone,) it must needs be diverted towards the Poles, and sometimes produces the west, and otherwhile the laterals, north and south-west, as the angles are more direct or acute in their reflexion.

Thus, from the same latitude where the trade wind ends, there usually begins a motion contrary to the course of the sun, by which wee sail from west to east, and so much the more or lesse, as it deflects towards either of the Poles: wherefore those who navigate from the Moluccas to the western parts of America, being never able to hold on their course in the middle, and beare up against the general wind, fetch a compasse beyond the tropiques, sometimes to 36, and otherwhile to 40; as the course of the sun, and consequently the winds and tydes, incline more or lesse towards the north or south. And so those that sail from Barbados, St. Domingo, or Jamaica, are forc'd to steer their course towards the Gulf of Florida, to the 36, and in summer sometimes beyond the 40 degree of N. latitude; where they meet with the reverse, or western winds to conduct them into Europe. The same likewise happens in the voyage from Brasile to Angola: if the sun illustrates the southern world, it extrudes the general wind to at least the 36 degree of S. latitude; where afterwards they meet with perpetuall currents and winds from the west: but in the other part of the yeere, when the trade wind makes a lesser arch towards their hemisphere, it will be sufficient if you take a compasse to the 25, or 26 degrees of latitude.

So not only the tropicall brise, but the western (which are kind of perennial or stationary winds, without the tropiques) observe their just distance from the Equinoctials, always proportionable to the course of the sun; and, if this were better understood by some of our less curious navigators, they would find the motions of the trade winds, though it meets them in severall latitudes, sometimes neerer and otherwhile remoter from the line, not so fortuitous as they commonly imagine: and some more accurate observations of this nature, would not only instruct them, where to expect the trade wind in their voyages to the new world, but how farre they should make a circuit without the tropicks, fetch their western winds, when they are homeward bound.

The generall or trade winds are diffus'd through the universe, and have vast territorys, and dominions, but others are confin'd to as narrow

a compasse; which they call the regionary and provincially, because they wander not farre from their native fountains, and terminate in those regions which gave them birth. Gassendus mentions one in Provence that blows constantly from the same point and seldom makes any excursions above two miles.

Seneca says, these are observ'd in all country's and climes. And whence can they proceed but from the salts, juices, and earths thereabout that afford them materials? or from the adjacent mountains, and caverns which are as it were, the country and royalty of those winds; so that they neither sally farre abroad themselves, nor suffer foreigners to invade their districts. For though by reason of the situation of the places or the paucity of the exhalation, they make no long journeys from home; yet having indefectible and perennial fountains, they never cease blowing within their own jurisdiction.

I might reckon among the provincially winds those on the shoars of Peru and Chile, which blow perpetually from the south; that in their voyage from Lima to Panama they quickly run it up before the wind, but in their returne back again, they are forc'd to steere a different course, which requires many days.

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#### ON ORDINARY ELECTRICAL DISCHARGES, AND ON THE OBSERVED EFFECT OF LIGHTNING ON SHIPPING;

*Being a further investigation of Mr. Sturgeon's "Memoir on Marine Lightning Conductors;" by Mr. Snow Harris, F.R.S., &c.*

IN my preceding communication, I considered the nature of a well-known phenomenon in electricity, termed by Cavallo, Priestly, and others, "The Lateral Explosion," and shewed that it did not in any way apply to the state of a metallic rod, transmitting a vanishing electrical accumulation, as erroneously imagined by Mr. Sturgeon, Lecturer on Natural Philosophy, at the Honorable Company's Seminary at Addiscombe, and author of a Memoir on Marine Lightning Conductors, recently published in a periodical journal, called "Annals of Electricity."

I shall, in this paper, proceed to consider what Mr. Sturgeon has advanced, under the two following heads:—

- 1.—Examination of the observed effects of lightning on shipping.
- 2.—A comparison of the probable effects which lightning would produce by the application of Mr. Harris' Conductors to shipping.

The first contains an excellent, and I have no doubt an accurate statement by an intelligent officer of H.M.S. Rodney, of the destructive effects of lightning in that vessel, together with notices of two cases

in which ships fitted with my conductors were struck by lightning without any ill consequence.

Under the second, the author labors to shew from the effects of lightning in the Rodney, that my system is inadmissible, inasmuch as the discharge of lightning which fell on the Rodney, "would have been" he says, "powerful enough to have rendered the thickest part of Mr. Harris' conductor sufficiently hot to ignite gunpowder." That the cases in which shocks of lightning are said to have fallen on my conductors without any such effect, and which of course prove the contrary, are deceptive, and consequently of no value.

Considering the assurance of these conclusions, and the high pretension of the Memoir, we should expect, on examining the author's researches, to find him in possession of a copious induction of facts, from well authenticated cases of damage by lightning on shipboard, illustrating clearly the views he so pertinaciously insists on: cases in which continuous, or other metallic conductors have been from any cause placed along the masts or rigging, and in which the electrified agency found its way through the hull to the sea. We should further expect from him an examination of the general nature and effects of electrical discharges, without which we can never expect to arrive at anything like an accurate estimate of the relative quantity of electricity likely to be discharged from a thunder cloud, and the probable effects on metallic rods, or other conductors, set up with a view of directing it in any given course.

Now, it is to be particularly observed, that Mr. Sturgeon's memoir is really deficient in such information. A few clumsy experiments in illustration of a well known fact in electricity, deceptively associated by means of a vague hypothesis, with some of the ordinary effects of lightning, on a ship, *not having* any regular conductor; and with some every day phenomena of the electrical kite, is virtually the amount of all the author has advanced, under the imposing title of "Theoretical and Experimental Researches."

In illustration of the careless way, in which Mr. Sturgeon treats this question, it may not be out of place to notice the following specimen of his inductive philosophy, being the very outset of the comparison he has proposed of the observed effects of lightning, and the probable effects, &c. on my conductors.\*

In the account given of the damage sustained by H.M.S. Rodney, in Dec. 1836, it appears that the shock of lightning which shivered the topgallant-mast, damaged the topmast, &c., fell on a small brass sheeve in the truck for signal halliards; it was in consequence *slightly* fused.— This sheeve, it must be remembered, weighed about four ounces, being

\* Sturgeon's Memoir, sec. 204.



not much above an inch and a half in diameter, hollowed except at the centre, and run, where it was somewhere about half an inch, in thickness. The lightning also fell on the copper funnel for topgallant rigging; being a hollow cylinder of sixteen inches in length, ten inches in diameter, and not quite one-fourth of an inch thick. This *was* not anywhere fused. It fell also on other metallic masses, such as the iron-bound tie blocks, &c. on the topsail yard, &c., iron hoops of the mast, &c., on which masses, no calorific effect was apparent. Now, we have here something like evidence of what was really the *actual power* of the charge. We see for example, that it *could not* fuse a copper funnel sixteen inches long, ten inches in diameter, and about one-fifth of an inch thick. In the face of which fact, Mr. Sturgeon insists upon it, that had the charge fallen on my conductor; the thickest part of it would have become red hot; or, to place the matter more explicitly, the reasoning amounts to this;—an explosion of lightning having *slightly* fused a small sheave of brass, weighing four ounces, and having failed to fuse a short copper funnel; therefore, had it fallen on a rod of copper, of one inch in diameter, and two hundred feet long,\* that rod would have been rendered *red hot*.—Q. E. D.

This, it must be allowed, is a somewhat amusing kind of special pleading, quite unprecedented, I believe, in any paper on science.

The author wishes to strengthen this deduction, such as it is, by adverting in a foot note to the case of a small brig, struck by lightning, in which, he says, “some part of a chain conductor, was fused;” how much is not stated, as “the lower part fell overboard.” The statement is given without further authority, and is altogether deficient in the very information most required; viz. the *size of the chain*, and *how much of it was fused*. Let us, however, take it upon the the author’s own ground, and suppose the conductor to have been such as is commonly used in the merchant service—that is to say, links of iron wire of about a quarter of an inch diameter; a kind of conductor very easily disjointed, and fused at the points of junction by lightning: the reasoning then stands thus—because a shock of lightning fused and disjointed some unknown portion of a lightning chain in a merchant brig; therefore, the same shock, had it fallen on a solid copper rod of one inch in diameter, and of at least one hundred feet long, would have rendered that rod red hot.

The fallacy, and entire worthlessness of such reasoning as this, seems not altogether to have escaped Mr. Sturgeon’s notice, as appears by his amplification of the above effects. Thus on entering upon the compa-

\* This is the equivalent of my conductors on the main-mast of such a ship as the Rodney, taking it at its least value.

riſon of the effects of lightning, he reſorts to a ſort of wholeſale dealing, and leads the reader to conclude, that the *whole* of the ſheave in the Rodney, and *all* the brig's conductors underwent fuſion. But even if it were ſo, no ſuch concluſion as that abovementioned, is admiſſible, eſpecially in reference to a continuous and maſſive conductor, receiving a ſhock of lightning on its point; and equalizing with inconceivable rapidity, the diſturbed electrical ſtate of the ſea and clouds.\*

The maſtiff deficiency of ſound practical information, in Mr. Sturgeon's memoir, impoſes upon me the neceſſity of advertiſing again to the general character, and operation of common electrical diſcharges, whether produced by artificial means, or on the great ſcale of nature. In doing this, I have no deſire to excuſe myſelf, in caſe I ſhould not have written clearly and explicitly on the ſubject. Since, in no department of physical ſcience is the field of obſervation ſo fertile, and the path of experiment ſo ſure and eaſy. We have before us the experience of nearly a century, during which time lightning rods have been employed to a greater or leſs extent, and in which an immense number of inſtances have occurred of ſhocks of lightning falling on ſhips and buildings under a variety of different circumſtances; in ſome caſes where lightning conductors have been preſent: in others, where abſent. In many inſtances where ſhips have been near each other, and expoſed to the ſame ſtorm; ſome *having* ſuch conductor, others *not*. The general character of the electrical diſcharge is treble in them all; and the effects on various metallic bodies of different forms clearly ſhewn. On the other hand, we can, on a minor ſcale, imitate ſucceſſfully the great operation of nature, and examine experimentally every poſſible contingency attendant on the operation of a ſhock of lightning in a ſhip. It is our own faults, therefore, if we do not treat the ſubject ſcientifically, and arrive at complete practical ſolutions of ſuch queſtions as theſe. Is a lightning conductor deſirable in a ſhip? Will it cauſe by attraction a ſhock of lightning to fall on a ſhip, when otherwiſe ſuch would not take place? If ſo, can it cauſe damage by its inability to get rid of the lightning which falls on it? What is the beſt form and dimensions of a lightning conductor for a ſhip? What is the greateſt probable force of lightning to which it may become expoſed? Is it liable to cauſe damage by any lateral operation of the charge in paſſing through it &c.? I ſay, if ſuch queſtions as theſe cannot now, be reaſonably deter-

\* "Were there no other data than thoſe of fuſion of the metallic ſheave in the Rodney; and the fuſion of the chain conductors in the brig June, &c."

"The impreſſions which theſe facts convey to the mind are too definite to be eaſily miſunderſtood: they clearly imply that either of the diſcharges which ſtruck the Rodney or June, would have rendered the thickeſt part of Mr. Harris's conductors, ſufficiently hot to ignite gunpowder."—*Sturgeon's Memoir*, ſec. 204.

mined, they never can; and, therefore, any one who writes or reasons obscurely about them, and without due regard to a good induction of facts, can have no claim to be considered as a sound reasoner in experimental science. For, as beautifully observed by Lord Bacon, "Man who is the servant of Nature, can act and understand *no further* than he has either in *operation*, or in *contemplation* observed, of the method and order of nature." With these views, I proceed to examine the general character and effects of electrical discharges, as exhibited artificially, and on the great scale of Nature.

Although some theoretical difference may have arisen, concerning the precise nature of electricity, yet the following explanation runs sufficiently parallel with facts, to entitle it to our confidence, and put us in possession of one of the great advantages of any theory, viz. a classification and connection of observed effects; the province of human knowledge being, as justly observed by a most intellectual and accomplished writer, "to observe facts and trace what their relations are."\*

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#### NAUTICAL SURVEYS AND NAVAL SURVEYORS.—No. II.

[Continued from p. 91.]

THUS much for the responsibility which the Naval surveyor incurs when he undertakes the conducting of a maritime survey, and this leads us to an observation, which we may add *en passant*. It has often been our lot to witness the productions of, not the *tyro* in surveying, nor perhaps those of the *aspirant* for surveying fame, but of the well-meaning man, who would make himself useful where chance has thrown him; in fact, where he happens to find himself—perhaps in some distant part of the world, the charts of which are in a miserably deficient condition, and this unhappily is the case in too many places. With the best possible intentions, a plan of a harbour, perhaps of an anchorage, or whatever the place may be, is made by him; but how, in what manner, or with what means, is only known to the person himself, or those immediately about him.—What is the result? Little or no confidence can be placed on it, because nothing is known of these particulars, and hence great labours are rendered useless. The information it contains, which may be much or little, cannot be turned to account, and the time so employed passes by of no avail. Perhaps the work may have been done well by these busy, and would be useful persons: perhaps it may have been done ill; but it is clear, that unless there be proof of how it

\* We are reluctantly compelled to reserve the remainder of this paper for our next number, owing to its length.—Ed. N.M.

has been done, it must share the fate of the worst: how can such work be introduced among the valuable labours of the surveyors, whose responsibility we have been endeavouring to shew?

Distinct from the class of acknowledged Surveying Officers of the Royal Navy, stand several, whose names have been recorded in our pages, as having made most valuable additions to our hydrographical resources in different parts of the world; and such contributions as those of Lieutenant Cannon, Lieutenant Loring, Mr. Woore, in the East Indies, (whose name we regret not seeing on the list of lieutenants,) Mr. Cox, in the Harlequin, Captain Milue, Mr. Peacock, (master,) Captain Hon. W. Wellesley, in the West Indies, Captain De Roos, Mr. Thompson, (master, R.N.,) Mr. Newman, (master, R.N.;) and, no doubt, many others which we cannot now call to mind, deserve honorable mention, as having had, not only the inclination, but also have succeeded in making themselves useful in the surveying branch. We remember once meeting with a plan of Cape Palmas, off which, one of her Majesty's ships had grounded on a rock. We did not then possess Captain Vidal's valuable survey of that cape; but, that which we are alluding to, was finished as well as his, and perhaps, in the first style of plan drawing, The draftsman had done his part well enough; but alas, when the bearings from the rock, of the Cape and points of the shore were tried for its position, nothing could be made of them. It might as well have been made off the Cape of Good Hope, for it became a question which really was Cape Palmas on the plan. And yet this plan, as far as drawing went, had great pretensions even to the "new and correct" style of our chart manufacturers. And the author had, no doubt, the best intentions in the world, of laying down the dangerous rocky ground off Cape Palmas, with all the accuracy of a finished surveyor. Had this plan recorded the means employed by him in his operations, viz., the position and length of his base, the instruments used in obtaining the angles, and the various angles which were obtained, how the soundings had been laid down, and the outlines of the shoals which so authoritatively figured on it in the garb in which a finished draftsman can dress them, all this trouble would have been saved. Probably a few random bearings only had been taken in place of all this, and had just so much only been said, the imposing appearance given to it, by the draftsman, would have gone for nothing in assigning to it its real value. Others productions again, do not enjoy such good fortune at the hands of a draftsman, and perhaps owe their value, if any they have, to the knowledge which their author may have had of the work he has in hand, and did they speak for themselves in the particulars of their construction, would be well classed amongst the latter description of animals, alluded to in the old saying, "Brag is a good

dog, but hold-fast is a better;" while the former dressed up by the draftsman, would fall under the first. "All is not gold that glitters," applies, as well in point of value to works of surveying, as to the precious metal itself; and there is no denying that "Brag is a good dog, but hold-fast is a better." But our brag chart, turns out troublesome as well as worthless. Every manuscript chart or plan, therefore should bear on its face a record of the principle materials of its construction in all the particulars we have stated above; also the date and name of its author, if it be expected to have any pretensions to notice. In a word, what we simply mean is, that when we go to the play, we like to know not only what the play is, but the particulars of the playbill; that is, who are the players!

We shall, however, now follow Capt. Hall.—"In speaking above of the minute care, which every part of the survey requires, we spoke for the purpose of illustration, as if the officer in command of the service could by possibility execute all the details with his own hands, as if he stood in the ship's chains, or in the boat, and hove the lead himself—as if finally he measured every angle with his own sextant and with his own eye! This, however, even on the smallest scale, is manifestly impossible; and, even if it were possible, would be absurd, as well as injurious. Absurd, because the same things can generally be better done by deputy; and injurious, because their performance would inevitably take away the commander's attention from things of greater importance, to which no one but he can pay sufficient attention."

A parallel might here been drawn by way of illustration, between the duties of a commander-in-chief of a squadron, and the principal, who has the conducting of the various operations of a Nautical Survey. The commander-in-chief we have alluded to, must depend entirely, in many cases, on the zeal and abilities of the respective captains of ships under his command, and the most important measures which he decides on, the courses which he considers it right to adopt, must be entrusted to them, or, in other words, as Capt. Hall says, must be done by deputy. So also the Surveyor, as in many cases, and in important ones too, must he depend on his assistants. "It becomes necessary then," as Capt. Hall observes, "in the first place, that the Surveyor should be sure that all his people are competent to do their work; and in the next, to see that they actually do perform it correctly. The amount of knowledge, therefore, which is required on the part of the commanding officer is very considerable, and to be at all useful, must go a great way beyond the current demands which are made upon it. Accordingly, it becomes an extremely delicate, as well as important part of his duty, to assign to each of his assistants the kind and degree of

work best fitted to his peculiar qualifications. This, however, is only the beginning. No man, be his zeal what it may, ever does his duty properly, unless, in some shape or other his exertions are noticed. He may be carried for a time by the mere momentum of principle, and this principle may be so firmly seated in his mind, as to prevent his ever doing any thing very wrong: but there is a wide latitude between not doing wrong, and doing that which is quite right, and the very best for the service. So that, unless a subordinate officer on a survey, as in any other position in life, be duly superintended, he will inevitably fall into negligent habits, in the course of time, and the survey will prove useless, or, as we have already hinted, often worse than useless."

This is rather a stern picture which Capt. Hall has drawn of human nature. True it may be of mankind in the aggregate, but we should blush for our Surveyors, if we really did think it could possibly apply to them; to those persons who possess the high and honorable feelings of an officer, in addition to the fearful responsibility of losing sight of *their* duty, the indignant retribution which would attach to their name in after life, if even with disappointed hopes, and broken promises, left without notice, they for once allowed themselves to be betrayed into a negligence which would be fraught with so much danger! No! such a course is impossible. Are they passed over?—is advancement tardy?—the path of the general service is open to them, and they may pursue that with better fortune. But is it so? we believe that, although where the number of rewards is disproportionate to that of the claimants, the "noticed exertions" must be proportionably few, yet that reward comes sooner or later; and, we can never admit, that the delay of its arrival produces the least deviation from that course which is "quite right," and that which is "the very best for the service." There is no doubt good philosophy in the king of Prussia's lines which say that

"Love by hope is still sustained,  
And zeal by the reward that's gained."

But the principle can only be applicable to the generality of mankind, it is a cold apathetic calculating kind of feeling, more applicable to that shortsighted class of the community known as the hunters of *£ s. d.* appertaining more to the atmosphere of the counting-house than the quarter-deck of the naval officer, and more particularly the ground of the Naval Surveyor. The Naval Surveyor has only one mode of doing his duty, if he is to do it at all, and that must be the right one. Does he otherwise, he publishes his own dereliction. Silently and perseveringly as we have said, he keeps his object before him, to its accomplishment, and as far as our observation and experience go, although temporarily he has to see the *right* hand of reward extended to others, yet

his motto, with the *mens conscia recti*, prefixed to it, is still "onward." His labour no doubt is great, and Capt. Hall truly says, "Here, then, is brought at once upon the surveyor's shoulders far more than the average load of responsibility; which presses upon him without any intermission, is often of a very peculiar kind, and requires the closest description of vigilance. If all the soundings, angular measurements, and other details of a survey, were made from on board the ship, or in the boats stationed close to her, the captain might, by the ordinary exercise of discipline, ensure their correct performance. But by far the greater part of all these operations is done at a distance, in boats detached from the ship, or under other circumstances where direct personal superintendence is impossible. A higher sort of discipline, therefore, in the shape of moral influence \* must be brought into play, and it becomes the arduous task of the surveyor to establish such a degree of authority over his people, as shall ensure their serving under him, when out of his sight, with the same fidelity, and with the same zeal, as if they were actually working under his eye. He must teach them truly to love their work on its own account, and to be stimulated by its performance, not only by a sense of duty, but by the certainty of gaining the approbation of their superiors, and by the generous hope of those eventual advantages which belong to patient well-doing,

"This system, to be effective, must pervade the whole of a commanding officers arrangements, and must include not only those persons employed in the private manipulations of the survey, whether in the boats or on shore, or in the chart office on board, but must take into account the petty officers and seamen engaged in these services, as well as the ordinary duties of the ship. All hands, in short, must be kept in good humour, in order that all may work cheerfully together. If the general discipline be either too tight, or too slack, this will never be the case; and it is wonderful to observe how all the operations of a survey, even those which it might be thought lie most out of the way of such influences, are made to feel the effects of good or bad discipline in the largest sense of the word."

There is much allowance to be made here. The management of his ship's company always a primary object with a naval officer, must be still more so with the naval surveyor; and he has additional difficulties of various kinds to overcome, besides the original untractable disposition of some among his crew. The sameness of the work in some instances is, perhaps, of little consequence, but it is a different matter when we come to expose them in boats, in an unhealthy climate, in

\* This is the kind of discipline by which every ship in the Royal Navy should, or might be managed.

tropical regions, with the lead going all day, and at night sleeping in them. The destruction of clothes, to say nothing about the risk of health, or loss of life, occasions no small demand on Jack's pocket, or rather adds not a little to the difficulty of keeping up that cheerful devotion to the service which is so necessary to the proper performance of his duty. Some seamen in surveying operations take, at times, not only a responsible but a far superior part to those in the general service. Far more in boats than the others, they are besides toiling at those duties of a ship, incident to a presence of the coast,—such as perpetually weighing anchor, &c., while their brethren in the general line of the service go through the ordinary routine of duty in time of peace, of making a passage from one port to another, or lying snug in harbour. And there is no doubt that in such a disparity of circumstances, to preserve good discipline “in the largest sense of the word,” demands the utmost attention to the character of the seaman on the part of the naval surveyor. Indeed, the case of the petty officers and seamen of a surveying vessel is one which requires the utmost consideration of the commander. They derive no advantages from what is going forward, but wear out more clothes by having a great deal more to do than their brethren in the ordinary line of the service, and with no other prospect of reward than *this* would always hold out. Consequently as they can look for no superior encouragement from Government to enter this service, they still have a right to expect some recompense for all this extra duty, and that can be only hoped for at the hands of the captain, in attending to their wants and comforts to the utmost of his power. Their only motive for serving in a surveying vessel in preference to another, must be esteem and respect for the commander, while his, and that of his officers is honor and preferment.

“An officer,” says Captain Hall, “in command of a surveying service, as we have already mentioned, must, from the nature of things, be left to his own discretion, for it is generally owing to the hydrographical circumstances of a coast being imperfectly known, that he is employed at all. He has, therefore, to decide at the moment in what manner the objects are to be attained. At one time it may be proper to keep all hands on board to work in the ship. At another the ship may be anchored in a place of safety, and the boats be dispatched in a body, or separately, to explore districts where it may be dangerous to expose the ship. The captain may consider it necessary to accompany such expeditions, or he may send them away under his officers; but, whatever he does, he has the responsibility of the decision; and when it is considered that he is acting in unknown regions, where the dangers and difficulties are to be provided against at the very moment of their discovery, and where it will often happen that nothing is certain but the danger his



ship is in, his uninterrupted anxiety may be in some degree imagined. Let it be recollected, too, that in the process of that minute investigation, which the very essence of a survey implies, it is the duty of an officer to be almost perpetually incurring hazards, which at any other time it is his duty to avoid."

This reminds us of frequent complaints which have been rather unjustly made of the masters of the merchant service when failing to examine shoals, or such dangers as they happen to come across in their voyages. They are glad enough to keep clear of them, should they stumble on any, and which we hear of their doing occasionally. But, why so? Simply because it is not their business to go near them. Should they commence shoal hunting, or "rock groping" as the surveyors have it, in their passages, the underwriter would put his "spoke" in, the insurance would be vitiated, and the "goodly" ship, instead of having according to her manifest been making the best of her passage to the consigned port, would be shewn to have broken her orders in rock hunting! But we do not hold the gallant captains of our commercial marine exempt from the charge on these occasions of not having put their lead over the side. This is an easy operation—one which the safety of the ship must acknowledge, which is demanded of them on the part of their brother seamen for the advancement of hydrography, and which we fear is too often neglected to save a little trouble.

An incident which serves tolerably well to illustrate the hazards which surveying vessels incur, may be mentioned here. The *Fairy* in the course of her tedious and elaborate survey of the North Sea, has, like other surveying vessels, on many an occasion, been placed in hazardous positions, from which the critical knowledge of her commander, Captain Hewett, has often rescued her. We shall have occasion in the course of these papers to go rather largely into her operations, and may come across some more of these escapes, but to proceed with that to which we allude. It occurred in the course of surveying the North Sea to the eastward of the "Gabbards," two very dangerous shoals; but whether these were one or two had never been determined until this survey took place, although situated at a distance of only five leagues from our own shore. The outer of these shoals is divided by an extremely narrow channel, and the parts of the shoals thus separated overlap each other; but so close are they, that in gales of wind the breakers from the one part have not space to subside before they come in contact with those of the other, thus rendering the opening very difficult to discover from the deck of a vessel, even by the surveyor who is well acquainted with the features of the shoals, and we should say impossible by a stranger. The sudden changes of weather to which the North Sea is subject, are well known to those who have experienced them. One of these changes occurred

in the midst of the *Fairy's* operations, near the shoals, with which she was occasionally taking rather unwarrantable liberties, in approaching to nearly actual contact at times. There is always more or less surf on these shoals. If in a calm, a gradual rippling wave is seen, then a sullen break, from which little sound is heard; but, if there be any breeze, a collection of breakers always marks them. On this occasion a gale sprung up from the eastward, and which shortly raised a terrific sea, and the little "*Fairy*" was caught in such a position that she had breakers throughout her lee, and that with a lee-tide; and even with her excellent sailing qualities, it was found impossible to keep to windward of them. But prompt decision was necessary, and in an instant the captain had made up his mind to adopt a course for which there was but just left space and daylight. He took his station in the rigging, and all eyes were anxiously watching the expression of his countenance, when, to the astonishment of all, the helm was ordered to be put up, and the terrific surf, towards which the vessel was now dashing along, appeared still more awful by her nearer approach to it. There appeared a continuous mass of breakers ahead, and on both bows, close aboard. In another moment the helm was put hard a port, and the *Fairy* bounded through the breakers and the narrow channel above-mentioned at a fearful rate, assisted by the lee-tide, and propelled by the fury of the gale, the boiling surf curling on each side of her as if striving to arrest her passage through the sea of foam, the noise of which increased the confused howling of the gale. Two minutes sufficed to weather the overlapping point to leeward, and the next saw her scudding away merrily for her port, while the raging sea on the outer Gabbard had many a look of satisfaction from those on board her, arising from the safety felt by her crew, that the impending danger was passed. The shoal was now far to windward, and the channel through which she had taken her course was unseen from the moment she passed it, the whole edge of the shoal appearing from to-leeward as it had from to-windward, one close mass of heavy breakers throughout; shewing that it required an experienced eye in the commander to have distinguished the channel amidst the foam which covered it, and no small nerve and decision to act upon a judgment founded on such an apparently precarious foundation.

This however is only one of the vessels employed in surveying operations close at home, and we have merely introduced this circumstance in illustration of Captain Hall's assertions. But, we shall proceed with his remarks on the qualifications of the Naval Surveyor.

"It appears, fortunately for the public service, that many of our surveyors are men of education, as well as of talents and industry. Most of the officers now employed, are well informed geologists; indeed,

nothing comes amiss to them. They are geographers by actual employment, in the strictest sense of the word. They should know a good deal of history, something of botany, zoology, and of natural history generally, to say nothing of meteorology. Even classical attainments have their value in some surveys: witness the elegant researches of Captain Beaufort, on the coast of Karamania, or those of Captain Smyth, all round the Mediterranean, as evidenced by his interesting books, especially that on medals. Finally, in order either to perform his business properly in the first instance, or to render it available afterwards in the shape of charts and reports, the surveyor must be more or less of a draftsman, a mathematician, and a man of general science, or many of his opportunities will be lost both to himself and his country.

“We say nothing of those numberless minor details to which the commander of a survey’s attention must be given, if he hopes to maintain that degree of cheerfulness amongst his officers and people which insures the hearty co-operation of all parties in advancing the work in hand. If, for example, the boats sent out shall be inadequately supplied with provisions, or be kept too long exposed to the heat of the sun between the tropics, or to the cold and rain beyond them; or, if the hands left behind for the ship’s duty be too few in number, the generous spirit of companionship in toil is gradually damped and at last extinguished.

Such delicate operations as surveying, require the handling of instruments of delicate and careful workmanship, which can only be exposed in the open air in certain weather; even then, the effect of the sea-air on them is severe enough without the addition of rain; so that if any work requires fine weather, it is that of the surveyor. Exposure to the effects of the sun in the day, and to damp at night, is sufficient without rain; from the effects of which it is the first care of every officer who studies the comfort of the seamen under him to guard them as much as lies in his power. There are occasions enough which call for unavoidable exposure in bad weather; but it will be the care of every considerate naval officer to lessen these as much as he can, and more particularly the naval surveyor. He must not fail to remember that Jack’s wardrobe is not so well stocked as his own, little as even that may be; and the means of replenishing it are not so plentiful with him as his officer. Captain Hall concludes this part of his paper with the following excellent remarks, with which we shall also complete this part of our subject, reserving our next essay for the question of the relative advantages of the surveying service, and the ordinary employment of a man-of-war for teaching seamanship. It may be said, and truly, that much of what we have pointed out here, respecting the duties of a naval surveyor, belongs with various modifications to every description of

naval duties. Still we are not aware of any in which the sagacity, good temper, and general knowledge of his business, on the part of a commanding officer tell so surely, or where the opposite qualities of ignorance, impatience, and want of professional knowledge, produce more inevitable mischief to the service in hand, than in the surveying branch of the Royal Navy.

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RAMBLES AT HOME.

*Edinburgh, 26th July, 1839.*

My dear Mr. Editor,

Having taken my leave of the beautiful lake of Windermere, on the morning of the 17th, the day on which I last wrote to you, I proceeded in a car to Grasmere. About a mile and a half from Ambleside, I left the road to view two waterfalls, which are much spoken of in the grounds of Lady Fleeming, at a place called Rydal Hall, a charming richly-wooded estate, with many trees upon it of remarkably fine growth. The walk to the upper cascade is through a narrow glen—the path following the course of the stream, which gurgles over its rocky bed: a more delightful stroll than this on a hot summer's day, under the shade of the trees which thickly overhang the channel in the rocks, cannot be imagined. The distance to this upper fall is about a mile, and the ascent rather steep. The water flows through a chasm or creek in the rocks in one continuous sheet, which opens out into a broader sheet; but this second sheet is not so high as the one immediately over it.

At some little distance from this waterfall, and lower down in the ground, there is another which is shewn to strangers through the windows of a little wooden building, erected at the front of it, and the effect is really very striking; the stream being seen as it flows under an arch, *before* it reaches the spot where it falls over. The building appears to have stood there for centuries, and I observed the date, 1617, carved on one of the shutters.

Having visited these falls, I crossed over the road which skirts Lady Fleeming's property, and walked into a little garden immediately in front of the cottage of the poet Wordsworth, who most kindly allows any visitor to go into his garden in the very front of his windows,—to mount a circular mound, or grass-plot, and to enjoy one of the most beautiful and picturesque views that can well be imagined, comprising every requisite for a landscape—hills, dales, wood, and water; the very spot of all others for a poet. Wordsworth, I am told, will often come out and talk to the people who may visit this charming spot, which he has so judiciously selected as his retreat in the evening of life; but, I was not so fortunate as to see this distinguished poet and kind-hearted venerable man.

Pursuing my journey, we drove through a little valley in which there is a small lake, called Rydal Water, which, after receiving its supplies from Grasmere, flows into Windermere, and shortly afterwards we entered the pretty luxuriant valley of Grasmere itself with its little lake,—somewhat larger than Rydal Water, shut in with hills on all sides; a sweet retired spot, at least, as

regards the effect produced upon the mind by the surrounding scenery, but so overrun with tourists, that I was unable to procure another car to proceed on my journey, and had to wait several hours before they could furnish one from the "Red Lion," the little inn where I stopped. I made good use of my legs, and varied the views of the valley by ascending different points; it is, perhaps, seen to the best advantage on ascending the road which passes through it, and which leads to the fort of Helvellyn: the *retrospect* is charming—a rich contracted valley, completely hemmed in by lofty barren hills; those on the north-west of the vale being jagged and irregular, worn away by time and the elements, two destructive agents, the ruin of all things.

One of the rugged hills alluded to is known by the name of Helm Crag, whose summit is covered with fragments of rock, appearing, as one of the guide-books not inaptly remarks, "like a mass of ruins occasioned by a volcano," which perhaps is altogether not unlike the appearance it presents; but what think you of the following comparisons drawn by men of talent? Mr. Gray (I quote my guide-book) "liken[s] it to some gigantic building demolished."—Mr. West, "to a mass of antediluvian ruins."—Mr. Green, "to the figures of a lion and lamb."—Mr. Wordsworth, "to an astrologer and old woman!"—another compares it "to the wheel of a water-mill," very like a whale, certainly: but so they go on *ad infinitum*, as if every one was in duty bound to find out some resemblance. How one and the same thing can be like any two of the foregoing very *dis*-similar things, I am quite at a loss to know. My own poor brains, I confess, could conjure up no imaginary resemblance to anything beyond the ruins of a volcano.

Quitting the delightful vale of Grasmere, one of the prettiest spots in the district of the lakes, and attaining the summit, the bold mountain of Skiddaw, rises to the view, directly in front, presenting a very imposing appearance; and shortly afterwards, the base of Helvellyn—the "mighty Helvellyn," (so says the guide-book,) is seen on the right, the road winding at the very foot of it. The little inn, the "Nag's Head," Wythburn, as the spot is called, standing on the opposite side of the road immediately under Helvellyn, so close under it that the summit is not at all visible; and, though it does certainly seem a *tough* hill to walk up after dinner, it did not inspire me with that awe I had expected, on seeing the highest mountain in England,—which, however, it must be remembered, is only 3,070 feet. I took up my quarters at this little inn, intending to pass a quiet night, being somewhat fatigued, and to ascend Helvellyn the next morning, but I spared my shoe leather, at any rate, for it proved a most unpropitious day, blowing very hard, with thick and constant squalls of rain.

Alas! how often are our fondest hopes blighted in a moment. I had scarce got into my bed, and placed myself in the arms of Morpheus, the *God of dreams*, to enjoy my quiet night, when a violent battering at the door of the inn set me on the *qui vive*, feeling fully convinced that it would not long stand such a bombardment; and in another minute the poor landlady, whose husband was a cripple, came up to my bedroom-door in the greatest state of alarm, followed by all her children, vociferating, that "the men had returned to the house! what was to be done?" Be it known to you that the *men* were three drunken blackguards whom I had observed quarrelling and fighting by the road side, when I drove up to the inn, followed by a woman,—and one of them was so pot-valiant that he was swear-

ing with many a strange oath, that "he would fight up to his knees in blood."—A pretty business this, thinks I to myself—but I lighted a candle and went down to make the best I could of a bad job, not knowing at all what the result might be, but I confess, to my great satisfaction and peace of mind, I found that a gamekeeper, and one or two worthy clods of the soil who had not left the house, as the poor landlady thought when she came in such despair to my bedroom-door, had just sallied forth with sticks in their hands, and so unexpectedly cudgelled the intruders, that they took to their heels, no doubt seeing, at least *double* the number of men who had come out to attack them. They never came near the place a second time. All this is well enough by way of variety, but in a lonely spot like this with not a house, save the little church opposite, anywhere near it, and rendered still more lonely by the howling of the wind and rain, the night being very tempestuous, it was anything but agreeable I assure you—particularly as the "Nag's Head" would not long stand a siege, for even if they had failed to force the door, the house is so low that the besiegers would not have had much difficulty in gaining admittance at the bedroom windows:—so much for my *quiet* night.

Having given up all hope of ascending Helvellyn, I proceeded on to Keswick in the afternoon by the mail, which changed horses at Wythburn. The day continued so rough and boisterous that I saw little of the beauty, though something of the grandeur of the scenery. The road passes close to Thirlmere Lake, situated about 500 feet above the level of the sea, and the highest elevation of the lakes. The scenery around it is somewhat of a wild character, and continues so until after passing an extensive peat moss, when it shortly enters the fine vale in which Keswick lies.

The morning of the 19th was, if possible, worse than the preceding day, and it never ceased raining. I need not therefore say, that I saw little or nothing of Derwent water, which is about three miles in extent, and not much of the mountains, Skiddaw and Saddleback: they were covered with mist and clouds, but as these occasionally cleared off, I could see their outlines tolerably well. Wet as the day was, I trudged out with two other gentlemen whom I had met at Grasmere, as far as a spot called Crow Park, and afterwards to "Friar's Crag," which overhangs the lake; and from whence, on a fine day, there is a good view of it; but I saw it under the most unfavorable circumstances, and could only now and then, as the mist cleared away, get a glimpse of Lowdor Waterfall—the Niagara of Derwent water! as my guide-book is pleased to call it. The fall of water is stated to be 150 feet, and it is considered the principal cascade among the lakes.

The town of Keswick stands at some little distance from the lake: it seemed to be a dull town; but, what place does not appear so upon a dull day? There was exhibiting in the Town Hall, a very clever plaister-of-Paris model of the lake districts, which I studied with great interest, and which helped to wile away the time. There was also a delightful little museum, collected by Mr. Hutton, in which I passed an hour or two, and was much surprised at seeing a stuffed animal, wholly unlike any quadruped I had before seen or heard of: although the Annual Register\* calls it a dog, between a mastiff and a greyhound, and gives its measurement from the head to the tail end, five feet eight inches, and

\* Annual Register, Vol. LIII. p. 107.

its weight six stone. It is here called the sheep-destroyer, the pest of the farmers some few years ago, from the ravages it committed, and so fleet was it said to be, that although it had often been seen and hunted, they had never been able for a great length of time to get within shot of it. I wish I could tell you more about it, but any enquiries you make about so singular an animal would certainly repay you.

Before taking leave of the lakes, you must allow me to digress a little, and to point out to you the remarkable similarity of names to those used by the Norwegians. The waterfalls here are all designated by the word *Force*, Airey-force, Stockgill-force, &c. In Norway, *Foss* is invariably used for a fall of water. Here, too, the islands are called *Holm*—in Norway the same—Munk-holm in the Troudhjem Fiord, &c. Here, the word *Fell* is in constant use for the mountains—in Norway, *Fi-eld*, the latter syllable being strongly accented.

I now made up my mind to take my departure from the lakes for the weather seemed "set in" for bad; and finding that the best, and indeed, the only way by coach to Carlisle, whither I was going to pass a day or two with some friends, was *via* Cockermouth, I went on to that place, although quite *out* of my way, leaving Keswick in the afternoon of the 19th, by the mail.

The road skirts along the margin of Bassenthwaite Water, which is a fine lake of about four miles in length, and Skiddaw rises in great majesty above it; but the day continued so wet that I saw it to much disadvantage. This lake receives its supplies from Derwent Water; emptying itself at its northern extremity into the River Derwent, it falls into St. George's Channel.

Arriving at Cockermouth to dinner, I found that I had run into the risk of passing even a less *quiet* night, than in the little hedge alehouse at the foot of Helvellyn.

The Chartists had constantly been assembling in formidable parties, and much anxiety was prevailing in the town: night after night the *crisis* was expected, and the town was to be fired. The magistrates had taken it in turn to sit up all the night through, and were now sitting at the "Globe," where I had taken up my quarters, and where I soon learnt that a detachment of soldiers had likewise taken theirs. Two post-chaises had just arrived with some of the metropolitan police, who evidently created a little sensation. I candidly admit I wished myself any where else than at Cockermouth; but the rain continuing to pour down in torrents, I had no great fear of a *conflagration* at any rate, and indulging in the hope that the Chartists would not be such fools as to sally forth on such a night as this—in which conjecture I was not mistaken, I went to bed and forgot all about them till the following morning, the 20th, when I left Cockermouth for Carlisle, in the same continued dismal rain, consoling myself by the reflection that I should have gained nothing by remaining another day at Keswick.

The friend to whom I paid a visit, resides near the little village of Wetheral, which is situated on the left bank of the Eden, which is here a river of considerable breadth, and a beautiful bridge, or viaduct, has been thrown across it for the engines and trains of the Carlisle and Newcastle Railway. This is a fine piece of masonry, the arches rising to a height of very nearly 100 feet above the river, with a span of eighty feet for each. There are altogether five arches, and the total length of bridge is upwards of 600 feet.

Passing a Sunday at Wetheral, I went to the church; it is romantically situated above the river, which sweeps round the finely wooded estate of Corby, on the opposite bank, and which, being much swollen from the late rains, was flowing with great rapidity through the arches of the bridge.

There is, in a little vestibule, or gothic chapel, attached to this church, a monument, by Nollekins, one of the most exquisite pieces of sculpture that I ever remember to have seen:—it is to the memory of Mrs. Howard, who died in child-birth, the wife, I believe, of the present Mr. Howard, of Corby; with the still-born infant in her arms. The figures are most beautiful: she is represented in a reclining posture, supported by a figure of a female whose hand is pointing upwards, and is no doubt intended to represent Religion. The expression of the countenance in both figures is most excellent,—the one so calm, and so resigned; the other so full of hope, that it is impossible to view it without being affected. There is in Westminster Abbey, a monument that has always struck my fancy, from its beautiful simplicity. It is one by Westmacott, to the memory of Mrs. Elizabeth Warren, who was a lady of eminent virtue, and unbounded charity. It represents the figure of a girl in rags, in a kneeling posture; but a more beautiful and expressive work of art I have seldom seen.

Taking leave of my friends on the 23rd, I returned by the railway to Carlisle; and proceeded by the Edinburgh mail as far as Longtown, where I passed the night at the "Graham Arms," a most comfortable hotel, which I had not expected to find at this place, having passed through it in 1835, when I remember thinking otherwise of the accommodation the town afforded.

I remained at Longtown the next day, and visited Netherby, the noble estate of Sir James Graham, Bart., through which flows the river Esk. I had seen it once before, in 1835, when the mansion was undergoing great improvements which are now completed: I also rode across the Solway Moss, which has in a great measure been brought into cultivation by Sir James.

The little vicarage at Arthnot, where Sir James Graham's brother resides, is one of the most charming places imaginable. The cottage with its little garden, stocked with beautiful flowers, stands on the slope of a hill, and is backed by a fine wood which grows to the summit, from whence, on a clear day, I am told, there is an extensive view of the country.

Leaving Longtown on the 25th, I went on to Edinburgh by a somewhat slow coach; but the drive is pretty and full of interest. The road follows the river Esk, which flows through a prettily wooded glen, as far as Langholm. It then enters among the hills, which, though pleasing, seemed interminable. There are fine sheep-walks, and some of the more rugged, where the furze and heath abound, are full of black-cock and grouse, many of which we saw from the road. Passing through those hills we came to Howick, having come upon the banks of the Trent, a very pretty stream. Howick is delightfully situated among the hills, but it seemed to be a dirty slovenly looking sort of place, and the streets crowded with idle people, who came hanging round the coach while we were changing horses, very much in the *Irish* fashion.

Selkirk, through which we passed, is also agreeably situated, but was apparently just such another place as Howick, but perhaps not quite so bad. We now came upon the Tweed, and passed Abbotsford, which stands prettily above its banks. Between Howick and Selkirk, behind a small range of hills



on the right, stands the property of the Earl of Minto, but it is not visible on the road,—and beyond, in the distance, lie the Cherick Hills, a very extensive and imposing range, which add much to the beauty of the scenery.

After passing all these places, as also a town called Galashiels, on the Tweed, a rather populous place, and like Hahnsh and Selkirk, a manufacturing town, for woollen articles, I do not know that there is anything of interest on the way. Approached by this road Edinburgh makes no appearance, and we drove quietly into it just as it was getting dusk.

How agreeably surprised I was with this noble city the next day, I shall take leave to tell you in my next.

I wanted to get housed at Douglas' Hotel, which I heard was the best, but there was not a room to be had, and I took up my quarters in the same square St. Andrew's, at the London Hotel, which seemed to be frequented chiefly by commercial men; but it was the nearest place at hand.

I remain, your obedient servant,

A MIDDY ASHORE.

#### THE PORTABLE TELEGRAPH.

THE great utility of a code of signals on some economical plan, like the following, to be used at short distances, has induced us to re-publish them from a little work, entitled "The Homograph, or Every Man a Signal Tower," by Lieut. James Spratt, R.N., for which we are indebted to a friendly correspondent.

Lieut. Spratt says this new, easy, and useful code of numerical signals, is to be performed with a white pocket handkerchief, to be held in different positions with the body.

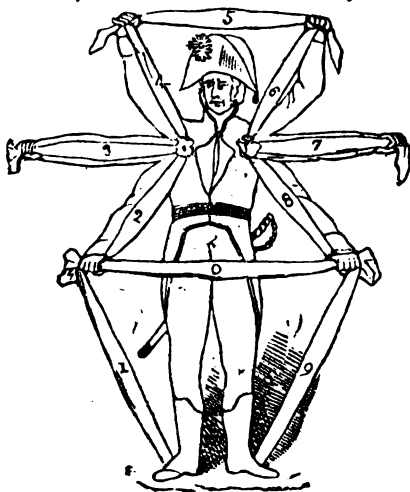


Fig. 1, with the additional arms, exhibits the whole of the numerical Homograph signals at one view. (See position that the handkerchief is held in, and the figures thereon). The first position from the right foot to the right hand is No. 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. When making 1, 5, 9, and 0, the handkerchief should be held by the diagonal corners, as generally prepared for wearing round the neck. For making 2, 3, 4, 6, 7, 8, you should gather the oppo-

site sides of the handkerchief in each hand, the near extremity of the handkerchief to be held by one hand to the point of the shoulder.

In working the Homograph, the body should be erect, the positions steady, the handkerchief to be held well in front of the arms, and parallel to the person to whom you are to impart your intentions. The best place for shewing signals from a ship is, in the chains, or on a lower deck port, as the white handkerchief exhibits a greater contrast with the black sides, and is of course better discerned; when made from the shore, on the side of a green hill, or in front of some thick foliage, or hedge, or a dark wall. The positions which you intend should compose the number of your signals, should be made in succession. The person to whom a signal is made should wave his handkerchief, horizontally, to convince you that it is understood. When the positions which compose the number of your signals are finished, you are to wave your handkerchief in like manner. For example, persons who make use of the Homograph should arrange in their separate books every question and answer which may occur to them, on any subject, as there is no limitation to the numbers. If the number prefixed to your communication be 1000, you are first to make position No. 1, and keep it so, until your consort answers it, by waving his handkerchief, which informs you that it is understood; then you are to make the 0 three times distinctly, (see Fig. 1, for the positions;) each 0 to be kept up until answered as before. Now, your signal being made you wave your handkerchief, which informs your consort that he is to refer to his book for the purport of the signal No. 1000.—*See examples.*

It is to be understood, that the persons who use the Homograph signals, are to have their conversation premeditated, and inserted in separate books, and the sentences to be numbered as in the subjoined

Fig. 2.

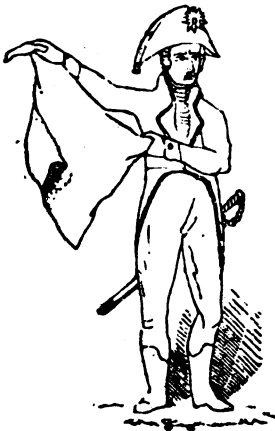


Fig. 3.



examples, when each, by reference to his book, may carry on the conversation at the distance of four miles by a common telescope.

The author frequently conversed with his messmates at Spithead, from the green ramparts at Portsmouth, and from Plymouth Sound to the Hoe, which is still a greater distance.

When you wish to commence signaling (if I may be allowed the expression) you are to display the handkerchief, which is called the signal of attention (see Fig. 2); and your consort is to display his in return. The person who displays first has a right to commence signaling, and to prevent confusion it is to be displayed at the commencement of every signal.

If by any accident your attention should be called off, and you did not comprehend the whole of a signal, by holding the handkerchief as in Fig. 3, you may demand a repetition.

This signal is called the repeat

Fig. 4.



Fig. 4 shews the following signals by twisting the handkerchief regularly round the arms:—

- No. 1. Affirmative.
- 2. Negative.
- 3. Interrogative.
- 4. To annul.

The Homograph may be found useful to captains lodging on shore, by which they may communicate any orders, with ease and accuracy, to the commanding officers of their ships at anchor.

Passengers in the East and West India and other fleets, may keep up a constant and friendly intercourse, to console themselves for the tediousness of a long voyage.

The country gentleman, may at a moment's warning, summon his neighbours to the sports of the field, or to the hospitable board.

#### *Examples of Signals.*

- 1.—We are now going into action; and hope it may end as gloriously as that of Trafalgar.
- 2.—We have gained a complete victory.
- 3.—Guard well the prisoners, as they are ten times our number.
- 4.—Our gallant chief has been ennobled by our gracious sovereign for his services.

5.—The officers who signalized themselves, are to be presented with medals.

6.—As you are going to England to refit, I shall be obliged to you for your live stock.

7.—Be particular in boarding ships subject to quarantine.

8.—We are in great distress for provisions.

9.—We are in a very leaky state, relieve us or we perish.

10.—Our foraging party has been successful.

11.—We have put the enemy's out-posts to flight, and made some prisoners.

12.—The enemy's cavalry are advancing from the wood on the right.

13.—We are in need of a reinforcement, with a field-piece.

14.—The enemy is disposed for battle, their wings are strong, and their centre weak.

15.—The engagement is general throughout the line.

16.—Our left is considerably weakened, and the enemy preparing to out-flank us.

17.—The enemy are routed on their right; their centre is in great disorder.

18.—Let the cavalry follow the fugitives.

19.—The enemy has been reinforced, and taken possession of a strong post by the sea-side.

20.—The co-operation of the navy will be necessary.

21.—Will you breakfast with me to-morrow?

22.—Shall we keep company?

23.—Send for your letters.

100.—What water have you on board?

200.—I invite you, and your neighbours, to celebrate the anniversary of the battle of Trafalgar.

1000.—I intend to shake a noble bag fox to-morrow. Meet me at day-break on the downs.

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## Naval Chronicle.

### THE QUEEN'S MARRIAGE.

THE very important and auspicious event of the marriage of Her Majesty Queen Victoria with His Royal Highness Prince Albert of Saxe-Cobourg, took place on Monday the 10th of February, at the Chapel Royal, St. James' Palace. The day was observed as one of general rejoicing,—royal salutes were fired by the several Naval and Military establishments of the country, and illuminations followed at night.

## SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.

THE cases relieved by this society in the last two months have been so numerous, as to render it imperative upon us, that we should give the facts as briefly as possible; merely premising that, in most instances, the sufferers have been supplied with food and clothing, and forwarded to their homes.

Aid has been extended, by the Brighton Branch, to the widow and ten children of Rayner Smith, whose fishing-boat was run down off Brighton, on the 16th Dec.

By the Aldborough Branch and Central Society:—To the master and crew of the Charlotte of Exeter, wrecked on the Kentish Knock, on the 23rd Dec.

By the Falmouth Branch:—To the crew, seventeen in number, of the Sackville of London, fallen in with on the 18th Dec., water-logged, about twenty-five miles north of Scilly.

By the Sheerness Agent:—To James Weaver, a Fisherman of Sheerness, whose boat was driven from her moorings, on the 23rd Dec. and wrecked.

By the Leith Branch:—To the widows, children, and aged parents of four Fishermen, lost in the Frith of Forth, on the 25th Dec.

By the Yarmouth Branch:—To the crew, nine in number, of the Crown of North Shields, wrecked on the Mouse, on the 24th Dec.

By the Yarmouth Branch:—To the crew of the West Hendon of Sunderland, wrecked on the Hasbro' Sand, on the 4th Jan.

By the Leith Branch:—To the widows and children of two Fishermen lost in the Frith of Forth, on the 8th Jan.

By the Yarmouth Branch:—To the crew of the Magnet of Stockton, wrecked on the Ower Sand, on the 2d Jan.

By the Aldborough and Yarmouth Branches:—To the crew of the William and Mary of Sunderland, run down on the 8th Jan.

By the Central Society:—To the crew of the Ringdove of Sunderland, wrecked on the Gunfleet Sand, on the 12th Jan.

By the Central Society:—To the crew of the Ann and Dorothy of Sunderland, wrecked off Boulogne, on the 16th Jan.

By the Yarmouth Branch:—To the crew of the Newcastle of Newcastle, wrecked on the Scroby Sand, on the 19th Jan.

By the Redcar Branch:—To the crew of the New Hopewell of Wells, upset off Huntcliffe.

By the Central Society:—To part of the crew of the Braganza of Peterhead, wrecked on the 2d Jan.

By the Central Society:—To the crew of the Barlow of St. John, New Brunswick, wrecked on the Mouse, on the 24th Jan.

By the Yarmouth Branch:—To the crew of the Quebec of North Shields, run down off Pakefield, on the 27th Jan.

By the Yarmouth Branch:—To the crew of the Regent of Aberdeen, run down off Pakefield, on the same day.

By the Harwich Branch:—To the crew of the Friends' Adventure of Sunderland, wrecked on the Gunfleet Sand, on the 26th Jan.

By the Harwich Branch :—To the crew of the Prospect of Sunderland, the vessel having foundered at sea, on the 27th Jan.

By the Grimsby Agent :—To the crew of the William of Newcastle, which vessel was abandoned in a sinking state, on the 22d Jan.

By the Bridlington Agent :—To the crew of the Antelope of South Shields, run down off Flamboro' Head, on the 8th Feb.

By the Bridlington Agent :—To the crew of the Topaz of London, run down off Flamboro' Head, on the same day.

By the Central Society :—To the crew of the Eliza and Jessie of Newcastle, wrecked on the coast of Germany, on the 28th Jan.

By the Brighton Branch :—To the crew of the Helen of Maldon, wrecked at Seaford, on the 21st Jan.

By the Falmouth Branch :—To the crew of the William Ranfield of Whitby, wrecked at Portreath, on the 4th Feb.

And, by the Central Society :—To the crew of the Recovery of Sunderland, wrecked fifteen miles from Brest, on the 26th Jan.

Auxiliary Branches have been formed and honorary Agents appointed, at the undermentioned places, since our last report :—

Ayr,	Newport, (Pembrokshire),	Wells, (Norfolk)
Montrose,	Durham,	Looe,
Scilly Isles,	Hornsea, (Yorkshire)	Castletown, (Cork)
Stranraer,	Stonehaven,	Ewell,
Goole,	Kinsale,	Cardiff,
Isle of Arran,	Cambeltown,	Cromarty,
Cork,	Cheltenham,	Guernsey,
Norwich,	Barnstaple,	Tunbridge Wells,
Arbroath,	Lynn,	Colchester,
Sidmouth,	Worcester,	Bideford,
Blyth,	Northampton,	Banff, and
Titchfield,	Lymington,	Southport.

We do not know a society that has sprung up and become so general in so short a period of time as this, nor one that has been more extensively useful in that short time; and this we can only attribute to its excellent objects, its limited subscriptions of two shillings and sixpence annually, and to the soundness of its management.

#### NOTICE TO MARINERS.

##### LIGHT AT ST. CATHERINE'S POINT, ISLE OF WIGHT.

*Trinity House, London, 4th February, 1840.*

NOTICE is hereby given, that the light tower which has been for some time past in course of erection on St. Catherine's Point, in the Isle of Wight, being nearly completed; the light will be exhibited therein on or before the evening of the 1st of March next, and thenceforth continued every night from sunset to sunrise.

The light at the above station will burn at an elevation of 178 feet above the level of high-water, and will appear as a *fixed bright Light* in all directions seaward.

##### LIGHT AT THE NEEDLES POINT.

Mariners are to observe, that in conformity with the notice issued from this house, under date the 29th November, 1838, the light at the Needles

Point will continue to be shewn in all directions within which it has heretofore been visible; but that, in order to distinguish it from the new light at St. Catherine's, it will, on and after the exhibition of that last-mentioned light, assume a *Red* colour, and will be so continued,

By order,

J. HERBERT, Secretary.

LIGHT ON THE COAST OF JUTLAND IN THE CATTEGAT.

THE following letter from Mr. Consul MacGregor, announces the establishment of a new light, on the western shore of the Cattégat:—

*Elsinore, Dec. 25th, 1839.*

Sir,—I have the honour to inform you that the Danish Government has caused a lighthouse to be erected at Forness, the utmost point of the headland extending from the east coast of Jutland in the Cattégat. It is built in the form of a quadrangular tower, having a dwelling-house with a roof of red tiles annexed to it. The buildings are covered with white plastering, so as also to afford a good seamark by daytime. It is situated  $2\frac{1}{2}$  English miles N.E.  $\frac{1}{2}$  E. by compass from the entrance of Grenæ Haven and distant about thirty miles W.S.W. from Anholt lighthouse. The light is placed at an elevation of sixty-seven feet above the water's edge, and it is perceptible at a distance of about thirteen miles.

It consists of six lanterns, with reverberators revolving in three minutes, and exhibiting each half-minute, a strong light for about six seconds, which disappears again for twenty-four seconds before it again returns. It is to be lighted for the first time in the course of December, and will continue to burn between Easter and Michaelmas from one hour, and between Michaelmas and Easter from half an hour, after sunset to sunrise.

I have, &c.

*To the Hon. W. Fox Strangways.*

FRANCIS MACGREGOR.

EFFECTS OF LIGHTNING ON H.M.S. SNAKE.—Mr. Editor,—Having observed in some of the late numbers of your Magazine, statements relative to H.M. ships having been struck by lightning; I beg to forward you the following notice of H.M.S. Snake having been struck on the passage from Nassau to Halifax in June 1838. We had reached latitude  $29^{\circ} 45' N.$ , longitude  $74^{\circ} 25' W$ ; the weather fine, with E.S.E. trade wind: at 8 A.M. a dense arch of clouds was observed to rise in S.W., which quickly passed over our mastheads. The instant it was vertical over them, the electric fluid of a vivid purple colour, was observed to descend with an instantaneous explosion. Looking aloft at the moment splinters were observed falling; the electric fluid had entered the main truck, shivered the main-royal-mast, passed down the fore part of, the main topgallant mast, splintering it in its course, and from the heel of that mast was attracted to the chain main-topsail tye, leading up and down the mast, down which it was conducted until it reached the lower end, about eight feet from the deck. Finding a better conductor in the mainmast than in the topsail halliards, it flew into it, driving out several splinters in a slanting direction, and apparently became divided under the saddle of the main boom, as very small grooves were observed cut into the mast in several places on both sides. An explosion appeared to take place at the deck, and the electric fluid to become divided, one

part had the appearance of passing out at the quarter-deck port, the other descending to the lower deck, where it exercised its electrical properties on the officers of the gun-room, officiating as an emetic to one; and several had their limbs benumbed for several hours. On examination of the mainmast on arrival at Halifax, it was found to be badly sprung at the partners, two inches deep, and nearly fifteen inches in circumference. The mast sounded hollow, and was found to be much shaken, the grain of the wood at the step being perfectly open, following the course of the annular rings; showing that the shock had extended to the heel. A seaman aloft on the crosstrees, at the time, experienced no sensation whatever.

I recollect some months previous, when cruising on the coast of Cuba, two of the officers being affected, in a very curious manner, by the presence of electricity; they were lying in their hammocks at the time, close to the main hatchway, and a great deal of lightning round the ship, running from cloud to cloud, although none close. Yet these persons were so perfectly stupified, and seized with sickness and weakness of the limbs, that they were unable to stand, and did not recover until the lightning had passed off.

I am your obedient servant,

ALEX. MILNE,

Captain H.M.S. Snake.

January 1839.

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#### THE BRITISH QUEEN.

MR. EDITOR.—I have read with mingled feelings of astonishment and regret, a letter in your last number, signed Mercator, on Atlantic Steam Navigation—I say astonishment, because such large steamers, which are the boast of this country, are *depreciated* by him, and regret at seeing your valuable work made the channel of conveying his random and ill-formed opinions to the world. Such a magnificent vessel as the British Queen, the largest steamer the whole world can produce, should rather be held up as an object for admiration than ridicule; and his doing the latter can only be attributed to his having some ulterior object. With a degree of self-sufficiency, which can only be excusable from its very absurdity, Mercator speaks of erroneous forms and construction of sea-going steamers in general—all are wrong in his estimation, and no one knows anything of building a steamer but himself! He speaks of blunders committed by companies and shipwrights! and has no hesitation in saying, that a steam ship, to be forced against the seas of the ocean, should be short of 200 feet in length. This is vastly fine, no doubt; but, will Mercator shew why she should not be 250 feet in length? The full forebody appears to displease him, but is he aware that a space of twenty feet from both the extremities of the British Queen is bulkheaded off and nothing carried in it whatever. No doubt the action of sails on a sailing vessel, and the action of paddles on a steamer, are totally different questions; and perhaps Mercator will enlighten your readers, if he can, on the subject. But, if he cannot write more to the purpose than he has done, your readers, Mr. Editor, will not gain much by his erudition.

I am sorry Mercator, who really seems to mean well, should not have



been better informed respecting the British Queen, which vessel he selects to bear the brunt of his remarks. He alludes to her present state, but does not say what it is ; and averse as I am to appearing in print, yet I consider it my duty as her commander to inform you that, notwithstanding the extraordinary severe weather of our last voyage home, she strained and worked as little as any ship I have ever sailed or steamed in, during 20 years' experience at sea, either in Her Majesty's Navy, or the Merchant Service. There are many particulars concerning her with which Mercator is evidently quite unacquainted, such as her foremast being ninety feet from her stem, &c., but these perhaps it is not his desire to know ; therefore, I shall conclude this with the recommendation, that before he addresses you again on this subject, he will inform himself upon it, and he will then be obliged to change his opinions, and will write as much in admiration of this noble vessel as he has done against her.

I am, Sir, &c.,

RICHARD ROBERTS.

*Lieut. R.N., and Commander of the British Queen.*

*British Queen, Blackwall, 14th Feb. 1840.*

[We insert the foregoing letter from the commander of the British Queen, in order that we may avert the charge of partiality. But, although his vessel has been particularized by Mercator, it is evident that the discussion related purely to questions in naval architecture, applicable to all the great steamers. We do not believe Mercator has any such object as that attributed to him by Captain Roberts, but that he wrote from the purest feeling.—ED. N.M.]

### SKERRIES LIGHTHOUSE TOLLS.

A meeting of ship-owners and others, connected with the trade of Dublin and the outports, was held on the 13th Feb. in the Council Chamber of the Chamber of Commerce. The object of the meeting was to take into consideration law opinions obtained and other documents connected with the demands made on shipping by the proprietor of the Skerries lighthouse.

George M'BRIDE, Esq. in the Chair.

Charles Halliday, Esq., (secretary to the Chamber of Commerce,) commenced the proceedings by reading the following

#### REPORT.

“The council of the Chamber of Commerce have convened this meeting for the purpose of bringing under the consideration of the ship-owners and others interested in the trade of Dublin and the outports, the measures which have been taken, as well as those considered necessary, to prevent illegal tolls being levied by the proprietor of the Skerries lighthouse.

“A select committee of the house of commons recommended that the lighthouse (which is the property of a private individual) should be purchased by the Trinity House Corporation, and that shipping should thus be relieved from a burden which has long been a source of complaint.

“But as it appeared from returns then made to parliament, that the proprietor derived a clear income exceeding 12,600*l.* per annum from this single lighthouse, and as it appears from other documents that the nett annual income now exceeds 15,900*l.* the estimated value of the

property was so great as to prevent the Trinity House from completing the purchase.

“Anxious to facilitate as far as possible a very desirable object, the Chamber of Commerce resolved to ascertain how far the proprietor of the Skerries lighthouse was legally entitled to collect the tolls which he demanded, as any deduction from the annual income must reduce the sum required for the purchase of it.

“On the investigation it appeared that the lighthouse was erected under a patent granted by Queen Anne, and although that patent was subsequently confirmed, and perpetuated by the English act of parliament of the 3d Geo. II. chap. 36, this act was never recognised by the parliament of Ireland.

“It further appeared, that even if the English act of the 3d Geo. II., could be supposed to authorise the collection of any tolls in Ireland, there was no clause in that act which could justify the collection of tolls, which for the last fifteen years have been exacted from Irish shipping.

“It appeared that tolls are now collected from vessels which do not pass by, near, or in sight of Skerries light, or sail on any of the voyages mentioned in the act; and as these tolls are collected from vessels, whether loaded or in ballast, they amount in all cases to fourfold, and in some cases to eightfold the sum charged by the Irish Lighthouse Board, for any lighthouse on the coast of Ireland.

“On these facts being ascertained, a letter was addressed to the proprietor of the Skerries lighthouse, requesting that he would state under what act of parliament, or other authority, he demanded lighthouse dues from vessels trading from Wexford to Dublin, and on other similar voyages.

“This request was answered by a reference to his law agent, who stated that the tolls were collected under the 3d of Geo. II, chap. 36; and on being requested to point out the section or clause, as that act did not appear to contain any which could authorise the collection of tolls for the voyages specified, the law agent stated that they had submitted a case to counsel, and would inform the chamber of the result.

“After considerable delay the chamber again solicited the required information, and then the law agents stated, in reply, that they would not advise the proprietor of the Skerries lighthouse to point out any clause in the act of parliament under which such tolls were collected.

“As it was evident from this answer that the proprietor of the Skerries lighthouse had decided not to discontinue any exaction, until compelled to do so, and that so long as he was permitted to collect the tolls he would demand them, a case was prepared on behalf of the Chamber of Commerce, and opinions being obtained, it appeared from the opinions of the Attorney-general and Mr. Bessonett, Q. C., and counsel to the Irish Lighthouse Board, that *no tolls whatsoever* could be legally levied *in Ireland* by the proprietor of the Skerries lighthouse.

“This case, with the opinions thereon, was immediately forwarded to the Trinity House Corporation, as it appeared by the returns made to parliament that tolls exceeding 3,000*l.* per annum were collected in Dublin, and the reduction which thus might be made from the estimated value of the lighthouse might enable the Trinity House to complete the purchase.

“ The Trinity brethren, participating in the views of the Chamber of Commerce, directed a case to be prepared by their own solicitor, and submitted for the opinion of their own counsel, the Attorney-General of England, Sir William Follett, Mr. Cresswell and Mr. Robinson. This step created a delay of several months: but the Trinity brethren, on receiving the opinions transmitted a copy of them to the chamber, from whence it appeared that, although the English lawyers did not fully concur in the opinions obtained in Ireland, they *unanimously* agreed that *Irish coasting vessels* were not liable to the payment of dues for the Skerries lighthouse, and consequently that the dues now levied on them were illegal.

“ In transmitting these opinions, the Trinity brethren stated that they were negotiating the purchase of the lighthouse from the proprietor; but as the Chamber of Commerce feared that this negotiation, which had already lasted for some years, might be delayed; and as the trade of Ireland would, pending it, be subjected to an illegal impost, which should never have been levied, they again sought the opinion of counsel on the steps which should be taken for the relief of the shipping interests.

“ The obstacle to immediate relief from the exaction arose from the course pursued by a former collector of customs, who having been appointed collector of the Skerries light dues, from which he received a large commission, the amount of these dues was greatly increased; yet, being collected at the custom-house, by an officer of the customs, the masters and owners of vessels were led to believe that the demand was in all respects legal, particularly as the collector refused to grant custom-house clearances, unless the dues which he demanded were paid. The present collector of customs, who has no interest whatsoever in the collection, conceives that it is his duty to refuse custom-house clearances to any vessel, if the master or owner of that vessel does not produce a receipt specifying the payment of the Skerries light dues, and he refuses these clearances to Irish coasting vessels, because he found that to be the course of business when he entered into office; and considers that he cannot deviate from the practice of his predecessor, no matter under what circumstances that practice was introduced, except he be directed to do so by the lords of the treasury, or the commissioners of customs.

“ The Chamber of Commerce, acting on the legal advice received, forwarded to the Lords of the Treasury a statement of the case, with the opinions of counsel and other documents, and prayed that, as the Attorney-General of England, and the Attorney-General of Ireland had declared that Irish coasting vessels were not liable to the Skerries light dues, their lordships would direct that the collector of customs should not refuse clearances to such vessels, because the owners refused to pay these dues.

“ In fact that, as the law officers of the crown had declared the demand to be illegal, that the power of the crown should no longer be exercised, through the collector of customs, to compel submission to that illegal demand; and they confined themselves, in the first instance, to the case of Irish coasting vessels, as on the illegality of exacting tolls from them no difference of opinion existed between the Attorney General of England and the Attorney General of Ireland.

“ It is with much regret, therefore, that the council have now to

communicate to you the reply from the Lords of the Treasury, a reply which could not have been anticipated, as it decides in effect that their lordships consider that the power of the crown shall continue to be exercised for the benefit of an individual, and the trade of Ireland compelled to pay an impost avowedly illegal, until the Trinity House can purchase the income of that individual, of which this illegal impost forms a part.

(COPY.)

“ *Treasury Chambers, 30th Jan., 1840.* ”

“ SIR,—I am commanded by the Lords Commissioners of her Majesty’s Treasury to acquaint you, with reference to your letter of the 4th inst., that a negotiation is now going on between the Trinity Board and the proprietor of the Skerries light, for the absolute purchase of his right therein; and that under these circumstances my lords do not deem it expedient at the present time to give any directions relative to the dues collected from Irish coasting vessels.

“ I am, sir, your obedient servant,  
(Signed) “ C. N. TRAVELMAN.

“ *The Secretary of the Chamber of Commerce, Dublin.* ”

“ As every vessel sailing through the Irish Channel is now taxed for the Skerries light, the merchants and shipowners of Cork, Waterford, Wexford, Drogheda, Newry, Belfast, &c., are interested in the result of this case, and it will be for consideration whether a committee should not be appointed to conduct the legal or rather proceedings which may be found necessary, either to relieve the trade of Ireland from any payments for this lighthouse, or so much of it as relates to Irish coasters.”

Mr. Halliday continued, and said that it might be further necessary to state to the meeting that they had received communications from Wexford, and some other outports, expressing similar opinions; and they should know that in the event of the Trinity House purchasing the tolls of that lighthouse, they might legally levy the dues which the present proprietor had no right to do. He was sure they did not contemplate such a thing, because it was their object not to burden the trade; but it was right to state that it would be in their power to do so under an act passed in the last reign, which gave them power to levy any tolls for lights set forth by them, and sanctioned by the privy council. It was now for the consideration of the meeting what steps should be taken.

Mr. M'Donnell suggested that they should appoint a committee, and require of them to report what steps should be adopted.

A gentleman asked what was the amount of tolls paid for the lighthouse by coasters?

Mr. Halliday said that the proprietor, before a committee of the House of Commons, refused to make any return. He stated that it was private property, and as such not bound to give any return; but being pressed by the house, he gave a return of the average of seven years, and it was 12,600*l.* net annual income. It since appeared, by letters from the Trinity House it was upwards of 17,000*l.*

Mr. Abel Labertouche said that he had told the collector of the tax in Dublin, that he ought to go fully prepared to state what income was derived from the country. That gentleman was, from illness, unable to attend, but he gave him (the speaker) a statement of the gross amount of the receipts of the Skerries lights for the last two years. In 1838, they were 39,02*l.* 16*s.* 4*d.*, and in 1839, 42,74*l.* 8*s.* 10*d.*, out of that the sum received for coasters in Ireland had been 330*l.* or 340*l.*; of that from 100*l.* to 110*l.* had been received in Dublin. The collector had not the authority of his employer for making this statement, but he was not cautioned against it.

Mr. Halliday stated that they had written to Mr. Jones, the proprietor, asking under what authority he collected the tolls, and he referred them to his solicitors, Evan and Morgan, Cardigan, who, in their reply, had not given the information required.

Mr. Astle said that he could show Mr. Labertouche, that the return he had read was a one-sided return. That was only the amount received in Dublin. but there were collectors in London and Liverpool, and most of the ships coming over paid before they came here. They must, therefore, double the amount which had been mentioned. He (Mr. Astle) said that they wanted to resist the toll in toto (hear, hear). This was not the only light which required toll from ships whether they passed it or not. If a line were taken across from Skerries to Dublin, it would be found that the majority of vessels did not go near it. This light did not collect from the Irish coasters until within a few years.

A gentleman said that he had offered Mr. Jones 800*l.* a-year to clear all vessels from the port of Dublin.—That was twelve years since.

Mr. Halliday said that the amount of this light tax was not very material. It did not matter whether it was 3,900*l.* or 4,000*l.*, or, which would be nearer the truth, 8,000*l.* a-year—but it was of great importance to them that not even 500*l.* a-year should continue to be levied illegally. The Attorney-Generals of both countries had given their opinions that the toll was illegal as far as regarded Ireland, and it was for the present meeting to say whether they would not, by representations to parliament or otherwise, see that the authorities should not sanction a collection which the crown officers had pronounced to be illegal.

Mr. Astle said that the plain course was to bring the question to issue with the collector, and let Mr. Jones try his right. They should put their hands in their pockets and subscribe.

Mr. M'Donnell thought that the best plan would be, to refer the matter to a committee.

Mr. Boyce suggested that they should communicate, by letter or deputation, with the board of trade; there was now an Irishman on that board in whom they had reason to expect a friend. He thought that would be preferable to going to law in the first instance, to which every mercantile man must object. He for one would be very glad to accompany any gentleman to go over on the subject, and if they did not get redress in that way they might adopt Mr. Astle's suggestion.

A gentleman suggested that the treasury had been applied to, and their answer had been received.

Mr. Boyce said they were still open to remonstrance.

Mr. Astle said that ships saw the Stack light at double the distance of the Skerries light, and they did not pay for it.

Mr. Gibbon complimented the Chamber of Commerce on their exertions in the matter, and proposed, as an amendment, that the further management of it should be left with them, and that they should prosecute their labours with the view of ascertaining if the Skerries light was to be extinguished, or to be managed on the general principles which govern other lighthouses. They might, when necessary, report, and communicate with their brethren of the trade.

Mr. Boyce suggested that the secretary ought to be consulted before they asked the council to do a very heavy task—delay might be fatal to them, for if the board of the Trinity House got those lights into their possession, they would be legally entitled to collect toll, and there would be no remedy but a legal enactment.

Mr. Wilson (Governor of the Bank of Ireland) asked by whom the expenses were to be borne.

Mr. Allen mentioned that the Captain of the Innisfail steam packet had told him that he had gone in her fifty-two voyages, paying 104 times, and had not during that time ever seen the light. He knew that on ten Irish lights, viz. :—Howth, Kingstown, Kish, Wicklow, upper and lower Arklow, Tusker, Ronybeg, Hook and Cork—the charge was only 2<sup>d</sup>. per ton. On the English lighthouses the charge was 1<sup>d</sup>. per ton, while on the Skerries light it was 1<sup>d</sup>. per ton.

Mr. Halliday said that if they returned these papers back to the Chamber of Commerce, and requested them to communicate with the Board of Trade, the effect would be delay, and the illegal impost would still continue. He would now state to them, that it was the opinion of counsel that if they did not take a certain legal step which would be pointed out to them, they could never recover back one shilling of the dues which had been paid. It was of importance to every shipowner that the step pointed out should be taken—from the time that was done the proprietor could be compelled to refund everything that had been illegally paid to him. For that reason, he (Mr. H.) thought the business ought to be referred to a committee representing the shipping interest, with power to collect a trifling sum, and he would lend his assistance.

The motion for a committee was then put and carried.

Mr. Boyce thought that it ought not to go forth that the statement read by Mr. Labertouche was strictly correct. Any gentleman in the room, representing any of the steam companies, must be aware that there were fallacies in it: the Glasgow Company alone paid 300<sup>l</sup>. a-year.

A committee was then named, consisting of Messrs. Boyce, Astle, Howell, H. Scott, and Allen.

The meeting separated.

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ANTIPODS ISLAND.—In our first page we have inserted a communication from Lieut. O. Wilson, R.N., on the longitude of this island, who considers it in 178° 42' W., placing it as he says, to the westward of where the charts lay it down. We are not aware what charts Lieut.

Wilson alludes to, but we find it in  $179^{\circ} 40'$  which would make Lieut. Wilson's corrected position to the eastward instead of westward as he states it to be. The island, we believe, was discovered in 1800 by Waterhouse.

### MARINE ARTIFICIAL HORIZON.

With the view of shewing the capabilities of Lieut. Becher's Pendulum Marine Artificial Horizon,\* which has now been considerably improved, we lay before our readers the following observations, made on board H.M.S. Fairy, with the instrument attached to one of Cary's sextants.

The following meridian altitudes of the sun were observed on board the Fairy in Harwich harbour, with the pendulum horizon, to obtain an approximate correction for the instrument.

	November, Tues. 19th.	Wed. 20th.	Sat. 23d.	Tues. 26th.
	$18^{\circ} 31' 40''$	$18^{\circ} 21' 30''$	$17^{\circ} 42' 70''$	$17^{\circ} 6' 30''$
Refr. Px. . . .	$-2 40$	$-2 43$	$-2 49$	$-2 55$
	$18 32 0$	$18 18 47$	$17 39 41$	$17 3 35$
Semi. Dr. . . .	$+ 16 13$	$+ 16 13$	$+ 16 14$	$+ 16 14$
T. A. . . . .	$18 48 13$	$18 35 0$	$17 55 55$	$17 19 49$
Z. D. N. . . .	$71 11 47$	$71 25 0$	$72 4 5$	$72 40 11$
Decl. S. . . .	$19 23 35$	$19 37 31$	$20 17 10$	$20 53 27$
Approx. Lat.	$51 48 12$	$51 47 29$	$51 46 55$	$51 46 44$

$0 48 12$	Extr.	Diff. of extr.	$0 1 17$
$0 47 29$			
$0 46 55$	Extr.		
$0 46 44$			
$51 47 19$	Mean		
$51 56 45$	True Lat.		
$0 9 26$	Correction Subtractive.		

This correction inherent in the construction of the instrument is best obtained by comparing simultaneous altitudes with the Instrument, and another sextant in the common artificial horizon, or with the sea horizon; the difference between the corresponding altitudes being the correction required.

Meridian altitudes of the moon for the latitude of the anchorage previously observed on board the Fairy, in Harwich harbour, with the pendulum horizon lighted by lamp; the foregoing approximate correction for the horizon being applied to obtain the observed apparent altitude.

\* Made by Cary, Optician, Straud.

At night the horizon illuminated by lamp.

November, Sat. 16th.	Mon. 18th.
Moon's L.L. 7h. 57m. P.M.	9h. 47m. P.M. Moon's L.L.
35° 54' 0"	49° 59' 0"
Pend. Cor. . . . 0 9 26	0 9 26
Moon's A. A. 35 44 34	49 49 34
Sem. Dr. . . . + 16 17	+ 16 46
36 0 51	50 6 20
Cor. . . . . + 46 35	+ 38 13
T. A. . . . . 36 47 26	50 44 33
Z. D. N. . . . 53 12 34	39 15 27
Decl. S. . . . 1 16 35	N. 12 41 7
Lat. . . . . 51 55 59	51 56 34

Hor. Par. . . . . 58 53 6	60 33 8
Change . . . . . 0 17 3	0 14 7
59 10 9	60 48 0
Declm. . . . . 1 31 8 1	12 31 41
Change . . . . . - 14 32 6	+ 9 25 8
1 16 35 5	12 41 6 8

December 2, 1839, at sea off the Bawdsey buoy, the proper latitude of which is 51° 58' N., considerable motion.

Merid. Alt. Sun's L.L.

15° 57' 20"	
— 9 26	Pen. Cor.
15 47 54	
— 3 10	R. P.
15 44 44	
+ 16 15	Sem. Dr.
16 0 59	Sun's T. A.
73 59 1	Zen. D. N.
21 55 23	Decl. S.
Lat. 52 3 39	N.

In this observation the observer was hurried to put the ship about.

In page 303 of our last volume, will be found observations with another instrument of this kind; and in our next we shall give some observations for chronometers with the horizon with which the above were obtained.



## RECORDS OF WRECKS.

*Union*, (190) Crew saved by the *Blessing*, of North Shields; the crew treated with great humanity and generosity, by Captain Gibson, and landed at Richebucto.

*Hart*, (158) Struck on rocks of Cape Race at night; all saved.

*Manly*, (166) Wrecked on Troubridge shoal, the captain having mistaken the lights of the wreck of the *Parse* for those at Holdfast Bay.

*Brilliant*, (139) Becalmed in shore while in stays; driven by swell and surf on rocks; survivors dropped from bowsprit on rocks; remainder lashed to rigging, killed by chafing of spars. The captain seen longest from shore and observed to drop: he left a wife and four small children. The mate, a seaman, and a boy likewise drowned, and also a coast-guard man in rendering assistance.

*James Mc Inroy*, (163) Struck on a coral reef of the Maldives going 8½ knots, at 9h. 30m. P.M. Efforts to get ship off of no avail; daylight, Maldiv Islands seen seven miles distant; boat sent to the islands—pitched tent; returned and landed the rest. Conveyed to the Sultan, and left the islands in boats for Cochin on 10th June; on 24th, anchored off Malabar coast, obliged to bear up for Ceylon; on 29th, arrived at P. de Galle, mate having died on the passage.

*Aid-de-Camp*, (2) Went on shore on Friar Island, Keppel Harbour, with above 300 passengers on board, sixteen of whom were drowned; the remainder reached Halifax in a deplorable condition.

*Anne*, (8) Left Llanelly on 31st Jan., rounded Cape; driven up Mozambique Channel; captain ill, died on 25th; vessel struck and filled rapidly; mate and three of crew captured and ill treated by Arabs; (the rest took longboat) and then brought to an Arab port and embarked for Muscat, where they were put on board *Hugh Lindsay* steamer for India.

*Children*, (31) Left Sydney (Australia) for S. coast on 11th Jan.; bad weather; under trysail and close reefed topsail, heading to W.N.W., struck, and shattered to pieces. Thirty-eight persons on board; dreadful suffering while vessel was breaking up. Several attempting to swim ashore perished in the sea, excepting mate; at daybreak twenty-two persons were huddled on the rocks, the remainder strewn about corpses—buried: attempt to reach Port Philip and arrived on 5th Feb.

*Arab*, (9) Captain Little, 18th Sept., in lat. 33° 40', long. 61° 20', discovered at a distance the appearance of a raft with something on it; bore up and sent his boat, and took from it three human beings, with scarcely any life in them; took them on board, and learned that they were the only survivors of a crew of nineteen men belonging to the ship *Arab*, Robertson, of and for Hull, from Belize, Honduras, with a cargo of mahogany. During the gale of the 13th Sept. she was dismasted, and finally went entirely to pieces. Those saved were on the side of the poop, being four planks twenty feet long. They had been on this raft five days, without any thing except two cocoa-nuts, which they found, and were in a most wretched and starving condition when taken off, and probably would not have survived another day. There were originally nine upon the raft, including the mate, but they had previously died, or becoming deranged for want of food, had jumped into the

sea. The names of those saved are Wm. Westwood, carpenter, of Selby, Yorkshire, England; John Arsley, a Prussian; and Halvor Haralsen, a Norwegian.—*Shipping Gazette*.

*Manchester*, (79) From Bombay for Liverpool, laden principally with cotton, left Bombay on the 15th July; she proceeded, all well, till the 29th, when in lat.  $1^{\circ} 47' N.$ , long.  $14^{\circ} 49' E.$ , with a heavy head sea, suddenly found to be making a great deal of water. At first one pump kept going, but it was found that continual working at two pumps did not keep her free, vessel making eight feet of water an hour. Endeavours to reach the Isle of France, but on the 2nd August, the pumps refused to suck, and the water in the hold had been increased to sixteen feet. As the ship was sinking the boats were got out. The captain, one passenger, and seventeen men got into the long boat, the first mate and four men into the gig, and the second mate and four men into the jolly boat. With two casks of water and one of bread, they shaped their course for Ceylon, only the poop of the barque being visible when they put off from her. The gig proving leaky the men were removed from her into the long boat, and she was abandoned. The two remaining boats continued their course for Ceylon till the morning of the 4th of August, when, judging it impracticable to fetch that Island, they stood for Penang. The long boat, with the captain, first mate, a passenger, and seventeen of the crew, reached Penang on the morning of Sept. 22. They had lost sight of the jolly boat in a squall; and, up to the latest hour, no tidings had been heard of her, though one of the government gun-boats had been out on her probable track for the purpose of rendering her any assistance. Those in the long boat had, on the morning of their arrival, breakfasted on their last biscuit. The most kind and humane attention was paid to the distressed mariners at Penang.

*Brilliant*, (139) Was built in 1821; her tonnage is 258; belongs to the Aberdeen, Leith, and Clyde Shipping Company, and may be said to have been worth 10 to 12,000*l.*, and is, we believe, uninsured.

*Scotir*, (185) The crew of this timber ship saved under very trying and difficult circumstances, by the *Roscus*, Captain Collins, to whom great credit is due, for saving the lives of twenty-four persons. The conduct also of Captain Jeans, in being the last to leave his ship, besides the general esteem in which he was held by his crew, is well becoming the real character of the British seaman.

*Elizabeth*, (152) Cape of Good Hope, Nov. 14: Information reached town on Sunday, that the *Elizabeth*, a ship of four hundred tons, from Calcutta for Liverpool, with a cargo consisting of two hundred and fifty bales of cotton, indigo, and spirits, had come on shore during a gale on the preceding Friday night, near the mouth of the Beka, in Kafirland. From information which has reached us it appears that the vessel was standing off shore during the whole of the preceding day—the gale however came on so suddenly, blowing directly on the land, that in spite of every effort she came on shore. Fortunately the place where she grounded, (near the scene of Captain Stout's disaster in 1796,) is free from rocks; and, we are glad to say, that the whole of the crew succeeded, by the aid of their boats, in effecting a landing.

The Kafirs living in that neighbourhood, belonging to Pato's tribe, were first attracted to the spot by observing some casks floating in the

river, and which they mistook for hippopotami. They accordingly mustered for a hunt, but on approaching the spot they discovered their mistake, and also the wrecked sailors in a group on the beach. Being armed, and apprehensive that this might excite alarm, they, with great good sense, laid down their assagais, and approached them in a friendly manner, signifying their readiness to assist them, and that they might dismiss all apprehension.

Information of the disaster was despatched to the diplomatic agent in that neighbourhood, to the commandant at Fort Peddie, and also to the Rev. W. B. Boyce, of the Wesleyan Mission Station near the same spot. Everything has since been done for the security of the property, and the comfort of the sufferers. A detachment of the 27th Regiment has been marched to the scene of disaster.

The agent for Lloyd's at Graham's Town, Mr. C. Maynard, proceeded thither immediately on the receipt of the intelligence—and hence there can be no doubt but that all will be effected which circumstances will admit of, to lessen the severe loss and to ameliorate the situation of the immediate sufferers. We do not learn that the vessel has gone to pieces, but we imagine the hope of saving her is but slender.—*Graham's Times Journal.*

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*Providential Escape from Lightning.*—During the storm which continued with such unabated violence along the west coast of Erris, H.M. revenue cruiser, Hawk, anchored for shelter in Broadhaven, riding heavy with two anchors ahead, on the 21st ult. Whilst two of the coastguard men were on the lookout at Ballyglass station, the sky was suddenly overcast with a dense black cloud, and immediately after was rent asunder by vivid lightning; at this moment both exclaimed, "oh, the poor Hawk is gone." The cutter was lying as already described, abreast the Watch House, and appeared to them enveloped in a blue flame of terrific lightning, as she seemed to yield to the awful crash of the thunderbolt, and their supposition was too truly verified; as in a short time the cutter's boat was rowed to the shore, and the commander, H. Griffith, Esq., a most active and indefatigable officer, sent an express to Captain Nugent, inspecting commander of Belmullet district, informing him that the lightning had struck the Hawk. It first descended on the copper spindle at the topmast head, which it instantly melted, and quite shivered the topmast, played along the iron hoops, round the mainmast head, which it has injured; then descending right down the main hatchway, striking the chain cable, and exploded between decks, among the crew. The report was equal to that of a small cannon, and the particles of the fire-ball scattered all around, filling the men's berths and the whole of the vessel below with a thick vapour of sulphurous matter, most overcoming by its smell. The fire passed between a man and a boy, who were standing at the moment in the main hatchway. The boy, crying with terror, ran forward; and the man felt a great shock, and was stunned for the time, but soon recovered. Another man, lying carelessly across a hammock, near the hatchway, jumped up and thought his neck-handkerchief was on fire, and so close did the electric fluid pass to him, that it disabled his right arm, which prevented him

from untying his neckcloth, but he also recovered. It is remarkable that at the same time, as nearly as possible, the Neptune, a small cruiser attached to the Belmullet district, lying at anchor in Ely Bay, was near being struck—the electric fluid having burst so close, followed by the thunderbolt, that it made the vessel reel, and several of the crew were stunned.—*Mayo Constitution.*

## LAW DECISIONS.

CRANE AND SON, LATE SWAINSTON AND OTHERS, V. GIBBS.

**ISABELLA.**—*Collison.*—The hearing of this cause came on before Mr. Counsellor Moody, at the Guildhall Tavern, on the 20th and 21st December last. It was originally intended to be brought before the Court of Queen's Bench; but, it being shewn that the cause could not be tried till after term, from the number of cases which preceded it, and it being uncertain if the witnesses for the defence (then in London) could be again collected, it was agreed to be settled by arbitration. The action was brought against the defendant so long back as 1836, and is a case of considerable interest to the Cinque Ports pilots.

It appears that on the 23rd June, 1836, the defendant, who is a branch pilot, of Deal, was working the ship *Isabella*, of 600 tons burthen, Captain David Brown, from Calcutta, up the River Thames, in heavy weather, under double-reefed topsails, on the larboard tack, when she accidentally, and most unfortunately, came in collision with the Liverpool brig, *Crescent*, of 200 tons, Captain Roberts, who was standing over from the north shore, on the starboard tack, causing considerable damage to both vessels, that of the brig to the amount of 68l., and of the ship to the amount of 85l. It appears, however, that the Captain and officers of the ship fully exonerated the pilot from all blame; but the owners of the brig first came upon the *Isabella* for the amount of the damage done to their vessel, and ultimately brought their action against the pilot. Hence the cause of the present proceedings. It was argued by the plaintiff's counsel that a sufficient look-out was not kept on board the *Isabella*, and that the pilot was responsible for the acts of the crew under such circumstances. For the defence, it was deposed, that the ship bore up to avoid the collision, immediately after tacking from the Blyth Sand, off which the accident took place; and, that the brig, instead of keeping her wind, as she ought to have done, in accordance with an established rule in nautical affairs: that the ship on the larboard tack shall bear up, to avoid coming in collision with vessels on the starboard tack, which are expected to keep their wind, bore up also, by which she brought herself in contact with the *Isabella*, thereby causing the damage for the recovery of which the plaintiffs had brought the present action against the pilot of the *Isabella*. We understand that the evidence was so equally balanced, as well as contradictory, that the arbitrator, (not being a nautical man, and consequently having considerable difficulty in understanding the subject,) rejected the evidence altogether, and took time to consider, when he ultimately decided in favour of the plaintiffs, without however assigning his reasons for so doing, awarding the damages at 75l.; for, although the sum of 67l. 19s. 6d. only was claimed in the first instance, a further claim was subsequently made for loss of time, occasioned by the brig being under repair, amounting altogether to the sum of 94l. 3s. The arbitrator awarding 75l. and costs, which we understand to be enormous, the cause having been postponed no less than seven times, to allow the defendant the opportunity of collecting his witnesses, who had all sailed on their respective voyages, when the action was first commenced. The Attorney General was retained for the defence; but Mr. F. Robinson only pleaded. The solicitors for the plaintiffs were Messrs. Sheppard, Thomas, Lepard, and Williams, of Cloak-lane, Dowgate-hill; for the defendant, Messrs. Teesdale, Symes, and Weston of Fenchurch-street.

## NEW BOOKS.

**THE COURT AND CAMP OF RUNJEET SING.** *By the Hon. W. G. Osborne, Military Secretary to the Earl of Auckland, Governor General of India.*—Colburn, London, 1840.

A collection of Sketches, Notes, and Observations, in the form of a journal, from Simla to Lahore, a part of the world, at the present time, that is particularly interesting, and therefore adds value to every piece of information concerning it. The journal is preceded by an introductory sketch of the origin and rise of the Sikh State, which forms an important part in Indian history. It is also written in a plain, unadorned style, bearing evidence of originality; and is interspersed with anecdotes illustrative of the natives, and embellished with neat sketches, on zinc, from Mr. Day's extensive establishment. The whole work is got up with great care.

**POOR JACK.** *By Captain Marryatt, with illustrations by Clarkson and Stanfield.*—Longman, London.

The fashion of the day, periodical publications, it appears then is to be followed by authors, and our first naval novelist is to see the production of his pen eked out in monthly numbers; a method of publication, which, although it might suit the readers of Dickens, is ill calculated for a work like *Poor Jack*. However, leaving all that to the *Managers*, here are the two first numbers before us, wherein Jack gives us his "birth, parentage, and education," in neither of which, as might be expected from the title which he assumes, is he very happy. But though his station is none of the happiest, he is happy enough, and spins his yarns very happily. Jack's father has the misfortune to lose his tail, which had been most vindictively cut off by his wife, while he lay asleep after a drinking bout, and the following is his lament over it on making the discovery, as it lay on the floor.—"Well, I never would have thought it, had they told me, you and I should have parted company. Many, many years has it taken you to grow to your present length; often have you been handled, often have you been combed, and often have you been tied. Many's the eel has been skinned for your service, and many's the yard of ribbon which you have cost me; you have been the envy of my shipmates, the fancy of the women, and the pride of poor Tom Saunders. I thought we should never have parted on 'arth, and, if so be my sins were forgiven me, and I could shew a fair log, that I might be permitted to wear you in the world which is to come. But there you are—parted for all the world like, like a limb shot off in action, never to be spliced again. What am I to say when I go on board? I shall have a short tale to tell, instead of a long tail to show. And the wife of my busum to do this. Well, I married too high, and now my pride is laid low. Jack, never marry a lady's ladies' maid; for it appears that the longer the names, the more venomous the cattle be."

The work is publishing in monthly shilling numbers, and we shall have more to say on it hereafter.

**ON THE NEW GENERAL BIOGRAPHICAL DICTIONARY.**—Shoberl, London.

This is a small pamphlet of letters, by Mr. Corney, on what must be considered one of the most important subjects which can occupy the pen:—viz., "Biography," and he is therefore justly severe in this "specimen of amateur criticism," as he terms it, on the merits of the work he has commenced overhauling. We therefore strongly recommend those who have the one, to get the other, as a kind of appendix, to serve as a "Mentor" to a very wayward child. But we are glad to find an announcement accompanying the pamphlet, of "Details of British Biography" being contemplated by Mr. Corney himself, and have no doubt of seeing something good from one who is so duly impressed with the important nature of the task.

## THE CONVULSIONS OF THE EARTH,

*Near Axmouth, on the coast of Devon, 24th Dec., 1839.*

SIR,—As the bed of the sea appears to have been materially altered by this extraordinary phenomenon, in the above locality, it is desirable that mariners be apprised of the same.

No doubt our naval surveyors will soon be attracted to the spot, in order to examine the extent of the alteration which has so singularly been effected, and to reconstruct the chart-line of the coast—point out the dangers which may have arisen, and note down the new soundings: in the mean time, the following brief notice may not be unacceptable.

The convulsion appears to have commenced at three A.M. of the 24th Dec. last, and continued during the whole of Christmas-day, with a roaring noise accompanied by a sensible motion of the earth at some distance from the place of the disturbance. A tract, extending east and west, about a mile in length, and several hundred feet in breadth, subsided or sank downwards, forming a chasm of more than 200 feet in depth. Columnar masses resembling vast pinnacles or towers of chalk are in some places left standing, whilst the more broken or crushed parts have sunk around them; immense banks of flint and broken rock rise in hillocks on every side, whilst the ground is rent and scored in seams, many feet wide and deep.

The chasm thus formed is not the whole effect of the phenomenon, nor is it the most extraordinary: it lies parallel to the shores and has cut off from the main land a portion of the sea board, about a mile in length, and half that distance in breadth; this mass has been forced on its foundation many yards, in a southerly direction towards the sea, inclined somewhat from its former level, and rent and depressed into terraces. But, the most singular effect has been exercised on the bed of the sea, the whole extent of which in front of this disarranged portion of land, having been lifted *forty feet above the surface!* to a great distance out from the original line of coast, and now forming reefs and islands, where none before existed, within which are bays and coves where boats have since entered and found good soundings! These reefs of thrown-up rocks are covered with marine productions, such as corallines, fucī, and shells. The western basin, thus singularly originating, somewhat resembles the Cobb at Lyme; but, it has the advantage over it in being larger in size: the eastern basin is entered through a long narrow channel, which then widens into what may be termed a sea-lake, or lagoon.

The locality must not be confounded with Exmouth, which lies fifteen miles westerly of it. The situation is about five or six miles to the westward of Lyme Regis, and at the northern part of the great bight, which lies between Portland and Praul Point.

The writer, from whose account (in the Saturday Magazine\*) we are indebted for these particulars, thinks that the phenomenon was not produced by an earthquake, consequent on ignivomous operations beneath the surface—a closer examination of the component materials of the district, and a mature consideration of other accessaries acting

\* No. 498, in which there is a plate representing the appearance of the locality and the effect of the phenomenon.

thereon, will incline an observer to decide otherwise: it is probable that water, and not fire, has been the cause. The geological construction of the land as he has pointed it out, and long continuance of wet weather, seem to strengthen his opinion; but I am not quite satisfied with his explanation of the rise of the bed of the sea by *lateral pressure*; because, as the depth of water increases from the shore, the effect, I imagine, would have been the reverse; that is, a direct side pressure would have *shoved* the bed nearer to the shore *into deeper water*, by which, as there was no actual fall from the land, the inshore water would have increased in depth. I cannot imagine such an effect to arise from pressure, however forceable on *one side only*, unless on the opposite one there should be immovable resistance, which, without doubting the possibility of such having existed, I do not think probable. The soundings as marked upon the chart, may assist in deciding that question.

The rise altogether has been *eighty-two feet!* This is amazing, without any deposit. Now, supposing the bed of the sea to be level outwards for some distance beyond the effect produced, unless accumulation of the saturated mass of earthy and sandy matter had been poured out, could the side pressure act *sub-aquæ* otherwise, than it did with the intervening strip, situated above the level of the sea?—*i. e.*, to shove it forward. The depression inland is stated to be more than 200 feet, but we do not know the elevation at which the surface stood above the-level of the sea prior to the subsidence; and, until this datum be obtained, and the disposition of the bottom of the sea given, any argument would perhaps be considered inconclusive.

It is not unreasonable, however, to believe that the stratum of sandy marl, between the surface and the clay stratum lying beneath, which is impervious to water, had been entirely removed through the agency of percolating rills, working their way through fissures into the sea: an operation which might have been going on for ages without detection, as such piece-meal deposits would be carried away by the action of the tides; and that the catastrophe was suddenly consummated by the effect of continued wet during the autumn. And if this be a fair inference, would lateral pressure affect the bed of the sea, in the manner described?

I do not here intend to maintain the impossibility of such; but, as far as the circumstances have been explained, I am rather inclined to infer, that whatever the cause may have been, the up-heaving of the bed of the sea, appears to have been effected by direct pressure *from beneath*.

It is worthy of remark that many shocks of the earth have been felt during the autumn and winter, in Scotland, and which are not yet subsided.

By accounts also, this month, (February,) it appears that the cliffs bordering the sea, near Lyme, are so saturated with wet, as to be subsiding in all directions. There will be ample work here for the invaluable aid of the naval surveyor, and we shall look forward, Mr. Editor, to your more competent abilities for a detailed account of the phenomenon, which is interesting alike to the seaman and the philosopher.

AN INQUISITIVE.

*To the Editor of the Nautical Magazine.*

## WRECKS OF BRITISH SHIPPING.

VESSELS.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED	WHEN.
135 Active		Bevridge	Newcastl	Hartlepl	North sea	Jan. 15 c.s.
Ann	Scarboro'	reported	seen 56'	SW. of C	terloggd c.s.	
Betty & Jenny				Liverpool	I. of Man	Jan. 30
Brilliant	Aberdeen	Wade	Leith	Ab'rdeen	by fire	Dec. 11 c.s.
Charlotte	Exeter	Smith	Stockton	Exeter	K. knock	Dec. 23
140 Chilton	Liverpool		abandon'd	on banks	Newfldd	Dec. c.s.
Corsair			Halifax	Liverpool	Jordanbk	Jan. 27 c.s.
Coventry		Clark	Quebec	Newcastl	abandon'd	c.s.
Dart		Grace			W Indies	Dec. 5 c.s.
Dauntless			London	St. Michl	W Barrow	Jan. 21 c.s.
145 Diana	Glasgow		Limerick	Oronsay		Jan. 18 c.s.
Dryad		Loose	Liverpool	Cula	C. Cruz	Nov. 10 c.s.
Duke of Sussex	Sunderland	Booth	Sunderld		Orkneys	Jan. 25 91.
Duncan	Liverpool	wreck	passed by	Pandora	in G. Flo	Nov. 15
Dunn	Ipswich	Horn			Dog bank	Jan. 23 c.s.
150 Eliza	St Andrews			Newcastl	Bulmer	Jan. 20
Elizabeth			Calcutta	Liverpool	C. G. Hpe	Nov. c.s.
Emmeline			St. John	Dublin	Ireland	Jan. 21 c.s.
Falmouth Packet		Christian	Falm'th	St. Michl	St. Michl	Dec. 5 1 s.
Fearon	Shoreham	Poole	Shorehm	Stockton	abandon'd	Jan. 26 c.s.
155 Friends Adven.			Stockton	London	Gunfleet	Jan. 27 c.s.
Hannah Kerr	St John NB	Bacon	Liverpool	St. John	Machias	Dec. 9 c.s.
Hart	Glasgow	Carfrae				Nov. 30
Hope			Mirmichi		Teignmo'	Feb. 1 c.s.
Jane	Liverpool	Strachan			Copiapo	July 24 11.
160 King William	Sydney				Newcastl	July 5
Lively		Rees	Swansea		Whitford	Dec. 18 c.s.
London Mercht.	North sea	run foul	of by	Venerabl	e & sunk	Dec. 21.
Lord Byron		Smith	Dartm'th	abandon'd	47N. 8W	June c.s.
Magnet	Stockton	And'rson	Newport	Hull	Ower S.	Jan. 2 c.s.
165 Manly		Ridley			Brazil	Nov. 29
Mary	Cork		Cork	Portsmth		Jan. 20 11.
Mary Elizabeth	Abandon'd		P. E. Isl'd	Bideford	at sea	Dec. 20 c.s.
Medusa	Whitby	Walker	Middlebo'	London	Filey	Nov. 29
Miriam		Goss	St. John	Falm'th	abandon'd	Nov. 30 c.s.
170 Navigator			Stettin		Leman O	Dec. 3.
Newcastle			Newcastl	London	Scroby S.	Jan. 19 c.s.
New Hopewell	Wells	Spoddish	Wells	Newcastl	North sea	Jan. 24 c.s.
Orion		Tregarth	Newfldd.	Liverpool	Galway	Jan. 20
Panuco	So. Shields	Tose			Shields	Jan. 29 c.s.
175 Persian			St. Jago	Swansea	Inagua	Oct. 24 c.s.
Petrel	Stockton	Parry	Dalhouse	Stockton	C. Scotld	Dec. 7 71
Prince Le Boo			Archangl	Hull	Stromsoe	Nov. c.s.
Prospect	Sunderland	Milne			Doggr bk	Jan. 27 c.s.
Ringdove	Sunderland	Wilmot	Newcastl	Algiers	Gunfleet	Jan. 12 c.s.
180 Rivals			St. John	Liverpool		Jan. 18 c.s.
Salisbury	Sunderland	Davison	Sunderld		Hamb'r h	Jan. 22 c.s.
Sam Freeman	Greenock	Cubit			C Ireland	Jan. 11 31.
Sarah	Liverpool	Dawson	Newcastl	Dundalk	Peterhd.	Jan. 31 c.s.
Scotia		Jeans	Quebec	Glasgow	abandon'd	Dec. 5 c.s.
185 Shepherd			Swansea	Dublin	Rosilly b.	Jan. 21
Solon	Whithaven	timber	laden,	deserted	Canarvon	Jan. 26
Sneaton	Whitby		off Sunde	land sin	king	Dec. 25
Thames	Hartlepool	Barclay	Memel	Hartlepl	North sea	Dec. 20 21
Union	St Andrews	Watson	found wa	terloggd	41N 63W	c.s.
190 West Hendon	Sunderland	Dymond	Shields	Malta	Hasbro's	Jan. c.s.
William	London	Wilkie	Stockton	Boston	founder'd	Jan. 20 c.s.
William & Mary	Sunderland		run foul	of & sunk	North sea	Jan. 8 c.s.



**ROGERS' ANCHORS.**—It is a fact worth recording, that our French neighbours appear to acknowledge the superiority of Lieut. Rogers' anchors, which have now become so general in the mercantile service. A correspondent informs us, that with a due regard to the patent of this gentleman, and a high sense of their value, from actual experiment in France, M. Duperré, the Minister of Marine, has ordered some of different sizes to be forwarded immediately to Brest, for the use of vessels in the Royal Navy of France. They are likewise finding their way into our own navy; but it would be rather curious for a French man of war with an English Lieutenant's anchor to meet one of our men of war without it, and an English merchantman with it; yet such might very easily happen. The largest steamer in the world, the British Queen, has no other than Rogers' anchors; and we have no doubt from their extensive use in the merchant service, where good seamen, and good judges of these matters are not scarce, that their holding qualities are far superior to any other yet made. We may refer our readers in support of this opinion to the letter of a Trinity Pilot in our last number, and have no doubt many such testimonials may be found; but that is important, as it relates to the Downs, where the anchorage is on chalky ground, and unfavourable for holding.

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#### SHAKINGS.

**MERCHANT SEAMEN'S ACT.**—Mr. Ingham, Member for Shields, has moved for the appointment of a Select Committee to consider the provisions of this act, to inquire into the state of the funds, and how they can be most effectually maintained, and administered for the benefit of the seamen of the Merchant Service.

**THE WILLIAM HUSKISSON.**—We perceive that Mr. Brotherton, the member for Salford, intends moving an address to Her Majesty, praying her to confer some testimony of approbation on Capt. Clegg of the Huddersfield for his gallant conduct in rescuing the crew of the ill-fated steamer, the account of which will be found in our last number. It appears that in saving her people, 93, he lost his bowsprit, and after refitting sailed again, when his vessel came in contact with a barque, again carrying away his bowsprit, obliging her to put back to Milford.

We perceive that the city of Dublin Steam Packet Company to whom the William Huskisson belonged, has presented to Capt. Clegg the sum of 50 guineas, and another sum of 50 guineas to be divided among the crew of the Huddersfield, as a small acknowledgment of their valuable services in the cause of humanity.

**THE THAMES BORE** is likely to become a bore above water, as well as under water, having interrupted the London steamer, on her way down the river. It appears that considerable alarm was occasioned by this vessel grounding on it, both for the safety of the vessel, and the security of the tunnel, as well as the lives which might be lost thereby.

A **STEAM-BOAT ACCIDENT** of a serious nature occurred on the morning of the 13th of Feb., the steamer Manchester having run foul of the

barque Tyrian lying at anchor near Gravesend, which sunk in five fathoms water. It is said, four of the crew and one passenger went down in the Tyrian: the captain, his wife, and remainder of the crew being saved.

A line-of-battle ship, a first-rate, is about to be put on the stocks, to be called the "Royal Albert."

His Royal Highness Prince Albert, we understand, bestowed a handsome present on Captains Hamilton and Southall, of the packet service, who commanded the Ariel packet, which conveyed him from Calais.

A short time since the widow of a naval officer, having eleven children to support, and whose circumstances were much reduced, made application to her Her Majesty Queen Adelaide for pecuniary assistance. Her Majesty instituted an inquiry into the circumstances, and finding it a case of much distress, Her Majesty took a house for her in Grove-street, Camden-town, furnished it, pays the rent, and allows the widow 40*l.* a year for her support, besides providing for her numerous family.

The pay of the Masters of the Navy will be immediately raised, the younger officers will have 150*l.* per annum, rising up to 280*l.* We trust this improved remuneration will retain many valuable officers in the service.—*Herts. Telegraph.*

**EARTHQUAKE.**—On the evening of the 30th ult. a slight shock of an earthquake, which lasted for two or three seconds, was felt at Lisbon, and occasioned great alarm; it was felt on board some vessels in the Tagus: to the southward of Lisbon the weather was very fine, and nothing was felt at Gibraltar or Cadiz; but at the latter place it blew very hard with thunder, accompanied by vivid lightning.

A most terrific hurricane occurred at Madras in the middle of November, from the effects of which it was calculated that 20,000 persons had perished; 60 vessels which were in the roads had also disappeared.

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**CARDIGAN BAR.**—We have seen lately in the Shipping Gazette, a letter relating the destruction of two vessels in the late gales, attempting to cross Cardigan Bar. The writer appears to be of opinion that had there been proper buoys there to shew the channel, the event would not have happened. We leave that for the consideration of the proper authorities, and in the mean time give the following directions for crossing the bar in the best water, from Lieut. Sheringham's recent survey of it.—*ED. N.M.*

The outer edge of Cardigan Bar is in line with Curbert houses, two very remarkable white buildings, near the edge of the cliff, on the east side of the bay, and the northernmost farm on the high ground at the back of them; or the farm of Glanymor, in line with a high and very conspicuous house, Bryntirion, on the top of the hill on the west side of the bay.

The mark for crossing this bar in the best water, is to have the beacon on the west side of the channel just open of the sand point, or end

of the breakers on the high line on the east side. Run with this until the bar is crossed when the beacon may be steered for, which in entering is to be left on the starboard hand.

NAVY ESTIMATES.

Wages to Seamen and Marines . . . . .	£1,145,791
Victuals for ditto . . . . .	645,068
Admiralty Office . . . . .	122,096
Office for the Registry of Merchant Seamen . . . . .	2,980
Scientific Branch . . . . .	29,597
Her Majesty's Establishment at home . . . . .	123,353
Her Majesty's Establishment abroad . . . . .	21,010
Wages to Artificers, &c. employed in Her Majesty's establishments at home . . . . .	528,723
Ditto to Artificers abroad . . . . .	28,330
Naval stores, &c. for building and repair of ships, docks, wharfs, &c.	1,087,563
New works, improvements and repairs in the yards, &c.	193,174
Medicine and Medical stores . . . . .	21,000
Miscellaneous services . . . . .	155,036
Total for the Effective Service	4,112,721
Half-pay to officers of the Navy and Royal Marines . . . . .	758,657
Military Pensions and allowances . . . . .	517,355
Civil Pensions and allowances . . . . .	188,242
Total for the Naval service	5,576,975

MINTO. DALMENY.

N.B.—The number of seamen is 24,165; 2,000 boys; and 5,500 royal marines afloat, and 3,500 on shore.

The following officers and seamen were actually employed on the 1st January 1838, 1st January 1839, and the 1st January in the present year:—

	1838	1839	1840		1838	1839	1840
Flag officers . . . . .	15	12	12	Second masters	113	116	107
Commodores . . . . .	4	3	4	Masters' assistants	345	195	140
Captains . . . . .	59	57	63	Mates . . . . .	471	487	387
Commanders . . . . .	67	68	73	Midshipmen . . . . .	381	375	488
Lieutenants . . . . .	405	393	423	Volunteers . . . . .	451	205	224
Masters . . . . .	109	105	115	Warrant officers	669	666	673
Secretaries . . . . .	12	9	10	Engineers . . . . .	31	61	64
Clerks . . . . .	314	285	299	Naval Instructors	51	47	53
Chaplains . . . . .	35	33	36	Petty officers	4799	3998	4779
Surgeons . . . . .	133	127	133	Able & Ordinary Seamen, boys, landsmen, &c.	11694	12846	14620
Assistant-surgeons	175	182	195				
Pursers . . . . .	105	101	107				

By the Navy estimates it will be seen that we have now 3000 more seamen employed than we had a year since, and that provision is to be made for the purchase of timber and stores to the amount of one million and thirty thousand pounds, being an increase, within two years, of nearly half a million sterling; the improvements in the Dock-yards are also to progress in a still greater proportion, as they are increased from 89,000*l.* in 1838, to 193,000*l.* in 1840. Among these improvements the Smithey at Portsmouth is to be improved, a new Saw Mill to be erected, and the Metal Mills are to be enlarged, besides the re-construction of the Building Slips and Sea Wall; at Plymouth a new Basin is to be

formed by running out a Pier; at Woolwich a new Dock is to be commenced, a Steam Manufactory proceeded with, and a Building to be erected for the manufactory of Mr. Grant's Steam Fuel; at Pembroke two Building Slips are to be made, a Roof to be erected over another, and a new Saw Mill and Machinery to be provided; 10,000*l.* is required to repair the mischief at Bermuda, caused by the hurricane of September last. Two Captains have been added to the Good Service Pension List, whose qualifications for such rewards of 150*l.* per annum, we give from the Estimates:—

Captain Sir William Henry Dillon, K.C.H., entered the service in May, 1790, Lieutenant, 28th April, 1797; Commander, 8th April, 1805; Captain, 21st March, 1808; was Midshipman of the Defence, in the battle of the 1st June, in which he was wounded; in 1803, he was detained as a prisoner by the Dutch, having been sent into Helvoetsluys with a flag of truce, and remained so for upwards of four years: in the Childers, fourteen 12-pounder carronades, he engaged for several hours, and beat off a Danish brig-of-war with eighteen long 18-pounder guns; he was severely wounded in this action, and was promoted to the rank of Captain for his conduct on the occasion; has been in actual service as a commissioned officer seventeen years.

Captain George Bell, entered the service in 1781; Lieutenant, 6th December, 1796; Commander, 12th October, 1807; Captain, 31st July, 1809; was promoted to be Lieutenant for his conduct as master of the Indefatigable, in the destruction of the French ship-of-the-line *Le Droit de l'Homme*: assisted at the capture of *La Venus*, French frigate, and several privateers, when serving as Lieutenant; in 1805, when commanding in the *Victor* sloop, captured *Les Amis Reunis*, French privateer; engaged in a sanguinary conflict, when in the *Victor*, by an attempt of several prisoners, amounting to 120, taken from some Dutch proas, to effect their liberation, which failed from the courage and gallantry displayed by the officers and crew of the *Victor*, and for which they received the thanks of the Board of Admiralty; when commanding the *Culloden*, he assisted at the destruction of two Dutch 70-gun ships, a cut-down two-decker fitted as a sheer hulk, an indiaman of 1,000 tons burthen, and a large transport lying at Griesse; has been in actual service as a commissioned officer upwards of fifteen years.

The navy estimates for 1840 amount to 5,576,975*l.*, being 372,151*l.* more than the estimates of last year. The estimate for the effective service in 1839 was 3,705,858*l.*; for 1840, 4,112,721*l.* The charge for non-effective service was for 1839, 1,498,966*l.*; for 1840, 1,454,256*l.* being 44,710*l.* less in the present than in the last year. The number of men for which wages are provided is 24,165 seamen, 2,000 boys, 5,500 marines employed afloat, and 3,500 marines employed on shore, altogether 35,165 men and boys. There is also included in the navy estimates 192,158*l.* for the army and ordnance departments, conveyance of troops, &c.; and 85,718*l.* for convict service, making the total navy estimates for the year 5,854,851*l.*

## PROMOTIONS AND APPOINTMENTS.

### APPOINTMENTS.

ANDROMACHE, 26,—*Lieutenant*, R. W. Pelley; *Master*, H. Mapleton; *Mate*, J. Fisher. BEACON,—*Surgeon*, A. Baxter. BLENHEIM, 72,—*Lieutenants*, R. Collinson, H. L. Tylden; *Mates*, J. A. Paynter, R. L. Place; *Vol.*, W. D. Lock. BRITANNIA, 120,—*Master*, R. Yule; *Mate*, S. Moresby. BLONDE, 46,—*Chaplain*, H. M. Franklin; *Mates*, G. Kerr, Hon. J. Cole. CAMBRIDGE, 78,—*Captain*, E. Barnard; *Lieutenants*, J. C. Hoseason, J. E. Katon, H. Ainslie. COASTGUARD,—*Lieutenant*, G. Coleman Milleisle; *Mate*, A. M. Shairp. CYCLOPS st. v.—

*Mate*, S. F. Short, C. R. Marcuard. EXCELLENT,—*Lieutenant*, B. Sharpe, *Surgeon*, A. Edwards; *Mate*, A. P. Ryder. EXPRESS,—*Lieutenant*, E. Herrick. FIREBRAND st. v.—*Mate*, F. J. Jamison. GLEANER st. v.—*Lieutenant Com.*, J. Page. HASLAR, *Hospital*,—*Secretary*, A. Lillie. JAMAICA, *Hospital*,—*Surgeon*, E. Hilditch. MAGICIENNE, 21.—*Captain*, W. Bennett; *Lieutenant*, B. Sharpe; *Master*, H. Emes; *Purser*, R. Singer. NIMROD, 20.—*Lieutenant*, H. Gaitskill; *Master*, W. Hyne. ORDINARY, *Portsmouth*,—*Lieutenant*, A. J. Græme. PEARL, 18,—*Commander*, C. C. Frankland; *Lieutenant*, B. A. Wake. PERSIAN, 18.—*Commander*, M. Quin. PIQUE, 36,—*Mate*, J. R. Harward; *Naval Ins.*, F. Mc Michael; *Volunteer*, F. J. Partridge. REVENGE, 76,—*Midshipman*, J. P. Lethbridge. RODNEY, 92,—*Clerk*, W. Hall. ROYAL SOVEREIGN YACHT,—*Lieutenant*, G. A. Leary. SAN JOSEF, 110,—*Purser*, J. Johns. THUNDERER, 84.—*Captain*, Hon. M. F. Berkely; *Commander*, W. J. Williams; *Lieutenants*, C. Leach, A. S. Booth, G. H. L. Beazely, H. Loring, A. Little, J. H. Bridges; *Master*, H. Davy; *Purser*, R. Goodridge, *Mate*, J. Rick, J. Hollingsworth; *Second Master*, R. Read; *Assistant Surgeons*, J. Tait, J. H. Steele. VICTORY, 104,—*Lieutenants*, D. B. Grant, G. E. Powell; *Master*, G. H. Cole. WELLESLEY, 72,—*Volunteers*, J. J. Lethbridge, Hon. J. Coke.

### MOVEMENTS OF THE ROYAL NAVY IN COMMISSION AT HOME.

*Blenheim*, 72, Capt. Sir H. F. Senhouse, 31st Jan. towed out of harbour to Spithead. *Blonde*, 42, Capt. T. Bourchier, 4th Feb. at Spithead; 15th sailed for Plymouth. *Cambridge*, 6th Feb. commissioned at Sheerness, by Capt. E. Barnard. *Columbia*, st. v., Mr. A. Thompson, 6th Feb. arrived at Portsmouth with troops. *Cyclops*, Capt. H. T. Austin, Sheerness, fitting. *Fantome*, Com. Butterfield, 14th Feb. left Plymouth for Africa. *Flamer*, st. v., 30th Jan. left Falmouth for West Indies. *Inconstant*, 36, Capt. Pring, 7th Feb. arrived at Plymouth from Havana; on 3d experienced a very heavy gale, about 150 miles west of Scilly, which continued with unabated violence till next morning; her foresail, main-topsail, trysail, and staysails were blown away, and no canvas could be shewn, so violent was the wind; 13th went into harbour. *Magicienne*, 24, Capt. W. Burnett, 14th Feb. commissioned at Portsmouth. *Meteor*, st. v., Lieut.-com. R. D. Pritchard, 1st Feb. left Portsmouth for Glasgow, to bring round Stromboli, steamer, to Chatham. *Minden*, 72, Capt. A. R. Sharpe, C.B., 15th Feb. paid off at Plymouth. *Nimrod*, 20, Com. C. A. Barlow, at Plymouth fitting. *Pearl*, 18, commissioned at Sheerness, 10th Feb. by Com. C. C. Frankland. *Pembroke*, 72, Capt. F. Moresby, C.B., 15th Feb. paid off at Portsmouth. *Persian*, 16, Com. at Plymouth, 17th Feb. by Com. M. Quin. *Pylades*, 18, Com. T. V. Anson, 3d Feb. in Plymouth Sound. *Wanderer*, Com. Hon. J. Denman, 30th Jan. left Plymouth for the Cape. AT PORTSMOUTH, in Harbour, Britannia, Pique. Royal George yacht, Victory, Excellent, Raven, Messenger, Pembroke, Andromache, Magicienne. AT SPITHEAD.—*Blenheim*, *Fantome*, *Crescent*. AT SHEERNESS.—*Cyclops*, *Pearl*. AT PLYMOUTH.—*San Josef*, *Impregnable*, *Nimrod*, *Pylades*, *Persian*, *Carron*.

### ABROAD.

*Acheron*, st. v., Lieut.-com. A. Kennedy, 15th Jan. left Gibraltar for Malta. *Acorn*, 16, Com. J. Adams, 18th Nov. at Cape; 29th sailed. *Alecto*, st. v., Lieut.-com. W. Hoseason, 7th Feb. arrived at Marsailles from Malta; 10th returned. *Algerine*, 10, Lieut.-com. T. H. Mason, 5th Dec. left Bombay for Suez, with intelligence of the death of Admiral Sir F. Maitland. *Apollo*, troop ship, Mr. A. Karley, 24th Dec. at Gibraltar, said about to convey troops to Jamaica. *Bellerophon*, 80, Capt. C. J. Austen, 22d Jan. arrived at Malta from Vourla. *Bonetta*, 3, Lieut.-com. J. L. R. Stoll, 5th Dec. arrived at Cape of Good Hope from Sierra Leone. *Calliope*, 26, Capt. T. Herbert, at Buenos Ayres. *Camelion*, 10, Lieut.-com. G. M. Hunter, 16th Dec. arrived at Bahia, from Rio. *Castor*, 36, Capt. E. Collier, 9th Jan. arrived at Malta. *Charybdis*,

3, Lieut.-com. E. B. Tinling, 11th Dec. left Jamaica for Nassau. *Cleopatra*, 26, Capt. S. Lushington, 7th Dec. left Jamaica on a cruise. *Clio*, 16, Com. S. G. Freemantle, 21st Dec. at Rio. *Comus*, 18, Com. E. Nepean, 21st Dec. left Jamaica for Barbados, 9th Jan. arrived. *Conway*, 26, Capt. C. R. D. Bethune, 8th Dec. arrived at Calcutta, from Rangoon. *Crocodile*, 26, Capt. A. Milne, 26th Dec. arrived at Jamaica. *Cruizer*, 16, Com. H. W. Gifford, 3d Nov. left Singapore on a cruise. *Curacoa*, 24, Com. W. Preston, 21st Dec. at Rio. *Daphne*, 18, Com. W. Dalling, 9th Jan. arrived at Malta. *Dee*, st. v., Com. J. Sherer, 16th Dec. arrived at Jamaica. *Donegal*, 78, Capt. J. Drake, 5th Feb. at Lisbon. *Erebus*, Capt. J. C. Ross, 3d November arrived at Tenerife. *Forrester*, 3, Lieut.-com. Ross, Ascension. *Ganges*, 84, Capt. B. Reynolds, C.B., 22d Jan. arrived at Malta, from Vourla. *Griffon*, 3, Lieut.-com. J. G. D'Urban, 8th Dec. left Barbados on a cruise. *Hermes*, st. v., Lieut.-com. W. J. Blount, 6th Jan. left Gibraltar for Malta. *Hornet*, 6, Lieut.-com. R. B. Miller, 18th Dec. left Jamaica for Chagres. *Hyacinth*, 18, Com. W. Warren, see Volage. *Jupiter*, troop ship, Master-com. R. Fulton, 7th Dec. arrived at Cape. *Kite*, st. v., Lieut.-com. G. Snell, 16th Dec. left Barbados for Demerara. *Melville*, 72, Capt. Hon. R. L. Dundas, 10th Nov. left Cape for Ascension. *Partridge*, 10, Lieut.-com. W. Morris, 10th Dec. at Bahia. *Phoenix*, st. v., Com. R. S. Robinson, 31st Dec. arrived at Vourla from Malta. *Pilot*, 16, Com. G. Ramsay, 29th Dec. left Barbados for Texas. *Racehorse*, 18, Com. Hon. E. A. Harris, 27th Dec. left Barbados for Para. *Racer*, 16, Com. G. Byng, 31st Dec. left Jamaica for Carthagena. *Rattlesnake*, troop ship, Master-com. W. Brodie, 11th Dec. arrived at Tenerife from England; 14th sailed for Ceylon. *Revenge*, 76, Capt. Hon. W. Waldegrave, 5th Feb., Lisbon. *Rhadamanthus*, st. v., Com. A. Wakefield, 24th Jan. at Malta, from Vourla. *Ringdore*, 16, Com. Hon. K. Stewart, 8th Dec. left Jamaica for Honduras. *Rodney*, 92, Capt. H. Parker, C.B., left Vourla for Malta and England; 15th inst. as the Rodney's launch was conveying a cargo of water on board, just as she got alongside, a sudden heavy swell came on, swamped and sunk her, leaving her cargo, Lieut. Wyse, Mr. Kynaston, mate, and the crew on the surface; and, but for the expedition in manning the boats to pick them up, the whole must have met with a watery grave, for the best swimmer could not possibly have kept a long time afloat, from the severity of the cold, and the heavy sea at the time. *Rover*, 18, Com. T. W. C. Symonds, 24th Dec. left Jamaica for Bermuda. *Samarang*, 26, Capt. W. Broughton, 14th October at Valparaiso. *Satellite*, 18, Com. J. Robb, 28th Nov. at Bermuda, having lost seven officers and men at one period, from a severe attack of the yellow fever; and, of 113 officers and men, 83 were incapacitated, Capt. Robb being the only officer capable of doing duty; he was shortly after attacked, but is recovering. *Seringapatam*, 42, Capt. J. Leith, 27th Nov. arrived at Barbados, from Grenada. *Serpent*, 16, Com. Hon. R. Gore, 30th Dec. left Jamaica for Honduras. *Skipjack*, 5, Lieut.-com. H. Waight, 16th Dec. at Port Royal, from Montego Bay. *Snake*, 16, Com. J. B. P. Hay, 17th Dec. arrived at Port Royal, Jamaica. *Sparrow*, 10, Lieut.-com. R. Lowcay, 17th Nov. arrived at Rio, from Falkland Islands. *Terror*, Com. F. R. M. Crozier, 3d November arrived at Tenerife. *Trinculo*, 16, Com. H. E. Coffin, 2d Feb. at Cadiz. *Vanguard*, 80, Capt. Sir T. Fellowes, C.B., 22d Jan. arrived at Malta, from Vourla. *Vestal*, 26, Capt. T. W. Carter, 4th Dec. left Barbados for Bermuda. *Volage*, 26, Capt. Smith, Nov. at Canton. Commissioner Lin having refused to carry a trading treaty, into full and fair effect, Capt. Elliott sent the Volage and the Hyacinth to the Bogue, to deliver a chop, demanding an explanation. The reply was an order to twenty-nine Chinese junks to surround and seize our ships. The junks were repeatedly warned off, but, becoming troublesome, and approaching too close, the Volage and Hyacinth fired on them. Five were sunk or blown up (with each 200 men on board.) The rest evincing a disposition to retire, Captain Elliott ordered the firing to cease, or all might have been destroyed. *Volcano*, st. v., Lieut.-com. J. West, 1st Feb. at Gibraltar. *Wasp*, 16, Com. Hon. D. W. A. Pelham, 1st Feb. Gibraltar. *Winchester*, 50, Capt. J. Parker, 28th Nov. at Bermuda. *Zebra*, 16, Com. R. J. Stopford, 9th Jan. arrived at Malta.

TABLE LIV.

*For reducing Chinese Lis to English miles, and English miles to Chinese Lis.*

1 Chinese Li = 0.359375225 English miles.

1 English mile = 2.782606957 Chinese Lis

Chinese lis or Eng. miles.	English miles and Dec. parts.	Chinese lis, and Dec. parts.	Chinese lis or Eng. miles.	English miles, and Dec. parts.	Chinese lis, and Dec. parts.	Chinese lis or Eng. miles.	English miles, and Dec. parts.	Chinese lis, and Dec. parts.
1	0.359	2.783	40	14.375	111.304	79	28.391	219.826
2	0.719	5.565	41	14.734	114.087	80	28.750	222.609
3	1.078	8.348	42	15.094	116.869	81	29.109	225.391
4	1.438	11.130	43	15.453	119.652	82	29.469	228.174
5	1.797	13.913	44	15.813	122.435	83	29.828	230.956
6	2.156	16.696	45	16.172	125.217	84	30.188	233.739
7	2.516	19.478	46	16.531	128.000	85	30.547	236.522
8	2.875	22.261	47	16.891	130.783	86	30.906	239.304
9	3.234	25.043	48	17.250	133.565	87	31.266	242.087
10	3.594	27.826	49	17.609	136.348	88	31.625	244.869
11	3.953	30.609	50	17.969	139.130	89	31.984	247.652
12	4.313	33.391	51	18.328	141.913	90	32.344	250.435
13	4.672	36.174	52	18.688	144.696	91	32.703	253.217
14	5.031	38.956	53	19.047	147.478	92	33.063	256.000
15	5.391	41.739	54	19.406	150.261	93	33.422	258.782
16	5.750	44.522	55	19.766	153.043	94	33.781	261.565
17	6.109	47.304	56	20.125	155.826	95	34.141	264.348
18	6.469	50.087	57	20.484	158.609	96	34.500	267.130
19	6.828	52.870	58	20.844	161.391	97	34.859	269.913
20	7.188	55.652	59	21.203	164.174	98	35.219	272.695
21	7.547	58.435	60	21.563	166.956	99	35.578	275.478
22	7.906	61.217	61	21.922	169.739	100	35.938	278.261
23	8.266	64.000	62	22.281	172.522	150	53.906	417.391
24	8.625	66.783	63	22.641	175.304	200	71.875	556.521
25	8.984	69.565	64	23.000	178.087	250	89.844	695.652
26	9.344	72.348	65	23.359	180.869	300	107.813	834.782
27	9.703	75.130	66	23.719	183.652	350	125.781	973.912
28	10.063	77.913	67	24.078	186.435	400	143.750	1113.043
29	10.422	80.696	68	24.438	189.217	450	161.719	1252.173
30	10.781	83.478	69	24.797	192.000	500	179.688	1391.303
31	11.141	86.261	70	25.156	194.782	550	197.656	1530.434
32	11.500	89.043	71	25.516	197.565	600	215.625	1669.564
33	11.859	91.826	72	25.875	200.348	650	233.594	1808.695
34	12.219	94.609	73	26.234	203.130	700	251.563	1947.825
35	12.578	97.391	74	26.594	205.913	750	269.531	2086.955
36	12.938	100.174	75	26.953	208.696	800	287.500	2226.086
37	13.297	102.956	76	27.313	211.478	850	305.469	2365.216
38	13.656	105.739	77	27.672	214.261	900	323.438	2504.346
39	14.016	108.522	78	28.031	217.043	1000	359.375	2782.607

**Births.**

In Norfolk-street, Strand, the lady of F. Ommaney, Esq., of a Daughter.

**Marriages.**

On the 18th Feb. John N. Nott, Esq. Commander, R.N. to Mary, daughter of Sir William Burnett, K.C.H. Physician-General of the Navy.

On the 6th Feb. at St. Paul's, Southsea, R. Pollock, Esq., of the 8th Madras Light Cavalry, second son of Sir F. Pollock, M.P. to Ellen, daughter of Capt. Douglas, R.N. Commodore on Jamaica station.

At Tidenham, Gloucester, the Rev. J. B. Scadamore Burr, to Jane, daughter of Capt. C. Gordon, R.N. of Dennill-hill.

At Calcutta, on the 31st Oct. H. J. Bamber, Esq. son of Capt. Bamber, R.N. to Amelia Frances, daughter of J. Kilby, of the city of York.

At Clifton, Capt. W. H. Rogers, 58th regiment, to Mrs. Harriet Ranken, the daughter of Capt. S. G. Church, R.N.

Lieut. R. Thomas, R.N. of Ballynakill house, near Waterford, to Sarah daughter of J. P. Murphy, of Stratford, Essex

At Dundalk, on the 20th Jan. Capt. C. Paget, R.N. to Caroline daughter of H. McClintock, Esq., Collector of Customs at that port.

**Deaths.**

At Devonport, on the 18th of Feb. retired Commander J. H. Priest, R.N.

At Largo house, Scotland, 6th of Feb, aged 86, Gen. J. Durham, upwards of 70 years an officer in the British Army, and brother of Admiral Sir P. Durham.

At Plympton, 8th Feb. at an advanced age, Rear-Admiral Foster.

At Rochester, Mr. W. Peche, Purser, 1797, aged 67 years.

On board of H.M.S. Vestal, Mr. T. H. Herring, second master of that ship.

On the 9th Nov. at Buenos Ayres, Mr. E. Joceline Lay, mate H.M.S. Calliope.

At Tenterden, Kent, Mrs. Stretton, mother of Mr. S. Stretton, Purser of H. M.S. Crocodile.

At his residence, Mount Pearl, near St. John, Newfoundland, suddenly Com. J. Pearl, K.H.

On the 25th Dec. at Bermuda, J. Borlase, Esq. Mate of H.M.S. Serpent.

On the 12th Feb. at Woburn-place, Russell-square, J. Rouse, Esq. late of the Admiralty.

On the 30th December last, on board

his flag-ship, the Wellesley, 72 guns, at sea, in the vicinity of Bombay. Rear-Admiral Sir Frederick Lewis Maitland, K.C.B. Commander-in-Chief in the East Indies.

On the 7th instant, at Brighton, Admiral Sir Harry Burrard Neale, G.C.B. aged 76.

At his residence, Boldre Hill, near Lymington, on the 28th January, Rear-Admiral Augustus Brine, eldest son of the late Admiral James Brine, in the 71st year of his age.

At his seat Hornby Castle, near Lancaster, Rear-Admiral Sandford Tatham, in the 85th year of his age.

On the 18th January, at Norton, in the county of Durham, in the 75th year of her age, Mrs. Stapylton, widow of the late Henry Stapylton, Esq., and only daughter of the late Robert Gregory, Esq., Captain R.N.

At Port Macquarie, New South Wales, Captain E. L. Adams, late commander E. I. C.'s ship, Kellie Castle.

On the 26th January, in John-street, Berkely-square, after a very short illness, in the 35th year of his age, Henry Paget Aldenburgh Bentinck, second surviving son of the late Admiral William and of Lady Frances Bentinck, now Lady Frances Stephens.

On the 29th Jan., at Mount Crozier, Cork, Robert Wesley, Esq., Surgeon, R.N., (1780.)

At Ardpatrick, N.B., Adelaide, daughter of Captain Colin Campbell, (a) R.N.

At Horsham, lately, Captain Ellis, R.N.

At Priory-road, Wandsworth-road, Lieut. John Cameron, R.N., of Invermale, Fort William, aged 67.

Drowned in Launceston Harbour, Australia, by the upsetting of a boat, on the 9th of September, 1839, Mr. John Rands Finlayson, aged 19 years, third mate of the Arab, and only son of Lieut. Finlayson, R.N.

At Halifax, N. S., on the 26th December, Lieut. Andrew Brown, R.N.

On the 1st November, at the Candonga Mine, in the province of Minas Geraes, Brazil, A. F. Goodridge, Esq., M.D., only son of John Goodridge, Esq., R. N. (late Master Attendant at the Cape of Good Hope).

On the 8th February, at Castle Dawson, Ireland, the beloved wife of Lieut. John Good Lapenotiere, R.N., aged 25 years.

On the 14th February, at Norfolk-terrace, Southsea, Ann, the beloved wife of Lieut. James Clark, R.N., aged 40 years.

F ERRATA.—Page 85, line 19, for "researches," read "resources."—p. 183, line 20, from bottom, for "Arthnot," read "Arthuret."—p. 183, line 1, 3, 8, and 9, for "Howick," read "Hawick."—p. 184, line 2, for "Cherick," read "Cheviot."—p. 184, line 5, for "Hainsh," read "Hawick."



METEOROLOGICAL REGISTER.

From the 21st of January, to the 20th of February, 1810.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

Month Day.	Week Day.	BAROMETER		FAHR. THER. In the Shade.				WIND.				WEATHER.	
		9 A.M.	3 P.M.	9AM.	3PM.	Min.	Max.	Quarter.		Stren.		A. M.	P. M.
								AM.	PM.	AM.	PM.		
21	Tu.	29.31	29.34	52	48	48	55	SW	SW	9	11	op(1)(2)	qbc(3)
22	W.	29.67	29.67	47	49	43	52	SW	SW	8	7	qbc	qbc(3)
23	Th.	29.80	29.64	46	52	38	54	SW	SW	7	7	qor 2)	qor 4)
24	F.	29.36	29.00	51	52	50	53	S	S	10	11	qor(1)(2)	qor(3)4)
25	S.	29.30	29.36	37	42	36	43	SW	SW	4	5	bc	qbc
26	Su.	28.95	28.86	52	45	38	53	SW	W	10	10	qorh(2)	qbc(3)(4)
27	M.	29.46	29.42	35	13	34	44	SW	SW	3	5	b	qb
28	Tu.	29.44	29.19	42	50	36	52	S	SW	7	8	qor(2)	qprh(3)
29	W.	29.50	29.70	43	43	42	44	W	NW	4	4	qbc(1)	bc
30	Th.	29.90	29.86	30	12	29	43	S	NE	3	2	fb	or 4)
31	F.	29.57	29.51	42	47	37	48	S	S	1	2	bc	bc
1	S.	29.33	29.21	42	44	35	47	SE	SE	4	5	o	or(1)
2	Su.	29.35	29.38	38	47	37	48	SW	SW	4	6	b	qbc(3)
3	M.	29.16	29.14	41	45	40	46	SW	SW	6	5	qo	qbc
4	Tu.	28.64	28.56	43	45	37	47	S	S	10	10	qr(1)(2)	qp(3)(4)
5	W.	29.10	29.28	41	43	40	44	W	NW	6	5	qr(1)(2)	o
6	Th.	29.74	29.72	38	46	34	48	SW	W	3	3	or(2)	bc
7	F.	29.60	29.40	46	51	38	52	SW	SW	3	6	od(2)	qbc(3)
8	S.	29.51	29.51	41	41	37	43	SW	SW	4	6	bc	qprh(3)
9	Su.	29.70	29.70	36	46	32	48	SW	SW	3	3	bcm	bcm
10	M.	29.58	29.61	48	46	42	49	S	SW	6	4	qor 2)	or(3)
11	Tu.	29.94	29.96	42	47	37	49	S	SW	3	3	bc	bc
12	W.	29.71	29.67	45	48	41	51	S	SW	3	4	b	bcp(3)
13	Th.	29.82	29.82	40	48	37	49	SW	S	3	3	bc	bcp(3)
14	F.	29.92	29.90	32	41	31	43	S	S	1	1	fm	fm
15	S.	29.81	29.75	36	42	25	46	S	SW	2	3	bcrh	or(3)(4)
16	Su.	29.72	29.82	45	51	43	52	SW	SW	2	1	om	ogm
17	M.	30.00	30.04	45	46	44	48	E	NE	2	4	o	od(3)
18	Tu.	30.21	30.21	36	40	30	42	E	NE	4	4	bcm	og
19	W.	30.31	30.32	34	35	32	36	NE	NE	3	3	os 2)	os(3)(4)
20	Th.	30.40	30.42	31	31	30	33	NE	NE	3	3	ops(1)(2)	ops(3)(4)

**JANUARY**—mean height of the barometer= 29.816 inches : mean temperature=39.06 degrees : Depth of Rain fallen=2.92 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We are obliged to Mr. Airy, the Astronomer-Royal for his important communication on chronometers, which will appear in our next.

E. By all means, such papers are both useful and interesting.

Best thanks to Capt. Milne, R.N. for his letter on Lightning; the others in an early number.

Will Mr. Blunt (New York) oblige us, (and excuse this mode of conveying our request,) by throwing all the light he can on the shoal off Trinidad in p. 68 of our January number.

Mr. R. C. Allan's second letter just received.

Mr. Gould's useful communication in our next, if not too late; if so, it shall be returned.

We will insert the letter from Kingsbury House, in our next.

Mr. Livingstone's letter is in reserve, as well as the rest of the College Questions, and Capt. Marshall's letter.

J. F. M. on heaving down ships received.

H. J., Cook's Library, is thanked for his offer, but declined.



M<sup>r</sup> HARRIS

ON LIGHTNING CONDUCTORS

Plate 2.

Fig 1.

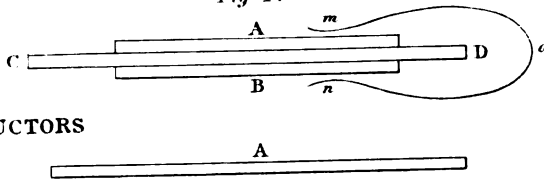


Fig 2.

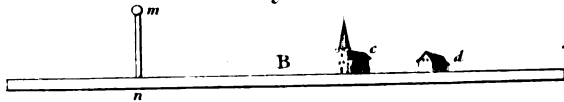


Fig 7.

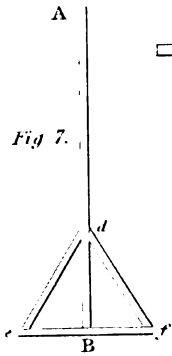


Fig 3.

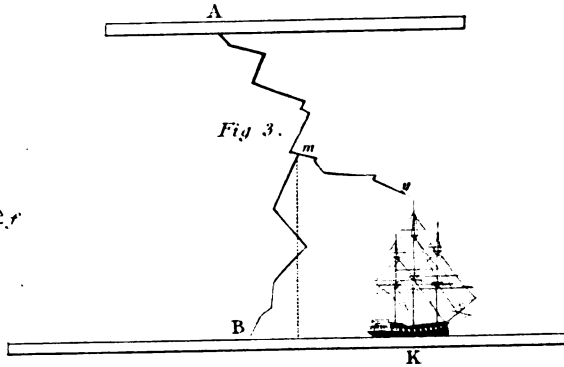


Fig 8.

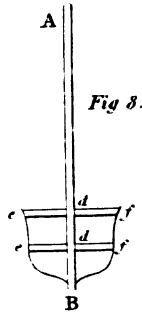


Fig 4.

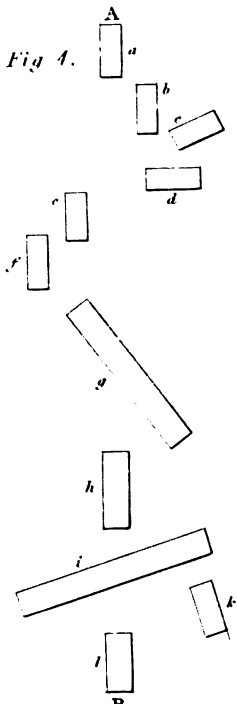


Fig 5.

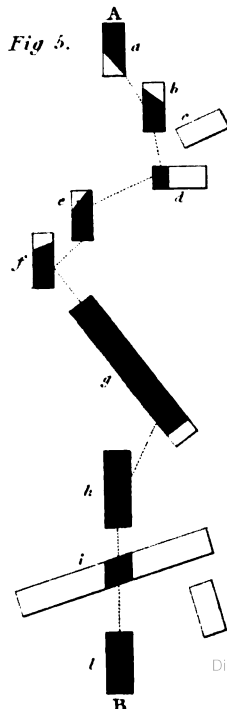
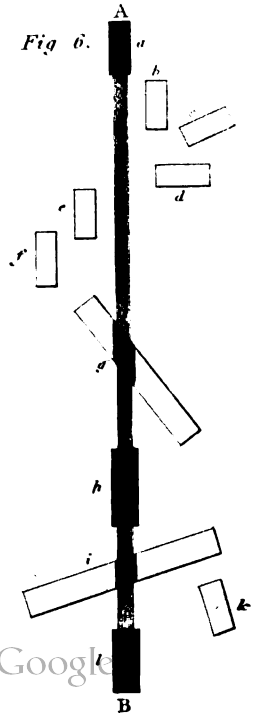


Fig 6.



## ORIGINAL PAPERS.

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APRIL 1840.

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### MOZAMBIQUE, AND ITS ADJOINING PORTS—VELYAKO, KONDOCIA, AND MOKAMBA.

THE following hitherto unpublished nautical description of the important Portuguese establishment of Mozambique, and its adjoining ports, was drawn up by Capt. W. F. W. Owen, R.N.,\* from observations made during his extensive survey of the coasts of Africa and Arabia, in the *Leven* and *Barracouta* in 1821-26. The description of the coast being for the most part completed up to the entrance of the Persian Gulf, we shall lay it before our readers in future numbers for the benefit of seamen, trusting that we shall hereafter obtain from the same high authority, a similar account of the shores of Madagascar, and the coast southward to the Cape, as well as of the western coast in the Atlantic Ocean of the vast African continent, which was included in that valuable and laborious contribution to our stores of Hydrography.

MOZAMBIQUE, being the most ancient establishment of the Portuguese to the eastward of the Cape of Good Hope, has long been known as the seat of government for all their possessions in East Africa. But up to the time of our survey, even the Portuguese inhabitants had no tolerable plan of the port of Mozambique itself, and none whatever of the ports adjoining; and the only plan of the port of Mozambique which could be useful to seamen, that we know of, was one by that indefatigable navigator, Mr. David Inverarity.

It had long been imagined, that Mozambique Island and city, was the metropolis of an immense colony, extending in unbroken possession, and continuous establishments from Cape Corientes at the southern tropic, at least to Cape Delgado, or in 11° S. But the fact is, that the Portuguese can be said to possess no territory with the island of Mozambique, except the peninsula of Cabacera, and a few detached spots on

\* See p. 264 of our last volume.

the northern shores of that peninsular piece of land between its port and that of Mokamba, including the outer island of Kintangonya, and Tree, St. George, and St. Jago; none of which have any inhabitants. Nevertheless, their sovereignty is now here disputed, within perhaps, three or four leagues in all directions. Beyond those limits the natives are in no wise subject to their government or interference, except when caprice may induce a governor to move in force to any point, and he is then forgotten as soon as he retires.

How the natives north of Mozambique are disposed to the Portuguese we had no means of knowing, but the evident effect of their vicinity has been to remove almost every symptom of population from the sea coast, and we have been told that the Portuguese may send native emissaries among them, but dare not trust themselves.

To the southward of Mokamba, and almost to the north shores of Zambezi, the natives are absolutely independent of, and decidedly inimical to the Portuguese, so that on occasions which require an overland communication with their stations on the Rias de Senna or Zambezi, they employ natives, for whose fidelity they are obliged to pay high.

Mozambique is well defended by its fortifications, but might be easily starved out by a sea force, which should possess itself of Cabacera, and the outer islands, and the ports of Konducia and Mokamba; so that they are only indebted, for their present tenure of it, to the dread of the English by the Arabs; who, were they once relieved from the salutary fear of British interference, would soon overwhelm it, and the effect would be, as now seen at Zanzibar, Mombas, Patta, &c.: another century would scarcely see one stone left on another.

Mozambique is still the seat of Portuguese government, and has indications of some considerable wealth. But as a considerable portion of the governor's revenue arises from the export of slaves so is he naturally solicitous, only to evade the strict execution of the treaties with Great Britain on that subject. Yet none of the slaves are obtained from their immediate vicinity, they are all received from the ports between Ibo and Zanzibar, on the north; and on the south from Killiman, Inyamban, and Delgado bay; and the export from all these ports taken together, generally amounted to little less than 40,000 or 50,000 annually; of which there passed through Mozambique and Killiman nearly 20,000 annually from 1822 to 1826.

The importance of Mozambique arises solely from its being the seat of government, and for that reason the Portuguese force all their commerce into it, as an *entré-pôt*, and general mart: but none of the articles found there, are the produce of its immediate territory, except indeed a very small quantity of the very best coffee in the world, of which there are several species indigenous, and it is affirmed with

much seeming probability, that Arabia derived the berry from Mozambique. The Columbo root is also a native on all this eastern coast.

The island on which the city is built has a moderate elevation, perhaps from twenty to fifty feet above the sea level, and some parts of the town are very well built. The palace is spacious, and has been magnificent, built in the Spanish and Moorish style round an area.

The substratum of the island is madrepora, which is used both for stone and lime in building; and there is generally abundance of water in its wells; but the best water is that preserved at the fort from the rains. We always found the island and port very healthy, and had reason to believe that much of the manifest mortality to Europeans at this place arises from the habits imported with them. It is necessary for the navigator to bear in mind, that the Table Mountain is in lat.  $14^{\circ} 41' S.$ , and long.  $40^{\circ} 40' E.$ , that there is a perpetual current running down the coast, and that its greatest velocity is precisely from the island of Kintangonya to Cape Bayon or Bajone, and close to the outer reefs; so that during the northern monsoon, ships desirous of entering Mozambique, or either of its adjacent ports must make the land well to the northward, between Cape Langa and Kintangonya. But the instant a ship is within the line of the outer reefs, the current will be no longer felt, and she will be in the tide-way only; and it may not be amiss to repeat that we always found the current weakest, and sometimes hardly perceptible at spring tides, when they of course were strongest.

Having made the land to the northward of Cape Kintangonya in lat.  $14^{\circ} 51' S.$ , and long.  $40^{\circ} 51' 2'' E.$ , a ship may coast as close as she pleases, and, if bound for Konducia River, she must haul round the south point of Kintangonya, steering S.W.b.W. for Cape Konducia, which is the eastern cliff and elevated ground of the peninsula of Cabacera; and when the two pointlets or little points, (which are the only rocks to the westward of Sombrero islet,) bear N.W.b.N., when the Table Mountain is open to the westward of them, a ship may steer in N.W., and coast the northern shore by the plan published by the Admiralty, into such anchorage as she may choose.

Arab vessels frequently anchor near the fishing stakes on Cabacera, to avoid the port dues, and for the same reason the Port Velyako is often used, as being in the latter end of the northern monsoon, better secured from the tornadoes, which blow strongest from the north-west.

In entering Konducia bay from the southward, with a commanding wind to stem the current, round Tree islet as close as convenient, and steer N.W.b.N. for the Table Mountain, just open of the pointlets, and when Cape Konducia bears S.W. steer N.W. or N.W.b.W., and afterwards by the plan, the lead, and the eye as convenient.

The S.W. extreme of the bar point of Konducia river is in lat.  $14^{\circ} 53' S.$ , and  $40^{\circ} 40' 3'' E.$

The bay of Konducia is the estuary of the river so named, which has its source in the Table Mountain. The river is almost barred across at its mouth, in the head of the bay, by bar point which is a dry narrow spit of sand, with some wood or shrubs on it; its direction is W.S.W. opposed to the general trend of the river stream leaving a passage between it and the southern shore near the isthmus of Cabacera, or Empassa, of about a quarter of a mile, or three cables length with very deep water, having ten fathoms in the narrows. The bar, flats extend about two miles into the bay, leaving a tortuous channel between them, in no part of which is there less than four fathoms at low water. A bare inspection of the plan will furnish the best directions, if required, to enter it, which by strangers should always be by boats sounding ahead. The N.E. extreme of Cape Konducia is in lat.  $14^{\circ} 55' 2'' S.$ , and long.  $40^{\circ} 46' 5'' E.$

Within the bar there is a beautiful small port, with no less than four fathoms in it; it is upwards of a mile long in the stream of the river, and more than half as broad within the bar point; it is navigable for boats almost to the foot of the Table. The Portuguese have not a single establishment on the eastern side of the stream, nor on the western (as it is believed,) so much as a league above the bar.

Coasters and small Arab vessels, use this bay of Konducia, for the double purpose of evading the port dues for Mozambique, and for smuggling a traffic in negroes, by the connivance of the Portuguese authorities, who pretend that their authority does not extend to vessels in Konducia bay, or Port Velyako; and, therefore, they are not responsible for their breach of national faith on the subject of the slave trade, as pledged in their treaties with Great Britain.

These vessels generally anchor near the fishing stakes to the westward of Arab island, where the isthmus of Empassa is a little more than half a mile wide, and negroes are both imported and exported by that route, of which traffic no trace can be found in any of the public records of Mozambique. Thus the crown of Portugal loses its dues; but the governor and his subordinates are enriched by the price of compromise.

On the north and east the shores of Cabacera all the way from the bar of Konducia to Cape Cabacera, are covered by a coral flat, scarcely any where less than a mile off shore, and in some parts more, particularly between Arab island and Cape Konducia, as shewn by the plan.

Cape Konducia is the north-east extremity of the peninsula of Caba-

cera, the shore of which is a little elevated, and bounded by cliffs, the only part that is so, except the south point of Cape Cabacera.

About half a mile N.E. of Cape Konducia, the reefs form a small bight, and extend thence straight to the north end of Tree island, and so far as that, all the way from the bar of Konducia, it shoals so gradually, that the lead will be a sure guide for approaching it, whether to coast or to beat.

Tree island, or *Ilha de Pau* is the northern and largest of three islets that stand on a sand bank generally dry, but, sometimes covered. This bank is two miles long, and its direction N. $\frac{1}{2}$ E. by S. $\frac{1}{2}$ W.; they are half a league and more north-easterly of Cape Cabacera, and the outer reefs which are in part a-wash at low water, pass about half a mile to the eastward of Pau bank, ending half a league to the southward of the southern and smallest Pau islet; there it forms the northern boundary of the northern channel into the bay and port of Mozambique, which channel is about a mile and quarter wide between it and the northern reefs of Goa, or St. George island, due south of it: the said Pau reef south head, which is also due east about a league from fort St. Sebastian of Mozambique.

St. George, or Goa island is about half a mile in diameter, and is a flat coral island bound by rocks, except in one point on its N.W. It has a few shrubs on it.

St. Jago, or Senna island, is about the same size and quite similar in character, it is two miles nearly S.S.W. from Goa, leaving the southern channel into Mozambique bay and port between them about one mile and a quarter wide.

St. Jago is about four miles S.S.E. from the fort of St. Sebastian, and forms the southern corner of the great coral flats of Mozambique, whilst this last named island forms their northern limits; these flats have generally, at low water, spring tides, as much as nine feet water, over them, and they cover the shore of the main all the way from point Kisumbo to Cape Sunkool, enclosing the Sunkool sand flats, which cover only at high water common tides. This south channel was always in old charts, marked as being blocked by reefs connecting the two islands, and was generally believed impassable by ships of burden. The Leven used it frequently.

Mozambique island lies nearly N.E. and S.W.; it is a mile and three quarters long, and not half a mile wide. It is covered by buildings of the city and forts; the harbour is within it on its N.W.; and the outer bay between it and St. George island. The S.W. battery of Mozambique island is in lat. 15° 02' S., and long. 40° 58' E. The great fort St. Sebastian is on the N.E. extremity of the island; it is a fine piece of old masonry, and commands both the bay and harbour, as



well as the only pass between them for ships, and which is not four cables lengths wide in its narrowest part, between the fort and the Harpsell sands of Cabacera.

These sands cover the entire south shore of Cabacera, and like those of Sunkool are covered with the last quarter flood.

In the outer bay of Mozambique, there are three coral knolls, (see plan,) the two southern of which have never less than three fathoms, and are in the fair way of the south channel; and the northern one two and three quarters in one spot. It is small, and lies in the fair way of the north channel, reducing the channel between it, and the rocky flat between the south end of Pau reefs, and the sands south of Cape Cabacera, to half a mile wide.

Within the harbour, the Leven banks may be said to be the only obstacles to free navigation, and these are not three cables length off the N.W. end of island; between them and the shore of Mozambique island is the best and most commodious anchorage. The outer reefs are always sufficiently visible by day.

To enter by the north channel between Pau reefs and Cabacera on the north, and St. George island on the south, observe:—

The reefs are always sufficiently manifest on the outside; but the rocky flat and the northern coral knoll are in the way of large ships: bring the north extreme of Mozambique island and fort N.W., or the Pau mountain over the white buildings on point Mapéte nearly on that bearing; this will lead clear in through the narrows; and when point Kisumbo and its village, are open to the northward of the fort, a ship may haul close round the foot of the fort, and choose her anchorage.

To avoid the south point of the Harpsell, or Cabacera sands in entering, the Pau mountain may be kept on, or but little open to the northward of the fort until Tree island be quite shut in with Cape Cabacera, when the Pau may be brought on with the white buildings of Mapéte, or midway between the said extreme point, and its brow N.W. as before directed.

To avoid the spit, which projects a quarter of a mile east of the north bastion of the fort, a ship must not shut in the S.W. battery with the magazine point, or eastern shore of Mozambique, or must not shut in the eastern shores of Cape Cabacera, until the cliffy shores of Lomboo, or the village so named, be seen clear of the north bastion, and must not haul in for the fort, until Kisumbo village and point are seen about W.b.N.: at low water this spit is clearly visible, and often dry; but at high water, it is not so, and is dangerous.

If a ship enter by the south channel, and fear the knolls, she had better send boats to lead her through them, than trust the pilots, who are not only ignorant but wicked.

About two miles above the island of Mozambique the harbour branches off into three creeks, the eastern one, called Meshureel, abuts the isthmus of Empassa within half a mile of the south shore of Konduzia, and there is a road of communication for the convenience of traders lying in Konduzia, which has been spoken of.

On the eastern side of Meshureel creek, the governors used formerly to keep some well laid out gardens, and were used to retire there for relaxation, but neither the residence nor gardens were in our time in sufficient keeping to induce visits for pleasure. We did, however, accompany the governor on one occasion, and found the garden a wilderness, and the residence equally neglected.

The western creek opens into two, Kolombo and Lomboo. The former appears to have been named from the root, which we call Columbo root, which is on all this coast in great plenty, the Arabs call it Kalemb, or Kalomba, which was neglected to be mentioned, when speaking of the produce of Mozambique.

The shores of all these creeks are lined with mangrove, and woe to the European who takes leave to sleep within their baleful influence.

The shores everywhere teem with the most rare and beautiful sea-shells, and the Harp is fished at Cabacera every retiring tide for food. For choice shells, indeed, there is no part of the coasts we visited, where they are not abundant; and a profitable voyage might be made by a scientific person, in a small vessel, in making collections on these now, unfrequented shores.

The southwest point of Mozambique bay is Cape Sunkool, which is in lat.  $15^{\circ} 4' S.$  and long.  $40^{\circ} 44' E.$  There are a few huts on it: all the land between it and Kalomba and Mokamba is low, and at this Cape the Mozambique coral flats terminate. Small vessels may at most times navigate these flats, but the sea generally breaks very heavily on their southern coast between Sunkool and St. Jago, and a large English ship was lost here in 1823, apparently by design, the calculated profits of the voyage having been previously insured, and the utter uselessness of all former charts furnishing good excuse for wilful ignorance.

Before the description of Mokamba is undertaken, it may be well to remark, that there are good soundings and anchorage in reasonable depths, at convenient distances from every part of the reefs southward of Tree island; and that in the northern monsoon, if a ship comes in on the land too late in the day to enter either of the ports; she had better anchor outside for a convenient time; for no ship can beat against the current near the shore, and if becalmed she will inevitably be swept past them, as very frequently happens; in this case, if a ship cannot, at least, fetch in under the lee of the coral flats, where she would be sheltered from the strength of the current, she has no alterna-

tive but to stand out to sea again for fifteen or twenty leagues, and may lose a week in regaining the port.

Between Capes Sunkool and Bayon, (which lie nearly in the same meridian, and three leagues asunder), is the great bay of Mokamba, in the bottom of which is the fine port of that name.

Mudge reef lies much in the fair way of the entrance, and is N.b.W.  $\frac{1}{2}$  W., about seven miles from Cape Bayon, and five miles from the eastern point of Cape Sunkool, and nearly W.S.W. three leagues from St. Jago.

The shore all the way between Mudge reef and Capes Mudge and Bayon, is very foul and shallow to appearance, but we did not examine it, except in the immediate neighbourhood of the port.

To the northward of Mudge reefs, the fair channel into Port Mokamba, is two miles wide, with no known danger. The Sunkool shore which is the northern boundary of the bay, is a clean sandy beach from the low swampy shore of the southern projection of Cape Sunkool itself.

Cape Mudge is upwards of half a league S.W.b.W. (true,) from the reef head, and W.  $\frac{3}{4}$  N. from Cape Mudge, half a league is Cape Mokamba, leaving a channel perfectly clear between them; half a league S. 50° W. from Cape Mudge on the same shore is point William, which is foul, it leaves the channel between it and Cape Mokamba, nearly north of it also half a league wide, these three points thus forming an isosules triangle, are low but well marked.

Westward of Cape Mokamba and Point William, Port Mokamba opens out into a spacious basin, a league and half in diameter; and in the head of the port two leagues from the entrance is the river Tomonya, with good depths for small craft.

To enter Mokamba keep the Sunkool shore on board, or bring Mokamba peak to bear W.b.N., and steer for it until Point William is brought mid-channel between Capes Mudge and Mokamba about S.W.  $\frac{1}{2}$  W., it may then be steered for until midway between the three points, then steer W.b.N.  $\frac{1}{2}$  N. until fairly within the bay, and choose a berth by the plan.

This bay has always been entirely neglected by the Portuguese until 1824, when an enterprising Brazilian, Senhor Alvarez, established a whale fishery in it. It is said these fish frequent it in the calving season, (July to September,) in great abundance.

The peak of Mokamba on the north shore is nearly half a league within Cape Mokamba, and is perhaps 2000 feet high, we understood it to have some hot springs at its base, but we did not look for them. It is said also to have been a volcano, and the Portuguese say it is not yet extinct.

This account of Mozambique may be concluded with a tradition, that whenever there is an eruption of the volcano on Mayotta of the Comoro isles, there are earthquakes felt at Mozambique, and in January 1823, we felt several severe shocks for two successive days even in the ship at anchor in the harbour, these places, however, are ninety leagues asunder.

It is high water on all this coast from Cape Monyany to Cape Bayon, near 4 P.M. on the days of full and change; the highest tides are generally four or five tides after rise in springs, from 11 to 14 feet, in neaps from 2 to 7 feet.

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## ON ORDINARY ELECTRICAL DISCHARGES, AND ON THE OBSERVED EFFECT OF LIGHTNING ON SHIPPING;

*Being a further investigation of Mr. Sturgeon's "Memoir on Marine Lightning Conductors;" by Mr. Snow Harris, F.R.S., &c.*

(Continued from p. 170.)

**GENERAL Principles.**—1. There is an invisible agency in the material world, intimately associated with common matter termed electricity.

2. Lightning, thunder, and a variety of analagous phenomena of a minor kind, artificially produced, result from discharges of this agency between bodies differently affected by it.

3. In every case of electrical discharge there are two sources of action; one existing on some substance eager to throw off redundant electricity, being according to Dr. Franklin, overcharged with it; the other existing in some other supposed substance, eager to receive electricity, being according to the same philosopher, deficient of it, or undercharged.

4. Two opposed bodies thus affected have a sort of exclusive action on each other, either directly through any intervening substance, whether a conductor of the electrical principle or not, or otherwise *indirectly*, through any lateral circuit. Thus, two metallic surfaces, A B, Fig. 1, pasted on the opposite sides of a square of glass, C D, have, when the square is said to be charged, an exclusive action on each other, either through the intervening glass, or otherwise through any conductor, *m o n*, connecting them.

5. We have only to suppose these planes placed further apart as in Fig. 2, to have a discharging conductor, *m n*, of greater or less extent between them, to be greatly increased in size—to be separated by air instead of glass, and to consist of free vapour, or water, and we have a pretty faithful representation of the conditions under which a discharge

of lightning takes place; when passing partly through the air, and partly through a discharging conductor,  $m n$ , or any other body placed on the plane, B.\*

6. Any continuous metallic rod or other body,  $m n$ , Fig. 2, connected with the lower plane, must be considered merely as a passive way of access for the charge so far as it goes, the electrical agency being observed to seize upon substances best adapted, and in a position to facilitate its progress, or otherwise to fall with destructive effect upon such as resist it. It is easy to perceive here, that the presence of such a conducting rod,  $m n$ , Fig. 2, or other conducting body, has nothing whatever to do with the great natural action, set up between the planes, A, B, it being merely a point in one of them. The original accumulation of electricity and subsequent discharge, would necessarily go on, whether such a rod were present or not, as is completely shewn by experience. When present its operation is confined to the transmission, so far as it extends, of that portion of the charge which happens to fall on it; and, since it is quite impossible to avoid the presence of conducting bodies in the construction of ships, it is the more important to understand clearly in what way damage by lightning occurs to the general mass and how it may be best avoided.

7. Now, when discharges of lightning fall on a ship in the way above stated, as being a heterogeneous mass, fortuitously placed between the charged surfaces, A B, Fig. 3, the course of the discharge is always de-

\* The thickness of the intervening stratum, and the consequent amount of free electricity in the clouds, has led Professor Henry to question, in some measure, the perfect analogy of a discharge of lightning, with that of a Leyden jar; but, I think upon mature consideration, this will be found in no way subversive of the general principle. Thus, whether electricity be accumulated on thick glass or on thin, the result is the same; it is merely the intensity as indicated by an electrometer which changes. Now the term "free electricity," applies only to the greater or lesser influence of the opposed coating, in respect of other bodies.

In the case of the opposed surfaces of the clouds and earth, *all* the charge is necessarily free electricity, since there exists no other point upon which it can tend to discharge. In the same way, the electricity of the jar, when the coatings are very near, is necessarily redundant, or free electricity, in respect of the action between the coatings; although latent in respect of other bodies. Hence, with a moderate accumulation, the electricity exhibits but a small intensity, if any. The only difference at the time of the discharge is, in the position of the discharging circuit, which, in the case of the clouds and sea, is directly in the interval of separation; and as we find the principle of induction always active between them in cases of lightning: the thickness of the stratum has evidently no influence on the conditions of the accumulation, especially when we consider the great extent of the opposed surfaces in respect of it, which may possibly be 20,000, or more, square acres. Dr. Faraday has shown, that no distance can be assigned probably, through which electrical induction does not take place.

terminated through a certain line, or lines; which, upon the whole, resist its progress. The interposed air between the ship and the clouds first gives way in some particular point, probably the weakest, suppose at A, Fig. 3, the electrical agency, then meeting with continued resistance from the non-conducting particles of air, becomes frequently turned into a tortuous course. Suppose it arrives in this way at some point, *m*, in the vicinity of a ship at K. The question whether it would strike upon the mast at *y*, would be determined by the resistance in the direction, *m y k*, as compared with that in any other direction, *m B*, whether, in fact, it would be easier to break down the remaining air, in the direction *m B*, or otherwise the air in a straight or tortuous direction, *m K*, supposing the ship's mast to facilitate the progress in that direction.

8. Let the charge, however, strike in the direction *m y*, and to fall on the mast; then in proceeding to its destination, viz. the plane of the sea B, its course is still determined by the same general principle: hence it seizes upon all those bodies which can best assist its progress, and which at the same time happen to be placed in certain relative positions, and upon no others; falling with destructive effect upon intervening bad conductors; and exhibiting in non-conducting intervals all the effects of an irresistible expansive force. If we examine carefully the course of discharges of lightning on ships, in some hundred instances in which damage has ensued, we shall find this effect invariable. The damage has always occurred where good conductors cease to be continued; and the destructive consequences most apparent, are those usually produced by expansion. The calorific effects, except as depending on this cause, are really inconsiderable. There are comparatively few instances in which metallic bodies have been at all fused, and no instance in which a bolt or chain of any great extent has been even much heated.

9. A few illustrations of this principle may not be here out of place.

Exp. 1.—Let some detached pieces of leaf gold be laid on paper, as represented in Fig. 4. Pass a discharge from A to B, sufficiently powerful to disperse the gold, and so exhibit by the dark portions the track of the explosion. The result will be similar to that represented in Fig. 5, by which we perceive the course of discharge has been in the dotted line, *a b d e f g h i l*, being the least resisting line; and it is particularly worthy of remark, that not only are the pieces, *c k* untouched, being from their position of no use in facilitating the progress of the discharge, but even portions of those pieces which have so operated, are left perfect, as in the transverse piece, *i*, and portions of *a b d e f*,—so little is there any tendency to a lateral discharge, even up to the point of dispersion of the metallic circuit in which the charge has proceeded: indeed, so completely is the effect confined to the line

of least resistance, that percussion powder may be placed with impunity in the interval—between the portions, *i k*.

Now the separated pieces of leaf gold, thus disposed, may be taken to represent detached conducting masses fortuitously placed along the mast and hull of a ship.

Exp. 2. Let a continuous line be passed through the separated pieces of gold and a shock of electricity be discharged over the whole as in the preceding case, the effect will be as represented in Fig. 6, the discharge will be confined to the line of least resistance; and we may perceive in this as in the former case, that those pieces or parts of pieces out of the track of the discharge, are not affected. Thus, a part only of the piece *g* is destroyed, also of the piece *i*, whilst other pieces, *b d e f*, which, in the former case were blackened by the discharge when the continuous line was not present, are here untouched.

Exp. 3. If the continuous line, A B, Figs. 7 and 8, be assisted by other *short* collateral branches, as *d f, d e*, having *one common connection*, then a discharge, which would destroy the whole line, A B, will divide upon these auxiliary lines, and the part, *d B*, will either escape, or the whole will suffer together.

Exp. 4. Pass a discharge over a strip of gold leaf as A, Fig. 2; every part of it, as indicated by the last experiment, will participate in the shock; and, if it be of uniform density and thickness, it will be every where equally affected, so that one portion will not be destroyed without the whole. This result will be readily distinguished from that represented at *g* and *i*, Fig. 6, where the pieces lie *across* the track of the discharge. The diagrams here referred to are copied from the actual effects of the electrical discharge in the way above mentioned.

10. These experiments are instructive; they evidently prove, that an electrical explosion will not leave a good conductor, constituting an efficient line of action, to fall upon bodies out of that line. Mr. Sturgeon's assertion, that a conductor on a ship's mast would operate on the magazine, is therefore quite unwarranted. Besides, we have many instances of the masts having been shivered by lightning into the step, whilst acting as partial conductors, without any ill consequences, as happened in the *Mignonne* in the West Indies; the *Thetis* at Rio; the *London*, *Gibraltar*, and several others. Instead, therefore, of a conductor on the mast being dangerous, it is absolutely requisite, as a source of safety to the ship, by confining the discharge to a given line, and leading it to the sea.

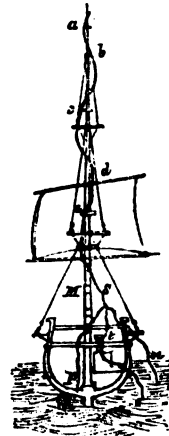
11. It was from a careful examination of these effects, and from experimental facts similar to those just stated, that I was led to suggest the propriety of fixing continuous conductors of lightning of great capacity on the masts of ships, linking them by efficient connection, together

with the principal detached metallic bodies in the hull, into one general system, and finally connecting the whole with the sea. As these conductors have been more than once described in the *Nautical Magazine*, it is unnecessary to make further mention of them. I shall therefore proceed to some illustrations on the great scale of Nature, of the general law of electrical discharges above exemplified experimentally.

12. It is well known that in December, 1838, the *Rodney* of 90 guns, one of the finest ships in the Mediterranean, not having a lightning conductor, was struck by lightning, and severely damaged. The attendant phenomena, were such as have always occurred, in similar cases, *e. g.* The electrical discharge in forcing its way between the sea and clouds, over resisting intervals, and between discontinuous metallic masses, was productive of a violent expansive effect in these intervals, causing at the same time a considerable evolution of heat.

The course of the discharge was a very simple affair, being by this well-established law of electrical action in the line or lines of least resistance, from the highest point to the sea: thus the course of the discharge was along the mast and rigging, upon the general mass of the hull and sea, as indicated by the waving black line in the annexed diagram.

The vane spindle, &c. at *a*, upon which the accumulation was first concentrated, was of course severely dealt with. From this being assisted, probably, by the moisture on the surface of the wood, it glanced over the royal pole to the head of the top-gallant mast at *b*, where it found intermediate metallic assistance in the copper funnel for the top-gallant rigging; from this, the resistance in the direction of the wood, appears to have been less than that on its surface, probably from the long interval of air, between the funnel and conducting bodies about the cap below at *c*. The mast was therefore split open so far as the cap, there again it was enabled to strike over the surface of the mast, upon the metals about the parrall of the topsail yard at *d*, where the accumulation became again concentrated, producing a powerful expansive and heating effect so far as the lower cap at *e*; and thus it passed on, persaltum, from one metallic mass to another, over the lower mast *M*, until within a striking distance of the sea and hull at *S*, it distributed itself freely in several directions. In this course, we should naturally expect, it sought assistance from all the conducting matter it could seize on—such as the wet ropes, the copper funnel for the top-gallant rigging at *b*; the iron work and other bodies about the topmast cap, &c.; as also the men in the top-





gallant crossrees at *c*. The charge evidently divided upon them in proportion to the assistance each could afford, as a small auxiliary circuit, as in Exp. 3,—The men nearest the mast would be necessarily in the more direct course of the discharge, the others would be more or less so, according to their respective positions. That these poor fellows who were killed, suffered in this way, as being conductors to part of the charge, is evident from the appearance of the bodies. Mr. Sturgeon calls especial attention to the circumstance of the *men being thrown in opposite directions*, and thinks it *remarkable*; but how could it be otherwise, the intervening air, being caused to expand violently from a central point; would necessarily operate as a central force; surely there is nothing new in this. About the parrall of the topsail yard at *e*, we should expect again powerful effects, for here again the charge became concentrated; and set the sail, &c. on fire. This is still quite in accordance with known laws of electrical action. Thus we find the points of ingress and egress of an artificial charge, when caused to fall on a slip of gold leaf or other matter, are always those in which the most powerful effect ensues; and when we desire to fire inflammable matter by electricity, we place it directly between detached metallic points.

The circumstance of the lightning striking over portions of the wet mast without damage, is also precisely the same effect as observed in artificial electrical discharges. Thus a very slight film of moisture, will allow a jar intensely charged, to discharge a luminous ball over a long strip of glass: an experiment, not only beautiful, but instructive. Thus also, Dr. Franklin found, he could destroy a *dry* rat by an electrical shock, when he failed to hurt a wet one. If we continue to follow the discharge, we find similar expansive and destructive effects, such as the bursting of the hoops on the mast, &c. which will sometimes occur, and sometimes not.

There is really nothing in all this to call for *especial* remark, as imagined by Mr. Sturgeon, except we may observe, as shewn by the experiments already described, that if a good capacious conductor had been incorporated with the mast from the truck to the metallic masses in the hull, and to the sea, then these expansive and destructive effects could not possibly have occurred; since the interrupted circuit would have been avoided, and the electrical action would have vanished, or nearly so, at the mast head, for it would no longer have been obliged to force its way in a dense and explosive form to the hull and sea. Of this we have the most complete evidence from experience, particularly in the cases of the ships struck by lightning having such conductors as those just alluded to, and which are curiously enough quoted by Mr. Sturgeon, as evidence to the contrary. It seems a strange way of dis-

proving a fact, to quote those who having been eye-witnesses, insist upon its truth.\* That the electric matter finally distributed itself upon the hull as well as on the sea, is evident from the circumstance of the casing of Hearle's pump at *t*, which led through the side under water being shivered from the vivid electrical sparks below, and from the usual smell of sulphur in the well at *p*, and from the appearance of smoke on the orlop deck. The interrupted circuit, therefore, to be traced here, is, *first*, from the vane spindles, *a*, to the copper funnel of top-gallant rigging, *b*; *second*, from this to the conducting bodies at the heel of top-mast at *c*; *third*, from thence to the metallic masses about the parrall of topsail yard at *d*; *fourth*, between this and the metallic bodies about head of lower mast, at *e*; *fifth*, from this over the detached metallic bodies on lower mast, *M*; *finally*, from lower mast to the hull and sea over the directions, *sn sto sp*. The effect of this shock of lightning, appears to have been somewhat palliated by heavy rain.

Although Mr. Sturgeon has gone far out of his way to twist these phenomena into an accordance with his theoretical views, and sets them up as being of an extraordinary kind, they are nevertheless of a very elementary character, and are merely illustrative of a few evident laws of electrical action.

(To be Continued.)

[The reader is requested to notice the following errata in the preceding part of this communication, given in our last number, p. 166.—Page 167, 18th line from the top for "electrified agency," read "electrical agency."—p. 168, 2nd line from top for "run" read "rim."—p. 169, 22d line from the top for "conductor" read "conductors;" 24th line from the top for "treble" read "evident."]

## MAGNETISM OF CHRONOMETERS.

MR. EDITOR.—The subject of the Magnetism of Chronometers has occasionally engaged your attention. Perhaps, you may take some interest in the following account of a rate of a chronometer, subject, in a greater degree than any other which I have examined, to the influence of magnetism; and of the process by which this fault has been nearly corrected.

In the month of September last, the chronometer Brockbanks, 425, the property of the government, was returned to the Royal Observatory, Greenwich, by Messrs. Brockbanks and Co. with a statement that the chronometer appeared sensible to magnetic action, as its rate was distinctly altered when the chronometer was placed near to an iron door. It appeared desirable to institute an accurate examination into the effect of terrestrial magnetism upon its rate; and for this purpose the following process was used. The chronometer was compared every day with a clock whose error was accurately known from transit observations,

\* See Lieut. Sullivan's letter in Nautical Magazine for December 1839.

(in the usual chronometer system of the Royal Observatory,) and after each comparison it was turned  $90^\circ$  in azimuth, always in the same direction as the motion of the hands of a watch. The smallest acquaintance with the theory of the action of magnetic forces upon the balance or balance-spring, will convince any one that observations made with any part of the chronometer in the four cardinal positions, will exhibit the effects of magnetism, as completely as if it had been turned successively to every point of the compass; and, indeed, that they will enable us to predict accurately the rate which the chronometer will have when turned in any other position. And, as the cycle of observations embraces only four days, (or five days, when, as usually happens, on Sundays, a day's comparison, and one turn of  $90^\circ$  are omitted,) the comparison of rates will scarcely be affected by these gradual changes of rate to which all chronometers are liable. The position of the figures XII, on the chronometer face, with reference to the Astronomical meridian, was registered after each change of position.

For the detail of rates thus observed, I beg to refer to the tables at the termination of this paper, remarking only, that they prove the chronometer to be, generally, a good one. The following abstract (containing the means of the rates in the different positions of the chronometer) will shew the amount of the influence of terrestrial magnetism:

Mean daily rate, figure XII.	North	—4·64s.
Ditto	East	—8·70s.
Ditto	South	—9·61s.
Ditto	West	—5·71s.

The mean daily rate with figure XII, in any azimuth  $A$ , measured from the north towards the east, south, and west, would, therefore, have been

$$-7\cdot16s. + 2\cdot48s. \times \cos A - 1\cdot50s. \times \sin A.$$

The smallest losing rate would be —4·26s., when the figure XII was N.  $31^\circ$  W.; and the greatest losing rate would be —10·06s., when the figure XII was S.  $31^\circ$  E.; the greatest difference of rates, depending on the position of the chronometer being 5·80s.\*

The amount of magnetic influence being thus determined, it then became necessary to consider how this influence might be reduced or annihilated. There appear to be but two principles upon which this can be done.

\* These numbers are thus obtained, 7·16 is the mean of the rates in the four positions; 2·48 is half the difference of the N. and S. rates, 1·50 is half the difference of the E. and W. rates;  $5\cdot80 = 2 \sqrt{(2\cdot48^2 + 1\cdot50^2)}$ ; and  $\tan 31^\circ = \frac{1\cdot50}{2\cdot48}$  nearly.

One is, to destroy the internal sensitiveness of the chronometer to external magnetic action. This is the only way by which the possibility of magnetic disturbance under all circumstances can be radically destroyed. I see no practical method of effecting this but by the expensive process of removing the balance and balance-spring, and substituting new ones. It is, however, much to be desired that some person conversant with practical operations of magnetism should endeavour to make practicable the destruction of permanent magnetism in the balance and springs of chronometers, as mounted in the instruments.

The other principle is, to neutralize the terrestrial magnetism by introducing another antagonist magnetic force. This may be done with great facility, by reference to the following consideration.

The earth, so far as its action on magnetic substances, at any one place is concerned, may be considered as a huge magnet, having its marked end towards the south. This will be evident, if we remember that the opposite poles of different magnets attract each other; and, therefore, as the marked end of a magnet is attracted to the north, the unmarked end of the great terrestrial magnet which attracts it must be on the north side, and its marked end on the south side.

If, therefore, a magnet be suspended freely, as the needle of a common compass, it will assume a position in which its poles are opposed to the poles of the terrestrial magnet.

Consequently, the compass-needle, and the terrestrial magnet act in opposite ways upon any other body subject to their magnetic influence; or, the effect of the compass needle will tend to neutralize, or to reverse the effect of terrestrial magnetism.

And, therefore, by proper adjustment of the distance, the magnetic action of the compass-needle upon any other body may be made to correct the magnetic action of the earth on the same body.

The practical construction which this suggests is extremely simple. *The action of terrestrial magnetism upon a magnetic chronometer may be annihilated by placing the chronometer upon the top of a compass box, whose needle is perfectly free, provided that its elevation above the compass be properly adjusted.*

It is easy to make a trial of the principle of this correction, thus: place a small compass upon the glass cover of a large compass, and the marked end of the small one will point to the S. Elevate it to a great distance above the large one, and its marked end will point to the N. Raise it gradually from the glass, blocking it up with pieces of wood, copper coin, pasteboard, &c.; and a position will at last be obtained in which the needle of the small compass will rest in any direction. This is the elevation at which the magnetic part of the chronometer

ought to be placed in order that the effect of terrestrial magnetism may be entirely corrected.

Exactly in the method which I have described, I proceeded to correct Brockbanks, 425. Having ascertained the elevation at which a Kater's compass neutralized the terrestrial magnetism, and having measured the distance of the chronometer-balance (in which I supposed the magnetic part to be situate) above the base of the chronometer case, I constructed a wooden box or dish, with ledges for the support of the chronometer box, and with a central hollow or well for the compass, and I so adjusted the elevation of the compass, that the balance of the chronometer might be (as nearly as I could arrange,) at the same elevation as the needle of the small compass had been when its directive power was destroyed. The chronometer was then rated as before, being turned  $90^\circ$  after every comparison; the following are the means of the rates:—

Mean daily rate, figure XII.	North	—6·90s.
Ditto	East	—8·10 one day only
Ditto	South	—8·17
Ditto	West,	—6·75

The discordance in different positions was thus greatly reduced, but the residual part was of the same kind as the original discordance. It appeared, therefore, that the action of the compass was too weak, or that it was too far depressed below the chronometer. It was, therefore, raised a quarter of an inch, and the chronometer was again rated. The following are the means of the rates:—

Mean daily rate, figure XII.	North	—7·96s.
Ditto	East	—9·20
Ditto	South	—9·54
Ditto	West	—8·41

As the remaining error was still of the same kind, the compass was again raised a quarter of an inch, and the results were as follows:—

Mean daily rate, figure XII.	North	—9·24s.
Ditto	East	—9·41
Ditto	South	—9·75
Ditto	West	—10·03

It now appears that the chronometer is over-corrected; but so little, that it may be considered for all practical purposes, as free from magnetism. The small irregularity which remains does not follow the same law as that of the original magnetic disturbance, which I ascribe to the following cause: Upon taking the chronometer from its wooden

ledges, I usually found that the compass was left in the state of vibration through a small arc. I infer from this, that the steel work of the chronometer had deranged its position, and therefore, it could not exactly correct the terrestrial magnetism. This circumstance points out the advantage of using, in similar cases, a powerful compass, which will bear to be removed to a considerable distance from the chronometer.

I am somewhat surprised at the necessity, which in this instance has become quite certain, of bringing the compass nearer to the balance than was necessary for destroying the directive power of the small trial compass. The uncertainty of measures cannot amount to half an inch; the only probable explanation seems to be, that the part most susceptible to magnetic action was not the balance, but the balance-spring.

I beg, therefore, to suggest the following, as rules to be adopted whenever there is reason to think that a chronometer is disturbed by magnetic action; and I wish to point out as a convenience attending the method, that it requires the use of only such apparatus as may be found in every ship.

1. Place a small compass upon the top of a large one, and determine by trial, the distance to which it must be raised, in order that its directive power may be destroyed. In this state, measure the elevation of the small needle above the glass, or any other convenient part of the large compass: call this *a*.

2. Measure the elevation of the balance of the chronometer above the bottom of its box: call this *b*.

3. Place the chronometer box upon the large compass, the elevation of the bottom of the chronometer box above the glass of the compass being the excess of *a* above *b*. Then the balance will be at the same height as the small compass-needle in the trial.

4. It will, perhaps, be found necessary to bring the chronometer a little nearer to the compass.

5. If a ship is passing through different magnetic latitudes, it will be necessary from time to time, to repeat the trial, and to alter the adjustment accordingly.

6. The amount of discordance depending on magnetic action is a matter of no consequence whatever, and needs not to be ascertained beforehand. The same arrangement of the compass which corrects a small discordance will correct a large one, and will do no hurt to the chronometer, if it have no discordance whatever.

I subjoin the tables of daily rates, and I am, Mr. Editor,

Your very obedient servant,

G. B. AIRY.

Royal Observatory, Greenwich, Feb. 22<sup>d</sup>, 1840.

2 H 2

**TABLE I.**  
*Daily rate of Brockbanks, 425, in the ordinary state.*

Day 1839	Positions of figure XII.			
	N	E	S	W
Oct. 4	-4.7			
5		-8.4		
6			-8.3	
7				-6.1
8	-4.1			
9		-9.0		
10			-9.6	
11				-6.0
12	-5.0			
13		-8.4		
14			-11.3	
15				-5.1
16	-4.1			
17		-9.1		
18			-9.3	
19				-5.8
20	-3.9			
21		-9.1		
22			-9.4	
23				-6.0
24	-4.9			
25		-8.3		
26			-9.5	
27				-5.3
28	-5.2			
29		-8.6		
30			-9.9	
31				-5.7
Nov. 1	-5.2			
No days	8	7	7	7
Mean rate	-4.64	-8.70	-9.61	-5.71

**TABLE II.**  
*Daily rate of Brockbanks, 425, with the compass as first applied.*

Day 1839	Positions of figure XII.			
	N	E	S	W
Nov. 3			-8.0	
4			-8.0	
5				-6.6
6	-6.8			
7		-8.1		
8			-8.5	
9				-6.9
10	-7.0			
11	-6.9			
No days	3	1	3	2
Mean rate	-6.90	-8.10	-8.17	-6.75

**TABLE III.**  
*Daily rate of Brockbanks, 425, with the compass in second position.*

Day 1839	Position of figure XII.			
	N	E.	S	W
Nov. 13			-9.3	
14				-6.9
15	-7.4			
16		-8.7		
17			-8.9	
18			-8.8	
19				-7.8
20	-7.3			
21		-9.0		
22			-9.2	
23				-8.3
24	-7.4			
25	-7.4			
26		-9.0		
27			-9.5	
28				-8.6
29	-7.8			
30		-9.1		
Dec. 1			-10.1	
2			-10.1	
3				-8.4
4	-7.9			
5		-9.8		
6			-9.9	
7				-8.6
8	-8.5			
9	-8.5			
10		-9.6		
11			-9.7	
12				-9.2
13	-8.1			
14		-9.8		
15			-9.8	
16			-9.8	
17				-8.3
18	-9.3			
19		-8.6		
20			-9.4	
21				-9.6
No. days	10	8	12	9
Mean rate	-7.96	-9.20	-9.54	-8.41

TABLE IV.  
*Daily rate of Brockbanks, 425, with the compass in the third position.*

Day 1839 and 1840	Positions of figure XII.				Day 1840	Positions of figure XII.			
	N	E	S	W		N	E	S	W
Dec. 24		-9.1			Jan. 20				-10.2
25			-9.8		21	-9.5			
26			-9.9		22		-9.7		
27				-10.0	23			-9.8	
28	-9.2				24				-10.3
29		-9.2			25	-9.4			
30		-9.1			26		-9.5		
31			-9.7		27		-9.4		
Jan. 1				-10.4	28			-10.6	
2	-8.8				29				-9.6
3		-9.2			30	-9.1			
4			-9.8		31		-9.4		
5				-10.2	Feb. 1			-10.0	
6				-10.1	2				-9.9
7	*				3				-9.9
8		-9.5			4	-9.5			
9			-9.6		5		-9.4		
10				-10.0	6			-9.9	
11	-9.2				7				-9.6
12		-9.4			8	-9.3			
13		-9.3			9		-9.5		
14			-9.4		10		-9.5		
15				-10.0	11		-9.6		
16	-9.2								
17		-9.7			No. days	9	16	11	13
18			-9.4		Mean rate	-9.24	-9.41	-9.75	-10.03
19				-10.2					

\* Chronometer run down.

### NAUTICAL DESCRIPTION OF THE COAST OF WALES.—No. 1.

*Grassholm, the Barrels, the Hats, and the Smalls.*\*—By Lieut. W. L. Sheringham, R.N.

As we consider that a correct nautical description of a coast even in the absence of any correct charts is of great service to seamen, we have commenced here a series of papers describing the shores of this country;

\* Hats, Barrels, &c.—The uncertainty as to the proper names, and position of these shoals has given rise to much confusion. This it is hoped will be now greatly removed by assigning distinct names to each. However these names may have originated, as they appear familiar to every seaman on the coast; and certainly by them associated with the locality in which they are found; it was deemed prudent to retain them.

Norie, in his *St. George Channel*, gives the name of Hats and Barrels, to one shoal, nearly equi-distant between the Smalls and Grassholm. Lewis Morris calls the Hats and Barrels, a long extent of foul ground, stretching off to the southward,



intending occasionally to continue them in future numbers, while the Surveys from which they are constructed, remain preparing for publication.

#### GRASSHOLM.

Lies W.N.W. from the west end of Skomer island, distant from it rather more than six miles; it is in shape an oblong, lying N.E. and S.W., about three quarters of a mile in circumference. Grassholm is composed of trap rock, and its rugged shores are scarcely approachable. The best landing place is at the west end, between the clefts of the rocks, from whence there is a tolerably easy ascent to the summit. Although scanty patches of grass are seen, there is not sufficient food on the whole island for half a dozen sheep, neither is there any water to be found. This island is occasionally visited in the summer for the purpose of collecting the eggs of the sea fowl, which literally swarm there, and are so tame as to be easily taken from their nests by hand.

Grassholm is a conspicuous object from the sea, being frequently the first land made coming from the south and westward; its highest point, which is near the centre of the island, is about 146 feet above low water spring tides.

There are no off lying dangers, but as the tides set with great velocity on it, occasioning a complete race at the N.E. and S.W. ends; and a strong eddy or indraft on the lee or opposite side to the tide, which extends upwards of a quarter of a mile from the island, some precaution ought to be observed in approaching it, particularly in light winds, when it might be dangerous to get within the edge of the true tide. Its position is as follows:—Lat. 51° 43' 54" N., long. 5° 28' 40" W. and bears

From St. Ann Lighthouse . . .	N. 48° W. or N.W. $\frac{1}{4}$ W.—	11 $\frac{3}{4}$ miles
The Smalls ditto . . .	S. 68° E. or E.S.E.	7 $\frac{1}{8}$ "
The South Bishop ditto . . .	S. 47° W. or S.W. $\frac{1}{4}$ W.	7 $\frac{3}{4}$ "
St. David Head . . .	S. 59° W. or S.W. b.W. $\frac{1}{4}$ W.	12 "
S. entrance to Ramsey sound	S. 67° W. or W.S.W.	9 "

#### THE BARRELS.

Three of these rocks dry a little after half tide, or the last quarter ebb. They lie W.  $\frac{3}{4}$  N. from the center of Grassholm; distant exactly three miles.

The Barrels, although generally shewing themselves by a heavy and connected with the Smalls. The rocks which in these directions are called the Barrels, and known as such to the local Packet seamen, he calls Skittle Bottom. This name, together with the Pope, the Monk, and the Mascus, has been omitted, as the three last shoals do not exist; and the first is a name likely to mislead.

breaking sea, must be approached with caution, as at or near high water, in light winds and no swell with a lee tide, they are very difficult to be seen. The tide sets over them with great strength, particularly at springs: this causes so strong an eddy on the opposite side that the indraft ought to be carefully guarded against. Although the rocks which dry occupy but a small space, the foul ground or tail of the shoal extends some distance, particularly to the S.W. and N.E.; it would be highly imprudent therefore to approach them nearer than half a mile. The following mark leads over the dry rocks; viz. Llaethdy rock which is the small mountain near St. David Head, just shewing clear of the north part of the Ramsey Mountain. The clearing marks will be given in the directions for sailing near them.

The Barrels bear from

St. Ann Lighthouse . . . . .	N. 55° W. or N.W.b.W.—	14 $\frac{1}{2}$ miles
Smalls ditto . . . . .	S. 57° E. or S.E.b.E.	4 $\frac{3}{8}$ "
South Bishop ditto . . . . .	S. 60° W. or S.W.b.W. $\frac{1}{4}$ W.	10 "

#### THE HATS

Lie N.W. from the Barrels, and distant from them nearly two miles and a half. As this danger never dries, great caution is requisite when sailing near their position. Independently of the little water over them at low water, from eight to ten feet, there is generally at springs with a weather tide particularly a most terrific sea on them. The shoal is not of large extent, but the depth of water is so irregular near it, and the tides so rapid causing great overfalls, that seamen cannot be too much on their guard.

The following mark leads over them: viz. Llaethdy Rock just within the point of Ramsey island. They bear from

St. Ann Lighthouse . . . . .	N. 54° W. or N.W. $\frac{3}{4}$ W.—	16 $\frac{5}{8}$ miles
Smalls ditto . . . . .	S. 66 $\frac{1}{2}$ ° E. or E.S.E.	2 "
South Bishop ditto . . . . .	S. 72° W. or W.b.S. $\frac{1}{2}$ S.	10 $\frac{1}{4}$ "

#### THE SMALLS

Are a cluster of low bare trap rocks, about one-fifth of a mile in length, and one-twelfth of a mile in width; they extend in a N.E.b.N. and S.W.b.S. direction, and are never entirely covered. Upon the largest of the group which is the westernmost rock, and about 130 yards long, the Lighthouse is erected. The lanthorn is raised upon piles, having the lightkeeper's dwelling immediately under it; which is got at from the rock by means of a rope or Jacob's ladder.

The following is the description of the light, as copied from the Admiralty Notice of British Lighthouses.

" No. of lights—*One. Fixed. Colour—Bright.*

" Distance seen in clear weather—*15 miles.*

" Seen all round. Colour of lighthouse or any peculiarity—*Red.*

" Lanthorn above high water, 70 feet. Height of building, 58 feet.

There are several detached sunken rocks, which lie at some distance from the main group; viz.

No. 1.—The S.W. Rock.—This dries at the last quarter ebb, and bears from the lighthouse S. 70° W., or W.b.S.½S., distant nearly a quarter of a mile. Between this rock and the lighthouse there are two others, nearly in the same line, and about equi-distant from each other. These also dry at low water.

No. 2.—The E. Rock, which bears from the lighthouse S. 60° 20' E., or about S.b.E.¼E., and distant from it a quarter of a mile. This rock is about a-wash at low water spring tides; and, therefore, must be carefully avoided, when sailing between the Smalls and the Hats.

No. 3.—The N.E. Rock. This bears from the lighthouse N.E.¼E., distant about quarter of a mile, and is also nearly dry at low water, it is very dangerous when sailing near the Smalls to the northward. Outside or west of the lighthouse there is nothing off-lying, and the rock may be approached to within a quarter of a mile. The landing place is on the south side of the lighthouse, protected by the southern ledge of high water rocks; at low water it forms a sort of cove, but when the tide is up the water flows through. It may be observed, however, that it is not often that a safe landing can be effected on these rocks; and the signal from the lighthouse, whether it is practicable or not, is a Ball—*Yes.* Ensign—*No.* The rocks of this group have a powerful effect upon the needle, for, when a common steering compass was placed on them it deflected, at least, four points, and became motionless—by the box being gently raised it gradually recovered its activity, and at the distance of six feet from the rock it regained its proper action. Something, perhaps, may be attributed to the numerous iron bolts which are let into the rocks, but as care was taken to place the compass as far removed as possible from them, certainly the effect produced could only be in a small degree attributable to their influence. The following is the position of the Smalls lighthouse; viz. Latitude 51° 43' 17" N., longitude 5° 40' 5" 6 W., and bears from

St. Ann Lighthouse . . . . .	N. 56° W. or N.W.b.W.—	18½ miles
South Bishop ditto . . . . .	S. 78½° W. or W.b.S.	12½ "
Grassholm . . . . .	N. 68° W. or W.N.W.	7½ "
Skomer Island . . . . .	N. 66½° W. or W.N.W.	13¾ "
S. entrance to Ramsey Sound	S. 87° W. or W.½S.	15 "

St. David Head . . . . .	S. 78° W. or W.b.S.	17½ miles
West end of Bais Rock . . . .	S. 68° W. or W.S.W.	15½ "

To clear the Smalls, Hats, and Barrels, to the southward. The Smalls ought not to be approached on this side within one mile, in coming from the westward, until the lighthouse is brought to bear north, in order to avoid the S.W. rock, as the soundings are extremely irregular; varying at that distance from 40 to 25 fathoms, generally gravel and broken shells, no dependence can be placed on the lead for a guide. The whole of the dangers lie so nearly in the same line, that one mark will suffice.

In clear weather and daylight, a good clearing mark to the southward is to keep the Gap in the land near St. Ann Head, which is formed by the low land near Dale, a little open of the north part of Skokholm; neither the island, nor the back land alluded to are very easily made out at that distance; but if seen at all the Gap in question is very conspicuous. This mark will lead at least two miles to the southward of the Hats and Smalls, and about one mile and a quarter south of the Barrels. Should this mark be used care must be taken not to open the Gap much of Skokholm, for by so doing it would infallibly lead over the Barrels.

At night the Smalls light must not be brought to the westward of N.W.½N., nor St. Ann light to the southward of S. 60° E., or S.E. b.E.½E., these bearings will give the Barrels a berth of about 1½ miles. A vessel would pass to the eastward of all the dangers with the South Bishop north of N.E.b.E., or Grassholm, E.N.E. and may then haul up for the latter island, in order, if bound to Milford Haven, to pass through the sound, between the Islands of Skomer and Skokholm, which with a scant wind and ebb tide, it is essentially necessary that she should try to do.

To clear the Smalls, Hats, and Barrels to the northward. Here again care must be taken to give the Smalls a sufficient berth to clear the N.E. Rock the transit of which is past when the lighthouse bears S.W.b.W.½W.

When the land is distinguishable an excellent clearing mark to the northward is the N.E. end of Grassholm, on the S.W. end of Skomer, this line will lead at a distance of about ¾ of a mile from the Hats, and 1½ miles from the Barrels.

At night St. Ann Light should always be kept in sight, between the bearings of S. 31° E. and S. 42° E., or from S.S.E.¾E. to S.E.½S. nearly, when it will shew between the islands of Skomer and Skokholm, on this course there will not be less than twenty-eight fathoms, and generally above thirty, gravel and broken shells. However, much this may be considered as too wide a mark, at all events, it is a safe one.

If, however, with flood tide and southerly wind in fine weather, it is desirable not to keep so far to the northward, and the compasses can be well depended on, when St. Ann light is masked by Grassholm and Skokholm, observe well the following directions.

The Smalls light is on no account to be brought to the northward of west until the South Bishop light, bears E.N.E., on which bearing a vessel will have passed to the eastward of the Hats, she may then keep to the southward until the Smalls light bear W.N.W., but this bearing will take her certainly not quite a mile to the northward of the Barrels, and even then she may cross the Shoal Bank which stretches off to the N.N.E. of those rocks. On this bank it is possible that she may have as little as ten fathoms, gravel and broken shells; and as it suddenly deepens into twenty or thirty fathoms on both sides, in strong winds and weather, spring tides, a heavy sea may be expected.

Observe well that the moment St. Ann light is unmasked to the southward of Skokholm, a vessel is nearly in the line of direction of the shoals—in fact, it leads over the Hats, and not more than half a mile north of the Barrels. Again, it may be noticed that with the South Bishop, north of N.E.b.E. the shoals may be passed to the eastward.

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#### ÆOLIAN RESEARCHES.—No. IV.

[Of the seventeenth century.]

We have in the next place, a fit opportunity to make a more accurate research into all sorts of brises. The brises are those winds which blow alternately both from sea and land, in the space of 24 hours.

The viracoins or sea brises rule by day, and those that come off from shoare, which the Portugals call Terreinhos, or Vento di Terra, are, as it were, the sentinels of the night, so that dividing their empire between sea and land; they are constant as the seasons of the year, or course of the sun; on which they seem wholly to depend. Yet I deny not, but they come sooner or later, in some places then others, and vary the alternative, according to the severall latitudes, and other externall events in the regions where they happen.

De Cartes and Du Hamel agree in the same opinion; where, offering as the cause why some winds blow off from sea in the day time, and from land by night; the former gives this account. *Solem dum splendet plures vaporisè mari, quàm terra attollere: at contra, cum sol recessit, calorem relictum plures è terra quàm è mari, elevare.* And Du Hamel comments thus on the same opinion in his treatise of meteors. *Hæc enim calorem pertinacius retinet quàm aqua; unde terra etiam noctu*

*vapores ventis procreandis suppeditat* : as if the day brises were generated from the sea vapors during the presence of the sun ; and the night winds from the heat which he leaves behind him in the earth. For though liquids reake more in the day time, and emit greater numbers of vaporous steams ; yet solid bodys, such as the earth, being once thoroughly heated, retain the warmth longer, by reason the density and close con-texture of their parts, for some time, hinders the exilition of the fiery particles. So that after sun-setting, the terrestriall fumes may still afford matter for the night brises.

Yet the learned Is. Vossius, (De Motu and Vent,) regretting the ill success of all former hypotheses, and particularly that of Cartesius, follow'd by Du Hamel, endeavours to prove the origine of most, and even those that are commonly reputed land winds, to proceed from the sea, which he admits not only to be sooner susceptible of any calorifique impressions, but longer retentive of them, then the earth. For the divers find by experience, that the profoundest seas are in hot days warme to the bottom, though not equally with their sur'ace ; when the land is scarce ever heated above 2 or 3 foot by the sun. Wee may suppose with this inquisitive gentleman, that the motion of the air is generally consecaneous to the seas ; and both of them elated by rarefaction So that the heat raising them higher, the winds and tydes accompany each other to the shoars ; yet in the night time, being depriv'd of the celestiall beams, they subside ; and observing the equall libration of the air, revert back again to their former stations ; whence may be generated those which wee call terrestriall winds : *Sole occaso subsidere utrumque humorem, O Aerem denuo ad locum suum refluxe.* Cap. 24.

In some countrys the sea brises are no more then efforts of the general or trade wind ; as at Madagascar, St. Helens, Barbados, and others of the Carribbe islands, together with many places between tropiques, when the universal wind reaches their coasts : which, if it bee not impeded by mountains, or islands, blows fresh in the day time, but after sun-setting, the terrestriall exhalations, that happily were too much attenuated by the heat of the day, condense again by the nocturnal cold, and settling about the promontorys and hills, they are at length precipitated by their innate gravity, and beget a wind towards all quarters at once ; which is not only able to make head against the trade wind, but to repulse it from their coasts, as the Jamaica brises come from all parts of the island at the same time, that no ship can enter the harbour by night, nor depart after the sea brise begins.

Lastly, may not all sorts of brises, bee chiefly caus'd by the mutuall rarefaction and condensation of the air ; and those which in the day time make to land (where the medium is most yielding, and thinnest, because fewer vapors ascend from thence) in the night, are repercus'd

back again to sea; and so, as it were, ebbe and flow by turns, that these atmospherick tydes are no lesse constant, then the fluxes and refluxes of the ocean. I have often suspected, that all these species of winds arise from the difference between the density of the land and sea air: for air, if it chance to be much compres'd in one place, more than another, the naturall elasticity thereof endeavours a restitution, and oftentimes repells it back again with extreme violence: so that almost any unequall density of the atmosphere may occasion winds. But whatever be the particular mode of their generation, they seeme to be universallly govern'd by the motion of the sun. When first he salutes our horizon, they begin insensibly to fanne, and agitate the air, blowing fresher by degrees, as the celestiaall heat prevayles, and are highest at 12 of the clock; and so continue till 2 or 3, and then slacken, and (as it were) decline with the sun. The brises in the Levant cease all the winter, when the sun is banisht into the southern tropique; and returne again in the spring when he likewise reverts towards the northerne signs: beside, they often intermit in the summer, when the Levant winds blow through the Mediterranean; and it would questionlesse prove very obliging to the learned world, to make a complete collection of such observations, as might in any way contribute to a more perfect history of brises. For example, first how they differ according to the severall latitudes and meridians; 2dly, whether they are perrenniall, as between the tropiques, or last only the summer months, as most in the temperate zones: 3dly what obstructions they meet with from the universall brise, or other crosse winds. And lastly the nature of the shoars, and currents, and hills where they happen. In the fore-mentioned Isle of Jamaica the land winds depend so much on the situation of the mountain, that they reach to all parts at an equal distance from thence: and therefore an ingenious person has observ'd in his voyage to the Caribbes, that at Port-morant on the easterly side of the country there is little land brise, because the mountain is more remote from thence, so that the exhalation spends it self in the way.

In these parts of the West Indies, the sea winds are coolest, and most refreshing, which the people receive with their windows open, the fronts of their houses being generally built on purpose for their reception; and they find themselves no lesse quicken'd by the pleasurable gale, which is as great a luxury to those regions, as bathing with us; and so cherishing to the inhabitants, that sick persons, if they can possibly creep out of their hammocks or beds, neglect not this opportunity of reviving their spirits. In so much that wee may judge concerning the salubrity of many African and American climats, from the nature of the brises; for those which want the gentle salutes of the sea wind, are scarce inhabitable by the excesse of heat. In the mean time,

though I despair of reconciling the various hypotheses to which the phenomena may referre; I shall set down certain historicall remarques taken from our journals, and voyages into the Levant, Guiny, the East and West Indies; and may hereafter promise a fuller account of all other parts, wherever the English ships have spread their triumphant streamers in the old or new world.

In the first place wee must note, that the terreinhos, and brises of all sorts succeed a calme; wherein happily the matter of which they consist, forms itselfe.

They come in the day time from the seaward; yet not always from one point of the compass, but severall, as the land lyes. On the coast of Carthagene from the east; on the Island of Trinidad, and so likewise at Guiana in America, from the north; at Jamaica south upon one side of the island, and north upon the other.

In Guiny (and from six degrees of north latitude to the æquinoctiall,) the sea brises arrive at S.S.W. to the S.W. Their beginning is at 9, or 10 of the clock in the morning, and they continue till 10, 11, or 12, at night, blowing a fresh gale, which extremely cherishes the natives and white men.

At 10, 11, or 12, at night they cease; giving place to the land winds which continue till morning, from the north to the N.W. points. This I was inform'd by a skillfull master of a ship, who had made severall voyages to Guiny; whom I shall have occasion to mention more particularly hereafter.

On the coasts of Malabar (if wee may rely upon Linschoten, and Varenius, who pretends in such cases to have diligently consulted the seamen's journalls) from September to April, which is the time of their summer, the easterly winds blow off the land, about 12 at night, and continue till 12 at noone, reaching ten miles into the ocean; then the western make to shoar, as it were the former reflected back again; the vapors and clouds being alternately resolv'd into winds, by the rising, and setting sun.

In Brasile, Madagascar, and many of the Caribbe Islands, they have no land brise, especially if the shoars lye low, as at Barbados, where the generall or Levant wind blows from one end of the isle to the other; and servs instead of the viracoins or sea brise. Here (as I was inform'd by one of the chiefe planters, who liv'd severall years upon the place) it begins to rise about 7, or 8 in the morning, rising higher with the sun till 12, when it blows with a very strong gale; and so lasts at the same height till towards 3 in the afternoon, and then slackens at sun-setting. As the trade wind generally blows fresher by day then night.

On the coasts of Madagascar and Brasile, they have the aforesaid



generall or trade winds, all the year round, from 9 in the morning till 3 in the afternoon. It would be further inquir'd into, whether there be any terreinhos, but from high lands: for at Barbados they have rarely any land brise, the Levants being sole monarchs of the island: but at Jamaica, which lyes 4 or 5 degrees from thence, and within the tropiques, they have also the land winds constantly every night, which drive away the Levants from their shoars.

In other places they want the sea brise: and for the most part, where the ocean lyes westerly between the tropiques: as the western kingdoms of Afric, Gualata, Hoden, about Cape Verde, and the river Niger, Malaguta, Congo: so in America on the coasts of New Spain, Chiapa, Hondura, etc. where the trade wind rains perpetually, and suffers not the sea brise to approach their coasts. But where ever long ridges of mountains guard them from the east, as in the part of Guiny, Angola, and so on the western countrys of Peru; they have the refreshings brises from the ocean, which renders them fruitfull and pleasant.

I made no further enquiry of our seamen concerning the brises of the East Indies, finding them already set down by Hughen Van Linschoten in his instruction, for the navigation of the Indies.

“The land winds blowing into the sea, last from midnight; and the viracoins (which arrive at the west and sometimes N.W. throughout all India) from noon till 12 at night: and coming out of the sea towards the land, are therefore call'd viracoins, or sea winds: they often stay late, and blow but slowly.”

Nearer the coasts of China, you have the terreinhos out of the west, and N.W.S.E and E.N.E. Being in the north they change to the south, and then ensues a calme, till the terreinhos come in.

The brises in the straights begin about 9, or 10 in the morning, blowing freshest at noon, and so gradually declining till 4 or 5, at last cease in a calme: which lasts till 10, 11, or 12, at night: when begins the land brise till 5 or 6; and then calme, till the sea brise comes in. This account I receiv'd from a sea captain well vers'd in all parts of the Levant: having serv'd under the Venetians severall years in those seas.

At the river of Constantinople the winds commonly blow thorough; but in exceeding fair weather you shall have both the land and sea brises, as in the straights,

If either the easterly, or westerly winds, blow fresh, they hinder both the land and sea brises in the Mediterranean; of which wee must note: they are always the more languid, and weaker, the later they come in.

In very hot days, and when no other winds are stirring, you may

sometimes observe this alternation between the land and sea brises on the coasts of England: but scarce with any certainty beyond the latitude of Portugal.

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### THE CHINESE.

In the present state of our affairs with the Chinese, the following sound views of their character and condition, which appeared some little time ago in the Canton Register, will be found particularly interesting.

In all the pursuits of active and speculative life the emulation of states and individuals is the most powerful spring of the efforts and improvements of mankind. China alone in the universe, with self-satisfied pride, undisturbed by the comparison of foreign merit, is slow in the career of improvement, having neither competitors to urge its speed, nor judges to crown its victory. The subject is degraded to a languid torpor, without ambition beyond the hall of examination, or the amassing of wealth. The rulers are content with their rank and emoluments, thinking themselves superior to all other earthly beings; whilst the great mass of the people live in a state of want and apathy. These are the natural effects of their solitary and insulated state, which by many is considered the acme of happiness. The language and peculiar manners of this great people constitute them a separate nation, less accessible than many savage tribes in the heart of Africa. Every thing that tends to rouse them from this state of lethargy is as unwelcome to them as the summons to a sluggard to bestir himself. The government certainly participates largely in this state of absolute indifference; if the people were to awaken from their slumbers, their rulers must either suppress the latent embers of national spirit, or yield to its influence by becoming its champions. But there is little apprehension that such an event will take place, unless the Almighty hand of Providence raise up extraordinary men from amongst the nation; a merciful dispensation which has often taken place when the mental powers of a nation lay prostrate. We shall either sympathize with, or exult in, the placid imbecility of so many millions, according to the idea we form of human happiness; yet impartiality will direct us neither to admire the stagnant pool, nor the boisterous sea, but to dwell with delight on the running stream, and the bubbling fountain. If man's destination were to spend a life of insensibility, the nearest approach to torpor, or annihilation, (as the Budhuists have it,) would be the height of human bliss; and we should surely have to bewail our lot, and envy the oyster, or rock of the sea.

The absence of mental engagement, so congenial to man's immortal

spirit, cannot be conducive to human happiness; nor is the engaged and fettered mind in an envious condition, because Nature's God gave to it wings, that it might dart in ethereal flight, and traverse the immense field of improvement, until approaching a state of perfection. Few thanks are due to the Chinese, and our scribes of the middle ages, with Aristotle at their head, for having enthralled the human spirit, which is originally born to liberty. But the comparatively tranquil state of the celestial empire, may be decidedly preferable to the constant fermentation which agitates more civilized nations. But mankind labour under the same imperfections as nature, whose destructive tempests and terrible earthquakes, and floods, are necessary evils; for during the long space of a sultry calm, the atmosphere becomes pestiferous, and proves more fatal than the fiercest storm. A little acquaintance with Chinese history proves that after a long peace, when the body was effeminate and enervated, and the mind debilitated, the horrors of war, plunder, and rapine, and carnage were dreadful, and far exceeded the fiercest contest in Europe.

There is much in China which tends to lull the mind to slumber. The relation between a man and his Creator, the source of the sublimest ideas and noblest emotions, is either lost in the bottomless pit of atheism, or in the farrago of motley idolatry. Whenever the view is bounded by ephemeral existence and a diminutive spot, the human spirit cannot expand. If the machinery of the universe, as established by the orthodox creed of the state religion of China, is always revolving, independent of the skill of a great mover, we have nothing to fear nor to expect; our lot of being swallowed up in the elements of which we are compounded is inevitable; and with the greater indifference we view all changes, and the more strictly we confine all our thoughts to mother earth, the greater will be our happiness. If on the contrary, the reveries of the Taou sect have any foundation, if immortality waits the misanthropic recluse who spends his life in dens and jungles, few individuals can interest themselves in striving after hope beyond the grave. Nor can the tenets of Budhuism hold out objects worthy of research, for they are too absurd, or too childish to claim one moment's serious attention. If, therefore, irreligion, a state of morbid indifference takes hold of the mind, it is by no means to be wondered. The institutions of the country co-operate in rendering the spirit extinct. There is a constant sameness, all ceremony and form, without any external excitement; pinching want parallizes the faculties of the majority, and those who have time to think, prefer the ancients to their own thoughts. This state of things is, however, not congenial to Chinese nature, for the people possess a great fund of natural understanding and mother-wit, which once for all is doomed to spend itself in trifles.

Mindful to check the spirit of innovation, the government watches carefully the first spark of native genius, which if not soon extinguished, might throw its whole machinery into combustion. Confident that no such thing can happen, as long as the government officers are the guardians of the public spirit, they tremble at that barbarian craftiness which assumes the name of science, improvement, and march of intellect, and is so powerful as to sap the foundation of old established custom. Though not yet fully apprized of their real intention, they conclude, once for all, that a crafty and lying barbarian can only meditate mischief. Their fierceness is proverbial, their eagerness to conquer upon record, and it is dangerous to permit the least encroachment.

That these are no idle dreams is too well proved by past experience and that the Chinese government acquainted with its internal strength has reason to tremble, is a matter of fact.

In the western and southern provinces tribes of hardy mountaineers, the aborigines of those countries, have often disturbed the peace. Neither the martial ardour of Keenlung, nor the profuse bribes of Taou-kwang, have tamed their restless spirit. Irritated either by want or oppression they sally forth from their fastnesses, and are always successful in a desultory warfare, which thins the ranks of their enemies, enriches themselves with spoil, and nourishes their refractory spirit against their celestial lords. The numerous fastnesses in Kioei-chow, Sze-chuen, Zun-yan, could never effectually check their depredations; they remain the scourge of the country around them, and without experiencing the transforming influence of the celestial empire, will continue its enemies. Kokouor is inhabited by various tribes, distinguished by language and custom from each other; they have hitherto proved obedient to their liege lord; because the great Lamas in Thibet, their spiritual guides, acknowledged fealty to the emperor of China. Humanly speaking, it may be said, that China has nothing to fear from that quarter; the Thibetians are a too submissive people; and unless the Ghorkas, a desperate race of warriors, push forth their conquests, the Chinese may slumber in security. With equal indifference they may look upon their Burman, Cochin-Chinese, and Laos neighbours, of which the former alone disdain to acknowledge the supremacy of the celestial monarch. But in the north-west the prospect is darkened by the hostile aspect of the Afghans, the kindred free tribes of Turkomans, who have to revenge the death of thousands of their brethren inhumanly slaughtered by the Chinese. There are the roving Khirgis, or Kos-sacks, the Calmucks, whose fidelity is doubtful, and the Uzbecks who view every idolater as their enemy. The frontier possesses here no external fortifications, and those hardy sons of the desert, inured to all hardships, may penetrate to the heart of Shense, or Kan-suh pro-

vinces before the Chinese are able to oppose their inroad. If such an event had happened it would be weak to entertain an apprehension of imaginary objects of fear; but, China has paid too dearly for the insults offered to the neighbouring tribes, and has often to encounter their well paid barbarian auxiliaries on the field of battle. How much soever the national spirit of the Turkomans may have been crushed, the injuries they have suffered from the Chinese Government rankle in the breast of the few survivors, and will recoil with redoubled fury upon the heads of their tyrants.

But there is a more formidable enemy in the north; the innumerable swarms of Mongols, without permanent possessions, the lords of an ungrateful soil, who are alternately subject to murrain and starvation, which drives them to the brink of despair; who have nothing to lose but their lives, which they have often sold dear instead of waiting the approach of gnawing hunger. Such a hoard of voracious Scythians is really formidable; they have more than once inundated the northern provinces of China, though under different names, and once subjected the whole empire to their sway.

Under as intrepid leaders as Zingis and Timur, the valourous Turks, the brave Persians, the hardy Russians, and the steel clad knights of Germany, could only oppose a feeble resistance to their impetuosity. Though Europe, perhaps, has for ever put a barrier to their invasions by superior tactics, China remains in the same state in which they found it when constituting themselves lords over the celestials. It is true, many of their princes are joined by ties of blood to the interests of the Mantchoo dynasty; many of the tribes have lost their nationality; but, the deserts of Asia are fertile in extraordinary and sudden revolutions. A nation emerges to power and pushes its conquests with surprising rapidity. Witness the history of the Huns, Turks, Mongols, Kitans, Mantchoos, Kalmucks, and other tribes. The Chinese have always been jealous of the Mongul power and have watched them until this moment with a jealous eye of distrust.

Of all the frontier parts of the empire, the coast is, perhaps, in the most defenceless state. An inefficient navy with dismantled forts can afford little protection. From the Choo keang (Pearl River,) of Canton to the frontiers of Mantchooria, there are numerous navigable rivers which lean to the most flourishing cities of the empire; spacious harbours to contain whole fleets, and water communication by means of canals to the most distant parts of the empire. They cannot be ignorant that six provinces are assailable, and that the most important parts of the empire lie open to the grasp of a superior maritime power. If the government officers, therefore, tremble at the sole thought of irritating a foreign power, which has the means of punishing their arrogance, we

must not consider their fear unfounded. They may have recourse to haughty edicts, and a show of power; but when all stratagems and expedients are exhausted, they will sue for peace as humbly from, as they formerly, in the height of pride, announced their decrees to, the barbarians. It is true they have stopped trade, but if the matter were now reversed, and the power or people, which they wish to injure stopped their trade,—an easy thing,—how dreadful would be the consequences in the maritime provinces! the thousands of junks employed for carrying the necessaries of life from one part of the coast to the other, if detained in the harbours, would give rise to incalculable mischief. How can Fuh-keen subsist without Formosa? How Pe-che-le without the southern provinces? The imperial government ought really to recoil with horror from every act of aggression which might involve the most valuable provinces in ruin. As lovers of peace we should urge the local government at Canton, and the imperial at Peking, to hasten the adjustment of matters which have now come to a crisis. Often has the experiment of the stoppage of trade been tried with great success, and with impunity; but maritime China is now too well known, and a renewal of the old system will entail the heaviest losses upon those who adopt it. It is headstrong ignorance which has compromised the Chinese government, so helpless, so unprincipled. Whilst radical associations in the country undermine the security of the throne, and a secret hatred against their Mantchoo rulers still lurks in the breasts of many, they venture to irritate and provoke hostilities. Though their reasons for excluding all foreign intercourse may be weighty enough for themselves, they ought never to have given a just cause of complaint. If they could rely upon the patriotic spirit of the natives, which ought not to be mistaken for the hostile feelings the inhabitants of Kwang-chow-foo, (Canton,) have often shown towards foreigners, they might have a firm support. But a nation oppressed and ground down cannot feel much interest in the welfare of their governors; nor can they suddenly rise from that dejection engendered by slavery, and rouse themselves to that nobility of the soul which sacrifices every thing for the country.

Gloomy fears pervade our breast if we think of the inevitable ruin into which the Chinese Government is hurrying itself if it perseveres in the antiquated system of nation exclusion. What can stem the torrent of improvement, which earlier or later will reach China? Can it be believed for a moment that the western nations in the progression of power, will respect its repulsive spirit and yield to weak rhodomontade. The lessons given the Chinese Government officers by the Tartars, seem to have been lost on those incorrigible magnates. Instead of accommodating themselves to circumstances, they brag and hector, and show

unwittingly their weakness. But enough of this; if their announcement of stopping the trade had been answered by,—“We will stop yours also,” they would have hesitated to make good their threat, and matters might have been carried on with the same ease as before.

We do not envy the emperor upon his throne when the innumerable prostrate crowd of officers adores him in the dust as a superior being. In the height of his glory he may fancy himself the autocrat of the whole earth, and feel himself entitled to prescribe laws to all nations; but, when the phantom has vanished, and he has to learn that the barbarians, even in his presence, still deem themselves men, and demand human treatment, he will be greatly puzzled. Our fancy may be bewildered when we hear about the numerous standards of valiant soldiers, who obey his nod; but what are they in point of actual service? Are they not similar to the thousand men-of-war which guard the coast? Wretchedly equipped, and taken from the dregs of the people, and long accustomed to a life of effeminacy, without discipline or any sense of honour, they have to conquer and to subdue. An exhausted treasury, a deranged state of finances, a number of presumptuous and ignorant officers to boot, enhance the difficulties with which the Chinese monarch, in contending with a powerful foreign nation, has to struggle. If the Meaou-tsze and Formosan rebels could not be subdued, except by large bribes, how will the imperialists be able to deal with a people who are bold and valiant to the verge of temerity—whose dauntless spirit is supported by the contempt of danger and death.

For the sake of harmony and mutual friendly understanding, we should address our celestial friends to lower their tone, and to be rational. They may have played their game well at Canton, may boast of their destructive fire and of the wounds inflicted on British commerce; and even add a threat to repeat the same, if we yield not implicit obedience to their orders; but tell them, in plain language, that their own trade will be stopped as long as ours continues to be so; that the government will have to make good the losses incurred by these prohibitions; and we are sure that there will be a wonderful change in politics. We praise the forbearance of the British nation, for there has never, in any quarter of the globe, been shown so much forbearance as in China; and are really astonished with our celestial friends that injury was suffered quietly, without having recourse to those measures which, without effusion of blood, might have settled the matter once for all, and made the local government at Canton tremble to commit blunders wantonly. Yet we trust that this will be the last time of similar occurrences.

For the sake of our friends, the officers of government, we will point

out the dangers to which they expose themselves, if they ever again indulge in the fancy of rendering their edicts efficacious by stopping the trade.

Formosa is the granary of Fuh-keen, and occasionally of Che-keang. Two sloops of war would be quite sufficient to blockade the four harbours of the island from which the grain is exported. The most numerous part of the population of Fuh-keen subsists by trade; if three sloops of war cruise on the coast, and it is seldom Chinese vessels go out of sight of land, they would prevent all vessels from proceeding to the northward, for they are all dull sailing craft, and their crews too timorous to encounter unknown dangers. The commerce of Shih-po, Ning-po, and Hang-choo, might be intercepted by an equal number of vessels; one man-of-war is quite sufficient to blockade the most important part of Shang-hae, from the opening of which the lives of millions depend. What should hinder us from commanding the great canal, the navigation of which is indispensably necessary to the existence of the court. One vessel off the Pe-ho can command the navigation of the river. There are, perhaps, one thousand junks which repair annually to the emporium of the capital, Teen-tsin; one man-of-war would completely put a stop to the trade of Leaou-tung, so valuable and necessary to Keang-soo and Shan-tung provinces. At Kaou-choo, and Ting-choo, in Shan-tung, two cruisers would cut off all communications. What would be the feelings of other provinces, if they had to expiate the quarrels of Canton? What would the emperor say, if the customary tribute of grain amounting to 4,365,382 shih (each shih is 130 catties) was withheld? Really these things are to be considered by the Canton government, and duly weighed by the emperor, before he takes any measures to endanger the safety of his realm.

All we wish and desire is, peace until the two respective governments have settled their own affairs. Let the trade be continued without interruption. But if after the most serious remonstrances these fair proposals should be rejected with disdain, let the officers who are responsible for the losses for acts of aggression, become also responsible for the losses suffered on their account. Do they act according to instructions received from the imperial cabinet? Be it so: the emperor will be the responsible person. A clear statement of the matter will inform them of the difficulties to which they have exposed themselves, and nobody will have to complain for having suffered unjustly, after being fully warned.

It is strange that a government which professes to be only actuated by principles of virtue, should nevertheless, aim at mischief; and after all, adopt a hypocritical cant of tenderness and compassion. Such sentences will call forth on our side expressions of forbearance. This



we ought to show, especially towards the people, who are by no means concerned in the contest. Let the government, and the government alone, reimburse those sums which have been lost on its account, and thereby receive a lasting lesson for the future.

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### THE LARCH OF EUROPE AND AMERICA.

IN order to assist an enquiry into the nature and quality of "*Hackmatac*," a timber hitherto considered by some as an inferior species of Pine peculiar to the British American Colonies, and which is extensively used in colonial built vessels, I offer the following sketch, with the opinion, that the *Hackmatac* of America, is essentially the "Larch," of Europe; and that the differences which exist, if any, are solely attributable to climate or soil; and that, therefore, for the various purposes of ship-building for which Larch is applicable, *Hackmatac* is so likewise: and, moreover, that the Larch is one of our most valuable timbers for naval purposes.

*Larch* is termed *Pinus Larix*, *Pinus Pendula* Lamb, *Larix Americana* Michaux, *Epinette Rouge*, by the French Canadians—*Hackmatac* or *Tamarack*, by Americans and English settlers. It belongs to one of the sections of the Pine tribe; but, by a similarity in cones and wood, seems to be allied to the Cedars, from which it differs in not being an evergreen. The leaves in bundles and deciduous, cones oblong, branches pendulous, wood exogenous, timber shewing very little sap-wood, bark rough, approaching that of Cedar.

Larch is not supposed to be indigenous to Great Britain, although such large forests exist at this time in Scotland, and numerous plantations throughout England. The tree is said to have been introduced from Switzerland, and first planted, according to Loudon, by the grandfather of the present Sir John Nasnugth, at Dalwich, near Peebles, in 1725. The Duke of Athol's Larches (so well known) were planted in 1736, being now 103 years old; but in the transactions of the Royal Society it is said, that this tree was planted at a prior period, at Godwood, in Sussex, by a former Duke of Richmond.

In 1831, at ninety-five years of age, one of the Athol Larches is said to have contained 368 feet, or seven loads, eighteen feet, which, at the present price of Baltic Fir, (*Pinus Silvestris*, or Scotch Fir,) would be worth about forty-three pounds. The duke who planted them was buried in a coffin made from the largest, which measured 106 feet in length. He planted about 8,000 acres with this tree, in the neighbourhood of Dunkeld and Blair Athol; and set the fashion of planting it throughout the kingdom. It is singular that, neither in the splendid

work of Lambert, or the Pinetum of the late Duke of Bedford, nor, in fact, in any English work on forest trees, do we find notice of Hackmatac by name—though what I consider to be the Larch of America, is so universally known by it.

In the Duke of Bedford's grand work we find, however, the *Larix Pendula*, as having been introduced into Britain, in 1739, from North America, where, he says, "it produces timber of a superior quality to any of the native Pines which inhabit the same parts; its branches are more purple and slender: and, it is a more pendulous tree than the European Larch."

In Switzerland the Larch abounds, and the dwellings of the peasantry attest its durability as a building timber.

The Romans when first acquainted with the Larch, during their German wars, lost no time in bringing it down from the Alps by the River Po, thence, to be conveyed to Rome for building purposes. Vitruvius bears evidence of its value as building timber. Pliny says, "This tree is the best of the kind that bears resin; it rots not, but endures a long time."—And this assertion of Pliny's, is well borne out by what is stated as facts—that the immense floating palace or ship, built by the Emperor Trajan, as a summer residence on Lake Nerne, of Cypress and Larch, having been weighed up, the timber was found sound after 1,400 years' immersion. It is worthy of remark, that this vessel appeared to have been sheathed with lead, fastened with copper nails, double planked, and caulked with linen rags, payed over with Greek pitch—(Asphaltum.)

In Russia, whilst the exportation of Oak is permitted, the Larch is a government monopoly, for the national purpose of ship-building, and its exportation prohibited. Of the applicability of Larch to purposes of ship-building, and of its durability, we find the following notices:—

In the year 1809—"Larch timber, grown by his Grace the Duke of Athol; was first used for the British navy in building, at Woolwich dock-yard, the Serapis store-ship; the Sybille frigate; the bottom of a lighter; and for piles driven into the mud alternately, wet and dry: and in all the various situations; proved a strong and durable timber."

The Athol, of twenty-eight guns, was also built entirely of Larch of the same growth; and, at the same time, the Niemen, of Riga timber. After their first course of service they were both examined, when the Niemen was found in a decayed state and condemned accordingly, whilst the Athol was again put into commission, and after a second course of service again examined, and again found sound; and she has ever, from that time to the present day, endured the incessant wear and tear of a store-ship, in every climate for thirty years.

It was also observed, that during the period that this timber lay in Woolwich dock-yard, exposed to the weather, neither the heart nor the sap-wood exhibited decomposition, nor did lichen or fungus grow thereon.

I have already observed, that the description of Larch generally, and of the *Larix Pendula*, of the late Duke of Bedford in particular, agree with my observations of the Hackmatac of British America, I will therefore proceed with them.

The Hackmatac grows generally throughout the North Eastern States of the Union and British America, but is found in the largest quantities in New Brunswick, Nova Scotia, and Prince Edward Island: the name is probably of Indian origin. The timber is straight grained, fitting it for small spars of ships, though I have known the mainmast of a vessel of 650 tons made of it—it works roughly—is rather given to warp—is hard, strong, and very durable. In the colonies it is generally used as a building timber, both for houses and small craft; it is particularly approved for knees to fasten the beams of ships, the butt of the stem, and one of the principal roots forming the angle required. Treenails made of it are also considered to be of very superior quality.

It is not a timber of commerce, nor is it converted to any extent, but for house and ship building in the colonies. It is sometimes sawn into deals, but never shipped as Hackmatac deals, being occasionally called Juniper, or Red Spruce, though more generally confounded with Spruce and Hemlock, and shipped as inferior goods.

Hard working and warping deals, however valuable on the score of strength and durability, are not valued in the home market, where softness of grain, freedom of working, and absence of warping, have given a preference to the white or yellow deal of America.

The wood burns with a crackling noise, and though not so easily ignited as most of the Pine tribe, when once blazing, burns with great briskness, giving out fervent heat; and, therefore, in great request for the fuel of steam boat engines in Canada and the United States. Colonial vessels built of this wood are notoriously durable, inferior to none but teak or British oak; and excepting in one instance, the British Merchant, there is no record of such vessels having been destroyed by dry rot; whilst in several cases, the oak and other material surrounding, and attached to the Hackmatac, has been found destroyed by dry rot, the Larch has continued perfectly free. Paradoxes however never cease; one colonial gentleman, whose mercantile career in the colonies was not very successful, (Mr. H. S. Chapman,) has described Hackmatac ships, as commonly called sailors' coffins: and this opinion was adopted by a late President of the Board of Trade.—N. GOULD.

MERCHANT SEAMEN'S DUES,—REGISTRY ACT,—MARINE BOARD  
FOR REGULATING STEAM NAVIGATION, & PILOTAGE ACT.

WELL, Mr. Editor, after considerable perseverance in the exercise of our pens, abusing and holding up to ridicule that clever piece of legislation, known as "Sir James Graham's Act," it appears, from many admissions in parliament, it is likely to be remodelled. A select committee has in hand the claims of merchant seamen, to the appropriation of our own funds, which have been so shamefully withheld from us under the incomprehensible acts for the collection of Merchant Seamen's Dues, till there is, I suppose, an accumulation of somewhere about 100,000*l.*, and a yearly revenue of nearly the same amount. We are promised a "Marine Board," for the regulation of Steam Navigation; to curtail, if not prevent, the accidents continually occurring, from the ignorance and neglect of those to whom is entrusted this useful and important branch of navigation; and lastly, we are, on the subject of Pilotage, unfortunately told, that although "this is a subject very desirable to legislate upon; yet that it is at present of no use! and why? because a few interested people, and some of such narrow-minds, as always see danger in innovation, get up clamour when the matter is before Parliament; and thus we see likely to be continued for some time longer, that most abominable tax upon shipping, and especially upon steam navigation, (which, as I have upon former occasions said, amounts to from 300*l.* to 500*l.* per annum, upon many ships,) when all that is asked is to let the masters pilot their own ships, after they have passed an examination qualifying them for such charge! Oh! that a useful measure for the regulation of British shipping cannot be carried, because of a little clamour in the House of Commons, backed by the not quite disinterested elder brethren of the Trinity-House, and its host of licensed pilots!

I have taken the present occasion for alluding to the foregoing subjects, and what is passing in regard to them; first to show, 'or rather to remind the public, how carefully the *Nautical* has an eye to passing events; to remind the said public, how much credit is due to its conductors, for their advocacy through its' pages, of all these interesting subjects connected with the interests of the Merchant Service, for some years past, which if they have not been carried on by some of your correspondents with vigor lately, will no doubt be resumed, now attention seems to be attracted to the many representations your pages have contained, of abuses on the subjects referred to. And that sooner or later, all such will be rectified, there can be no more doubt, than that the compliment is due to you, Mr. Editor, in causing the *Nautical Magazine* to have been the very principal organ of the press, in demanding such reforms.

I would remind our legislators, that in respect to Sir J. Graham's bill, we have called for an amendment, on the score of its being deficient in procuring discipline in our ships,—that we have no law for the guidance of our Merchant Seamen, as to pointing out their duty, nor that of their officers,—that its professed object, viz. Registration, is a farce, nor can any rational man understand what is aimed at by Registration.

In respect to the Merchant Seamen's Dues, *we demand as a matter of right, and not as charity*, a fair distribution amongst the "old, worn out, and decrepid," the whole of the annual contribution, which I have said, and repeat, ought to amount to about 100,000*l.*! and that the immense sum already accumulated, which probably is equal also to 100,000*l.*, *must* be laid out some way or other, in our service; and that with submission to the Select Committee of the House of Commons, who have this matter before them, I think it could not be better appropriated, than in the building of a Second Greenwich on the banks of the Thames, wherein might be provided for, 200 masters, and 1000 or 1,500 old seamen, besides pensioning a great many more at their own homes; and if there is not money to effect this, there can be no doubt but shipowners would readily submit to a small tax, for the support of such a noble establishment, in which there should not be an individual employed, but the Sailors of the Merchant Service. It is to be hoped, that this subject will be taken up in a proper enlarged spirit, and not in petty squabbles, as to how much this port is to benefit, and how much another, where as I have formerly shewn, the greatest part of the thus divided small sums, is expended in "management."

In respect to Steam Navigation, the public has certainly a right to expect that it will be "controlled," and this effectually, by a Board, that will be armed with sufficient power, to accomplish what it is called into existence for; duties, which I think your correspondent, "Mercator," some time since shewed pretty clearly, may consist well with what it will owe to the public; and the interest of those interested in steamers.

In regard to Pilotage, I will only hope that ere long the parties who are now afraid of bringing forward the question, will retract the declaration that has been made; and that a complete re-modification of the laws relating to it, *will take place*; and I will conclude with asserting my conviction, that your very useful work will have the honor again by and by, of referring to this subject, as one on which it has held sound opinions, and such as will ere long be acted upon.

I am, Sir, your obedient servant,

A MASTER OF A BRITISH MERCHANT SHIP.

## A SURVEYOR'S GLANCE AT THE COAST OF CHINA.

IN laying before our readers the following rapid glance over the coast of China, from a late number of the Canton Register, we are somewhat gratified by the reflection, that a skilful and accomplished young officer, Lieutenant Collinson, of the Royal Navy, is now on his way to that part of the world; appointed for the sole object of surveying those parts of the coast where favorable opportunities offer. Assuredly, the maritime hydrography of China, with the exception of a very few places, has hitherto been untouched; and Lieutenant Collinson will have enough on his hands if he shews the way for our ships, as we have no doubt he will do, into many a valuable harbour frequented only hitherto by junks. It is well known that the Chinese people are mostly well inclined towards the English merchants, have been found eager to purchase British manufactures, but owing to the opposition of the Mandarines they are prevented from obtaining them. We shall look with much anxiety for the fruits of Lieutenant Collinson's appointment, and no less at the result of the present proceedings, in not only opening trade, but making known those parts of the coast where his labours will be so usefully directed. The following is the extract alluded to:—

“With lively joy, we should hail the arrival of one of the North Polar cruisers to survey the coast of China and Mantchooria. This is truly a gigantic task, and would confer greater honour upon the surveyors, than an abode of two or three winters in 80° latitude, under snow and ice. We might be led to inquire what has been gained by these costly expeditions, if we did not consider every additional information upon a dubious point in geography of real advantage to mankind. At the same time we must allow, that a survey of the whole coast of China would be less expensive, less dangerous, and infinitely more advantageous than those laudable enterprizes. A fear of hurting the proverbial jealousy of the Chinese might have, in years of yore, prevented the execution of such an undertaking; but, as we are now convinced by a series of recent facts, that the security of the Canton trade is not endangered by expeditions to the north-east coast, we may safely venture to complete the work of the sagacious Kang-he.

“No coast of the Asiatic continent has so many excellent and spacious harbours as the Chinese, Hainan and Mantchooria included; it extends from 18° to 54° latitude, and is thus more extensive than that of any other empire in the world. As it is confidently hoped that British enterprise will no longer be confined to one single part, the property of British subjects will be exposed to great risks, as long as the ships have to sail in the dark and to grope their way.

“The coast of Canton, with the exception of some of the eastern

parts, is pretty well known. The south-western parts of Fokien have also attracted the notice of the scientific navigator, but we are not aware, that the Chaou-gan Bay, which is sheltered against all winds, is known to any European. Chang-poo-heen has a bar harbour, with three fathoms over the bar at low water, and has latterly become known, but has never been surveyed. Beyond Amoy the coast is much indented, but we wish not to dwell upon any anchorage which Horsburgh has noticed, though his information is much circumscribed. Even those harbours of which he has given an outline still deserve to be visited by the hydrographer, for in many are unknown dangers, which, to a vessel without the aid of a pilot, would prove destructive. Hwuy-gan harbour, though the resort of numerous junks, is scarcely known by name. Kee-leaou has a harbour sheltered against all winds, but the entrance is very dangerous. The Me-choo Islands form too a well sheltered harbour; but, there is a sunken rock in mid-channel, of which the position has never been accurately ascertained. In regard of the spacious bay of Hing-hwa-foo, we are completely in the dark—nor do we know much about the passage between the island of Hae-tan and the main, except that it is very dangerous, on account of not being surveyed. The entrance to Fuh-choo harbour, though partly surveyed, ought to be better known before large ships can venture into it. From Ting-hae, a port in the neighbourhood of Fuh-choo, which has been visited up to the frontiers of Che-kiang province, the coast is a complete fairy land, scarcely ever visited by any ship—nor are the numerous and well cultivated islands with which it is studded, even known by name. We mention here the principal bays and harbours, which will claim the attention of the surveyor,—Lo-yuen-heen, Ning-tih-heen, with a very spacious bay, and Fuh-ning-foo, the latter the nearest harbour to the Woo-e hills, from whence we receive our black teas.

“Between the Piscadores, or Pang-hoo islands, are many good anchorages, but utterly unknown. The frightful coast of Formosa, with its large sand banks, is not so dangerous as it might be imagined; but, a ship without sailing directions runs a considerable risk. We do not now speak of the east coast, which seems to have entirely escaped notice, but as we have read a parliamentary speech upon this island, and have seen some of its bar harbours, we should indulge ourselves with the hope, that it will form a part of the survey.

“The Che-keang coast is equally indented as the Fokien, but we look in vain for sailing directions and shall only mention the principal harbours, beginning from the south, Hwuy-gan-heen, Wan-choo, Lo-ting-heen, Tae-ping-heen, Tae-choo, Ning-hae-heen, Shih-po basin, the entrance of the Tseen-tang river, which leads to the capital, Hang-choo, and Cha-po harbour, which has been visited. Ning-po and

Choo-san harbour are known, but the Choo-san group would still require a good survey.

“The coast of Keang-soo (Keang-nan) is very low, and has few good harbours. Shang-hae, on the left bank of the Woo-sung river, has a dangerous entrance, surrounded by shoals without any land-mark, where the best navigator may be bewildered without sailing directions.

“The Yang-tsze-keang, with its formidable sand banks towards the south, is by no means so inaccessible as our ignorance has painted that majestic river. We are not aware, that any ship has ever made an attempt to proceed as far as Tung-choo, on its northern bank. How would the Chinese pride be humbled if our ships could find access to a river which stands in connection by means of canals with the whole empire. From the Yang-tsze-keang to the Hwang ho, or the yellow river, the coast runs in a straight line, there are neither harbours nor commercial cities. We do not doubt, but the yellow river, notwithstanding its large banks, might be entered, if a hydrographer would show the way. To the north of the yellow river the coast gradually rises, and the city of Hae-choo has a well sheltered harbour, between the island Yun-tae-shan and the main. We also suppose that vessels anchor near Han-yu-heën.

“The coast of Shan-tung is rocky and bold, but has no other harbours except Wei-hae-wei and Ting-choo, the former on the promontory, the latter a little to the north, have been honored with a visit from barbarian vessels. As we, however, are persuaded, that our appeal will not be in vain, we give the nomenclature of the remaining bays and harbours, Kaou-choo, Tse-me-heën, Heung-yae-sc, and Haou-yang-so on the south; Sin-han-so and Chin shan-wei on the west, and Fuh-shan-heën on the north coast.

“Pechih-le province is without any harbours. The channel which leads over the bar of the Pih-ho to Teën-tsin has only fourteen feet water, when a southerly wind blows, but during the prevalence of northerly breezes even junks of eight feet draught cannot pass up it.

“The southern part of Mantchooria, Leaou-tung, or Shing-king, has various good harbours and bays, Kin-choo and Kae-choo are partly known, the latter is very shallow; Tung tsze-kow bay is spacious and tolerably well sheltered; there are several other bays towards the promontory, and a deep one at the mouth of the Ya-luh keang, on the frontiers of Corea; but none of these have ever been visited by any ships.

“The coast of Kirin province has between latitude 42° and 43°, several bays, the largest of which are at the mouth of the Tu-meu-ula, and the Suif and Pira, but the country is scantily inhabited, and even the natives do not engage in navigating the sea of Japan. The northern



most part of the coast is little indented, but not at all known, until we reach the Seghalien island, which was visited by La Perouse.

“ We have thus taken a short view of the immense field open to an enterprising and unwearied surveyor. We should have included Corea and Japan in the list of unknown coasts, if this would not have swelled this paper too much. The voyages of Cook, and of his successors have conferred great benefits upon mankind at large, but there are only a few scattered tribes on the islands of the Pacific, whilst the coast of China swarms with myriads of human beings, who may thus come in contact with civilized nations. Other considerations of still higher importance, are too obvious to require any comment. Assured that the results of such a survey would completely change the state of our relations with the celestial empire, and give to our trade, which has hitherto hung on a slender thread, a firm basis, we expect, that this proposal, though coming from an humble individual will meet with no objections. No party, even the most accommodating towards the celestials can find fault with measures so eminently calculated to promote geographical science, and British interests, without violence or intrusion. The pecuniary sacrifices required to effect so great a purpose are comparatively trifling. The Jesuits in the service of Kang-he have done much towards so desirable an object, their labours still remain, and shew to the world, after the lapse of a century, what an unwearied pursuit of a laudable object can accomplish. Let us not be behind them, but rather strive to outdo them in zeal and perseverance.”

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## RAMBLES AT HOME.

*Edinburgh, July 29th, 1839.*

My dear Mr. Editor,

As I have taken up my pen to address you, while seated in the coffee-room, which is as full as it can well be, you must not expect a long letter, particularly as Edinburgh is a city well known to most people,—nor be surprised at any inaccuracies, for it is no easy matter to collect one's thoughts amidst the incessant din that prevails; the laughing, talking, and clattering of knives and forks,—to say nothing of the sundry calls to the waiter:—one vociferating for “ a glass of whiskey and some hot water,”—another—“ Bring me a herring, waiter,”—a third—“ Waiter, when am I to have my tea?”—“ Send boots to me, with a pair of slippers.”—“ Bring me a tooth-pick, waiter.”—and so they run on, taxing the poor fellow's memory most unmercifully. But, to the point—Edinburgh is in all respects as fine a city as I had pictured to myself, although I had imagined it to be of greater extent. The houses, however, in the old town are lofty, generally nine or ten stories high, so that it is a very populous city, and the streets at all times well thronged with foot passengers.

Every one has heard often enough of "the Old and New town;" and that the contrast between them forms the principal character, giving the agreeable effect to the city; but, you may not know (as certainly I did not) how the two towns lie with reference to each other. They are completely separated by a long and narrow valley, at the upper end of which, at the foot of the Calton Hill, there are a parcel of old houses, but the remaining and by far greater portion of this valley is laid out in gardens.

The *Old* town is built on the slope of a hill which rises abruptly, but to no great height; and the *New* town stands on a hill on the opposite side of the valley. The latter rises gradually, and on the level part, along the ridge of the hill, there is a beautiful street, nearly a mile in length, perfectly straight and ornamented at two of the offsets or streets which cross it, with fine bronze statues of George the Fourth, and of Pitt: the latter by Chantrey, and apparently cast from the same mould as that which stands in Hanover square, London. This street is terminated by a planted inclosure on one side of which stands St. George's Church, an imposing building.

All the streets in the New town are regularly laid out, well built, and handsome, and the houses are apparently all occupied. The descent towards the Frith of Forth is rapid, and the streets steep but not long. At the foot of the hill between the town and the sea, there are numerous cultivated fields on a comparative flat of some extent; Newhaven and Leith, however, occupying a portion, and adjoining the town by a straggling road with houses on either side.

The first spot I sought, to get some idea of the *locality*, I need scarcely say, was Calton Hill. From thence there is a delightful prospect of the old city, and the beautiful expanse of water in the Frith, with a few vessels at anchor, and Her Majesty's ship "Benbow," proudly conspicuous among them, adding not a little to the panoramic view. As she is the first line-of-battle ship that has floated on the waters of the Frith for this many a day, thousands and thousands (I mean it literally) have pressed on board to see her; and myself, of course, among the number. I went in one of the fishing-boats as it was the only boat I could procure at Newhaven, and at the same moment the Benbow's cutter shoved off. It was blowing fresh and the cutter fell to leeward so much that they were obliged to lower their sail and take to their oars, while the good stiff fishing-boat kept her way, and got alongside some time before the cutter, the Benbow lying at a distance of about three miles from the shore: but I fear I am sadly digressing as I have left you on the Calton Hill, where there is a tower erected as a monument to Nelson, and from the top the view is extensive. Besides this monument there are one or two others on the Hill—an unfinished "Waterloo monument," which has stopped for want of funds; but, even as it now stands it is a very fine and effective *temple*,—standing on a hill which rises so abruptly from the town. Beyond the Calton Hill there is one of considerable elevation, probably 800 feet, the summit of which is called Arthur's seat. I went up to the top, but after having attained a certain height, it did not improve the view, as the clouds overhung, and obscured it; but on descending a very few steps all was again clear, and the panorama most beautiful. A portion of this hill shows the basalt to great perfection. It rises from the hill much in the same way as the basalt at the Giant's Causeway; but I

did not observe any distinct columns, nor any apparent approach to columnar formation.

As it is only my intention to give you a faint outline, and as I hope, general idea of this beautiful city, I will now say a few words about the *Old town*; one of the principal features in which is, perhaps, the castle, standing as it does, on a steep rocky hill, rising precipitously from the valley at the further end and opposite side from the Calton Hill; I went over it and was allowed to walk through the several ramparts and batteries. At the highest battery there is an enormous gun, not quite so large, perhaps, as that in the Kremlin at Moscow, but very nearly so. It is a curious old affair, and we learn by the inscription on the gun-carriage that it was forged at Mons, in 1486; taken at the siege of Norham Castle in 1497; sent to the tower in 1754; and restored to Scotland by George the Fourth in 1829. On each side of it are two small mortars. On the battery immediately below this are nine twenty-four pounders, and five twelve-pounder carronades. On the next battery there are ten eighteen-pounders, and on the lowest battery six six-pounders. I believe this to be a correct account, but I took only a hurried glance.

Walking from the castle I came to a fine church, called the High Church, behind which is a somewhat imposing range of buildings, now occupied chiefly by banks and other offices. This is called Parliament Square, and in the centre stands an equestrian statue, erected, as the pedestal informs us, by "*Augustissimo, Magnificentissimo, Carolo Secundo, Britanniarum, Galliarum et Hibernicæ Monarchæ, Invictissimo.*" The head of the horse is badly put on, and the figure of Charles sadly wanting in ease and elegance—anything, in short, but what the inscription would lead one to expect.

I visited the Canongate of course, (as well as the Cowgate,) and in passing through the former, on my way to Arthur's seat, took the opportunity of going over Holyrood-house, the abbey and palace of which I need scarcely say afforded me the greatest possible interest. The abbey, or as it is generally called the chapel-royal, is a very fine ruin; the pillars of the aisle being in a tolerably perfect state, but it is roofless. In the time of George the Third, a roof of stone was added, but the walls were unable to sustain the weight, and it fell in, creating much injury to the beautiful ruin. There are many people, renowned in history, buried within the abbey, but little time is afforded to a visitor to read and reflect upon the tablets on the walls. George the Fourth, struck with the beauty of the ruin, intended that the abbey should be restored, as well as the palace, but I suppose the funds voted out of the Crown Revenues for Scotland, for a certain period only, would not admit of it, and the palace alone has undergone repair. Beyond the interest that must ever attach to the palace, and particularly to the closet in which the unfortunate Rizzio was murdered, and dragged into the very presence of Queen Mary, in her own apartment, I do not know that there is much to engage the attention. It is a quadrangular building, rather imposing than otherwise.

Passing a Sunday at Edinburgh, I went to the Scotch church, as well as to our own, and I am glad to say that at the English church, called St. John's chapel, a very pretty building, the service was well attended. In the church yard I observed a tablet erected to the memory of an officer of the Company's

Service, the simple device of which, (a sailor leaning against a broken anchor,) had attracted my attention. As there is, to me, always something very affecting in the untimely fate of the intrepid mariner, and as the inscription on the tablet is so creditable to the party, I make no apology for transcribing it, and only hope that in doing so, it may meet the eye of some of his relatives or friends. It is as follows:—

“ To the memory of Mr. Charles Moir, late chief officer of the ship Duke of York, in the service of the Honorable East India Company, who died at Whampoa in China, on the 19th of September, 1818, aged 33 years. This monument was erected by the officers of the Honorable Company's Fleet, then in China, in testimony of their esteem for him as an officer and a man.

“ His brother officers of the Duke of York, have also erected one over his grave at Whampoa.”

I will not *inflict* you with any prolonged account of Edinburgh, but must not forget to mention a visit I paid to the “ Castle Mills,” a fine extensive building erected for the purpose of working up *refuse* silk, and converting it, by passing it through machinery of the most appropriate and admirable construction into an article, not only fit for use, but which would quite surprize you if you saw it, considering what a *hopeless* material it is manufactured from. They have adopted at the Castle Mills, a simple and ingenious plan, for which a patent has been taken out by Mr. Ivison, for lessening the consumption of fuel, and entirely preventing the escape of any smoke from the chimney, merely by a small pipe passing over the furnace, and emitting jets of steam in very small quantities. It answers in the latter respect perfectly—for the moment the steam-communication was cut off, the smoke issued forth from the tall chimney, and was instantly suppressed when the steam was again let on. It would, I should think, prove highly advantageous, if applied to the furnaces of marine engines.

My next will be addressed to you from Newcastle.

I remain, your obedient servant,

A MIDDY ASHORE.

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## Naval Chronicle.

### NIGER EXPEDITION.

THE expedition to the interior of Africa by the Niger, alluded to in the following correspondence, will leave England in the course of the summer, under the command of Captain Trotter, R.N.; and, as it will be attended with considerable interest we shall thus introduce the first account of it to our readers.

Return to an Address of the Honourable the House of Commons, dated 6th February, 1840; for Copies or Extracts of any Correspondence which may have passed between her Majesty's Secretary of State for the Colonial Department and the Lords Commissioners of her Majesty's Treasury, relating to an Expedition to be sent to the River Niger. Ordered by the House of Commons to be printed, 8th February, 1840.

ENLARGED SERIES.—NO. 4.—VOL. FOR 1840.

2 M

Copy of a Letter from the Right Hon. Lord John Russell to the Lords Commissioners of her Majesty's Treasury,

*Downing Street, Dec. 26, 1839.*

MY LORDS.—The state of the Foreign slave trade has for some time past engaged much of the attention of her Majesty's confidential advisers. In whatever light this traffic is viewed, it must be regarded as an evil of incalculable magnitude; the injuries it inflicts on the lawful commerce of this country, the constant expense incurred in the employment of ships of war for the suppression of it, and the annual sacrifice of so many valuable lives in this service, however deeply to be lamented, are not the most disastrous results of this system. The honour of the British crown is compromised by the habitual invasion of the treaties subsisting between her Majesty and foreign Powers for the abolition of the slave trade, and the calamities which, in defiance of religion, humanity, and justice, are inflicted on a large proportion of the African continent, are such as cannot be contemplated without the deepest and most lively concern. The Houses of Lords and Commons have, in their addresses to the crown, expressed in the most energetic terms the indignation with which parliament regards the continuance of the trade in African slaves, and their anxious desire that every practicable method should be taken for the extinction of this great social evil.

To estimate the actual extent of the foreign slave trade, is, from the nature of the case, an attempt of extreme difficulty; nor can anything more than a general approximation to the truth be made. But after the most attentive examination which it has been in my power to make of official documents, and especially of the correspondence communicated to parliament from the department of her Majesty's Principal Secretary of State for Foreign Affairs, I find it impossible to avoid the conclusion, that the average number of slaves introduced into Foreign States or colonies in America and the West Indies, from the western coast of Africa, annually exceeds 100,000. In this estimate a very large deduction is made for the exaggerations which are more or less inseparable from all statements on a subject so well calculated to excite the feelings of every impartial and disinterested witness. But making this deduction, the number of slaves actually landed in the importing countries affords but a very imperfect indication of the real extent of the calamities which this traffic inflicts on its victims. No record exists of the multitudes who perish in the overland journey to the African coast, or in the passage across the Atlantic, or of the still greater number who fall sacrifice to the warfare, pillage, and cruelties by which the slave trade is fed. Unhappily, however, no fact can be more certain, than that such an importation as I have mentioned presupposes and involves a waste of human life, and a sum of human misery, proceeding from year to year, without respite or intermission, to such an extent as to render the subject the most painful of any which, in the survey of the condition of mankind, it is possible to contemplate.

The preceding statement unavoidably suggests the inquiry, why the costly efforts in which Great Britain has so long been engaged for repressing the foreign slave trade have proved thus ineffectual? With-

out pausing to enumerate the many concurrent causes of failure, it may be sufficient to say that such is the difference between the price at which a slave is bought on the coast of Africa, and the price for which he is sold in Brazil or Cuba, that the importer receives back his purchase-money tenfold on the safe arrival of his vessel at the port of destination. It is more than probable that the general profits of his trade, if accurately calculated, would fall exceedingly below this estimate, as indeed it is certain that in many cases it is carried on at a ruinous loss. But your lordships are well aware how powerful and constant an impulse may be given to any species of illegal traffic, however hazardous, when they who engage in it are allured by the hope of very large and quick returns, if their good fortunes could enable them to escape the penalties of the law. It may, therefore, be readily understood how effective is such a stimulus, when as in the case in question, the law itself is regarded with general disfavour in the society to which the violator of it belongs, and is reluctantly executed by the government of that society. We must add to this exciting motive the security which is derived from insurances, and insurance companies, which are carried on to a great extent and combine powerful interests. Under such circumstances to repress the foreign slave trade by marine guard, would scarcely be possible if the whole British navy could be employed for that purpose. It is an evil which can never be adequately encountered by any system of mere prohibition and penalties.

Her Majesty's confidential advisers are, therefore, compelled to admit the conviction, that it is indispensable to enter upon some new preventive system, calculated to arrest the foreign slave trade in its source, by counteracting the principles by which it is now sustained. Although it may be impossible to check the cupidity of those who purchase slaves for exportation from Africa, it may yet be possible to force on those, by whom they were sold, the persuasion that they are engaged in a traffic opposed to their own interests when correctly understood.

With this view it is proposed to establish new commercial relations with those African chiefs or powers within whose dominions the internal slave trade of Africa is carried on, and the external slave trade supplied with its victims. To this end the Queen has directed her ministers to negotiate conventions or agreements with those chiefs and powers, the basis of which conventions would be, first, the abandonment and absolute prohibitions of the slave trade; and, secondly, the admission for consumption in this country, on favourable terms, of goods the produce or manufacture of the territories subject to them. Of those chiefs, the most considerable rule over the countries adjacent to the Niger and its great tributary streams. It is, therefore, proposed to despatch an expedition which would ascend that river by steam-boats, as far as the points at which it receives the confluence of some of the principal rivers falling into it from the eastward. At these, or at any other stations which may be found more favourable for the promotion of a legitimate commerce, it is proposed to establish factories, in the hope that the natives may be taught that there are methods of employing the population more profitable to those to whom they are subject, than that of converting them into slaves, and selling them for exportation to the slave traders.

In this communication it would be out of place, and indeed impracticable, to enter upon a full detail of the plan itself, of the ulterior measures to which it may lead, or of the reasons which induce her Majesty's government to believe that it eventually leads to the substitution of an innocent and profitable commerce, for that traffic by which the continent of Africa has so long been desolated. For my immediate purpose it will be sufficient to say, that having maturely weighed these questions, and with a full perception of the difficulties which may attend this undertaking, the Ministers of the Crown are yet convinced that it affords the best, if not the only prospect of accomplishing the great object so earnestly desired by the Queen, by her parliament, and her people.

Having instituted a careful inquiry as to the best and most economical method of conducting the proposed expedition, I find from the enclosed communication from the Lords Commissioners of the Admiralty, that it will be necessary to build three iron steam vessels for this service, and that the first cost of those vessels, including provisions and stores for six months, will amount to 35,000*l*. It further appears that the annual charge of paying and victualling the officers and men will be 10,546*l*. The salaries of the conductors of the expedition, and of their chaplain and surgeon, will probably amount to 4,000*l*. In addition to this expenditure, presents must be purchased for the chiefs, and tents, mathematical instruments, with some other articles of a similar kind, will be indispensable for the use of the persons who are to be engaged in this service, when at a distance from their vessels. I have some time since given directions for the completion of this additional estimate, but with those directions it has not hitherto been found practicable to comply. The charge for this branch of the proposed service will not be very considerable.

I have to convey to your Lordships my recommendation that in the estimates to be laid before the House of Commons for the services of the year 1840, the sums be included which are necessary to provide for the expenses of the proposed expedition to the Niger, on the scale already mentioned, under the several heads of expenditure.

I have, &c. (Signed) J. RUSSELL.

Extract of a letter from R. More O'Ferrall, Esq., to James Stephen, Esq.; dated Nov. 16, 1839.

"I am commanded by my Lords Commissioners of the Admiralty, to transmit herewith, for the information of Lord J. Russell, a copy of a report from Sir Edward Parry, relative to the equipment and expense of the proposed steam boat expedition to the river Niger."

Sir Edward Parry's Report with reference to Mr. More O'Ferrall's minute on Mr. Stephen's letter of the 6th of Nov. 1839.

In order to afford a reasonable prospect of success in the object which her Majesty's government has in view, in sending an expedition up the river Niger, I conceive that three steam vessels are indispensable. In many cases a fourth vessel of the smaller class might afford very important facilities, but in the estimates of the expense I am about to offer, the calculations are confined to three.

The vessels should be built very strongly of iron, expressly for this service, the two larger to have very roomy and airy accommodations for their officers and crews, and to be of exactly the same size, rig, and power, with all their stores precisely alike. The third vessel, intended for detached service up smaller rivers, for conveying intelligence or sick persons, and especially for sounding a-head of the other vessels in difficult or unknown navigation, should also have her stores of every kind as much like those of the other two as possible.

The steam-engines of the three vessels, that is, two in each of the larger and one in the other, should be of the same power, constructed by the same manufacturer, and precisely alike in the most minute particular, so that the duplicate (or spare) parts may fit any of the engines without selection or alteration.

This arrangement, both as regards the engines and all other parts of the equipment, is obviously of the greatest importance, in increasing the resources of the expedition, where the means of repair must be limited, and the distance from any regular establishment great, for a considerable time. It may also be observed, that the expense of duplicate parts for the engines, and the quantity of spare stores of every other kind, are greatly reduced by this arrangement.

After consulting with Captain Trotter and other competent persons, I am of opinion that the vessels should be of about the following lowing dimensions :—

THE TWO LARGER.	
Length on deck .....	136 ft.   Tonnage, about ..... 440 tons
Breadth of beam.....	17 "   Draught of water not to
Depth of hold .....	10 "   exceed ..... 4ft. 9.in.
Two sliding keels.....	6ft. deep

Each of the larger vessels to have two engines of 35-horse power each engine, that is an aggregate power of 70 horses; to carry coals for 15 days (of 12 hours), and to be fitted with projections over the gunwale on each side, like the vessels on the American rivers, for the convenience of stowing a supply of wood for fuel.

THE SMALLER VESSEL.	
Length on deck .....	110 ft.   Draught of water not to
Breadth of beam.....	22 "   exceed..... 3 feet
Depth of hold.....	8ft. 3in.

To carry one engine of 35-horse power, and coal for 10 days (of 12 hours.)

The estimated expense of building and equipment is as follows :—

Cost of the two larger vessels, including engines, masts, rigging, sails, anchors, cables, and fixtures .....	£24,000
Cost of the smaller vessel, including the same .....	6,750
Ordinary provisions for six months .....	1,146
Preserved meats and soups extra for sick .....	1,104
Stores for six months.....	2,000

Total first cost and equipment for six months..... £35,000

It will be necessary also to furnish the expedition with a supply of articles as presents to the natives, which are not included in the foregoing estimate.



The annual charge for paying and victualling the officers' and men upon the annexed scale of establishment (which is considered to be the proper one,) will be nearly as follows:—

Wages,	(1st vessel) £2,332	(2nd vessel) £,2,789	(3rd vessel) £2,077
Victuals	990	917	684
	£1,022	£3,763	£2,761

Total annual charge for wages and victuals, £10,516.

It will, in my opinion, be highly expedient to contract with one iron shipbuilder for the vessels and engines; the selection of the manufacturer of the engines, as well as the plan of their construction, being strictly subject to the approval of the Admiralty.

And as there are only two or three individuals who understand the peculiar art of iron ship building, and Messrs. Laird, of Liverpool, are the most eminent and experienced in this line, I recommend that they be desired to furnish plans and estimates for this undertaking. Messrs. Laird have already built several iron vessels for enterprises of this nature; among the rest, for the Euphrates expedition; and one of these gentlemen being an African traveller of considerable reputation, they would not only bring to the subject much more information and experience than any other persons can possess, but would also take a deep personal interest and pride in making the vessels in all respects fit for this important undertaking. I may add, that Messrs. Laird are now under contract with the Admiralty for furnishing an iron steam-vessel for a Dover packet, with her engines and everything complete for sea, in the manner above recommended.

I find on inquiry, that one such larger vessel as I have proposed might, with great exertion, be completed with her engines, in eight months from the date of the order, a second in nine months, and the third in ten months. But, as their complete equipments for sea would require some weeks after they are out of the manufacturer's hands, and the expedition ought to be *bona fide* ready to leave England by the 15th of October, no time should be lost in calling for the plans and estimates. Indeed I have reason to believe that the demand for iron vessels, especially for foreign countries, is become so urgent, that unless the order be very soon given, it is doubtful whether the vessels could be completed in time to proceed to the Niger next year at all.

As vessels of the description here proposed, though in all respects adapted to river navigation, cannot carry out with them, across the sea, anything like sufficient resources for an enterprise of this nature, it will be necessary that they should be accompanied, or perhaps preceded, by a transport to convey a supply of provisions and stores; a portion of these to be put on board the steam vessels at the mouth of the Niger, and the remainder to be landed at Fernando Po, or some other convenient place, as a depot for future use.

(Signed)

E. W. PARRY.

Admiralty, 14th Nov., 1839.

Treasury Chambers, Dec. 30., 1839.

Sir,—The Lords Commissioners of her Majesty's Treasury having had under their consideration the letter addressed to them by Lord John Russell on the 26th instant, submitting a plan for the effectual aboli-

tion of the slave trade and, recommending that the expenses thereof may be included in the estimates to be submitted to Parliament, I have it in command to request you will state to his Lordship, that my Lords will be prepared to sanction such estimates as may be required for the service in question.

I have, &c.

(Signed)

G. J. PENNINGTON.

*James Stephens, Esq.*

### ON MAKING BOATS OF PADDLE BOXES.

*Royal Navy Club, Bond Street, March 1, 1840.*

SIR,—The loss of life in the Huskisson steam vessel induces me to address the following remarks, which through the wide circulation of your valuable journal may attract the attention of the general Steam Companies, and lead them to consider whether the adoption of Capt. George Smith's, R.N. invention, for converting the tops of the Paddle Boxes into boats, is not a precaution actually called for, and which might prove a safeguard in many cases of danger, in saving the lives of those intrusted to their charge, and who in the event of fire or foundering at sea, (as in the case of the Huskisson,) have no chance of being saved, except by such an interposition of Divine Providence, as in her case, by falling in with the Huddersfield, and receiving prompt and noble assistance.

Amongst several very excellent inventions of Capt. Smith's, which may all be seen at the Polytechnic Institution, the conversion of the of the Paddle Boxes into boats, is one, not only large, but of a very safe description, which are so ingeniously fitted as to be placed in the water with great facility, and much quicker than a boat could be hoisted out from the deck.

It is well known to seamen, that no steamer has boats at present, that could save thirty persons, in case of foundering at sea, and I am of opinion, that had the Huskisson been fitted with Capt. Smith's invention; although the sea was rough, that those twenty unfortunate individuals who perished might have been saved.

I shall conclude, by a supposed case, which, I think, must forcibly shew the necessity of every sea-going steamer, having the means to save her passengers and crew. It is not an impossible case, that a steam vessel might have sprung a leak, and founder within sight of her port, in fine calm weather, before any assistance could reach her. Would not this be a melancholy catastrophe? as all must perish, save a few in her ordinary boats, whereas had she been fitted up with Captain Smith's boats, all would most probably have been saved!

Your advocacy and connexion with maritime affairs, will I trust, Sir, induce you to take this subject in hand, as I feel satisfied the adoption of these boats as herein proposed, would be a great public benefit, and a security to the many thousands that are constantly traversing the ocean in steam vessels.

You will oblige me, Sir, by giving publicity to this letter, although but a feeble effort to bring into notice this excellent invention.

I am, Sir, your obedient servant,

E. H. SCOTT,

*Captain R.N.*

*To the Editor of the Nautical Magazine.*

P.S. The government have partially adopted this invention, as either

two or three of the Queen's steam vessels have been fitted under Capt. Smith's inspection, with boats as described. The loss of life in America has been awful in consequence of the want of boats! and very recently 100 lives were lost in the Lexington, burnt in Long Island Sound.

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#### ATLANTIC STEAMERS.

SIR,—In making some observations upon the errors of construction committed in the great Atlantic steamers, I happened to remark somewhat more particularly upon the British Queen, than seems to have been quite agreeable to those concerned in that ship; and her commander has exhibited a creditable degree of zeal in abusing me for so doing—at the same time expressing his belief that I am actuated by some ulterior object. My object in obtruding upon the public, remarks upon the blunders committed in steam navigation, has been to rectify them; and, to prevent such noble undertakings as this great power is in the course of being applied to, from retrograding; by communicating the result of experience and attention to the subject; and Lieutenant Roberts may be assured that I was as far from meaning to effect injury to individual interests, as I should be in offering a personal affront to himself.

There is one very gross mis-statement in his letter, which I must rectify: he says that I have asserted, “that the length of a steamer to be forced against the seas of the ocean should not exceed 200 feet;”—and he asks, “why she should not be 250 feet?”—the question I will answer at a future time, and at present only deny having said anything of the kind about the limitation of a steamer's length: on the contrary, I have in the pages of the *Nautical* frequently said, “that to obtain the greatest advantages in ocean steam navigation, there is no limit to the length of a steamer except the difficulty of constructing her of sufficient strength:” and in my letter, to which that of Lieutenant Roberts proposes to be a reply, I have said, “that the art of the shipbuilder has not yet succeeded in forming a steamer of sufficient strength, exceeding 200 feet in length.” But, that no mistake whatever may remain, I beg to tell the Lieutenant, that I have found no fault whatever with the length of his ship, nor should I were she 300 feet long, which, indeed, is the length I have in my own mind concluded a steamer should be, to make head against the great seas of the world. My objections are to the *form*, and to the *deficiency of strength* of all large steamers; and upon these points I am ready, in fair argument, to meet all opponents.

I have promised that I would follow up my objections to the ocean steamers, by some remarks to the point, as to what are their errors, and this it is certainly my intention to do; but, notwithstanding the excess of presumption with which I am charged, I have thought fit to await the production of the draughts of the ship, which I am led to believe will speedily be before the public, for the service of the Company, to whom I addressed my last letter,—“The Royal Mail Steam Packet Company.” These ships are said to be draughted by a master builder of one of the Royal Dock Yards, Mr Laing, a gentleman for whose abilities I have such respect, that I expect much from him on this occa-

sion ; and, until we see what he proposes for ocean navigation by steam, I am willing to wait, fully believing (though Lieutenant Roberts says the contrary,) that there are others as well as myself, who may form correct notions on the subject : but, as I will plead guilty to the existence of some degree of presumption, I promise that even Mr. Laing's ships shall be freely criticised, should they not accord with what I feel convinced they should be—mean as to form, strength, and dimensions.

I have often, Mr. Editor, in discussing nautical subjects in your useful periodical, alluded to the superiority of the American ships ; and I will maintain, that the packet-ships of the United States are an ornament to that country, and a pattern to our own.

It is really extraordinary that we should be so blind as not to see the advantage Jonathan has over us in these ships, but, also in the *notorious superiority* of his steamers, which, in point of speed and construction, bear something like the proportion to ours, that the immense rivers of that country do to our pigmy streams.

Finding fault with steam operations having hitherto been my theme, I will now endeavour to make some amends, by admitting the great degree of perfection attained in our river steamers, though very far behind those of America. The building of iron steamers has been progressing to a much greater extent than the public is generally aware of, for some time past ; and, as skill and practice increase the confidence in these vessels, by an improvement in their strength, no doubt the great advantage of their less displacements, consequent upon their lightness, will be duly appreciated. I think it only justice, to whoever may have constructed the new iron steamer, "The Sons of the Thames," to draw attention to this beautiful craft. She is now lying in the East India Dock, and I will venture to say that her form is the very nearest perfection for speed, of anything in existence. She is said to be built and planned by Mr. Ditchburn of Blackwall, a gentleman who, I believe, served under the late Mr. Fearnall, shipbuilder at Limehouse, to whose memory I am happy to have this opportunity of paying a tribute of respect, in declaring my belief, that he had the most correct notion of what the form of a steamer should be, of any professional man of his day ; and that he perhaps aided the improvements in steam ships more than any other person whatever.

I am, sir, your obedient servant,

MERCATOR.

*To the Editor of the Nautical Magazine.*

*London, March, 1840.*

[“Mercator” will excuse us for having curtailed his letter in which he alludes to the deficiency of argument on the part of Captain Roberts, and asserts that his own experience is about double that of the captain's, &c. At the same time we admit that he has been retorted upon unceremoniously which we shall prevent in future, and we hope he will not be deterred from giving us the benefit of his forty years of experience.—ED. N.M.]

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#### STEAM BOAT TACTICS.

SIR.—Having sent you a few lines on the back turn in steam vessels in October last, I beg to offer to your notice the following particulars.

The other day we landed a mail at Zante, where for the sake of despatch we stood in very close. The wind was blowing a fresh breeze

(5) on shore. The engines were stopped, and the mainsheet hauled aft to keep her head up to the wind, until she gathered sternway, the mainsail had the desired effect; but then she fell right off, and gathering headway came to again, &c. Meantime the business of delivering and receiving the mails had been despatched. The engines were immediately backed, and the helm being amidships, when in spite of the mainsail, she came right up, with her stern to the wind, bringing it on the other beam.

Thus, Sir, it appears that we must take into account something else besides the wind acting on the hull of the vessel, and the paddle wheels sending her in the direction of her length. Probably the position of the latter, and the formation of the vessels bottom must be considered.

It seems a strange assertion, but it is nevertheless true, that a steam vessel in a fresh breeze, with her mainsail set, and going a back turn will ply to windward, constantly in short boards, tacking stern foremost, regardless of the helm.

I do not wish to be understood to assert positively, that *all* steamers will act thus. I allude more particularly to sea-going vessels of the present construction. I presume, however, to offer my opinion on the subject; and that is, that *all* steam vessels will ply to windward, as above stated, not excluding the three masted vessel with her mizen set.

I am, Sir, your obedient servant,

R. C. ALLAN.

To the Editor of the Nautical Magazine.

Volcano, Malta, Jan. 19, 1839.

**THE CHINESE NAVY.**—A number of the Pekin Gazette contains a paper of six pages concerning the Navy of China, from the pen (or rather pencil) of His Imperial Majesty. It was occasioned by the operations of the Chinese navy on the coast of Cochin-China when a pirate was captured. The emperor's attention being called to failures in capturing other pirates on the coast, he animadverts in severe terms on the state of the Chinese navy. He begins his paper by this first principle, that "according to the ancients in the government of a nation, while civilians required rubbing up, the military no less required a brushing. Government," he says, "appoints soldiers for the protection of the people; and naval captains are not less important than dry land soldiers. But the navy has lately fallen off, as appears by many cases of failure on the high seas.

"On shore a man's ability is measured by his archery and his horsemanship; but a sailor's talent by his ability to fight with and on the water. A sailor must know the winds and the clouds, and the lands and the lines, (channels among sands). He must be thoroughly versed in breaking a spear with (or beating against) the wind. He must know, like a God, how to break through the billows, handle his ship, and be all in regular order for action. Then when his spears are thrown they will pierce; and his guns will follow to give them effect. The spitting tornados of the fire physic (gunpowder) will all reach truly their mark; and whenever pirates are met with they will be vanquished wonderously. No aim will miss its mark. The pirate banditti will be impoverished and crippled, and even on the high seas when they take to flight, they will be followed and caught and slaughtered. Thus the monsters of the deep, and the waves, will be still, and the sea become perfectly calm, not a ripple will be raised.

“ But far different from this has of late been the fact. There is the name of going to sea, but there is no going to sea in reality. Cases of piracy are perpetually occurring, and even barbarian barks anchor in our inner seas, without the least notice being taken of them! I, the emperor consider,” &c. Here his Majesty looks back on the past, and has rather dismal forebodings for the future, arising from such an uncommonly appearance of things; but the shadows of night are obscuring his paper, and after threatening and advising his naval servants, he adds “ do not hereafter say that you were not early warned.”

PENDULUM MARINE ARTIFICIAL HORIZON.

THE following sights for time with Lieut. Becher's Pendulum Horizon were taken on board the Fairy in Harwich harbour, and alluded to in our last.

Wednesday, 20th Nov. 1839. P.M.				Tuesday, 26th Nov. 1839. P.M.			
Times by W.		Sun's Alt. L.L.		Times.		Sun's Alt L.L.	
h.	m.	s.	° ' "	h.	m.	s.	° ' "
3	10	30	7 6 30	2	58	13	7 9 20
0	11	25	0 30		59	11	7 0 0
0	12	19	6 56 0	3	0	16	6 53 0
0	13	27	50 20		1	10	47 0
0	14	39	43 30		1	58	42 10
<hr/>				<hr/>			
140			276 50	48			271 30
<hr/>				<hr/>			
Watch fast	3	12 28	6 55 22	Chron.	3	0 9	6 54 18
	0	9 52	0 9 26	Pend. Cor.	0	13 35	0 9 26
Chron.	3	22 20	6 45 56	Chron.	3	13 44	6 44 52
			0 7 24 R.				0 7 27
Sun's Decl.			6 38 32	Sun's Decl.			6 37 25
19	37	31	0 16 13 S.D.	20	53 27.6		0 16 14
	0	1 42 Corr.			0	1 22 Corr.	
19	39	13	6 54 45 T.A.	20	54 49		6 53 39

Sun's Alt.	6 54 45	Cosec.	0.026067	6 53 39	0.029598
P.D.	109 39 13	Sec	0.210133	110 54 50	0.210133
Lat.	51 56 45		6.301030	51 56 45	6.301030
			9.000377		8.950828
	168 30 43		9.989316	169 45 14	9.990377
	84 15 21	Cos.	5.526923	84 52 37	5.481966
	77 20 36	Sin.		77 58 58	
	h. m. s.				
	3 13 43				
Eq. T.	0 14 14			h. m. s.	
				3 3 22	
	2 59 29	Harwich M. T.		0 12 34	
	3 22 20	Chron.			
				2 50 48	
	0 22 51	Chron. Fast.		3 13 45	
	0 5 9.3	Long. in T.			
				0 22 57	Chron. fast
	0 17 41.7	fast Gr. M.T. 20th		0 5 9.3	Eq. T.
	0 17 47.7	fast Gr. M.T. 26th			
				0 17 47.7	
	0 0 6.0	Gain in six days			
		Or, one second per day.			

Meridian observation for Latitude made on board off Woolwich Dock-yard.

Saturday 21st Dec. 1839. Sun.

14	°	58	′	30	″
0	°	9	′	26	″
Pend. Cor.					

14	°	49	′	4	″
0	°	3	′	28	″
Refr.					

14	°	45	′	36	″
0	°	16	′	16	″
Sem. D.					

15	°	1	′	52	″
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74	°	58	′	8	″
23	°	27	′	30	″
Decl.					

51	°	30	′	38	″
Lat.					

Proper latitude, 51° 30′ N. nearly.

**PORTER'S PATENT ANCHOR.** Mr. Editor,—Having seen a drawing of Porter's Anchor with a string of recommendations of it from a commander in the Royal Navy, in the last number of the United Service Journal, and considering that with such high pretensions to excellence it is a fair subject for discussion, I enclose you the following queries on it:—

You are aware that the arms of this anchor consist of an entirely separate piece of iron from the shank, and turn on a bolt which passes through the end of the shank at the crown which is constructed open, and between the two sides of which it moves freely.

Query 1. What will be the effect of an unequal strain upon it? Suppose fig. 1 to represent the anchor lying in its most favorable position, will a heavy strain tend to raise the cable end of the shank, as in fig. 2, from off the ground, and the upper arm resting flat upon it, will it be raised with it? If so, when the strain is removed and the shank falls on the ground again, the upper arm remains where it was forced to, as in fig. 3, leaving a space between it and the shank to foul the cable, in the event of the ship breaking her sheer on swinging to the other tide, or going over her anchor if it be calm? That the strain on an anchor is unequal, being very heavy at times and none at all at others, according to wind and tide, will scarcely I think be denied.

Query 2. What will be the condition of a ship trusting to this anchor in a confined anchorage tolerably full of shipping when the lower arm will not bite, as in fig. 4 or 5, and supposing the ground to be soft mud, may it slip easily along the surface without biting—all this time it is blowing hard—will it be *dangerous* to herself and to others near her?



Query 3. If two boats take out each a piece of the anchor, one the arms, and the other the shank and stock, because neither of them can carry it out entire, which of the boats is it to be put together in for letting go? Your inserting these queries in your next number will oblige.

A SEAMAN.

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### THE PORTABLE TELEGRAPH.

*Wednesday Evening.*

MR. EDITOR.—The other day on my return home from my station aloft, I was glad to find that you had taken the hint I gave you one cloudy day respecting the Homo-graph. I am, sir, it is true, a moving fixture, yet I am not without a mind, as indeed you may well conceive when you reflect on the important communications to the Fleet, &c., constantly pointed out by me; and this mind of mine, I can assure you, sir, is very fond of being comfortable, and when the day is over is glad to retire to the fire-side, and over some hot rum punch, which pleases best after such a cold day as this has been, study the news, how those succeed in the destinations to which I have sent them, and how far it is probable I shall have to direct others, (weather always permitting,) and so forth.

The sun having set in the haze, and my fingers very cold, from which, as you may perceive, they have not yet recovered; having stirred the fire and my punch, I took up your March part of the *Nautical*, with which I am very well pleased, particularly with that part respecting the Homo-graph, I would, however, recommend that in your next number you mention the use of a stick, a sword, a spy-glass, or best of all, a short batten painted white, for the purpose of telegraph; for from all I can learn, "a white handkerchief" is now a rarity in the service, a wooden arm, as in my own case, I find most convenient; but in that case it is necessary to state, that No. 2 is extended, instead of the white being shown along the right arm, it is extended from it.

I am the more anxious about this, my little offspring, believing that if it is made properly known it may prove of far more use than for the purposes you mention, as surveying for one. It might be of great service in the Merchant Service if given in my friend Marryat's Code of Signals, and for general purposes should form a part of those which issue from under my foot, as everything given in them can be expressed by it—and Captain Spratt I am sure can only wish to see it made generally useful.

I am, sir, your servant,

THE SEMAPHORE ON THE TOP OF THE ADMIRALTY.

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A CHINESE ADMIRAL.—The following picture of the Chinese Admiral Wang, resident at Canton, is highly illustrative of the Chinese character. The Admiral was received on board the Amherst with the respect due to his rank: a salute of three guns was fired and every attention paid to him. But it appears that the ideas he had acquired at Macao of foreign character, did not lead him to imagine that such courtesy was requisite towards us. He began the conversation by



abruptly asking various questions, hardly giving me time to reply;—"Where did you come from?—What is your nation?—What business have you here?—You must be gone instantly, etc." I had just commenced a reply when his Excellency turned sharply to Mr. Gutzlaff and said, "You are a Chinese." Mr. Gutzlaff denying it, he told him to take off his cap that he might see if he wore a tail, which being done, he said, "No—I see you are a Portuguese." I now told him that the ship was English, which assertions he treated with perfect discredit, saying, "I have lived at Macao and know the barbarian customs; your ship is from Macao." I again replied that it was strange in his Excellency to accuse me of falsehood in this manner, and that both myself and the ship were positively English, in spite of all he had known and learned at Macao. I then took a pencil and wrote on a slip of paper, "Ta-Ying-kwo (Great Britain) is my nation," and placed it in his hands. On receiving it he burst into the most scornful laugh, and exclaimed, "Nonsense!—the great English Nation! the petty English Nation you should say!—you tell lies to me." Up to this moment I had kept my temper perfectly, and answered all his insulting remarks with civility; but I confess that the grossness of this last speech completely overcame the natural placidity of my disposition. I snatched the paper, which he was still laughing at, out of his hands, and seizing hold of the Admiral's arm, I said, "As you have come to my ship merely to insult my nation and myself, I insist on your instantly quitting her;" and suiting the action to the word, I was on the point of handing him out of the cabin. His Excellency now saw that he had carried the matter too far and commenced apologizing: "Pray excuse me, I did not mean to offend:—you know well there is the Ta-se-yang, and the Seaou-se-yang; (the one is generally applied to Portugal, the other to Goa) I thought there also was the Ta-ying-kwo and the Seaou-ying-kwo; I acknowledge my offence, and again beg you will excuse me." This ingenious apology was accompanied by a profusion of bows, and a behaviour as cringing as before it had been insolent. He staid on board a considerable time, but his manners and conduct were so singular as to raise a suspicion that his judgment was not quite sound, which was corroborated by some of his officers who accompanied him, and who expressed much regret at the indecorous conduct of their commander.

## LAW DECISIONS.

### CASE OF THE ISABELLA.\*

SIR,—In the September number of your valuable Magazine for 1838, you did me the favor of publishing my letter upon the case of the *Isabella*. You will perceive that what I anticipated in that epistle has taken place, and that the defendant (the pilot) is victimized; for notwithstanding the fact of his being exonerated all blame by the owners, captains, officers, and crew of the *Isabella*, (which ship received the greater damage,) he is cast in damages, claimed by the brig, to the amount of 75%, and the most ruinous costs—although it may safely be defied to produce a precedent when the pilot has been held to be *solely* responsible for damage, occasioned by the vessel of which he is in charge, unless drunkenness or wilful negligence be proven against him. Suppose there had been no pilot on board, would an action have been brought against the captain, the

\* See decision in our last number.

mate, or officer of the watch, *individually*? Most certainly not, but against the ship and cargo; and I beg to observe that the pilot of a day has less control over the crew than their officers, with whom they have performed the voyage, whose voice and gesture they are accustomed to obey. The pilot does not command the crew, but gives his directions to the officers, whom he expects to be upon the look-out above board, whilst he attends to the safety of the ship, by directing the helmsman's motions to steer her clear of rocks, shoals, &c.: and, if those on the look-out neglect to give him timely notice of the proximity of another vessel, by which neglect a collision takes place and damage is occasioned, how is it possible for him to insure every craft in the river from damage by his charge, in his capacity of pilot?—and why should a different rule be observed in the Merchant Service than on board a British ship of war, in which the pilot is never expected to be made responsible for accidents of collision, &c., unless it be shewn that it was by his own wilful act that such occurrence took place? in which case he would be cashiered, and very deservedly too! But, in my father's case he is made to be *solely* responsible, and the plaintiff's witnesses, who have never in their lives so much as seen him, have *succeeded* in *proving gross and wilful negligence* on the part of the pilot of another vessel; although, as I said before, his captain and officers cast not the shadow of a fault upon him in the transaction, for had he been in fault, not only would his pilotage have been withheld, but, as Captain Brown observed, he would have been made responsible for the damage occasioned to the ship by such negligence. If there *is* any fault it must rest conjointly with the crew and pilot, taking the most unfavorable view of the case. Even Dr. Lushington would not have entertained the question of the pilot's *sole* responsibility under the circumstances detailed; and it is well known that he takes a more unfavourable view of the pilot's actions than ever were entertained by Lord Stowel, or Sir John Nicholl, who says, "that unless *wilful negligence* be clearly proven, it is *utterly impossible* to cast a defendant; and that in common sense and common justice an action should be against the ship and freight, and not against the pilot, who, if faulty, is responsible to his owners, to the amount of his bond (100*l.*) for any expense he may by his negligence put them to." See the case of the "Transit," reported in the May Number of the *Nautical Magazine* for 1838; also the "Carnation and Smith of March." Dr. Lushington in a very recent case, (that of the *Diana*, tried in the Court of Admiralty, on 31st January,) said that "this was a *very novel case*, the fault resting with the pilot, master, and crew, conjointly; and he must, therefore, defer his judgment on this important and difficult question till next court day." Indeed, it is "a difficult question,"—how the pilot can be in fault, and not the crew also! But, in my father's case the arbitrator sees no "difficulty" in the matter at all, or if he does, the gordian knot which he cannot untie, he cuts through at once, and thus the "difficulty" vanishes, like mist before the morning sun; and, that no further question may arise, he does not so much as condescend to assign a reason for such solution of the "difficulty."—CAN HE?

And here I must take the liberty of protesting against a case of this nature being adjudicated out of the Court of Admiralty, or by a man *totally unacquainted* with nautical affairs. In fine the whole case appears like one of the grossest injustice, if not of the basest treachery.

I am, sir, &c.

Kingsbury House, Red Hill, Edgware,  
Feb. 6, 1840.

W. GIBBS,  
(Son of the Victim.)

SHIP LARKINS.—*Libel*.—This was an action for libel. The declaration stated that the plaintiff was owner of the ship, that she was advertised in the "Times" newspaper, to carry goods and passengers to the East Indies; and, that the defendant published in the same paper, a libel of and concerning the said ship. The defendant pleaded, first, that he did not publish the alleged libel; and, secondly, that the said ship was not seaworthy, or in a fit and proper state to perform such a voyage, on both which pleas issue was joined. The trial lasted some time, and the evidence went to show that she had made several voyages

to the East Indies and back. The evidence of the gentleman who lately commanded her, with his steward, proved that she was a most excellent ship, performing in the years 1835, 1836, 1837, and 1838, her voyages exceedingly well. The ship, moreover, stood in the highest class in Lloyd's books, *Æ*, proving that she was of a description to which not only was the libel inapplicable, but afforded no reasonable and fair pretence for its publication.

The jury returned a verdict for the plaintiff—damages, 900*l.*

**DON JUAN—Salvage.**—This case was tried before the magistrates of Colchester. The *Don Juan*, schooner, was on her passage from Hamburgh to St. John, Newfoundland, and ran on shore on the Mouse-land, near Foulness Island. She was discovered by the crews of the smacks, *Elizabeth* of Harwich, and the *George* and *Eliza* of Colchester, and was assisted by them in getting out the kege and hawser anchors, and at high-water, was got off; after discharging part of her cargo into the smacks, and eventually brought into Harwich: the admitted value of the schooner and cargo was 2,750*l.* From the evidence adduced, the magistrates were quite satisfied, and awarded the salvors, 75*l.*, directing each party to pay their own expenses. This decision was unsatisfactory to the owners of the smacks, who declared their intention of appealing to the Admiralty Court.

**MAGNETISM OF CHRONOMETERS.**—We beg to call the attention of our naval readers to a very important communication on this subject in our present number, from the Astronomer-Royal. That the rates of Chronometers are different on board ship from what they are on shore has been long since allowed by careful seamen who have attended to the subject, and we might quote the names of many officers who have specially alluded to it. Our readers will also remember the experiments of Mr. Dent described in our first volume, (1832,) and also those of the Rev. George Fisher at Greenwich, who with one of Arnold and Dent's chronometers obtained a series of rates differing from each other from no other cause than the position of the XII hour of the plate being successively placed towards the four cardinal points of the horizon. These rates will be found in our volume for 1837, described in a letter to Capt. Beaufort, the hydrographer to the Admiralty. Mr. Fisher also alludes to differences in rates found by Mr. Northcote in his voyage to India, in the *Jupiter*, all clearly proving the formidable action of magnetism on chronometers. The experiments of the Astronomer-Royal have for their object to correct the effects of this deranging force, and we recommend the whole subject to the careful attention of our readers. Mr. Fisher has also shewn in our volume for 1838, p. 386, the mischief arising from a method formerly in use, but which no careful sea-man now adopts.

**ROYAL NAVAL COLLEGE.**—The following questions were put to the Naval Officers at the last half yearly examination at this establishment.

STEAM MACHINERY, &c.

1.—What theories have been proposed to account for the conversion of a solid into a liquid? In what manner is heat conveyed away from a hot body? Why should the outer surface of a steam cylinder be polished?

2.—Prove that the intensity of heat radiated from a given point, varies inversely as the square of the distance from that point.

3.—Explain the term “latent heat.” What is the general effect of a change of temperature on the volume of a body? What advantage is taken of this in rivetting together the plates of a steam boiler?

4.—If an open vessel containing fluid be heated, will the boiling point depend on the state of the atmosphere? Distinguish between high and low pressure steam. Why are high pressure engines used on railways?

5.—What are the principal improvements introduced by Watt in the construction of steam engines? Explain the use of a fly-wheel in machinery. Why is a fly-wheel not requisite for nautical engines?

6.—Explain the construction of the “feed-pipe” and “self-regulating damper” of a land engine. How is the quantity of water in a boiler ascertained?

7.—Describe minutely the formation of the D valve, and explain the process of “blowing through,” on first starting the engine.

8.—Describe the “Eccentric,” and give the technical terms of the different parts of the machinery connecting it with the slide valve.

9.—Give a minute description of the air pump, condenser, and hot-well of a nautical engine.

10.—Explain the process of “blowing off” the boiler, and describe Hall’s patent condenser for obviating the necessity of this process.

11.—The diameter of the cylinder of a double engine being 24in. the length of the stroke 4ft., the number of strokes per minute 23, and the force of the steam in the boiler 5lb. per circular inch above that of the atmosphere; required its power.

#### SHIPWRECKED FISHERMEN AND MARINERS’ BENEVOLENT SOCIETY.

We had the satisfaction, indeed we may call it the good fortune, of being present at the second anniversary dinner of the friends and supporters of this institution on the 25th of March, at the London Tavern in Bishopsgate-street. To give our readers a just idea of the proceedings; of the complete success which has attended it; of the able, dignified, and eloquent bearing of the Right Hon. Sir Robert Peel, who presided; or of the many noble and excellent sentiments which were expressed on the occasion of this meeting of nearly 400 persons, all tending to the security of that great object the public good of this land, would require more extensive limits and time, than we can at present command. We therefore satisfy ourselves with promising our readers as complete an account of them as we can obtain, in our next, and shall take the opportunity of going into the merits of the Society, and shewing the grounds on which it has an undeniable claim to support throughout the whole country, both inland and maritime; and we shall content ourselves for the present, in stating, that the subscriptions of the day announced by the Secretary, the several names of the subscribers being read over, amounted to the sum of one thousand and forty-five pounds, a tolerable proof of the success of the institution, and a sterling acknowledgment of the soundness of its objects, as well as its management, and an earnest of its future well-doing. We were gratified in hearing the periodical press eulogized in the latter part of the evening

by the noble president, for the assistance which the institution had received. For our own parts, if our very cloth alone commands such services, which we hold that it does, how much more are we in duty bound to render that assistance in such a cause, aided as this work has been in its infancy by the Government, and holding the high station and character which it enjoys. We can assure its worthy president, whose splendid talents were never more happily conspicuous than on this occasion, that we do, and always shall, consider it one of our first duties to assist the institution all in our very humble power; and that we have embarked in the cause along with him with such determination from the pure conviction that the objects are most excellent, that we are sure the more those objects become known, the greater will be its success, and that to assist in such work well becomes the character of the Nautical Magazine.

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**PERRYIAN FILTER INKSTAND.**—We most readily add our testimony to the great merits of this invention; which exhibits a scientific principle applied to a most useful purpose. Clean ink, free from dust, mould, and evaporation producing thickness, is a great luxury, and one completely secured by this very ingenious invention. To our nautical friends we strongly recommend it, not only on these accounts, but from the consequent preservation of the ink, so much longer than in any other we have seen, a great desideratum at sea. It is simply the application of the air pump to force filtered ink up through a small tube into a cup for use. For persons particular in these matters, we look on this as an established companion.

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**THE BARQUE TYRIAN.**—The following letter from Captain Fisher, to the Lord Mayor, relates the accident which has occurred to this vessel:

*“Principal Harbour-master’s Office, St. Catherine’s,  
Feb. 30, 1840.”*

“My Lord Mayor,—I have to acquaint your Lordship that this morning, at 1 A.M., the steam vessel Manchester, bound to Berwick, going down the river, ran into the Tyrian Barque, lying in Gravesend Reach, and bound to Valparaiso with government stores. The Tyrian was immediately sunk, and I regret to say four of her crew and a passenger were drowned. The master and his wife, with the remainder of the crew, were saved.

“I immediately went down to Gravesend, and found the vessel sunk off the Custom-house, in seven fathoms, with her lower yards out of water at about half-ebb tide.

“I have directed Lieutenant Stone, R.N., the harbour-master at Gravesend, to place during the night, a boat with two lights horizontally near the wreck, in order to prevent vessels passing through the Reach swerving foul of it.

“I have the honour to be, my lord, your obedient servant,

*“JOHN FISHER, Harbour-master.”*

It is remarkable that the Tyrian was lying in precisely the same

place where the brig *William* was a little time back run down by the *Monarch*. After great exertions she has been raised and brought back to the docks, and her cargo discharged. By this unfortunate accident five persons have been drowned, and a coroner's inquest which has concluded its sittings, has brought in a verdict of manslaughter against the captain of the *Manchester*, with a deodand of 800*l.* for each person, making in all 4,000*l.* The *Manchester* is now lying at Berwick, and the *Rapid*, steamer, belonging to the same company, runs in her place. Both parties, it is reported, are actively engaged in collecting evidence relating to this unhappy occurrence; and it is said that Government has put the broad arrow on the *Manchester*, to prevent her running until the result of the whole affair is known.

### SHAKINGS.

ADMIRALTY, March 18, 1840.—Notice.—The Lords Commissioners of the Admiralty having determined to raise the strength of Her Majesty's Dockyards to the full peace establishment, there will be required for Woolwich yard, 36 shipwrights, 12 smiths, and one caulker. The men must not exceed 35 years of age, be of good character, good health and constitution, and not subject to any bodily infirmity.

MILFORD, March 19.—The steam ship *Medina*, of 900 tons burthen, and 300-horse power, was launched last evening from the Royal Dockyard, Pembroke, intended, after engines being fitted, to be placed on the Liverpool and Dublin line of Mail Packets.

The fall of the cliffs, and the upheaving of the bed of the sea, now reach from Whitlands Bay to Axmouth, a distance of many miles. This extraordinary phenomenon of nature forms the leading attraction of Lyme Regis, which is crowded daily with visitors, who flock from all parts to see this wonderful effect of one of nature's convulsions.—See an account of this in our last number, p. 205.

Sir Gilbert Blane's Medals have been awarded to Dr. Alexander Mc Kechnie, late of the Madagascar, and Mr. Robert Henderson Brown, late of the *Scout*, for the correct and scientific manner in which the particulars of the cases that came under their care have been recorded in their journals. This award was made, as is the custom, by the approbation of the Presidents of the Colleges of Physicians and Surgeons, in conjunction with the Physician-General of the navy, Sir William Burnett.

REWARD.—We understand that a chronometer by Arnold and Dent, worth fifty guineas has been presented by the Admiralty to Capt. J. B. Armourieux of the barque *La Jeune Frederic*, for his humane exertions in rescuing the British seamen up the river Gaboon, and that a gold medal is to be formally presented to King Denny for his important assistance by Com. Hon. J. Denman, of H.M.S. *Wanderer*.

MEDITERRANEAN GOSSIP.—The *Princess Charlotte*, previous to refitting exercised her crew last week in shifting topmasts, which was done in a most masterly style, with truly wonderful expedition, and without the least accident occurring. The main-topmast was shifted, the rigging set up, and the top-gallant-mast fidded in less than an hour; the fore-topmast occupied a few minutes more.

## PROMOTIONS AND APPOINTMENTS.

## PROMOTIONS.

COMMANDERS,—J. Stopford, retired; R. Yule, J. M. Grier.  
 LIEUTENANTS,—C. R. Johnstone, H. J. Douglas.

## APPOINTMENTS.

REAR ADMIRAL,—The Hon. G. Elliott, Commander-in-Chief in the East Indies.

ANDROMACHE, 26,—*Master*, T. Richardson. ASTREA,—*Lieutenant*, A. Dawson. BLENHEIM, 72,—*Mate*, Lord Amelius Beauclerc. BRITANNIA, 120,—*Midshipmen*, T. S. L. Brooke, T. O. B. Seymour; *Clerk*, W. D. Rowe; *Second Master*, S. Marryat. BRISK, 3,—*Lieutenant-Com.* G. Sprigg. CAMBRIDGE, 73,—*Commander*, J. L. Parkin; *Lieutenants*, R. G. Welch, G. C. Mends; *Mates*, T. R. Fortescue, C. H. James; *Nav. Instr.*, J. D. Kennedy; *Clerk*, W. H. Harris. CASTOR, 36,—*Lieutenant*, C. E. Patey. CLIO, 10,—*Surgeon*, J. Sloan. COASTGUARD,—*Com.* H. F. Glaise, E. Robinson; *Mates*, R. J. Turner, T. A. Allridge, W. C. Forsyth. CONFIDENCE st.-v.,—*Mate*, W. Willbraham. CURLEW, 10,—*Lieut.-Com.* T. C. Ross. CYCLOPS st.-v.,—*Mates*, A. Cummings, W. Butler; *Volunteer*, A. D. Horsey. DOLPHIN, 3,—*Second Master*, G. W. Beaumont; *Clerk*, G. W. Rowe. EXCELLENT,—*Mates*, R. Hall, J. W. Connolly; Hon. J. W. Spencer, J. Perkins, J. G. Simpkinson, T. Forster, L. P. Pigott; *Midshipman*, W. Wardrop. GANGES, 84,—*Mate*, W. E. Fisher. HERMES, st.-v.—*Mate*, W. Rattrey. HYDRA st.-v.—*Com.* E. Stopford. IMPREGNABLE, 104,—*Assistant Surgeons*, F. Stupart, G. G. Creighton. INCONSTANT, 36,—*Master*, W. R. H. Mattacott; *Purser*, J. Inconstant; *Surgeon*, J. Willson; *Mate*, E. F. Roberts. JUPITER,—*Second Master*, J. G. Nops. MAGICIENNE, 24,—*Lieutenants*, T. P. Thompson, G. C. Adams, C. B. Warren; *Surgeon*, G. D. Maclaren; *Mates*, O. P. Knott, J. Mc D. Smith, W. Gordon; *Sec. Master*, F. F. Taylor; *Assistant Surgeon*, E. J. Brown; *Clerk*, J. R. Andrews; *Volunteers*, W. Wood, G. W. Rice. PEARL, 20,—*Clerk*, G. E. Ricketts; *Lieutenants*, B. A. Wake, E. Dixon. PERSIAN, 16,—*Com.* W. H. Quin, and not M. Quin, as in our last; *Lieutenants*, P. H. Somerville, W. V. Lee, R. F. King; *Master Act.*, J. Benwood; *Surgeon*, J. Still; *Purser*, B. Wickham. PIQUE, 36,—*Purser*, J. Ward; *Mate*, R. Warren. PRINCESS CHARLOTTE, 104,—*Flag Lieutenant*, W. F. Glanville; *Lieutenant*, Sir G. Webster. PYLADES,—*Surgeon*, C. Priaulx. ROYAL SOVEREIGN,—*Lieutenant*, (add.) A. Darby for Advice Packet. THUNDERER,—*Com.* T. L. Massie; *mates*, H. Charlton, H. V. Craven, D. M. Gordon; *Assistant Surgeons*, R. Facis, J. Tait; *Chaplain*, Rev. P. P. Smith; *Nav. Instr.*, A. A. Bridgman; *midshipman*, S. F. Douglas. VICTOR, 16,—*Com.* W. Dawson, (a); *Lieutenant*, A. Derbyshire; *master*, (act.) E. Mallard; *Surgeon*, W. Bowler; *Purser*, G. T. Plumbly; *master-assistant*, J. Simpson. WELLESLEY, 72,—*mate*, T. Carmichael. ZEBRA, 16,—*Com.* J. Stopford.

## MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

## AT HOME.

*Andromache*, 26, Capt. R. L. Baynes, C.B., 4th March, left Portsmouth and anchored at Spithead. *Blenheim*, 72, Capt. Sir H. F. Senhouse, K.C.H., 26th Feb. passed Plymouth on way to East Indies. *Blonde*, 42, Capt. T. Bourchier, 24th Feb., sailed for China. *Cambridge*, Capt. E. Barnard, 6th March, moved out of basin at Sheerness. *Columbia* st.-v., Mr. A. Thomson, 22nd March, left Plymouth for N. Coast of Spain. *Crescent*, 26th Feb., passed Plymouth on way to South America. *Cyclops* st.-v., Capt. H. T. Austin, 2nd March, arrived at Cork from Portsmouth; 7th, left with *Jupiter* in tow; 11th, arrived at Southampton, landed troops and sailed 12th, for Portsmouth. *Jupiter*, troop-ship, Master Com., R. Fulton, 11th March, arrived at Portsmouth from Cork, having landed troops at Southampton. *Meteor* st.-v., Lieutenant-Com., R. D. Pritchard, 19th Feb., arrived at Falmouth, to cruise in entrance of channel. *Nautilus*, 10, Lieutenant-Com., G. Beaufoy, 16th March, arrived at Plymouth from coast of Spain. *Nimrod*, 20, Com., C. A. Barlow, 20th Feb. sailed for East Indies. *Pique*, 36, Capt. E. Boxer, 9th March, left Spithead, touched at Plymouth on

way to sea; 16th, returned to Plymouth. *Pylades*, 18, Com. T. V. Anson, 20th Feb., sailed for East Indies. *Raven*, 4, Lieutenant-Com., R. D. B. Mapleton, 4th March, left Portsmouth for Sheerness, put back damaged. *Thunderer*, 84, Capt. F. F. Berkely, commissioned at Plymouth, Feb. *Vanguard*, 80, Capt. Sir T. Fellowes, C.B., 13th March, arrived at Portsmouth from Malta; 17th, moved into harbour. *Victor*, Com. W. Dawson, (a) commissioned 16th of March.

AT PORTSMOUTH.—*In Harbour*,—Britannia, Victory, Vanguard, Excellent, Royal George, Cyclops, Magicienne, Victor, Jupiter, Raven, Messenger. *At Spithead*,—Andromache.

AT PLYMOUTH.—*In Harbour*,—Impregnable, San Josef, Thunderer, Inconstant, Persian, Columbia, Carron. *In the Sound*,—Pique, Nautilus.

## ABROAD.

*Acheron* st.-v., Lieutenant-Com. A. Kennedy, 12th Feb., left Gibraltar for Malta. *Acteon*, 26, Capt. R. Russell, 31st Dec., arrived at Rio from Monte Video. *Alecto*, st.-v. Lieutenant-Com. W. Hoseason, 13th Feb., arrived at Malta from Marseilles. *Alligator*, 26, Capt. Sir J. J. G. Bremer, K.C.H., 16th September, left Sydney for Norfolk Island; 16th Jan., arrived at Madras from Penang. *Asia*, 81, Capt. W. Fisher, 5th Feb., at Malta; 13th, sailed for Levant. *Basilisk*, 6, Lieutenant-Com. J. Russell, 16th Nov., at Valparaiso. *Beacon*, s.-v., Lieutenant F. Graves, 5th Feb., Malta. *Blazer*, 27th Feb., arrived at Gibraltar, and left. *Bonetta*, 3, Lieutenant-Com. J. L. B. Stoll, 19th Dec., sailed for St. Helena. *Brisk*, 3, Lieutenant Com. A. Kellett, 13th Dec., arrived at Cape; 19th, remaining. *Buzzard*, 3, Lieut.-Com. C. Fitzgerald, 28th Jan. at Sierra Leone. *Carysfort*, 26th, Capt. H. B. Martin, 25th Jan. left Constantinople, being relieved by Dido; 16th Feb., arrived at Malta. *Castor*, 36, Capt. E. Collier, 29th Feb., left Malta for Vourla. *Childers*, 16, Com. E. Halstead, 6th Jan., arrived at Madras from Trincomalee; 13th, sailed for Bombay. *Clio*, 16, Com. S. G. Freeman, 21st Jan., at Rio, from cruise. *Columbine*, 16, Com. G. Elliott, 11th Jan., arrived at St. Helena. *Comus*, 18, Com. E. Nepean, 24th Jan., left Port Royal for St. Martha; at Malta, 24th Feb. *Conway*, 26, Capt. C. R. D. Bethune, 20 Dec., left Saugor. *Curacoa*, 24, Com. W. Preston, 8th Jan. left Rio for Monte Video. *Curlew*, 10, Lieutenant-Com. G. Rose, 19th Dec., at Cape Good Hope. *Daphne*, 18, Com. W. Dalling, 6th Feb., sailed from Malta. *Dido*, 18, Capt. L. Davies, C.B., 24th Jan., arrived at Constantinople. *Electra*, 18, Com. E. R. P. Mainwaring, 16th Nov., Valparaiso. *Gordon* st.-v., Capt. W. H. Henderson, 12th Feb., arrived at Malta from Vourla. *Harlequin*, 16, Com. Right Hon. Lord F. J. Russell, 26th Jan. at Sierra Leone. *Hydra* st.-v., Com. R. Stopford, 29th Jan., arrived at Malta; 20th Feb., left for Vourla. *Lily*, 16, Com. C. Deare, 5th Jan., at Ascension. *Megara* st.-v., Lieutenant-Com. H. Goldsmith, 14th Jan., left Malta for Alexandria. *Maggie* st.-v. Lieutenant-Com. T. S. Brock, 5th Feb., at Malta. *Mellville*, 72, Capt. Hon. S. Dundas, 10th Jan., at Table Bay. *Princess Charlotte*, 104, Capt. A. Fanshawe, 17th Feb., arrived at Malta from Vourla. *Prometheus*, st.-v., Lieutenant-Com. T. Spark, 3rd March, arrived at Gibraltar; 4th, sailed for Malta. *Rodney*, 92, Capt. H. Parker, C.B., 4th Feb., arrived at Malta. *Rolla*, 10, Lieutenant-Com. C. Hall, 8th Dec., arrived at Tenerife. *Sappho*, 19, Com. T. Fraser, 30th Jan., left Vera Cruz for Sacrificios; 16th Jan., returned. *Satellite*, 18, Com. J. Robb, 20th Nov., at Bermuda. *Serpent*, 16, Com. Hon. R. Gore, 19th Jan., arrived at Vera Cruz from Tampico. *Stag*, 46, Commodore T. B. Sullivan, C.B., 10th Dec., left Rio for River Plate. *Trinculo*, 16, Com. H. E. Coffin, 14th Feb., Cadiz; 13th March, remaining. *Vestal*, 16, Capt. S. W. Carter, 25th Jan., arrived at Halifax from Bermuda; 19th Feb. remained. *Volcano* st.-v., Lieutenant-Com. J. West, 9th Feb., left Gibraltar for Malta. *Wasp*, 18, Com. Hon. D. W. A. Pelham, 13th Feb., at Tangier. *Weazle*, 10, Lieutenant-Com. J. Simpson, (e) 16th Feb., arrived at Patras from Corfu. *Wellesley*, 72, Capt. T. Maitland, 4th Jan., left Bombay for sea. *Wizard*, 10, Lieutenant-Com. T. F. Birch, 2nd Jan., left Rio for Bahia. *Wolverine*, 16, Com. W. Tucker, (b) 18th Dec., at Princes Island.



TABLE LV.

*For reducing Sardinian Palms to English Feet, and English Feet to Sardinian Palms.*

1 Sardinian Palm = 0·81486729 English Foot.

1 English Foot = 1·22719259 Sardinian Palm.

Sard. palms, or Eng. feet.	English feet, and Dec. parts.	Sardinian palms and Dec. parts.	Sard. palms, or Eng. feet.	English feet, and Dec. parts.	Sardinian palms and Dec. parts.	Sard. palms, or Eng. feet.	English feet, and Dec. parts.	Sardinian palms and Dec. parts.
1	0·815	1·227	40	32·595	49·088	79	64·375	96·948
2	1·630	2·454	41	33·410	50·315	80	65·189	98·175
3	2·645	3·682	42	34·224	51·542	81	66·004	99·403
4	3·259	4·909	43	35·039	52·769	82	66·819	100·630
5	4·074	6·136	44	35·854	53·996	83	67·634	101·857
6	4·889	7·363	45	36·669	55·224	84	68·449	103·084
7	5·704	8·590	46	37·484	56·451	85	69·264	104·311
8	6·519	9·818	47	38·299	57·678	86	70·079	105·539
9	7·334	11·045	48	39·114	58·905	87	70·893	106·766
10	8·149	12·272	49	39·928	60·132	88	71·708	107·993
11	8·964	13·499	50	40·743	61·360	89	72·523	109·220
12	9·778	14·726	51	41·558	62·587	90	73·338	110·447
13	10·593	15·953	52	42·373	63·814	91	74·153	111·675
14	11·408	17·181	53	43·188	65·041	92	74·968	112·902
15	12·223	18·408	54	44·003	66·268	93	75·783	114·129
16	13·038	19·635	55	44·818	67·496	94	76·597	115·356
17	13·853	20·862	56	45·633	68·723	95	77·412	116·583
18	14·668	22·089	57	46·447	69·950	96	78·227	117·810
19	15·482	23·317	58	47·262	71·177	97	79·042	119·038
20	16·297	24·544	59	48·077	72·404	98	79·857	120·265
21	17·112	25·771	60	48·892	73·632	99	80·672	121·492
22	17·927	26·998	61	49·707	74·859	100	81·487	122·719
23	18·742	28·225	62	50·522	76·086	150	122·230	184·079
24	19·557	29·453	63	51·337	77·313	200	162·973	245·439
25	20·372	30·680	64	52·151	78·540	250	203·717	306·798
26	21·187	31·907	65	52·966	79·768	300	244·460	368·158
27	22·001	33·134	66	53·781	80·995	350	285·204	429·517
28	22·816	34·361	67	54·596	82·222	400	325·947	490·877
29	23·631	35·589	68	55·411	83·449	450	366·690	552·237
30	24·446	36·816	69	56·226	84·676	500	407·434	613·596
31	25·261	38·043	70	57·041	85·903	550	448·177	674·956
32	26·076	39·270	71	57·856	87·131	600	488·920	736·316
33	26·891	40·497	72	58·670	88·358	650	529·664	797·675
34	27·705	41·725	73	59·485	89·585	700	570·407	859·035
35	28·520	42·952	74	60·300	90·812	750	611·150	920·394
36	29·335	44·179	75	61·115	92·039	800	651·894	981·754
37	30·150	45·406	76	61·930	93·267	850	692·637	1043·114
38	30·965	46·633	77	62·745	94·494	900	733·381	1104·473
39	31·780	47·861	78	63·560	95·721	1000	814·867	1227·193

**Births.**

On the 28th Feb. at Paris, the lady of Capt. Manners, R.N. of a daughter.

At Knockmullen, County of Wexford, Ireland, the lady of Capt. R. Owen, R.N. of a daughter.

On the 26th Feb. the wife of Lieut. J. Stone, R.N. of a son.

On the 21st Feb. in Guernsey, the lady of Capt. Henvey, R.N. of a daughter

At Devonport, on the 2nd March, the wife of Lieut. C. Holbrook, R.N. of a son

At Dover, 29th Feb. the lady of Capt. L. Smithell of H.M. Packet Ariel, of a son.

At Lee Terrace, Blackheath, on 12th of March, the lady of Capt. W. Hewett, R.N. of H.M.S. Fairy of a son.

At the Cottage, Freshwater, on the 18th March, the lady of Capt. R. Crosier, R.N. of a daughter.

At the Views, Quendon, Essex, 19th March, the lady of H. Byng, Esq. of a son.

At Stakes, on the 20th March, the lady of Lieut. W. Taylor, R.N. of a son.

**Marriages.**

On the 19th Mar., at Fareham, Major Hassell Moor, R.A. to Eliza, daughter of the late Admiral J. Stanhope.

At Plymouth, Capt. H. S. Browne, 85th Light Infantry, to Isabella H. Ann, daughter of Capt. Sir J. Gordon Bremer, C.B., K.C.H., of Compton.

At Tunbridge Wells, F. Dick, Esq., R.A., son of Rear-Admiral Dick, Southampton, to Laura, daughter of the late W. B. Goodrich, Esq. of Lenborough.

At Malta, on the 10th Feb. Lieut. B. Varlo, R.M. of H.M.S. Castor, to Francis Emily, niece of Ass. Com. Gen. Major

At Alverstoke, J. W. Bowler, surgeon, R.N. to Amelia, eldest daughter of the late Lieut. Clarributt of Haslar Hospital

At St. John's, Westminster, on the 27th of Feb. Dr. J. L. Clark, R.N. to Jane Lydia, second daughter of the late J. Couch, Esq.

On 10th March, Island of Jersey, the Rev. A. J. Brine, of Boldre-hill, near Lymington, only son of the late Rear Admiral A. Brine, to Helen Lempriere, daughter of P. R. Lempriere, Esq.

At Plymouth, James Williams, Esq. to Sophia, daughter of the late J. Mosely Marchant, Esq. Purser, R.N.

At St. Leonard, on the 12th of March, Capt. J. W. Montagu, H.M.S. Britannia, son of the late Admiral Sir George Montagu, G.C.H., to Isabella Elizabeth, daughter of C. Beauclerk, Esq.

**Deaths.**

On the 24th Feb. at Lee, Kent, aged 58 years, James Young, Esq. one of the Elder Brethren of the Trinity House.

At Lambeth, 18th Feb. Commander J. M'Arthur Low, (1818), aged 52.

On the 17th Feb. in Paris, Col. Sir R. Steele, Knt. K.C.S., Deputy-Lieutenant of Dorset

At Cork, on the 23d ult. Lieut. Hugh Roche, (1816), R.N.

At Patna, East Indies, on the 18th of November, Henry Douglas, Esq., son of the late Admiral Sir James Douglas, Bart., of Springwood Park, aged 32.

At Albany, King George Sound, West Australia, on the 24th July last, Capt. Sir R. Spencer, C.B., K.C.H.

On the 22d Feb. aged 50, Lieut. R. Low, R.N. emigrant agent at Liverpool.

On the 25th Feb. at Queenhithe, 60, Christian, widow of the late Mr. Scater, Master R.N.

At Stonehouse, on the 19th Feb. Mrs. Grace Williams, aged 61, widow of the late Com. P. Williams, R.N.

Suddenly at Malta, on the 19th Feb. B. Sammut, M.D. Surgeon, R.N., late of H.M.S. Hazard.

On the 17th March, in Dorset-square, Rebecca Ann, wife of the late Capt. E. Scobell, R.N.

On the 13th Nov. on his passage from Ceylon, Mr. J. Hawkins, second master of H.M.S. Jupiter, of consumption.

At Walworth, on 14th March, George Parsons Esq. Surgeon, R.N.

At Fratton, Mr. George Miller, purser R.N. aged 40.

At Bodmin, Wales, aged 64, Lieut.-Colonel Peter Jones, R.M.

At Halifax, N.S. 31st Dec., Lieut. A. Brown, R.N., aged 47.

On the 8th March, at Westminster, in his 58th year, Capt. G. Kendall, R.N.

At Borden, Kent, 7th March, Mrs. Vesey, relict of Capt. Vesey, R.N.

At Malta, 18th Feb. Com. A. W. Milward, of H.M. Steam Frigate Hydra.

On the 3d of Jan. Mr. H. Bond, mate of Fair Rosamond.

**VESTAL.**—The Barbadian notices the receipt of Bermuda papers, with the information that H.M.S. Vestal had arrived there in 17 days from Barbados, having lost on the voyage no less than 30 of her officers and crew by yellow fever, including the master and second master, Messrs. Hall and Herring. There had been 140 cases on board, but the disease at length subsided.—*Times*.

## METEOROLOGICAL REGISTER.

From the 21st of February to the 20th of March, 1840.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

Month	Day	BAROMETER		FAHR. THER. In the Shade.				WIND.				WEATHER.	
		9 A.M.	3 P.M.	9 AM.	12 M.	3 P.M.	6 P.M.	Quarter.		Stren.		A. M.	P. M.
								AM.	PM.	AM.	PM.		
21	F.	In Dec. 30.42	In. Dec. 30.38	o 31	o 31	o 29	o 32	E	NE	3	4	ops(1)(2)	ops (3)
22	S.	30.31	30.27	30	32	28	34	E	E	4	4	o	bc
23	Su.	30.22	30.26	28	31	23	32	E	E	6	6	qbc	qb
24	M.	30.36	30.40	28	33	23	34	E	E	5	5	bv	bv
25	Tu.	30.57	30.62	32	37	24	37	E	E	3	4	b	b
26	W.	30.58	30.54	33	36	27	37	E	NE	4	4	o	o
27	Th.	30.45	30.40	33	36	31	38	NE	NE	4	6	bc	qbc
28	F.	30.30	30.22	34	42	32	42	NE	NE	4	5	ops (2)	o
29	S.	30.34	30.35	36	38	31	40	E	NE	4	6	bc	qbc
1	Su.	30.35	30.32	30	34	26	36	NE	NE	3	6	b	qbv
2	M.	30.42	30.42	34	39	27	40	NE	NE	4	6	b	qb
3	Tu.	30.41	30.34	37	42	31	45	NE	NE	5	6	bcq	bcq
4	W.	30.36	30.32	34	37	29	40	E	NE	7	8	bcq	pcq
5	Th.	30.38	30.36	33	40	26	42	E	E	2	4	bv	bv
6	F.	30.41	30.45	29	42	23	45	NE	NE	2	2	bv	bv
7	S.	30.55	30.57	32	43	24	46	E	E	2	2	b	bv
8	Su.	30.62	30.64	30	48	25	49	NE	NE	2	2	b	bv
9	M.	30.62	30.60	33	48	24	50	N	NE	2	2	b	b
10	Tu.	30.38	30.32	36	50	29	52	SW	N	2	4	bm	bc
11	W.	30.27	30.29	41	45	39	47	N	NE	4	5	od 1)	qo
12	Th.	30.26	30.22	42	47	36	49	NW	NW	3	4	o	bc
13	F.	30.10	30.00	43	49	35	50	NW	NW	3	4	o	bc
14	S.	30.04	30.04	44	46	38	49	NW	NW	4	4	o	o
15	Su.	29.96	29.84	43	47	34	48	W	W	3	3	or 2)	or (3)
16	M.	30.02	30.14	43	45	40	46	NE	NE	5	5	od (2)	bc
17	Tu.	30.26	30.24	39	43	33	45	NE	N	5	5	bc	bc
18	W.	30.17	30.11	40	44	37	45	N	N	5	6	o	oq
19	Th.	30.18	30.22	40	46	38	48	NE	NE	4	4	o	bc m
20	F.	30.29	30.25	37	45	29	47	W	NW	2	4	o	o

**FEBRUARY**—mean height of the barometer = 29.895 inches : mean temperature = 32.02 degrees : Depth of Rain fallen = 1.38 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The immediate interest attached to several papers in our present number, has obliged us to defer several others, which we had intended to appear. The papers of *E. in reserve*, also *Nautical Surveys and Naval Surveyors, No. 3*. Some useful articles of *Argonaut*,—*Stormy Jack*,—*Nota Bene*,—*Nauticus*,—*Capt. Milne, R.N.*,—*A Skipper*,—*Mr. Lawrence*,—*An Ancient Mariner*,—*A West Country Coaster*,—*Mercator (a)*,—and *Mr. Thacker, master R.N.* Truly we are concerned at seeing so many names on our list, in addition to the stock of matter we had prepared, but shall continue our endeavours to attend to all hands.

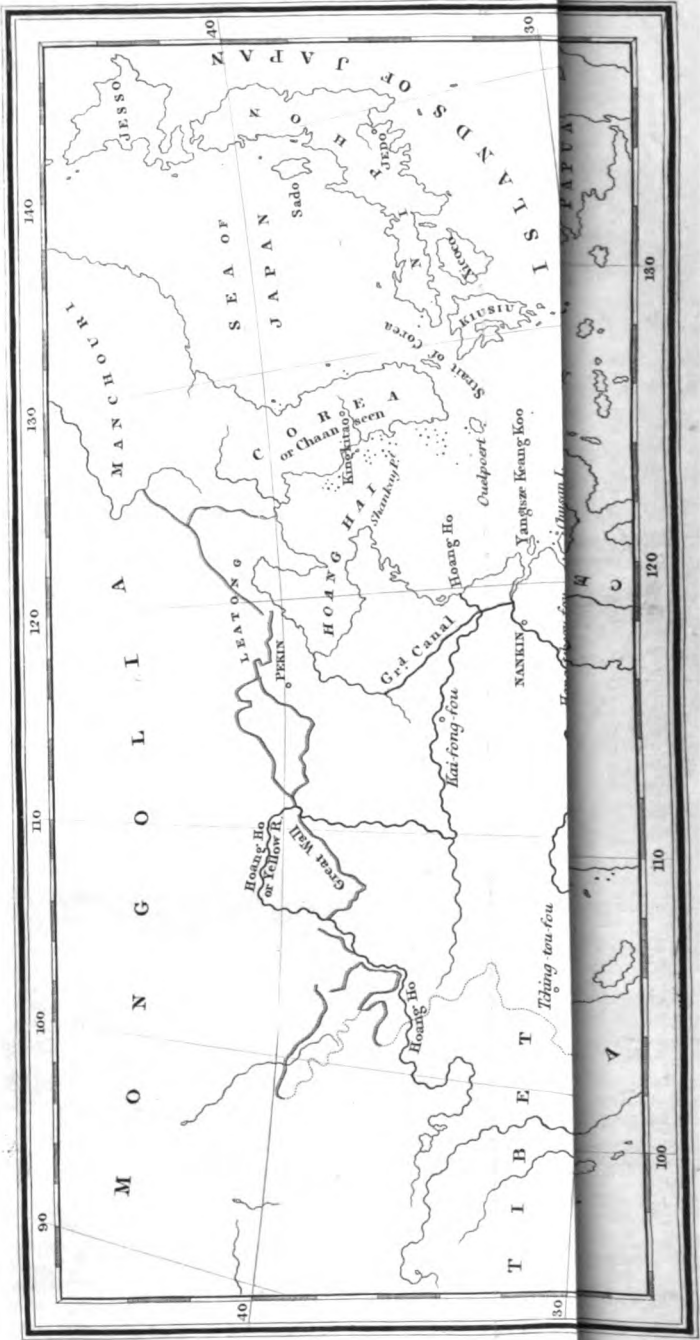
*Mr. Redfield's* paper on Tyfoons received. We are requested by a correspondent to thank him for the New York paper.

*Capt. Brown*, (ship *Arabian*.) on the Inner Passage, just received; also the letter of *S.*, and *An old officer R.N.* and *Subscriber* shall have attention in our next.

To the enquiry of *A Captain in the Merchant Service*,—the work has long been out of print, but another is preparing, and is very shortly going to press. Its appearance will be announced in this journal.

*Admiralty Orders* in our next, when we shall also attend to our Publishing Friends.

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## ORIGINAL PAPERS.

MAY, 1840.

### DESCRIPTION OF THE ASWATADA ISLANDS;\*

*Or, as now commonly denominated by Englishmen and by the Portuguese, the Querimba Isles; and of the adjacent coasts from Cape Delgado to Cape Manyany. By Capt. W. F. W. Owen, R.N.*

BETWEEN Cape Delgado, in latitude  $10^{\circ} 41'$  S., and  $40^{\circ} 39'$  E., and Cape Manyany in  $12^{\circ} 56'$  S., and  $40^{\circ} 38'$  E., the coast is bordered with coral reefs and islands, generally marked on English Charts as the Querimba or Kerimba Islands. Between many of these reefs and the adjacent coast there is an intricate navigation, used by coasting vessels, and possibly in the infancy of the art of navigation, intricate as this was, it might have been preferred to that of the open sea outside of them, for the manifest reasons of certain shelter and convenient anchorage throughout.

In the first voyage of Vasco de Gama on this coast, he took pilots on board at Mozambique; who having before that time, been used only to vessels, even, smaller than his, most probably made their voyages within these islands; and, therefore, they took his little squadron, (two small vessels only!) within the isles Matema and Makalow,† Sparrow and Wood Isles. The Portuguese, always suspicious of Arabs or Moors, finding themselves involved in a labyrinth of shoals, suspected treachery; and Vasco de Gama is said to have flogged all his pilots, and made them take him out into the open sea. From this circumstance these islands obtained from the early Portuguese the name of Ilhas das Azotadas, or Islands of the flogged and whipped; and I believe they continued to be so distinguished by the Portuguese, until their principal fortress and establishment was fixed on the island of Querimba at Ibo, less than fifty years ago. From that time the name has by particular usage at least, been applied to all the islands.

The general name of Querimba Islands is not, I believe, applied by

\* To preserve the pronunciation of the proper names, Capt. Owen has written them so as to suit the English ear, and we have not altered them.—Ed. N.M.

† See the Chart of these islands, in two small sheets, published by the Admiralty ENLARGED SERIES.—NO. 5.—VOL. FOR 1840. 2 P

the Portuguese even, to any of the range, except those between Querimba and Masimbua, the rest being included even in common Charts in no general name. I have therefore, less repugnance to restore, in our charts and descriptions to the whole range of islands between Cape Delgado and Manyany, the general name of Aswatada Islands; whilst the name of Kerimba will be attached to those islands only, to which it properly belongs, in the immediate vicinity of Ibo. Thus the record of an historical fact will be continued, and confusion avoided, which otherwise might, and too often does arise from extending the specific name of a place generally to a region which has no other relation than proximity.

The outer coast line of the Aswatada Islands and Reefs, and the course from Cape Delgado entirely to Cape Manyany is due south forty-five leagues; in this distance there are eighteen or nineteen openings through the outer reefs into a still greater number of secure ports or convenient anchorages.

The general character of these islands, and their reefs is, that their sea faces are very steep, having rarely any practical soundings even alongside them: but no sooner has a vessel passed within the imaginary line between their extremities at seaward, than soundings may be expected, and generally in reasonable and convenient depths.

The dominion of the Portuguese seems to be acknowledged by the natives as far as lat. 11° S. but not to the northward of that; where the whole coast is subject to Seuheli chiefs, or to Arab usurpation.

The Aswatada isles are generally low, but some have a diversified surface of hill and dale, and many are mere corallets. They were most of them in high cultivation a hundred years ago, but having been so long completely open to Arab and Malgash depredation, they have returned to their pristine state of wilderness; they are consequently in general well wooded, and easily seen from seaward. But as no soundings are to be had, to give notice of approach to them, it would seldom be safe to try to make them by night. Indeed this observation applies generally all along the coast from Maleenda to Mozambique, with such exceptions only as have been described, or will be hereafter.

The outer coral reefs of Aswatada, do almost all of them dry at low water, or half tide, like those of Cape Delgado, and Nassonga.

#### THE BAY OF TONGHY

Is formed by Cape Delgado on the north, which by the natives is called Tonghy Keetwa, and by the island and coral reefs of Tikomadju on the south. Port and village of Kiveeha Old Fort is in 10° 40' 7" S., 40° 36' E.

Coming from the northward, and rounding the coral reefs of Del-

gado, (which extend a full mile off shore all round that cape, and are dry at half tide,) they may be coasted as close as convenient to the westward, and such an anchorage be taken in the open bay, as the draught of water or purposes of visit may require.

Upwards of a league west from the extremity of the Cape is the village of Kiveeha, where Lieut. Owen has marked a sort of fort; but none of our journals or memoirs notice any thing of the sort, and I believe it an error, or at best but a site marked by ruins.

Upwards of a league S.W. of Kiveeha is the mouth of the river Tomoomboo, which was not examined, but is in lat.  $10^{\circ} 43' S.$ , and  $40^{\circ} 32' 7'' E.$  long.

About a league south of Tomoomboo mouth is the village of Menangany opposite to which is the Barrachois, or as I believe, the outer channel of Tomoomboo: from the depths in this Barrachois, there is reason to believe that the river must bring down great bodies of water, but we never heard it spoken of.

Upwards of two leagues S.E. from Menangany village, and from the Barrachois, is the long point of Foonjy, or south point of Tonghy bay.

The contour of this bay as formed by the coast from Cape Delgado to Point Foonjy is nearly a semicircle, the centre of which is the N.W. point of the island of Tikomadjy, and open only between the said island and Delgado, where the channel is nearly a league clear between the reefs.

The point Foonjy is completely covered or capped by a coral bank on which stand the islands of Tikomadjy and Rongwy, or Rongoohy, (sometimes by corruption called Longa). This bank extends upwards of three leagues north and south; and appears to be very steep on its sea face.

Both islands are very well wooded, but their surfaces are low and flat. Their outer or sea coasts rocky; their inner, or northern, and western coasts, sandy beach.

Tikomadjy is the northern island, it has the form of a triangle, about two miles long from north to south. Tikoomadjy island, north-east point is in lat.  $10^{\circ} 46' S.$ , and  $40^{\circ} 40' 7'' E.$

Rongwy lies eastward of point Foonjy and is separated half a league from Tikomadjy and two miles from Foonjy: it is more than a league long from north to south and half as broad.

About two miles within the extremity of Delgado, on its west, the coral reef terminates in a clear sandy beach, which from thence forms the shore line all round the bay to point Foonjy, which is pointed by a piece of coral reef of its own.

At low water the reefs of Foonjy and Rongwy approach within half



a mile of each other, but the channel is obstructed by such numerous shoals that it is generally considered impracticable for sailing vessels, and the Albatross, our tender, would not attempt to pass it, although drawing less than 7 feet.

Of the bay of Tonghy our plan will give a much clearer idea than any verbal description. Lieuts. Boteler and Owen, neglected to examine the Barrachois and the River. The former I have laid in from the observations and Journal of Mr. Dupont, and shall take leave here to register some of his bearings by compass, which having been taken very carefully on two points, will furnish a means to future navigators, for comparing the variations of the magnetic needle. On the 30th December, 1806, Mr. Dupont anchored off the village of Kiveeha in 4 fathoms mud and sandy bottom, with the following bearings by compass :

S. extreme of Cape Delgado E. $\frac{1}{2}$ N.	Point Foonjy .....	S. $\frac{1}{2}$ W.
N.E. point of Tikomadjy S.E. $\frac{1}{2}$ S.	Village of Kiveeha .....	N.b.E.

On the 1st January, 1807, at anchor on the southern point of the Barrachois of Menangany, and opposite the village so named, the bearings and points seen only from aloft, and therefore not quite certain :

Cape Delgado extreme..... E.N.E.	Foonjy point extreme .....	S.E.
W. point of Tikomadjy..... E.S.E.		

These bearings, loose as they are, furnish the only means of shewing the Barrachois of Menangany, which in truth, is the true port of Tonghy, and seemingly the channel to Tomoomboo.

Mr. Dupont says, " I employed the day in sounding the Barrachois. In the channel I found throughout 12 fathoms, and even at the bottom of it 6 fathoms, and such loose mud that my lead sunk so deep in it as to make it difficult to extricate. I afterwards visited the village where there were few inhabitants, having very excellent plantations, and the water was very good."

On the 27th January, 1807, Mr. Dupont anchored near the N. W. end of Tikomadjy, and took the following bearings by compass, viz.

Point Foonjy..... S. 21° 30' W.	S.E. point Tikomadjy ... S. 50° E.
W. point Isle Rongwy S. 8 $\frac{1}{2}$ ° W.	E. extreme Delgado..... N. 25 $\frac{1}{2}$ ° E.
W. point Tikomadjy..... S. 3° W.	Village of Kiveeha ..... N. 8° W.

" This done," says Mr. Dupont, " I went on shore to examine the island and having placed my compass on the north-western point of Tikomadjy, I took the following bearings,"

E. extreme Rongwy. .... S. 19° E.	E. extreme Delgado ..... N. 20° E.
W. extreme Rongwy..... S. 8° W.	Point Foonjy ..... S. 26° W.
Centre of Keeryameiby S. 16° W.	Village of Kiveeha..... N. 10° W.

On the 25th January, 1807, Mr. Dupont walked over point Delgado from the village of Kiveeha, and from the N.E. extremity of the Cape at the extreme point, whence he could take bearings, he took by his compass, (which it appears he had taken with him for the purpose),

the bearing of the extreme point of Nassonga, (5) N. 7° W. and from the eastern extremity of the Cape.

E. point of Tikomadjy S. 2° W. | W. point of Tikomadjy S. 24° W.

Comparing these observations Nos. 4 and 6, with the true bearing on our chart, the mean variation in 1807 does not appear to have exceeded 15° W. the same as Capt. Vidal's observations on the same point in 1823, which would lead to the conclusion that there was little difference in the variation in 17 years. I had found by comparing the 6th observation only that the variation was 18° and came to a conclusion relative to the annual decrease of variation which is, I now see, not justified by these observations, they are a valuable record, for this purpose but for no other.

It may be observed also, that the bearing of the north-western point of Tikomadjy, from the eastern extreme of Cape Delgado was S. 24° W whilst the back bearing of the east extreme of Delgado from the north-west point, Tikomadjy was N. 20° E: this discrepancy is no proof that Mr. Dupont was not careful, and as accurate as possible, in making and in noting his observations, but the truth is that the magnetic needle will not maintain in the same direction, precisely in any two different places, even when very near each other, and therefore can never be used exclusively for operations of survey, and the greatest improvements of the moderns in this art, is that the use of the compass or magnetic needle is now confined to subsidiary work; that is, to the filling up of the detail of portions whose precise figure, position, and limits, have been determined without using it at all.

In order to prove further the danger of using the magnetic needle in operations of survey for measuring angles between terrestrial objects, I may add, that in no country which I have visited, could the needle be used at all, because of the different effects of local attraction in every different place. For example, at Kingston in Upper Canada, the variation was 5° on one side of my house, and 22° on the other; 5° on one side of the harbour, and 18° on the other. On the Cape de Verd isles the variation differed in different places, near each other.

The outside course from the reefs of Cape Delgado to the eastern reef point of the Island Ameer, is S.b.E.  $\frac{1}{2}$  E., nearly seven leagues; but, thence to the southward is about S.  $\frac{3}{4}$  W. as far as the reef of Sparrow Island, or Ilha das Passeras, distance twelve leagues, thence to Point Mauyany, the course is nearly south for twenty-eight leagues.

The next bay, southward of Tonghy, is Maiyapa Bay, the entrance to which from seaward is between the reefs of Rongwy and Keerya Memby, left to the north; or on the starboard hand; and the Island of Ameer and the coral bank on the larboard hand, or to the southward.

The opening between the reefs of Rongwy and Ameer, is nearly four

miles, and as much between the sands of Keerya Memby and the reefs of Ameer: the entire opening seems clear and to have good soundings and anchorages; but, a small coral bank is directly in the fairway. Our examination of this fine bay was by no means sufficiently minute, but the entire space westward of Keerya Memby and the Bank, seems clear and safe throughout: the limits of the shoal water so far as examined are marked in the plan.\*

Point Foonjy limits the bay to the northward within the outer reefs, and Point Noondo to the southward.

The feature of the land is moderate of elevation from Delgado to Toomoo river, thence low and flat to Point Foonjy; but, the southern coast of Foonjy is bolder and more diversified in surface.

In the south-west part of the bay, at two miles and four miles N.W. of Point Noondo, are the two rivers, Maiyapa and Mooloory, and a sand bank covers the whole of Noondo; and projecting to the N.W., nearly to the mouth of the Maiyapa, encloses the beautiful little harbour of Mooloory, which is deep enough throughout for large ships. But the country is a wilderness with a few inhabitants, and those in a state of barbarism. Mooloory is the northern settlement of the Portuguese on this coast, although there are no Portuguese there. The settlement, formerly on Ameer, has been moved to Mooloory many years, from fear of the Malagash marauders.

Between Point Foonjy and the river Maiyapa there is some hilly ground, but none more than two hundred feet high—the Maiyapa washes their south-western end. Both the rivers are of fresh water.

The island of Ameer is in every respect the finest of all the Aswatada Isles. It was formerly well inhabited, and the Portuguese had until within half a century a station on its northern coast. It has abundance of water and is still resorted to for that article. It is nearly eight miles long, and generally a little more than a mile wide; it lies almost due east and west, and may be considered as a prolongation of Point Noondo. It is hilly and well wooded, and the reef point extends two miles to seaward of the east coast of Ameer.

Within the bay of Maiyapa, the Island of Keerya Memby, situated on an extensive sand, dry, or a-wash at low water, is a very pretty spot; it is not a mile long from N.W. to S.E. and half a mile broad; it stands on the western edge of its sand bank, the limits of which may be nearly traced by a radius of a mile north-east, and south of the south point of the island. The passage between Keerya Memby and Rongwy reefs, is shallow and foul.

The Bank in the chart, south of Keerya Memby, is a coral reef, dry at half tide; it is less than a mile in diameter and is steep-to on all sides.

\* See plan before alluded to.

More than two leagues to the southward of Ameer are the two Islands of Luhamba and Kisangoola, which may be considered as one island, resembling much in feature, position and character, the Island of Ameer. Kisangoola, the eastern island, is the highest of all the Aswatadas, having hills of about four hundred feet high.

The coast line from Point Noondo to Massinghy, is shallow and unbroken: like all the rest its feature is seeming bold and very well wooded, rising abruptly from a narrow sandy beach. Between the points named, is nearly four leagues S. b. W.  $\frac{1}{2}$  W., and Massinghy is the north point of the great Bay of Mosimbwa.

From the south coast of Ameer the coral reefs do not extend more than a mile, but nearly a league from the north point of Kisangoola, having an opening of two miles into the Bay of Kisangoola.

Our vessels examined only the part northward and westward of the Island of Kiya, and misjudged the shoals to extend from the north reefs of Luhamba to those of Kiya: this error in judgment I am enabled to correct by the journal of Mr. Dupont, which is the more important, as this appears to be the northern channel used to and from the Port of Mosimbwa.

When a ship has rounded the north-west head of Kisangoola reef, she may bear up to pass between Kiya and Keteena, carrying through not less than six fathoms until within the said Islets. Northward of Keeya, there is a remarkably mushroom-shaped corallet, standing on a dry sand.

The channel between the west point of Luhamba and Point Massinghy is clear, and the shore at the west point of the island is clean. A vessel bound to Mosimbwa and entering by this channel, may coast this point at pleasure and then steer due south for Isoonaway which is south from it nearly three leagues.

The Islands of Luhamba and Kisangoola have suffered devastation and depopulation in common with the rest of this beautiful range; do not appear to be now inhabited at all; their extent, on a circular segment bending from the southward, may be seven or eight miles, and at the north-east extremity there are some rocks and a small islet.

It does not appear that this bay of Kisangoola is used at present for any other purpose than as the northern channel to Mosimbwa, and the communication between it and Maiyapa by the narrow and shallow strait of Noondo, seems only to be used by boats.

The strait between Luhamba and Massinghy is the pass of Massinghy, and the channel between Kiya and Kiteena is called the Kisangoola channel, or Courier's passage.

## NAUTICAL DESCRIPTION OF THE COAST OF WALES—No. 2.

*The Channels between Skomer Island, Grassholm, Smalls, Hats, and Barrels.—*  
*By Lieut. W. L. Sheringham, R.N.*

## CHANNELS BETWEEN THE SMALLS AND SKOMER ISLAND.

BOUND to or from the Bristol Channel, or Milford Haven, and indeed under many circumstances, it might be extremely desirable to keep in shore, or to the eastward of the Smalls: there are four passages which may be taken for this purpose, viz.

## NO. 1.—BETWEEN GRASSHOLM AND SKOMER.

This is the easternmost, and also the safest, in fact, it is an excellent channel, free from all dangers, and has the advantage of a true tide. It is six miles broad, the depth varying from 32 to 27 fathoms. Both islands may be approached to within half a mile, and this distance is only necessary to be preserved for the purpose of avoiding the races which extend about a quarter of a mile from both of them.

The flood tide sets through about N.N.E., the ebb nearly in a contrary direction. Anything to the westward of Skomer the flood leads outside Ramsey Island, but inside the Bishops; and has a velocity of about two knots at neaps, increasing to nearly four at springs: the stream was found to run three and a half hours after the tide at Fishguard, and four and a half after the tide at St. Ann Head.

## NO. 2.—BETWEEN GRASSHOLM AND THE BARRELS.

In daylight this is also a good channel, and perhaps may be considered in point of safety next to No. 1. It has at least a breadth of two miles with not less than 20 fathoms water. Of course it would be prudent to keep rather nearer to Grassholm than to the Barrels, as nothing lays off the former but what is always seen, observing to avoid the race at the end of the island. The Barrels however may be safely borrowed on until Llaethdy Rock is about to be shut in behind the high part of Ramsey Mountain.

N.B.—The appearance of Llaethdy Rock in reference to the mountain when on the Barrels, is shown in the view before referred to.\* As the tides run with great force through these channels; a passage must never be attempted against them, unless at neap tides, or near slack water, with a tolerably fresh and fair wind.

In fine weather, even at night, now that there is a light on the South Bishop, this channel may be taken, as Grassholm is always a sufficient

\* The views referred to in these directions will appear in the charts when published by the Admiralty.

guide for the east side; and the Barrels will be avoided by not bringing the light to bear to the eastward of N.E.b.E.: but as bearings at best are but very uncertain guides at night, when navigating narrow channels; and as half a point will make all the difference in running through this one, it can scarcely be recommended to the stranger as perfectly safe to adopt: however, in case of need, it is, as before stated the second best.

#### NO. 3.—BETWEEN THE HATS AND BARRELS.

This channel may be depended on in daylight, and in fine weather, if the Hats and Barrels both shew themselves, which is generally the case, particularly the latter, even in a moderate breeze. It is best to keep as nearly as possible in mid-channel, but should the Hats not break, attend to the mark as shewn in the view, viz. carrying the eye from the highest point towards the north end of Ramsey Island, a second remarkable round hill or rise will be observed, which, however, is much lower than the mountain itself. Bring Llaethdy Rock nearly on the top of this rise, as shewn in the view, and it will lead fair between the shoals. This is the best mark to use if sailing to the northward, but bound the other way, and desirous of keeping to the northward of Grassholm, on account of the tide, &c.; then the right hand part of Grassholm, on the left hand part of Skomer, as shewn in the view, is to be preferred, as this will also lead between the shoals towards Grassholm.

As it would be highly imprudent to venture through this channel at night, no directions are offered for that purpose; indeed none to be depended on could be given.

It is again repeated that the mark for leading over the Hats is Llaethdy Rock, just shut in with the extreme point of Ramsey Island, or Penbery, (a mountain a little to the eastward, as seen from this point to the right of Llaethdy Rock, and something like it,) in the middle of the slack of Ramsey Island, between the mountain and the hill to the left of it.

#### NO. 4.—BETWEEN THE SMALLS AND HATS.

When the Hats break, this is a good and safe channel in daylight, although not more at most than one mile and three quarters wide.

If the Hats are seen, keep in mid-channel, if not care must be taken to avoid the rocks off the Smalls. Should they not shew themselves, the distance from the lighthouse may be estimated near enough for that purpose, about three-quarters of a mile. If the South Bishop can be made out, the following mark will clear all; viz. The South Bishop just open of St. David Head, as shown in the view. If the Bishop

touches the Head, it will lead a great deal too close, if not over the south-west rock of the Smalls. This cannot be recommended as a channel proper to be taken at night, although in very smooth water, under favourable circumstances, and using great caution; it may in a case of necessity be attempted; sail pretty close to the light, keeping in mind the bearing of the South Bishop light from the Hats, as given before.

The following remark may be well worthy of attention, viz., that when obliged to adopt any of these passages at night, it must always be remembered that the Barrels are half tide rocks, therefore very dangerous; but the Hats, not having less than eight feet water over them, even at low water spring tides, are therefore the safest to approach; although a heavy breaking sea may always be looked for, if there is any swell at all, which is almost constantly the case.

#### TIDES NEAR THE SMALLS, HATS, AND BARRELS.

Near the Smalls, and north of the shoals to Grassholm. The flood stream sets N.E.b.N., and the ebb S.W.b.S., with a velocity at mean tides of about two and a half knots. The stream of flood was found to make four and a half hours after low water by the shore at St. Ann Head. Their duration, about six hours each way, with very little slack tide.

It must be observed however, that over the shoals, and through the different channels, the velocity of the tides is greatly increased, and there is every reason to believe, that at springs their rate is not much less than six knots.

There is always a strong tide under these shoals, which of course is increased or decreased, according to the rise of the tide. This is important when working up near them, as some advantage might, in the day time, be taken of it, by keeping on the proper side. Its influence will be manifest to any vessel, thus situated, as she would nearly make her course good when under their lee, but furiously swept away as she opened the different passages.

Should it be desired to have the true tide, it will then be requisite to keep on the north or south side of all the shoals, according as it is ebb or flood.

The rise of tide at the Smalls was estimated by the lightkeeper at nineteen feet, which is perhaps too much, seventeen feet springs, and ten or twelve neaps will be found very nearly the truth.

Outside the Smalls there is nothing to be guarded against, the rock on which the lighthouse stands being steep-to, the mariner must therefore be guided by the general directions for St. George Channel, but it may be well to observe, that with less than from 43 to 40 fathoms

reduced to low water, he may be sure that he is within a line drawn from one mile and a half north of the Smalls, terminating at about two miles north of the west end of the Bais Bank, that is to say, any where with the Smalls to the westward of south, until the South Bishop is brought to the westward of south also. With this last bearing, and much less than 40 fathoms, he will be near the end of the bank.

Before closing the remarks on these shoals, it may not be unnecessary to urge the prudence of paying a strict attention to the state of the tide, when bound to or from the Bristol Channel or Milford Haven.

For instance, if coming from any part of the south-west coast of Ireland, and bound to Milford Haven, &c. by day, it will be well to make Grassholm, which is frequently the first land seen, or at night the Smalls light.

Should there be a long flood to run, it will be best, particularly if the wind is to the southward, to pass well south of the light, or to try and make St. Ann light upon a bearing of about E.b.S.  $\frac{1}{2}$  S., passing outside Skokholm.

But on the contrary, on an ebb tide, then of course opposite precautions may be taken, and a good guide would be after having passed to the northward of the Smalls, to keep St. Ann light open between the islands of Skomer and Skokholm, in which case it would bear about S.E.b.S., and lead between them. This with the wind to the northward, would be all the better.

The above remarks are only offered as general hints, as every thing must depend on the direction and force of both wind and tide, in the immediate spot in which a vessel may be placed.

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#### CHINESE ISLANDS.—No. 1.

HAENAN, is the southernmost of the Chinese islands, between latitude  $18^{\circ} 11'$  and  $20^{\circ} 1'$  N., and longitude  $108^{\circ} 23'$  and  $111^{\circ}$  E, from Greenwich. It is productive, well inhabited, and for the greater part under the jurisdiction of the Chinese, and has several good harbours which are well described by Horsburgh. Its situation is, however, too far south: comparatively but few junks visit it, and on the whole its trade is rather on a limited scale.

FORMOSA, or Tac-wan, the largest island under Chinese dominion, with three very considerable emporia and bar harbours on its west coast, namely *Taewan Foo*, *Lokang*, and *Tan Shwuy*; and one good harbour, that of *Kelung* or *Kelang* on the northern point, is well fitted for becoming one of the most flourishing colonies on the globe. The



general impression received from reading the accounts of Formosa is, that the Dutch were in possession of the whole island. In one of the old descriptions of this island we found however, that the Dutch East India Company merely occupied the present capital with the adjacent territory, and had erected factories, and some small forts both at *Kelung* (Kelong), and *Tan Shwuy* (Tamsuy). Their possessions extended a few miles inland, and some few thousand aborigines were subject to the Dutch control. To rule over them they sent clergymen and school-masters, who had to instruct the natives in the principles of the christian religion. The number of these missionaries was considerable; and it appears also that they did not neglect their duties, for all the aborigines who owned their sway had become christians; and a great number received such an education as to fit them for the office of a teacher. The attachment to their masters was therefore very great, and they were faithful to their Dutch rulers to the last. Formosa is the granary of Fokien, and produces a great part of the camphor exported from Canton; the privilege of dealing in which is sold by the government, at an annual rate to an individual. The Chinese state that it is the policy of their government to retain possession of Formosa, not so much from its intrinsic value, as with a view to prevent others from occupying an island so contiguous to their maritime provinces; and from apprehensions that it might be made, as formerly, a resort for pirates. The western side of the island is alone possessed by the Chinese; the eastern, on which they have not attempted to form settlements, is inhabited by the aborigines, and but little known to foreigners, by none of whom are we aware of it having been visited, since the temporary residence of the adventurous Benjowsky about sixty years ago. The possession, however, of the western part of the island is too valuable to the Chinese empire for its government to cede it on any terms, or for any price to any foreign power; for from the moment strangers establish their influence on the western side of Formosa, Fuh-keen must cease to be numbered amongst the eighteen provinces of the middle kingdom. Our knowledge of the east coast does not enable us to decide whether a suitable spot for the formation of a settlement could there be found.

Between Formosa and Luconia we find a number of small islets little known, and inhabited by a very uncivilised race. The heavy gales, however, which frequently blow through these straits, render the navigation dangerous. We are moreover, not aware that there are any good harbours; and the inhabitants are decidedly hostile to strangers.

A chain of islands called by the natives Katchi Kasema, (the eight islands,) by some Madjicosema, extending in an easterly and north-easterly direction from Formosa, were visited in 1797 by Capt. Brough-

tion in the Providence. They deserve peculiar attention, since they are beyond the influence of the Chinese government, and inhabited by a humane race of people who are said to be tributary to *Loo Choo*, and to speak a dialect of the Japanese language.

The Loo Choo islands are too far out of the way; their political connection with China is too close; and it would be in vain to obtain any concession from the chiefs by the mere force of argument. The coast of China is richly studded with islands from the south-westernmost point to the *Yang-tsze-keang*. Those to the west of Canton are but ill adapted for forming settlements; but the Canton Archipelago, if we may call it so, presents the most varied groups, with many good harbours, well calculated to become great entre-pôts

HONG KONG, particularly, has long drawn the attention of foreigners, being a very eligible spot. But the same disadvantages which exist in regard to Canton, on account of its situation, almost in the south-west corner of the empire, are likewise applicable to Hong Kong. But if ever a settlement is to be founded in this corner, Hong Kong holds, perhaps, the first place for this purpose in the Archipelago.

NAMAQ, on the eastern frontier of Canton province, is situated just in the track of the junks which come from the south. The harbour is capacious, and the communication with the main easy. Though barren, and therefore, but thinly inhabited, it is by no means a despicable island; and it is one of the principal Chinese naval stations.

TANGSOA or TUNGSHAN island, latitude  $23^{\circ} 40'$ , is likewise a large barren spot of ground, with good harbours, and well situated for commerce.

The islands KINMUN, (Kimmœi,) and HEAMUN, (Amoy,) are too well known to require any further description. As entre-pôts they rank almost in the first class. The harbours are spacious, easy of access, and situated in the very centre of the native maritime commerce.

Though the harbours of the Pescadores, or Panghoo group, are very secure, the islands themselves are very barren, and their possession of no importance, except as furnishing anchoring places between the coast of China and Formosa. Whosoever is master of the Pescadores, can command the trade of Fuh-keen.

In latitude  $25^{\circ}$  N. is NAN-JIH (Lamyet,) island; and in  $24^{\circ} 59\frac{1}{2}$  N.  $119^{\circ} 34\frac{1}{2}$  E. is WOO-SEN, (Ocksen); with a number of other islands, inhabited by fishermen. There are some good harbours between them. The inhabitants are but little under the control of the Chinese, and not at all averse to strangers.

HAETAN island has repeatedly been visited and described. It is more fertile than the islands of the neighbourhood, and has one tole-

nable harbour; but appears by no means well adapted for a mark of foreign trade.

A spacious bay extending from La-yuen Heën to Fuhning Foo, between  $26^{\circ} 30'$  and  $26^{\circ} 50'$ , is richly studded with islands, and abounds with safe harbours. It is only about sixty miles distant from the Woo-E hills: but the communication with the Black Tea country is, on account of the high mountainous ridges, very difficult.

The coast of *Che-keang* is much indented and studded with numerous islands. Both on the coast of Shwuy-gan Heën in latitude  $27^{\circ} 45'$ , and Wanchoo Foo in latitude  $28^{\circ} 10'$ , there are whole groups; the largest of which is Tayu-shan. As they never have been visited by an European vessel, we cannot decide upon their fitness. Judging, however, from the great coasting trade carried on there by native craft, we may safely conclude that there must be spacious harbours between them. The islands about Taechoo, in latitude  $28^{\circ} 40'$ , are of a smaller size, but all thickly inhabited, and well cultivated.

Superior to all is the island of Chusan, (Chow-shan,) or Tinghae Heën. The advantages of a central situation on the coast, communicating with the very heart of China, of anchorages, harbours, fertility, population, climate, are here all united; Ningpo, Hangchoo, Shanghai, and Japan, are distant only a few days' sail. It is, therefore, no wonder that the early Portuguese navigators perceived at once the fitness of this spot for establishing a large commercial mart; and that they had here for a number of years a very flourishing colony. Among these numerous islands (Chu-san,) there are almost as many valuable harbours, or places of perfect security, for ships of any burden. This advantage, together with that of their central situation, in respect to the eastern coast of China, and the vicinity of Corea, Japan, Leokeoo, and Formosa, attract considerable commerce especially to Ningpo, a city of great trade in the adjoining province of Che-kiang, to which all the Chu-san islands are annexed. From one port in that province twelve vessels sail annually for copper to Japan. The remaining islands on the Chinese coast are few and insignificant.

Tsung-ming at the mouth of the Yang-tsze-keang, is inaccessible to large ships, on account of the sand banks. Yun-tae-shan, an island to the north of the Hwang-ho, in latitude  $34^{\circ} 40'$  N., is entirely unknown to foreign navigators. The islets on the north coast of the Shan-tung promontory are small and unimportant, but we believe there are good anchoring grounds, and on that account they deserve attention.

On the west coast of Corea there are hundreds of uninhabited and unclaimed islands, fertile and with good harbours; but they are scarcely known. Southward is the island of Quelpaert, a fine tract of land,

partly known from the accounts of shipwrecked Dutchmen. This is an important spot and should be visited.

The distant Bonin islands are entirely out of the track of native vessels; and the clumsy Japanese and Chinese junks, accustomed only to coasting voyages, would scarcely venture so far on an unknown sea to find out a new market.

To sum up our remarks and draw a conclusion—we consider *Chusan* to be the island best fitted for a commercial mart. In the south, Hong Kong and Mamo are well adapted for that purpose.

Much light might be thrown upon this subject if an intelligent navigator would patiently complete a voyage of observation. There are still discoveries to be made in this part of the world, which, of all others, has least engaged the attention of scientific travellers.

The fort *Zeelandia* on *Formosa*, was built on a sand bank at the entrance of *Taewan* harbour; but it was so defective in its construction, and so entirely destitute of all necessary means of defence, that it could not have held out a single month against a determined siege. Yet this fortification was deemed strong enough to resist the attacks of the Chinese.

The Company had fixed on this spot in order to monopolize the Chinese and Japanese trade. The inhabitants of the maritime provinces of China, driven from their homes by the invading Mantchows, flocked thither in great numbers; and brought with them their habits of persevering industry. The commerce was, therefore, in a very flourishing condition; and the colony could almost support itself. As soon, however as the Dutch were certain of *Koksing's* intended attack, they withdrew their troops from *Tamsuy* and *Kelong*, and concentrated their whole force in *Zeelandia* and two other forts.—The most remarkable circumstance of this war was that the Tatar-Chinese government entered into an alliance with the Dutch; but the latter did not avail themselves of this advantage. We must, however, not be seduced into the belief that this was a very fierce and protracted struggle on an extensive field. The whole of the Dutch forces did not exceed 1000 men, and these were quartered in three different forts; whilst the fleet and army of *Koksing* were twenty times more numerous. In the few encounters that took place, the Chinese were handled very roughly, and they learnt caution from the behaviour of the Dutch, and did not anxiously seek opportunities of conflict.

The imbecility and helplessness of *Van der Luen*, the Dutch Admiral, was such, that instead of assisting his countrymen with his fleet, he rather increased their difficulties; and leaving 600 soldiers behind, he returned ingloriously with his officers to *Batavia*. When *Koksing* however, invested *Zeelandia*, a new squadron was sent from *Batavia*, under

*Cacun*, formerly a lawyer. This man lost all courage when he observed the preparations of the Chinese, and being despatched with two vessels in order to bring the Tatar auxiliaries over, he fled to Batavia, and thus by his dastardly flight hastened the surrender of the fort. The company's property being declared lawful booty, the Chinese expected to find very great treasures, but their disappointment and astonishment were great when the amount of ready money, and the value of every other article did not exceed 471,500 guilders. From this fact it may be concluded, that the settlement was at the time of its capture not in a very flourishing condition.

*Koksing* committed the most dreadful cruelties against the Dutch. A small detachment of sailors had been sent to the *Pescadores* as a foraging party; twelve of them fell into the hands of the Chinese, who sent them over to Formosa in a small vessel. During the passage the Dutch resolved to seize the vessel, but their plan was betrayed by a Frenchman. On their arrival at the camp of *Koksing*, he ordered their ears, noses, and hands to be cut off, and when they were thus mutilated, sent them back to the Dutch fort. Two of the schoolmasters exhorted the natives to resist the Chinese, and when they were taken they were crucified; and more than 100 soldiers were put to death by the most cruel torments by *Koksing's* orders: the lives of about twenty prisoners were spared. Afterwards when *Hambrouck*, the minister, was sent into *Zealandia*, he periled his own life by exhorting his countrymen to defend the fort to the last; and he and all the other prisoners were executed by *Koksing's* orders when he returned; and even some of the Dutch females were put to death; such was the behaviour of the polite and civilized Chinese.

The Island was thus lost. The Dutch never made an effort to recover it, but instead, spent their forces in aiding the Tatars to conquer *Amoy*.

The Island is even now only partially under the Chinese dominion; they are still carrying on a war of conquest against the unsubdued parts. We know not whether the English have not as good a right to occupy Formosa, in whole or in part, as the celestials themselves; or as the former had to depopulate New South Wales, by encroaching on the territories of the native tribes.

The Island of Nan-aou (in the local dialect Namoh,) is about fourteen miles in length, and of irregular breadth, varying from one mile to five or six. On the northern side are two deep bays, at the bottom of which are large villages, and a considerable extent of cultivated ground. The general appearance of this Island is mountainous and barren, though Chinese industry has here shown what effects patience and perseverance may produce in despite of the niggardness of nature. The mandarins resides at the eastern town, which is called Nan-tse.

This Island which is half in Canton, and half in Fuh-keen province is the second naval station of Canton; it is the residence of a taund-ping-kwan, or admiral, who has a nominal force of 5,237 men under his command; of which 4,078 belong to Canton, and 1,159 to Fuh-keen. The existence, however, of these troops is very doubtful. The defences of the station, as we saw it, consisted of seven or eight small junks, in appearance resembling the smaller class of Fuh-keen trading vessels, and in all respects inferior to those of Canton. On an island, at the entrance of the bay, are two forts, the upper one mounting eight, the lower six guns; but as is invariably the case in Chinese fortifications, they are both commanded by heights immediately behind them; up the bay there is another small fort without any guns. Here also, we met with the strongest proofs of the jealousy and suspicion of the mandarines. Wishing to go on board of one of the war junks, we were refused admission, under the pretence that the admiral had issued positive orders that no one should hold the slightest communication with us. There were several large trading vessels wind-bound here, and on sailing past one we went on board by the express invitation of her commander, an intelligent and respectable person, who received us with the greatest cordiality. We had been here but a few minutes, before no less than three small war boats with mandarines joined us, and at first commenced angrily upbraiding the captain for entering into communication with barbarians. An interesting and amusing conversation followed, in which we soon found, that though our opponents were very ready to commence with violent and angry words, yet, that a mixture of independent and good humoured argument very soon lowered their tone, and they ended by apologizing for the uncivil reception we had met with; the blame they threw entirely on their superiors; and we then spent half an hour talking on numerous subjects in the most friendly manner. The point which seemed most to puzzle them, and indeed gave them most uneasiness, was hearing foreigners converse in their own language, and show some knowledge of their local institutions and geography: it was however decided among them that Mr. Gutzlaff was a Chinese from Amoy, and one of them asked me, in a confidential way, to confess that their surmise was true. I took some trouble to explain to him that far from such being the case, the gentleman had only been six years out of Europe, and previously to that unacquainted with the language. Having given all the information required for a report to the mandarines, we parted on friendly terms, the chief man saying to me "we shall report you to be well disposed persons, who thoroughly understand the rules of propriety." Much regret was also expressed at their not daring to avail themselves of my invitation to visit the ship. Here, as at Keatsze, in unguarded freedom of conversation, the mandarines dropped

hints expressive of the great alarm which the admiral had been in, thinking us a ship of war, as reports had reached them that a numerous fleet was expected at Canton.

We had now quitted Canton province and entered that of Fuh-keen. During the last month we had constant intercourse with the people at every place where we stopped. Strangers and unprotected, either by any force of our own, or by the countenance of the government, we had repeatedly entered their villages, and been surrounded by hundreds of Chinese; and instead of the rudeness and insult which is but too frequent near Canton, we had met with nothing but expressions of friendship and goodwill. It is true the places we had hitherto visited, are mostly poor, nor is it probable that much advantage will ever arise from intercourse with them; but still it was a source of satisfaction and encouragement to us, to think that we have made some friends at every spot we have visited. In Fuh-keen we had to look for intercourse of a more important description; but the experience we had gained, inspired us with confidence in looking forward to a continuance of the same friendly disposition on the part of the natives, and that all our difficulties would arise from the interference of the mandarines. Left to themselves the Chinese are not the jealous and suspicious race they have been generally imagined. These are the ideas that suggested themselves at the time, and the sequel will shew that they have been amply realized.

I have few commercial remarks to offer respecting our voyage while in Canton province. Repeated inquiries were made for opium by our visitors, and at Nan-ou, some persons, after having seen our goods, promised to go to Ching-hae and procure customers for us. Calicoes appear to attract most notice among the poorer classes, and in barter for provisions they generally preferred ten cubits or four yards of calico to 1000 cash, which is equivalent to a dollar; at this rate it would appear that the retail price to this people was as high as ten dollars per piece; but as we sold none, it would not be fair to draw any conclusion from such premises.—*Lindsay's Journal*.

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The following extract from the Canton Register shews that Slave Trading even extends to the coasts of China.

“On the third day of the first moon observed a small junk run close in shore and anchor. Shortly after observed a great many people go down to the boats on the beach, and also two sedan chairs; thought it was some government officer going to embark. Having some of the natives on board the barbarian ship, we asked them what was going on, and who all those people were. They replied it was two or three gentlemen going to Formosa with slaves; they had bought them prior to the new year. Women and children about 150, were embarked on board this small vessel, not exceeding 90 tons burthen. When they had all got on board, a barbarian officer (using the celestial terms,) went on board the junk to see how they were stowed

away. The hold of the junk was divided into four parts; the aftermost was allotted to the gentlemen, and the other three parts to the women and children. Here they were, poor creatures! stowed very close; the greatest part of them being children from two years old and upwards, male and female; and several poor little urchins on deck exposed to the cold winds. The officer took the hatch off to put them below; there was not one that would lay hold of them; and the stench was so great, he was obliged to place them on deck again. The price of the children varied from twenty to fifty dollars each; that of the elder women from thirty to eighty. One stout young woman, about nineteen years old was offered for sale; they asked fifty dollars for her, the officer made no purchase, but let her take her chance in the new country.

"We asked some of the men how such a practice was allowed in such a country as theirs? the reply was:—'what can the poor people do who have no rice to give their children? it was much better to sell them for dollars than let them starve, and their parents want dollars for the new year.'

This abominable practice is carried on to a great extent. Slaves and free emigrants go over to *Formosa* from the *Fokien* coast in hordes; the numbers are incredible. The Chinese will soon have the island entirely under their sway; there are several new settlements on the N.E. and E. side of *Formosa*. The natives give battle sometimes, but invariably are obliged to retreat.

#### A COASTER.

"The kidnapping of children is carried on by women, it is considered an offence and the discovery of it is only punished with a fine."

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### MANNING THE NAVY.

EVERY proposal for attaining so desirable an object as Manning the Navy, without recourse to impressment, deserves consideration: but among the many that have been made, we have not met with one, on the voluntary system, so likely to keep the navy manned as the following of Capt. Sir Thomas Cochrane, R.N. There can be no doubt in the mind of any one who has witnessed the paying off of our men-of-war, that they are then in their most efficient state. Nautical friendships are formed among the men, their training to their various duties established, accustomed to each other, to their officers, and, not least, to their ship, in which they have weathered many a breeze, and passed many a happy day, when the day for paying off arrives, and which is to separate, and perhaps, scatter them to the four quarters of the world, then is the very time when they should be kept together. However, we shall refer our readers to Sir Thomas's letter with merely adding our own opinion that his proposal is founded on sound principles.

*Government House, St. John's, Newfoundland,  
Jan. 11th, 1826.*

MY DEAR LORD.—At a time when a peace of ten years' duration has reduced the number of ships in commission, as well as the proportion of



men employed in them, to a force that formerly constituted but a small squadron, it becomes desirable to know how far the services of that force are available in the event of any unforeseen rupture—and in the persuasion that there is no person more alive to the best interests of the naval profession than your Lordship, or more convinced of the necessity of the peace establishment being in an efficient state for war, (however much we may hope for a continuance of the blessings of peace for many years to come,) I venture to address a few observations to your Lordship, being the result of nearly four years and a half's service and experience in the command of a ship upon the peace establishment.

I do not know whether it has or has not reached your Lordship, but it is no less true, that notwithstanding the few men employed, there is a general complaint as to their inferiority, and not one captain in ten that acknowledges his having a crew with whom, either in strength, quality, or character, he is at all satisfied; and, moreover, that although these men enter voluntarily, desertion is carried on to an extent never known in time of war. For this there cannot but be some cause, and I think it may be traced to the mode in which the peace establishment is at present conducted. When a ship is first commissioned, men are brought together from wherever they can be collected—unknown to the officers as well as to each other; after their ship shall have been nominally ready for sea, (which is seldom under four, five, or six months,) she yet has a great deal to do with respect to her equipment and her internal arrangement, and it is still some months more before that most necessary part of their instruction is taken in hand, their gunnery, and on which the Admiralty have most justly laid considerable stress; and there is no captain who has been employed during peace that will not tell your Lordship that he did not consider his ship in all points an efficient man-of-war until she had been from twelve to eighteen months in commission, and particularly in relation to the management of her guns. However anxious a captain may be to have his ship perfect in that respect, he at first meets an obstacle at every step: to exercise the guns as they ought to be, breaks in upon the whole day's work; it is therefore postponed from time to time, and just enough exercise performed to fill up the quarterly report. I believe I exercised more in the *Forte*—certainly fully as much as any ship in the navy, and to which I was led from my anxiety to give Congreve sights (a complete set of which I had managed to obtain) a fair trial, and seldom anchored anywhere that, if time permitted, I did not put out a mark to fire at, and I know, by experience, what an inconvenience attended my first doing so.

About the period before mentioned, a ship becomes in all respects in a state a man-of-war ought to be: the men know and agree with each

other, they work together, they are comfortable in their messes; the drudgery of the exercise of sails, guns, arms, &c., is over, and desertion ceases, and the officers begin to reap the benefit of their exertions. The ship being complete in all respects, the exercising of guns, sails, &c., goes on regularly without interruption; and this continues for a twelve-month or a little more, when the prospect of paying off comes in view, and then discipline, exercise, &c., begin to relax, and, if at home, the ship is paid off at the end of three years, and all belonging to her dispersed. Re-commission this ship the next day, and she is perfectly a new creation, and the same routine to be repeated already stated to your Lordship. The men who were lately in her have no more inducement to return to that ship than any other, as she is but the shell they formerly inhabited; and although a crew may be collected, all of men lately serving in a man-of-war, yet you will have the same complaint from the present as from her former captain, as to their inefficiency and want of union, and the same discontent will for an equal period exist, and the ship be in a similar state of inefficiency for a similar length of time.

I have always considered that a peace establishment was as much a preliminary preparation for war as for any other service; that consequently your ships thus employed should be manned with picked men, and that they should be in that state of training and efficiency that each ship, on a rupture taking place, could turn over one watch to form the groundwork of another vessel to be fitted out. To accomplish this much-desired end, allow me to suggest to your Lordship the following plan.

That when a ship is commissioned, she should never be entirely paid off—that if the ship herself become unserviceable, that the whole be transferred to another of equal size—let the captain and officers be appointed for the period they are now kept in employment, and the men be entered for a period not under five years, and as much longer as they please; and instead of paying off altogether, the captains, officers, and men be discharged respectively as their period of service expires; and that if the ship be employed on a foreign station, the men whose time is up, and who wish their discharge, to be sent home in the first man-of-war, or allowed to find their own way.

The advantage to be derived from this plan I conceive to be the following: first, that as before mentioned, at the end of eighteen months, the ship's company have become known and attached to each other—they have got over the drudgery and annoyance of fitting out—of exercising in all its various branches—and have only to keep the ship in the state she is then in; there is no general looking forward to discharge. In a frigate of a complement of three hundred, after the first four years,

the number to be discharged will be about three per month. Supposing a ship is out five months, and, returning into port, discharges fifteen men, these men instead of going on shore in a herd with two or three hundred others, without a home, or one place more than another of which to make choice, each encouraging the other in every species of dissipation and vagrancy, they are landed with the knowledge that they have left a home where they might have remained and continued in the enjoyment of comfort; they have no multitude to keep them in countenance in their debaucheries, and the want of old associates soon makes them tired of their present life, and cast an eye to the home and messmates they have left; but they know too the ship is but fifteen short of complement, and that their places may be filled up; and I am much mistaken, unless the ship has something in her that makes her very unpopular, if ten out of the fifteen do not return, or if, before quitting her, they do not give in their names to return again after their cruise is out. It must be quite clear to your Lordship that any man would rather return to a comfortable, well-regulated mess of old acquaintances, and the drudgery of equipping over, than go where he would meet none but strange faces and all the vexation of first fitting out. Even the new men, who are to supply the five the ship is now short of, will instantly partake of the comforts of the rest of the crew—they will in a few days fall into the mode of discipline preserved in the ship, and be as expert at their duty as any others of equal talents who may be on board; and here another advantage, with respect to discipline or the mode of carrying on duty, will be obtained. It must be well known to your Lordship, as it is quite notorious, that there are almost as many systems of carrying on duty as there are officers in command; and that men, on first coming together, are for some time at a loss to find out the system to be observed; but if a ship have been commanded by an officer of any professional talent for three years, and shall have been brought to that proper efficient state a man-of-war ought to be in, it is impossible but his successor will follow the plans heretofore adopted; for whatever his fancies and caprices may be, he must be devoid of all sense to overturn a system that has been pursued with success; and while he tries to bend others to his ways, he insensibly falls into those already adopted, and neither officers nor crew will feel that change which they inevitably must do in joining a newly-commissioned ship.

With respect to desertion—which is now carried on to a most extraordinary pitch—I am quite persuaded the want of comfort on board a newly-commissioned ship has much to do with it. In corroboration I may mention, that three weeks after the *Forte* was paid her advance, on being first commissioned, she was obliged to be docked at Portsmouth, and during that period she lost fifty men. I was told I only

met the fate of others; but fearing that the cause might be dissatisfaction, either at the conduct of some of the officers, or discontent with my own, I privately sent for some of the oldest petty officers on several occasions, and begged them to tell me fairly if any cause of complaint existed, when they assured me that none whatever did; that they had no fault to find with my arrangements, nor with the conduct of the officers; and although they could give no satisfactory account for the desertions, yet they allowed the people were not happy among themselves—that they were new to each other, and constantly quarrelling; and I am quite persuaded that this accounted for most of the desertions that had taken place. The attachment of men to ships to which they have for some time belonged is very great, and I entertain little doubt but many would serve their whole time in the same vessel.

If any difficulty should be started with respect to ships on foreign stations being able to replace the men they occasionally discharge, it would be quite easy to supply them with volunteers by the ships from time to time joining the station from England—not that I consider such to be necessary, as there is no want of men abroad with whom to fill up the vacancies that may occur, even should most of the men take advantage of their discharge—which I am persuaded would not be the case. On this system being first adopted, there would be a little inconvenience at the end of the first five years, as many having entered at the same period would be entitled to their discharge at the same time. To remedy this, I would recommend discharging, at the end of the first three years, a certain portion of such as did not intend to enter again for a second term, after which, the entering and discharging would proceed regularly. The army did formerly enlist men in a very similar way, and found no inconvenience from it: but what state would each regiment be in, if disbanded at the end of every three years?

I will offer no apology for having troubled your Lordship at length on a subject of such vital importance to the Naval profession and country at large. I only earnestly request your Lordship's attention to the hints I have thrown out, as, if they strike you as they do myself, I am persuaded in the detail you may so much improve upon them, as not only to secure to the service a better class of seamen, and in a great degree check desertion, but to reap advantages for the efficiency and discipline of our fleets that have not entered into my contemplation.

Believe me, my dear Lord,

Very faithfully yours,

THOMAS COCHRANE.

*The Right Hon. Viscount Melville, K.T., &c. &c.*

ADDENDA.—1839.

Every consideration I have subsequently been able to give to the

foregoing subject, and every information I have received from various officers as to the efficiency of the crews of her Majesty's vessels, convince me the more strongly of the absolute necessity of adopting the suggestions there thrown out, or some similar plan, for securing to the service the full benefit of the number of men employed—their increased comfort and adequate encouragement to good and orderly men to enter into the navy.

There is not, I am sure, an officer of the least observation, who has served since the peace, who is not conscious of the various discomforts attending a newly commissioned ship, and that there is a large class of men, particularly petty officers, very much improved in character and intelligence, to whom a well-regulated and comfortable home is a real consideration. Yet under, the present system, these men have nothing permanent to look to; for, after undergoing all the discomforts as well as moral evils attending first fitting out, they know that under the most favorable circumstances their comforts are but ephemeral, and at the end of three years they are again to be turned upon the world, and have the task of Sisyphus to perform. The injury to the moral character attendant upon such periodical abandonment is incalculable.

Although almost, if not every naval officer to whom I have submitted my plan, has approved of it, yet there no doubt will be some whom, wedded to old recollections, or who have never been in a position to experience, or have forgotten, the disadvantages attending the present system, it will be difficult to convince that a change is desirable; and of these, and such as view the subject theoretically, I will draw the attention and consideration to the sister service. It is well known that it takes a much longer period to make a sailor than a soldier, and that when a ship is in commission (except actual fighting) the same detail of duties in all its branches—the same preparation for, and a variety of, services takes place in peace as in war; that, on the other hand, the army in peace is always in quarters; the detail of duties to be performed in one day will very nearly give you that for the whole year, and consequently a young soldier soon falls into the course prescribed for him. Yet, allow me to ask, what would be thought of the man who should propose that the army be disbanded and reorganised every third year? Would any one take the trouble of replying to a proposition so absurd, and so ruinous to the service? Yet was this course adopted, and it is quietly pursued in the navy, where it is shown it must be more fatally persevered in than it would be in the sister profession.

There is another point of much importance to be taken into consideration with reference to the present system—as regards the number of ships which must be always in an efficient state. Supposing one ship with another to be four months in fitting out, and that she is subse-

quently four or five months more in becoming all that a man-of-war ought to be; adding to this the disadvantages arising from a vessel being called home to be paid off, and other contingencies attached to it, I think it will be admitted that a twelvemonth out of the three years may fairly be deducted from that vessel's complete state of efficiency. If such be the case, then, in point of fact one third of the navy is always either altogether, or more or less, in an inefficient state. What a loss is this to the country, and which would in a great measure be obviated by the adoption of the plan proposed!

There is no new arrangement which has not, more or less, some primary difficulty to contend with in its details; but, as I have already stated in my letter to Lord Melville, I am quite satisfied they may be expected that the proposer of a new system should himself show how it is to be carried into execution, I will now add a short detail of the mode to be pursued.

The men to be entered for five years—which in a forty-six gun frigate of three hundred men will give the average discharge of about three men per month; but as on first commencing this system, and commissioning a ship, all the men would be entered nearly at the same time, I would, in the *first instance*, and only on *that occasion*, reserve the right of discharging about half the crew at the end of three years, or such of them, as were indisposed to enter for a fresh term. This arrangement, with the vacancies that would arise from sickness, invaliding, death, and other casualties, would very soon sufficiently distribute the periods of entry and discharge for every practical purpose.

Every man to declare, three months before his time expires, whether he is inclined to enter again, should his captain be willing to keep him.

If a ship is ordered to prepare for a foreign station, such men as are within . . . period of the expiration of their time, and do not choose to enter again, to be left behind, if the service will admit of it.

When a ship is on a foreign station, the men entitled to their discharge to receive it there, or to be sent home by the first convenient opportunity; but should their services be required, they may be retained for . . . months beyond the five years, and, if required, for a further period, to receive . . . sum extra pay per month for the period they are so retained; and for all the purposes of sending discharged men home, on receiving recruits from thence, the present and increasing use of steam-vessels affords great additional facilities.

The captains and officers of course to be removed as heretofore, or at such periods as the Admiralty may judge fit: but, as I have already observed, these are details which may have to undergo great modification, without affecting the principle of the measure.

Two great objects I have in view—the efficiency of the service, and the character and condition of your seamen; and I cannot but feel persuaded that both these objects will be essentially attained by the introduction of this, or some similar system.

The influence it would have upon your seamen would, I firmly believe, be very great. A sailor, although a rough exterior, has all the feelings, sensations, and predilections of those born to better things; and I am persuaded the good men suffer all the distress of mind at the triennial disruption of their society, that we should do at a similar dislocation of our domestic relations; and those men who, from dissolute habits, are not now sensible to such deprivations, would soon become equally so when they knew the comforts of a permanent home, and that they were no longer, as at present, *absolutely driven* into vice, our sea-ports affording them no other resource. No set of men existing becomes more attached to their homes than sailors do to their ships and mess-mates; and there is no officer who has served in the late war, and seen ships paid off, after having been six, seven, and eight years in commission, who cannot, I am sure, vouch for the positive grief the men have evinced when their separation took place.

It will be perceived that I have not touched upon the economy which would attend the foregoing system, by the prevention of that *very considerable loss* which arises from the dismantling of each ship, as it must be obvious to every officer who has served in a ship, when in the course of being paid off, or who has been appointed to one re-commissioned, and who remembers what tearing to pieces, cutting up of rigging, and every species of destruction that goes on while the pendant is up, and the manner in which the dockyard workmen complete that task when the ship returns into her state of ordinary.

An officer, not long since paid off, has stated to me, that on revisiting his ship some weeks after he left her, he found a destruction of internal fittings, &c., had arisen, which it would require a very heavy sum to replace; yet the Admiralty use every means that strict orders and injunctions can supply, to put a stop to such wasteful proceedings.

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#### THE ROYALIST.

THE following extract of a letter from Mr. J. Brookes, in his yacht the *Royalist*, dated Singapore, 8th May, 1839, contains some interesting accounts of the coast of Borneo.

“I have much pleasure in acquainting you, that the *Royalist* reached Singapore in May last, after a pleasant passage, having on her voyage out touched at Rio Janeiro, the Cape of Good Hope, and Anger; a

severe attack of illness prevented my leaving this place until July, when I took the Royalist across to the western coast of Borneo, as from information received, I was led to hope that a friendly communication might be established with the native chiefs.

“ In this expectation, so greatly tending to facilitate my future progress, I am happy to say I was not disappointed, as we were kindly and hospitably received by the Rajah Moodah Hassim, the virtual ruler of the extensive state of Borneo. This prince not only shewed us every personal attention, but evinced the greatest readiness to forward our wish to visit the various ports of his territory, and although I availed myself of his kindness to some extent, I have to regret that a rebellion in the interior prevented my penetrating as far as the mountains. The Royalist first made the land of Borneo off Tonjong Assi ; and thence we commenced and continued a survey of about 150 miles along the coast. Our charts are so defective, both in position and outline, that it is impossible to convey any clear idea of the coast, as it really exists, and I must content myself with mentioning that the few places given by Horsburgh are 60 and 80 miles from their proper situations,—that numerous islands, navigable rivers, and bold headlands are altogether omitted, and that the coast marked as very low land, is distinguished by detached mountains of 2000 or 3000 feet in height.

“ A belt of alluvial soil of considerable depth, diversified by these mountains, and intersected with a network of rivers runs along this portion of the western shore of the island, and from the numerous sandbanks formed at the mouths of the streams, and stretching to the islands in the offing, there is evidence to conclude that the land has for ages been encroaching on the sea ; and that the mountains which now rise amid the low grounds, were once detached islands. Among many fine rivers, those of Saravak, Morotabas, and Sading may be distinguished as being navigable for vessels of considerable burden. The Royalist ascended near 40 miles up the Saravak to the village of Kuching, the temporary residence of Rajah Moodah Hassim, and thence boat excursions were dispatched in various directions, penetrating 100 miles up the Samarahn river, and visiting portions of the Quop, the Riam, the Boyar, the Lindoo, &c.

“ In the latter river we lived nearly a fortnight with the Dyak tribe, called Sibuyaw, and thus became acquainted with the manners, customs, and habits of this wild people, and though my acquaintance with other tribes is very limited, I am led to hope that many of the barbarous customs attributed to them will be found greatly exaggerated, and the human heads which they preserve with such scrupulous care, will prove on inquiry to have been procured in war, and kept as trophies of victory.



“ The space of this letter will preclude my entering into any further detail, but I may state that the country is rich in mineral and vegetable productions, and fertile in its soil, that the rulers are well inclined to encourage trade with the English, and willing to enter into alliance with them; should such alliance be ever concluded, it would open a vast and most interesting field for investigation, and the propagation of the Christian religion. I propose returning to the western coast as early as the season will allow, and in the meantime to sail during the present north-east monsoon to the eastern coast, and proceeding from Bangor Messin towards the northern part of the island. The beauty and diversity of scenery, the healthy and equable climate, the absence of all bad weather, and the interest experienced in visiting little frequented countries, renders these seas most agreeable for cruising; and I can recommend this excursion to any of our Yachting brethren, but it is to be regretted that no orders respecting the privileges of yachts have been forwarded to the Cape of Good Hope, or our Indian possessions, or the Dutch and Spanish colonial governments of Java and Manilla. On my return from the eastern coast I will again address you. In the meantime, with my regards, believe me,

My dear Sir, truly yours,

J. BROOKE.

*To W. Lomer, Esq., Sec. R. W. Y. C., Plymouth.*

## NAUTICAL SURVEYS AND NAVAL SURVEYORS.—No. II.

[Continued from p. 179.]

It is generally allowed by all parties, be they who they may, ignorant or informed, that, “ Knowledge is power.” The former class are constrained to admit it by the superiority which its possession commands over them even against their inclination, and the latter carry about them the proof concealed like a precious gem, too valuable to be exposed to the crowd, that the greater their attainments are the more modest they become. The celebrated Dr. Johnson says, “ that a man always makes himself greater as he increases his knowledge,” and so impressed was he with its importance that he declares “ all knowledge is of itself of some value. “ There is nothing so minute or inconsiderable that I would not rather know it” he says “ than not,” and one of his companions the Rev. Mr. Ford advises us by all means to “ obtain some general principles of every science; he who can talk only on one subject, or act only in one department, is seldom wanted, and perhaps never wished for; while the man of general knowledge can often benefit, and always please.” In scripture also we read, “ there is gold and a multitude of rubies; but the lips of knowledge are a precious jewel:” now

this power inherent in the possession of knowledge, will if we mistake not, appear to great advantage in the various duties which we have shown a naval surveyor has to perform: and one of those duties which we have left for separate discussion is seamanship. Can seamanship be better learnt in a vessel engaged on a survey, or in one in the ordinary employment of Her Majesty's service? is a question now for consideration, and first let us see what Captain Hall says on the subject.

"I am tempted here," he says, "to touch for a moment on rather an interesting professional controversy, namely, the relative advantages of the surveying service, and the ordinary employment of the man-of-war for teaching seamanship, and all the most important details of navigation. It strikes me as decidedly in favour of the surveying service, chiefly from the nautical dangers and difficulties by which it is almost constantly surrounded. Unless under peculiar circumstances, a man-of-war is occupied chiefly in making passages from port to port, or in the easy and merry work of cruising, and her commander, as I have already remarked, avoids on principle, rocks, shoals, and all those dangers which, on principle, the surveyor hunts for and closes with. Who shall say then that less seamanship is required in managing a ship which is placed continually in dangerous situations, on an open and exposed coast, close in shore, frequently surrounded with rocks and reefs unknown till he has discovered them, liable to be continually surprised in such situations by calms, by fogs, by darkness, or by the sudden springing up of gales, blowing directly towards the land? Many men-of-war indeed, pass years without encountering as many professional difficulties of a trying nature, so far as seamanship is concerned, as a surveying vessel meets in a month! How can it be maintained that any situation is more favorable for breeding good seamen, especially of the rank of officers, than a vessel constantly navigating amongst islands and shoals of an unknown coast, requiring the utmost vigilance on their part, and the enforcement of the most prompt obedience on the part of the men as well as the quickest evolutions in order to save the ship from the dilemmas to which she is every minute exposed? While it can hardly be doubted that, for acquiring a knowledge of nautical astronomy, and scientific navigation generally, the surveying service is much the best school, for its requirements are unceasing. A few of the general etiquettes of the service, indeed, and some of the important duties of a fleet, cannot be learned, or fully kept up on a survey. But a judicious officer will not fail, even then, to maintain all the regulations of the service entire, while habits of vigilance, of promptitude, and prudence, may be engendered so as to be turned to the highest account in every department of the naval service afterwards."

The foregoing is the opinion of an officer of considerable experience

on this subject, but the subject is one of those which will bear a little further discussion, because there are those who have not considered it fully, or do not happen to have sufficient knowledge of it to be enabled to form a correct judgment. Let us put the question:—Is seamanship a necessary qualification of the nautical surveyor? How can this be denied when the very essence of his duties is to seek hidden dangers in the shape of rocks and shoals, which on principle the naval officer has to avoid—to keep his ship clear of. But having found these dangers the work of the surveyor is then to commence, he has then to examine them; nay, to be in actual contact with them for the purpose of determining their extent and position, to sound their approaches on all sides, in spite of currents, sea, and tides, and exposed to every kind of weather. Again, on an unknown coast which may be beset with dangers, the surveyor finds himself bewildered among its out-lying dangers, and should he be caught in a gale of wind on such a coast and split his sails, or carry away spars in beating off; nay, should he be in a miserable dull-sailing craft, that will scarcely stir through the water, and have to run for shelter where he may happen to know from his own personal examination, that there is a chance of finding it, his seamanship in either of these conditions is called into action, and the *aspirant* will not fail of turning such opportunities to account,—opportunities which from the continual presence of such *acquaintances* as we have alluded to, and the continual contact with the shore which the duties of a surveyor require, are of no seldom occurrence. Now, we find all kinds of vessels in the employment of surveying, viz., ships, brigs, schooners, cutters, and steam-vessels, and they are under the command of naval officers who it is well known are good seamen. Such vessels cannot fail of being a good school for making seamen, for in addition to the critical positions which we have mentioned, surveying requires the assistance of expert seamanship in taking up an anchorage with exact precision, in close watchfulness for altering the vessels' course where a wrong cast would put her on shore, in beating off a danger, and the art of keeping a ship clear of her anchor, all which points seldom fall to the lot of an officer in the general line of the service while the surveying service will find ample opportunities for showing the surveying officers' proficiency in them, and, therefore, in teaching the beginner.

If we turn to boat service, as in general surveying duties are half of them carried on in boats, it will be seen that, the naval surveyor has double the experience there that another naval officer gains in the general line of the service, and indeed a great deal more. The whole of the Lakes of Canada were surveyed in boats. Lord Nelson used to call frigates the "eyes" of a fleet, and the term with as much justice may be applied to the boats of a surveying expedition. Ever active,

they are found where larger vessels cannot go; be it in creeks, rivers, inlets and channels of all kinds. The annals of maritime surveying bear full testimony to the value of boat service, and in them the naval surveyor has ample opportunity of learning that branch of his profession which demands a thorough knowledge of their management. It is not many years since a boat of one of our surveying ships found her way home from the straits of Gibraltar, making the perilous navigation of the Bay of Biscay and the English channel to Spithead. It is not denied that such a feat was the result of accident, but the performance of it demanded seamanship, and perhaps only the habitual confidence acquired in a constant experience of boat management prompted the idea of such a feat and led to its successful performance. In this branch of seamanship then, viz. the management of boats, the surveying service is decidedly superior to the general line of the service, from offering more opportunity for acquiring it.

Reverting however to the quarter-deck of the surveying ship, here the young naval surveyor is found in precisely the same condition as in the man-of-war. Subject to the same discipline, an ingredient which every good officer well knows is essential to the due performance of all the duties of a ship, be they what they may, he is placed in the situations which we have alluded to, to pick up his acquaintance with seamanship. It is true that the sextant and the pencil must be often in his hand, and it has also been correctly observed by Lord Nelson, "aft the most honour, forward the better seaman:" but we still maintain that although the young surveyor has full claim on his attention arising from the scientific part of his duty, yet, that he has ample opportunity to learn the seaman's part if he chooses to apply to it. And supposing him to be entirely bred up in the surveying service, apply he must, or he will never succeed in passing the ordeal of an examination in that branch of his profession which he must go through before he can rise in it.

But there is nothing like an appeal to facts after all, so we will illustrate the position we have advanced by an extract or two—and first from the journal of one of the officers employed on the St. Lawrence survey. The following is dated in June:—"The other night we were becalmed in the North channel to the northward of Hare Island. Here the water is too deep and the bottom too rocky to allow anchoring. We drifted about till 3 A.M., and were carried by the tide during the night through ripples and eddies which roared like rapids.\* Some of these eddies deserve the name of whirlpools; and after the breeze sprung up, though the Gulnare was going full five knots through the water, they

\* Those who are acquainted with *Rapids* of the St. Lawrence will fully appreciate this.—Ed. N.M.

caused her to sheer about against her helm several points each way. To be carried along through roaring ripples with the water, literally boiling about the vessel in a dark night, and in a place unknown, being ignorant whether the ripples were produced by rocks or not, affords no very pleasing sensation.

“ We passed down the whole estuary to Cape Chat in the most horrible of all weather. Sometimes we were six days and nights following, enveloped in thick fog, the water dropping from our sails and rigging like rain, and the weather as cold as an English winter. Being necessarily near the shore we had some narrow escapes and were several times left to the mercy of the tides by a sudden calm when entangled in the bays and among shoals. This happened in Outard Bay, and off the dangerous Manicougan shoal, alongside of which in some parts there is no bottom with fifty fathoms; and when becalmed at night in Outard Bay we had ninety-three fathoms, so that there is no stopping the vessel with an anchor.

“ In the old charts there is laid down a shoal just to the westward of the Moisie river, the first to the eastward of the Bay of islands. As we stood towards its supposed position, we had such deep water that we began to doubt its existence, when in the space of two minutes we passed suddenly from 35 fathoms with the patent lead, to 12 feet with the hand lead. The helm was immediately put up to sheer to the southward off shore; in which direction we naturally supposed it most likely to deepen. This however did not prove the case, so we tried the other way, and half a dozen others, till at last we had only ten and a half feet—just one foot to spare. At this time the look-out on the fore yard called out breakers a cable’s length on the larboard bow. One said we had better go to the southward, another said to the northward, and a third to, the eastward; and if ‘ in the multitude of councillors there is wisdom,’ we had no time now to profit by it. So in this dilemma I instantly ordered the helm a-lee, and immediately that we began to get stern-way braced sharp round the headyards, and brailed up the after sails. Her ladyship, the *Gulnare*, is well used to these manœuvres, and unlike most other ladies, generally does as she is bid. She, therefore, quietly slued herself round in her own length, and I steered as nearly as I could *back again*, leaving the experiment of going northward, southward, and eastward to be settled some other time. Thus we narrowly escaped sticking fast upon a shoal two miles off an open coast, on which there is a south-west swell, and surf, so that no boat can land in six days out of seven.”

Another extract says, “ I was sounding off this part of the coast, (*Anticosti*) when a heavy gale came on from the south-west, (off the land,) whilst ranging along the cliffs under double reefed sails, and a

sudden squall split our foresail. Not liking to be driven out to sea with a foresail in rags, and a sprung fore topmast, I carried sail to beat into one of the bays, and was rewarded by finding stiff clay bottom a very unusual thing at Anticosti. Here I anchored and rode out the gale." Speaking of the cliffs of this island, Capt. Bayfield says, "the Gulnare tacked within a cable's length of them, and although her main topmast head, is nearly a hundred feet high, she looked like a mere boat under them.

Here is another which assists in conveying an idea of nautical surveying at least as carried on by our worthy naval surveyors.

"On the south coast of the St. Lawrence there is no harbour all the way until we come to Gaspé. You will clearly see from this the necessity of a surveyor to have a stout-built well sailing vessel, for St. Nicholas harbour is too small to enter in bad weather, so that we are obliged to keep the sea and weather out the hardest gales as we best can. The north-easters are the worst: they are always attended with fog, rain, and cold raw weather. I have been three days and three nights without seeing the land between Point des Monts and Cape Chat, the coast about both of which headlands is so bold that there is no warning by lead; there are 100 fathoms half a mile off shore. I stood across under close reef sails the whole time from side to side, and got bottom in from 100 to 170 fathoms wearing round whenever I had the lesser depth. The distance across is about twenty-five miles."

We must take one more extract from the St. Lawrence surveyor: "After leaving Cape Chat, on another occasion nothing more than the common routine of surveying occurred till we arrived at Claude river, on the south coast. I had observed during our running survey of this coast last year, two or three small bays which appeared likely to afford anchorage, and anchorage on an iron bound coast, when the foot of the precipice is edged with rocks, and where there are thirty fathoms of water, in general within a quarter of a mile of the shore, would be very valuable. We stood into the mouth of the bay, which certainly did not look inviting, but we trusted to the known qualities of the vessel with a commanding breeze. From 30 fathoms we came into 17 sand and shells, the small bower descended instantly to the bottom. It is as heavy, and the chain as stout nearly as that of a 10-gun brig, for I knew from experience on Lake Superior, the value of heavy anchors, on such a service; we had never known this favorite anchor to start, after it once fairly touched the ground, but the breeze being fresh we dragged it down hill into 25 fathoms before we brought up with a whole cable out.

"We were now at anchor, but in driving we had not improved our position by any means. I examined the place with my glass: a more romantic little bay and valley I have seldom seen. The mountains,

which line the coast appeared scooped out on purpose to form the bay, into which a small river enters at the head, having previously pursued its winding course among precipices and hanging woods of birch and spruce trees. Each point of the bay rose about 1,000 feet abruptly out of the water: the inner sides of these points (about  $\frac{1}{4}$  of a mile apart,) appeared as if cut away, for they were bare cliffs of slate, and grey wacke' in waving strata, which gave them a striped appearance.

"From the western point a reef of rocks appeared, discolouring the water half way across the bay, being about two cables' lengths from us on our larboard beam. Astern of us at the distance of a little more than three cables' lengths, the sea broke over black rocks which beautifully contrasted with the white spray, as it flew over them, and dashed against the precipice on the eastern side of the bay, and which was at least 800 feet high, and perfectly inaccessible.

"The wind was from the westward inclining slightly on shore. The swell was still more on the shore, striking the vessel on her starboard bow; thus rendering it very difficult to cast her out to seaward. The wind too had freshened, or we imagined it had in the short time since we had anchored.

"Such was the situation of the Gulnare at 3 P.M., no very enviable one you will allow; for if I have succeeded in my description you will perceive that there was every probability of the anchor starting in such deep water, long before we could heave short, particularly as we were obliged to set the topsail to endeavour to cast the vessel. There was also every chance of our not succeeding in casting her to seaward, on account of the sea on her starboard bow. Should she cast the wrong way, that is towards the reef close to us, the weight of the anchor and cable dragging along the ground from her weather bow would prevent us from veering round, even supposing that we had room. We must, therefore, have slipped and sacrificed the anchor and cable to save the vessel, but bolts and shackles of chain cables sometimes resist the attempt to drive them out, and ours had only to do so for a few minutes, and we should be on shore under the magnificent precipice to leeward of us: the more magnificent perhaps from the idea of the danger which its nearness to us inspired. To wait finer weather would never do, for it might blow harder, and then we knew there would be no holding on in such deep water, and with such bad ground as this appeared to be.

"I wanted to determine accurately the latitude and longitude of some point hereabouts, and this could only be done by anchoring, for the current runs strongly and constantly to leeward, (to the N.E.,) with westerly winds, so that the vessel would be many miles away in the time necessary to effect our purpose. In easterly winds it is always rainy and foggy. The weather became bad; the observations of course

could not be got, for I could not venture to take a boat's crew away from our weak crew under such circumstances.

“ Well,—we got hammer and punch, and axe all ready to cut or slip,—braced our topsail the right way,—hauled aft our jib sheets on the larboard side, so that they should take aback when hoisted;—hove when she sheered out, and avast heaving when she appeared likely to come the wrong way. At last she fortunately took a rather broader sheer out than usual, we seized the critical moment, ran up the jib and flying jib, which payed her off, tearing the anchor out of the ground. We instantly clapped sail on her, dragged the anchor out into deep water till we had room to get it up at our leisure.”

Such incidents serve to give some idea of the Naval Surveying Service in which as much seamanship is required, and a far greater display of it on critical occasions where life is at stake, than in the ordinary routine of the service. But the foregoing relates to the St. Lawrence survey. In others it is much the same kind of work. Here is an extract from Lieut. Welsted's account of the Gulf of Akabah, the north-western extreme of the Red Sea. Some idea of the nature of the gulf may be collected from the following:—“ The gulf of Akabah has the appearance of a deep narrow ravine, extending nearly a hundred miles in a straight direction; and the circumjacent hills rise in some places two thousand feet perpendicularly from the shore. The gulf which fills the bed of this valley, has remained for centuries unknown to Europeans. To this day the Arabs are profoundly ignorant of the sea of Akabah, and when looking upwards from our snug anchorage, I view the effect of its boisterous winds in the dangerous swell they create, and the sullen appearance of its dark blue waters, yet further increased by the high mountains turning on either side, I must admit there is enough to justify the degree of dread they entertain of a voyage up it in their rude boats. Nor must we omit to mention the indifferent character of the Bedouins who inhabit its barren and inhospitable shores.”

It would be unjust not to quote the following boat accident, shewing that such things can occur in these venerated waters as well as of those of the English channel, St. Lawrence, Magellan Strait, Pacific Ocean, and African waters. Lieutenant Welsted, who was employed in her, says,—“ The wind which had lulled in the morning again increased as we drew towards the centre of the sea. At length in a strong gust, although under close reefed sails, the boat heeled over and filled. I had but a moment in which to act—I used it decisively—the boat was put before the wind ere another billow could give it the *coup de grace*—and then by baling with our hats, &c., we succeeded in getting her free. We were prevented sinking by the buoyancy of our fresh water



casks, of which we always carried eight or ten as ballast. When the blast struck us, the Lascars raised a yell of mingled agony and fear; and our situation many miles from the ship and the shore appeared so desperate that our hardy pilot, who had been steering, let go the helm, addressed a short prayer to Mohammed, quietly resigned himself to his fate. Indeed, our escape may be considered as almost miraculous, for it afterwards appeared that Captain Moresby, anxious for our safety, had despatched a man to the mast-head, who saw, but immediately afterwards lost sight of us, and he consequently concluded that we had again bore up for the shore; so that, had the boat failed to sink under us, which under all circumstances would have been most desirable, we should have drifted out to sea, with the certainty that a lingering death by hunger and thirst awaited us. The greatest care was necessary in bringing her through the high breaking waves we encountered afterwards, although a most excellent boat, and built expressly for such a service; and I am not ashamed to acknowledge, it was with great pleasure that I again found myself on the deck of the *Palinurus*."

So much for boat service in the operation of surveying, which can call forth prayers to Mahomet, and resignation to the will of God, from those exposed to its numerous dangers, and with pain must we add from those who have fallen victims to the service—*Requiescant in pace!* But, now for another extract relating to the *Palinurus* herself, under Captain Moresby, of the Honourable East India Company's Marine, in this same Gulf of Akabah, whose course of service has no doubt presented escapes of a far more trying nature; but we take the following, supplied us by Lieutenant Welsted. In the course of these papers we shall endeavour to include some account of the valuable services rendered to modern hydrography, by the officers of the East India Company, whose high station in the scientific branch of their profession has long since been acknowledged. Nautical surveying has but one object, and that is, to supply the wants of the navigator; and in considering the contributions of our naval officers we should lay ourselves open to the charge of partiality were we to neglect holding up to admiration those of a sister profession, whose authors rank so high in the scale of scientific attainments.

But to the extract before us:—"About an hour after midnight the wind shifted to the north-east, with appearance of blowing weather. We were then about mid-channel, and immediately stood over to the Sinai shore, the beach or surf of which we were anxious to sight, in order to stretch across with the greater confidence on the other tack. This manœuvre, though not unattended with risk, became necessary, because the appearance of the mountains rising up abruptly from the sea on either hand, is so deceptive, that in a dark night it is impossi-

ble to ascertain their distance with any degree of confidence ; and there are no soundings at any known depth even at a distance of a few yards from the shore to denote our approach to it. For this purpose, we had several people stationed on the fore yard looking out, while our indefatigable commander was on the fore-castle. Suddenly he observed and pointed out to the pilots, a white appearance, followed by a break in the water, close under the bows ; but they conceived it to be merely a meeting of the tides. Unconvinced, Capt. Moresby sprung up the fore rigging, and immediately discovered it to be a reef ; at the same instant rocks were perceived under the ship's bottom. She was now kept away a few yards, and the water being tolerably smooth, we let go two anchors in three fathoms. She then swung round, and we had no bottom under the stern at 80 fathoms. Had the ship fetched a few yards further to the northward, or had the captain's vigilance slumbered for an instant, nothing could have saved us from destruction ; and with the impression of our narrow escape still on our minds, we viewed with some anxiety the precarious nature of our anchorage. We were on the verge of a steep bank or precipice, from whence, in case our anchors had dragged, we should have been again away with our bagalá, (boat of the country,) whether to drift on the rocks to leeward, or to proceed again on an unknown sea, with winds and sea both increasing, was equally uncertain. The scene will not readily be forgotten by those who witnessed it.

“ Through the gloom of a dark night, yet further increased by a murky haze, we could perceive, towering far above the mast heads of the vessel, a huge perpendicular range of mountains, against the base of which, apparently within a few yards of us, the surf was beating with that hoarse and sullen roar, which it utters when tumbling head-long into caverns, fretted and worn by its former frantic violence. On such a coast the stoutest vessel ever constructed by the hands of man, must within a few minutes after striking, have been shivered and strewn alongside of it. As if to contrast with the gloom above, the sea had now acquired that phosphorescent quality which causes its waters, when agitated to emit lambent flashes and corruscations ; so that, what with the blaze created by the constant breaking of the sea, and the broad beams of light which followed each successive gust that swept down, tearing up the water in sheets in its progress, the whole had the appearance of a vast lake illuminated with indescribable brilliancy.

“ At daylight the event occurred which we had anticipated. The vessel drove off, fortunately canting with her head off shore with thirty fathoms on one chain, and eighty on the other, both large and heavy ; we had, it may be supposed, enough of difficulty in heaving up our anchors. Indeed our Captain was more than once inclined to slip, in

which case we should have been again compelled to leave the sea. At length, however, after much labour, we got them up to the bows and bore away for Sherm Majowwik."

Although we may incur the risk of having nearly exhausted our subject at the expense of our readers' patience, we cannot help turning nearer home, and quoting another instance from the journal of that scientific officer and seaman, Capt. Hewett, where first-rate seamanship was required, and successfully practised. The Protector commanded by Captain (then Lieutenant,) Hewett was engaged in her usual labours—surveying the North Sea, off the coast of Norfolk, when she was caught off Winterton by the memorable gale of October 13th, 1823, a gale which spread wreck and ruin along the whole eastern coast of Great Britain, and will long be remembered by the inhabitants of the towns and villages throughout its extent, and doubtless by the underwriters at Lloyd's. The Protector had been surveying the Coast Bank, between Hasborough and Cromer during the day, with a south-westerly wind, and which had prevailed for several weeks before. Towards the evening she was beat up to Winterton with the view of taking up her position, favorable for the observations of the ensuing day, when it suddenly fell calm, and the flood-tide which was then running having in that part a tendency towards the shore, from the Cockle shoal turning in that direction, the Protector was compelled to let go her anchor within pistol-shot of the beach, to prevent going on shore, it being then quite dark, and the voices of the people on shore distinctly heard from the vessel. Nine merchant vessels had anchored near the Protector from the same cause. Apprehensive of one of those sudden gales which so characterize the North Sea at this particular season, the Protector had everything ready for taking advantage of the first light air, and which was felt about two hours after the south-westerly wind had subsided. The topsails which were before sheeted home were now hoisted, the anchor weighed, and the vessel got on the larboard tack; but, before even the weather-braces could be hauled out, the wind, which had been heard for a minute or two before howling in that direction, came so suddenly down, that everything was "let fly" save the topsail-sheets. To take the Cockle Gateway, with a pitch dark night and unguided, under such circumstances was impossible; and Lieutenant Hewett felt himself called upon to act with instant decision. It being high water at the time, he immediately determined on running the vessel with the wind a-beam under the topsails on the caps, and to escape over the Sea Heads and Newarp shoals before the sea rose sufficient to cause the vessel to pitch, and to strike the ground, a step he dare not have taken at half-tide; and to keep the vessel more away was impracticable, as such a course would have led to certain destruction.

No lead was allowed to be hove, lest a "quarter less twain" might have reached the ears of some of the least hardy on board, and could not by possibility have done any good, the course adopted must be steered, as the only chance on the instant of escape. A particular bearing of the Newarp light-vessel soon convinced Lieut. Hewett that he was outside the banks, the Protector was put before the wind, sails furled, and the vessel scudded nine knots under bare poles, which will convey some idea of the strength of this gale. Eight of the nine vessels left under Winterton were driven on shore, and only one man and one boy of the whole of their crews were saved from the wrecks on the following morning by Capt. Manby's apparatus. The ninth, from having exceedingly good ground tackling, providentially rode out until daylight, when she slipped and ran through the Cockle Gateway into Yarmouth Roads. The Protector after scudding to a convenient position, hove to for daylight, and then ran for Harwich harbour. Two days afterwards the Protector was officially reported in the Public papers as having swamped at her anchors under Winterton, on the night of Oct. 13th; the pilots having pronounced it impossible for her to escape from the position she had anchored in, under the peculiar circumstances of that eventful night. This is only one of many instances in which this vessel has had hair-breadth escapes of similar descriptions; and but for the clear view which her commander immediately caught of the best, and perhaps the only mode of escape, (as in the present instance,) who can for a moment doubt, that not only is a first rate knowledge of seamanship an essential qualification for the naval surveyor, but that those officers selected for the onerous and important service, have actually possessed it in an eminent degree.

In the few extracts which we have now quoted, we have advanced a tolerably direct answer to the question with which we started, affirming beyond all dispute, that the surveying branch of the navy, is, without doubt a good school for seamanship. We have appealed but to three, out of three or four times that number of surveyors; and adduced little more perhaps, than as many extracts relating to passing events, which are of common occurrence. It may be said, that among the pursuits of the naval surveyor, seamanship is thrown into the shade. As far as attraction to the mind goes, this may be true; but it is no less so, and fortunately so, perhaps that this subject forces itself on his attention, as a paramount duty, and he is not only necessarily urged to its cultivation, by the every day events of his occupation; but his very profession is grounded upon it. Where nautical operations are to be carried on, nautical skill is required for their proper performance, and no where is that skill more essential, than in the presence of those very dangers which are avoided on principle by our men-of-war; but which

must be sought out and examined by the naval surveyor. We consider then that we have given an incontrovertible reply to Captain Hall's question. Excepting in the manœuvring of fleets, and where will the officer of the ordinary line of the service look for this, for alas, the days of "Nelson, Howe and Jervis" are gone by! but excepting in the manœuvring of fleets, the surveying service is a better school for seamanship than the ordinary course of men-of-war because the opportunities are far more frequent while the coast and its adjacent dangers are always present.

But in taking leave of this part of our subject, we have yet a pleasing duty to perform in justice towards our Naval Surveyors. They are no less Naval Officers than their brethren in the ordinary line of the service, and no less than they do they receive the gratifying approbation of the Commanders-in-Chief abroad on the state and condition of their ships as men-of-war, as far as the necessary arrangements required for their peculiar service will admit. This is as it should be. It is an earnest proof of their worth as officers of a profession, the main-spring of which is discipline and good order, proving likewise their sense of the real value of the same discipline, for the performance of duties where dangers are continually incurred, which duties call into action that knowledge of scientific truths which must always stamp them as the indefatigable and real benefactors of their profession.

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#### THE DESERTION OF SEAMEN FROM MERCHANT SERVICE.

————— "If valour greatly claim,  
And native blunt simplicity delight,  
Let the rude gallant sons of Neptune claim,  
A nation's care."—*Hall*.

It is to be hoped, Mr. Editor, that during the present Session of Parliament, this subject will be brought before the House, and that Sir James Graham's Bill will be re-modelled. The evil so repeatedly complained of, has been gaining ground since the peace, and unless some means are devised to put a stop to it, the effect upon trade will be very serious. Sailors are proverbially fickle-minded, and that fraternal tie which exists among shipmates—a feeling universal and strong with seamen of all grades, and but little known in shore communities,\* acts its part in the locomotive movement—like a galvanic battery on a rank of operatives—whenever one subject, among a ship's crew feels the impulse of the "cut and run" monomania! One or two ideas having struck me as offering something like a relief to the consequences of

\* The old adage among Landsmen that "two of a trade can never agree" is inapplicable to Seamen.

the evil, (I cannot say a certain remedy as it is impossible to anticipate effects in such a case,) an evil which so often places the masters of ships in an unpleasant dilemma, and puts the owners to pecuniary loss, I now venture to send them to you, for the consideration of those who are most concerned.

What is to prevent the "Articles" from being signed or subscribed, before a sitting magistrate or other functionary, and an attested copy lodged in the Custom House? Such a document, without the necessity of reference to witnesses, to be deemed sufficient legal proof of the ratification of the agreement and taken in evidence against the deserter.

Again:—Suppose an act were passed decreeing that, any merchant seamen or any other person serving in a merchant vessel, who after having signed or subscribed to the articles of agreement, deserts from his vessel, shall be compelled to serve . . . years in the Royal Navy, that the Commanders of Her Majesty's ships and other vessels, shall have the power of seizing such deserter wherever found. That every seaman, &c. shall be provided with a ticket (and duplicate) marked with his name, description, &c. and those of the master and vessel, in which he quitted the United Kingdom; and that he shall be bound to produce one of these when required so to do by the commander of any of Her Majesty's vessels, by any consul or magistrate, in the colonies or possessions of Her Majesty. Would not such a law go far in remedying the evil?

In addition; that,—exchanges shall be permitted abroad, between the seamen of one merchant vessel and those of another.

The propriety of sanctioning such an indulgence without restraint, or making it conditional by the consent of the masters being given, is, a nice point to decide.

On the one hand, it may be urged that, without some check or limit to the exchanges, there would be a pretty constant round of agitation; and the duties of the ship would be subject to frequent interruption. On the other, it may be said that, if the sanction rests solely with the master, he may not always act with impartiality; and that opposition to the wish of the seamen, although it may be reasonable, may not only create confusion, insubordination, &c., but cause the continuance of desertion—for, the sailor who once sets his mind on quitting his vessel, will do so whether he be permitted or not. I may observe, however, that the proposed penalty (servitude for a given time in the navy,) would act as a check upon desertion, when the exchange should not be allowed by the master; but it should be made imperative on him, to enter his reasons in the ship's Log-book—or, the case may be submitted to the consul, or to the Commander of any of her Majesty's vessels present, who should be empowered to decide.

It is reasonable to believe that, most masters of ships would be glad of such means for ridding themselves of those among their crew who are dissatisfied, or who fancy themselves aggrieved, especially as it often happens that change of vessel, produces a change of conduct in troublesome characters.

It is probable that more than a moiety of these cases of desertion arise from mere whim; the others may be traced to different causes, of which perhaps, the seamen may have some reason for complaint. At all events, as the propensity for change is inseparable from the seaman's character, and is far beyond human sagacity to eradicate, constituted as he is at present, would it not be wise to turn it to advantage, by endeavouring to make it subservient to its own cure, and so relieve the harrassed skippers of a great annoyance? We may not be able effectually to cure the propensity, but all that seems necessary for neutralizing the pernicious consequences which flow from it is, to strip it of its clandestine character. Such an arrangement would probably at first occasion some trouble, but it would soon settle down into a regular course; reconcile differences, by cutting them short, and what is of vast importance, make the useful but eccentric members to whom it would be applied more contented with their lot. Remove the restraint—allow the indulgence, (let the desire spring from whatever cause it may,) and it is highly probable that things would go on smoothly,—at least one cause of irritation would be expelled, and the tars fancying their interests looked to, would probably become more tractable.

It may seem scarcely necessary to extend the argument, but we will essay a few words more.

There is in human nature an inconsistency which although remarkable can neither be denied nor accounted for. The seaman enters voluntarily into an engagement, where the exercise of *will* is restrained and liberty marked by a certain boundary. He becomes in a short time restless under bond, merely because a reasonable check is put upon his freedom for a given time, and by and with his own consent; his perverseness goads him on to a radical opposition; a temporary bondage, although voluntarily, becomes at last so irksome, that he takes the first opportunity to burst his fetters, and is again free for a moment, but to submit to a similar restraint; and this brief possession of independence is gained at the expence of his good name, the sacrifice of his hard earned gains and his personal comforts! He cares not when or where the opportunity offers—change he delights in, and change he will accomplish—reckless of consequences! Now, I venture to predict that if the restriction were removed, and the sailor left free to change his ship whilst abroad, the number that would do so (after a time) would dwindle down to a minimum—the very inconsistency alluded to

would come into useful play. It may be proper to restrict the indulgence, perhaps, to a single exchange during a voyage, unless under particular circumstances. It is absolutely necessary, in forming laws for guidance of the seamen's conduct that, the framers should have a thorough knowledge of his character; his peculiarities, whims, caprices, and prejudices ought to be studied, and the laws made to suit these consistent with justice,—policy dictates such. Seamen are valuable members of society; the prop and stay of this maritime country! and they know and feel themselves to be so, notwithstanding the recklessness of their actions; and unless they are attended to, they being denizens, as it were, of the wide world of waters, will seek other climes and shores where their services are better required. Extreme coercive measures are of no avail with such a class, who for the most part, throughout, have the same identical characteristics. The lines of Pope addressed to Bollingbroke on the character of women (which by-the-by are considered ambiguous,) may be applied to seamen:—

“ Nothing so true as what you once let fall—  
Most 'seamen' have no character at all!”

That is to say: there is little or no variation in their character; not that they are in want of principle. Like the mule, or Pat. Dolan's pig, Jack may be led by gentle means, but you cannot drive him; he is unyielding in his purpose, and there is no obstacle which may stand in his way, and can be removed by human energy, but he will throw aside, when his resolution is once fixed. In a frigate I belonged to, one dark night when off Morant Bay, NINE miles from the shore, a seaman who had been recently impressed, let himself down into the water, and swam to the land! On another occasion I saw at daylight several men stuck in the mud unable to move, near the entrance of the Avon, who had deserted from a sloop of war, lying about two miles off. Two or three, more fortunate, got on board some of the merchantmen and escaped.

With respect to the arrears of pay due, it would be policy, and also be beneficial to the individual seaman wishing to exchange, that such should not be paid him when quitting his vessel abroad; he should, however, be entitled to a pay-certificate (not negociable or transferable) from his captain, specifying the amount due, and any charges which may have been made against his wages; and this document should be countersigned by the mate. The demand for payment may be permitted to be made from any other British or Irish port than the one whence the ship sailed, or where the payer resides—through a Bank, as the easiest and safest medium of communication: the paper, of course, to be endorsed by the seaman to whom the pay is due; and if



he is unable to write, he may be allowed to make his sign, attested by the captain of the vessel he is attached to at that time, or by a householder.

Probably such an arrangement may be open to objections which do not strike us at present. Considering the proverbial carelessness of our tars, a paper of this sort may be liable to be lost or stolen. This indeed would apply with more force if he were to be paid in cash in a foreign port. I may remark, however, that our old men-of-war seamen took great care of their certificates, and smart tickets, which they generally kept in tin cases. I can see no remedy for the objection but in the individual's own attention to that which is of moment to himself. The object desired is, that, the sailor who exchanges should not be compelled at some cost, and, probably, inconvenience to himself, to make personal application at the office of the ship-owner or merchant, for the arrears of his pay. If he suffer shipwreck and lose his pay-certificate, such should not debar him from his just claims, when his person is identified.

Some further reflections in connection with the subject I venture to subjoin here, and do so the more readily, Mr. Editor, as Jack is without an advocate, and unable to plead his own cause in your pages; nevertheless, as we are not blind to his faults, we must not attempt to extenuate them.

From what we have ourselves seen, and from the relation of those who command merchant-vessels, it may be safely asserted that, the unhappy skippers (for most of them are plagued in a manner scarcely endurable, one way or other) are not blessed with the *elite* of that singular class of beings yclep'd—"Blue jacket:"—at all events, there can be no doubt that the preponderance of the "mauvais" is with them, and, consequently, they have their full measure of the *désagrémens* to be expected from such a source.

But, we are bound in equity not to look on one side of the question only; impartiality and fair dealing demand this of those who would steer clear of prejudice; and desiring to hold the scale of justice with an even hand, we say:—

"Grant to the Merchant and Mate all that's due,  
But, let the Sailor have his full share too!"

The condition of the seaman requires improvement, particularly in the mess-places and sleeping berths provided for him; in many cases the latter are shamefully circumscribed; and those I have seen of the former are little better than "dog-kennels," even in some of the large traders. I have not the most distant idea, Mr. Editor, of leaning towards the opinion, that sailors ought to be accommodated with a "carpeted" cabin, but do contend that they are entitled to *good quarters*,

and a sufficiency of *room, light, and air*. Let any reflecting man who does know what seamen have to endure—the arduousness of their sea duties, especially in rigorous and stormy climes by night as well as by daylight—deny, if he can with any show of reason, that the accommodations of a crew should be one of the first considerations in the fitting out of a vessel—it is quite impossible that such a man could be found; but, I apprehend, the point is too often a minor one in many, if not in most cases.

Without seamen, ships would be useless!—this is a truism, indeed; but, I fear it is one which is not unfrequently forgotten by those who profit most by the labour of that invaluable class of men. By the way, the ships which afford the best accommodations to the crew, are those with deep waists. In these vessels the men's cabin—for cabin it is—is situated under the break of the quarter-deck. There the crew have, not only the comfort, (and why should not the *sailor's* comfort be looked to?) at least, of *room and dry quarters*; and not, as in the “eyes” of the vessel, subjected to darkness and wet. The fore “cuddy,” as it is termed, is more suited to the aquatic habits of Polar Bears, than to be the mess-place and dormitory of human beings. In fact it is only bearable in a medium climate. In that of either extreme—of heat or of cold—it becomes a sort of wooden purgatory, where both body and mind becomes affected. At the Havana,—Honduras,—on the coast of Africa, and other inter-tropical places, where the heat is excessive, and miasmata fertile, therein the germ of those destructive fevers which periodically sweep away so many of our seamen, is engendered:—in the one case, such a dwelling becomes almost as insufferable as the “Black-Hole” of Calcutta,—and in the other, as an Esquimaux ice-cabin of the Arctic Regions.

With respect to the conduct of seamen in merchant vessels, it is not to be denied that it is often flagitious. I have witnessed it more than once. I do not therefore wonder that some of the suffering skippers should write on the subject in very strong language. But it were absurd to imagine that throughout the merchant service the men are intractable, and that harmony never reigns in it. I have seen and known the contrary—and whence does the latter arise?—from the example set by the commander and his subordinate officers, the absence of all intemperate language and violence of conduct, and a proper regard to the comforts of the men.

To the behaviour of some masters and mates is to be attributed many of the scandalous scenes which occur on board of merchant vessels. Even peaceably inclined men are sometimes driven into acts of insubordination, and other excess, by the unworthy conduct of their officers.—I have witnessed such display too, and well remember one

mate who never used any milder means of enforcing an order which was not promptly obeyed, than *à la Belcher!* This man, a smart seaman, was a Bristolian, and was drowned in the command of a fine ship. Unquestionably there are a great many clever and worthy men commanding merchant ships, who do honour to their station; but, it cannot be denied at the same time, that, there are others who, from habits of inebriety and swearing, are unfit for their situations; and these are the members who bring discredit on a respectable and most important profession. Exceptions to general propriety of conduct are, indeed, to be found in every society; those attached to the skipper are not therefore mentioned here as being singular, but merely as bearing on the question under review.

I have, Mr. Editor, slightly touched on subjects of great moment to the well-being of our mercantile marine, and having done so with strict impartiality, may be permitted to express a hope that, whilst any endeavour shall be made to enforce obedience in the sailor, every attention will be paid to his condition; for to effect the one *equitably*, the other cannot be neglected.

I have the honour to be, &c.

NAUTICUS.

While on this subject we are tempted to add the following picture of British Seamen at Quebec, contained in a letter from a person long resident in that place.

“ In 1838, the Fall shipping arrived, many hundred sail of vessels at the same time at Quebec having been detained with westerly winds in the river. In all cases when a great number of shipping arrive at Quebec at the same time the wages of daily labour nearly double, in consequence of the seamen contributing little or nothing to the labour of unloading and reloading the merchant cargoes; therefore as long as the seamen's money lasts, they range the streets of Quebec in a drunk and disorderly manner, to the great annoyance of the inhabitants. But in the case of 1838, the seamen amounting to about 700 men, led by a few sea-lawyers, all mutinied, left their vessels in the stream, and of course nearly all became more or less drunk and riotous on shore, demanding double wages, and from their numbers produced general alarm, so much so that troops were ordered out for the protection of property and females. The seamen being half drunk and unarmed, they were soon either driven to their vessels, or taken off to confinement till the prisons were all filled. This sort of trouble from the seamen, happens more or less every year, in such cases as I have before described.

A similar case happened during Lord Durham's stay at Quebec, but his Lordship had established a Police from some of the Volunteer troops, that were drilled during the previous winter, in consequence of the rebellion. The seamen again appeared in great numbers, but the Quebec Police being armed with pistols and cutlasses, were enabled to drive the seamen to their haunts in the suburbs, and to take the stragglers to prison till it was filled, and this last affair was so well managed by the police, that most of the crews were taken from prison to proceed with their vessels on their return voyage.

Finding the Police establishment working so well, (making a dirty town comparatively clean,) there has during the last year, been a Water Police established which has been of great advantage to the Merchant Service, and of comfort to the citizens. No seaman without a pass from the ship he belongs to can be allowed in the street after Nine in the evening. The Water Police having three boats day and night in readiness, the master of a merchant Vessel having any refractory men on board have only to make the case clear at the Police Office, the seamen are taken out by the Water Police, and taken to prison, and there kept till the vessel is ready to sail for England.

“The consequence of this Quebec Water Police is, that some of the worst characters, (and I trust the Quebec merchant seamen are the worst of our naval marine,) for I think not any language can convey an idea of the degradation of their moral character, few are worthy of the olden name of seamen, clearly proving the folly of the lawyers’ proof of a seaman—hand, reef, steer; are obliged to leave Quebec finding that if they are not well behaved they will be sent to prison. Therefore many walk to the lower ports in the Gulf of St. Lawrence, and thence to St. John, New Brunswick, plundering the poor inhabitants to an alarming extent, thinking nothing of breaking through all contracts either for a greater gain or drunkenness. Imagine a man recovering from a beastly state of drunkenness, and after rubbing his eyes endeavouring to discover where he is, every thing being new and strange to him, at last peering up the hatchway he calls out to some more who have been conveyed on board in the same drunken condition. ‘My eyes Jack, what’s that—why I’m d—d if that isn’t a pennant flying over our heads.’ This will give you an idea of the method of obtaining seamen at Quebec.”

[The picture is a severe one, but unhappily no less true, and is amply corroborated by the evidence before Mr. Palmer’s committee, on timber ships last year.—Ed. N.M.]

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## Naval Chronicle.

CHINA.—The following order in council has been presented to both houses of parliament by command of her Majesty, April, 1840.

At the Court of Buckingham Palace, the 3rd of April, 1840; present, the Queen’s Most Excellent Majesty in Council.

Her Majesty having taken into consideration the late injurious proceedings of certain officers of the Emperor of China towards officers and subjects of her Majesty, and her Majesty having given orders that satisfaction and reparation for the same shall be demanded from the Chinese government; and it being expedient that, with a view to obtain such satisfaction and reparation, ships and vessels and cargoes belonging to the Emperor of China and to his subjects shall be detained and held in custody; and, that if such reparation and satisfaction be refused by the Chinese government, the ships and vessels and cargoes so detained, and others to be hereafter detained, shall be confiscated and sold, and the proceeds thereof shall be applied in such manner as her Majesty may be pleased to direct: Her Majesty, therefore, is pleased, by and with the advice of her Privy Council, to order, and it is hereby ordered, that the commanders of her Majesty’s ships of war do detain and bring into port all ships, vessels, and goods belonging to the Emperor of China, or his subjects, or other persons inhabiting any of the countries, territories, or dominions of China; and, in the event of such reparation and satisfaction as aforesaid having been refused by the

Chinese government, to bring the same to judgment in any of the courts of Admiralty within her Majesty's dominions; and to that end, her Majesty's Advocate-General, with the Advocate of the Admiralty, is forthwith to prepare the draught of a commission, and present the same to her Majesty at this board, authorizing the commissioners for executing the office of Lord High Admiral to will and require the High Court of Admiralty of Great Britain, as also the several courts of Admiralty within her Majesty's dominions, to take cognizance of, and judicially proceed upon all, and all manner of captures, seizures, prizes, and reprisals of all ships, vessels, and goods, that are, or shall be taken, and to hear and determine the same according to the course of Admiralty, and the laws of nations, to adjudge and condemn all such ships, vessels, and goods, as shall belong to China, or subjects of the Emperor of China, or to any others inhabiting within any of his countries, territories or dominions; and that any such powers and clauses be inserted in the said commission as have been usual, and are according to former precedents: they are likewise to prepare, and lay before her Majesty at this board, a draft of such instructions as may be proper to be sent to the courts of Admiralty in her Majesty's foreign governments and plantations for their guidance herein: and the said commissioners are to give the necessary directions herein accordingly.

C. C. GREVILLE.

### ADMIRALTY ORDERS.

*Admiralty, Jan. 23rd, 1840.*

WITH reference to the Circular Order of the 14th Feb. 1834, and to their Lordships' letter of the 8th Dec. following, addressed to the Commanders in Chief, in the former of which it is directed, that such *Seamen* as may volunteer to continue their services abroad, after their own Ship shall have been ordered home, shall be paid the Wages due to them by the Naval Storekeepers abroad; and in the latter of which it was explained, that this indulgence was intended to be confined to *Seamen* only; My Lords Commissioners of the Admiralty are pleased to direct, that such *Marines* as may in like manner volunteer to continue their services abroad, shall also be allowed to receive the Wages due to them under the regulations contained in their Lordships said Order of the 14th February, 1834.

*By Command of their Lordships,*

R. MORE O'FERRALL.

[We understand that the Commanders-in-Chief have been informed that the *Marines* are only to be removed from their ships, when the exigences of the service may require it.—Ed. N.M.]

*Admiralty, Jan. 20th, 1840.*

IT is their Lordship's direction that the Commanding Officers of each of Her Majesty's ships and vessels shall transmit through their respective Commanders in Chief Quarterly Returns, according to the subjoined form, of the Gunners, Boatswains, and Carpenters serving afloat, in order that their Lordships may be enabled from time to time to select for advancement those Officers who are most deserving.

*By Command of their Lordships,*

R. MORE O'FERRALL.

Quarterly return of Warrant Officers serving on Board Her Majesty's Ship . . . between the . . . and the . . .

Name.	Quality.	Seniority.	Age.	Length of Service afloat as a Warrant Officer.	In what Ships.	Whether deserving of advancement.	Whether strong and healthy.	Remarks as to activity, sobriety, and general character.

## NAVAL AND MILITARY COMMISSION.

THE Gazette announces that the Queen has been pleased to direct letters patent to be passed under the Great Seal, authorising and appointing Arthur Duke of Wellington, K.G.; Charles Duke of Richmond, K.G.; Gilbert Earl of Minto, G.C.B.; Robert Viscount Melville, K.T.; The Right Hon. Henry Grey, (commonly called Viscount Howick); Rowland Lord Hill, G.C.B.; The Right Hon. Henry Labouchere; Vice-Admiral Sir C. Adam, K.C.B.; Lieut.-Gen. Sir J. Kemp, G.C.B.; Admiral Sir G. Cockburn, G.C.B.; Lieut.-Gen. Sir R. H. Vivian, Bart., G.C.B.; Major-Gen. Sir A. J. Dickson, K.C.B.; Major-Gen. Sir H. Hardinge, K.C.B.; and Col. Sir R. Williams, K.C.B.; to be Her Majesty's Commissioners for inquiring into the several modes of promotion and retirement now authorised and granted to the officers of Her Majesty's Naval and Military forces; for ascertaining the comparative situation of the officers in each branch; and for reporting whether, due regard being had to economy and to the efficiency of the service, it may be practicable and expedient to make any, and what changes in the present system.—See *Nautical Magazine*, page 422, volume for 1838.

## REPORT OF THE COMMISSIONERS FOR INQUIRING INTO NAVAL AND MILITARY PROMOTION AND RETIREMENT.

*To the Queen's Most Excellent Majesty.*

WE, Your Majesty's Commissioners, appointed by Your Majesty's Commission, bearing date the Third day of May, in the First year of Your Majesty's reign, whose hands and seals are hereunto set, do humbly certify to your Majesty—That

We have entered upon the inquiry which Your Majesty was graciously pleased to entrust to our charge, with a full sense of the responsible nature of our duties, viewing them either in relation to the individual interests, present and prospective, which might be affected by the result of our examination, or in relation to that important national consideration, the maintenance of efficiency in the officers of Your Majesty's Army and Navy, whose comparative situation and prospects of promotion and retirement we were instructed to investigate.

To assist in our inquiry, Your Majesty has desired that we should summon before us those who might possess any information on the subjects into which we were to examine, and, acting upon that authority, we have received evidence from officers of every branch of the Military and Naval service. We have availed ourselves also of the resources of every department connected with the Army and the Navy to supply such details as would exhibit the exact condition of the officers with reference to their age, and consequent efficiency for service, the duties they had to discharge, their present remuneration, and the prospects open to them of promotion or retirement.

In the course of our proceedings, as Your Majesty will not fail to observe, various proposals, some of them comprising great and important alterations, and emanating from officers of high character and distinction, have been submitted to us. To all of these we have given our best consideration, but recollecting that the results of a war unexampled in its duration, as in the extent of the services Your Majesty's sea and land forces had to perform, afford ample testimony in favour of the general efficiency of the existing systems in both Navy and Army, we have rather endeavoured to amend where we thought amendment was required, than ventured to propose the adoption of material changes (however plausible the arguments by which they were supported,) the effects of which we were apprehensive might not realize the hopes and expectations of the projectors; and this we have done, under the full impression

that the existing constitution of each branch of the service, with the alterations we have suggested, should they meet Your Majesty's approval, is such as will enable it readily and effectively to meet any demands that may hereafter be made on it either in peace or in war.

The present state of efficiency of the officers of Your Majesty's forces is best shown by the returns for which we called immediately on our assembling; although it will be seen, that in the higher ranks there are many of an advanced age, we are still happy in having it in our power to report that they are for the most part competent to the duties of their several stations, and moreover that there exists, both in Your Majesty's Navy and Army, ample means of extending and organizing either Force to any amount that may be necessary.

Upon one great principle we immediately concurred, that it is for the interest of the individuals whose claims we have had under consideration, as it is undoubtedly for the interest of the country, that the expense should be as much as possible kept down, and that the pay should be regulated on a moderate scale.

The reason we have to submit for this opinion is briefly this. It is the natural interest and should be the object of every officer in either the Military or the Naval service, that the force to which he belongs should be as effective as possible, that it should be of sufficient strength and energy to discharge the duties intrusted to it, and to discharge them in a satisfactory manner. But from the moment that this service should become burthensome to the country, or that a prejudice should be created against it on account of the high scale of its pay, its efficiency would be reduced, its strength curtailed, its capacity to render service to the country annihilated, the opportunities of acquiring reputation and honour reduced in number, or no longer afforded, and it would languish from wanting that popular support which is essential not only to its vigour and efficiency, but to its very existence. Reduction would follow upon reduction, and the non-effective establishment would be increased, while the duty to be discharged, not being correspondingly diminished, would become incessant and irksome to the smaller establishment maintained to discharge it.

The great object to be kept constantly in view is, that the service should be performed not only well but cheerfully; this, however, cannot be accomplished if the severity of the duty should harrass or overtask the energies of those employed in the performance of it, or if they should be led to consider the continuance of that employment of a temporary and uncertain character.

In a small establishment, which would be the necessary consequence of a highly paid service, the hope of promotion, which should be the first incentive to good conduct, might be materially diminished; and there can be no condition of affairs more to be deplored than that which would place a number of efficient officers, with strong attachment to the services in which they have been brought up, in a position where they would be without hope of employment, and consequently without hope of promotion.

In a fluctuating and uncertain establishment, the continued fear of reduction would equally operate to check the energies of those holding employment therein, as their anxieties might be more directed to their individual position than to a satisfactory discharge of their duties.

Steady and certain employment for the efficient, with a due encouragement of promotion, and sufficient reward for those who may be worn out in the service, form the best foundation upon which the Military and Naval establishments of this country should be framed; but neither of these could be secured if by an undue liberality the remuneration for service were fixed at too high a scale.

While, however, we endeavour to press upon Your Majesty's consideration the propriety of limiting the pay for such service to such a moderate amount as may not render the maintenance of any particular branch of it a burthensome charge upon the public revenues, it is equally our duty to submit to Your Majesty the expediency of fixing the scale of service-pay in all classes at such rates as to make employment beneficial for the officer, when compared with his position on half pay.

Our inquiry has shown that, under the existing system, this is not the case in regard to some classes of naval officers; but that it may positively occur that an officer, when summoned to serve under the commission he holds, may receive full pay at a lower rate than the daily allowance of his half pay, or that the advantage to be gained by service may be comparatively so trifling as to afford him no remuneration for the necessary expense of his outfit.

In that division of our Report which has reference to the Navy, we venture to submit certain propositions tending to remove this anomaly, to which we beg Your Majesty's gracious consideration.

Before we enter upon the discussion of the several services, and the examination of their claims in detail, we request Your Majesty's permission to record our opinion upon one particular point in the instructions with which we were honoured.

We were directed to ascertain the comparative situation of the officers of each branch of Your Majesty's service, the object of that inquiry being, as we understand it, to compare the relative ranks of the Naval and Military services with reference to their pay, and the prospects open to them of promotion or retirement.

But, after having fully investigated and considered this part of the subject, we feel it our duty expressly to state that, from various causes, especially when employed on active service, it would be impossible to attempt to assimilate generally the relative pay and advantages of each service.

The education required for each arm of the service is as different as the service it is called upon to perform.

From the engineer or the artillerist is exacted a degree of mathematical knowledge by no means essential to the qualification of a marine, or a cavalry, or an infantry officer, while the sea lieutenant can only establish his claim to that rank by a course of practical education to which all the energies of his mind and body must for years be directed. But it is not only in education or qualifications that the services essentially differ. In their duties, and in their opportunities of obtaining distinction, the variation between them is no less remarkable. The one may be involved in an extent of individual responsibility which can never be imposed upon the other, who, in his turn, renders service valuable in its degree, but not leading to that subsequent distinction which he of more responsibility may acquire.



To establish one unvarying standard of pay for all services would, in our opinion, have a manifest tendency to damp rather than improve those energies upon which the efficiency of all entirely depends.

In the alterations, therefore, which we will venture to suggest for Your Majesty's consideration, we have been governed more particularly by a reference to the especial claims of each particular branch of the service, to its duties, to its hopes of distinction, and to its constitution as a separate and distinct force.

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The service to which our attention was first directed was the corps of Royal Marines, as Your Majesty's Commission had been instituted in consequence of representations from the officers of that force, that they were denied those advantages in pay and promotion which were granted to corresponding ranks in other branches of Your Majesty's service, and upon that representation Your Majesty thought it expedient to direct an inquiry to be made into the condition of the officers of every arm of the service, military or naval.

To assist us in our inquiries, Your Majesty was pleased to appoint Col. Sir Richard Williams to be a member of the Commission.

His long and meritorious services in the corps enabled him to afford us the most valuable assistance in the prosecution of our inquiry, and although we were deprived of his zealous aid, and Your Majesty lost the benefit of the further services of this gallant and distinguished officer, in consequence of his death occurring before our labours were completed, we have had the satisfaction of placing his suggestions upon the records of our proceedings, and have given full consideration to them in the conclusions at which we have arrived.

The complaints which the officers of Your Majesty's Royal Marine forces preferred were,—

1st.—That the number of Field Officers allowed to the corps was insufficient :

2dly.—That the promotion was unusually slow :

3dly.—That there was an unequal distribution of brevet rank, and also an unequal apportionment of prize-money, as compared with corresponding ranks in other military corps : and

4thly.—That the captains of Marines were paid at a lower rate than the captains of the Army or the Ordnance.

With regard to the first of these complaints, the insufficient number of Field Officers, we thought it our duty to institute the strictest inquiries with a view to ascertain whether, on grounds connected with the efficiency of this valuable corps, it would be expedient to recommend to Your Majesty to make any addition to the establishment authorized by the Order in Council of June, 1837 ; and with this view the question was repeatedly pressed upon the several witnesses who advocated the necessity of increasing the number of Field Officers, how they proposed to employ these additional officers ; and they were required also to state whether they knew any instances of the employment of Field Officers on foreign service.

The general recommendation as to the employment of the additional Field Officers was that they should be placed at the several foreign stations, to inspect and keep in order the different detachments of

Marines under the Admiral commanding on the station, or in the different garrisons, Gibraltar for instance; and to the second question, whether they knew any instances of the employment of Field Officers abroad, the answers were, that the employment of such officers on foreign service had been extremely rare.

Col. Tremenheere, an officer of 59 years' service, stated that there have not been many Field Officers sent abroad, but for several years past (alluding, probably, to recent employments in Spain and the Mediterranean,) there have been some.

Col. Owen stated that "our Field Officers did not often go on service during the war."

Col. Wright believed that Sir Richard Williams was the only Field Officer of Marines that ever commanded a battallion abroad during the last war.

Capt. Burton stated that Field Officers were supposed to be exempt from sea duty or foreign service; and could only recollect one instance of a Field Officer having been so detached on service, which was to Holland towards the close of the war.

In fact it appeared that a Field Officer had only been detached on foreign service occasionally, and then with reference to some contemplated employment of the Marines as a battallion on shore.

The station of the Field Officer on board ship was also admitted to be a matter of difficulty.

In the case where Lieut. Col. Wright actually embarked as a Field Officer of Marines for the Lisbon station, he stated that he was three times removed from ship to ship, as the Admiral's ship had not accommodation for the Field Officer of Marines.

Capt. Burton admitted that a flag ship only would be able to afford accommodation for a Field Officer, and that, in a two-decker, additional cabins must be built for him; and Capt. Willes thought that the presence of a Field Officer on board ship would produce some inconvenience.

Even with reference to the stations where Field Officers might be employed in the duties of inspection with advantage, there was a difference of opinion materially affecting the question.

Lieut.-Col. Owen specified only the Mediterranean, the East Indies, and the West Indies.

Lieut.-Col. Wright limited their employment to stations where the Marines amount to more than 400; and did not consider it necessary to place them at all on stations where the squadron is much detached. He considered the East India station to be one where it would not be necessary to have a Field Officer. He applied the same remark to the Cape, the West Indies, and the Pacific. In fact where a squadron is much dispersed, he considered that a Field Officer would be in the way.

Capt. Willes did not think a Field Officer necessary with the squadrons at the Cape, in India, and at the Brazils, or in the Pacific.

The result of this evidence was to confirm us in the opinion that Field Officers were not essentially required for ordinary sea service, and that the existing establishment of the corps furnished sufficient numbers for home duties, or for those extraordinary occasions where it might be necessary to employ any body of Marines ashore.

But we are nevertheless prepared to admit the force of Col. Owen's

argument, that the Marines had a title to an additional number of officers of the higher ranks to give them "a fair proportion of promotion with the other branches of the service," and as it was shown to us that this additional number was not needed on the effective list, we are disposed to recommend to Your Majesty an addition of *two* Lieutenant Colonels to the retired full-pay establishment, making the numbers of that rank to whom retired full-pay may be granted *six* instead of *four*.

We are also disposed to recommend that retirement on full-pay in those corps, in which promotion is acquired by seniority only, shall be no bar to an officer's receiving further brevet promotion in cases where the retirement shall have been caused by ill health, and when, before retiring, he shall have obtained the regimental rank of Field Officer; but the only increased charge we contemplate in this respect, as regards the Marines, is that the retired full-pay officer, who has held the commission of a regimental Field Officer, should have his retired pay increased to £400 a-year upon becoming a major-general.

In furtherance of the object we have in view, of increasing the number of promotions to the rank of Field Officer, we would suggest that two Lieutenant-Colonels of the Royal Marines should be allowed to retire upon half-pay annually, as a permanent provision.

We are of opinion that these arrangements will tend to facilitate the promotion of the officers of the corps to an extent equal to that which would result from the appointment of additional Field Officers on the effective establishment.

With regard to the second ground of complaint, that the promotion in the corps had been unusually slow as compared with other seniority services, we find that in the Order in Council of 21st June, 1837, which fixed the new establishment of the Marines, this was fully admitted; but we are of opinion that the promotions which have followed upon that order, have effected a very material improvement in this respect.

By returns which we have obtained from the Admiralty, we find that all the existing Colonels-Commandant, all the Colonels-Second-Commandant, all the Lieutenant-Colonels, one-third nearly of all the Captains, and one-half nearly of the First Lieutenants have obtained their present rank since that date.

It must be admitted that any arrangements which promoted so large a proportion of the corps, were important steps towards removing the disadvantages under which they had previously laboured.

These disadvantages are attributable to various causes, but the most material perhaps were an insufficient retired establishment, and an unusually large proportion of subalterns to a company.

The first of these disadvantages, we consider that the establishment of retired full-pay, authorized by the Order in Council of 21st June, 1837, with the additions we have ventured to suggest to Your Majesty's consideration, will effectually remove.

With regard to the proportion of subalterns to a company, which is shown to have been four during the whole war, and as far back as 1779, we consider the reduction to two subalterns a company, which was effected in 1825, as calculated materially to improve the prospect of promotion now open to the junior officers, and we are induced to hope that it will prove not only amply sufficient for all the duties of the service, but also to afford a due encouragement of promotion.

The third ground of complaint upon which the officers of Marines prayed for inquiry into their conditions was, that there was an unequal distribution of brevet rank, and the other distinctions and rewards for service, and an unjust apportionment of prize-money, in reference to corresponding ranks in other services.

With regard to the first of these grievances, viz., the withholding of brevet rank for distinguished and gallant conduct, it would appear that the officers of Royal Marines labour under some misapprehension which it will be our duty to remove.

From the nature of marine service, which is generally rendered in small detachments under captains and subalterns, and the recognized absence of field officers from sea duty or foreign service during the war, it frequently happened that the senior officer of Marines in a great naval engagement held no higher rank than that of captain, and he is eligible for no higher reward than a step of brevet rank for the particular engagement.

As an instance of the sparing manner in which this reward was bestowed, it was stated by Captain Willes that, for Trafalgar, where 3,000 marines served in the fleet, one brevet only of major was given.

The fact is, that this was an anticipation of the practice, which was not adopted in the Army till of 1811. giving a step of brevet rank for service in action; and we have no doubt whatever, that similar distinctions will be fully earned and obtained by the officers of Royal Marines, if similar occasions should again require their service.

The same observations will also apply to the distinction of the Order of the Bath, which was not placed on its present enlarged establishment till 1815.

We are fully disposed to recognize the justice of that complaint which was preferred by the Marine Officers, and more especially by Sir Richard Williams, that in the apportionment of prize-money the due gradation of rank should be preserved, and we humbly recommend to your Majesty that so much of the Royal Proclamation of 3rd February 1836, as places Field Officers of Marines on a par with sea lieutenants and captains of their own corps should be rescinded, and that they should be entitled to share prize-money with Officers of corresponding rank in other services.

We feel justified in the recommendation we make in this respect, from the circumstance that during the whole war when Field Officers of Marines did share prize-money, it was on expeditions in which they were joined with officers of the land forces; and on these occasions, the proportion allotted to them was at the same rate as that granted to an officer of corresponding rank in the Army.

There appear to be other distinctions in the position of the superior officers of Marines, which we are also disposed to recommend to your Majesty should be abolished, one having reference to the grant of pensions for good services, and another to the retired pay of the officer removed from the Marines, on promotion to the rank of general officer.

By the Order in Council of 3d July, 1837, regulating the grant of pensions for good services, the general officers of Marines were placed on a footing with the flag officers of your Majesty's fleet, whereas the pensions which have been granted to the Generals of Marines have been fixed at the scale which that Order in Council would give to Captains of the Navy.

We would suggest that the scale of pension should be that of the Flag Officer as sanctioned by the Order in Council.

With reference to the position of the officer removed from the Marines on promotion to be a Major-General, it appears that under the existing regulations, that officer would be allowed unattached pay at the rate of 1*l.* 5*s.* a-day only; whereas if he had retired as a Colonel-Commandant, he would have received 1*l.* 18*s.* 6*d.* a day. In this respect, therefore, the officer who has remained longest on duty may obtain a lower rate of pension than one of much shorter service, and possibly of inferior claims. The regulations of the Army allow every General Officer, removed from the effective service by his promotion, the full pay of his last regimental commission. For these reasons we would suggest for your Majesty's consideration, that all officers, who may retain efficiently their commissions in the Marines until they shall be removed by promotion to the rank of General, should be allowed, on that removal, the full pay of their last regimental appointment.

We are persuaded that any regulations in this respect, which shall be so arranged as to prevent the possibility of the divisions of Marines falling into inefficient hands, will have a happy effect in satisfying those officers, who have passed a long and meritorious service in the corps, that their pensions for good service, and their pay as General Officers, are granted upon principles perfectly analogous to those which regulate other services.

There is but one more alleged grievance in the case of the Royal Marines, on which we shall feel it necessary to offer any suggestions for your Majesty's consideration. It is that the Captains of Marines are receiving a lower daily pay than the Captains of the Line.

The origin of this distinction between the pay of the two services we have ascertained to be this:—A part of the emoluments of an Infantry Captain consisted of an annual allowance of 20*l.*, which was issued to him under the title of "Non-effective Allowance," it being the admitted profit which the Captains of the Army formerly derived from the maintenance of a certain number of non-effective or non-existent men on the establishment of a regiment whose pay formed a fund to cover the expenses of a recruiting. In 1825 this annual allowance was, for official convenience, converted into an addition of 1*s.* 1*d.* to the daily pay of an Infantry Captain. While it had been issued as an annual allowance the claim of the Marine captain to the same advantage was less apparent, inasmuch as the Act of 1783, which recognized the claim of the Infantry captains to this portoin of the non effective allowance as a personal profit, did not extend to the Marines; but when the change into an addition to the daily pay took place, the Marines, resting their claims upon the uniformity of their pay with that of the Infantry in all other ranks, preferred an application for the same increase to the pay of their Captains; and it formed one of the representations which they addressed to your Commissioners.

Upon general ground, as we have already ventured to submit to Your Majesty, we are by no means prepared to advocate the propriety of regulating the pay of one service by the standard of another; but we are not disposed to deny the justice of the complaint which the Captains of Marines prefer, that when doing precisely similar duty to the line, and when actually on service with Line Regiments, they are paid in one rank only, at a rate lower than that which their comrades on

the same service are receiving. This distinction we see no sufficient grounds for maintaining; and we submit that it would be expedient that the pay of the Captains of Marines, when serving ashore, should be issued at the same daily rate as that of Captains of Infantry.

We limit our recommendation to service ashore, because we have ascertained that at sea the Marine officer receives free rations, which may be considered as a compensation for the difference of pay.

There now only remains for us to submit to Your Majesty the conclusions which, in our judgment, result from the evidence we have received respecting the Marines.

1. That it is expedient that officers should not be continued in command of divisions, when no longer equal to the active duties of the service.

2. That every officer of Marines removed from the corps, on becoming a General Officer, should receive the full pay of his last regimental commission, or 400*l.* a year when the pay of his last regimental commission is not of that amount.

3. That upon full consideration whether, in consequence of the proposed alteration with respect to the pay of officers of Marines removed from the corps as Major-Generals, it would be proper to diminish the number of Colonels-Commandant allowed to retire upon full pay, it has appeared to Your Majesty's Commissioners that it would be inexpedient to offer any such recommendation, because the number of retirements allowed to Colonels-Commandant need not be filled up by the Board of Admiralty unless it should be thought necessary, while it might be inconvenient to diminish the means now afforded, by the retirement on full pay of Colonels-Commandant, of removing from the corps officers who, from ill-health or other causes, have become inefficient.

4. The Commission deem it right to recommend to Your Majesty that the present number of Lieutenant-Colonels of Royal Marines allowed to retire on full pay should be increased from *four* to *six*, on the same ground, and in the same manner, as has been recommended for the retirement of the Colonels-Commandant.

5. That the regimental Field Officers so retiring, and all those who may have heretofore retired upon full-pay as such, should be promoted in succession, by brevet, to the rank of General Officer; and that the retired full pay of such of the Field Officers as may attain the rank of General officer, should be made up to £400 a-year, if the retired pay they received should be below that amount.

6. That the Board of Admiralty should be authorized to admit of the permanent retirement annually of two Lieutenant-Colonels of the Royal Marines to half-pay at their own request; but these officers should not be eligible for any further promotion by brevet or otherwise.

7. That it is expedient that so much of the Royal Proclamation of 3rd February, 1836, as relates to the allowance of prize-money to the Field Officers of Marines, under which they are classed with sea lieutenants and captains of their own corps, should be rescinded; and that they should, in respect to prizemoney, be placed on a footing with Field Officers of corresponding rank in the line.

8. That it would be expedient, in regulating such grants of pensions for good services as may be made to General Officers of Marines, to adhere to the principle of the Order in Council of 3rd July, 1837, under

which General Officers of Marines were classed with Flag Officers of the fleet, with whom they rank.

9. That it is expedient that the pay of the Captains of Marines, when serving ashore, should be fixed at the same rate as that of the Captains of Infantry of the line.

Our examination of the systems of promotion and retirement in the Military services having been completed, we directed the course of our inquiries to the state of the Navy, with a view to ascertain the condition and prospects, of the officers of your Majesty's fleet, and to the suggestion of such remedial measures as might tend to maintain in vigour and efficiency this most important arm of national defence.

During the whole progress of our inquiry, and of our subsequent discussion and examination of the various propositions that had been submitted to us, we have been gratified by the zealous and cordial co-operation of that most gallant and distinguished officer, Vice-Admiral Sir Thomas Hardy; and although we are unfortunately by his death deprived of the satisfaction of obtaining his signature to this our Report we beg to assure Your Majesty that we had his full concurrence in all our propositions.

We proceeded, in regard to the Navy, in the course we had adopted with the other services, obtaining from the departments of the Admiralty, statements calculated to exhibit, generally, but not in detail, the ages and services of the officers of the several ranks. We have, moreover, called before us for examination such officers as, from their experience, or the attention they had given to the subject, might be best qualified to afford us information on the objects of our inquiry, and we have given our full and anxious consideration to the many appeals and petitions which were placed before us.

The system of Naval promotion may be described as one of selection up to the rank of Captain, and of advancement, by seniority, from that rank to be a Flag Officer, the qualification for selection being merely that the officer shall have served a certain period in each rank; the qualification for advancement by seniority to be a Flag officer on the active list being that the Captain shall have served a certain period in command of a rated ship.

This brief explanation of the general features of the system of Naval promotion, appears necessary, as a preliminary to that examination of the subject upon which we propose to enter, and is sufficiently distinct as a reference in the remarks we shall feel it our duty to submit to Your Majesty on the present state of the Navy, in relation to the points adverted to in our instructions.

In the Army, the Ordnance, or the Marines, the establishment of full-pay is defined, and the condition of the service is, that the officer, while effective, retains his place on the list of employed officers, passing to another and separate establishment when he shall be disqualified for duty.

In the Navy, from the peculiar constitution of the service, and the limit placed upon employment at sea, there is but one establishment of Naval Officers, comprising both the full-pay and the half-pay list. In the Army, the Ordnance, or the Marines, an effective officer of good

conduct may, on a fixed establishment, be assured of retaining his employment as long as he continues efficient; and if he quits that employment for retirement, it is either because the public service requires a more active officer, or it is a voluntary relinquishment of the service, with a perfect knowledge on the part of the officer retiring that he will pass to another and separate establishment. In the Navy the reduction to half-pay after a short period of service often occurs without any reference to the efficiency of the officers affected thereby. In this retirement the Naval Officer has no choice, and he falls back upon the half-pay list of his class, merely because his ship is paid off, from which half-pay he may never again be removed, although he is still retained on the list of officers liable to be called upon to serve.

Hence there is this difference between the returns we have obtained of the ages of officers in the Army and in the Navy; that, in the former, as we have already stated, officers on full pay only are included, while the Tables of ages and services, prepared by the Admiralty, refer not only to those in actual full-pay employment, but also to all of the same rank, whether in retirement as being notoriously past service, or only on half-pay from their services not being required. This amalgamation consequently tends to increase generally the averages of ages, as calculated for each particular class. We were, therefore, prepared to expect that these returns would exhibit generally advanced ages among all classes of officers; and the result of our examination in no way surprised us, or gave us any reason to apprehend that the high average age of officers of different ranks in the Navy necessarily implied a defective system of promotion in that branch of the service.

As it is, however, above all things our desire to give Your Majesty a clear view of the condition in which we have found each arm of your Majesty's service, we shall proceed precisely in the course we adopted with regard to the Marines, the Ordnance, and the Army, by detailing, where the official records enable us to do so, the ages and services of the several commissioned Officers of the Navy, as they have been reported to us by the Board of Admiralty, fully admitting that a much larger proportion of inefficiency is to be found in the various ranks in the Navy than we have discovered in any of the other services. But we desire to record it as our deliberate conviction, that this admitted inefficiency is not only not connected with the system of Naval promotion, but that, on the contrary, that system of selection offers the best security which could be devised for re-invigorating and re-animating the Navy to any extent which the circumstances of the country might, on an emergency, render necessary. The condition of the Navy at the present moment, therefore, will furnish no data whatever upon which the value of the system of promotion adopted in it could be estimated. Age, ill health, or disuetude, may have unfitted a large portion of the Naval Officers, for sea duties, and have reduced the really available members of the profession to a comparatively small number; but this number during peace is sufficient to meet the demands upon their services, and whenever more are required, the Minister of the Crown, appointed for the management and control of this important service, is vested with ample powers to repair the deficiency on any moment of emergency, by the mere suspension of those restrictions on Naval promotion, which for financial reasons chiefly, at present exist.



It seemed to us expedient to offer these preliminary remarks to Your Majesty's notice, fearing that an inference unfavorable to the system of promotion might be formed from the condition of some officers of the Navy, and that a generally advanced age with reference to rank might be considered a consequence of that system, instead of being, as it is, in evident opposition to a principle of selection, and the result, rather of an extremely liberal distribution of rewards, at the conclusion of a long war, than of any system of promotion proceeding in an ordinary course.

From the Admiralty records the ages of the Flag Officers, at the period of our calling for the return, appeared to be as follows; since that time some casualties have occurred:—

Admirals.	Vice-Admirals.
1 above 90 years of age,	1 above 80 years of age.
7 between 90 and 80.	18 between 80 and 70.
25 between 80 and 70.	24 between 70 and 65.
7 between 70 and 65.	10 between 65 and 59.
1 the youngest 65 years of age.	1 the youngest 59 years of age.
—	—
41.	54.

#### Rear-Admirals.

1 above 80 years of age.	10 between 59 and 53.
5 between 80 and 71.	2 not reported.
19 between 71 and 65.	1 the youngest above 50.
26 between 65 and 59.	—64.

From the same records the ages of 670 of the Captains would appear to be as follow, on the 1st April, 1839:—

1 above 90 years of age.	104 between 49 and 43.
1 between 90 and 80.	52 between 42 and 37.
28 between 80 and 70.	27 between 37 and 31.
105 between 70 and 60.	2 the youngest 30 years of age.
140 between 60 and 55.	—
210 between 55 and 49.	670.

The official documents are not equally available to give us the ages of the Commanders and Lieutenants. One return would show the average ages of the former to be 49 years, and of the latter 43 years; but it is evident that, from the large number of each class who may be considered in permanent retirement, any deduction drawn from an average would be an unsafe guide. We have endeavoured to supply the information required with regard to the ages of the Commanders and Lieutenants, by an estimate calculated in the following manner. We propose to take 13 years as the average age at which the youth commences his Naval career, and to add to that eight years as the assumed average service of each commissioned officer as Mate and Midshipman, or Volunteer. We are of necessity compelled to assume an average of service before the officer receives his commission of Lieutenant, as there are no means of tracing such service, except by reference to the books of each ship in which the officer may have served.

Upon these data, two being admitted assumptions, and in the unavoidable absence of more accurate information, the following statements of ages of the Commanders and Lieutenants have been prepared, and it is believed that they will afford as near an approach to the real facts of the case as could be desired:—

Commanders.	Lieutenants.
6 between 81 and 76 years of age.	11 between 81 and 63 years of age.
15 between 71 and 66.	43 between 62 and 59.
61 between 66 and 61.	45 between 59 and 55.
100 between 61 and 56.	275 between 55 and 51.
183 between 56 and 51.	441 between 51 and 47.
161 between 51 and 46.	910 between 47 and 43.
107 between 46 and 41.	87 between 43 and 39.
87 between 41 and 36.	232 between 39 and 35.
58 between 36 and 31.	415 between 35 and 31.
27 between 31 and 26.	185 between 31 and 27.
1 not reported.	104 between 27 and 24.
1 below 26.	111 between 24 and 22.
807.	20 below 22.
	2,879.

It cannot be denied that the preceding statements show the ages of the Naval Officers generally to be far advanced, in many cases exceeding the possibility of expecting good and efficient service from them; and there seemed to be an admission on the part of all the Naval witnesses that a very large portion of each class was altogether inefficient for service. And, doubtless, an equal degree of inefficiency would have been shown in the Army, if the statements had contained as those from the Admiralty do, one general table of all ranks, either on full-pay or in retirement, or who had at any time belonged to the service.

From the comparatively small number of Naval Officers employed upon full-pay afloat, which may be stated to be in the following proportions:—Captains 1 in 11; Commanders, less than 1 in 10; Lieutenants, 1 in 6; it is evident that by far the greater number of the two superior classes have little expectation, even if the service of the Navy were performed by an accurate rollster, of ever being called upon for duty with an establishment on the limited scale required in time of peace, and the consequence must necessarily be, that a large number may be considered to hold their existing commissions on the Commanders and Lieutenants' lists, without prospect of further employment or advancement. In proof of this we refer to some returns in the Navy Appendix, showing what full-pay service has been rendered by the officers of each class, and what period has passed since their employment.

These returns exhibit the state of the officers of the Navy in June, 1838, just previous to the last general promotion.

The numbers at that time of each of the three ranks of Captain, Commander, and Lieutenant, and the numbers who had never served afloat in those ranks, is shown in the following statement:—

Ranks.	Total Numbers.	Have never served as such afloat.
Captains	683	313
Commanders	807	402
Lieutenants	2,879	530

It would be incorrect to attribute the inactivity of these officers entirely to a voluntary relinquishment of duty on their part, as there is no doubt that very many of them would have been fully prepared to serve if opportunities had been afforded to them; but as we have shown that

the proportion of the employed to the unemployed is as small as 1 to 11 in one class, as to 1 to 10 in the second, and as 1 to 6 in the last class, it must be quite obvious that any full-pay employment must have been quite out of the reach of a very large number.

With regard to the second point, viz. the time that has lapsed since the active employment of some of these officers, and the necessary change thereupon in the character of their half-pay, from a retaining fee to a pension, in consequence of disuetude, the following statement, also prepared from the Admiralty Returns, will show how large a portion must be considered as permanently non-effective.

Rank.	Total Numbers.	Period passed since employment afloat.					Total of preceding Column.	Served during last 10 Years.
		Above 30 Yrs.	20 to 30 Yrs.	15 to 20 Yrs.	10 to 15 Yrs.			
Captains . . . . .	683	12	237	55	98	402	281	
Commanders . . . .	807	34	299	65	126	524	283	
Lieutenants . . . .	2879	57	1257	153	354	1821	1058	
	4369	103	1793	273	578	2747	1622	

With this return before us, which shows that about one half of the officers of the Navy have never served afloat for more than 15 years, and that very nearly 2,000 have not served afloat for more than 20 years, we feel it impossible to doubt that whatever difficulties may have been presented to their obtaining employment, a very large number indeed must regard their positions as one of retirement upon half-pay for the remainder of their lives.

Taking the service therefore as a whole, which, as we have already explained, we are, from its construction, obliged to do, and considering the large admixture of inefficient officers necessarily to be found in each class, we see no reason to declare this inefficiency of the Navy as at all greater than might naturally be expected from an examination so conducted, as to embrace both the available and the retired officers.

At the same time it is our duty to apprise Your Majesty, that if any circumstances should occur requiring Naval armaments of the magnitude employed during the last war, and on the scale adapted to the character of this country, it would be necessary to make probably very extensive promotions, for which ample materials will be found in the numerous able and accomplished officers of every rank in the fleet, so as to place the entire service on a footing commensurate with the expectations which the past services of the British Navy, under its long line of illustrious leaders, have engendered, and to secure the continued possession of that vast colonial empire, for the acquisition of which the country is so materially indebted to its exertions.

Having given this brief sketch of the present condition of the Navy as regards the efficiency of its officers, we propose to trace the course of promotion, step by step, from the entry of the volunteer as a boy on board a ship of war, until he shall take his place as an officer and be finally elevated to his flag.

It is shown in the regulations for the government of the sea-service, that the officers of your Majesty's Navy are divided into three classes, viz.—Commission Officers, Warrant Officers, Petty Officers.

Taking those ranks only whose claims would appear to come within the limits of the inquiry, for which the Commission has been instituted, the first class comprises—Flag-Officers, Commodores (a temporary rank), Captains, Commanders, Lieutenants. In the second class will be found—Masters, Secretaries (a temporary appointment), Medical Officers, Chaplains, Purser, Mates. In the third, or Petty Officers' class, will be found—Midshipmen, Masters' Assistants, Volunteers of the first class. It is in this class of Petty Officers that the young gentleman destined for the Naval service must commence his career.

According to an Order from the Board of Admiralty, 7th of February, 1838, the following are the numbers of Volunteers of the first class, allowed as a part of the peace complement of each ship:—

First rate . 5	Third rate . 5	Fifth rate . 3	Sloops . 1
Second rate 5	Fourth rate . 4	Sixth rate . 2	

and the total number serving on 1st of January, 1839, is stated to have been 147.

It was formerly the practice to allow a Captain or Commander, on first commissioning a ship, to nominate the whole of this class, with the exception of those Volunteers selected by the Admiralty from the Naval College; and the consequence was, according to the evidence, that the Captains generally selected their own friends, and that it was very difficult to obtain appointments for Volunteers of the first class, who had previously been at sea. The only stipulation was, that the Captain's nominations were subject to the approval of the Board of Admiralty.

On the 11th of October, 1834, the Board of Admiralty issued an Order, directing that in each ship, commissioned after that date, in which Volunteers of the first class were allowed, only one fresh entry into the service should be made, on the nomination of the Captain or Commanding Officer, and that the remainder of the complement should be selected by him from young gentlemen who had previously been at sea.

By Order 13th of October, 1837, a similar privilege of nominating one Volunteer of the first class as a first entry into the service, was allowed to each Flag Officer, on hoisting his flag.

In addition to the youths thus appointed to the Naval service, the Board of Admiralty nominate annually 25 Volunteers of the first class, in lieu of those who were formerly received from the College; and this is stated to be equal to the average annual number admitted from that college, while it existed in latter years.

Under this system of restriction, it is calculated that about 55 fresh appointments are made every year, 30 being nominated by the Captains, and 25 by the Admiralty.

After two years' service at sea, and at 14 years of age, the Volunteers of the first class may be rated as Midshipmen by order of the Lords of the Admiralty, or by the Commanders of Her Majesty's ships and vessels. The advancement is given if the Volunteer has conducted himself properly, and after an examination.

The total number of Midshipmen in the service on 1st January, 1839, was 239.

When the youth has been six years at sea as Volunteer and Midship-

man, he is eligible to undergo an examination for seamanship as a qualification for a Lieutenant's commission: and if he should pass this examination, he is, if abroad, entitled, according to the Naval regulations, to claim a warrant under the hand of the Captain or Commander of the vessel, appointing him to the rank and rating of a mate. But he is bound, within two months after his arrival in England, to undergo a mathematical examination to secure the confirmation of his position as a Mate, which, in effect, is that of a passed Midshipman eligible for the rank of Lieutenant. The Captain may withhold the warrant, if the Midshipman's conduct shall not have been good.

The actual number of Mates, serving on 1st January, 1839, was 569.

The Naval candidate is by this step removed from the third, or class of Petty Officers, to the second, or class of Warrant Officers.

When a Mate is unemployed, he is completely out of the service; he has no hold upon it, and he cannot be compelled to serve; and it may be inferred that, without some restriction on the power of the Commanding Officer to select the Mates and Midshipmen for his ship at his discretion, difficulties must have occurred in the way of Mates desirous of re-employment, when their ships were paid off.

To secure to some of the Mates an opening for re-employment, and to provide for there being among the Warrant and Petty Officers competent persons for a ship's duties, a regulation was issued by the Board of Admiralty on the 18th December, 1833, fixing the complement of Mates and Midshipmen for the various ships and vessels on a peace establishment at the following scale:—

First rates . . . . .	24	Sixth rates . . . . .	8
Second rates . . . . .	20	Sloops . . . . .	3
Third rates . . . . .	16	Cutters, gun-brigs . . . . .	2
Fourth and Fifth rates . . . . .	10	Guard-ships . . . . .	8

and directing that the Captain should be bound to take, of this complement the following establishment of Mates who had passed both examinations, if serving at home, or the examination for seamanship, if serving abroad one year, viz.—

First rates . . . . .	8	Sloops . . . . .	1
Second rates . . . . .	8	Cutters, gun-brigs . . . . .	1
Third rates . . . . .	5	Guard ships . . . . .	4
Fourth, fifth, and sixth rates . . . . .	4		

Up to this point the career of the Naval candidate is uninterrupted, with such exceptions as may have occurred in the difficulty of obtaining service; and his advancement through the ranks of Petty and Warrant Officer is a certainty dependent solely upon his own conduct and exertions.

He passes for a Mate at the expiration of six years' sea-service. The examination he then undergoes is that qualifying him for a Lieutenant's commission, which he might receive at 19 years of age; but it is by selection only, made by the Board of Admiralty, that he can obtain this rank.

If he should be selected for a Lieutenant's commission, he becomes eligible, after a service of two complete years at sea in that rank, for promotion to the commission of Commander, which is also regulated by

selection; and with one complete year's service at sea as Commander, he is eligible for the rank of Captain, also upon selection.

From this last rank the promotion to the Flag is now regulated by seniority; the Captain obtaining the commission of a Flag Officer, or being placed upon the retired list of Rear-Admirals, according to the period of his sea-service as a Captain.

The promotion to the Flag, and the advancement of the various classes of Flag Officers, take place contemporaneously with the general Brevets of the Army.

Previously to February, 1830, the promotions in the Navy were in no respect limited to any fixed establishment for each class, but were regulated entirely by the discretion of the First Lord of the Admiralty; and the numbers promoted varied in each year, the Minister of the Crown responsible for the service having reference probably to the claims of the candidates, rather than to the wants of the Navy.

The irregularity of these promotions will be seen in the following statement of the promotions of each class of Commission Officers, during the years from 1st January, 1816, to 1st January, 1830, as delivered in to the Committee on Army and Navy Appointments, by Sir John Barrow, in 1833.

Statement of the Promotions of Commissioned Officers of the Royal Navy, from 1st Jan. 1816, to the 1st Jan. 1830.

	1816	1817	1818	1819	1820	1821	1822
Midshipmen to be Lieutenants	98	36	64	†	57	117	85
Lieutenants to be Commanders	33	10	23	30	17	60	49
Commanders to be Captains	11	26	16	17	3	18	34
	1823	1824	1825	1826	1827	1828	1829
Midshipmen to be Lieutenants	99	164	†	154	146	131	82
Lieutenants to be Commanders	34	41	59	47	80	93	46
Commanders to be Captains	13	16	29	19	30	40	17

† General Promotions in these years.

In February, 1830, a regulation was introduced by the Board of Admiralty, which restricted the promotions to one-third of the vacancies in the superior class; so that from that time only one Captain, one Commander, or one Lieutenant, can be made for every three casualties or removals from the lists of any one of these ranks.

There are, however, the following exceptions to this restriction:—  
 1st. Officers distinguishing themselves by brilliant service. 2nd. Three Officers annually promoted for services in the Coast Guard. 3rd. Death vacancies on foreign stations. 4th. A Lieutenant or a Midshipman, at the nomination of the Commander-in-Chief at each of the home ports; or of an Admiral, on his being relieved on a foreign station, and striking his flag. 5th. General promotions.

It is obvious that, in peace time, the first exception can operate but little to advance Naval promotion. The capture of slavers, or the prosecution of successful voyages of discovery, or for scientific purposes, furnish the only opportunities for acquiring claims to be recognised under this exception; but it is a valuable reservation of that right of selection

which we consider to be judiciously placed in the Minister's hands, to enable him to reward merit or gallant conduct.

The promotions for Coast-Guard service, not being granted exclusively for Naval duties, can scarcely be taken into account as forming part of the system of Naval promotion.

The promotion to death vacancies on foreign service is, in effect, equivalent to the practice of the Army, consistently with which the vacancies in the regimental establishments are filled generally by promotion when the casualties occur on foreign service, the difference between the Navy and Army system in this respect being merely one of degree. The very large portion of the Army employed in the colonies, and their protracted service there, will undoubtedly be productive of a larger proportionate mortality, and will afford, consequently, greater prospect of advancement to casualties that will result from the comparatively limited colonial service of the Navy. The propriety of maintaining this exception to the restriction upon Naval promotion is apparent, as it is consistent with the practice adopted in all the other services.

The fourth exception is no more than a reasonable compliment to a Flag Officer on striking his flag, and requires no comment from us.

The fifth and last exception to the restriction on Naval promotion occurs on the occasion of general promotions. It is the usual practice, on such occasions, to confer promotion on an undefined number of the classes of Naval Officers, who are promoted by selection. These promotions are entirely made at the direction of the First Lord of the Admiralty, assisted by his Naval colleagues.

We have called for statements calculated to exhibit the extent of promotion which the selections made on these occasions have conferred during the last 10 years, and we do not find that they have been made sparingly.

In 1830, contemporaneously with the Flag promotion of the 22nd of July, there were the following promotions of selected officers:—

Commanders to be Captains, 18; Lieutenants to be Commanders, 20; Mates to be Lieutenants, 24.

In 1837, on the 10th January, with the Flag promotions:—Commanders to Captains, 35; Lieutenants to be Commanders, 25; Mates to be Lieutenants, 25.

And on the 28th of June, 1828:—Commanders to be Captains, 35; Lieutenants to be Commanders, 50; Mates to be Lieutenants, 60.

In Naval promotions, it is to be observed that all advancement is to substantive rank, and is accompanied with pecuniary advantage; whereas, in the Army or Ordnance corps, the brevet rank which is given at periods of general promotion is not substantive rank, as we have shown in our Reports upon those services, and, except in the instances of the Colonels upon half-pay being made Major-Generals, or the Captains made Brevet Majors, carries with it no increase of pay whatever.

The grant of substantive rank, which is the effect, or rather the accompaniment, of a general promotion in the Navy, renders this boon a more valuable one than that conferred by brevet advancement in the Army, a point which should not be lost sight of in estimating the comparative position of the officers of the two services.

As we have endeavoured to show the present state of efficiency of the

officers of Your Majesty's Navy, and have described carefully the course of promotion adopted throughout, we propose to refer to each separate rank in detail, pointing out the peculiar disadvantages under which we consider some of them to labour, and to suggest such remedies as, consistently with a due regard to economy, may present themselves to our minds. We shall take the classes in their order, beginning with those through which the Naval candidate must pass before he can take his position on the quarter-deck of a ship-of-war in the highly responsible office of Commanding Officer.

It does not occur to us to offer any suggestions to Your Majesty with respect to the Naval Officer while he is holding the situation of Volunteer or Midshipman; he may, while in that position, be described as a Cadet for the sea service merely. His connexion with the Navy may terminate with a single voyage. His inclinations, or the state of his health, may induce him to direct himself to other pursuits; and even at the expiration of the whole period of his service as such, he will still have before him all the prospects that may be open to any young man of 17 or 18 years of age; and certainly under the new and improved system of Naval instruction, he will not be deprived of those advantages of education, the loss of which might have resulted from sea service in periods more remote from the present time. It is, however, certain that a very considerable number of Naval candidates do relinquish the sea service in this their noviciate, as may be inferred from the number of admissions into the class exceeding the annual average of those who pass their examination for the rank of Lieutenant to an extent which the ordinary casualties of service would not account for. It was indeed stated to us in evidence, that a considerable number of Volunteers leave the service in the course of their two years' probation to be Midshipmen; and an inference was drawn from this circumstance that the chances of promotion for young gentlemen now entering the Navy are better than might be supposed from the average annual promotion from the Mates to be Commission Officers.

When the Midshipman has passed his examination, and maintained his qualification to be a Lieutenant on an opportunity offering itself, his value as a serviceable officer of the Navy becomes more apparent. His abilities in seamanship and navigation have been tested by a rigid examination, and his conduct must have been good, or his rating as a Mate would, according to the evidence before us, have been withheld from him. In our opinion, it would be highly expedient to attach this valuable class of officers definitely to the service by the grant of some warrant or commission from the Board of Admiralty, and to give them a permanent position in the Navy. At present they have neither rank (when paid off), half pay, nor retirement. If they are paid off from one ship, they must seek an appointment to another, and failing that, they no longer form a part of the service, and have no tie to it whatever. It is our unanimous conviction that this state of things requires, on public grounds, amendment, and that both justice and sound policy render it of importance to secure to the service those who have passed through their probationary course, and who have shown that they are qualified to take their position as Commissioned Officers. There is no witness examined by us who has not borne ready testimony to the merits and the value of these officers; and such of us, whom Your Ma-



jesty has been pleased to assemble for the purpose of this inquiry, as have had the opportunity of observing the conduct of these young men in the course of our service, would desire to add our own testimony in support of their strong claims to consideration.

As a general question, we should have felt some hesitation in entering upon any consideration of the rates of pay assigned to the officers in the different branches of the service, unless it had been shown to us that the efficiency of the service was exposed to detriment from an insufficient scale of remuneration to those employed therein. We have, on this account, already suggested an increase of pay to the Adjutants of the Army, and the same reason will induce us to offer a recommendation that an increase of pay should be given to the Mates of the Navy. We certainly do not consider that the present scale, which fixes their pay at about 5*l.* a-year, is sufficiently remunerative to encourage these gentlemen to continue to afford their valuable services in a profession, where proficiency can only be acquired by great practical experience: and, as we propose to attach this class to the Navy by a warrant or commission, and by half pay, we should consider it highly expedient to elevate the rank by the establishment of a scale of pay more nearly commensurate with their station and duties than exists at present.

The recommendations we offer in this respect to Your Majesty are:— first, that the sea-pay of the Mates should be fixed at 3*s.* 7*d.* a-day, or 5*l.* per lunar month; and, second, that after three years' actual sea service as Mate, and when unable to obtain employment in Your Majesty's service, Mates should be entitled to half-pay at the rate of 2*s.* 6*d.* a-day.

With regard to retirement, we have to observe that we should consider it expedient to assign a limit to their liability to service, and to fix a period at which it should be within the power of the Board of Admiralty to allow a Mate to retire altogether with a pension. We considered and discussed this point very fully, desiring to guard ourselves, on the one hand, from the possibility of recommending that serviceable men should be encouraged to relinquish employment in the Navy, and, on the other hand, quite disposed to recognise the claims of such as might be entitled to that indulgence to a permanent provision from the public on a scale proportioned to their pay for employment. We propose to recommend to Your Majesty to invest the Board of Admiralty with a discretion in this respect, merely prescribing a given period of service as an essential condition of eligibility for the pension. We see no reason to fix this retired half-pay at a higher rate than the half-pay which is held under the liability to service, viz., 2*s.* 6*d.* a-day; and the term of service upon which we would propose that the Board of Admiralty may be left to decide the title of a Mate to retired half-pay should be twenty years' actual sea-service, during ten of which he shall have had rating as a Mate.

As we desire to examine the condition of the several ranks of officers in the course which they would follow on promotions, we shall proceed to the Lieutenants, deferring for the present our observations upon some other classes.

Our examination to the evidence in regard to the rank of Naval Lieutenant, has led to the conviction that a very large number must be considered as having obtained this commission as a provision from the

public for service in an inferior station. They did not, of course, obtain Lieutenancies exempted from a liability to be recalled to employment; but to many it must have been apparent that this contingency was remote, and they must have viewed the position they obtained as the ultimate station they would hold in the Navy. The promotion of more than 1,000 officers to be Lieutenants, in one year, at the close of the last war, would in itself furnish a sufficient proof of this. Nor can we overlook the fact exhibited to us in the returns of services procured from the Admiralty, that a large number of the class have done very little sea-duty since their advancement to that rank. We have no doubt, however, that this deficiency of service, and unwillingness to be employed, as shown in the evidence before us, has arisen in many cases from the little inducement to Lieutenants to remove from half-pay to full-pay.

One return in the Navy Appendix shows that—  
 530 have never served as Lieutenants.  
 386 less than one year as such.  
 656 from one to three years as such.  
 —1,572.

Another return shows that 1,467, or rather more than one half of the whole class of Lieutenants, have not served afloat for more than 15 years, and that of this number 375 have never served at sea as Lieutenants at all: and of the next 354, who have not been afloat for more than ten years, it is shown that 109 have not served in that rank at sea. We should, indeed, say that the rates of half-pay provided for Lieutenants have been framed upon a scale which would place the senior 1,100 of the number almost in the position of receiving retired full-pay.

Under the Order in Council of the 30th January 1816, 100 of the Lieutenants taken by seniority, are placed on a retired list (if they desire it) with the rank of Commander, and a pension of 8*s.* 6*d.* a-day. The remainder of the rank are allowed half-pay at the following rates, viz:—the first 300, 7*s.* a-day; the next 700, 6*s.* a-day; the remainder, 5*s.* a-day. Any one of the first 300 receiving 7*s.* a-day, may have the rank of retired Commander, on foregoing all claim to further promotion; but he obtains no increased pay, and the Lieutenants' list is not affected by his acceptance of that rank. According to the existing scale of sea-pay, the highest rate any Lieutenant could receive would be that allowed to the First Lieutenant in a flag ship, something less than 159*l.* a year, and the minimum rate for any other Lieutenant in a sea-going ship would be about 120*l.* a year. These being the extreme rates of sea-pay allowed to Lieutenants, it appears unreasonable to expect that an officer of that rank amongst the first 300, receiving 7*s.* a-day, (127*l.* 15*s.* a-year,) or that many among the next 700, receiving 6*s.* a-day (109*l.* 10*s.* a-year,) would be candidates for service, when the advantages to be gained by it would be, under any circumstances, so moderate as not even to repay the necessary cost of outfit.

A Lieutenant taken from the 7*s.* list could only obtain an increase to that which he receives as half-pay by appointment to be First Lieutenant. If in a flag ship, he would receive for his service about 30*l.* a-year; if not employed in a flag ship, about 20*l.* a-year. As other than First Lieutenant, he would receive about 20*s.* a-year in a flag ship, and be a positive loser by service in any other position than First Lieutenant in a sea-going ship.

A Lieutenant taken from the 6s. list would, of course, receive for employment 18l. 5s. a-year more in any position is compared with his half-pay, than one taken from the 7s. list; but it is impossible to consider this increase, which, in the most favourable position, would not exceed 48l. a-year, and as a Lieutenant on ordinary duty would not exceed 10l. a-year, as a sufficient encouragement to any officer willingly to incur the expense of an outfit, which has been stated to us in evidence might be fairly estimated at 150l., and to take service for about three years, as these are terms which would not reimburse him even for the necessary charges attending his equipment.

The small number employed of the two senior classes of the Lieutenants, and the very close approximation of their rates of half-pay to the full-pay they would receive for sea-service, are, in our opinion, almost conclusive to the establishment of the fact, that the Lieutenants on the 7s. and 6s. list are to be considered virtually more in the light of retired officers, than as officers generally available for service; although the principles of the service do not admit of this construction.

We are here led to the consideration of the anomaly peculiar to the Naval service, that by mere seniority on the list, without any, the slightest reference to service performed, an officer acquires a right to an increase of his half-pay. In the Army, the Ordnance, and the Marines, no regulation exists which would give any Half-Pay Officer an increase of his half-pay without any advance of rank, or which would allow standing upon half-pay and seniority to count as equivalent to service.

It was, indeed, specially provided in the regulations for the increase of the half pay of the officers of the Army and Marines, which increase was granted in 1814, in consideration of their services during the war, that the benefits of the advanced rates of half-pay should be strictly limited to those officers who should be reduced on the formation of a peace establishment, or who should have been placed on half-pay during the course of the war in consequence of wounds or infirmities contracted on service.

In the Navy, on the other hand, the increased rates of half-pay have been invariably given to the seniors of the rank, without any reference to the length of service performed, or the period when that service was rendered.

This principle of increasing half-pay for seniority without reference to service, we should think it expedient to qualify in some degree as far as regards the Lieutenants. We consider, therefore, that for the future it would be highly expedient to establish a minimum rate of half-pay for the Lieutenant, from which he should only be removed after a certain term of sea service in that rank, and which shall approach less nearly to the sea-pay than the present rates, so as to make service more remunerative than it can be under the present system. We would beg to suggest to Your Majesty, that the half-pay of Lieutenants hereafter promoted to that rank should be fixed at 4s. a-day, to be increased to 5s. a-day after three years' sea service as Lieutenant. We should desire, however, to make an exception in favour of those Lieutenants who, from ill health contracted on service, might not be able to complete their three years at sea; and we think this might be accomplished by reserving to the Board of Admiralty a power to place any Lieutenant on the 5s. list who shall have been incapacitated for service under circumstances giving him a claim to such retirement.

This advantage, to be acquired by service, we should consider calculated to remove some of the embarrassments that at present result from the general disinclination of the Lieutenants to resume service, except, as is stated in the evidence, on the part of those who are deficient in the term of sea-service required to qualify them for the next rank. But it is our duty to submit to Your Majesty our opinion that an increase of half-pay to be gained by service is not the only change we should recommend in the condition of the Lieutenants of the Navy.

The sea-pay of this class of officers we consider to be insufficient, either as a compensation for the responsibilities of their duty, or as an encouragement to the exertions of those energies which the character of the Naval Service demands, and upon which its efficiency entirely depends.

According to the present scale of sea-pay, a Lieutenant will scarcely be reimbursed those expenses which must attend his outfit for service. This is neither just nor politic; and the conviction that some improvement of the condition of the serving officer was essential, has been most strongly impressed upon us in the case of the Naval Lieutenant. We cannot suppose that an appointment to full-pay will be an object of anxiety to the Lieutenant, when all he would gain by it would be about 28*l.* a-year, at a considerable expense for outfit. Carefully weighing the urgent reasons that exist for a rigidly economical administration of the public revenues on the one hand, and on the other the no less imperative necessity of keeping the limited Naval establishment employed in time of peace; energetic, and therefore useful—contented, and therefore efficient—we have no hesitation in earnestly addressing our unanimous recommendation to your Majesty that there should be a considerable increase to the rates of sea-pay allowed to the Navy Lieutenants.

The suggestion we have to offer in this respect is, that the full-pay of all Lieutenants of seven years' standing in that rank, and being First Lieutenants of sea-going rated ships, or in command of any of Your Majesty's ships, other than those employed on the packet or surveying establishment, should be fixed at 11*s.* a-day, or 15*l.* 8*s.* per lunar month; and that the full-pay for all other Lieutenants should be fixed at 10*s.* a-day, or 14*l.* per lunar month.

We should, however, recommend to Your Majesty that, if this increased scale of pay should be adopted, the extra pay of 6*d.* a-day, at present allowed to all Lieutenants in flag ships, should be discontinued.

After two years' service at sea as a Lieutenant, an officer is eligible for promotion to the rank of Commander, the condition of which class we shall now proceed to examine.

The sea-pay of a Commander, which is about 300*l.* a-year, offers a better inducement to officers of that rank, who would be taken from the half-pay, to serve, than can be found for the Lieutenants according to the existing scale; there is not, therefore, that unwillingness to resume service which, we have been informed, is manifested by the Lieutenants, and no complaint has been presented to us of the full-pay being insufficient. Under these circumstances, we do not consider that we are called upon to recommend any change in the Commanders' rate of sea-pay.

The grievances under which the officers of this rank consider themselves to labour, have reference to those points we are more particularly

instructed to investigate, viz.—promotion and retirement: their complaint in regard to promotion being directed against the adoption of the principle of selection in the advancement of Commanders to be Captains; and it was suggested to us that the promotions from the Commanders' list should be made according to seniority. This, however, is a suggestion which we are not at all disposed to adopt. It is obvious, that if seniority promotion is made to commence in a lower rank than it does at present, the age at which it may be possible for any officer, however distinguished, to reach his Post or Flag rank must be much greater, to the infinite detriment of the public service; and we do not think that the preliminary division of the Commanders into an effective and a non-efficient list, which was proposed, would be sufficient to remedy the evils that must result from a system of seniority promotion so extended. Upon a full consideration of the whole subject, we are by no means prepared to recommend any deviation from the existing rule in respect to the promotion of Commanders to Captains' rank.

With regard to retirement, the Commanders have some exclusive ground of complaint. They urge that there is no provision in the establishment of Greenwich Hospital for any officers of their rank, and further, that there is no retired list for the seniors of their class similar to the rank of retired Rear-Admiral as opened to the Captains, or to that of the retired Commander as opened to Lieutenants. For both of these grievances we should consider it expedient that redress should be afforded. The advantages of Greenwich Hospital should be opened to Commanders as they are to Captains and Lieutenants; and we would, therefore, recommend that four Commanders should be added to the establishment of that institution.

With respect to a rate of retired pay for Commanders, we would suggest to Your Majesty, that the principle adopted in regard to the first 100 Lieutenants should be applied to the Commanders. These 100 Lieutenants have the option of retirement as Commanders, with the lowest rate of half-pay of that rank, viz. 8*s.* 6*d.* a-day; we would recommend that a precisely similar indulgence should be extended to a limited number of the senior Commanders; and we should consider that it would be fair to allow 50 of the seniors of that rank the option of receiving the retired rank of Captain, with the lowest rate of half-pay allowed to a Captain, viz. 10*s.* 6*d.* a-day. It is not in our view to reduce the numbers entitled to the half-pay of 10*s.* a-day as Commanders by the proposed boon. We contemplate the institution of a class of 50 retired Captains, with 10*s.* 6*d.* a-day, to be followed by the same number of Commanders, viz. 150, at 10*s.* a-day, as are at present allowed.

We pass now to the rank of Captain, for which the Commander is eligible, after one year's service completed at sea. The propriety of selecting for this rank is in our opinion unquestionable. The responsibilities involved in the exercise of Captain's command, viewed either in relation to the public, or to those placed under his immediate authority and control, are so great, and the interests that may be entrusted to his charge are so important, that we could not, with satisfaction to ourselves, neglect to express our entire conviction that the promotion to this high office should be made under the direct authority of the Minister of the Crown, upon a selection to be governed altogether by his discretion, under the usual liabilities for the exercise of this power.

One grievance alleged on behalf of this class, and to which our attention was most strongly directed, was the great expense to which Captains of the Navy were subjected on commissioning a ship. The cost of the outfit, calculated upon a scale sufficient to enable the Captain to maintain a table, was shown to us to be considerable, and the difference between half and full pay was in many cases scarcely sufficient to reimburse the Captain these expenses, or, at all events, was not such compensation as he was entitled to for the advantages which we are satisfied must result from the establishment of a separate table.

Our view of the matter, therefore, is that articles of table equipment should, upon application of the Captain or other officer, be furnished by the public; that a moderate assortment of table plate, of cabin furniture, of cutlery and table linen, and of cooking utensils, should be supplied from public stores in the several dock-yards, for the uses of the Captains on taking a command, according to a scale and rates to be fixed by the Board of Admiralty. It appears to us reasonable to subject the Captain to a certain per centage for the use of these articles, which might be applied to form a fund for the future supply. The most equitable mode of proceeding that occurs to us, in regard to these articles of cabin equipment, would be to have a fair valuation made of the articles supplied, and to lease them to the Captain for the term of his command, at the rate of 10 per cent. per annum, with an understanding that he would be liable to the full cost of any of the articles missing, unless it were shown that the cause of the deficiency arose out of the casualties of sea-service, and that it was in no way attributed to carelessness or neglect. This proposition we are quite aware is entirely strange to the practice of the service. The articles of plate, &c. which it is our recommendation should be supplied by the public, have hitherto been furnished at the cost of the officer. But feeling that these supplies are actually necessary for a public purpose, that the expenditure at the Captain's table is mainly devoted to a public object, and that it is in fact essential for the well-being of the service, we should, in our opinion, be shrinking from our duty to Your Majesty, if we failed to press it seriously upon Your Majesty's consideration, that it is not consistent with the position of a Naval Captain, in the British Service, that the mere equipment of this table, which he must maintain for the advantage of the discipline of the Navy, should be, as it too often is, a matter involving him in serious pecuniary difficulty. The sea-pay of the Captain does not appear to us to be fixed at a rate which would render the indulgence we propose to extend to this class, any thing more than might be justified by the scale of expense in which the officer holding the commission is, for public ends, compelled to maintain his establishment.

The following are the rates of sea-pay in round sums:—

Captain 6th rates, 350 <i>l.</i> a-year.	Captain 3rd rates, 600 <i>l.</i> a-year.
— 5th rates, 400 <i>l.</i> —	— 2nd rates, 700 <i>l.</i> —
— 4th rates, 500 <i>l.</i> —	— 1st rates, 800 <i>l.</i> —

The ship being paid off, generally after about three years' service during peace, the Captain falls back upon half-pay at one of the following rates:—

The first 100,	14s. 6d. a day	264l. 12s. 6d. a-year.
The next 150,	12s. 6d. —	228l. 2s. 6d. —
The rest,	10s. 6d. —	191l. 12s. 6d. —

If it were necessary to offer any further grounds upon which our preceding recommendation should rest, we feel it might derive some support from a reference to the position of the officer's family during his absence on service. We might urge that in the Captain's case, an establishment in no way benefited by the expense of his outfit must be maintained at home for his family; that sacrifices must be made by them, to enable him to secure his position as an officer on service, under any circumstances, and that it must in all cases be necessary for the officer to infringe largely upon his private resources, or to forestal his accruing income from his appointment, by procuring advances from his agent, to prepare for the habitual and almost daily expenditure arising from cabin charges, which he not only cannot avoid, but which it is almost his duty to incur, to assist in the maintenance of good order and discipline in his ship.

It does not occur to us to suggest to Your Majesty the adoption of any other changes in regard to the Captain's pay or allowances. Various propositions were made to us to recommend the establishment of a retired list for officers of this rank, as well as for other ranks in the Navy, the particulars of which will be found in the evidence given in the Appendix. The whole of these propositions had, however, reference rather to claims arising out of seniority on the respective lists, than of service performed; and they did not appear to us to be calculated to advance the public interests to any extent commensurate with the charge they would entail upon the public revenues. We, therefore, upon a full consideration of these suggestions, have refrained from offering any recommendation to Your Majesty, to extend the principle of a retired list beyond the present practice, except in the cases of Mates and Commanders, for the reasons we have explained in our observations on those classes.

The most important question connected with the rank of Captain, which came under our consideration, had reference to the system of promotion to the rank of Flag Officer.

By the evidence in the Appendix, it will be seen that prior to the year 1747, Flag Officers were taken from any part of the list of Captains from which the Board of Admiralty thought proper to select them; and that in consequence of complaints preferred by certain Captains, who had been passed over in such selection, the rank of retired Rear-Admiral was established; this retired rank being in the first instance limited to such officers as had distinguished themselves in the recent Spanish war. In 1771, by Order in Council, it was declared that this boon of the retired rank for such it was stated to be, should be conferred upon any Captains, who might be passed over on selection, provided they had served with approbation in any war immediately preceding any promotion which passed their names. So strictly was this rule as to approved service being necessary to establish a claim to the retired rank of Rear-Admiral enforced, that in Lord Howe's Naval Administration, when sixteen Captains were selected for Flag Officers' rank, and twenty-nine were passed over, there were only five of those passed over who were considered entitled to the retired rank. This exclusion produced great discontent; and by a subsequent regulation, on the 19th

of December, 1804, it was established that every officer, who had served at all in the last preceding war, should be entitled to be placed in his turn upon the active list of Flag Officers, the retired rank being given to those who had not so served in the last preceding war. Difficulties and embarrassments, however, grew out of this regulation, and cases occurred in which officers of good service were excluded even from the retired rank because they had not served in the last war, the terms of the Order in Council operating severely and unfairly against them.

To remedy this state of things, and to ensure to every Captain of unblemished character, who had not declined nor avoided service, the rank and pay of a Flag Officer, an Order in Council was issued on the 30th June, 1827, which first prescribed the conditions under which a Captain might be qualified for promotion to be a Flag Officer on the active list, viz.—four complete years in command of a rated ship during war, or six complete years during peace, or five complete years of war and peace combined. Failing these terms of service, the officer would be placed upon the retired list of Rear-Admirals, with Rear-Admiral's pay, but eligible neither for further employment nor for promotion.

In proof that the rule for exacting the requisite period of service to qualify a Captain for his flag is very rigidly enforced, it was stated in evidence, that an officer who had lost an arm in the service, and wanted but one day of four years' war time, was compelled to serve one year and a day, to make up the five years of war and peace combined, to entitle him to the active flag. But it might occur that an officer having an equal claim with the one in question, and with as little deficiency of service, might not succeed even in obtaining, as he did, the opportunity of completing his period, in which case he would be placed irretrievably on the retired list.

Upon a full consideration of this question, we confess that the impression on our minds is, that the distinction between the active and retired list of officers is productive of little, if of any real advantage to the public, while it operates most distressingly in some instances upon the feelings of meritorious and gallant officers; and it is our opinion that this retired rank might with propriety be abolished.

It cannot be said to have succeeded as a measure of economy, inasmuch as the retired Rear-Admiral receives the same rate of pay as the Rear-Admiral of any of the specified squadrons of Your Majesty's Fleet, and the saving upon this enforced retirement would therefore arise merely from withholding from him the various increases of pay which he would obtain on the active list, by promotion to the steps of Vice-Admiral and Admiral. Nor can this arbitrary regulation, under which many active and able officers may be placed in retirement, whilst others, entirely disabled by their infirmities, are advanced on the active list, be defended as founded upon any distinction in point of efficiency in the two lists.

As economy is not materially supported, and as the retired list is in itself grating to the feelings of Naval Officers upon whom it is enforced; and as it has no precedent in the practice of the Army where the offer to serve is held to be sufficient to ensure a Brevet advancement to corresponding Army rank; we feel justified in submitting our earnest recommendation to Your Majesty, that the rank of retired Rear-Admiral be henceforth discontinued.



It is shown by the preceding statement, that for nearly a century the Admiralty endeavoured to maintain the principle of selection in the promotion of Captains to the rank of Flag Officers, and that the principle and practice having been repeatedly modified, were, after all, found so difficult in execution, that they were totally abandoned; and the advancement to Flag Officer's rank has since been determined by seniority alone. We desire to complete this arrangement by recommending Your Majesty to remove, for the reasons we have given, the distinction which exists between the promotion to the active and the retired list of Rear-Admirals.

During the anxious consideration which we gave to this subject, a proposition came under discussion to assimilate the position of Flag and General Officers by the establishment of an uniform rate of half-pay for all Flag rank, to be relieved by the partial distribution of pensions to officers selected by the Board of Admiralty for distinguished sea-service, the fund for such pensions arising from the difference between that uniform rate and the present scale for the higher ranks of Flag Officers so to avoid additional expense to the public.

But as this, unless extended to a much greater degree than was contemplated, appeared to lead to a renewal of the same difficulties which resulted from the old system of promoting of selection to the rank of Flag Officer, we cannot support the scheme by our recommendation.

We would nevertheless humbly suggest to Your Majesty to maintain the same distinction as to pay which at present exists. A Captain not having the required period of sea service would, under the present system, be promoted to the rank of retired Rear-Admiral, with the pay of 1*l.* 5*s.*, without any prospect of advanced rank, and consequently without any increase of pay. Our recommendation is that all Captains, according to seniority, if they shall have offered for service, and not declined an appointment, when proposed to them, should be promoted in their turn to be Rear-Admirals of Your Majesty's Fleet, and should be advanced with other Flag Officers of their standing, from that rank to be Vice-Admirals and Admirals; but if they are deficient of the terms of sea service required, we would suggest that they should obtain no increase of half-pay with their advanced rank, unless they shall have been selected for command, and shall have completed as Flag Officers, the period of sea service they should have rendered while holding commissions as Captains. The effect of this arrangement would be to remove the objection which many gallant officers must entertain to a rank which places them beyond the hope of employment, more especially in cases where a very short period of sea service may be wanting to make good the claim to Rear-Admirals rank on the active list.

In our progress through the ranks of the Navy, the classes of officers we have yet to speak of are Masters, Secretaries, Medical Officers, and Pursers,

According to the regulations of the Navy, the half-pay of Masters is fixed at the following scale:—

For the first 100, being qualified for 1st and 2nd rates, 7*s.* a-day.

For the next 200, being qualified for 3rd and 4th rates, 6*s.* a-day.

For the remainder, having served five years in the Navy, two of which as Acting or Second Masters, 5*s.* a-day.

And their sea pay would be as follows, in round sums:—

First rates . . .	170 <i>l.</i> a-year.	Fifth rates . . .	120 <i>l.</i> a-year
Second rates . . .	130 <i>l.</i> „	Sixth rates . . .	110 <i>l.</i> „
Third rates . . .	150 <i>l.</i> „	Sloops . . .	100 <i>l.</i> „
Fourth rates . . .	140 <i>l.</i> „		

The Master's outfit is represented to us to be as expensive as, or even more so than the Lieutenant's; while the advantages of resuming service are not more apparent in his case than they are in that of the Lieutenants: and moreover the Master has little or no hope of promotion beyond his rank.

All that a Master can gain by appointment to full pay in a first, second, third, or fourth rate, will be from 40*l.* to 30*l.* a year. Those qualified for fifth or sixth rates, or sloops, will receive as full pay from 28*l.* to 9*l.* a-year more than is allowed as half-pay.

This is certainly not a sufficient encouragement to obtain the prolonged services of a very valuable class of men; and we cannot hesitate to recommend an increase of the full-pay of all Masters. The scale we should propose would be for first, second, and third rates, 11*s.* 8*d.* a-day, or 16*l.* 6*s.* 8*d.* per lunar month; in all other rated ships 10*s.* a-day, or 14*l.* per lunar month; and in sloops, &c. 8*s.* 4*d.* a-day, or 11*l.* 14*s.* per lunar month.

With regard to the Secretaries to Flag Officers we have to report that these officers are frequently appointed from the Pursers upon half-pay, and their complaint is, that whatever may be the length of their service as Secretary, they obtain no reward whatever for this duty, reverting merely, if Pursers, or other Naval Officers, to the half-pay they vacated to assume the appointment. When we consider the important trusts that may be communicated to these officers while fulfilling their duties as Admiral's Secretary on a foreign station, and the necessary ability they must possess to discharge their duties in an efficient and satisfactory manner, we think that in justice they are entitled to some reward on relinquishing their employment, and that their pay on service is not sufficient for the responsibilities of their office. At present a Secretary to an Admiral commanding in chief has 1*l.* 1*s.* a-day: to a Vice or Rear-Admiral, also commanding in chief, 16*s.* 5*d.* a-day; and to a junior Flag Officer or Commodore, 8*s.* 2*d.* a-day. We should recommend that the full pay of Secretaries of all Flag Officers commanding in chief, should be 400*l.* a-year; and of all other Flag Officers, 300*l.* a-year: and further, that after 12 years' service as such, Secretaries should be entitled to half-pay of 12*s.* a-day.

During the course of our examination of the witnesses from the Marines and the Navy, our attention was repeatedly called to the difference in the position of the Naval or Marine Officer, as compared with that of the Officer of the Land Forces, with regard to losses of clothes and baggage on service; the latter receiving compensation according to a specified scale in certain cases, whereas the Officer of the Navy or Marines is not allowed any such compensation. It is proper, however, that we should explain that the principle of the Army regulations in regard to the indemnification for losses on service, is to enable individuals to re-equip themselves for the field; and the allowance is not to be considered as given for the purpose of making good the full amount of loss sustained. It is also regulated, in regard to the Army, that no compensation shall under any circumstances be given when the loss

might have been prevented by proper care and attention on the part of the individual, or of his servant or other person in charge. These principles might in our opinion be extended to the Navy; the more especially as shipwreck is one of the cases in which compensation may be given to a Military Officer, and it might not unfrequently occur that on the wreck of a ship-of-war, the Military Officer embarked in that ship would receive an indemnification for his losses, while the Marine Officer, who has no responsibility in regard to the management of that ship would be refused any compensation. It is impossible to deny that this difference in the treatment of officers, equally relieved from responsibility as to the charge of the ship, must present an appearance of injustice to that officer who receives no compensation; and we were not surprised to find this point urged upon our consideration by the corps of Marines as a prominent grievance. With respect to the Officer of the Navy who may be really responsible for the navigation of the ship, it is to be remembered that by the law and custom of the service, the loss of a vessel under his charge necessarily subjects him to a Court-martial, where the real facts of the case must be ascertained upon oath, and his culpability or freedom from blame must be satisfactorily established. With this obvious security that neglect or inadvertence will not be overlooked, we think that it is reasonable and just to place all the officers in your Majesty's service upon an equal footing; and we beg, therefore to recommend that indemnification for losses should be granted to the Officers of the Navy or Marines on the principles adopted in respect to Officers of the Army; and we would suggest that the Board of Admiralty should have authority to establish a scale of remuneration for losses on service, on the footing of that which is in use for the Army.

We sum up our Report upon this branch of the service with a recapitulation of the several resolutions at which we have arrived.

*Flag Officers.*—1. That it would be expedient to rescind so much of the Order in Council of the 30th June, 1827, as relates to the promotion of Captains to be Flag Officers; and that the rank of retired Rear-Admiral be abolished. But that in all Flag promotions every Captain whose seniority brings him in turn for advancement, shall be placed on the list of Flag Officers, provided he has served or offered his services as a Captain, and shall not have declined service at any time when called upon to serve, and that there be nothing against his character as an officer and a gentleman.

2. That it is expedient that the half-pay of those Flag Officers who have not had their sea service required, should not be increased with advanced rank, unless they shall have rendered as Flag Officers sea service of equal length to the period they were deficient as Captains.

*Captains.*—3. That it is expedient that the Captains of Your Majesty's ships of war should be supplied from public stores with certain articles of table and cabin equipment, according to a scale to be laid down by the Board of Admiralty for each rating; and that the Captain should be subjected to a charge of ten per cent. per annum, on a valuation to be made of these articles at the time of their shipment, for the use thereof; and on returning them into store, at the expiration of his command or other period, the Captain should be charged the full cost of any of the said articles missing, unless the cause of the deficiency be satisfactorily accounted for.

*Commanders.*—4. That it is expedient to make some provision of retired pay for officers of the rank of Commander.

5. That with a view to afford such retirement, four Commanders be added to the establishment of Greenwich Hospital.

6. That fifty of the senior Commanders on the list should have the option of receiving the retired rank of Captain, with the pay of 10*s.* 6*d.* a-day.

*Lieutenants.*—7. That in order to improve the situation of Lieutenants afloat, it is expedient that the full pay for Lieutenants of seven years' standing in that rank, and being First Lieutenant of a sea-going rated ship, or in command of any of Your Majesty's ships other than those on the packet or surveying establishment, should be fixed at 11*s.* a-day, or 15*l.* 8*s.* per lunar month; and that the full-pay for all other Lieutenants should be fixed at 10*s.* a-day, or 14*l.* per lunar month.

8. That the extra pay of 6*d.* a-day at present allowed to all Lieutenants in flag ships should be henceforth discontinued.

9. That the half-pay of Lieutenants hereafter promoted to that rank should be fixed at 4*s.* a-day to be increased to 5*s.* a-day after three years' sea service as Lieutenants; but that the Lords Commissioners of the Admiralty should be empowered to place any Lieutenant upon the 5*s.* list, who, through illness contracted in the service, shall have been unable to serve three years at sea in that rank.

*Masters.*—10. That in order to improve the situation of Masters afloat, it is expedient that the full-pay of Masters in first, second, and third rates should be fixed at 11*s.* 8*d.* a-day, or 16*l.* 6*s.* 8*d.* per lunar month; in all other rated ships at 10*s.* a-day, or 14*l.* per lunar month; and in sloops, &c., at 8*s.* 4*d.* a-day, or 11*l.* 14*s.* per lunar month.

*Mates.*—11. That in order to improve the situation of Mates, it is expedient that all Mates should receive Commissions or warrants from the Lords Commissioners of the Admiralty.

12. That the sea-pay of all Mates should be fixed at 3*s.* 7*d.* a-day, or 5*l.* per lunar month.

13. That after three years' actual sea service as Mate, and when unable to obtain employment in your Majesty's service, Mates should be entitled to half-pay, at the rate of 2*s.* 6*d.* a-day, with a liability to be recalled to the service.

14. That the Lords of the Admiralty should be empowered to allow any Mate to retire from the service with a pension of 2*s.* 6*d.* a-day, after twenty years' actual service, during ten of which he must have held that rating.

*Secretaries.*—15. That it appears expedient to improve the situation of the officers acting as Admiral's Secretary, with reference to the highly confidential and important nature of their duties; and with this view, it is suggested that the full-pay of Secretaries of all Flag Officers, commanding in chief, should be 400*l.* a-year, and of all other Flag Officers 300*l.* a-year; and after twelve years' service as such, Secretaries should be entitled to half-pay at the rate of 12*s.* a-day.

*Losses.*—16. That it is expedient that officers of all ranks in the Navy and Marines should receive a compensation for the loss of their instruments, clothing, and other effects, upon the same principles as are adopted in the Army, provided such other officer shall be acquitted of all blame as to the cause of any such loss.

THE Medical Department of the Military and Naval Services necessarily came under our review in the examination of the condition of the officers of the Army and the Navy; and some evidence from the principal Medical Officers of both services will be found in the Appendix to our Report, as well as Returns prepared for the purpose of exhibiting the state of this department, and the prospects of promotion and retirement that were open to Military and Naval Medical Officers.

With regard to the Naval Medical Officers, it is our duty to report to Your Majesty that the condition and prospects of this class of public servants are not such as to afford due encouragement to the meritorious individuals who are engaged in that department; and from the comparatively small number of candidates who present themselves for Naval Medical appointments, we think there is some reason to apprehend that, on an emergency, there might be an inadequate supply of properly qualified persons to undertake those responsible duties which must devolve upon a Medical Officer in any branch of the public service.

We observe that the qualifications of the Naval candidate differ in no respect from those which the Military candidate must possess; and we must therefore look to the subsequent position of the Medical Officer for the reasons which have operated to render the Naval Medical Service so much less popular than the Military.

We do not think that this unfavourable difference is to be found in a more limited prospect of promotion, as we have reason to believe that advancement from the rank of Assistant-Surgeon is more rapid in the Naval than in the Military Medical Department; and we feel assured that opportunities for individual distinction are far more frequent in the Navy than in the Army.

But the great discouragement which oppresses the officers of the sea-service, and which alone we should consider to be a sufficient ground for the preference generally exhibited for the Military to the Naval Medical Department, arises from the distinction made between the value of their respective services as Assistant-Surgeons. In the Navy, to whatever length that service may be extended, the Assistant-Surgeon counts but three years of his time, while the Army Medical Officer reckons, and justly reckons, the whole period of his full pay service in that rank, in support of his future claims to increased pay or retirement.

We earnestly recommend that, under Your Majesty's authority, this invidious distinction may at once be removed. It is not only unjust to the officer, but in our opinion highly prejudicial to the public services since it must have an appearance of rendering valueless any exertions which an Assistant-Surgeon may make who shall not obtain his promotion rapidly; and it may therefore indispose him to give his best energies, without which his services might be fruitless, when he knows that the time devoted to active public duty, and with increased skill, shall be of no avail to him in any future claim.

We have no hesitation in suggesting that the total full pay service of the Naval Assistant-Surgeon should be allowed to reckon at its full value in support of his claims to increased pay or retirement, upon precisely the same principle that is adopted in regard to the Army Officer.

In our examination of the condition of this class of Naval Medical

Officers, one point came under discussion which has been adverted to in the evidence, namely, the possibility of removing the Assistant-Surgeons from the cock-pit to mess with the Lieutenants; but, upon full consideration, we found that there were practical difficulties in the way of making any arrangement which could accomplish this in a satisfactory and uniform manner in all classes of ships. We ascertained also that the accommodation afforded of late years to this class of Medical Officers was so improved as to render this removal less essential than it might have been at earlier periods of Naval economy; and we are therefore not prepared to make any recommendation in this respect.

With regard to the superior classes of Naval Medical Officers, we are fully disposed to recognise the propriety of assimilating them in rank and even in title to the officers of the Army Medical Department; and as the rank of Physician has been abolished in the Army for nearly ten years, and in our previous Report on that division of the subject, we have suggested the discontinuance of the rank of Assistant-Inspector, which was substituted for the Physician, we should recommend that the rank of Physician should be equally abolished in the Naval Service; and we make the same recommendation with regard to the Hospital-Assistant, which has ceased to exist as a Military rank.

We contemplate the division of the Naval Medical Officers into four classes only, under the following titles:—

Inspector of Hospitals and Fleets,  
Deputy Inspector of Hospitals and Fleets,  
Surgeons,  
Assistant-Surgeons,

the whole being liable to serve at sea or on shore, as the benefit of the public service may require.

The Inspectors would include the whole of the Physicians who are serving either in fleets or hospitals; and as vacancies shall occur in the hospitals, where the present Physicians are serving on salaries, we would suggest that they should be replaced by Inspectors on daily rates of pay.

The Deputy-Inspector would in like manner replace the Hospital Surgeon, or occupy such appointments as might seem to be suitable for them either at sea or on shore.

The Surgeons and Assistant-Surgeons would retain their present positions.

We should consider it essential that a certain period of sea service should be rendered by each Surgeon before he shall be eligible for advancement to the rank of Deputy-Inspector, and this term we are disposed to fix at six years.

The advantages which we anticipate from this classification of the Naval Medical Officers will be, that all will be alike liable for service, at the discretion of the Board of Admiralty, and that there will be uniformity and simplicity of system throughout the department. It will entirely destroy any monopoly of the shore appointments, and will place all the officers on an equal footing in regard to pay and retired pay, in relation to the rank they may hold; and it will have this further advantage, that it will be necessary all should be efficient and equal to any duty either ashore or afloat.

We have also to recommend to Your Majesty that the rates of pay and

half-pay of the Surgeons and Assistant-Surgeons should be increased, to place them in a position more analogous to the Medical Officers of the Army. But we do not consider that the rates should be granted to the officers now upon half-pay, nor to those who may hereafter be appointed to full-pay, except after such further term of service as the Board of Admiralty may think proper to establish.

We offer no suggestion as to the appointment of Physician General to the Navy, as the chief of the Medical Department may bear such title as the Board of Admiralty may consider it expedient to give him.

We submit the following conclusions upon the Medical Department of the Navy for your Majesty's gracious consideration:—

That it would be expedient to place the Medical Officers of the Navy, with respect to rank, pay, and additional pay for length of service, and also with respect to half-pay and retired pay, on a scale more nearly corresponding to that assigned to officers of the Army Medical Department than the present.

That the following be established as the scale of rank, pay, and half-pay for the Naval Medical Officers, viz.—

	Full pay per diem.	Half-pay per diem.
	£ s. d.	£ s. d.
Inspector of Hospitals and Fleets .. .. .	1 11 6	0 15 0
After 10 years' service as such .. .. .	2 2 0	1 1 0
Deputy-Inspector of Hospitals and Fleets (With such further allowance, when employed in Hospitals on shore, as the Board of Admiralty may think proper.)	1 0 0	0 15 0
Surgeon	0 11 0	0 5 0
Above 6 years' full pay service, including service as Assistant-Surgeon .. .. .	0 12 0	0 6 0
Above 10 years' ditto .. .. .	0 14 0	0 7 0
Above 15 years' ditto .. .. .	0 14 0	0 8 0
Above 20 years' ditto .. .. .	0 18 0	0 10 0
Above 25 years' ditto with leave to retire .. .. .	0 18 0	0 13 0
Above 30 years' ditto, with leave to retire .. .. .	0 18 0	0 15 0
Assistant-Surgeon	0 7 0	0 2 0
Above 3 years' full pay service	0 7 6	0 3 0
If serving in small vessels, under 10 years full pay service	0 8 0	
Above 10 years' full pay service	0 9 0	0 4 6
If serving in small vessels .. .. .	0 10 0	
Above 20 years' full pay service .. .. .		0 5 0

But the benefit of any new regulation, in this respect, should not be extended to any Medical Officers upon half-pay, nor to any Medical Officer who may hereafter come upon full pay, until he shall have served on some station for a period to be prescribed by the Board of Admiralty.

That as the Army Medical officers are allowed the benefit of the entire period of their full pay service, in claims to additional pay and retirement, the officers of the Naval Medical Department should equally be permitted to reckon the whole period of their full pay service as Assistant-Surgeons and Surgeons in claims to increased pay or retirement.

With reference to the Purser's of the Navy, we have to report to Your Majesty that we received evidence and documents, in some of which an

entire alteration of the principle by which the duties and remuneration of the Purser's have hitherto been regulated, was strongly advocated.

We consider that such a proposition must necessarily require a lengthened examination of official details and calculations; and that the tendency of this investigation would be to lead us from the objects we had your Majesty's instructions to keep in view, namely, the promotion and retirement of officers.

We deem it most advisable, therefore, with a view of securing a sound and satisfactory decision thereon, to suggest to your Majesty to refer the whole case and applications of this class of naval officers for the investigation and decision of the Board of Admiralty.

Our labours here terminate; and we surrender again into your Majesty's hands the important trust which it was your gracious pleasure that we should fulfil.

We have spared no pains to investigate the condition of each class of Naval or Military officers, and to ascertain the origin and course of the various streams of promotion which influence the progress and direct the fortunes of those embarked in the different professions constituting the Military force of this country on sea and land.

If our enquiry has been unusually protracted, we entreat your Majesty to believe that it was from no remissness on our part; that it did arise from any indifference to those claims, into which, under your Majesty's instructions, we proceeded to examine; but that it sprung from a conviction that it was expedient to give our most anxious consideration to every proposition that was placed before us: that it was incumbent upon us to trace accurately, and step by step, the progress of the Military or Naval Officer under the existing system; to ascertain his position and his prospects in each successive rank, either on service or in retirement; and, finally, connecting the facts thus ascertained, as to the condition of the Officers of the services, with the demands of the country upon their energies and exertions, that it was imperative upon us to pronounce an opinion whether the duties to be discharged could, under such circumstances, be always satisfactorily performed; or whether an improvement in the situation of the Officers was essential to secure an active and efficient Army, a useful and well-directed Fleet.

We trust that the several divisions of our Report will sufficiently exhibit our desire to unravel the complicated systems of promotion adopted in the different services. We have at least endeavoured to remove all difficulties in the way of a clear perception of the situation of all classes of Officers; and if the result of our deliberation shall not prove quite satisfactory to those who, detecting errors and disadvantages in the present system, are willing to incur the responsibility of recommending further change, we persuade ourselves that we shall leave upon record ample proof that our judgment has been formed after a full investigation of the subject, and upon a consideration of all the material points that could be necessary to assist us in the inquiry.

It has been our care to regard economy as strictly as your Majesty had enjoined us; but we have felt at the same time the absolute necessity, which we were equally desired to keep in view, of reporting where the efficiency of the service might be said to languish, from the



want of due encouragement; and in our recommendation, therefore, we have not hesitated to suggest various augmentations of pay which, from the number of Officers who would be entitled to benefit thereby, would cause a considerable addition to the public charge.

We are not prepared to report to Your Majesty what the extent of this increased charge would be, as no perfect judgment could be formed till the several claims to retired allowances have been strictly investigated.

We submit the result of our deliberations to Your Majesty in a perfect confidence that the whole will receive Your Majesty's gracious consideration; and that our attempt to discharge the important duty which was delegated to us, will be acknowledged as a faithful endeavour, to set fairly before Your Majesty the exact condition of the officers of every branch of the service, and to suggest such changes as appear likely to lead to practical improvement, both in relation to their efficiency, and to their just claims upon the country which they are serving, with that due attention to economy which, in obedience to Your Majesty's instructions, we were bound to maintain.

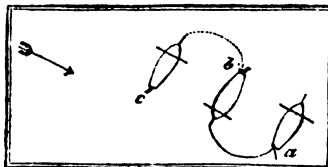
To all of us this inquiry has been a matter of the deepest interest, a trust of the highest importance and honour. But to none has this interest been so profound, this honourable trust so imposing, as to those amongst us who have passed the best years of our lives in the very services we are required to examine; and we trust Your Majesty will receive and permit us here to record the expression of our warmest sympathy with those whose condition and prospects we have had under review.

We humbly submit this our unanimous Report to Your Majesty's gracious consideration.

#### STEAM-BOAT TACTICS.

SIR,—I have just been reading your correspondent Mr. Allan's observations respecting the motions of Steam Vessels, and being totally unacquainted with their management, beg to request through the medium of your entertaining and instructive chronicle, that he will pursue his explanations a little further.

For more easy reference I have re-inserted his plan.



Now the weatherly course made on the retrograde movement, seems to me sufficiently explained by the action of the wind on the Paddle-Boxes, and fore-part of the Vessel. But I do not understand how the helm contributes to such result, and the question is in my mind whether without a rudder, the same course would not be described.

In a sailing vessel we should lash the helm a Starboard instead of to

Port—if we did so in a steamer, what would be the consequence! and what the result in a Calm?

The notice you have taken on former occasions of my trifling contributions, emboldens me, thus to seek this information.

I am, Sir, &c.

S.

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#### PORTER AND CO'S PATENT ANCHOR.

MR. EDITOR,—Your correspondent, “a Seaman,” (query) having advanced three suppositions, in the form of queries, respecting our Patent Anchor, in the last number of your able periodical, we beg you to favor us by inserting the following in reply :

Query 1st.—“What will be the effect of an unequal strain upon it?” Your correspondent implies that when strained it would be by lifting the shank, and then as the cable slackened falling back, place the anchor in such a position that it might be fouled: this, it must be confessed, is granting more than could have reasonably been expected from one who evidently does not wish well to our invention; for it is an admission that in three cases out of four where the common anchor would foul the ship's cable, our's would not. But the case *could* barely and never should occur, which “a seaman” supposes; a ship never should lift her anchor excepting with the capstan. A *good* seaman gives his ship plenty of cable when he sees a probability of her riding hard; to let her ride by a strain upon her anchor would be subjecting her to a trial which, if he were a naval officer, might cost him both his ship and commission. For a ship to lift or haul taut 80 or 100 fathoms of cable, or to give a strain that would lift the anchor as supposed by a seaman, is too unphilosophical and unsailorlike to call for remark. If, however, a “a seaman” should be unwise enough to ride at a short stay-peak in any situation where he anticipated a demand upon his anchor, he would find that which we have invented, still defy his efforts to foul, at the same time it would probably save him by its tenacious holding properties, from the consequence of his imprudence. As he lifted the shank, he would find when the cable slackened, that the weight of the upper arm moving on its hinge, and having its inclination from the pea in the ground, would again resume its recumbent position on the shank, and thus relieve him from his fears of fouling.

Query 2nd.—Your correspondent so entirely beg the question in this enquiry, that there appears nothing to answer, unless we first admit his proposition which, with the most practical facts before us, we are not disposed to do. It is, therefore, only necessary to remark that in all its trials both on mud, sand, or gravel, it takes the ground as soon as the anchor now in use, while on a smooth, almost adamant road, in Messrs. Brown, Lennox, and Co's yard, it took the ground in every trial within one-third the length of the shank, and so ploughed its way down through all resistance as to endanger the chain if tried any further.

Query 3rd.—Here “a seaman” again misunderstands the term employed and misconstrues the word “transported.” It is meant by transporting the Anchor that in the event of a ship having lost her Anchors, making a signal to that effect, others might be transported from another ship, or the shore to her, in two parts instead of distressing

one boat with the whole weight. Had the term "*carried out*" been employed, "a seaman's" inquiry would have been called for; but the word "*transported*" is certainly as expressive a term as could be employed. In conclusion we beg to observe that some of our patent Anchors, are now lying at the yard of Messrs. Brown, Lennox, and Co's Mill Wall; where your *anonymous* Correspondent, or any other parties interested will receive every attention and assistance in giving them any trial that may be desired, at the same time that we shall be happy to reply to any further enquiries from your Correspondents.

As we are led by your Correspondent's remarks, to imagine that he has not a perfect idea of our invention, we beg to enclose you some engravings, together with some further details respecting our Anchor, which we shall feel greatly obliged by your inserting in your widely circulated periodical, and remain Mr. Editor,

Your most Obedient Servants,  
PORTER & Co.



Fig. 1.—Position of the Anchor when canted.

Fig. 2.—Shews the action of the toggle, which has brought the underpea from the shank to the ground in the position to enter.

Fig. 3.—View of the Anchor in the ground, with the upper pea on the shank, in which position it remains; the dotted line shews the position in which the upper arm of a common anchor would be if placed by its side.

We are as yet unacquainted with any thing of which our invention is deficient in the useful properties of the old Anchor, while its superiority is evident by possessing the advantages named in the subjoined prospectus.

The long standing objection to the Anchor at present in use, is its having when in the ground one arm which is not only useless, but frequently mischievous.

It is well known, that the only reason for having an Anchor made with two fixed arms according to the plan of the present day, is to ensure one taking the ground on which ever side it may fall, the other immediately presents a dangerous projection, which in a crowded anchorage becomes a formidable peril, frequently doing incalculable injury to ships and boats, and only found out when too late to be remedied.

The simplicity, strength, and security of Porter and Co's Anchors justify them in seeking the patronage of all connected with the shipping interests, under the full conviction that it will stand the severest tests to which it can be exposed.

Amongst the many advantages over the common anchor, may be enumerated the following:—

1.—It cannot be fouled by either a hemp or chain cable, consequently a vessel may ride at single anchor for any length of time, as secure from fouling as if moored.

2.—Increased soundness and strength, attained both in the manufacture and formation.

In the manufacture—by the arms being finished apart from the shank, by which means they can be laid up with bars extending from pea to pea; and thus avoid the fatal risk of an unsound weld at the crown, the part at which the present anchor so often fails in the hour of peril.

In the formation—by means of the upper fluke coming down upon the shank, the greater portion of the strain is removed from the throat and hinge, and transferred to that part of the shank on which the upper pea rests; thus dividing the resistance more equally, and bringing the leverage much nearer the ring, by which means the anchor is enabled to bear the strains and jerks which would be fatal to one on the ordinary construction.

3.—By the spare arm lying down upon the shank, it cannot injure a ship's bottom, and in a crowded anchorage the risk and delay occasioned by hooking other vessel's, cables with the upper arm is totally avoided.

4.—*It cants and takes hold more quickly* than the common anchor; while its advantages in stowing are strikingly evident by simply detaching the arms from the shank.

Having thus enumerated a few of the most prominent advantages of this anchor, Messrs. Porter and Co. beg to call attention to the subjoined Report from Capt. Denham, R.N. (an officer well known to the maritime and scientific world,) to whom the Patentees are greatly indebted for having given it his able investigation. After numerous trials he has furnished them with the following communication.

*Marine Surveyor's Department,  
Port Fleetwood, Jan. 8th 1840.*

“DEAR SIR,—Having had under trial two classes of Porter's patent anchor, of the weights 7 cwt. and 3 cwt, and subjected them to the most treacherous holding ground, great tidal jerks and effects of eddies, as well as working round them to foul them if I could, I am now enabled to state that anchors so constructed will present to the mariner the combined essentials so long looked for; I need only enunciate the following:—

It is almost impossible to foul it.

It bites quickly into the most stubborn ground.

It holds on to the shortest stay-peak.

It cannot well lodge on its stock end.

It presents no upper fluke to injure the vessel herself, or others, in shoal water.

It cannot injure vessels bows when hanging a cock-bill, as merchant vessels find a convenient practice.

It is not so likely to break off an arm, or part in the shank as anchors with fixed flukes do, because the construction of these arms can be of continuous rod-iron, and the leverage is so much nearer the ring, owing to the pea of the upper fluke resting upon the shank.

It is a most convenient anchor for stowing on-board on a voyage, as the flukes can be easily separated, and passed into the hold, it can as easily be transported by two boats, when one would be distressed with the whole weight.

It produces the desired effect of ground tackle at one-twentieth less weight.

Wishing it general adoption, I remain yours truly,

H. M. DENHAM, Com. R.N., F.R.S."

To the Patentee of Porter's Improved Anchor,  
119, Cheapside, London.

### EASTERN HYDROGRAPHY.

[ From the Bombay Government Gazette. ]

**DIRECTIONS FOR ENTERING THE HARBOUR OF KURACHEE.**—Steer for the Islands to the Eastward of Kurachee Harbour, bearing about N. 20° E. and keep the Pyramid a little open of South Island, till the Buoy placed on the verge of the spit in 12 feet low water (a red nun Buoy) is seen, when you may haul up for it, and bring the Black Beacon situated N.W. by W. quarter of a mile from the Round Tower, in one with it, (the Round Tower,) which is the leading mark for the fair Channel up the Harbour.

The black or nun Buoy is placed on the Northern sand, in 12 feet at low water.

A Cask Buoy is placed on a line from the red Buoy to Pyramid Island, which shows the width of the Channel.

Flood tide at the outer Buoy sets across the Channel, or to the N.E. but beyond the black Buoy it sets fairly up the harbour.

Ebb tide takes the direction of the Channel.

C. SHARP, Lieut. Commander.

*H.C.B. War Euphrates, Kurachee Harbour, March 12th 1839.*

**BOMBAY FLOATING LIGHT.**—Not long since the Chamber of Commerce presented an address to the Bombay Government, praying that the Floating Light maintained at the entrance of the harbour during the monsoon, might be continued throughout the year. The application was grounded upon the opinion of many persons experienced in nautical affairs, that the floating light would, at all seasons, very much enhance the value of the Colabah Light-house to those making the Bombay harbour; and also upon the belief, very generally entertained by the public, that many of the accidents and losses which have occurred to Government vessels as well as to Merchantmen, were owing to the absence of some such beacon. We are happy to perceive by the last *Gazette* that Government have promptly and fully acceded to the wishes of the public as conveyed by the Chambers of Commerce. The following is the official notification.

#### NOTICE.

"The Honorable the Governor in Council having been pleased to sanction the Floating Light being stationed at the rock, throughout the year, hitherto kept there during the Monsoon only;

"It is notified for general information, that the Light Vessel will take up that station from the 15th instant."

By order of the Supt. I. N.

A. H. NOTT;

*Assist. Supt. I. N.*

*Bombay, 8th Jan. 1839.*

**THE PAMBAM PASSAGE.**—The Pambam Passage has now become quite a channel of frequent resort for coasting craft; and the Madras papers have continual notices of the vessels which have passed during the preceding few days—their tonnage, as stated before by us, ranged from forty to seventy tons, but by the last Madras official Gazette, we observe that a vessel of no less than one hundred and seventy-three tons passed through the channel with safety on the 27th ultimo—the usefulness of this passage to vessels trading along the coast, we are happy to see, is beginning to be known, and that vessels of greater burthen are endeavouring to pass by it in preference to the circuitous passage round Ceylon.—*Courier, June 24th 1839.*

**REEF IN THE CHINA SEA.**—On her way down, on the 7th inst. the *Rob Roy* grounded on a reef in the China Sea. We had not an opportunity of obtaining the particulars from Captain Mackinnon himself; but we are informed that he considers it to be the reef described in the following communication of Captain Freeman of the barque *Wellesley* to the *Singapore Chronicle* under date 8th October, 1835, of which it is said there are no traces in any chart:—

“The following day, P.M. while standing to the southward saw a detached reef right a head running east and west about 2 miles; its latitude by observation  $5^{\circ} 44' N.$  and longitude  $111^{\circ} 34' E.$  being 29 miles to the south westward of West London Reef; it has a sand bank at each end, and a small black rock in the centre, and is not laid down in any of the charts of the China Sea, and consequently very dangerous to ships navigating that sea. The latitude may be depended on within a mile or two, it being from a meridian altitude taken by two sextants, and the longitude by chronometers measured from the Grand Ladrone.”

The *Rob Roy* sustained little or no damage, and after survey held, proceeded on her voyage to Calcutta on the 23rd inst.—*Canton Press, Aug. 11.*

**ASCENSION. Shoal.**—The following extract of a letter from Rear-Admiral Elliott dated at port Melville, 11, February 1840, at Cape Coast Castle, gives directions for avoiding the Shoal lying in the way of vessels proceeding to the anchorage, and on which the Dutch ship *Scheldt* was lost in November last. “The most simple directions for anchoring at Ascension seem to be, to round the north side keeping at not less than three quarters of mile from the land, till the Fort is nearly open, then haul close along shore which is quite steep to, and may be approached to a cable’s length. In this way a ship will always fetch a good anchorage, without a tack, and it is not advisable to stand over near the western rocky bank in the variable winds under the land, with a view of tacking into the anchorage. Water can now be had always at Ascension.

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#### MERCHANT SEAMEN’S DUES.

SIR,—A Committee of the House of Commons having been appointed at your suggestion, to enquire into the above subject, I take the liberty of offering a few remarks thereon, for your consideration.

First. I would observe, that it is to be hoped, in whatever way the

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funds are to be applied in future, that the whole amount thereof will be appropriated to the relief of seamen. It does appear most unaccountable, that there should be such an apparent disinclination to apply to their legitimate ends, the ample sums that are yearly taken from us: for example, in the account for Cork for the year 1839, there appears to have been a balance in hand at the commencement of that year of nearly 1,000*l.*, for which 3 per cent. was received from the Saving's Bank, and 548*l.* 9*s.* 11*d.* more was collected. In the same year was doled out, the liberal amount of 384*l.* 11*s.*, at an expense for management of 101*l.* 7*s.*!! But observe how this sum was appropriated—say, to fifteen masters, two masters' widows, and nine children, 124*l.* 13*s.* 6*d.* or not quite 4*l.* 16*s.* each! To 106 seamen, widows, and children, 237*l.* 10*s.* 6*d.*, or about 2*l.* 5*s.* each; the balance of the funds in hand at the end of the year being increased about 100*l.*! Now, if these poor old masters, seamen, widows and children, were so distressed as to receive such pittances as these, surely there can be no reason why the whole amount collected, and the interest upon the balance in hand—to say nothing of the balance itself—should not have been given to them also.

There has evidently been gross mismanagement—what has become of the money collected from us? which in despite of all mismanagement has now accumulated to an enormous sum. This will be answered, I suppose, by reference to the yearly accounts, the one for instance just alluded to, where we see 101*l.* 7*s.*, charged for affording relief to the amount of 384*l.* 11*s.*! There was amongst others one published lately for Ramsgate, I think, and wherein if my memory does not fail me, 14*l.* was charged for management, and 17*l.* disbursed in relief! These dues are *obliged to be paid* at the Custom House, and there should not be any charge whatever for collection, or management. The correspondent in the last number of the *Nautical*,—"A Master of a British Merchant Ship," supposes the yearly amount of this fund to be 100,000*l.* Public returns state, that the seamen of this country in the Merchant Service, amount to above 200,000, independent of apprentices: out of this number there are probably 24,000 masters, paying 2*s.* per month, the rest paying 1*s.* Now this would produce 134,400*l.* if the whole were employed the year round; therefore, it is clear that the fund *should* amount to the above supposed sum: if the committee does not find some means of affording relief with such a fund at command, it will surely be their own fault and there is a very large sum in hand also, as stated by the correspondent referred to, probably amounting to a year's receipts, or much more.

I cannot but think that the suggestion is a good one, to erect and endow, a magnificent establishment on the bank of the Thames, that would be an ornament and credit to the country, as a retreat for the old and disabled merchant seamen with their families. I am sure that the shipping interest would come forward most readily to aid such an undertaking, as well as the Trinity House, and other public bodies; first, in subscribing towards the building; and, secondly, in cheerfully submitting to a small tax, for adding to the yearly income, which, if only  $\frac{1}{2}$ *d.* per ton upon every ship clearing at the Custom House, would produce 3,000*l.* per annum.

Let us see what might be done with such means! Supposing that

on the banks of the Thames was chosen, a spot containing room for buildings, a park, or grounds attached, sufficient to afford accommodation to 200 masters,\* and 1,500 seamen, with the families of such as have any; and apartments for a governor and three or four commissioners, chaplain, doctor, &c., all moderately furnished. Supposing that this cost 150,000*l.* Let every person about the establishment be merchant seamen, (doctor and chaplain of course excepted,) from the governor to the porter at the gate, there would probably be 250 to 300 female servants; these should be daughters or wives of seamen. Here we have 2,000 people provided for at once. Allow the masters 10*l.* per month, which will amount yearly to . . . . . £24,000  
 Allow the seamen 2*l.* per month, . . . . . 36,000  
 Suppose that the expenses of the establishment; say, salary to the governor, other officers and servants, clerks, housekeepers, &c.; the keeping the building in repair, keeping up furniture, providing coals and candles for the whole establishment, &c., 10,000  
 Suppose 2,000 seamen, and the families of those dead and in distress, as out-pensioners at 10*l.* per annum, . . . . . 20,000  
 £90,000

Now, whatever is the amount of the fund received under the name of "Merchant Seamen's Dues," it should be paid into the Bank of England, from each Custom House, free from any deduction whatever; it being also received at the Custom Houses free of expense, indeed I cannot conceive what is meant by "Charges of Management" that this sum should amount to 100,000*l.* yearly, I think there is no doubt whatever; and, that such a small tax as alluded to should be laid upon shipping, for aid in support of the aged seaman, is not only reasonable, but what I really believe the owners themselves would propose, could they see the proceeds so creditably applied; and suppose this to produce 30,000*l.* per annum. Here we have a surplus of 40,000*l.* above the estimate, from which, if necessary, take a yearly sum to repay a loan for any excess of the cost of the building should the same have been required; lay by a small sum, yearly, to extinguish the necessity of tax upon shipping, as I would have the whole supported ultimately by the merchant seamen of England—by themselves alone, and then there would remain a sum sufficient to increase very materially the means of the great National Establishment I propose—an establishment that would be worthy of this country, and do its commercial marine not only credit, but it would be the means of keeping the seamen of great Britain in its service, as no one that had ever been known to have sailed under a foreign flag should be admitted into it, though eligible as out-pensioners. Here would be something for the sea-faring men to look up to. I have said that the whole establishment should be selected from the merchant service; the whole management should be in the governor and commissioners, and secretary, who would have good apartments provided, and handsome salaries. Thus, with the probable excess of income over the estimated expenses, we should probably have 5,000 people provided for, and perhaps half as many children. In this establishment would be officers, for the most respectable of the merchant ser-

\* A separate house for each.



vice to look up to; but, excepting in the officers required for its management, the whole of the inmates, both masters and seamen, are supposed to be selected from the class of those most in want of relief.

It will, I know, be objected to such plan, that it is taking away the old seaman from his home, (only a few have any home, or predilection for any particular locality,) and that the Liverpool and Shields' man would like to end his days where he was born and brought up: let the out-pension be applied to this class, which would probably amount to double what it is proposed to provide for in the establishment itself, but let the rendezvous be on the Banks of the Thames, and all the business of this enormous fund there managed by the merchant seamen themselves, they would have something to look at; something then would appear tangible to them; "instead of as at present, they do not know what becomes of their money we do deduct from them; (I have often been asked the question, which I could not answer,); and when in want they don't know where to apply for succour! I really believe, that the funds so applied, would go far to relieve all the real calls that could be made; the fact is, that there are not any great proportion of sea-faring men, who are old and worn out. How many men following the sea live to above 60! and how large a proportion of these few even then give in—no, the very life of a sailor induces such a love of freedom, such a taste for a roving life, that as long as he can but do his duty at all, he will not give in. I will indeed venture to say, that out of 200,000 supposed to constitute the mercantile seamen of this country, that there is a smaller proportion come to want in old age than in any other class of life whatever: they have families, however, and it must be admitted, are too apt to leave them in distress; provide for them by all means. The masters, however, wear out quicker than the men; but there are few in proportion even of this class that require support; but where they do, they should be provided with a retreat, always let it be kept in view, of *their own making*, they have subscribed to it, and the death of their brother sailors has given them the right of provision by benefits of survivorship.

I trust, sir, that you will act promptly and with decision in this affair; and if you think well of the plan I suggest, let the present generation have to couple your name with a second "Greenwich" for the merchant seaman.

I am, sir, your humble servant,

"A SKIPPER."

London, April, 1840.

To R. Ingram, Esq., M.P.

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### THE NIGER EXPEDITION.

The announcement in our last of the contemplated expedition up the Niger, will have put our readers in possession of some of the particulars relative to the intended proceedings; but as many will feel a lively interest in every effort made to suppress the Slave Trade, a few further observations may not be out of place.

It cannot fail to be highly gratifying to the friends of Africa to learn the determination of Her Majesty's Government, and to know, that the principal object of the expedition is to put an end to the Slave Trade,

by entering into treaties with the Native Chiefs, "within whose dominions the internal Slave Trade is carried on, and the external trade supplied with its victims."

The expedition will embrace other important objects, though its leading feature will be an endeavour to suppress the inhuman traffic now carried on by those whose true interest it is to retain their subjects at home, and cultivate their native soil, so fruitful in natural productions, and so capable of being made the source of a legitimate and profitable commerce.

To convince the Native Chiefs, that to themselves especially, the Slave Trade is a losing concern is most desirable, and may be confidently anticipated now, that Her Majesty's Government is alive to the fact, that no system of blockade or prevention will ever remedy the evil, and that it is to the introduction of religion and civilization alone that we must look for the cure of a disease, which has been so lasting in its operations, and so fatal in its consequences.

It appears that the Government will sanction the establishment of Inland Factories, with a view of affording the native population the means of acquiring an extended knowledge of the benefit of a lawful trade, and of improving their temporal condition by habits of industry, the natural fruit of progressive morality and civilization.

The devoted men, whose lives have fallen a sacrifice to African discovery, have paved the way for such an undertaking, as is now to be entered upon, and without losing sight of the difficulties from climate and other causes; it may be fairly assumed, that the knowledge we now possess, and the means of reaching the very heart of Africa, by steam navigation, place us on the vantage ground of starting from points which former travellers only reached, by long and hazardous land journeys.

Should it be stated, that the voyage of Laird and Oldfield held out as fair a prospect of success as the intended expedition, it may be answered that it was a private trading speculation, and can be no fair criterion of what may be effected by the energies of Government, directed as they will be by men of high professional character, ardent enterprise, and a zeal worthy of the cause they are about to embark in.

By proceeding up the Niger a large portion of the Native Chiefs engaged in the Slave Trade, may easily be communicated with; and should the rapids or other obstructions about Boussa not be found impassable, a reasonable hope may be entertained of reaching the immediate vicinity of Timbuctoo, and navigating to Sansanding, from whence Park commenced his downward voyage, which terminated so fatally.

The prospect also, of reaching Lake Tschad can hardly be called a matter of speculation:—Lairds' voyage, and the information derived from native authority lead to the conclusion, that the British Flag may soon be displayed in the waters of this Inland Sea, and the populous countries and its neighbourhood opened to mercantile enterprise.

Our object however, in the preceding remarks is not merely to point out what may be looked for, from trade and civilization, when the Negro race shall have a fair field given them, for emerging from the debasing effects of their cruel and superstitious customs, and the desolating curse of Slavery. Religion must go hand in hand, or rather

precede the Merchant, or no permanent good can be expected, nor can we look for a blessing upon the disinterested exertions of our country.

The stations for Factories, before alluded to, will afford a residence for Missionaries and Schoolmasters, from whence they may go forth in perfect security; and thus, the friends of Africa, who have so long and so zealously laboured for her good, may yet be permitted to see a sure foundation laid, for the introduction of Christianity, with all its attendant temporal blessings.

Since the above remarks were committed to paper, we hear the "Remedy," of Mr. Buxton, has appeared, which when fairly and fully carried out will give satisfactory evidence, that it is fully equal in its healing properties to the cure of the malady so faithfully delineated in Mr. Buxton's former work, "The African Slave Trade."

That such may be the happy result of the present awakening in favor of Africa, is the sincere desire of those who cannot but see in the high privileges graciously bestowed on our country, a corresponding duty involved of using them rightly, for the glory of Him, who has said, "For unto whomsoever much is given, of him shall much be required."

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VANGUARD.—Those who are detractors of the British Navy would have very considerably altered their opinion of its non-efficiency, could they have visited and narrowly looked into the state and completeness of the Vanguard, on her arrival from the Mediterranean. The style of management, discipline of the crew, and appearance of the ship, is beyond all praise; and her gunnery practice, as evinced before Admirals Sir Edward Codrington, the Hon. D. P. Bouverie, and Captain Sir Thomas Hastings, was most perfect. The first target was speedily demolished, and though some difficulty was experienced from the strength of the wind and tide, placing a second, yet a small boat was anchored at eight hundred yards distance, and in a short period was shivered to fragments; in fact not a shot was fired that would not have struck a jolly boat under sail. She had a stiff breeze to bring her into harbour, and certainly we have never seen a vessel look better under sail, or courses handed in quicker time; and all the sails, as fast as the halyards were let go, were rolled up in a twinkling. She is altogether the most perfect specimen of a man-of-war we have ever witnessed.—*Hants. Tel.*

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#### BASS STRAIT AND VAN DIEMEN LAND.

THE following letter from Captain C. R. Drinkwater Bethune, of Her Majesty's ship Conway, upon the subject of a danger, which he has recently discovered in Bass Straits, and the doubtful position of the S.W. Cape of Van Dieman Land, as laid down in the Charts, is published for general information.

HIS EXCELLENCY REAR-ADMIRAL SIR F. L. MAITLAND, K.C.B., &c.

SIR,—I have the honour to report to your Excellency, that passing between King Island and Reid Rocks in Bass Straits, I perceived a danger, the position of which is different from that described as Bell Rock in the Australian Directory, vol. 1, page 112.

The following observations were made.

21st April, 1838, wind strong from N.W. heavy swell, ran between King Island and Reid Rocks, steering S.W.b.S (S. 43° W.) passed the centre Rock at a distance of three or four miles, they appeared correctly placed with reference to King Island.

Black Pyramid in one centre Rock (S. 30° E.) At 3h. 4m. centre Rock of Reid E.b.S.  $\frac{3}{4}$  S. (S. 61° E.) four miles by estimation.

Steered South (S. 9° W.) in five minutes perceived from the mast-head a heavy breaker, right ahead, estimated at six miles distance, hauled up S.W. (S. 54° W.) two miles then S.S.W. (S. 31° W.) and south (S. 9° W.) the distance on these two last courses not accurately noted—rate from seven to eight knots per hour.

(1.) 4h. 27m. Breaker and Black Pyramid in one E. 10° S. (S. 71° E.)

	(S. 79° E.)	36° 15'
	N. 82° E.	62 6
4h. 56m.	85	63 22
(3) 57	86	64 20
58		
4 57	N. 84 E.	63 15
	(S. 87 E.)	

Course steered S.S.E. (S. 13° E.) for 10 minutes, Rate 8, 1 per hour.

" South (S. 90° W.) for 20 minutes, "

The bearings from 1. 2. 3. (see sketch\*) give the relative positions of the Pyramid and Breaker P. and B. and the bearing of the Pyramid from Reid, the bearing and distance of Reid from the ship, and the bearing of Breaker from ship (right ahead) give the position of the ship and Reid S. and R.

The result is

From the Breaker,—Reid centre Rock bears (N. 328 E.) N.N.E. 10°  
 " Pyramid..... " (S. 73½ E.) E ¼ S. 13°

Now from (2) when anxious to get an angle to Reid Rock, it was just visible from a point 35 feet above water, and on passing it we judged it from 20 to 30 feet high; therefore at (2) we were about, but less than 12 miles from Reid, the sketch gives 11. 8.

Assuming Reid Rocks in 40° 15' 5" S. it places the Pyramid in 40° 27' 8" nearly five miles north of its position on the chart, thus agreeing with a remark made by Captain King, who thought it probable the Pyramid was placed too far South by four miles.

The distance from S. to E. agrees with the run of about eight knots per hour, but cannot be reconciled with the estimated distance when first seen, of six miles, this however having been judged from the mast head, cannot be much relied on.

The position of Bell Rock being four or five miles more to the eastward. I feel inclined to consider this a new danger; at any rate great caution is necessary in taking the passage betwixt Reid Rock and the Pyramid.

The state of the weather precluded more accurate observations. I consider the probable limit of error in the position to be half a point in the bearings, and one mile in the distances.

\* In our next Number.

I have also found reason to doubt the position of the S. W. Cape of Van Diemen Land, as marked on the chart. My observations place it about six miles more to the northward, this nearly restores it to the original position assigned by Flinders. M. Cecille, commanding H.M. C.M. ship *L'Heroine*, informed me that he had found that the latitude  $43^{\circ} 39' 4''$  was too far south by six or seven miles.

The 22nd April 1838—5 observations near noon, each reduced to noon by the run, gave the latitude  $43^{\circ} 15' 2''$  S.—At 2h. 12m. the S. W. Cape bore E. b. N. (N.  $88^{\circ}$  E.) 4 miles.

Ran in intervals S. E.  $\frac{1}{2}$  S. (S.  $31^{\circ}$  E.) 16

S. E.  $\frac{1}{4}$  E. (S.  $42^{\circ}$  E.) 4

Resulting difference Latitude..... 17

Latitude... 43 15

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43 33 lat. of S. W. Cape.

Flinders.....	43° 32'
King.....	39
Conway.....	33

I considered the latitude at noon as good as can be obtained from Sea Horizon—the run may also be trusted as we were going 10 knots steadily. The course may be subject to error, as there was a great swell, but this would not much affect the determination.

I will add, that having run between the Mewstone and Needles Rock, a course E. b. N.  $\frac{1}{2}$  N. brought the South Cape right ahead,—this, though not accurately observed with a view to fixing any position tends to prove that the S. W. Cape and its neighbouring Islands are four or five miles too far south.

I have, &c.

(Signed) C. R. DRINKWATER BETHUNE.

*Captain and Senior Officer, on the Coast of Australia.*

*H. M. Ship Conway, Hobart Town,  
Van Diemen Land, 20th April, 1838.*

#### NEW BOOKS.

THE SIDEREAL HEAVENS and other Subjects connected with Astronomy, etc. By Thomas Dick, L.L.D. &c.—Ward, London.

Another of those delightful books of Dr. Dick, who with the research of the Astronomer, the enlarged views of the Philosopher, and the happy tact of placing the fruits of learning in their most attractive form, has compressed into about as many pages as he occupied with "Celestial Scenery" the most important and interesting facts concerning the "Sidereal Heavens." On so vast a subject we have not space to dwell; but, such a subject needed a master hand, and we can assure our readers that the work before us is well worthy of the same patronage which the former has received. Instruction of the most interesting kind, a lofty tone of reasoning on the subjects which it presents; and a devout religious feeling at the grandeur of those subjects will be found in every page.

JOURNAL OF THREE VOYAGES ALONG THE COAST OF CHINA, in the years 1831-2-3, By Charles Gutzlaff, 1840.—Ward, London.

The title of this unpretending little volume is of itself an attractive one in the

\* See Nautical Magazine, 1938, p. 283.

present day. The voyages of Mr. Gutzlaff, who was led by a missionary spirit of no ordinary kind, extended along the whole coast of the Celestial Empire and its islands, as may be gathered from the map accompanying the work, which we have been enabled to transfer to our own pages, to serve as a reference for our readers on the papers we shall hereafter lay before them. It is judiciously commenced with an essay on the Policy and Religion of China, from the pen of the Rev. W. Ellis, author of "Polynesian Researches," and forms a volume which those who are in search of information on that important quarter of the globe should not fail to peruse.

**SAILING DIRECTIONS, FROM POINT LYNAS TO LIVERPOOL, &c. &c.** By Commander H. Denham, R.N., F.R.S.—Bate, London.

There is a mass of information in this book in the shape of Directions, Charts, Views, Sections, and Signals, which our Liverpool Masters had better look to as soon as possible. We are glad to find in it also intelligence of the success hitherto of the light at the entrance of Wyre, at Fleetwood, on piles fitted with Mitchell's Screw Mooring, which we have already noticed in a former volume; but we did not expect that the Wyre would have preceded the Thames,\* in establishing this new feature in the construction of lighthouses.

**THE SPITFIRE.—A Nautical Romance.** By Captain Chamier, 3 vols.—Colburn, London.

The author of Ben Brace, Jack Adams, and the Life of a Sailor, has again stepped forth and supplied the novel-reading world with another series of the usual articles, viz.,—illegitimacy, a roving life furnishing adventure of all kinds, not excepting piracy and its concomitants, plunder, rapine, murder, hairbreadth escapes, *et id genus omne*; all of which work well into a Nautical Romance! Chaptain Chamier has handled these materials in a masterly manner; and the "Spitfire" and her achievements will excite the interest of his readers.

**A NEW DERIVATION AND ETYMOLOGICAL DICTIONARY, &c.** By J. Rowbotham, F.R.A.S.—Longman, London.

A most useful little book, and one which cannot fail to be acceptable to those who have curiosity sufficient to look to the derivation of words which they use and hence learn their proper application. We are not certain whether the arrangement might not be improved, by not separating the Greek and Latin derivations; and, for our own part are so much wedded to the old dictionary arrangement, that we should like to see it here. We cordially recommend it to our readers as a useful companion.

#### SHAKINGS.

**MARGATE.**—A plan for the formation of a harbour at this place has been devised by Mr. Samuel Lloyd of the Marine Parade, which in the event of such works being projected there deserves attention. Mr. Lloyd proposes a pier extending along the Nayland rocks in a N.E. direction meeting another from the side on which the present pier and lighthouse stands, and thus enclosing 118 acres at low water with 18 feet at the entrance. There are besides arrangements for dry and wet docks, all of which would be well worthy of consideration in constructing a harbour at Margate, and are very creditable to Mr. Lloyd, who appears to have employed considerable practical knowledge in his plan.

**PACKETS.**—The Unicorn, the first of Mr. Cunard's line of mail steamers is to sail from Liverpool for Halifax and Boston, on Saturday the 16th May.

\* See Nautical Magazine, 1839, p. 175.

**LAUNCH.**—A steamer of 700 tons register burden, called the *Pern*, was launched on Saturday from a building-yard at Limehouse. This vessel belongs to the Pacific Steam Navigation Company, and along with three other steamers of the same class, is intended by that company to trade between Valparaiso and Panama. This company, we hear, have obtained patents from the various South American states along the coast, granting them the exclusive right of navigation in the Pacific for ten years, and if a railroad were formed across the Isthmus of Panama to Puerto Velo, on the Atlantic side, the Pacific Steam Navigation Company would extend their intercourse thence to China, should our commercial relations with that country be placed on a satisfactory basis.

**NELSON'S MONUMENT.**—The sub-committee consisting of the Marquis of Northampton, Lord Colborne, Sir Robert Inglis, Sir John Barrow, and Sir Peter Laurie, (Sir George Cockburn being in the chair,) met at the Royal Academy, and contracted with Messrs. Grissell & Peto for the erection of Nelson Pillar in Trafalgar-sqr. Their tender was the lowest. The erection is to be of granite, and is to be finished in two years. The committee have postponed deciding on the statue to be placed on the top of the pillar, for six weeks, expecting in the mean time a great addition to the funds, which is required to finish this deserved memorial to the most admired of our naval heroes. The pillar is to be fifty feet higher than the Duke of York's Column, and the figure of Nelson will be without a cloak. The Commissioners of Woods and Forests intend to complete the square becoming the site of this splendid monument.

**SHIP CANAL** for uniting the waters of the bay of Fundy with those of the Gulf of St. Lawrence.—At a meeting of persons interested in the projected undertaking, held at the Court-house, at Amherst, on Friday the 17th January, 1840, Joshua Chandler, Esq., High Sheriff of Cumberland, in the Chair, it was resolved—That share lists should be opened for subscription. That a general meeting should be held at this place on Saturday the 15th day of February next, at two o'clock in the afternoon, at which all persons interested in the concern are requested to attend, to adopt measures for forming a company, pursuant to the act of the province of Nova Scotia for that purpose. That the Hon. J. S. Morse, R. B. Dickey, W. W. Bent, M. Gordon, and I. Woodman, Esqrs., be a committee for preparing a prospectus of the company, to be submitted to the meeting.

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**SOUTHERN MAGNETIC EXPEDITION.**—*Extract of a Letter from an Officer of H.M.S. Erebus, 7th February, 1840.*—"On the 20th November we left Porto Praya, and December 2nd and 3rd examined and took observations on a cluster of rocks called St. Paul,—evidently the summit of a submarine peak. The sea would make a clear breach over them in blowing weather, consequently nothing vegetable is found. The geological specimens will prove interesting; their general character platonic, with blue lava and conglomerate. Crabs and sea birds were breeding, and the rocks are quite white with the dung of the latter.

"December 17th we landed on Trinidad, to make magnetic obser-

vations, and December 24th we crossed the magnetic equator, in latitude 14° 1' S, after which in the teeth of a S.E. trade we worked up to St. Helena, having completed a chain of dips from England to that place.

“Perhaps the most interesting of our achievements will be the fact of our having gained bottom, at two thousand four hundred and twenty six fathoms, in latitude 27° 24' S. longitude 17° 30' W. both ships being becalmed on the edge of the S.E. trade. A line of 3600 fathoms of spun-yarn being prepared, a weight of 72lbs was attached to it, and two boats were lowered to buoy up the line. The first 100 fathoms took 35 seconds reeling off,—the last nearly 6 minutes; we lifted the lead more than once, but of course the spun-yarn broke in the attempt to haul it up.”

**LIGHTNING. *Greenock***.—Her Majesty's Revenue Cruizer Chichester, Captain Stuart, arrived here on the 7th instant, from the west Coast of Ireland, having had her mast and part of the deck and bulwarks damaged by lightning, during a severe hurricane, on the 7th of last month on the Coast of Galway. The escape of the vessel and of the officers and crew is truly miraculous. A ball of fire descended the mast and broke through the deck, Captain Stuart was sitting at dinner in his cabin, with his two daughters. The ball passed over the table, smashed the bulk head, and shivered the dishes and glasses in pieces, but without injuring any one. The skylight was thrown up, and the whole of the deck in the centre of the vessel raised off the beams; all the patent lights were thrown out.

The electric fluid passed through the bottom by the copper bolts, and tore off the copper sheathing opposite to them under water.

The magnetism of the compasses was discharged, and those who had watches found they had stopped.

The vessel was filled with smoke. Captain Stuart by fishing the mast has been at last enabled to bring the cutter here for repair.

## PROMOTIONS AND APPOINTMENTS.

LIEUTENANTS,—R. L. Cox, W. P. Jamieson, C. R. Marcuard, M. Falcon.

### APPOINTMENTS.

*ÆTNA*,—*Second Master*, J. F. Loney; *Assistant-Surgeon*, R. H. Cullen. *ACTEON*, 26,—*Midshipman*, Hon. F. Curzon. *ANDROMACHE*, 26,—*Sec. Master*, E. H. Rowe. *ASIA*, *Con. Ship*,—*Surgeon*, J. W. Johnston, M.D. *BRITANNIA*, 120,—*Assistant-Surgeons*, J. T. Moxey, O. T. Miller. *CERES*,—*Second Master*, F. Fogden. *COASTGUARD*,—*Commanders*, R. Triscott, D. Pealt, *Vice*, J. M. Bate; J. Pulling, *Vice*, R. Morgan; W. H. Jervis, *Vice*, C. Frederick; S. Ramsay, *Vice*, T. R. Robinson. *Lieutenants*, W. Crispin; Vulcan, R. T. Edwain, Active, J. Ray, Eagle, R. Butcher, Tartar. EXCELLENT,—*Lieutenant*, G. G. Otway; *Mates*, E. May, E. H. Blake. *GREENWICH HOSPITAL*,—*Lieutenants*, S. Bromley, (out-pension), S. Mc Cornick. *MAGICIENNE*, 24,—*Midshipmen*, C. Fellows, G. O. Willes. *NIAGARA*, 20,—*Mate*, F. W. Vansittart. *PIQUE*, 36,—*Mate*, J. Morrison. *PEARL*, 20,—*Midshipmen*, C. Fellowes, R. O. Sargeant. *PRESIDENT*, 50,—*Lieutenant*, C. R. Marcuard. *PROSPERO*,—*Lieutenant*, E. J. Keane. *ROVER*, 18,—*Clerk*, T. Shanks. *STAG*, 46,—*Lieutenant*, H. L. Cox. *VICTOR*, 16,—*Mate*, M. B. Dunn. *VICTORY*, 104,—*Master-Assistant*, G. W.



**Jackson.** *VANGUARD*, 84,—*Captain*, Sir D. Dunn; *Commander*, F. Hutton; *Lieutenants*, H. Lyster, J. Cannon, S. J. Brown, B. J. Paget, W. Wiseman; *Master*, S. G. J. Northcotes; *Purser*, J. Mounsher; *Second Master*, J. Tiddes; *Surgeon*, J. Wilson; *Assistant-Surgeons*, J. G. Rick, J. Buchanan; *Chaplain*, J. Richards; *Mates*, G. Y. Paterson, A. Gladstone; *Midshipman*, A. Paget; *Clerks*, J. M. Starke, W. H. Granville, F. G. Graves; *Naval Instructor*, R. Scott; *Volunteers*, F. S. Marryat, P. Chase.

### MOVEMENTS OF THE ROYAL NAVY IN COMMISSION

#### AT HOME.

*AFRICAN*, (st. v.) Capt. F. W. Beechey, 17th March at Donaghadee, sailed 18th.

*ANDROMACHE*, 26, Capt. R. L. Baynes, C.B., 1st April sailed for the Cape

*CAMBRIDGE*, 78, Capt. E. Barnard, 9th April left Sheerness for Portsmouth; 15th arrived at Plymouth

*CYCLOPS*, (st. v.) Capt. H. T. Austin, 9th April sailed for Lisbon and Mediterranean takes out as passengers to Malta, the family of the Hon. Capt. Berkely of the Thunderer

*DOLPHIN*, 3, Lieut. E. Littlehales, 19th April left Sheerness for Plymouth

*HERMES*, (st. v.) Lieut.-Com. W. S. Blount, 27th March arrived at Plymouth from the Mediterranean

*JUPITER*, (tran.) Mas.-Com. R. Fulton, 2d April arrived; paid off at Portsmouth, recommissioned next day

*PEARL*, 18, Com. C. C. Frankland, 3d April arrived at Spithead

*PERSIAN*, 18, Com. W. H. Quin, 16th April moved from Hamoaee into the Sound

*PIQUE*, 36, Capt. E. Boxer, 16th April left Plymouth for Portsmouth; 18th arrived, fitting for St. Petersburg

*VANGUARD*, 80, Capt. Sir T. Fellowes, C.B., 1st April paid off; 2nd recommissioned by Capt. Sir David Dunn.

**PORTSMOUTH—In harbour.**—*Britannia*, Royal George Yacht, Victory, Excellent, *Andromache*, *Magicienne*, *Victor*, *Jupiter*, *Messenger*.—*At Spithead*—*Pique*, *Pearl*

**PLYMOUTH**—*Impregnable*, *San Josef*, *Thunderer*, *Inconstant*, *Persian*, *Nautilus*, *Sheldrake*, *Sylph*, *Carron*.—*In the Sound*—*Cambridge*

#### ABROAD.

*ACHERON*, (st. v.) Lieut.-Com. A. Kennedy, 19th March arrived at Malta from Gibraltar

*ALLIGATOR*, 26, Capt. Sir J. G. Bremer, K.C.H. 27th Jan. arrived at Trincomalee; 7th Feb. sailed for China

*APOLLO*, (tran. sh.) Mr. A. Karley 30th Jan. arrived at Port Royal with 82d reg. command of Col. Marshall

*ATOLL*, 28, (tran. sh.) Mas.-Com. C.

P. Bellamy, 25th Feb. arrived at Trinidad to convey troops to Quebec and Gibraltar, and return home

*BENBOW*, 72, Capt. H. Stewart, 27th of March left Smyrna with flag of Rear-Admiral Sir J. Louis for Malta; 5th April arrived the Admiral transferring his flag to the Ganges

*BLAZER*, 19th March arrived at Alexandria from Malta

*BRISK*, 3, Lieut. Com. A. Kellett, 28th January arrived at St. Helena, 24th sailed for Cape

*CALLIOPE*, 26, Capt. T. Herbert, 18th Dec. left Buenos Ayres, for Monte Video

*CARYSPORT*, 26, Capt. H. B. Martin, 26th March left Malta for England touching at Algiers.

*CHARYBDIS*, 3, Lieut.-Com. E. B. Tilling 19th January arrived Pt. Royal from Nassau, 25th Feb. sailed for Chagres.

*CHILDERS*, 16, Com. E. P. Halsted 29th February at Bombay.

*CLEOPATRA*, 26, Capt. S. Lushington, 16th Feb. left Port Royal on a cruise

*COLUMBIA*, (st. v.) 1st April left Lisbon for West Indies

*COLUMBLA*, 16, Com. G. Elliott, 25th Jan.; 29th off Sierra Leone

*CONFIANCE*, (st. v.) Lieut.-Com. E. Stopford, 31st March at Malta from Ionian Islands

*CONWAY*, 26, Capt. C. R. D. Bethune, 29th Jan. arrived at Calcutta from Amherst; 12th Feb. at Madras

*CROCODILE*, 26, Capt. A. Milne, 17th Feb. left Port Royal

*CURLEW*, 10, Lieut.-Com. G. Rose, 25th Jan. sailed from Simon Bay

*DEE*, (st. v.) Com. J. Sherer, KH. 10th Jan. at Port Royal

*DONEGAL*, 78, Capt. J. Drake, 13th April in the Tagus

*EREBUS*, Capt. J. C. Ross, 11th Feb. St. Helena

*ESPOIR*, 10, Lieut.-Com. J. T. Paulson, 7th April arrived at Cadiz from Lisbon

*FAIRY*, (sur. v.) Capt. W. Hewett, 9th April left Woolwich to resume her surveying operations in the North Sea

*FAWN*, Lieut.-Com. J. Foote, 22d Jan. arrived at Rio Janeiro from Rio Grande

*FIREFLY*, (st. v.) Lieut. Com. W. Winniett, 4th Feb. at Barbados.

- FLY**, 18, Com. G. G. Lock, 18th Jan. left Callao for England
- GORGON**, (st. v.) Capt. W. H. Henderson, 26th Mar. left Constantinople for Alexandria
- GRECIAN**, 16, Com. W. Smyth, 18th December arrived at Buenos Ayres
- GRIFFON**, 3, Lt. Com. J. G. D'Urban, 27th Jan. left Barbados on a cruise
- HASTINGS**, 72, Capt. J. Lawrence, C.B. 9th March left Symrna for Vourla
- HECLA**, (st. v.) Lieut. Com. J. B. Cragg, 1st Feb. at Port Royal
- HERALD**, 26, Capt. J. Nias, 24th Sept. left Singapore for Australia, 22d Nov. at Hobart Town
- HONER**, 6, Lieut. Com. R. B. Miller, 28th Feb. returned to Port Royal from Chagres
- HYACINTH**, 11, Com. W. Warren, 28th Oct. left Macao roads, 6th Dec. proceeded to the Bogue with the Volage
- HYDRA**, (st. v.) Com. A. W. Milward, 3d April arrived at Malta from Sicily
- JASEUR**, 16, Com. F. M. Boulbee, 2d April arrived at Malta from Corfu
- KITE**, (st. v.) Lieut. Com. G. Snell, 25th Jan. left Barbados for Demerara, 21st arrived
- MASTIFF**, (sur. v.) Master Com. G. Thomas, 11th April left Woolwich to complete her survey of the Orkneys
- MEGERA**, (st. v.) Lieut. Com. H. C. Goldsmith, 1st March arrived at Malta from Alexandria
- MELVILLE**, 72, Capt. Hon. R. J. Dundas, 24th Jan. left St. Helena for Cape. The Dutch ship Scheldt going into Ascension, went down with all sails set. The crew escaped, and a subscription for these Dutch sailors was made by the crew of the Melville, who had witnessed their distress and every man landed at Simon Town in possession of £2.
- PHOENIX**, (st. v.) 26th March arrived at Constantinople
- PICKLE**, 5, Lieut. Com. F. Holland, 11th Jan. left Havana for Jamaica
- PILOT**, 16, Com. G. Ramsay, 4th Jan. at Port Royal, 8th sailed for Texas
- PLUTO**, (st. v.) Lieut. Com. J. Lunn, 20th Jan. arrived at Demerara
- PRINCESS CHARLOTTE**, 104, Captain A. Fanshawe, 28th March at Malta
- PROMETHEUS**, (st. v.) Lieut. Com. T. Spark, 1st April arrived at Marseilles from Malta, 10th returned
- RACER**, 16, Com. G. Byng, 17th Mar., arrived at Havana from Jamaica
- RATTLESNAKE**, (tran. sh.) Master Com. W. Brodie, 14th Jan. arrived at Cape with troops, 22d sailed for Ceylon
- REVENGE**, 76, Capt. Hon. W. Waldegrave 13th April in the Tagus
- RINGDOVE**, 16, Com. Hon. K. Stewart, 7th Feb. arrived at Port Royal with a Slave prize
- RODNEY**, 92, Capt. H. Parker, C.B. 14th March left Leghorn for England, 7th April at Gibraltar, 5th sailed
- ROSE**, 16, Com. P. Christie, 4th Feb. arrived at Rio Janeiro from Tenerife
- ROVER**, 18, Com. T. W. C. Symonds, 23d Jan. arrived at Jamaica, 12th March arrived at Havana, 13th sailed
- SAMARANG**, 26, Capt. W. Broughton, 25th Jan. San Blas, Capt. Scott exchanges into and brings her home
- SAPPHIRE**, (tran. sh.) Comman. G. W. Nembhard, (act) 4th Feb. at Barbados to convey troops to Quebec and Gibraltar, and return home
- SAPPHO**, 16, Com. T. Fraser, 16th Feb. left Tampico for Jamaica
- SATELLITE**, 18, Com. J. Robb, 27th January arrived at Port Royal; 4th Feb. sailed for Santa Martha
- SERINGAPATAM**, 42, Capt. J. Leith, 4th Feb. at Barbados
- SNAKE**, 16, Com. J. B. P. Hay, 20th Feb. sailed from Port Royal
- SPARROWHAWK**, 16, Com. J. Sheppard, 5th August on her way from Valparaiso to Pacific Islands; to return in Feb
- TARTARUS**, (st. v.) Lieut. Com. G. W. Smith, 3d February left Jamaica for St. Thomas; 19th arrived at Havana
- TERROR**, Com. F. R. M. Crosier, 31st January arrived at St. Helena; 11th Feb. remained
- THUNDER**, (s.v.) Com. E. Barnett, 23d Feb. at Port Royal; 28th left for Nassau
- TRINCULO**, 16, Com. H. E. Coffin, 12th April arrived at Lisbon from Cadiz
- VOLAGE**, 26, Capt. H. Smith, 20th Nov. at Toonkoo (Tigris); 6th December proceeded to the Bogue with the Hyacinth
- WELLESLEY**, 72, 27th Jan. arrived at Trincomalee; 7th Feb. sailed for China
- WINCHESTER**, 50, Capt. J. Parker, 25th Jan. at Barbados from Bermuda; 7th of Feb. at Jamaica with Admiral Sir T. Hervey; 25th sailed for Bermuda
- WIZARD**, 10, Lieut. Com. T. F. Brisk, 9th left Rio on a cruise
- ZEBRA**, 16, Command. R. F. Stopford, reported on way to Corfu, lost some of her false keel on Cape Blanco
- AT MALTA 5th April.—Princess Charlotte 104 (bearing the flag of Admiral the Hon. Sir R. Stopford, GCB. GCMG.)—Belleophon 80—Benbow 72—Jaseur 16—Beacon 8—Maggie 4—Ceylon 6—Steamers; Hydra 4—Acheron, Blazer, Confidence, Phoenix, Alecto, and the French Steamers Sesostris and Leonidas.

TABLE LVI.

*For reducing Prussian feet to English feet, and English feet to Prussian.*

1 Neufchatel foot = 0·9843520225 English foot.

1 English foot = 1·0158967291 Neufchatel foot.

Prussian or English feet	English Feet and Dec. parts.	Prussian Feet and Dec. parts	Prussian or English feet.	English Feet and Dec. parts.	Prussian Feet and Dec. parts.	Prussian or English feet.	English feet and dec. parts	Prussian Feet and Dec. parts.
1	0·984	1·016	40	39·374	40·636	79	77·764	80·256
2	1·969	2·032	41	40·358	41·652	80	78·748	81·272
3	2·953	3·048	42	41·343	42·668	81	79·733	82·288
4	3·937	4·064	43	42·327	43·684	82	80·717	83·304
5	4·922	5·079	44	43·311	44·699	83	81·701	84·319
6	5·906	6·095	45	44·296	45·715	84	82·686	85·335
7	6·890	7·111	46	45·280	46·731	85	83·670	86·351
8	7·875	8·127	47	46·265	47·747	86	84·654	87·367
9	8·859	9·143	48	47·249	48·763	87	85·639	88·383
10	9·844	10·159	49	48·233	49·779	88	86·623	89·399
11	10·828	11·175	50	49·218	50·795	89	87·607	90·415
12	11·812	12·191	51	50·202	51·811	90	88·592	91·431
13	12·797	13·207	52	51·186	52·827	91	89·576	92·447
14	13·781	14·223	53	52·171	53·843	92	90·560	93·462
15	14·765	15·238	54	53·155	54·858	93	91·545	94·478
16	15·750	16·254	55	54·139	55·874	94	92·529	95·494
17	16·734	17·270	56	55·124	56·890	95	93·513	96·510
18	17·718	18·286	57	56·108	57·906	96	94·498	97·526
19	18·703	19·302	58	57·092	58·922	97	95·482	98·542
20	19·687	20·318	59	58·077	59·938	98	96·466	99·558
21	20·671	21·334	60	59·061	60·954	99	97·451	100·574
22	21·656	22·350	61	60·045	61·970	100	98·435	101·590
23	22·640	23·366	62	61·030	62·986	150	147·653	152·384
24	23·624	24·382	63	62·014	64·001	200	196·870	203·179
25	24·609	25·397	64	62·999	65·017	250	246·088	253·974
26	25·593	26·413	65	63·983	66·033	300	295·306	304·769
27	26·578	27·429	66	64·967	67·049	350	344·523	355·564
28	27·562	28·445	67	65·952	68·065	400	393·741	406·359
29	28·546	29·461	68	66·936	69·081	450	442·958	457·154
30	29·531	30·477	69	67·920	70·097	500	492·176	507·948
31	30·515	31·493	70	68·905	71·113	550	541·394	558·743
32	31·499	32·509	71	69·889	72·129	600	590·611	609·538
33	32·484	33·525	72	70·873	73·145	650	639·829	660·333
34	33·468	34·540	73	71·858	74·160	700	689·046	711·129
35	34·452	35·556	74	72·842	75·176	750	738·264	761·923
36	35·437	36·572	75	73·826	76·192	800	787·482	812·717
37	36·421	37·588	76	74·811	77·208	850	836·699	863·512
38	37·405	38·604	77	75·795	78·224	900	885·917	914·307
39	38·390	39·620	78	76·779	79·240	1000	984·352	1015·697

**Births.**

At Harwich, March 21, the wife of Mr. Ayles, Master of H.M.S. Hastings, of a son.

On the 6th inst. at Cottage Mona Lezayre, the Lady of Lieut. Richard J. Marsh, R.N. of a son.

At Douglas Is'le of Man, the Lady of Capt. Sir T. Pasley, R.N. of a son.

At Gosport, the wife of Mr. Price R.N. of a daughter.

**Marriages**

At Colombo, Hew, son of the late Capt. Hew Stuart, R.N. to Anne, daughter of Joseph Brindley, Esq.

On the 9th April at St. Dunstan's Stepney, Lieut. W.N. Jewell, R.N. to Miss Weavers.

At Deptford, Lieutenant William F. Triscott, R. N. to Harriet, daughter of John D. Rolt, Esq.

On the 2nd April, at St. George's Church, Southwark, John William Medley, Esq. to Catherine Hannah, second daughter of Lady and the late Captain Sir George Mount Keith, Bart., R.N.

At Colchester, R. Blight, Esq. Leamington, son of the late Admiral Bligh to Elizabeth, daughter of Boger Nunn, M. D.

On the 18th April, at St. John's Westminster, Robert Marriott, Esq. to Eleanor youngest daughter of the late Capt. Daniel Ross, R.N.

**Deaths**

On the 9th April, Rear Admiral Henry Stuart, aged 72.

At his seat, near Torquay, at an advanced age, Rear Admiral S. P. Forster.

At Dieppe, on the 25th March, the Rev. J. Beavor, Chaplain of Nelson's ship the Monarch, who fought his gun, like a man before the mast, at Copenhagen.

On the 11th April, in Wyndham street Bryanston square, in his 63rd year, Capt John Baldwin, R.N.

On the 28th March, at her residence, Fareham Hants, in her 88th year, Mrs Prescott, widow of the late Adml Prescott and mother of Captain Prescott, C.B. Governor of Newfoundland.

In Wilton crescent, Belgrave square, Anne, widow of Captain Halliday, R.N. At Epsom, Commander J. Blandford, R.N. aged 70.

On the 8th April, at Anglesey, Mr. George Billingham, youngest son of the late Mr. Thomas Billingham, Surgeon R.N. aged 31.

At York. Mary, Relict of Captain G. Dawson, R.N. of Rufforth Yorkshire.

On the 22nd March, Captain Joseph Andrews, late of the Hon. East India Company's service, aged 62.

At Stonehouse, on the 22nd April, Mrs Sullivan, wife of Mr. Sullivan, Purser of H.M.S. Hastings.

On the 21st March, at the Ray, near Maidenhead, Captain Sir John Philimore Knt. a Captain of the Order of the Bath and a naval aid de camp to Her Majesty

At Winchester school, on the 29th of March, Hugh R. F. Hoare, only son of Captain Richard Hoare, R.N.

On the 21st ult. at Kirkcaldy, Mr James Mackie, collector harbour master at that port, in his 71st year.

Lately, Commander Francis Beaumont (a) on the retired list.

On 16th April, at Portsmouth Captain William Burnett, R.N. who recently commissioned and was in command of H.M.S. Magicienne,

On the 10th inst at Croydon, Surrey Capt. Richard Griffith, in his 42nd year.

At Brighton, Emma, daughter of the late Admiral Sir A. Bertie, Bart.

On the 15th inst. at her house in Harley street, aged 81, Ann, Dowager Lady Rodney widow of the late and mother of the present Lord Rodney.

**TRAVELS IN THE WEST.—By D. Turnbull Esq. M.A.—Longman. & Co.**

Cuba is the theme of Mr. Turnbull in this volume, on which he gives a great mass of information, historical, statistical and geographical; and as it will fall into the hands, of the readers of the Nautical in its first edition, we shall do him the service to annex the following supplementary note, which has been placed in our hands

"I learn with regret that I have been led into error in the last paragraph of the 1st chapter of this volume, pp. 22 and 23., respecting the events at Santiago.

"I have ascertained from undoubted authority that General Lorenzo was received on board the British cruiser alluded to under a convention to which he was himself a party, the terms of which were faithfully fulfilled in every particular, as is farther proved by General Lorenzo's own subsequent admission, published at Cadiz in 1837; and that the published statements which I found at the Havana of the destruction of 500 persons, intended doubtless to damage General Tacon, were wholly unwarranted by fact; as it now appears there was no loss of life whatever consequent on the events in question. It affords me satisfaction, also, that I am able to remove the mistatements thus unintentionally made affecting the character of the British navy."

## METEOROLOGICAL REGISTER.

From the 21st of March, to the 20th of April, 1840.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

Month Day	Week Day.	BAROMETER		FAHR. THER. In the Shade.				WIND.				WEATHER.	
		9 A.M.	3 P.M.	JAM.	3PM.	Min.	Max	Quarter.		Stren.		A. M.	P. M.
								AM.	PM.	AM	PM		
21	S.	In Dec.	In Dec.	o	o	o	o	N	N	5	7	qbc	qbc
22	Su.	30.36	30.40	36	42	29	43	W	NW	2	3	bcm	ogmd4)
23	M.	30.00	30.02	33	44	27	45	N	N	6	7	qops (2)	ibcps(3)
24	Tu.	30.12	30.12	32	37	30	38	N	N	7	8	qbcps (2)	ibcps(34)
25	W.	30.27	30.27	37	37	28	38	NE	NE	6	7	qbc	qbcps(3)
26	Th.	30.28	30.22	34	37	26	38	N	N	5	6	qops (2)	qops(3)(4)
27	F.	30.10	30.08	37	39	30	40	N	NE	4	4	ops (2)	oprs(3)
28	S.	30.09	29.99	38	40	33	41	N	NW	3	2	o	o
29	Su.	29.80	29.76	39	46	36	48	SW	SW	1	1	o	bcm
30	M.	29.87	29.89	44	48	36	52	SW	SW	3	3	bc	o
31	Tu.	29.82	29.80	46	47	42	48	SW	SW	4	5	od 2)	od 3)
1	W.	29.66	29.62	44	47	41	50	SW	S	3	4	odc 2)	o
2	Th.	29.70	29.76	43	54	33	55	E	E	2	3	bm	bcm
3	F.	30.00	29.98	42	49	38	51	NE	NE	4	3	o	bc
4	S.	29.92	29.92	38	46	29	47	NE	NE	3	4	bc	bc
5	Su.	30.02	30.02	43	55	34	56	NW	NW	2	3	bm	bcm
6	M.	29.80	29.69	46	54	35	55	SW	W	4	4	bc	bcp(3)
7	Tu.	29.55	29.60	44	48	33	50	NE	N	5	6	bcq	bcp(3)
8	W.	29.97	30.00	40	43	36	46	N	N	7	8	bcq	bcp(3)
9	Th	30.26	30.28	41	47	31	49	N	N	5	5	bc	bc
10	F.	30.39	30.38	45	52	30	54	N	E	2	2	bc	bc
11	S.	30.26	30.18	44	55	25	57	S	SE	2	2	bm	bm
12	Su	30.07	30.01	50	56	39	57	SW	SW	1	2	o	bc
13	M.	29.90	29.88	48	61	31	61	E	E	1	2	bf	b
14	Tu.	29.80	29.80	47	59	32	62	NE	SE	2	2	bm	bcm
15	W.	29.94	29.96	52	66	36	68	E	SW	1	2	b	bc
16	Th.	30.10	30.08	52	66	37	67	NW	N	1	3	bc	bcp 3)
17	F.	30.16	30.12	47	59	36	60	NE	NE	3	4	b	b
18	S.	30.01	29.96	45	61	33	63	NE	NE	3	3	b	b
19	Su.	29.92	29.88	41	59	36	61	N	NE	4	4	bc	bc
20	M.	29.90	29.88	50	62	34	64	W	W	2	2	bcm	bcm

MARCH—mean height of the barometer 30.219 inches : mean temperature = 38.02 degrees : Depth of Rain fallen 0.33 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The space occupied by that important document the Report of the Naval and Military Commission, even as far as it concerns the Navy and Marines, is so considerable as to have induced us to extend our present number to one half more than its usual size; which has obliged us also to increase its price in proportion.

We are obliged to Mr. M'Kennie, for his plan of Madras.

A LIEUTENANT R. N. must see that we cannot possibly interfere with official forms and ceremonies.

THE BERMUDA PAPERS, have reached us safely, for which we are thankful, they shall appear as soon as opportunity will allow; also a LANDSMAN'S CAPE adventure.

BLACK AND WHITE, will have an opportunity of choosing his colour shortly, his hint is taken as intended.



Discoveries of Messrs Dease & Simpson in 1839.

To face p. 41.



## ORIGINAL PAPERS.

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JUNE 1840.

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### GALVESTON HARBOUR.—GULF OF Mexico.

GALVESTON appears to be a place little known at present, but is gradually rising into importance as the principal seaport of the rich and fertile province of Texas. A neat little plan, the work of H. B. M. Consul, from Mr. Crawford's survey of the place, was published by the Admiralty a short time ago, which, with the following directions from the chief pilot, should be in the possession of masters of vessels bound there.

"It may be approached with *less danger than any port in the United States*, as the whole line of coast west of the Sabine, in *five fathoms of water*, is the best of holding ground, and a vessel may ride with perfect safety, throughout the year; so that masters of vessels bound to Galveston, having good ground tackling, need not be apprehensive of a lee shore—that seeming to be their principal object of alarm.

"As both the latitude and longitude of the east end of Galveston Island, laid down in charts and books of direction, are incorrect; and in consequence, many vessels have run to the westward of the port, by the error in longitude, and the prevailing westerly current—the following is the correct latitude— $29^{\circ} 16' 37''$  North,  $94^{\circ} 49' 41''$  West longitude.

"My statement of the latitude and longitude is gathered from the best of sources, as I am indebted to many officers of well known reputation in the Navy, as well as commanders of trading vessels, for their kind assistance, both by observations and chronometers. Masters of vessels may, therefore, lay aside all doubts and fears.

"Galveston has, heretofore, on account of its being low land, been found difficult to make; but now that we have upwards of 3000 houses, many of them are so lofty, that, from the mast-head of a vessel, they may be distinctly seen at a distance of 20 miles, it is easily made. Vessels, however, of heavy draught, should not approach the bar nearer than *six fathoms*; and then, by making a signal for a pilot, they will



METEOROLOGICAL REGISTER.

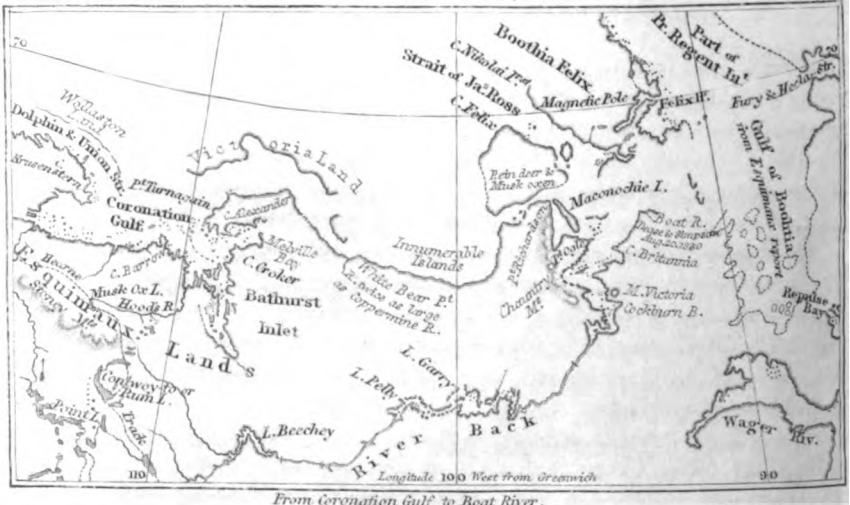
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24	Tu.	30.12	30.12	32	37	30	38	N	N	7	8	qbcps (2)	abcps(34)
25	W.	30.00	30.00	32	37	30	38	NE	NE	6	7	qbc	qbcps(2)

Discoveries of Messrs Dease & Simpson in 1839.

To face p. 40.



From Coronation Gulf to Boat River.

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Hunt, Printer, 32, Lower street-Islington.

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"Galveston has, heretofore, on account of its being low land, been found difficult to make; but now that we have upwards of 3000 houses, many of them are so lofty, that, from the mast-head of a vessel, they may be distinctly seen at a distance of 20 miles, it is easily made. Vessels, however, of heavy draught, should not approach the bar nearer than *six fathoms*; and then, by making a signal for a pilot, they will

be promptly attended to. Vessels making this port at night, would do well to come to an anchor till daylight. For the convenience of obtaining a pilot, vessels drawing eight feet or less, may approach as near as *four* fathoms of water.

“ I do not hesitate to say, that a vessel once anchored in Galveston harbour, is as safe as in any harbour in the United States.

“ Masters of vessels are particularly requested on sighting the city, if to the eastward, and it bearing a little to the southward of W.S.W. immediately to haul off to six fathoms, the town bearing S.W.b.W., they will then be in a fair way for the bar. If to the westward, run to the eastward until the town bears as above.

“ In conclusion, let me remark, that we have now a first rate pilot boat constantly on the look-out for vessels nearing land.”

GEORGE SIMPSON,

*Pilot of the Port of Galveston.*

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BAHAMA BANK.—*Passage across the South-East end.*

LIEUTENANT W. P. Croke, lately commanding H.M.P. Express, to whom our readers are indebted for the foregoing notice of Galveston, has drawn up the following remarks, on crossing the tail of the Great Bahama Bank, at the entrance of the Old Bahama Channel. They may be serviceable to the vessels for which he intends them.

“ There are two very good passages across the bank, the knowledge of which would be a great benefit to vessels which use the dangerous Old Bahama Channel, on their route to Havana, or the Gulf of Mexico. The first passage is that by Cayo Sal, called in the Admiralty Charts Ragged Island; it is to the northward of Cayo Verde. Cayo Sal is easy to make, it is larger than Cayo Verde. The channel to enter on the Bank is to the northward of the Cay, and is good for vessels of 14 or 15 feet draught. Should night be coming on, there is good anchorage in all winds, near the S.W. part of the Cay, off some salt collectors' Ranchos. After entering by the Cay, there are some reefs to pass through, which always break. The passage then across the bank is quite clear in from 6 to 7 fathoms water, with anchorage anywhere.

“ There are two long sand bars laid down in our charts, and on the western edge of the bank marked “*dry at low water* ;” these do not according to my informant exist, he having passed over the spot by observations of sun, and moon, and chronometers. An obelisk on Cayo Sal would much facilitate the making the island, and prevent mistakes.

The Passage to the southward of Cayo Sal is the widest, but there is a rock with 5 feet only on it in the centre. After leaving the western edge of the beach, Anguila should be sighted in both instances.

"The second passage for vessels of 18 feet, or I have no doubt, (if it were surveyed,) for a greater draft, is by Cayo Verde. Pass to the northward of the Cay, enter on the bank, (Cayo Verde bank) which has 5 or 6 fathoms water and clear, pass to the north of Cayo Santo Domingo, shape a course for the *Placer*, of Magallanes, which by its name *Placer*, (is clear,) having 6 or 7 fathoms on it, thence to the edge of the great bank, where there is a clear space of some miles to the eastward of the Mucaras, passing over the spot where there is said to be no soundings; and to the western edge to the northward of the Cayos Lobos and Guincho. Great care must be taken in dealing with the Mucaras, the name of which indicates them dangerous rocks, covered with weeds of the same color as the water.

"Ginger or Guincho Cay is in latitude  $22^{\circ} 45'$ , longitude  $78^{\circ} 5'$ , good anchorage about  $2\frac{1}{2}$  miles; Cay bearing from W.  $\frac{1}{2}$  N. to W.S.W.

"There is a shoal rocky spot in the edge of the beach, between Lobos and C. Guinchos, in latitude  $22^{\circ} 39'$ ; longitude  $77^{\circ} 54'$ .

"From 60 to 70 vessels from Spain, the packets from Cadiz, included, drawing 15 feet, constantly pass across the bank, and have a great dislike to the old channel, and justly so; several of our own packets have struck, and in a hurricane, or any extraordinary northwester, would be in the greatest possible danger. Lloyd's will not insure vessels to take the old channel, consequently much time is lost, when bound to Havana, by going to the southward of Cuba, and having to round Cape St. Antonio, and beat up to Havana: Spanish traders do not adopt this plan.

"I will take the liberty to add, that if I were caught in a hurricane, in the old channel, I should run on the bank some 20 miles, let go my largest anchor, veer to three hundred fathoms of chain, and strike yards and masts; finding her still driving, I would cut away the masts, by which I think I should save ship and life. I am quite satisfied that letting go two, or even three anchors is of no use, on the contrary manifest harm, as the wind in a hurricane is constantly shifting, by which one anchor fouls the other, and none can hold, even in the best ground. In a very heavy norther it would be different, the wind blowing constantly from N.N.W. to N.W.

[This part of the Bahama Bank has been lately examined by Capt. R. Owen in H.M.S. Thunder, the track of which vessel is marked by soundings and occasional anchorage.]

## NAUTICAL DESCRIPTION OF THE COAST OF WALES—No. 3.

*By Lieut. W. L. Sheringham, R. N.*

## ST. BRIDE BAY.

THE entrance to this bay, between the Islands of Skomer and Ramsey, is about six miles and three quarters wide at its mouth, and at least seven miles deep. Except near the coast on the north side between Solvach creek and Pen-maen-melyn, this bay is free from hidden dangers. The general character of the bottom, is fine sand and mud, and it is excellent trolling ground. The depth is very regular throughout, varying from 17 to 10 fathoms to within a mile of the low water line.

When in less than twenty fathoms, and the south Bishop Light in sight, a vessel is certain to be within the points of St. Bride Bay. With the wind to the southward and westward, and blowing strong, a heavy sea sets into the bay, which might make it difficult, particularly for deep laden vessels to work out; care should be taken therefore not to be caught there.

If well within the points the tides are not strong in St. Bride Bay, the flood sets up the south side to the eastward, and out again along the north side; the ebb in a contrary direction, so that there is generally a set out of the bay either on one side or the other, according as it is ebb or flood, which might be taken advantage of. The flood through Jack Sound sets direct across for Ramsey Island, and with considerable velocity for a hundred yards or so. The ebb was found to commence running through the Sound, two hours after it was high water by the shore. Its direction is pretty straight through Jack Sound, but there is a dangerous eddy on the south side near the rocks on the Middle Land, which vessels should be careful to avoid, if working through with southerly winds. A small sloop was totally lost by standing into this eddy in 1838. There is a strong eddy also on the north side of St. Bride Bay near Porthllyschi, on the ebb, caused by the rush of tide through Ramsey Sound, which it is proper to guard against, if working to the southward, by keeping enough to the westward to be within the influence of the true tide.

On the flood, a vessel must be well to the eastward and pretty close to the entrance, before she is within the limits of the Sound tide, as even with the entrance open at half a mile distant, the tide was found to set outside Ramsey Island.

Half way between Skomer and Ramsey, the flood stream makes nearly four hours after low water on shore.\*

\* As the coast in St. Bride Bay was included in Captain Denham's Survey of 1830,

## RAMSEY ISLAND

Bounds the Sound to which it gives its name on the west side. It lies about N.E.b.N. and S.W.b.S. is  $1\frac{1}{2}$  mile long, by about three-quarters of a mile wide at its broadest part; numerous islets and large rocks are detached from the main island, the largest of which Ynys-bery extends off, including the several large rocks, Meini-dûon, upwards of two-thirds of a mile in a S.W. direction from the south end of the island.

Although many rocks lie near the coast on the S.W. side of Ramsey, as they are close in, out of the track of vessels and never covered, no further notice need be taken of them.

Ramsey is partially cultivated, and has one farm house upon it near the coast on the west side of the Sound, close under which to the northward of the Bitches, is the proper landing place. With the exception of a small sandy bay on the west side Aber-Maur, the entire circumference of this island is a high and rocky cliff. On the west side, the land rises suddenly to a considerable elevation, forming a mountain of rock totally uncultivated; this is a very conspicuous object from the sea, and a useful mark for the shoals in the vicinity of the Smalls. The highest peak of the mountain is elevated above low water spring tides, 459 feet.

## THE BITCHES AND WHELPS.

This curious ledge of high rocks, some of which never cover, runs off at right angles to the coast, into the Sound, on the east side of Ramsey Island, and near the middle of it; extending at least one-sixth of a mile off shore. There are a few low rocks at the outer end of this ledge, lying about 30 or 40 feet outside the high rocks: these are dangerous as they cover at the first quarter flood.

## CARREG EILUN, AND PONT-YR-EILUN.

Two large rocks lying about a quarter of a mile to the eastward of Ynys-bery; they are close to the entrance of the Sound on the south side; the inner or westernmost one is a very high rock, Carreg Eilun; the other Pont-yr-Eilun which is close to it, is low and nearly covered at high spring tides, but as it always shows it is easily avoided.

## THE SYLVIA ROCK

Is a shoal patch lying in the track of vessels running for the Sound, it seems not to have been generally known, and therefore was named after Her Majesty's Cutter which was carried over it by the tide.

his directions must be referred to for an accurate description of the coast and dangers of this bay, particularly of the half tide rock, the Ystrodur, &c. which lie at the entrance of Porthlyschy and near Pen-maen-melyn at the entrance of Ramsey Sound.

There is water over the Sylvia Rock for the ordinary class of vessels that trade through this Sound; as even at low water springs, a depth of not less than 3½ fathoms was found with 13 to 15 fathoms inside of it, but as it is very difficult to hit the shoalest spot of these small rocks, it is better avoided, particularly in blowing weather.

It lies half a mile S.b.W. from Carreg Eilun, the outer high Bitch just open of Pont-yr-Eilun, leads over it.

#### CLEARING MARKS.

A good mark for sailing to the eastward of the Sylvia Rock is St. David Head on with Pen-maen-melyn.

To pass to the southward of it, keep Daufraich or the Bishop, next to the south Bishop open of all the rocks, Meini-dûon off Ynys-bery.

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#### NAUTICAL DESCRIPTION OF THE BAY OF MOSIMBWA,

*Eastern Africa, by Capt. W. F. W. Owen, R.N.—Aswatada Islands continued.*

THE great bay of Mosimbwa is contained between Point Massinghy, on the north, and Point Hooly, (misnamed Vela on our chart,) on the south.

To seaward this bay is covered by a coral reef, on which there are three islets, two of them wooded, and one a mere corallet unclothed. The reef is more than a league from east to west, and two miles from north to south: the extremes are in latitude 11° 15'·5 S., 11° 17'·8 S., longitude 40° 43'·3 E., 40° 39'·2 E.

The channel between this coral bank and the reefs of Kisangoola, and Luhamba, is a league wide, but these last must be kept aboard if entering by this pass, (called Luhamba south pass,) for it appears shoal half a league N.N.W. of the island; but whether this be a shoal separated from it, or adjoining it, we have not determined.

Mootoondoo Island, the centre of which is in latitude 11° 21'·5 S., and 40° 41' E., is a long slip of half a league nearly east and west, and not more than a quarter of a mile broad, but its coral bank is a league in diameter.

The south pass to Mosimbwa is between this bank and the bank to the southward of it, and is near a league wide, very clear and safe.

The small island of Isonway, in latitude 11° 18' S., and longitude 40° 36' E., lies about a league and a little more N.W. from Mootoondoo, it stands on the western edge of a sand bank, dry at half tide, and half a league from north to south. The bank of Isonway is clean on all sides, and there are clear and safe passes between it and all other banks and shoals.

About four miles S.S.W. from Isonway, is the small island of Timboozy, standing on a considerable bank, and nearly six miles west of Mootoondoo, and S.E. of Timboozy, about two miles, is a small isolated coral patch; and south of Timboozy about four miles is the island Mihoojy, standing on the long sandy spit, projecting eastward from point Hooly, five or six miles, and ending in a coral reef, marked also by a small ledge of rocks above water. Westward of Isonway, are the islets of Changa and their shoal bank. Changa islet is in latitude  $11^{\circ} 16' 6''$  S., longitude  $40^{\circ} 32'$  E.

From the point of Massinghy, to the Port of Mosimbwa, the distance is about ten miles S.W., and the shore between them for the most part flat and shallow. The Port of Mosimbwa is covered by the islet of Loopooloo which is about W.N.W. ten miles from the island Mihoojy.

Point Massinghy, in latitude  $11^{\circ} 11' 4''$  S., longitude  $40^{\circ} 32' 45''$  E., is about a league and a half west, southerly from the western point of Luhamba; it projects nearly east, in a peninsula point forming a small bay on its north, which appears shallow, the point itself seems to be bolder on its south.

The shore is covered by a narrow sandy beach, all the way from point Noondo, to the point of Mosimbwa.

At the point, in Mosimbwa Bay, which is more than two leagues to the S.W. of Massinghy, there is a range of low hills all the way to the port of Mosimbwa,, extending half a league north of it, and a league S.W. of it to the town.

Lieutenants Boteler and Owen, appear to have sounded the great bay of Mosimbwa very carefully, but their examination of the port was not critical, and they appear to have had no communication with its negro garrison. The journal of Mr. Dupont will therefore be interesting and serve to explain the points and routes of navigation. Lieutenants Boteler and Owen took one excellent line of soundings between Isonway Island and Changa flats, but misjudged these to continue to the N.E. rocks of Timboozy, so as to leave no passage, whereas the best channel to Mosimbwa from the north appears to be from Isonway about S.W.b. W.  $\frac{1}{2}$  W. leaving the shoals of Changa to the northward, and the islands Timboozy to the southward—this emendation I note from Mr. Dupont's journal hereafter quoted at greater length.

From Mosimbwa to the S.E. the shore of the coast is very foul and shallow, but with a good channel for careful navigators, between the reefs of Timboozy on the north, and Mihoojy island on the south, and out to sea between Mootoondoo on the north, and the coral reef and sand islets on the south.

To enter Mosimbwa roads from the northward, if a ship have passed through the Kisangoola channel (or the Couriers passage,) and rounded



the west point of Luhamba, she may steer south for Isonway Island, and coast its northern and western shores as close as convenient; and departing from it, steer between W.b.S. and W.S.W. or even more southerly until Timboozy bears E.b.S. and then choose a birth as convenient in the roads of Mosimbwa; a good birth seems to be with Loopoolooloo W.S.W. about half a league in five fathoms.

There is also a channel with good depths westward of Changa Island, but a shoal spit extends a mile N.W. of it, and there are several spots in the way with perhaps as little as three fathoms.

If a ship enter by Luhamba south pass, she must be careful to avoid the shoal two miles north of the island to the south, and then steer for Isonway, and proceed as before.

If a ship enter by the pass north of Mootoondoo Island, she should bring Isonway to bear west (true) before she enter the pass. This course will carry her mid-channel, until within half a league of Isonway whose coral reef extends a mile N.E., E., and S.E. from it; she may haul round the S.E. point of Isonway reef, and steer west for Loopoolooloo, which is full four leagues from it.

On entering by Mootoondoo pass, steering west for Isonway, when the west end of Mootoondoo bears S.  $\frac{1}{2}$  E., she may steer S.W.b.S. to the isolated patch, or she may pass on either side of the patch, haul round the south reefs of Timboozy, and steer W.b.N. or W.N.W. for Loopoolooloo.

The great south pass into Mosimbwa bay, is between the coral reefs of Mootoondoo on the north, and the coral reefs and sand islets on the south. This pass is upwards of a mile wide, and Mihoojy island is a good mark for this south pass and channel.

Steering west or W.  $\frac{1}{2}$  S. for Mihoojy until Isonway bears N.  $\frac{1}{2}$  W. and Mihoojy east rocks S.W.b.W., a ship may then steer W.N.W. for Loopoolooloo, coasting the coral reef of Timboozy as close as convenient.

It is useless to multiply words about a place so little used, but its importance is rather magnified as having long been the principal northern post of the Portuguese on these shores, and much used in the diabolical traffic for negroes, of which that degenerate people were, in their treaties, so jealous as to give much praise to their diplomatists for pertinaciously insisting that their limits extended to Cape Delgado, and moreover that Cape Delgado was in 10° south latitude; thus most ingeniously taking advantage of the English diplomatists, to keep open to them and other slave dealers, forty leagues of that part of the coast, which has always been the principal focus of that infamous trade on its coast; and where they have not a single possession. It almost is needless to recapitulate that their northern

limit is 11° 00' S., that Cape Delgado is in 10° 44', and that 10° 00' S. would include Lindy, Monghow, Mikindany, Mizimhatty, Rovooma, Hambeezy, and Tonghy, the only places on this part of the coast where negroes are commonly brought to market, and none of them owing the Portuguese any alliance, allegiance, or subjection.

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#### FIRST OFFICIAL VISIT OF THE LATE LORD HIGH ADMIRAL, TO THE PORTS AND NAVAL ESTABLISHMENTS.

His late Majesty, when filling the office of Lord High Admiral, from duty and inclination, took the first opportunity of paying a visit to the several Ports and Naval Establishments of the Empire.

The following extract from the journal of a person high in office, who accompanied His Royal Highness on this occasion, forming an authentic record of an event rare in our Naval History, will be both useful to the historian and interesting to our readers. The important office of Lord High Admiral, the duties of which are generally executed by commission, had previously been filled by Prince George of Denmark, from May 1702, until October 1708, when the Prince died.

The officers who attended the Lord High Admiral on the present occasion were, *Captain*—Sir William Hoste, Bart.; *Lieutenants*—The Hon. Frederick Fitzgerald De Ros, and William John Cole; *Surgeon*—William Thompson; *Purser*—Edward Bate; *Assistant*, Edward Harris; *Master*—John Franklin; *Midshipmen*—J. W. D. Brisbane, Augustus Leopold Kuper, George Vaughan Hart, Frederick Torrens, Vol. 1st class.

Rear-Admiral Sir Edward Owen also accompanied His Royal Highness, and the following Civilians—The Honorable (now Lord W. Keith Douglas, Lord of the Admiralty; Mr. Barrow, Secretary of the Admiralty, Mr. Holworthy, and Mr. J. Barrow, of the Admiralty. Philip Charles Sidney, now (Baron De Lisles), Lord Errol, and The Rev. Augustus (now Lord) Fitzclarence.

*July 7th, 1827.*—His Royal Highness the Lord High Admiral embarked at one o'clock this morning, from the Dock-yard of Woolwich, on board the Royal Sovereign Yacht, on a visitation to the several Ports and Dock-yards of Portsmouth, Plymouth, and Pembroke; she immediately proceeded down the river, towed by the Lightning, steam vessel, and on reaching the Nore the Procris brig of 10 guns, which had previously been ordered there, joined the Royal Sovereign, being towed by the Comet, steam vessel, but was found to be unable to keep company with the Sovereign. The Procris was intended to answer salutes made to the Lord High Admiral, and an order to that effect was given to her commander the Honorable William Waldegrave.

*Monday 9th.*—Arrived at six this evening at Devonport, and took up moorings opposite the landing stairs at the foot of Mount Wise, and in the course of the night the Procris arrived with the Comet, steam boat. On the Royal Sovereign entering the Sound, the hills were perceived to be covered with crowds of people, and all the ships in the Sound and harbour saluted the flag of the Lord High Admiral. At

seven, His Royal Highness landed, and proceeded to the residence of Admiral Lord Northesk, the Commander-in-Chief, through an immense concourse of people assembled on Mount Wise on the occasion.

*Tuesday 10th*—The Lord High Admiral visited the Breakwater this morning, and inspected the new mode of securing the sea face of this important work, which appeared to be planned with great skill, and executed with judgment and ability, under the superintendance of Mr. Stuart. The stones which form the surface of the sea face and summit are of such size, and so well fitted together and dovetailed, that no apprehension could in future be entertained of any displacement by the force of the sea, all-powerful as it is. About 250 yards in length of this kind of masonry is expected to be finished in the course of the year, and as much in the following year, when the western, or most exposed part of the Breakwater, will have been secured.

A plan and estimate for a Light-house, on the western end had been proposed for adoption by Mr. Rennie, the latter amounting to between 30,000*l.* and 40,000*l.*, but His Royal Highness and several naval officers were of opinion, that a floating-light vessel, at least for a temporary purpose, would answer equally as well. As however there were different opinions on this subject, Mr. Stuart was directed to carry up in the progress of the work, the shaft or base of a Light-house to the surface, that if it should be hereafter determined to erect a building of this description, the foundation might be found ready to receive the superstructure.\*

It had also been suggested that a battery might be necessary to protect the passages, and ships anchoring in the Sound, but His Royal Highness very justly observed, that the ships of war behind it formed by far the best protection that could possibly be afforded. It appeared however, that a battery of a few guns might be advantageously placed at the new watering place in Bovisand Bay, opposite the eastern end of the Breakwater. This watering place was also visited by His Royal Highness, who was of opinion, that a very great expense had been incurred for a very inadequate object. The want of water in the Cove to float the tanks or boats, except at high water, and a little before and after it, together with the strong westerly winds, and the swell of the sea in the eastern passage, are likely to render it unsafe and inefficient for the purposes of watering ships in the Sound for a great part of the year; and in point of fact, though complete in every part, and with an abundant supply of excellent water brought down to the pier head; no ship of war has, as yet, been watered in Bovisand Bay. Mr. Rennie suggested that there would be no difficulty in leading this fine stream

\* It is now in progress of being carried into execution.

of water to the centre of the Breakwater, by iron pipes laid down along the bottom of the sea in the Sound, which, while it would be a great convenience would obviate all the difficulties here mentioned. From Bovisand His Royal Highness next proceeded to view the quarries at Oreston, from whence the limestone for the Breakwater is procured. Next he proceeded to the new victualling office, where he mustered the officers, clerks, and workmen, of the several departments, and examined the state of the various storehouses.

*Wednesday 11th.*—His Royal Highness this morning proceeded to the Dock-yard, where he mustered the principal officers, clerks, and various artificers; inspected the several offices and storehouses, the ships building, &c., which occupied the whole of the day. In compliance with what has been usual on such occasions, His Royal Highness ordered that the men should have a half-holiday and half a day's pay. It was observed that nothing escaped the attention of the Lord High Admiral,—that he visited every room in the store department, ascending to the highest story, and descending to the very cellars where there were any; and some of those who attended him were heard to express, that it was one of the most fatiguing days they had ever experienced.

*Thursday 12th.*—This morning His Royal Highness visited the Marine Barracks, and inspected the whole interior arrangements and organization, after which he had the marines out on the Hoe, where the corps of marines to the number of four hundred and upwards, went through their manœuvres, with which the Duke expressed himself much satisfied.

*Friday 13th.*—The greater part of this day was consumed in visiting the ships in commission, both in the Sound and in harbour; in examining every part of them, and in mustering the officers and men. In the evening the Lord High Admiral and suite dined with the Mayor and Corporation of Plymouth, at the Great Hotel, where an address of congratulation was presented to him in presence of the Aldermen, Justices, and other members of the Corporation, and a great assemblage of the inhabitants, particularly of ladies, collected on the occasion.

*Saturday 14th.*—After seeing about 100 commissioned officers on half-pay, at the Admiral's house, His Royal Highness proceeded to the Naval Hospital at Stonehouse, and inspected the several wards and offices, and mustered the whole establishment. From thence he proceeded to Cremil point, to examine the progress made in the new and splendid victualling establishment, then forming at that place, which when finished, is meant to supersede and comprehend all the scattered branches of that department of the Naval Service. The most important part of the sea wall is nearly completed, and the Duke laid with due ceremony the first stone of the entrance pier into the basin. The tank on the summit of

the hill, which will contain 6000 tons of water, is completed, and will afford ample protection from any fire, that may happen in the buildings, by the abundance and complete command of the water it contains; and there is every reason to believe the whole establishment will be completed within the prescribed period of time, and also within the estimated expense.

In the evening H.R.H. the Duchess of Clarence arrived by land, and the Duke moved his quarters from the Royal Sovereign to Mount Edgecumbe. Nothing could exceed the joyous enthusiasm of the people on the approach of Her Royal Highness to Devonport. The whole population may be said to have gone out to meet her; they insisted on taking off the horses, and drawing her to the Government-house; and it was only with the most earnest entreaties that she prevailed on them to forego this ceremony. She mentioned the delight she had experienced on her journey: she had slept at Ilfracombe, and on her proceeding to embark at that place, she spoke with great feeling on the kind attention of the people; the poorest person having brought out a carpet, or rug, or something for Her Royal Highness to tread upon, on her way down to the quay.

*Sunday 15th.*—This morning the Duke and Duchess of Clarence, and the persons in their suite, and the officers of ships in commission, and the ordinary, attended Divine Service, on board the flag ship, the Britannia, after which His Royal Highness proceeded to the Admiral's house, where he received about 120 naval officers on half-pay; and then returned to Mount Edgecumbe.

*Monday 16th.*—The Lord High Admiral was this morning engaged not less than four hours, in seeing about 150 officers, on half-pay, after which he was waited on at the Admiral's house by a deputation of the inhabitants of Devonport, to receive an address of congratulation on his arrival at this port, in the character of Lord High Admiral. He then proceeded to the ordnance premises, to inspect the stores and the gun wharf, and from thence returned to Mount Edgecumbe.

*Tuesday 17th.*—His Royal Highness this morning visited the Athenæum at Plymouth, to witness some experiments in electricity, to elucidate the advantages of ships having conductors of metal, let into the masts, and continued from the mast's head down to the keel, in order to convey the electric fluid, in one unbroken line, into the sea. Mr. Harris, the experimentalist, had paid much attention to this subject, and as far as his experiments go, on a small scale, the results were perfectly satisfactory.

His Royal Highness next proceeded to visit the ships in ordinary in Hamoaze, examined their state of cleanliness, and ventilation, and expressed his satisfaction at the careful manner in which they were kept.

In the evening the Lord High Admiral entertained the officers of the Navy and Army with a grand dinner, on board the Royal Sovereign; and in the evening the Duchess of Clarence, on the suggestion of Lady Northesk, and Lady Emily Mount Edgcombe, gave a ball on board the Yacht, with the Meteor steamer attached to her, at which the numerous respectable families of Plymouth, Devonport, and the neighbourhood, attended to the number of at least 500.

*Wednesday 18th.*—The Lord High Admiral this morning reviewed the whole of the troops in the garrison, which, with the marines, amounted to about 1500 men, and expressed himself well pleased with their appearance, and evolutions; after which, he returned on board the Yacht, where he passed the remainder of the day in writing his despatches.

*Friday 20th.*—This day the Royal Sovereign removed from Barnpool close behind the Breakwater, as the best position to see the Regatta, in which a number of Gentlemen's Yachts, which had assembled here for the purpose, joined.

*Saturday 21st.*—At 11 this morning, after His Royal Highness had visited and mustered the Dryad Frigate, just arrived in the Sound from Gibraltar, the Royal Sovereign, towed by the Lightning, steam vessel, proceeded to the westward, and at 5 p. m. arrived at Falmouth, when the Lord High Admiral visited and inspected the packets that were in harbour, and was pleased to find them all in high order, more particularly the Ten-Gun Brigs, a class of vessels, that had been most undeservedly disparaged by persons utterly unacquainted with their capacity and sea worthiness.

*Sunday 22nd.*—This morning the Mayor, Aldermen, and a deputation of Burgesses waited on His Royal Highness with a congratulatory address on his recent appointment as Lord High Admiral, and on his arrival at Falmouth. The weather being unsettled, the Royal Sovereign remained here till the evening, when the weather moderating, she proceeded to sea, and on the following morning the 23rd, was off the Lands' End. A fresh breeze springing up, the steamer was cast off, and at 10 p. m. the Royal Sovereign entered Milford Haven, and a little before midnight, took up her moorings in front of the Dock-yard.

*Tuesday 24th.*—Examined the Dock-yard, and the ships building therein, consisting of the Royal William, a first-rate, the Goliath, of 80 guns, to be launched to-morrow, three 46-gun frigates, and some smaller vessels. The importance of Pembroke Dock-yard as a building yard, is evinced by the fact, that since its establishment thirty-two men-of-war have been launched, and it is almost unnecessary to add that this establishment has imparted to the neighbouring country, a degree of activity and prosperity unknown before.

Having completed the examination of the yard, the Lord High Admiral embarked on board the Meteor, steam vessel, and proceeded to the mouth of the Haven to examine the points for the defence of the harbour and Dock-yard, which had been pointed out by the Lords Commissioners of the Admiralty, at their visitation of 1824, accompanied by Sir Alexander Bryce of the Engineers; all of which were approved by His Royal Highness, who was strongly of opinion, that, the Barracks they recommended to be placed on the heights immediately above the Dock-yard, should be carried into effect without delay. The estimated expense of this work is 11,000*l.* It was also a question whether a corps of Marines, or of the Marine artillery, might not be stationed there, for the protection of the Dock-yard.

*Wednesday 25th.*—A vast assemblage of people, from every part of the neighbouring country was collected to witness the launch of the Goliath, which name was changed to that of Clarence, on her being christened by Her Royal Highness the Duchess of Clarence.

*Thursday 26th.*—This morning His Royal Highness mustered the officers, artificers, and labourers of the Dock-yard, and after that proceeded to Stackpole Court, the seat of Lord Cawdor, where he and his suite dined and slept; and on Friday 27th, again embarked on board the Royal Sovereign, for the purpose of proceeding to Portsmouth, but a dense fog came on which made it unsafe to attempt a passage down the Haven. At three the following morning the weather cleared up, the Royal Sovereign proceeded to sea, towed by the Lightning, steam vessel as far as the Lands' End, which she did not reach till the evening of the 29th, when a breeze springing up from the westward, the steamer was cast off and the Royal Sovereign reached Spithead on Monday the 30th, at 6 o'clock in the evening.

*Tuesday 31st.*—This day the Lord High Admiral mustered the Warspite, just returned from the East Indies, and some other ships of war, lying at Spithead; after which, the Royal Sovereign was towed into harbour, and His Royal Highness proceeded to inspect, and muster the Flag ship, Guard ship, and other ships of war, which occupied him till nearly 8 o'clock, after which, he dined with Sir Robert Stopford, the Commander-in-chief of the port.

*Wednesday, August 1st.*—This morning His Royal Highness landed in the Dock-yard, where he was received by the commissioners and principal officers of the yard. He then proceeded to muster the inferior officers, the clerks, artificers, and labourers, to the number of 2000 nearly; after which, he inspected the rope walk, hemp houses, and several of the stores, and in the afternoon returned to the Yacht.

*Thursday 2nd.*—This day His Royal Highness was chiefly employed in visiting and inspecting the ships in ordinary, and in mustering the

commission and warrant officers, and the men belonging to them. In the morning he received on board the Yacht, the Mayor and Corporation of Portsmouth, to present their address to His Royal Highness on his appointment to the situation of Lord High Admiral, and on his visit to this port; and in the evening they gave to His Royal Highness a sumptuous dinner at the public rooms. The heads of departments, the naval and military officers, and the gentry of the neighbourhood were present.

*Friday 3rd.*—The whole of this day was occupied in the inspection of the marines, of their drilling, accoutrements, barracks, pay books, &c.; after which, His Royal Highness had them out in the field, and reviewed them, and in the evening he entertained on board the Royal Yacht, about 80 persons, chiefly belonging to the civil, naval, and military departments, stationed at Portsmouth, among whom were several of the neighbouring gentry.

In his way to town, the Lord High Admiral visited the establishments at Dover, Sheerness, and Chatham, and at each place went through the usual examinations with a zeal, attention, and indefatigable perseverance which astonished every one who witnessed it.

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NAUTICAL RAMBLES.—*Bermuda Islands.*—No. 1.

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“Bermudas wall'd with rocks, who does not know?”—WALLER.

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It is probable that when the poet thus spoke of the notoriety of the islands, during his sojourn there, they were more generally known to the public at home, than at present. In the enjoyment of a peaceful obscurity, interrupted only occasionally by aerial visitation, the unostentatious and unsophisticated inhabitants, and their reef-guarded isles, have alike reposed in the undisturbed forgetfulness of the great world! They have been thought more worthy of the notice of our poets than of our prose writers. Shakspeare, as every one knows, seized upon the happy idea of turning to advantage the romantic and isolated situation of the group, and the rather overstrained celebrity which it had early obtained for stormy weather, in the illustration of his wonder exciting “*Tempest*;” and, little heeding the visionary spell of the great Magician of the Drama, the *more* dulcet notes of the amatory Bard of Erin, have sounded the praises of its cedar groves and wood nymphs!

The “*Fairy Isles*,” as the Bermudas have been styled by the latter poetic rover, are, as all seamen know, a very remarkable group situated in the North Atlantic. The period of their discovery is a disputed point; as also the name of the individual who first saw them. Dr. Rice, gives the year as 1527; and Captain Tuckey, 1557; a dis-



crepancy of no less than 30 years. The Naval Historian, Echard, states that Juan Bermudas, or Bermudez, a Spaniard, in the year 1522, (still earlier than any of the others has assigned,) was the first discoverer: whilst the Bristol mathematician, Exley, (A.M.) says the islands were first seen by Captain Henry May, an Englishman.

It is now, indeed, a matter of no importance whatever, when, and by whom, these specks of rock were discovered, there being no apprehension of Spain claiming them; to her they would be useless: the halo of glory (?) which once encircled her name has gradually faded away, and left her scarcely a semblance of that gigantic power, which spread its tyrannic sway from one extremity of the globe to the other. Of all her former conquests in the east and the west, nought remains to her as a record of the ambitious grasping with which her sons flared over the face of the habitable world, save the Philippines, Cuba, and Porto Rico!—*See Transit, &c.!!*

Immaterial as the circumstance may be, certain it is, however, that the islands have retained the name of the Spaniard who has generally been considered as their discoverer, notwithstanding the attempt which some of our geographers have made to set it aside, by terming them the Somer islands, from the event of Sir George Somers' shipwreck upon them in the year 1609, on his voyage to Virginia.

From the above-mentioned period they have remained in the possession of Great Britain, and have been considered, whether equitably or not, her property for the long period of 230 years. To any other European nation they would perhaps be of little or no value; but, although their extent, soil, and productions may be altogether insignificant, to England they are highly valuable, on account of their fitness as a naval depôt, with reference to her possessions on the continent of North America and the West Indies: they have accordingly been cherished; and, in due time every requisite will be provided to constitute them a strong hold, and efficient place of refit and rendezvous for our fleets during a time of war.

It appears that when Sir George Somers was cast away, the cedar trees flourished; we may believe, therefore, that these are indigenous to the islands, and not introduced by the settlers from the continent: upon this admission it might at first be inferred that at a remote period the islands formed a part of the main land, and that they had been separated from it by some great catastrophe, did we not know that birds are often the agents by which islands become clothed with trees.

It appears that Sir George Somers continued nine months on the islands, during which time he constructed a vessel with the cedar wood, by which means he was enabled to prosecute his voyage; this was about three years after the first settlement had been made by the English. Singular enough he was a second time wrecked there, and

eventually ended his days in the place which had been the scene of his misfortunes.

The islands, islets, and rocks are very numerous, but there is one only of moderate extent: this is known by the name of the Great Bermuda, and by way of distinction the inhabitants term it the "main land." Originally it was divided into eight districts, called "Tribes." A short notice of the disposition of these small districts may be of utility to the stranger. Hamilton, which is the most northern and eastern, is a mere belt of sand, rock, and a little vegetable mould, surrounding a lagoon, which is called Harrington Sound; this fine sheet of water might be made a secure harbour for shipping, by cutting a canal into it, the present channel being a mere shallow creek. The Hamlet of the Flats is situated on the southern bank of the creek, in Smith Tribe. Tucker town, which lies eastward of the lagoon, appertains to Hamilton Tribe. Smith and Devonshire Tribes follow in succession, in a south-western direction. Pembroke occupies a spur of the island which there trends in an east and west direction, and is divided from Paget Tribe by an inlet called Paget Pork—commonly Crow Lane. This little peninsula is very romantic, and is diversified with mounts and dales in miniature, high cliffs of a species of dark coloured slate or shale, sandy beaches, snug coves, and small bays; some spots are clear, with a covering of smooth sward, but, for the most part the land is clothed with cedars. Near the extremity which runs out to the N.W. is St. John Hill with a signal post on it, and two or three dwelling houses, which were occupied by the late Commanders-in-Chief, Admirals Sir J. B. Warren and Sir H. Sawyer. On the southern shore of the peninsula the town of Hamilton is built.

Paget Tribe commences at the head of the port of that name, and with that of Warwick runs to the S.W. by W. the land trending with a gentle curve to below Gibb Hill, where the latter Tribe is joined to that of Southampton, which with Sand's completes the district. Beyond this extremity of the Great Bermuda, in a N.N.E. and S.S.W. direction lie the islands of Somerset, Gate, and Ireland, the latter being the property of Government on which the new naval arsenal has been constructed. The description of this important national undertaking, we must leave to others, not having visited it since its advancement to completion.

There are two anchorages for men-of-war here; Grassy bay, which lies outside of a reef stretching across the Sound from Spanish point, the extreme of Pembroke Tribe; and another within that natural breakwater. The remoteness to the point of egress, to the open ocean of this rendezvous, was formerly considered as a very great objection,

but that no longer applies, as steam vessels can in a short time tow the ships out to sea.

The application of the term "tribe" to the divisions of land, we have been speaking of, seems a little curious to us at the present day. Perhaps, the explanation, most suitable will be found in the loose and often unappropriate use of geographical terms during the more early periods of maritime enterprise and discovery; and the application of the word to *land*, which should have reference only to a particular body of people, may have insensibly been transferred to the former, from inattention to a proper mode of speech,—in the same manner as we find the term *convoy* is often used to denote the *fleet* which ships of war have in charge.

From what I can learn, it appears that the Virginia company, in the pacific reign of James 1st. not only laid claim to the possession of these islands, under what plea I am not aware, but actually sold them to 120 persons.

And so little was the value of the group to the crown considered at the time, that the king subsequently to this transaction confirmed the disposal, by granting a charter to the purchasers. Would it be a libel on the memory of the monarch to enquire what profit accrued to him in the transaction? If the records of history are to be believed, he *sold* the patents of the Nova Scotia baronetcies. There can be no reasonable objection offered to the granting of lands to individuals, who may be desirous of settling on islands found uninhabited, but the demand of money for such, does not seem altogether justifiable in a sovereign, or government; and perhaps King James previously to the sale of the islands by the Virginia company, may have included *any* islands in the seas near their granted territory on the continent, in their charter of incorporation and possession: whether this was the disposal of the matter or not, certainly a *precedent* was not wanting; the unconscionable one of his holiness the Pope will be in the recollection of the reader, as well as the results arising from it,—how strange are the vicissitudes of fortune, wrought by the iron hand of time, and the corroding passions of ambitious men!—the three potent states to which we allude, are about as unimportant and pauperized a trio, at the present moment, as the annals of history can display. Honesty of purpose, integrity of principle, and benevolence, are attributes as much to be admired in a nation as in an individual; and the consequences springing from a non-observance of those moral virtues, are nowhere more striking in the chronicles of once mighty empires and states, than in those of the papal see of Portugal and Spain. But we are wandering from our peaceful and unambitious isles and their tenants, where happily the dreadful

effects of an inquisition or *auto-da-fé*, or an excommunicating bull are unknown.

It is probable that few of the purchasers became settlers, although the allotments may have been named after them, and their influential patrons. Somerset which is one of the best portions of the group, was perhaps, so named from the title of the king's favorite, Robert Carr, Earl of Somerset.

Some of the descendants of the original occupants we believe are in being at the present day; among whom we may not incorrectly suppose the Tuckers (*qr.* a corruption of Tuckard?) to be, as persons of that name are numerous in the islands; and one of these in the days of her youth was esteemed the rose of the isles; but the little\* poet who sang her praises, whatever may have been the sincerity of his vocal lyre, did not, like the noted Toby, "bear off the belle." There are few lovers of poetry who have not read the beautiful lines of the "Snow Spirit," addressed to Miss Fanny Tucker, of Bermuda. She heeded not, however, the invitation of the beguiling bard, to fly to the region of snow, but seems to have been wisely content with her silvery bowers and perfumed isle, as we found her united to a gentleman of her family name, who we believe was a cousin of her own.

The amount of land fit for cultivation, is variously given from 13 to 20,000 acres. Mr. Burke estimated the extent at 40 square miles. We are not aware of the islands having ever been trigonometrically surveyed. The number of inhabitants have been stated to be between ten and eleven thousand, the half of which are white.

The longitudinal extent of the Great Bermuda is fifteen miles, but it varies materially in breadth:—Where widest—from Tucker's Town to the extreme point, near the Ferry, in a direct line across, it is not more than two miles and a half. The land is high centrally, and slopes irregularly to the beaches and cliffs on either side; but, in some parts there are pleasant little vales, and small insulated mounts, rising abruptly, and are difficult to ascend. The telegraphic hill between

\* Little, was the assumed name of the Poet of Ireland, to his juvenile effusion. He is also a little man, and seems partial to diminutive epithets even amidst the profusion of happy expressions, with which he dresses his poetry. The following epigrammatic effusion chance has thrown in my way:

"When More in am'rous strains first sigh'd,  
And felt the fond poetic glow,  
The enraptur'd world enamour'd cried,  
Man wants but *little* here below!  
But bursting from concealment's span  
He gave each heart Anacreon's store,  
Tho' *little* was the wish of man,  
He found that yet he wanted *more*!"

Hamilton Town and the Wells, is exceedingly steep on the south side, but declines gradually towards the north shore.

Between the extremity of Sandy Tribe and the S.W. part of Somerset Island, there is anchorage for merchant vessels, which is called Ellis Harbour; the passage through the shoals leading to it from seaward is, however, intricate and dangerous, and cannot be attempted by a stranger without a pilot. The name of this place recalls to mind a circumstance which occurred during the war to a Mid,\* in charge of a prize brig; I give it as illustrative of personal character.

Having made the land about Wreck Hill, (the west end,) a pilot fortunately came on board, and as the weather wore a threatening aspect, he advised the young officer to run in for Ellis Harbour; this was accordingly attempted, but the vessel did not succeed in reaching it. She was anchored outside with the intention of warping in; but one of those furious tempests which are met with in the vicinity of this "vexed" land, arose, and after the loss of all the anchors, the brig, not without imminent risk, but with the admirable skill and local knowledge of the experienced pilot, and the good seamanship of the young gentleman, was ran out again, and eventually blown off far away from the land.

The storm raged for a long time, and every thing moveable on the upper deck was swept away,—boats, caboose, binnacle, log-line, &c. and it required the greatest care and circumspection to prevent the men from being washed overboard, the seas making a fair run over the devoted vessel.

After the hurricane had passed, the gallant young officer began to look about him, with no small degree of anxiety; and very soon found that he would have to rely principally upon the resources of his own mind, for, his quadrant alone remained to aid him! Nothing daunted, after putting his shattered bark into the best trim he could, he placed her head in the direction where he calculated Bermuda to lie, and determined to make every effort to regain the islands.

In his position, this might appear an easy matter to accomplish; for knowing on which side of the meridian of the islands he must be, from the direction of the gale, and being provided with an instrument by which he could ascertain his latitude, all that he had to do was to get into the parallel of the group, and run east, or west, as the case might be. In a part of the ocean free from variable currents this could be easily accomplished; but around these islands the currents are inconstant and often strong, in consequence of which, many vessels have missed the islands, and not a few, particularly American, have ran

\* J. M. now an old Lieutenant of 27 years standing, an intelligent and clever officer.

upon the reefs,—as many as five in a week! and not long since a French frigate was wrecked there, notwithstanding the celebrity which the naval officers of that country have obtained as mathematicians. A prize to H.M.B. Busy, (which vessel was supposed to have foundered in a hurricane,) in charge of the first Lieutenant was six weeks searching for the islands, and was at last obliged to bear away for Halifax, where she arrived with the crew in a state of starvation: the men to prevent the horrible expedient of *eating one another*, had consumed all the hides from the rigging, shoes, and leather caps! The *Milan* frigate in a run for the isles, was nine degrees out in her reckoning,—she had a good lunarian on board, as well as a chronometer; auxiliaries often wanting in merchant ships, and generally so in prizes. On the subject of hitting mere specks in a vast ocean with precision, if any surprise be felt at civilized navigators failing sometimes in such attempts, what shall we think of the feats of untutored savages,—Polynesians,—who often perform extraordinary voyages in their frail vessels, both with and against the wind, without the aid of any other science than that springing from the innate intelligence of their nature, and the spirit of observation arising therefrom. The wise provision of Providence cannot here be misunderstood; we look in vain for the display of such confidential daring among the actions of the continental wild man. Throughout the world, in accordance with natural design, it will be found that the natives of insular countries are more addicted to maritime pursuits—are bolder—more confident in their enterprises and exploits, whether for the purposes of war or peace, on the aqueous element; and more expert in the management of vessels, than those of a continuous land, whose coasts, however extended, border on the great ocean. But, to return to the brig: The poor bewildered pilot (a black man,) never having in the course of his life wandered so far from his native rocks, was exceedingly dejected; no consolation offered to him could moderate the distress of his mind, there was no earthly spot in his estimation equal to Bermuda!

“Such is the patriot’s boast, where’er we roam,  
His first, best country, ever is at home.”

Day after day passed and no Bermuda came in sight; the spirits of the poor fellow were at their lowest ebb, and it is not improbable that despair would have shrouded his intellect but for a trivial incident. At a moment when the crew were silently engaged in their duties, and the Mid wrapped in thought, he suddenly started up and exclaimed with a loud voice, that roused the young officer in an instant from his reveries—“A whale—a whale, massa Captain, no fear now sa; huzza! Bermuda no far off, tank God! Oh massa, dat we could but get a tow-

rope to him tail, dat would do de ting clebba ; dat impossible for true, but follow him sa, he carry you trait to Bermuda." How extraordinary that the mere sight of an external object, associated by some gossamer-like link with the ideas floating through the brain, should with the fleetness of the electric spark, rekindle the light of hope when that mysterious power is flickering into the darkness of despair ! a complete revolution seemed to have been thus created in the whole tenor of the pilot's mind ; the inertia consequent on the depression of the animal spirits, had given place to an opposite extreme ; his vigilance was now wide awake—perched on the bow-sprit end, he watched unceasingly during the night, and the rosy blush of morn had scarcely dawned in the east, ere the cheering sound of "Land O!" escaped his lips. In the course of the day the vessel was secure in harbour, as much to the delight of the weary Mid as to the alarmed pilot.

St. George and St. David islands lay to the N.E. with a number of others inferior in size, and many islets and rocks ; within these, and bounded in the S.W. by the N.E. part of the Great Bermuda is a shallow lagoon called Southampton Water. There are said to be altogether 400 insular spots, they are certainly very numerous, but it is probable that none of the islanders ever had the curiosity to count them ; the best informed person as to their exact number was, perhaps, the late Captain Hurd, of the Navy, who had devoted several years in surveying them. Collectively they present a miniature picture of a continent, with a chain of islands at either extreme, archipelagos, mediterraneans, lakes, promontories, capes, &c., in all their various forms ; in fact almost every geographical and hydrographical feature. The group forms the summit of a vast sub-marine mountain at a distance from the western continent of many leagues, the spine of which probably runs parallel to the line of the coast of that continent, connecting beneath the surface of the ocean the remote islands of the Bahamas and Newfoundland ; the intermediate fathomless trough forming a channel for the great marine stream, which proceeds from the Florida Strait. Those who are curious in this matter, and it is one of some interest to the hydrographer, although unaccountably neglected, may carry on the speculation, proceeding with the curve to the eastward towards the Azores, and southerly to the Madeiras ; and in this way, by analogous reasoning, argue on the probability of one of the causes for the continuance of the east belt of flowing waters, which encircles the North Atlantic.

It appears singular, that amidst the manifestations of superior skill, directed by practical science, which we see exemplified in the detailed delineations of the marine surveyor, no thought should ever have been bestowed on this very interesting and not unimportant subject. The patient industry which must have been employed in the consummation

of such elaborate minuteness, as the soundings marked upon the charts, of the various parts of the ocean present to our view, is no less wonderful than admirable. Would it be a more difficult undertaking to form a map of the bed of the entire aqueous portions of the globe, as far as our knowledge of it extends? Perfection of course would not be expected, in what may be termed the *occult art* of the science of marine surveying, as, much must necessarily be left to the judgment of the delineator; but still, with such a vast accession of absolute facts as the soundings would afford, something bordering on an approximation of the truth, at least as far as the main features of the connecting submarine ridges and their dependent depressions are attainable, might be arrived at; and which once accomplished, would we have little doubt throw some light on the hitherto puzzling problem of oceanic currents.

The rocks which I observed were grit-stone, lime-stone, and a species of argillite or shale in flakes. I am not quite aware that any indication exists of a volcanic origin; coral appears under water. To the south-west-ward of the islands we passed over a shoal, the bottom plainly discernible, studded with rocks, which appeared to be coated with that substance.

The soil of the islands is said to be poor and unproductive. This probably is true, in a great measure with those portions, which have been used for the growth of Indian corn, arrow-root, and the culinary vegetables; because the usual artificial means employed to enrich the land, or perpetuate the salts essential to the healthy growth of plants, are not obtainable in any quantity sufficiently great to produce the desired effect. But, there is scarcely a doubt, that if the proprietors of land were to study horticulture in its extended sense, embracing a knowledge of mineralogy, geology, and chemistry, they would find that the common ingredients generally employed, and considered necessary for such a purpose, may be dispensed with, and others substituted for them equally efficacious. For instance, they have abundance of lime, and of sea-weed, to which common sea salt might be sparingly added with advantage. It appears therefore, that if the soil is "worn out," as the expression is, by a constant succession of crops, without a proper attention being paid to the means which are available for the purpose of replenishing those salts necessary to the growth and vigour of vegetable life, the fault lies with the inhabitants themselves, and not with the ground. Cotton has been partially cultivated, but I believe it did not answer expectation; indeed, the available land is so circumscribed, and provisions often so much below the quantity required, that every portion of the islands capable of growing the necessaries of life, should be devoted to their culture, rather than to that of those productions which are extraneous to the nourishment of the body. In-



difference to this essential point in the economy of an isolated people, not only leaves the islanders greatly dependent on foreign aid, for the support of life, but places them sometimes in a very straitened situation with respect to food : for what advantage is gold, or its value in a raw material when hunger presses, if there be nothing to satisfy that craving within our reach ? It is hardly questionable, that a severe hurricane, or a continued drought, when the storehouses happened to be empty, or scantily provided, would entail upon the good people here, misery allied to famine, and leave them a prey to the bitter feelings of regret, for having neglected that precaution and prudence, which, as a civilized and intelligent people, they should exercise. At least one year's store of provisions should always be kept in the islands ; and an apparatus for distilling sea water, as they are totally dependent on the heavens for a supply of fresh water, there not being a spring in any of the islands.

Several tropical plants are found on the islands ; some of these no doubt were introduced ; but, there is one which is probably an indigenous production, as its wood although excellent in the formation of boats' knees, is not used for that purpose or otherwise than for fuel. I mean the morass-mangrove. I do not recollect to have seen the coconut tree ; it is scarcely possible that its growth has never been tried. One would therefore imagine that the vicissitudes of the weather, rather than any opposing quality of the soil was the cause of those beautiful trees not thriving there ; the Fan Palm, the Aloë, and Palma Christi, grow luxuriantly ; and we have seen the Date Palm, 13 degrees further to the northward than the position of these islands ; and I have little doubt of its thriving in the south of England, if the roots were protected from the frost, by being surrounded by a closed building until the tree had reached maturity. I have a faint recollection of having seen the Bamboo near Hamilton, but, of this I am not certain ; it is unquestionably one of the most valuable productions of nature, for rural and domestic purposes. By perseverance it might be naturalized in the southern countries of England and Ireland, and also in the Channel isles ; the nature of the stock,—wood it can scarcely be termed, being plenty and hard, is calculated to resist cold, and, perhaps, the great and only difficulty in rearing the plant would be during its minority. This, however, might be obviated. The Cedar tree which is so valued here, is identical with that of the southern states of North America, the *Juniperus Virginiana*, although comprehended in the natural order of the Coniferæ, it is a berry-bearing plant, and is placed in the second section, (the order being divided into three) of the Cypress tribe. The trees are very handsome and ornamental singly or in small groups ; but, covering the surface as they do here, the uniformity which is

presented to the eye every where, rather detracts from the picturesqueness of the scenery. The wood, which is of a red cinnamon colour, and sweet scented, is used in the construction of vessels; it is universally known as forming the covering to black lead pencils, and is extremely durable and light. The Corvettes built here for the Government during the war, consumed all the large trees; they were very beautiful ships of their class, but required a large quantity of iron ballast to counteract the natural buoyancy of the wood. I was informed that the merchant vessels built and planked with cedar, never required caulking; and if fortunate in keeping clear of rocks and shoals, outlasted all others, even without being coppered; the wood being all but imperishable, and free from the attacks of the marine worms and mollusce.

The domestic poultry appear to be reared with much care; the fowls and turkeys I observed feeding with avidity on the cedar berries, as also the pigs. Of oceanic fowl I noticed only the common brown, and the white gull, and a small sized tropic bird. The feathered tribes of the grove are not numerous; I saw only a few wood-pigeons, ground doves, and one or two species of small birds; but there are two others which on account of their beautiful colours are very conspicuous, and attract the notice of strangers; these are the Blue Robin, and Virginian Nightingale. The former a beautiful little warbler, is the *Sialia*, of a sky-blue colour; it is common in the United States, and has been named *S. Wilsonii*, in compliment to the celebrated ornithologist of that country, of great natural talent; a Scotchman by birth, and originally a weaver. I believe he has departed to the "land of spirits," but the web of renown which unostentatiously he wove for himself unrestrained by warp or woof, will enroll his name in the annals of science, and hand it down to the latest posterity. On the continent these birds are said to be migrant: in Bermuda they are stationary. The Virginian Nightingale, Red-bird, the *G. Cardinalis*, Cardinal grosbeak, is equally interesting and rather more attractive, on account of its notes. Some years ago in consequence of the representations of the inhabitants that this bird was a great depredator of the gardens, an order was issued by the Governor for their destruction, and a certain sum paid for their heads. It was a difficult matter, however, to dislodge them from their coverts; and after the excitement which the order had created, wore off, the poor birds were left unmolested, and so far from being exterminated, they were extremely numerous on my last visit. It is probable that the value of the powder and shot expended, and the "poll tax" paid by the Governor, far exceeded the amount of damage done to the Indian corn.

REPORT OF THE COMMITTEE UPON MR. SNOW HARRIS' AND OTHER LIGHTNING CONDUCTORS.

*Ordered, by the House of Commons, to be printed, 11th February 1840.*

THE application of Lightning conductors to ships, is of so much national importance, that, notwithstanding we have already devoted much of our attention to the subject, we shall again revert to it, with the view of laying before our readers some of the facts and reasonings contained in the above report. The Committee which gave it birth originated in a motion made by Lord Elliot, in the House of Commons last year on Mr. Harris's invention, and it was agreed that the subject should be left in the hands of the Admiralty, that Board undertaking to appoint a Committee to investigate it. The pledge has been fairly redeemed; the selection of the Committee including as it does, nautical men, men of science, and a master shipwright, all of high character, is a sufficient guarantee that this important investigation should be conducted by persons competent to examine the subject in all its bearings; and their Instructions are so framed as to secure the most strict and searching examination of it in all its parts. Those persons were Rear-Admiral J. A. Griffith, Chairman, Rear-Admiral Sir James Gordon, K.C.B., Captain James Clarke Ross, R.N., Professor Daniell, Mr. Fincham, master shipwright of Chatham Dock-yard, Mr. Waller Clifton, *Secretary*; and the following are the Instructions from the Lords Commissioners of the Admiralty, as to the points which the attention of this Committee was to be specially directed.

- 1.—Whether in cases where ships not having lightning conductors have been struck with lightning, it appears that other ships in company having conductors have not been struck, or have escaped injury.
- 2.—What conductors have been used in ships, either in the navy or in those belonging to private merchants?
- 3.—What the objections are to those now in use?
- 4.—What are the advantages or disadvantages of Mr. Snow Harris's conductors, as compared with others?
- 5.—What the comparative expense is of different descriptions of lightning conductors?
- 6.—Whether the conductors of Mr. Snow Harris can be so fitted as not to weaken the spars in which they are placed?
- 7.—What size the copper bars of which they are composed should be, and whether of the same size in all spars?
- 8.—Whether it is necessary to have conductors at each mast-head, and also in the jib boom?
- 9.—Whether the continuity can be preserved in all probable circumstances, and whether the danger is not increased in case of interruption of the conductor, or of its being of inadequate dimensions?
- 10.—Whether any other mode of fixing lightning conductors does not possess the same or greater advantages?

In replying to these queries, the Committee have published, in addition to their own report and digest of the evidence, a mass of oral and

documentary evidence, received from naval officers, men of science, and other competent persons, extending to upwards of eighty folio pages.

It is manifestly impossible, within the limits of the *Nautical*, to do more than glance at many of the facts which have been thus brought to light, and recorded by the labours of the Committee; but it shall be our endeavour, as concisely as we can, consistently with a satisfactory view of the question, to give such of the statements and reasonings as will enable our readers to appreciate the soundness of the conclusion at which the Committee have arrived. At the same time, we shall make no statement that may not be fully verified by the document before us.

With reference to the first point of enquiry, namely, "whether in cases where ships not having lightning conductors have been struck with lightning, it appears that other ships in company having conductors have not been struck, or have escaped injury?" the Committee adduce seven directly *affirmative* instances which are fully authenticated, and all their particulars stated in the appendix. We will just select three, in order to shew to our readers the nature of the cases.

1.—"In 1815, H.M.S. *Norge*, was struck by lightning at Jamaica, and lost her main-top mast and top-gallant-mast, whilst the *Warrior*, 74, which was lying close to her, with her conductor up, received no injury, though the electric fluid was observed absolutely to stream down it. Amongst many other ships which were in Port Royal harbour at the time, none received any damage but a merchant vessel, which, like the *Norge*, had no conductor up."

2.—"In 1830, H.M.S. *Etna*, when coming to off Corfu, was struck by lightning, three heavy discharges descending by the conductor, and passing to the water without injuring the spars. The *Madagascar* and *Mosquito*, which were in company at the time, and had no conductors up, were separately struck and received considerable injury."

3.—"In 1838, H.M.S. *Ceylon*, in Malta harbour, was struck by lightning, and her pole, fore-top mast and foremast were shivered. She had no conductor up, and was lying close to the *Talavera*, *Bellephophon*, and Dock yard sheers, all of which had conductors up at the time, and met with no injury."

An instance\* is also given of a New York packet that was struck and injured by lightning, and, the weather continuing stormy, the con-

\* Another recent instance has unhappily just occurred in the Mediterranean, of which we have not yet been furnished with the full particulars—but the following is an extract of a letter from an officer of H.M.S. *Asia*, dated Vourla Bay, March 30th, 1840. "We had a heavy shower of hail last night accompanied with thunder and lightning, in which the *Powerful* (who lay near us), had her fore top-gallant mast shivered to pieces and the foremast struck with lightning. We have *Harris'* conductors fitted and came off unscathed."

ductors were triced up to the mast-head. The ship was a second time struck by a most severe stroke of electricity which fused the chain but passed into the water without committing further damage.

Before quitting this first question, the Committee stop to discuss another, which is collateral with it; namely, whether, according to the common prejudice, conductors have the power of *attracting* a flash of lightning, which, in their absence, would not have fallen on the ship in which they are fitted. The report states (p. 4,) that "The numerous cases of accidents to ships without conductors, and the comparatively rare occurrence of lightning having been noticed to strike on a conductor, would tend to negative such a supposition; and it may be observed, that, in several instances, the electricity has been seen to strike down on the surface of the water, at no great distance from a ship fitted with a conductor. This phenomenon occurred in Plymouth Sound, within a moderate distance of the Caledonia, whilst fitted with Mr. Harris' conductors." The instances adduced by the Committee in answer to the first question, in which ships are seen to be struck, not having conductors, whilst others, with conductors fitted, are not so struck, afford evidence, they say, "either of the little influence exerted by conductors in inducing or attracting an explosive discharge, or of their efficacy in harmlessly and imperceptibly conveying the electricity to the water."

To shew that Mr. Harris' conductors are not very likely to *attract* the lightning, the Committee state that amongst the several ships fitted on his plan, which have for many years past been employed in tropical climates, and were exposed, as stated by their commanding-officers, to very severe lightning; they found great difficulty in obtaining direct evidence of their being struck at all; and in two or three instances only has the fact been satisfactorily observed, and no case of injury has been recorded.

The Committee consulted Professors Faraday and Wheatstone on this point, who gave it as their unequivocal opinion that conductors possess no inherent property of attracting or inviting a discharge from a cloud at a distance,

"If there be a projecting object, like a mast, within a moderate distance of the point from which the discharge takes place, the electricity will descend by it, *whether fitted with a conductor or not*, as affording a line of less resistance than it would meet with from the non-conducting property of the air." And Professor Faraday stated, that the effect of the conductors would be to draw off the electricity from the atmosphere, and thereby to diminish the tendency to explosive discharges.

In concluding their remarks on the first head of inquiry, the Committee state "*that every search has been made for cases of injury sustained by ships fitted with conductors, and though several statements*

*to that effect have been brought under our notice, not one has been substantiated."*

The action of a conductor is purely passive. It can no more be said to attract the lightning than a spout by the side of a house can attract the water into it from the roof. The conductor simply conveys safely away the electric matter which is brought to it; and since we have no power to resist a stroke of lightning, it must be considered as extremely fortunate that we have thus the power of controlling it.

The second inquiry of the Committee was "What conductors have been used in ships, either of the Navy, or in those belonging to private merchants?"

They describe the ordinary copper chain conductor, one of which is issued to ships when demanded: it is composed of rods about two feet long, and one-sixth of an inch thick, with an eye at each end. It terminates in a copper rod of the same dimensions, and when used is triced to the masthead, and leads over the side into the water.

It is said, that a chain of a similar form either copper or iron, is used occasionally in merchant vessels.

In the French navy, a metallic rope composed of mixed metal wire, is attached to the masthead, leads down to the top-gallant cross-trees, and thence by the top-gallant backstay to the channel, and descends into the water. A copper spindle about three feet long, tapering from an inch to a point, is screwed into the masthead, nine inches of the upper end being hardened and gilded. The rope consists of three strands of eight wires each, and measures  $1\frac{1}{4}$  inch in circumference.

Mr. Snow Harris' conductors, which, up to the date of the Report, had been fitted for trial on board thirteen men-of-war, are composed of two plates of copper rivetted together, so as to form an elastic and continuous line of metal; the inner plate being one-sixteenth, and the outer one-eighth of an inch in thickness; their breadth varying according to the class of ship, and the description of the spar. These plates are inserted in dove-tailed grooves, in the after part of the masts, and extend from the truck to the keelson; a copper plate of the same dimensions is led over the caps, and the continuity is preserved at all times by a tumbler on the caps, consisting of a short copper bar with a hinge at the base, by which it leans against the conductor of the topmast, whether fidded or housed, a stop being placed on the exterior by which the tumbler is prevented from falling backward.

Copper plates of equal dimensions to those on the lower masts are placed under the heels and steps of the masts, and are thence led along the keelson in contact with the copper fastenings.

In order to insure connexion with the copper sheathing, bolts are

driven transversely through the keel, so as to meet those passing down from the keelson.

Copper plates are likewise led along the underside of the beams of the lower and orlop decks to the principal copper fastenings, and ultimately terminate in the sheathing, *thereby combining all the chief masses of metal in the hull and spars of a ship with the conductors, and affording, by means of its ultimate connexion with the copper sheathing, a vast surface in contact with the water for the dispersion of the electricity.\**

We beg to refer our readers to the April number of our present volume, (p. 229,) in which is detailed the accident that happened to the Roduey, from lightning, in December 1838: it will be seen that if the combination of all the chief masses of metal, above described, had been made on board that ship, that is, had she been fitted with Harris' conductors, the accident would not have happened.

The cases of the Hyacinth and Athol, (vol. for 1839, p. 114—116,) are also much in point, and full of interest, as bearing upon this important part of the question.†

In the case of the Hyacinth, for instance, in which a heavy discharge of lightning shivered completely her main topmast and top-gallant mast, through a length of about 80 feet, and diameter of 12 inches; it was nevertheless conducted safely by an *iron* chain of not more than half an inch in diameter, from the lower yard to the deck, a distance of about 50 feet. We are thus furnished with the means of judging of the magnitude of the channel which the lightning requires for its safe conduction;‡ and, inasmuch as Harris' conductors are of copper, and are about four times the area of section of this chain; and, inasmuch, too, as the conducting power of copper is about six or eight times that of iron, a triumphant refutation is thus furnished to those of his opponents who say that his conductors are not sufficiently capacious: and when we find, as shewn above, that "all the chief masses of metal in the hull and spars" are combined with the conductors, we cannot but be satisfied, in addition to the evidence of past experience, that Mr. Harris' conductors are incalculably safe.

\* A plate illustrating Mr. Harris's method of fitting his conductors, will be found in our volume for 1837, (p. 742,) as well as a series of papers by that gentleman, fully explaining his ideas on this subject.

† In our volume for 1838, (p. 750, November number,) we inserted an *interesting* list of 174 cases, which had taken place in the Royal Navy from 1786 to 1836.

‡ It is stated in the report of the Committee of the Academy of sciences at Paris, appointed to investigate the utility of lightning conductors, that there is no instance on record of an iron rod of half an inch diameter being fused, or made red hot, by an atmospheric discharge of electricity.

With reference to the third head of the inquiry, namely, what are the objections to the conductors now in use? the Committee state, as the chief objections urged against the common chain conductors, that they not being fixtures, are seldom ready when required; that they are kept packed up in a box, and usually stowed away in the store-rooms; and when thunder-squalls arise, as they most frequently do, especially in the tropics, suddenly and unexpectedly, the damage is done to the ship before they can be got out and triced up.

And, inasmuch as they are usually triced up only when lightning is anticipated, in alluding to the danger attending the fixing of them at such a time, the Committee state, that "in 1834, on board the Thunderer, the men had not left the conductor five seconds, when the lightning descended with extreme violence; and in one instance, on board a vessel in the mouth of the Mississippi, several men were struck dead at the moment of hoisting one up.

"In dark nights the difficulty of tricing them up properly is greatly enhanced, and in heavy weather, when much needed, it has been found impracticable to get them up at all.

"The construction is very slight, and the rings not being welded together, a trifling strain breaks them.

"In the event of a topmast or top-gallant-mast being carried away, the conductor is likely to be lost, and at any rate the ship is unprotected until it can be got in, and triced up to another mast. This case occurred to the Jupiter.

"As conductors, their capacity is not sufficient for the safe transmission of heavy charges of electricity, and in several instances the metal has been fused or disjointed. This occurred in the Dublin and Etna. In short," say the Committee, "we cannot but regard them as a temporary and inadequate expedient.

"By not being permanently fixed, the security of the ship is left to the opinion of the commanding-officer, as to their utility at all, or necessity at the moment.

"They are not calculated to be applied in all weathers; are subject to all the casualties to which the ship's rigging is exposed; and liable to lead to serious accidents by the end being brought inboard, the continuity interrupted, or the end lifted out of the water."

In the above opinions respecting the old and inefficient chain conductors, the Committee are borne out by a long list of officers of high reputation, whose opinions on the subject are published in the Appendix to the Report. The remainder of this Report we must reserve for our next.



HURRICANES.—*Account of the Circular storm of December last in the United States, by Mr. W. C. Redfield, of New York.*

WE have received from Mr. Redfield, the following account of a storm which took place in the United States, on the 15th of December last, adding another to the many proofs already given of the truth of that gentleman's theory. There is a peculiar value belonging to this, derived from the fact of the *locality* of the various places of observation being strictly known, and therefore to be implicitly relied on; whereas those of ships at sea, not only have the differences in their compasses, but, also a certain extent of vagueness in the position of the vessels themselves to distract the reasonings on the different directions of the wind. Mr. Redfield says, "these facts, if considered geographically, and with strict reference to one point of time, are within the comprehension of every reader; and form, therefore, a valid and useful test for the theory or hypothesis of an inward or centripetal course of the wind in a storm, which is advocated by Mr. Espy.

"To avoid all complexity, we will confine our enquiries, on this occasion, to the afternoon of Sunday the 15th, *at or shortly before sunset*.—The evidence within our reach on this point is as follows:—

"1. At Nantucket, the excellent meteorological journal published at that place, states the wind at 7 A.M., and at noon of the 15th at east, with rain; at 9 P.M. S.W. *fair*. Compared with the next accounts, the change to S.W. would appear to have been in the afternoon, previous to sunset. The changes here being always found to make progress north-easterly.

"2. At Barnstable, on the southern extremity of Cape Cod Bay, 66 miles from Boston, in a nearly S.E. direction, it blew hard from 9 A.M. to noon; after which, while the gale was most severe at Boston, the wind lulled to a moderate breeze, and shifted to S. and S.W.; continuing through the afternoon and night. Another account states that the wind was south at sunset, rather mild, and stars visible in the evening.

"3. At New Bedford, Massachusetts as appears by the meteorological journal of Mr. Joseph Congdon, the wind also changed, about 3½ P.M., from E.N.E. to S.,—at 9 P.M. wind S. moderate and cloudy.

"The above three places would appear, at sunset, on the 15th, to have been within the central lull of the storm, which reached Boston about 7 P.M., and around which the wide spread annulus of *wind*, which forms the true gale, appears to have been blowing with its full power. The lighter winds within the central lull, in many cases, conform more or less to the course of the storm; which would cause the wind to be south-westerly. In what follows, therefore, no stress will be laid upon the direction of these lighter winds in the centre of the storm.

"4. At Provincetown, near the north extremity of Cape Cod the gale was most severe from 11 to 4 P.M. on Sunday; its direction by collating the accounts, would appear to have been from E.S.E. During the night following, the wind is stated to have been *moderate* and all round the compass. This was the central lull, as the storm was renewed on the following morning, as well as at the above mentioned places.

"5. Captain Slemmer of the brig *Columbus*, in his detailed and seaman-like account, states that on Sunday at 2 P.M. he made *Sandwich*, on the west side of Barnstable or Cape Cod Bay; the wind blowing a hurricane from E.S.E. The weather lighting up afterwards, he ran into Plymouth. The direction of the wind at sunset, after the lull, is not given us.

"7. A published letter from *Gloucester*, north-eastern extremity of Massachusetts Bay, dated on Sunday night says—We have experienced a most disastrous gale of wind here to-day from E.S.E.,—the rain continues to pour in torrents, and the gale has not abated any.

"7. At Salem, 15 miles from Boston, according to the Salem Register, during the day at intervals, the wind blew with tremendous force from the *eastward*, and the rain fell in torrents.

"8. At Newburyport, 30 miles N.N.E. from Boston, according to the Newburyport Herald, the storm commenced on Sunday morning, and from 10 to 12 o'clock on Sunday night, the wind which had shifted a point or two *more to the N.E.*, blew a perfect hurricane.

"9. At Portsmouth, New Hampshire, some 60 miles N.N.E. of Boston, in the Meteorological Journal published at that place, we find the wind recorded, during the day at *east*, with snow and rain. In a Portsmouth paper this storm is styled a heavy N.E. gale.

"10. At Portland, as appears from a valuable sketch just published by the keeper of the observatory, the wind at 11 A.M. on the 15th was east, with heavy rain; P.M. E. by S. *gale still continued*; in the evening wind shifted to N.E., &c.

"11. At Nashua, New Hampshire, on the Merimac, as we are informed by the Nashua Telegraph, the storm of the 15th was from N.E. All our information leads to the conclusion that this comprises the close of that day.

"12. At Boston, the Atlas says—On Sunday at 2 P.M. it commenced raining with a tremendous gale, from the N.E. which lasted till 7 P.M. The Mercantile Journal says—The wind blew with great fury from the *eastward*, and in the evening for several hours it increased to a hurricane. The Daily Times says—It commenced raining about 2 P.M. with a violent gale from the E.N.E., which lasted till 7 P.M. Another Boston account says—In the afternoon the wind became strong from

the *eastward*. The Boston Watchman says—The wind was strong from the *eastward*, accompanied by moist snow and sleet, which gradually changed to a driving rain, and continued during the day. In view of all this, we may safely infer, that the direction of the wind at Boston immediately before sunset, differed not greatly from E.N.E.

“13. At Providence, according to the observations of Professor Caswell, of Brown University, the wind on the 15th was brisk at N.E. which continued till 2 P.M. The barometer continued to fall till 4 P.M. and remained stationary till near 7 P.M., and the wind still at N.E. and cloudy. The professor adds, I am not particular to mark the *exact* point of compass, nor, indeed, have I any means of doing so. It appears probable that this locality was in or near the border of the central lull, after 2 P.M.

“14. At Middletown, Connecticut, as I am informed by Professor Smith of the Wesleyan University, the gale set in at N.N.E. and continued to snow and blow very hard during the 15th; the wind rather veered round to N., in which quarter the wind was very strong at the close of the day.

“15. At Hartford, Connecticut, according to the Daily Courant, this storm, during its continuance, was accompanied by a strong wind from the north and north-west. The latter was probably the driving wind of Sunday night and Monday.

“16. At Northampton, Massachusetts, as I am informed by the editor of the Northampton Courier, the wind during the storm of the 15th was from N.E. Mr. Espy, I perceive, states it to have been north at this place, but on what authority he does not inform us. We will, however, take N.N.E. the mean of the two statements.

“17. At Amherst, Massachusetts, according to the observations of Professor Snell, the wind in the latter part of the 15th was N. by W. —severe storm of wind and snow. His place of observation is on low ground a little S.W. from the college, which stands on a hill. Perhaps this may have slightly effected its local direction.

“18. At Hanover, on the western border of New Hampshire, as I am informed by Professor Hubbard, of Dartmouth College, the wind veered on the 15th from N.E. to N. The facts here are furnished from the meteorological journal of Professor Young; and as the winds in this journal appear to be all referred to the eight principal points of the compass, as is common, there is room to infer that in the latter part of the day the wind was somewhat eastward of the true north: but this need not be insisted on.

“19. At Albany and Troy, which places I visited the 17th, the wind late on Sunday afternoon, according to my best information, was somewhat eastward of north.

" 20. At Athens, Hudson, and Catskill, from information on which I can place implicit reliance, the wind at this time was at north.

" 21. At Litchfield, Connecticut, according to the Litchfield Enquirer, the wind during the storm from Saturday night till Sunday night, was high from the north-east and north.

" 22. Near New Haven, Connecticut, off the light house, Captain Woolsey, of the steam boat Providence, informs me that on Sunday afternoon till near sunset the wind was strong at N.N.W.; but at 9 p.m. it had veered to north-west, and was very heavy.

" 23. At New York, as appears from my own observations, carefully taken, the wind during the 15th, and before sunset, had veered from N. by W., strong;—to N.W. by W., a hard gale;—which continued in the evening.

" 24. At Cape May, New Jersey, as appears by the marine reports, the wind at this time was blowing a gale at north-west.

" The storm of wind and snow was severe throughout New England, and its limits on the 15th, extended greatly beyond the Hudson.

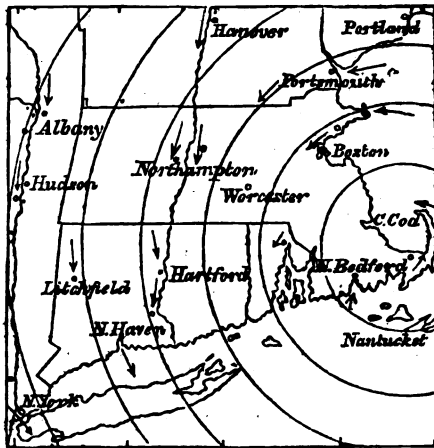
" 25. The ship Morrison, on the 15th, at sunset, 125 miles south of Rhode Island, latitude  $39^{\circ} 35'$ , longitude  $71^{\circ} 38'$ , had the gale violent from W.N.W.

" The erroneous statement, that the steamer Providence had the gale at S.W. near New Haven on the 15th, which Mr. Espy has used in at least one of the New York papers in support of his theory, he has since found occasion to correct: But I do not perceive that the correction has been given to the New York public.

" I have brought together below, the chief of the foregoing observations, on a small map; in order that it may now be seen, at a glance, whether the wind blew in this gale *inward* from all sides towards the centre of the storm, according to the favorite hypothesis of Mr. Espy; or whether on the contrary, it was actually blowing *in a great circuit* around its central portion, in the direction which is contrary to the hands of a watch which lies with its face upward: as is found to be the case in all gales which I have examined; not excepting even those upon which Mr. Espy is accustomed to rely, in his attempts to sustain his centripetal theory.

" The circular lines on the map are drawn from a center located on the southern border of Cape Cod Bay; and, whether or no, this is to be considered as the exact place of the axis, about sunset on the 15th, and the arrows near the several places as representing the exact course of the wind, is unimportant. These will at least serve as approximations; and the general result could not be materially affected by greater accuracy of delineation, were the latter attainable. To me it clearly appears that the wind was *not* blowing at any time on the 15th towards

a space or region of country south-west from Boston and north-east of New Haven, as was suggested by Mr. Espy in the *Courier and Enquirer*, and the *New York Gazette*; nor, indeed, towards *any other* central space in the gale. The general course or manner in which this gale *did* blow about sunset on the 15th, when its center was perhaps nearest, appears I think sufficiently obvious, from the foregoing statement.



“The limited object of the present inquiry restrains me from examining the consecutive changes and relaxations of this storm, at the various localities; and much information, for which I am indebted to my correspondents, must for the present be passed over. It should be borne in mind, that our map comprises but a portion of the area which was covered at one time by this gale; which was greatly extended on all sides, but mostly on the east and south. It should be noticed, also, that the point of time to which all the observations are referred approximates as already intimated, to the time of the greatest fall of the barometer in this storm, in the states of Connecticut, Rhode Island, and Massachusetts.

“The whole series of the gales which have occurred, weekly, since the 24th of November, are well worthy of the attention of meteorologists; and the rotative character of each, has appeared to be developed as clearly as in the case now before us.”

W. C. REDFIELD.

*New York, Jan. 6, 1840.*

## ATLANTIC STEAM NAVIGATION.

*To the Directors of the Royal Mail Steam Packet Company.*

GENTLEMEN,—In the Feb. number of this work, I addressed some remarks to you on the subject of the defects in the construction of the great steamers, that have been built for the navigation of the Atlantic, for which I have, as I expected, been called presumptuous, &c.

I will endeavour on the present occasion, not to be quite so plain in my remarks on any particular ship's defects, that I may avoid drawing down upon myself the ire of the commander. I shall, however, run the risk of being again abused for presumption, as I must tell the constructors of the great steamers that they are altogether wrong, and give them some plain hints as to what a steamer ought to be, that is expected to make head against the great seas of the ocean, without being thrashed and strained, in a manner that cannot be often repeated with impunity.

It might have been expected, Gentlemen, that the example these ships afforded, would have caused consideration to have been given to their defects, before such an operation as is now in progress under your guidance was proceeded with,—one in which the public is too much interested to allow of your proceedings being treated otherwise than those of a public nature are wont to be, and in which manner it is evidently the interest of all concerned in the Company, they should be viewed by the public press.

It is indeed, extraordinary, that the subject of the proper form of these great steamers, should never yet have been considered upon the ground that I think I shall prove in this paper, is the proper one,—that they never yet should have been separated entirely from sailing vessels, by those who plan them,—that the great distinction never should have been made, that they are to be propelled by a power at the water's edge, instead of one acting upon the immense leverage of the masts; and that they are to overcome the fury of the sea, acting right on end upon them: an effort that the sailing vessel is wholly unfit for, and which indeed she never can be subjected to, notwithstanding which, in the general form of the sea-going steamers, there is no difference (an increase of length alone excepted,) between her and the old form of a ship built for the attainments of sailing properties, the qualities required in each being as different as it is well possible to conceive.

It will, I am well aware, be a difficult matter to convince old sailors that there is hardly a property in the two different sorts of vessels required to be the same; yet it is said, that the late Lieut. Campbell, after taking out the *Atalanta* to Bombay, expressed his wish "that he

had left his masts at home." I am perfectly of the opinion this expression conveys, and that could the machinery be depended upon, (and the best may always be so,) that the masts are not merely a useless appendage to steamer, but a serious drawback; and if it be true as stated, that on board the British Queen last winter, it was contemplated cutting her's away, it would appear that I am not far wrong when I say, that their *dis-use* is greater than any utility to be looked for from them, and is only here mentioned, as a further proof that *sailing* properties are altogether unnecessary in steamers.

The great ships to which these observations have especial reference, are such as are intended to carry the mails and passengers across the ocean. These ships *are to make passages*,—they are, amongst other duties, to go to Halifax in the winter! and it has reference to what such ships, *must endure*, that I am now engaged to prove the existing ships wrong, taking for granted that it is by steam alone these passages are to be made.

It is difficult to anticipate what steam power will be brought to effect at sea; but judging from its present state, it is, I think, pretty clear that for long passages, and the navigation of the ocean where heavy storms and great seas are to be encountered, the vessels propelled by this power must be confined to the Packet Service,—those carrying passengers, and a few light goods, and specie; and that converting of steamers to any mercantile purpose beyond this, is out of the question, for such passages. But this observation is here introduced to follow up what has been already said, respecting the object of these remarks, being confined to the ships proper for such passages; as I am well aware, that there are a set of steam ships employed coastways, and in the short voyage to Holland, &c., that are to all intents and purposes the ordinary merchant ships; that they carry cargoes, and make their passages extremely well. However let the best of these fine ships attempt a passage to America in winter, and let her encounter the gales of that season, and she will be torn to pieces.

It is true also, that the Atlantic ocean has been partially navigated by steam for some few years past,—especially the Bay of Biscay, to Spain, Portugal, and the Mediterranean. This, in the first place, is a passage where bad weather is only rarely met with, of such violence as is experienced in crossing the ocean, and in such weather, when it does happen, *these* vessels are either detained in port, or they put back when caught in it! They are of a smaller class too than any one supposes sufficient to *make a passage*, and being smaller, it is just possible that they are built of sufficient strength to sustain the "hammering and pile driving process" they undergo, in attempting the passages they are condemned to, and often with heavy cargoes. It however yet remains to

be seen, whether all this can be done with impunity to the ships, and the return of a dividend to the proprietors!

Now in respect to the ships to be formed for the worst of the passages that can be contemplated, I would for the sake of simplifying the argument, have it admitted, that it is to *oppose* a gale, that the ship is necessarily to be adapted. We may admit, that almost any form is sufficient for going before the sea, and that if a steamer of great size steers well, and can be propelled at the rate of 9 or 10 knots, she will run before almost any sea whatever. We will suppose also that her form, as to proportion between depth and breadth is such, as will admit of her going along pretty comfortably with the sea a-beam. We have then reduced the argument to the one point, the steaming right head to wind and sea, and which in fact, constitutes the advantage of steam navigation, (and progress in a calm,) for in any position with the wind free, blowing strong, a fine sailing vessel of great size, has unquestionably the advantage of a steamer. This then is the simple question, of what form and proportions should a steamer be, to make head against a gale and head-sea?

I shall endeavour to elucidate this, by reference to the boats that are fitted by their perfect adaptation of form, to be forced through the seas and surf of a beach, and by a power applied as the wheels of a steamer at the water's edge, namely—oars. In discussing this subject, and confining the argument to the one point necessary, I consider the steamer *as always in a surf!* always in the situation in which we see a boat launched off a beach in bad weather.

What then is the *universal* form of a boat *proved* to be best adapted to this purpose? and when it is seen that invariably one great principle predominates, to obtain the quality of facing seas, surf, and breakers, larger considerably in proportion to the object overcoming them, than the largest steamer ever encounters at sea, we shall I think be at no loss to conclude, what the great steamers' construction should be. At the same time, in coming to a conclusion as to form, it will be apparent that in launching a boat, and forcing her through a sea, there is such a considerable part of her length forward, continually unsupported, in fact, completely out of the water, that on no account is there ever the least weight placed there. The boat must consequently have strength to allow of probably one-third of her whole length being suspended without support, a strength indeed easily attained in a boat, every one perhaps possessing it, *but which it never seems to have entered into the head of the shipwright, could be required in the steamer*; although such strength is certainly an indispensable requisite, that I venture to say the size of a steamer should be limited to what can be constructed, and *proved* to be capable of enduring this trial.



I have said that we shall find on reference to boats intended to go well through a surf, one grand principle predominate, and that is *extreme sharpness forward*, and that sharp bows wholly unincumbered by weight, to which may be added *length*. These requisites will be found to prevail in the boats on all coasts, where they are to be launched in bad weather, modified according to the objects the boats have to accomplish, and the degree of labour requisite to launch them, and to pull them out, and the facility of commanding that labour. Thus the "coble" of the north is launched with ease and safety by three men, and through a sea far greater in proportion to her size than any great steamer will ever encounter: whereas 40 or 50 will be employed to effect the same with the "Massulah boat," of the Coromandel coast, half that number remaining in her to pull her when a-float. The gigs of the Kentish coast, and the Revenue galleys, all along our coasts, as well as an innumerable variety of others, are included amongst the boats, readily and safely, driven through a surf, and afterwards calculated to be propelled with great speed, when fairly in a sea of great magnitude—comparatively.\*

It would indeed be a strange perversion of intellect, were we to see in the form of these boats, *any other construction than such as is calculated to oppose the least resistance to an opposition to be overcome*, or to see substituted a bluff round bow, for the sea to strike heavily against, instead of a form it has hardly an effect upon.

If we look beyond our own shores, the same principle of sharpness of the fore body will be invariably found, the length and other proportions modified by the ulterior uses the crafts are designed for, and this we see nowhere carried to such extreme as in the canoes of the southern parts of the world, and the African coasts. If we go far up their rivers, so as to be out of the influence of the winds of the ocean, where consequently the most perfect smooth always exist, we there find canoes like elongated washing tubs, parallel sided and square ends; but all along the coasts, and in the Islands, the canoe is of extreme sharpness forward, its main breadth being perhaps three-fourths of its length from forward, with the fore end projecting and raking considerably; its bottom, in small canoes, often forming "a Parabola." Here we do not see the absurdity of "a Gripe," which of all the monstrous ideas carried out in steamers, is perhaps the most so, and from which I

\* There are certain boats about our coasts that must not be confounded with this description, the Tub boats of Brighton for instance. Boats that are only required to put to sea in fine weather need not be formed for pulling through a surf, but as the uncertainty of our climate renders these fishing boats liable to be caught out in very bad weather, they are formed for taking the beach on their return, and for this purpose the boats of Brighton, Worthing, &c. are admirably adapted.

have seen one as nearly as possible lost. These extreme sharp canoes, are such as will be invariably found wherever the sea breeze or trade wind blowing into great rivers, require them to be formed to sustain a degree of sea, (to boats,) which is got up during the strength of the breeze even in rivers; this is also the form chosen for the canoe that goes out into the ocean from island to island, and along the coasts of Africa many hundred miles. And I defy it to be shewn through the whole world, any thing else used (in boats,) when speed and safety are to be combined, but craft of the extremest sharp fore bodies, modified as I have already said, according to their ulterior uses. And another quality which contributes to their safety, and good properties, is their main breadth, or at all events their "centre of capacity," *being removed a long way aft*, and which description applies to all our gigs and sharp boats at home.

I must not in supporting my argument omit mention of the London wherry and the Whale boat, the last being the only exception that I know, of the boats fit for going through the surf of a beach, that has her greatest breadth or capacity before her centre, and for which there are excellent reasons in her whaling application. This is however notoriously one of the safest boats known, will take a beach in tremendous surfs, will come off through them, and pull exceedingly fast in all situations, although having as I have said, her breadth farther forward than usual in sharp boats, the reason for which would be extraneous to the subject in hand. Yet she is so nicely balanced by the men in her, that the steersman, might so far elevate the fore body, as to give her a *water line* and entrance, as fine, and altogether as unexceptionable for going through a sea, as the finest of the boats on our own coasts. I have often thought it strange that our men-of-war are not furnished, either with a whale boat, or coble; our ships of war have not a boat *fit to take a beach in any surf whatever*; on foreign stations and surveys these boats would often be invaluable. In many situations, even in the finest latitudes, our boats have great difficulty in communicating with the shores, sometimes obliged to be aided by the savages of the South Sea Islands in such operations. At our own stations in India, when a ship of war is in Madras roads, a Massulah boat is appointed to attend on the beach, and when her cutters approach, goes off to bring the officer, &c. through the surf, (they could not land without this assistance,) the cutter anchoring outside the breakers; all which renders our men-of-war, not merely dependent upon others for a very important duty—communication with the shore, but the defect in their boats, tends in some measure to give barbarous people a somewhat mean opinion of our boasted superiority. Whilst upon the subject of men-of-war's boats, be it observed, that the French ships are infinitely better

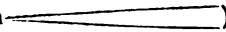
equipped than our own, not perhaps in appearance, but in size, and all the properties for which the boats of ships of war are applicable, theirs are superior.

The "London wherry" though formed for smooth water operations, may afford those whose opportunities of observing are confined, the means of judging how well an extreme sharp fore body is adapted for speed and safety. In heavy winter gales, there are situations in different reaches of the Thames, so exposed as to exhibit as pretty a little mimic sea on a weather tide, (compared to the size of the wherry,) as may be wished for, indeed fully equal in proportion to what the great steamers experience at sea. Yet these wherries will pull right against it and not ship any water forward, they are quite safe whilst not overloaded.

Amongst boats, perhaps the "London wherry," and the "Massulah boat" of India, present in appearance the greatest contrast; nothing can be conceived apparantly more opposite in all properties. The fact however is, that the clumsy appearance of the latter tends in some degree to mislead; it is so very buoyant, that if the line be taken at which it swims, it will be found, if not forming the same fine entrance that our English boats do, yet that it presents very small resistance to a straight forward motion, and is thus easily got through the surf, and it will be found that the greatest breadth and capacity is *about one-fourth from aft*. It cannot but strike every observer, even without going further than our own coasts, how completely necessity has mastered prejudice in the construction of boats. There is hardly any thing earthly, so endless as their variety! and it would puzzle "the most determined improver," to suggest, when looking at the particular boat of any locality whatever, any other form of boat that would be even fit (to answer better is out of the question,) for all the purposes accomplished by the one he sees. And yet, as I set out with observing, all the boats that have to go through a surf have these grand principles in them—extreme sharp fore bodies, and their greatest breadth and capacity removed well aft.

I will now only further allude to this fine fore body in boats, to combat a ridiculous objection to the application of the same principle in steamers, namely, that they would go down head foremost! I have myself heard real good practical sailors express this opinion!

I should like to know, whether anybody can state a good authenticated case of any craft of any description, in real good trim, going down by the head. Will any one please to describe what sort of weather it is that endangers the sharp schooners of America going down head foremost? Do not all seamen know that a Baltimore clipper may be laid-to in any weather whatever, and that the crew may turn in with the fore scuttle left open? There never was a more unfounded fear. Let us for a

moment consider the consequences of the sharp bow that I say every vessel should possess, intended to make way through seas, and contrast it with the sort of fore bodies that have been given to our sea-going steamers, with the express purpose of preventing their too great immersion to counteract their pitching properties. Let us first look at the progress through the water, of those beautiful river steamers, "Orwell," "Star," "Vesper," "Sons of the Thames," for instance,\* and contrast the manner in which these vessels divide and pass through the water, with the wave thrown up before the bow of the sea-going steamers, the "Wilberforce," the "Tagus," the "Phoenix," and generally of all the sea-going steamers! and which vessels have been formed with such unscientific fore bodies, under the mistaken notion that fullness forward was necessary at sea, to keep them from over immersion; whereas it is clearly *this very fullness which causes them to pitch*, and consequently to be half drowned when going against a head sea. For, the full fore body of these ships, in the first place involves the presence of a certain quantity of weight, in the quantity of material comprising that body, and affording as this does space, it is filled with cargo. A ship only pitches, when upon the top of a sea, the weight of the fore body, overbalances that of the after body, and then this ship *built to avoid too great immersion*, goes "slap in," fore-castle and bowsprit under; all owing to the fullness, or in other words *weight* of the fore body! One word more as to the propriety of extreme sharpness, it has been over and over again proved, by experiments of able men, by Col. Beaufoy, and others that a body in this form  impelled (with rapidity,) the sharp end first, has unquestionable advantage, over its effort at motion in the opposite direction; indeed it is astonishing, how the contrary opinion expressed by the absurdity of the "Cod head and Mackerel tail," could ever have existed amongst any but the most unscientific. The tendency of "centrifugal force," the immediate effort water makes to fly off at a tangent to the circle formed by every segment of the curve of a ship's body, is so clear as not to be questioned; and, therefore, it is evident to obtain speed, and present the most unresisting body to the seas of the ocean, the nearer straight lines can be accomplished in the form of a steamer's fore body, the better she will be adapted to go easily through the water.

From the foregoing remark on the forms proved to be good in boats to enable them to face a sea, we need not, I think, be at a loss to conclude, that the sea-going steamer has not yet been formed with that skill, which an observation of facts, would have led the constructors of her to the use of.

\* Our correspondent has forgotten the Ruby, of which something is said further on.—Ed. N.M.

Before detailing the conclusions to be drawn from what has been said as to the proper form of the steamer, I must not abandon the advantage to be gained for the arguments, in noticing the manner in which the propelling power of the steamer acts advantageously over that of boats, which although I have compared, and stated to be similar, acting at the water's edge, there is an evident inferiority in the action of the oar upon the sharp fore body of the boat, to that of the paddle on the steamer. And as it is certain that the action of the oars, *considerably depresses the boat*, and that the *tendency* of the paddle is to raise\* the steamer, it must be seen that at all events a similar form of sharp fore body may be applied, and no *increased* risk run of sending the whole down head foremost.

Steamers being intended to pass rapidly through the water, I set it down as incontrovertible, that their water lines—horizontally, *should be as nearly straight as possible*. I should, therefore, suggest that, placing the shaft of the wheel in the centre of the length of the ship, and keeping in view that all weight is as much possible to be dispensed with in the fore body, and that the great capacity is to be contained so far aft as to bring the centre of such capacity considerably abaft the centre of the vessel: that as a foundation on which a water line may be constructed, you draw straight lines from the stem to four-tenths the whole length, (the beam being one-sixth of the length); then, straight lines parallel to the keel for four-tenths more; and from that point to the stern post straight lines for the remaining two-tenths: the depth of the vessel to be three-fifths of her breadth. Thus we shall have a direct straight course for the water to the paddle wheels, the junction of the lines at the end of the first four-tenths, and the commencement of the second four-tenths, being reconciled by an easy curve, at which curve there is no doubt that the water would have a strong tendency to fly off, but here the operation of the paddles would be, to change the course of the water, and drive it direct aft in a right angle with their shaft; thus for some distance it would have its natural course in the plane of the ship's side, till within two-tenths of its termination, at which point the straight water line must cease, by being swelled out into a gentle curve to the stern post. A draughtsman having adapted this as a proper load water line, will construct the whole body to partake thereof,—keeping in view the observations that are to follow,—First, to make the main body as flat as possible, consistently with good lines, and to carry the floor and full body as far aft as practicable, to curtail the depth of the ship by four feet forward, (to draw that less water,) or even, should the ship be very large† more to give the fore

\* We recommend our intelligent correspondent to reconsider this.—Ed.

† The commanders of the ocean-going steamers, soon find out the necessity of

body a tolerable expansion above the water line, so as to form the bow somewhat "flaring"—to dispense with the knee of the head, adopting in the finish, a scroll or ornamental work, emblematical of the ship's name, something like that of the "Phoenix," a steamer under the French flag, running betwixt London and Havre, (the French adopt this plan in their small vessels of war, instead of the old, heavy, useless knees). I have seen this finish forward made very handsome, and consider that the steamer just named, exhibits good taste therein. Next, the whole weight of the fore body to be reduced, by commencing from four-tenths from forward, a gradual reduction of the material, to the stem, say in such great ships as the President and British Queen, from 8 inch wales to 3 inch at the rabbets of the stem; every thing else in proportion. I have already alluded to the mischief of "gripe,"—in a steamer it has the direct opposite tendency to what it has in the sailing vessel, it prevents her direct progress through the sea, either with the sea on the bow, or going right against it, it is continually liable to be operated upon injuriously to the ship's direct progress, thus throwing a great and continual strain upon the rudder; and instead of keeping her head up to a sea, as in a vessel under the influence of sail, it causes her to be continually thrown off. Gripe should therefore be *entirely abolished*, and the form assimilated to that of the whaling boat; this is an important alteration of the fore body, and would aid most materially in obtaining the necessary strength—the stem should have a *prodigious rake*.

These points well considered by the constructors, the fore body should next be rendered as light as possible, by other arrangements in the fitting. In the first place, the bowsprit should be altogether dispensed with; it will be found out by and by, what an absurdity this appendage is to a steamer. The anchors on getting to sea should be removed to a position prepared for them, immediately before the paddle boxes, the windlass, and every other weight, should be kept as far from the extreme as possible, and the heavy gun which is to be carried at each end of the new steamers, intended to carry the West India mails, should not be a fixture; but in bad weather, capable of being removed towards the centre.

A steamer constructed according to these suggestions, I feel convinced would go along, through great seas, *swimming upon her after body*, in a manner that would surprise those used to the present formed vessels. I will boldly maintain that a body thus formed, never would under any circumstances, immerse the knight heads in the sea; that she never

trimming their ships three or four feet by the stern. Here is a pretty derangement of all the builders fine schemes as to water lines! and a plain proof of the bad formation of the fore body! and yet our constructors will not take the hint.

would in fact ship a sea, over the bows, (great size in the vessels is here to be understood,) and *I found this opinion upon the practice I have referred to, of the boats used all over the world, to overcome the exact sort of obstacle the steamer is opposed to.*

It remains only to say something upon the relative proportions, of length, breadth, and depth, and a hint at the means necessary to effect a sufficient degree of strength.

In respect to the dimensions, it is an extraordinary fact, that so far from there existing any admitted rule on the subject, as any one unacquainted with the art of ship-building would suppose; there are scarcely two people, that think alike! In fact until within these few years, the law was so imperative upon this subject, that it was no use thinking about it; we were compelled to build ships, as narrow and as deep as possible. All this, however, is altered for the better, by abolishing the law in question, and yet the utmost confusion exists, and as I have said, hardly two people think alike. A great steamer has lately been constructed, where the beam and depth are pretty much the same! consequently she has as much tendency to swim on her broad side, as on her bottom! whereas, I was on board one the other day, where the breadth was nearly double the depth! and her length eight times her beam, proportions which for river steamers, I have no doubt will be found to be pretty correct.

It is odd enough, on looking at the dimensions of some sea-going steamers, of the most approved qualities, as sea boats, that their relative proportions should agree with those of Noah's Ark! which is described as "in length 300 cubits, in breadth 50, and in depth 30 cubits," and I believe until means can be found to strengthen the construction very materially, that length for sea-going steamers cannot with safety be extended much beyond these proportions. But I protest against being supposed to presume to lay down any rule, believing that the subject does not admit of forming any correct theory, and I only now draw my conclusion from actual experience, which I have frequently said, is the only ground upon which all practice in ship-building, must be based, it being incapable of being reduced to an exact science.

An observation or two on concluding, respecting the want of strength in the great steamers.

I have said, that whilst the defective form of the fore body is preserved, it is doubtful whether any degree of art, can effect sufficient strength! It cannot be contemplated, that a ship of the size and form of the great steamers of the present day, can ever be put together, so as admit when completed, to have 50 feet of the fore body unsupported, by the blocks being taken from under her, for that distance! and yet it must be plain to any sea-going person, that for at least that length,

such ship must be continually depending for support, upon its connection with the midship part!

Adopt the suggestions here given, and I have no doubt that turning cubits into feet, a steamer may be built of the relative dimensions given of Noah's ark, and of sufficient strength to bear the trial I have proposed to subject her to, if undertaken by a shipwright that would apply such mechanical art to the construction, as common sense would suggest. I can indeed see no difficulty in forming a specification and drawing that should effect such end.

I offer these observations to you, Gentlemen, because I am thoroughly convinced that the subject is misunderstood, and because I am certain much disappointment will be caused by the ships you have adopted for the Royal Mail Packet Service. I am an enthusiastic admirer of the great ends to be effected by steam navigation, and am, therefore, anxious to see it properly considered; and which I am quite sure it has not hitherto been; and for this end I have addressed this letter to you, feeling convinced, that if it fails in drawing immediate attention, and thus to effect the good I should wish to see, yet that I shall have the satisfaction of putting upon record opinions, which may have their effects sooner or later.

I am, Gentlemen, your most obedient servant,  
MERCATOR.

*London, April 1840.*

*Erratum.*—In p. 430, line 3, for “always” read “almost.”

## Naval Chronicle.

### ARCTIC LAND EXPEDITION.

THE following despatch was received on Saturday the 18th April, at the Hudson Bay House:—

*Port Simpson, October 16, 1839.*

“HONORABLE SIRS,—We have the honor to report the completion of all the primary objects of the expedition—the entire fulfilment of Governor Simpson's original instructions, under which it has been our good fortune to act, and something more, though as we plainly told your Honors last winter, it was quite out of the question to think of reaching the strait of the Fury and Hecla from the Coppermine River.

“On the 22d of June, we descended that impetuous stream to the Bloody Fall, where we remained until the 28th. This interval was employed by Mr. Simpson in exploring Richardson River, discovered in 1838, which discharges itself, as we then supposed, into the bottom Back's Inlet, in latitude 67° 53' 57" N., longitude 115° 56' W. A party of about thirty Esquimaux were encamped there, all of whom fled precipitately to the hills, except one family, whose tent was placed



on an island in the stream. With these last, a communication was opened, through our interpreter Ooligbuck, but the circle of their little lives being confined to Beren Isles and Richardson River, they had no information to impart of any value.

“ On the 3d of July, the first slight opening occurred in the sea ice, of which we took instant advantage; but our first week's journey did not exceed twenty miles, and it was the 18th, after sad work, before we could attain Cape Barrow. From its rocky heights we beheld with equal surprise and delight the wide extent of Coronation Gulf partially open, whereas long after the same date in 1838 the whole party might have crossed it on foot. At midnight on the 20th, we landed at Cape Franklin, just one month earlier than Mr. Simpson's arrival there, on his pedestrian journey of the year before. A violent easterly gale arrested our progress for the next four days, and on the 27th and 28th we encountered great peril in doubling Cape Alexander amidst very heavy driving ice.

From Cape Alexander, situate in latitude  $68^{\circ} 56' N.$ , longitude  $106^{\circ} 40' W.$ , to another remarkable point in latitude  $68^{\circ} 33' N.$ , longitude  $98^{\circ} 10' W.$ , the Arctic coast may be comprised in one spacious bay, stretching as far south as latitude  $67^{\circ} 40'$ , before it turns off abruptly northward to the last-mentioned position. This vast sweep, of which but an inconsiderable portion was seen by Mr. Simpson last year, is indented by an endless succession of minor bays, separated from one another by long narrow projecting points of land, enclosing an incalculable number of islands.

“ From this description it will be evident that our route was an extremely intricate one, and the duties of the survey most harassing; but, whilst perplexed beyond measure in finding our way through these labyrinths, we derived great advantage from the protection afforded by the islands from the crushing force of the seaward ice, and the weather was generally clear. In fact, the most serious detention caused by ice on this part of the voyage was from the 1st to the 5th of August, on a point that jutted out beyond the insular chain. White Bear Point, as it was called, lies in latitude  $68^{\circ} 7' 8'' N.$ , longitude  $103^{\circ} 36' 45'' W.$ , variation  $54^{\circ} 45' E.$  These bays and masses of islands present a distinct succession of geological features, which can be best illustrated by our series of specimens of the rocks that compose this wild and barren coast. Vestiges of Esquimaux, mostly old, were met with wherever we landed. They appear to subsist in single families, or very small parties, and to travel inland for the deer hunt in the month of June, not returning to their sealing islands till the ice sets fast in October. A river twice the size of the Coppermine, which falls into the sea at latitude  $68^{\circ} 2' N.$ , longitude  $104^{\circ} 15' W.$ , is much resorted by the reindeer and moose oxen in the summer season.

“ Finding the coast, as already remarked, trending northwardly from the bottom of the great bay, we expected nothing less than to be carried round Cape Felix of Captain James Ross, contrary to the conjecture hazarded by Mr. Simpson in his narrative of last year's journey. On the evening of the 10th of August, however, (at the point already given,) we suddenly opened a strait running in to the southward of east, where the rapid rush of the tide scarcely left a doubt of the existence of an open sea leading to the mouth of Back's Great Fish River.

This strait is ten miles wide at either extremity, but contracts to three in the centre. Even that narrow channel is much encroached upon by high shingle islands, but there is deep water in the middle throughout.

"The 12th of August was signalized by the most terrific thunder storm we have ever witnessed in these regions. Next day it blew roughly from the westward, with a very dense cold fog, but we ran rapidly south-east, passed Point Richardson and Point Ogle of Sir George Back, and continued on till the darkness of night and the increasing gale drove us ashore beyond Point Pechell. The storm shifted to the north-east and lasted till the 16th, when we directed our course, with flags flying, to the Montreal Island. On its northern side our people, guided by Mackay, soon found a deposit made among the rocks by some of Sir George Back's party, but, as Mackay seemed to think, without that officer's knowledge. It contained two bags of pemican, and a quantity of cocoa and chocolate, all perfectly rotten, besides an old tin vasculum, and two or three other trivial articles, of which we took possession, as memorials of our having breakfasted on the identical spot where the tent of our gallant, though less successful precursor stood on his return from Point Ogle to the Great Fish river that very day five years before.

"The arduous duty we had, in 1836, undertaken to perform, was thus fully accomplished; and the length and difficulty of the route back to the Coppermine would have amply justified our immediate return. We had all suffered more or less from the want of fuel, and the deprivation of warm food, and the prospects grew more cheerless as the cold fall weather stole on apace; but having already ascertained the separation of Boothia from the American continent, on the western side of the Great Fish river, we determined not to desist till we had settled its relation thereto on the eastern side also. A fog which had come on dispersed towards evening, and unfolded a full view of the picturesque shores of the estuary. Far to the southward Victoria headland stood forth so clearly defined, that we instantly recognized it by Sir George Back's exquisite drawing. Cape Beaufort we almost seemed to touch; and with the telescope we were able to discern a continuous line of high land, as far round as north-east, about two points more northerly than Cape Hay, the extreme eastern point seen by Sir George Back.

"The traverse to the farthest visible land occupied six hours' unremitting labour at the oar, and the sun was rising on the 17th when we scaled the bluff and singularly shaped Rocky Cape, to which our course had been directed. It stands in latitude  $68^{\circ} 3' 56''$  N., longitude  $94^{\circ} 35'$  W. The azimuth compass, by Jones, settled exactly in the true meridian, and agreed with two others, by the same maker, placed on the ground. From our proximity to the magnetic pole, the compass had latterly been of little or no use; but this was of the less consequence as the astronomical observations were very frequent. The dip of the needle, which at Thunder Cove (12th of August) was  $89^{\circ} 29' 35''$ , had here decreased to  $89^{\circ} 16' 40''$  N. This bold promontory, where we lay wind-bound till the 19th, was named Cape Britannia, in remembrance of our glorious country. On the beetling rock that sheltered our encampment from the sea, and forms the most conspicuous object on

all this part of the coast, we erected a conical pile of ponderous stones, fourteen feet high, that if not pulled down by the natives, may defy the rage of a thousand storms. In it was placed a sealed bottle, containing a sketch of our proceedings, and possession was taken of our extensive discoveries in the name of Victoria the First, amidst the firing of guns and the enthusiastic cheers of the whole party.

"On the 19th the gale shifted from N.E. to E.S.E., and after crossing a fine bay, due east, with no small toil and danger, the coast bent away N.E., which enabled us to effect a run of 40 miles. Next day the wind resumed its former direction, and after pulling against it all the morning among the shoals and breakers, and gaining only three miles, we were obliged to take refuge in the mouth of a small river.

"From a limestone ridge, about a league inland, we obtained a view of some very remote blue land in the N.E. quarter, in all probability one of the southern promontories of Boothia. Two considerable islands lay far in the offing, and others, high and distant, stretched from E. to E.N.E.

"Our view of the low main shore was confined to five miles in an easterly direction, after which it appeared to turn off greatly to the right. We could, therefore, scarcely doubt our having arrived at that large gulf uniformly described by the Esquimaux as containing many islands, and with numerous indentations stretching down to the southward, till it approaches within 40 miles of Repulse and Wager Bays. The exploration of such a gulf, which was the main object of the *Terror's* ill-starred voyage, would necessarily demand the whole time and energies of another expedition, having a starting or retreating point much nearer to the scene of operations than Great Bear Lake; and it was quite evident to us that any further foolhardy perseverance could only lead to the loss of the great object already attained, together with that of the whole party. We must here be allowed to express our admiration of Sir John Ross's extraordinary escape from this neighbourhood, after the protracted endurance of hardships, unparalleled in Arctic story. The mouth of the stream which bounded the last career of our admirable little boats, and received their name, lies in latitude  $68^{\circ} 28' 27''$  N., longitude  $93^{\circ} 7' W.$ ; variation of the compass,  $16^{\circ} 20' W.$  The strong wind that had forbidden our advance, gave wings to our retreat. The same night, the 20th of August, we landed once more at Cape Britannia, and next morning we crossed the inland direct to Point Pechell, with a heavy sea. On the 22nd we explored a long narrow bay on the west side of Point Ogle, which extends to the sixty-eighth parallel of latitude. The north wind blew roughly, with sharp frost, and next day we got no farther than Point Richardson. Thence we crossed over on the 24th, to what had from the continent appeared like two islands, but which we rightly conjectured to form part of the southern shore of Boothia, or, to speak with greater precision, of that land on which stands Cape Felix, of Captain James Ross. This shore we had the satisfaction of tracing for about 60 miles, till it turned up to the north, in latitude  $68^{\circ} 41' 16'' N.$ , longitude  $98^{\circ} 22' W.$  Only 57 miles from Ross Pillar the dip of the needle was  $89^{\circ} 28' 45'' N.$ ; the magnetic pole, bearing N.N.E., distant ninety miles. The variation, as shown by both the azimuth compass and the horizontal bar needle was  $45^{\circ} E.$  The objects seen on this coast are easily enumerated—a

low, uninteresting limestone tract, abounding, nevertheless, in reindeer, musk oxen, and old native encampments. To the westward a good deal of ice appeared, and vast numbers of snow geese passed high overhead in long triangular flights, bound for milder skies.

“ Whilst engaged in taking observations, our men constructed another durable memorial of our discoveries, which was saluted in the usual manner. Then recrossing the strait on the 25th, we resumed for some time our outward route, only keeping more along the seaward verge of the islands, so as to shape a straighter course.

“ The weather, from being threatening and unsettled, soon became unequivocally severe. On the 29th of August, a snow storm began, that lasted for seven days, during four days of which, we were fixed to a single spot, by the violence of the N.W. gales, while the frost was so keen that the pools among the rocks on which we lay, became solid enough to bear up a man. A more moderate interval succeeded this fierce outbreak. Quitting the continent again, at the large river already mentioned, we struck N.N.W. for an extensive island, 22 miles off, which we coasted N.W. for 20 miles; and shortly before sunset, on the 6th of September, stood out from thence due north for the nearest point of Victoria Land, which proved equally distant. We have never seen anything more brilliant than the phosphoric gleaming of the waves when darkness set in. The boats seemed to cleave a flood of molten silver, and the spray dashed from their bows before the fresh breeze, fell back like showers of diamonds into the deep. It was a cold night, and when we at last made the land, cliffs, faced with eternal ice, obliged us to run on for a couple of leagues, before we could take the shore with safety. The coast of Victoria Land, which we explored for upwards 150 miles, is incomparably the boldest we have met with in those seas. Often near the shore no bottom could be found with thirty-five fathoms of line, and the cerulean blue colour of the water everywhere indicated a profound depth. There are several noble bays, the largest of which, N.W. of Cape Alexander, is 20 miles wide, and equally deep, backed by snow-clad mountains. It attains to 69° 40' N., the highest latitude of this voyage. At length we reached the extreme point seen by Mr. Simpson, from Cape Franklin, in 1838, where the coast of this large country begins again to trend northward of west, Cape Barrow being by computation S.S.W. distant 50 miles. On the 10th of September, we crossed this magnificent strait with a strong E.S.E. or side wind, and a rough sea, in which our gallant boats, old and worn out as they were, acquitted themselves beyond our most sanguine hopes. Our return from Cape Barrow was miserably retarded by furious N.W. winds, and severe stress of weather. Winter permanently set in on the 15th of September, and next day, to the undisguised joy of the whole party, we re-entered the Coppermine River, after by far the longest voyage ever performed in boats on the Polar sea. Leaving one of our little craft, together with the remains of the pemican, (which through age and long exposure, was become quite mouldy,) and various other articles as a prize to the first Esquimaux who may visit the Bloody Fall, we ascended the river with our double crew in four days, abandoned our tents, and everything but absolute necessaries; crossed the barren grounds up to the knees in snow, having unluckily left out snow-shoes on the coast, and safely reached Fort Confidence, at dusk, on the 24th.

The fisheries had failed sooner than ever, and we had good reason to congratulate ourselves on not being doomed to pass a third winter within the Arctic Circle.

"After settling with the Indians, liberally rewarding the most deserving, and supplying all with ammunition gratuitously, we took our departure on the evening of the 26th, in two inland batteaux; one belonging to the expedition, the other came from Fort Simpson, sixteen days before our arrival.

"Our passage of Great Bear Lake was most boisterous, and inclement in crossing the body of the lake, and other considerable traverses; our boats, with every thing in them, and even the very clothes on our backs, became converted into shapeless masses and concretions of ice. It was high time for us to escape from Great Bear Lake, for the temperature, which was at 4° below zero when we landed at the head of the river, on the evening of the 4th of October, fell 10° lower in the course of the night, and next day we descended the rapid stream, in the very midst of the driving ice. On entering the Mackenzie, we experienced a temporary mitigation of this excessive cold; but we should most assuredly have stuck fast above Fort Norman, had not the northern gales again arose in their strength, and, while they shattered and dispersed the rapidly forming ice, enabled us to stem the current under close-reefed sails. At noon, on the 14th of October, after forcing our way with no small risk through the torrent of ice, forced out by the rivers of the mountains, we reached this place, and were cordially welcomed by our valuable friend Chief Trader M'Pherson, who had for some time given up all hopes of our arrival.

"Most of our people are still afflicted with acute pains and swellings in the limbs, caused by cold and exposure, and we are assured by Mr. M'Pherson that he has never known or heard of so early or vigorous commencement of winter in Mackenzie river; on the other hand, so fine a spring as that of 1839, seldom visits these frozen regions, and to this favouring circumstance, under Providence, ought our signal success to be partly ascribed.

"October 19.—The state of the ice at length enables us to despatch couriers to Slave Lake. In the meantime, Governor Simpson's highly valued letter of the 17th of June, which unfortunately missed us in our way hither, has cast up overland. We rejoice in having anticipated the Russian expedition, and secured to our country and the company, the indisputable honour of discovering the north-west passage, which has been an object of search to all maritime nations, for three centuries. When our expedition was planned at Norway House, in 1836, it was confidently expected that Sir George Back would have achieved the survey of the Gulf of Boothia with the *Terror's* boats, and that our meeting at the mouth of the Great Fish River, would have left no blank in the geography of Northern America. That officer's failure, the exhaustion of our men and means, and the necessity of a new wintering ground, render a fresh expedition indispensable for the examination of the Gulf of Boothia, the circuit of which, to the Strait of the Fury and Hecla, according to the Esquimaux accounts, cannot be less than 400 or 500 miles. It only remains for us to recommend to your approbation the plan proposed by Mr. Simpson, to perfect this interesting service, which, as he had no wish to avail himself of the leave of absence

granted, he is prepared to follow up whenever the limited means required are placed at his disposal. We have the honor, &c.

“PETER W. DEASE.

“THOMAS SIMPSON.”

“To the Governor, &c., Hudson's Bay Company, London.”

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### SOUTHAMPTON DOCKS.

WITH the plan of these docks accompanying our present number, we shall lay before our readers for the present, the following outline from a Southampton paper, of the intended routes of the steam vessels, which will carry the mails to the West Indies, intending to return to some account of the docks in a future number.

“The contract of the Royal Mail Steam Packet Company, with government has been taken for ten years, at no less a sum than 240,000*l.* per annum. They are bound to provide no less than fourteen large class steamers for the performance of their contract, together with six schooners for the passage between the intermediate islands. These steamers are to be 240 feet long, 1300 tons, and 400-horse power engines. The accommodation and comforts of the interior are to rival, and, if possible, to exceed the style of the British Queen and Great Western—so that, in fact, a voyage to New York will frequently be made *via* the West India route, as by extending the voyage, for but a short time, Barbados, Jamaica, the Havana, &c. may be visited, and two days stoppage being allowed at each place, the tour may very shortly be rendered one of pleasure and fashion; even a trip to the Gulf of Mexico will be afforded by these steamers with the regularity of the mail coach. Every place within the arrangement will have, in fact, two mails each month.

“Fourteen steamers are contracted for, one of which is to be laid down by the Messrs. T. and J. White, the celebrated builders, of Cowes, and the others among the builders on the coast. Eight of them will start together from Southampton on their first voyage in the early part of next year, their details of service being nearly as follows:—

“England to Barbados sixteen days, stop there ten hours. Deliver mails, &c., for Tobago, British Guiana, and Surinam. Afterwards, proceed to Grenada, 140 miles, twelve hours, together twenty-four hours. At Grenada, stop twelve hours to land the mails, passengers, &c., for all the wind-bound ports, Laguayra, &c. The same steamer will proceed from Grenada to the Havana, by St. Thomas, Porto Rico, Cape Nicola Mole, St. Jago de Cuba, and Jamaica, with the outward mails, and will return from the Havana to Samana (Hayti) by the same route with the inward European and inter-colonial mails from these several places, the gulf of Mexico, the Havana, and South America, and at Samana take in the mails collected from the several windward ports, and thence proceed with all the European mails to England.

“The steamer for British Guiana, &c., having taken in coals for her voyage at Grenada, the general depôt (on account of the superiority of the port, and its complete security from hurricanes,) will proceed thence to Barbados (one day,) in order to be ready when the next packet arrives from England, and will on her arrival proceed thence to To-

lago, Demerara, &c. This steamer will carry up from Grenada to Barbados all the passengers and inter-colonial mails, &c., collected at the former island by the steamers from all the places in that route. The return mail from Barbados to Europe will always be carried forward to Samana by the steamer which takes the mails from Europe, brought by the subsequent packet

“A steamer will proceed from Grenada to Curaçoa, land the outward European and colonial mails, and from Curaçoa to Grenada, by Samana, &c. land and take in inter-colonial mails. The return European mails from all the places between Grenada and Samana southward, will be carried forward by the next steamer which brings the mails by the following packet from Europe.

“The chief Haytian mail will be landed at Cape Nicola Mole. At that place also a sailing schooner will take in and proceed with the outward mails from Crooked Island and Nassau, and return with inward mails from both these places to Cape Nicola Mole.

“From Grenada to Samana northwards, (St. Thomas and Porto Rico excepted,) land the outward European and inter-colonial mails, and from Samana to Grenada southwards, take in the inter-colonial mails for all the islands eastward, northward and westward. The return European mails from the former places will be carried forward from Grenada to Samana by the next steamer, with the mails from the following packet from Europe. All the islands and places here alluded to will consequently have fifteen days to reply to their letters. Curaçoa to Carthagena, by Santa Martha is 420 miles. A sailing vessel will carry forward from Curaçoa the outward mails for the two latter places, by which means they will get these one or two days earlier than by way of Jamaica, and having delivered these will return immediately to Curaçoa with the coast return and inter-colonial mails. The return mails from Carthagena and Santa Martha for Europe, will be taken by the steamer returning from Chagres to Jamaica. The course and time of the sailing vessel may be, outwards four days; inwards eight days. If it is back within fifteen days, it will be in time for the next outward steamer from Barbados, &c.

“At Chagres, land the outward mails, for the Pacific, and take in the return mails from thence, and proceed to Jamaica, by Carthagena and Santa Martha, as above stated. It is desirable, that as much time as possible should be given at Chagres, in order to secure the reception of the mails from Panama. The distance from Chagres to Panama direct is 33 miles, (the route is 10 by water and 28 by land.) From Savana-la-Mar, a sailing vessel will carry forward the outward mails twice every month to Trinidad-de-Cuba, (230,) and thence to Honduras, (570 miles,) together 800 miles, say six days. Stop there two days, then beat back by the same route in eleven days, altogether twenty days. If back at Savana-la-Mar within twenty three days, she will always be in time for the return steamer with the mail of the following packet. The best and safest course for the Honduras mail, however, will be from and to the Havana.

“At Mobile, or Belize land the outward European, Colonial, and North American mails; and at Tampico and Vera Cruz, take in the return mails from these places, for Europe, North America, and the colonies. Another steamer will proceed from Havana to Vera Cruz, &c.

"The steamer at Vera Cruz and Tampico, will land the outward European, North American, and colonial mails; and at Belize and Mobile will take in the return European, North American, and Colonial mails.

"Steamers, twice each month, will be so regulated that they will reach Havana from New York, before the outward steamer arrives from Jamaica, and will leave Havana, for New York, &c., immediately after her arrival. The stoppages either at Halifax or New York may be as above stated; because if the steamers perform the work from the Havana, to the Havana again, within thirty days, they will always meet the arrival at, and departure from the Havana, of the packets with the mails to and from Europe, and the Colonies, and South America. They can take in their coals for the voyage at Halifax.

"The steamers employed, will all be built for the express purpose, and be of the same tonnage and power, (say 400-horse power each,) in order that they may all in rotation fall into the great line and make the voyage to Europe. Besides their regular course of post, fifty-seven days, Barbados, Grenada, St. Thomas, and Porto Rico, will have the opportunity of replying to European letters, so as to make the course of post between these places and London only 43 days. At Samana the mails will be removed from steamer to steamer, without any stoppage of moment; consequently they will always be under the protection of the British flag. Every place within the arrangement will have two mails each month."

ROGERS' ANCHOR.—We noticed in our last, the launch of the Peru, one of the vessels destined for the navigation of the Pacific, on Mr. Wheelwright's plan, which we gave an account of long since, but we little expected then that the circumstance would afford a test of the excellent qualities of Rogers' Anchor; such as we have received from her commander. However, the fact as he relates, it is as follows:

*Pacific Steam Navigation Company's Office,  
5, Barge Yard, Bucklersbury, May 15th, 1840.*

MY DEAR SIR,

Having lately subjected "Lieut. Rogers' Patent Kedge," to a most extraordinary trial, I feel it would not be doing justice to that gentleman, or my nautical brethren, not already acquainted with the peculiar merits of this paradoxical Anchor, where I not to give the circumstance as much publicity as possible.

I have therefore to ask the favor of your inserting the following in your invaluable little work, and remain,

Yours, &c.

*To the Editor of the Nautical Magazine.*

GEO. PEACOCK.

ON the 18th ult. when the Pacific Steam Navigation Company's ship "Peru," of 700 tons, was launched, one of Lieut. Rogers' Patent Kedges, of only two cwt. was let go, when the ship had ran about her own length clear of the ways with the stream chain eleven-sixteenths, bent to it, the Anchor bit so suddenly that it was found impossible to check the cable, altho' with three turns round the body of the windlass; it therefore ran out to the end, and brought up with a sudden jerk and most tremendous strain. I thought at the moment the chain would have

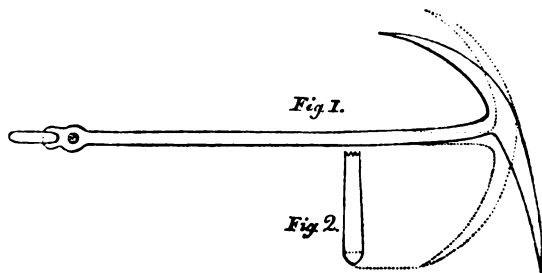


parted, but so firmly did the Anchor hold, that before it yielded the fluke straightened out, and the shank bent, assuming the form shewn in the diagram, which is a faithful sketch from actual measurement taken on landing the Anchor.

LIEUT. ROGERS' PATENT KEDGE WITHOUT PALMS.

Fig. 1.—A side view of the kedge with the stock in section; the dotted lines representing the original form.

Fig. 2.—A front view of the arms.



The tide was running about three knots, the impetus of the ship of course very considerable, and augmented by a fresh head wind; in short, so incredible did the holding power of this comparative pickaxe appear, that had I not been assured of the nature of the ground, (mud and sand) where it was let go, by Messrs. Curling and Young's, laborers and by the pilot's man, who weighed it afterwards, I should have imagined it had been hooked to some immovable substance. In order to prove further the fallacy of the opinion which was entertained by many, an Anchor of the same size and description was tried on the Monday following, when the "Chile," another of the Company's steamers, of 700 tons, was launched: it was let go a little further out in the stream, the tide was running strong, but the chain being checked gradually by stoppers, it effectually brought the ship up with thirty fathoms only; and on recovering this anchor, the fluke was also found partially straightened. The broadest part of the arms of these Anchors (which have no palms) measures only three inches and a quarter.

What an invaluable Anchor would this be in our vessels of war, to carry out in cases of getting ashore; it may be hove by a landsman, without danger of capsizing the boat, or tearing out the gunwale, an occurrence frequently happening, and the "stream" Anchor made on this plan, would, in my opinion, hold where the "bower" on the old plan would come home.\*

GEO. PEACOCK

*Captain Superintendent of the Pacific Steam  
Navigation Company's Steam Vessels.*

#### STEAM BOAT RACE,

Between the "Ruby" Gravesend steamer, and the "Orwell" and "Sons of the Thames," Iron steamers miscalled the fastest boats in the kingdom.

SIR.—As there has been of late so much swaggering and boasting of the superiority of Iron Steam Boats, over those of Wood, and as one of

\* Qy. Provided you had the means of laying it out, for very few of our men-of-war's largest boats will carry a bower anchor.

the principle advantages claimed, is stated to be much greater lightness and decrease in draught of water, and consequently greater speed, I shall feel obliged to you if you will give insertion in the pages of your useful journal, to the following account of a run which took place on Saturday last, May 2nd, between the Ruby and two of the crack Iron steamers.

I should premise, that the Ruby has been built 3 years, and she has now commenced for the fourth season, and that no vessel has yet been found that can compete with her. She is timber built of English Oak plank upon the improved plan adopted by the Diamond and Woolwich Companies, a plan I have no hesitation in saying is stronger, more durable, and superior to that of any iron boat whatever: she has never been caulked since the day she was launched, nor a farthing laid out in repairs, and her lines are as true as when they were first laid down on the Shipwright's floor.

As the Ruby has been lying by some time to refit for the season, the owners of the two iron boats alluded to, took the opportunity of announcing their respective craft as the fastest vessel in the kingdom, but the Ruby has again taken her place as No. 1, and like a giant refreshed with sleep, goes more powerfully and faster than ever, and the drubbing she has given the "Orwell" and "Sons of the Thames," will no doubt cause their respective partisans to alter their tone for the future.

In conclusion, I have only to repeat the challenge which has appeared in different public journals for the last three years, that I am ready to match the Ruby to run from Gravesend to Margate and back, for 200 guineas, against any boat afloat, whatever may be her size, power, or build.

I remain Sir, yours, &c.

A. BILLINGS,  
*Manager to the Diamond Steam  
Packet Company.*

*To the Editor of the Nautical Magazine.*

On Saturday at 8 A.M. the Ruby got under way from Blackwall, and proceeded slowly down the river to enable the Orwell to come up, as she was to start from London at 8 o'clock.

The Ruby went half speed down to Long Reach, no "Orwell" in sight, then tried the mile one hour after flood spring tide, came back as far as the half-way house and discovered the Orwell coming down with plenty of smoke and steam; turned round the Ruby and went on quarter speed till the Orwell was just four boats astern at Erith, off Cold harbour point; set off full speed with strong flood tide, two hours flood, (the reason of placing the Ruby a-head was the fear of hugging as both were near the shore.) The Ruby's engines went off in fine style 31 strokes, and she soon began to draw away perceptibly from the "Orwell," (the Orwell's people at this time hoisted the Jack at the main,) however when off Purfleet the Ruby had gained a quarter of a mile upon the latter vessel, the Jack was hauled down, and the Ruby as the conquerer hoisted her's. The Ruby gradually gained upon her antagonist till she stopped at Gravesend Town pier, when by observations made, the Orwell was a mile and a half astern, and by time eight minutes as she passed the town pier: thus beating the "Orwell" in a run of 14 miles about a mile and a half, the distance of four boats lengths having to be deducted, which was the distance the Ruby was

a-head when the race began; the Ruby ran the whole distance against a strong flood tide and wind a-head in one hour and ten minutes, being seven minutes less time than the Orwell.

*Second trial from Gravesend.*

The Ruby having stopped ten minutes at Gravesend Town pier, allowed the Orwell time to come up, on the opposite shore and pass Tilbury fort, when she again started for the chase, and by the time the Ruby had crossed the river against the strong flood in the stream, the Orwell was one mile a-head, the Ruby then ran on for 45 minutes, in which time she caught the Orwell and went right by her neck and neck, (you might have tossed a biscuit from one vessel to the other,) headed her by a quarter of a mile, turned round, and was back to Gravesend in 70 minutes, in this second race she beat the Orwell one mile in 45 minutes. From the above it will appear that the Ruby against tide is full a mile and half faster than her antagonist.

*Race with the "Sons of the Thames."*

The Ruby waited at Gravesend till 4 o'clock, and then started up the river, to meet the "Sons of the Thames," (*the fastest steamer in the world! so called in their advertisements.*) The "Sons of the Thames," and the "Mercury," left London at 5 P.M., and at forty minutes past 5, they were both discerned at the bottom of Woolwich reach, the "Sons of the Thames" full a quarter of a mile a-head of the "Mercury." Some colliers being in the stream, prevented the Ruby being turned round so soon as she ought to have been, so that when the vessel was got round with her head down, the "Sons of the Thames" was a quarter of a mile a-head, and the "Mercury" was just alongside, all three going full speed, and the tide running down strong; it was now evident, by the "Ruby" drawing away from the "Mercury," that she was gaining fast upon the "Sons of the Thames," which vessel the "Ruby" came up to and was passing, in fifteen minutes, when the "Sons of the Thames" had a half minute stop; the "Ruby" shot by her, and continued to gain upon her till the arrival at Gravesend Town Pier, when the "Ruby" was one mile a-head: it should be observed, that at Greenhithe, the "Sons of the Thames" had another short stop, but as she was going all the time with the tide, both these stoppages could not have made more than one minute difference.

The whole distance was done by the "Ruby," from the bottom of Woolwich reach in fifty-five minutes.

It is right to observe, that during the above races, the "Orwell," apparently had 100 persons on board, and the "Sons of the Thames" about 50, whilst the "Ruby" had none but her crew.

To some, this may appear an advantage for the "Ruby," but the advantage would have been more in favor of the "Ruby," if she had had 200 persons on board, as her paddles would then have had more hold of the water, and the vessel would have consequently gone faster; as during the race the "Ruby's" engines, were, overrunning their speed for want of proper resistance to the wheels. The "Ruby's" best speed is when she has 500 persons on board; in proof of which, the "Ruby" started from Gravesend on Sunday night last, with 300 passengers on board, half an hour after the "Sons of the Thames" had left, and

arrived at London Bridge within three minutes of the time that the latter reached there; the "Ruby" thus beating the "Sons of the Thames" twenty-seven minutes, in the whole distance, which was entirely against a strong ebb tide.

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TABLE AND SIMON BAYS.

*Bishopsgate street, May 1, 1840.*

DEAR SIR.—A long letter from Lieutenant Barrow appeared in the '*Nautical*'\* last year, advocating in strong terms the superior advantages of Simon over Table Bay. Had it met my eye before leaving England, I should have requested the insertion of a few remarks on some of the very erroneous statements contained in that letter; and I had, indeed, some intention of writing to you on the subject during my voyage. On reaching the Cape, however, I was happy to find that Captain Bance, whose experience, and excellent judgment rendered him so well calculated for the task, had fully replied to Mr. Barrow in the South African Advertiser, confuting all the mis-statement which your excellent magazine has (*unfortunately in this instance,*) too widely circulated. Captain Bance's letter was, I understood, forwarded to you, and has probably met with insertion; my object in now writing is to show how great an evil has already resulted from Mr. Barrow's account of the *good* qualities of Simon Bay.

The "General Palmer," a ship of 600 tons, left England in July last, with a large detachment of H.M. 15th Hussars, bound for Bombay. Off the island of Trinidad she lost her main-mast in a squall, and the Captain having the number of the '*Nautical*' before him, wherein Mr. Barrow describes in such glowing terms the advantages of Simon Bay, in an evil hour determined on going thither to obtain the necessary repairs. The Commanding Officer of the troops on board is my authority for stating that Mr. Barrow's letter *alone* induced him to take this most unfortunate step. And what was the consequence? not a spar, not even an artificer, was procurable at Simon Bay, and consequently every thing had to be prepared at Cape Town, and transported across the heavy sand of the isthmus. An additional expense of upwards of 400*l.* was thereby incurred, and, *at least*, a fortnight's longer demurrage with 170 troops on board! I wonder what consolation Mr. Barrow (who resides at Simon town,) had to offer the poor disappointed captain?

I remain Sir, &c.

JAMES LIDDELL.

*To the Editor of the Nautical Magazine.*

P. S. Let me take this opportunity of stating that another has been added to the long melancholy list of wrecks near Cape Lagullas.—On the 22nd February, (the very night I was passing,) the brig "Venerable" ran on shore near the spot where the Northumberland was stranded; the weather being moderate, fortunately no lives were lost, but the vessel and cargo were totally destroyed. I grieve to add that not a stone of the long talked of light house on this "cape of wrecks," has

\* See February number.

yet been laid, nor, as far as I could learn, have any explicit orders on the subject, as yet issued from the Colonial Office, notwithstanding the admirable report made by the talented surveyor-general of the Cape, Major Mitchell, whose plan appeared in the *Nautical* last year. Can it be regarded but as a national disgrace that so many years should have passed without a light-house being erected on the turning point of that vast continent, around which more than 250,000 tons of *British Shipping* yearly pass.

Our Correspondent should point out the "erroneous statements" to which he alludes. The reader will find Captain Bance's letter copied from the *South African* in p. 614 of the same volume, and in which we are at a loss to find any refutation of Lieut. Barrow's statements as to the natural "good qualities" of Simon Bay. Of the *supplies* to be found there, nothing was said by Lieut. Barrow excepting water, which Capt. Bance passes over in silence! whilst he makes an absurd comparison between the number of vessels that have for some years frequented the two places, to shew that Table Bay must necessarily be superior:—a comparison between a place very long established for affording supplies and one not established at all! but undeniably affording that protection to shipping which Table Bay never can do. The General Palmer had no business to go to Simon Bay when she wanted *supplies*, and Lieut. Barrow must be acquitted of all blame, for her captain giving meaning to words that they did not convey.

With regard to the light-house on the Cape, for which so much zeal was displayed by the admirers of Capt. Horsburgh, we can only lament with our Correspondent, that it has been allowed to pass away "as a story that is told."—Ed. N. M.

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#### BANK IN ST. GEORGE'S CHANNEL.

The following extract of a letter from that indefatigable officer Capt. Beechey, while commanding H.M.S.V. *African*, and dated Stranraer, March 10th, 1840, contains an account of a bank lying nearly mid-channel between Corsill light-house and Sanda Island.

"It is about a mile in diameter, steep to on all sides; and has from 18 to 22 fathoms on it. On the west it has 50 fathoms alongside it, on the east it slopes abruptly to 41, and on the north and south to 36 and 38 fathoms. It is situated from Ailsa Craig S. 41° W. true, 13 miles: from Sanda Island S. 32° E. true, 13¼ miles, and from Corsill light-house N. 54° W. true, 9 miles.

As the sea in this part of the channel is supposed to be deep, a vessel coming suddenly on this shoal, might suppose herself close upon Corsill or the Ayrshire coast, and in shaping a course according to that belief be endangered upon the opposite shore.

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#### SHAKINGS.

PACIFIC.—The American Exploratory Squadron, consisting of the *Peacock*, Captain Hudson; *Vincennes*, Captain Wilkes; *Porpoise*, Capt. Ringold; *Flying Fish*, Captain Pinkney; were at Sydney on the 4th December, having been cruising among the South Sea Islands.

CAPT. SCOTT, R.N.—A handsome chased silver tankard and stand has been presented by the Gunroom Officers of H.M.S. *Rodney*, to their late Commander, Capt. Edward Hinton Scott, in testimony of their estimation of his character as a British Officer.

**NAVAL COMMISSION.**—The Government, it seems intend to carry into effect, immediately, the recommendations of the Naval and Military Commission, the Chancellor of the Exchequer having, last night, included, in his estimated expenditure for the ensuing year, the sum of 75,000*l.* for that specific purpose.—*Shipping Gazette.*

**SOUTHAMPTON.**—The workmen employed on the Southampton Docks are making great progress in the work; and no doubts are entertained of the completion of one dock, within the stipulated period.

**COAST OF NORWAY.**—*Hydrography.*—We perceive that the three first charts of the coast of Norway have been just published, resulting from the survey ordered by the Storthing to be made of the coast of Norway and Finmark from Drontheim to the Russian Frontier.

**NELSON'S MONUMENT.**—We understand that a new account of the action of Cape St. Vincent, between the British and French Fleets is in the press, and that it contains some highly interesting anecdotes of Lord Nelson, which are quite new. As the author Colonel Drinkwater Bethune, intends the proceeds from it to be added to the funds of the Nelson Monument, it will have additional claim to the attention of our readers.

**LIGHT ON THE SEVEN STONES.**—Meetings have been held in the west, for the purpose of establishing a floating light on these dangerous rocks off the Scilly Islands.

**THE ARCHIMIDES.**—Experiments recently made with this vessel have been spoken favorably of.

**HIS ROYAL HIGHNESS PRINCE ALBERT.**—As customary with the Reigning Sovereigns of this country signed his name in the book kept for that purpose at the rooms of the Royal Society, as a member of that learned body, of which Sir Isaac Newton was the founder. The page containing it beautifully embossed and formed of vellum, had already received the signature of Her Majesty Queen Victoria.

**ADMIRAL KLINT.**—We understand that this veteran officer of the Swedish Navy, known to our readers by his valuable labours in charts of his own coast, died at Stockholm, on the 30th of April, leaving a wife and 13 children to lament their loss, in circumstances not far removed from penury.

**CHINA.**—The entrance to the port of Chinchew is to be put into a better state of defence by building an additional fort, in order to expel foreign ships.—*Canton Press.*

**FRENCH SURVEY OF THE ENGLISH CHANNEL.**—We read in the *Journal des Debats* of the 7th May, that the Minister of Marine stated that for the completion of the great work performed by the celebrated hydrographer, M. Beautemps Beaupre on, the French coast, a steam boat would be required to take the soundings in deep water, in order to construct an entirely new chart of the English Channel. On the proposal of Admiral Halgan, director of the H. Dépôt this work has been entrusted to M. Lesaulnier de Vauhelle, Capitain de Corvette, and it will be the first time such operations have been conducted by steam." The first time we may add that France has followed the example set by England long since in employing steam for such operations. This work is indeed something new and we shall be glad to see the work commenced.

TABLE LVII.

*For reducing Swiss feet to English, and English feet to Swiss.*

1 Zurich foot = 0·988794361 English foot

1 English foot = 1·011332628 Zurich foot.

Swiss or English feet.	English feet and Dec. parts	Swiss feet and Dec. parts	Swiss or English feet	English feet and Dec. parts.	Swiss feet and Dec. parts.	Swiss or English feet	English feet and Dec. parts	Swiss feet and Dec. parts.
1	0·989	1·011	40	39·552	40·453	79	78·115	79·895
2	1·978	2·023	41	40·541	41·465	80	79·104	80·907
3	2·966	3·034	42	41·529	42·476	81	80·092	81·918
4	3·955	4·045	43	42·518	43·487	82	81·081	82·929
5	4·944	5·057	44	43·507	44·499	83	82·070	83·941
6	5·933	6·068	45	44·496	45·510	84	83·059	84·952
7	6·922	7·079	46	45·485	46·521	85	84·048	85·963
8	7·910	8·091	47	46·473	47·533	86	85·036	86·975
9	8·899	9·102	48	47·462	48·544	87	86·025	87·986
10	9·888	10·113	49	48·451	49·555	88	87·014	88·997
11	10·877	11·125	50	49·440	50·567	89	88·003	90·009
12	11·866	12·136	51	50·429	51·578	90	88·991	91·020
13	12·854	13·147	52	51·417	52·589	91	89·980	92·031
14	13·843	14·159	53	52·406	53·601	92	90·969	93·043
15	14·832	15·170	54	53·395	54·612	93	91·958	94·054
16	15·821	16·181	55	54·384	55·623	94	92·947	95·065
17	16·810	17·193	56	55·372	56·635	95	93·935	96·077
18	17·798	18·204	57	56·361	57·646	96	94·924	97·088
19	18·787	19·215	58	57·350	58·657	97	95·913	98·099
20	19·776	20·227	59	58·339	59·669	98	96·902	99·111
21	20·765	21·238	60	59·328	60·680	99	97·891	100·122
22	21·754	22·249	61	60·316	61·691	100	98·879	101·133
23	22·742	23·261	62	61·305	62·703	150	148·319	151·700
24	23·731	24·272	63	62·294	63·714	200	197·759	202·267
25	24·720	25·283	64	63·283	64·725	250	247·199	252·833
26	25·709	26·295	65	64·272	65·737	300	296·638	303·400
27	26·697	27·306	66	65·260	66·748	350	346·078	353·966
28	27·686	28·317	67	66·249	67·759	400	395·518	404·533
29	28·675	29·329	68	67·238	68·771	450	444·957	455·100
30	29·664	30·340	69	68·227	69·782	500	494·397	505·666
31	30·653	31·351	70	69·216	70·793	550	543·837	556·233
32	31·641	32·363	71	70·204	71·805	600	593·277	606·800
33	32·630	33·374	72	71·193	72·816	650	642·716	657·366
34	33·619	34·385	73	72·182	73·827	700	692·156	707·933
35	34·608	35·397	74	73·171	74·839	750	741·596	758·499
36	35·597	36·408	75	74·160	75·850	800	791·035	809·066
37	36·585	37·419	76	75·148	76·861	850	840·475	859·633
38	37·574	38·431	77	76·137	77·873	900	889·915	910·199
39	38·563	39·442	78	77·126	78·884	1000	988·794	1011·333

## LAW DECISIONS

**MARY STUART—Collision.**—An action to recover compensation in damages for an injury done to the *Mary Stuart*, by a steamer called the *Clarence*. The accident took place on the 13th January, at 8 o'clock in the evening, outside the mouth of the Humber. The steamer had a light up, and although the people in the brig shouted loudly on their hearing a concussion ensued, in which the brig was considerably damaged, and the steamer slightly; the sum paid for repairing the damages of the *Mary Stuart*, amounted to £165.

As it appeared that the accident occurred from neglect on board the steamer, the Jury returned a verdict for the plaintiff. Damages £165.

**MARIA—Collision.**—And the *Websters*, the former a Prussian, the latter a British vessel came into collision in the Tyne, both vessels with pilots on board. The court was of opinion that the accident was occasioned by the pilot, that he was taken on board the Foreign vessel by compulsion, and that consequently the owners were not responsible for the damage done.

**PENRICE CASTLE—Collision.**—This vessel with many others, had taken shelter in Mullion Bay, on the coast of Cornwall, during the night of the 3rd April last, and lost. The *Benjamin* was charged with having caused the loss by coming in collision with the *Penrice Castle*. From the evidence shown, the court dismissed the owner of the *Benjamin* with costs.

**SOPHIA—Collision and Salvage.**—The *Sophia* which had been in collision with the "*Lord Goderich*," and sustained much damage, was fallen in with on the 14th September 25 miles from Beachey Head, with a signal of distress flying, by the *Royal Adelaide*, one of the steam packets between Dublin and London, and by her towed to Gravesend. A tender of £650 was made but refused, not being considered sufficient, as the service was of great merit and lasted 33 hours. The value of the *Sophia* with her cargo was estimated at £30,000.

The court having maturely considered the evidence adduced on both sides, awarded the salvors £350 in addition to the sum tendered, making altogether the sum of £1,000.

**GIL BLAS—Collision.**—An action brought by the plaintiff to recover damages for injury to his vessel, sustained in the negligently running down of her by the *Royal Adelaide* steamer, belonging to the Dublin Steam Packet Company. The *Gil Blas* arrived off Dover homeward bound, with a valuable cargo of Ivory, Palm Oil, and Gold Dust. The man on the look-out observed the light of a sail proceeding towards them, almost immediately afterwards he observed the hull of a large vessel; he hailed her, and observing that she was on the starboard side cried out "*Starboard your helm*," the Captain held out a light over the side of the vessel, and observed he was sure they would get clear of her, he had scarcely said so, when the vessel shifted her course, struck the *Gil Blas* on the starboard side, carrying away her mainmast. The crew and passengers, immediately got on board the steamer—the vessels being entangled; the steamer backed her engines and got free, the schooner immediately wore round and went off the wind. The Captain and crew were put on shore at Cowes, the schooner in mean time had drifted across channel was picked up by a Belgium pilot and taken to Ostend; the owners were obliged to pay £1000 salvage, and the present action was brought for the amount of salvage, incidental expenses, and repairs.

The evidence occupied two hours in reading over, and contained several discrepancies. In half an hour the Jury returned a verdict for plaintiff for the several heads of his demands.

**SCIPIO—Collision.**—An action in which the plaintiffs sought to recover damages, for the injury alleged by them to have been inflicted on their brig *Scipio*.



After hearing the evidence adduced on both sides, the case was summed up to the Jury, and a verdict was returned for the plaintiffs.—damages £173.

**MARINE INSURANCE**—*Robinson v. Brockett and Jobling*.—An action on a policy of insurance, done by the owner and master of sloop Catherine, for 200*l.* with the Newcastle-upon-Tyne Insurance Company, of which the defendants are directors. The defendants resisted payment on two pleas:—First, that the vessel was not seaworthy; and, secondly, that she was wilfully lost. The jury retired, and after about a quarter of an hour's consideration, returned a verdict for the defendants, on the ground that the bow-port had not been sufficiently secured; and, secondly, that the vessel had not been on the rocks at all.—*Gateshead Observer*.

**EBENEZER**—*Salvage*.—A claim for salvage rendered to the *Ebenezer*, a collier from Swansea, by the smack *Industry*. The collier on the 2nd November got on a dangerous part of the Andrew sand, on the coast of Suffolk; she was got off by the smack and piloted into Harwich. An agreement of £10 which was set up by the owners was denied by the alleged salvors. The court held that £10 was not sufficient, and awarded £30.

**PATRIOT**—*Salvage*.—The court gave £20 to the salvors in this case, for services rendered to the *Patriot*, from Dundee.

**CIRCISSIA**—*Salvage*.—A salvage service performed by 26 salvors, in three boats to the *Circassia*, of the value of £3,000 which was in distress off Yarmouth on the 6th of November. The services were acknowledged to be meritorious, and a tender of £250 was made.

The court added £100 to the tender, thus awarding £350 with costs.

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## NEW BOOKS.

**JACK ASHORE**.—*By the author of Rattlin the reefer, in 3 vols.*—Colburn, London.

As there are such depositories for books now-a-days as Nautical Libraries, for Jack himself on board of our men-of-war, we will introduce this aspirant to that honorable position, by transcribing the dedication.

“To the foremost men of Her Majesty's Royal Navy, the tale of Jack Ashore is respectfully dedicated, not only as a tribute to their sterling and well tried worth, but as an humble attempt to prove to the world, and to themselves, the eligibility and the honor of their station in life, by their old shipmate and friend Edward Howard.” Then my lads, the schoolmaster after all, you will find a better friend than the grog bottle, and you may do worse than read such tales as Jack Ashore, who we promise you is an entertaining fellow, whether ashore or afloat, though albeit not over gifted with the choicest language.

**BIBLICAL TOPOGRAPHY**. *By Samuel Ransom, Classical and Hebrew Tutor, &c. with a Preface by John Harris, D.D.*—Ward and Co., Paternoster-Row.

A little work, consisting of a series of lectures, delivered as academical exercises, illustrative of the position and character of the places mentioned in the Holy Scriptures. There are many passages of the Scriptures which to persons acquainted with the topographical conditions, nature of the climate, and other features of the places where they relate to, are far more intelligible, than to those who have not such knowledge: these conditions and indeed the history of the human race down to the time of our Saviour and his Apostles, form the subject of these lectures, which is a sufficient recommendation to those of our readers who take an interest (and who does not?) in such investigations. We cordially recommend it as a profitable companion.

PRINCE ALBERT, HIS COUNTRY, AND KINDRED.—*Ward and Co., Paternoster Row.*

An interesting account of the illustrious family from which the Prince has descended, and their connection with the Protestant reformation.

UNIVERSAL SEA LANGUAGE.—An appendix to this book of Capt. Rohde's has just appeared.

WE perceive Capt. Hall is busily engaged preparing in Monthly Parts, the whole of his interesting works, so that they may be attainable in a uniform size, &c. as they are published. The last containing the voyage to China is particularly acceptable at the present time.

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### NEW CHARTS.

ON referring to our announcements of these important documents to seamen, we find ourselves owing to a pressure of other matter, considerably in arrear with the current publications, and shall, therefore briefly string together those which have since appeared, that our notices may be as complete as we can make them.

As the most important of the present period, we shall commence with China, which has brought forth a host of these *sea cards*, and if we mistake not, we shall find something new in the annals of eastern hydrography; and the first to our hand is,

#### THE CHINA SEA,

Including the vast expanse of sea and land from the great gates, if we may so term them, between Sumatra, Java, Borneo, and Celebes, to the Bocca Tigris, and from the Sooloo Sea, to the Gulf of Siam, within the limits of about twenty-four inches by seventeen. It is in fact a neat and will be a most useful little general chart of the China Sea, bringing to a happy union the two halves which have so long been mysteriously separated by Horsburgh. As its present accompaniments we find next

#### COCHIN CHINA.—*Sheet 1.*

Including Pulo Condor to the south, and Tre island on the northern limits, shewing the ground about the Catwick and Ceicer Islands. Then

#### COCHIN CHINA.—*Sheet 2.—from Nhatrang Bay to Touron, and*

#### COCHIN CHINA.—*Sheet 3.—and part of Hainan,*

In which last we find the work of Captain La Place, in La Favorite, on the Cochin Coast, and that of Captain Daniel Ross, of the Bombay Marine, on the coast of Hainan. Nor must we omit to mention the name of Mr. Jean Dayot, whose valuable labours are turned to account in the second sheet, in the absence of almost any other information. The above three sheets are of the same size as the first, and considering the general ignorance which prevails of Chinese hydrography, we shall be glad to see them in the hands of our seamen, as the best companions they can have, and in which some glaring defects of other charts have been adjusted. We must not stop to analyze, but proceed at once with the next, a general chart of

#### THE COAST OF CHINA,

Beneath the title of which, we find this grave announcement,—“The positions are uncertain, except on those parts of the coast which are shaded,” and those shaded parts we may add are very few! but we shall have to say more of our ignorance of Chinese hydrography. The southern limit of this chart is the well known Macclesfield bank, and the northern one the Gulf of Leotong, and containing besides the gulf of Tonquin on the west, it includes the celebrated Loo Choo Islands on the east, thus, with the first in this notice bringing under one view the whole range of coasts and islands from Batavia to Peking, a most

desirable arrangement for the navigator. Indeed we will venture to predict that these two charts will be general favorites: but to proceed we find the "coast of China" serves as an index to

*CHINA sheet 1, south coast from Hainan to Macao: all the positions are uncertain.*

*CHINA sheet 2, south coast from Macao to Namoa.*

Of which as a set off to the former we may observe it is tolerably complete, the unshaded parts being few and in the heads of the bays; it also includes the dangerous Prata shoal. In the next

*CHINA, sheet 3, East coast from Namoa to Haitan, all the positions are uncertain.*

In such critical navigation as that of the strait of Formosa, full as it is of banks, and the outlying dangers of the Pescadore islands, the announcement in the title will put the seaman on his guard. The next is

*CHINA, sheet 4, East coast from Haitan to the Kuesan Islands.*

*CHINA, sheet 5, East coast from the Kuesan Islands to Hoang-Ho Gulf.*

Which Gulf will occupy sheet 6 unfinished; and we have

*CHINA, sheet 7, East coast, Yellow Sea, and Gulf of Pechili,*

Which completes the series, all these last bearing in their titles the same warning of all the positions being uncertain. The next we have is

#### THE PENINSULA OF KOREA

With the lesser Japan Islands and the Korean Archipelago. Returning southward we have of the same series

*CHOU-KIANG, OR CANTON RIVER, from Lintin to the Second Bar by Capt. Daniel Ross, Bombay Marine, 1815; and*

*THE ENTRANCE TO THE CHOU-KIANG; or Canton River from the outer islands to Lintin, surveyed by Capt. D. Ross, Bombay Marine, 1815.*

The latter enriched with plans of the Bocca Tigris, the small and second bars, Tiger Island, and the Chuen pee channel; where, although there is some detail left for the surveyor to fill up, the seaman will find himself more at home from the valuable labours of Capt. Ross. Another sheet contains

#### MACAO ROAD AND HARBOUR;

Including the Peninsula on which stands the city and its approaches. Also

*CUM-SING-MOON HARBOUR. By John Rees and F. Jauncey.*

An important plan, and again on the East coast

*PORT TA-OUTZE, and the Mouth of the River Ta-Hea, from a sketch by Thomas Rees, commander of the Hon. Company's ship Lord Amherst, 1832; and the*

#### ENTRANCE TO THE RIVER MIN,

By the same author. We have now enumerated the leading charts and plans of this first attempt on such a scale as displaying the hydrography of the China coast. The whole of the foregoing sheets are of the same size, namely that on which the China sea is drawn, and we trust will very soon obtain important additions arising from the present proceedings on the Chinese coast. But we have got before us some lesser sheets, of which the

*SKETCH OF THE LOO CHOO GROUP OF ISLANDS. By Capt. Basil Hall, R.N., H.M.S. *Lyra*, 1816.*

Is a neat little chart, shewing at one view the Great Island, and the positions of its principal harbours Napakiang and Port Melville, in their *exclusive* and *reserved* condition. A plan of the former harbour was published by the Admiralty, the work of Capt. Beechey, R.N., resulting from his visit in the Blossom; and the next before us is a

SKETCH OF PORT MELVILLE. *By Capt. Basil Hall, H.M.S. Lyra, 1816.*

A useful little plan. And again on the Chinese coast we have

TOURON BAY. *Surveyed by M. E. Paris of the French Corvette La Favorite, 1831.*

Done with considerable care both in water and land feature: also

MI-A-TAU STRAIT, and CHE FOW HARBOUR, *in the Gulf of Pechili.*

From a MS. sketch found among the papers of the late Mr. John Jackson, who was master of H.M.S. Lion, during the Earl of Macartney's embassy to China. It differs so much from the plans by Capt. D. Ross, of the Bombay Marine, that it has been thought fit to publish it unaltered, a fact which no doubt Capt. Ross will take into his consideration. We shall conclude our present notice with a plan of

CHOSAN HARBOUR. *By Capt. W. R. Broughton, H.M.S. Providence, 1797.*

In which there is more detail of soundings than of topographical feature, and we congratulate our commanders that they may obtain from Mr. Bate, of 21, Poultry, *the Admiralty Publisher*, so valuable and important additions to their stock of hydrographical materials.

We perceive some important additions in the neighbourhood of Hong Kong, contributed by Mr. J. A. Douglas, who while commanding the Cambridge rendered some valuable service to the British interests in the absence of our men-of-war.

## PROMOTIONS AND APPOINTMENTS.

### PROMOTIONS.

COMMANDERS—J. Elias, (1806), without increase of pay.

LIEUTENANTS—W. A. Fellowes, late of Vanguard; H. J. Julian, G. B. Le Mesurier, T. Etheridge.

### APPOINTMENTS.

Rear-Admiral Sir Edward Durnford King, K.C.H. is appointed to the command at the Cape of Good Hope Station, and will hoist his flag in the Southampton, 50, at Chatham.

CAPTAINS—F. T. Michell to *Magicienne* vice Burnett dec.\* R. Maunsell to *Rodney*. F. W. Beechey to *Lucifer*.

COMMANDERS—G. Mansell to *Wasp*, vice Hon. D. W. A. Pelham. T. O. Knox to *Rodney*.

LIEUTENANTS—R. A. Newman to *San Josef* for Plymouth Ordinary. J. C. Prevost to *Victor*. J. Nicholas, chief officer of *Coast Guard*. C. Postle to *Vanguard*. R. T. J. Levinge to *Wolverine*. W. N. Taylor, H. M. Ellicombe, J. H. Lloyd, J. R. Baker to *Rodney*. T. S. Coppinger to *Lucifer*.

MASTERS—R. Thompson (act.) to *Vanguard*. S. Flinn (act.) to *Rodney*. S. B. Cook to *Lucifer*.

SURGEONS—W. Donnelly, M.D. to *San Josef*. J. Lawrence to *Poictiers*.

PURSERS—F. Harger to *Inconstant*. R. L. Horniman to *Rodney*.

MATES—P. W. May, J. F. B. Wainright to *Excellent*. H. Ley, W. G. Mansfield, W. B. Beresford to *Vanguard*. O. Bentall, L. D. T. Provost to *Magicienne*. O. P. Knott to *Britannia*. J. Edge to *Lucifer*.

ASSISTANT-SURGEONS—W. Crofton to *Jupiter*. E. G. Irving, M.D., H. W. Bent to *Britannia*. J. King, J. A. Corbert to *Impregnable*. W. J. Rogers to *Victory*. A. Paterson to *Lucifer*.

MASTER'S-ASSISTANTS—G. H. Forster to *Jupiter*. R. Read to *Victory*. A. J. Barnard to *Edinburgh*. R. J. Hudson to *Victor*.

SECOND-MASTER—W. G. S. Stokes to *Rodney*.

MIDSHIPMEN—T. Fortescue, H. J. Grant to *Vanguard*. T. G. Carmichael to *Magicienne*. G. O. Willes to *Pearl*.

VOLUNTEERS OF FIRST CLASS—A. De Horsey to *Vanguard*. A. G. FitzRoy to *Victor*.

CLERKS IN CHARGE—Whitefield to *Lynx*. C. Thorne to *Charybdis*. S. Winter to *Lucifer*.

NAVAL INSTRUCTOR—F. W. Bouter to *Southampton*.

Midshipmen passed for Lieutenants Commissions—W. C. Willie, J. De Courcy, A. Agnew, W. H. Wardrop, W. V. Ansem, J. W. Palmer, P. M. May.

\* Buried with military honors at Portsmouth.

## MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

## AT HOME.

**ÆTNA, 6**—Lieut.-Com. J. Wilson, 2d May left Woolwich for north coast of Spain.

**AFRICAN**.—*Stranraer*, April 25: H.M. steamer African, Captain Beechey, employed on the survey of the Irish Channel, left Loch Ryan, on Tuesday 21st inst., for Holyhead and Woolwich, at which latter port Capt. Beechey is to commission the Lucifer steamer, to be employed on the same duty. The Lucifer was formerly one of the government mail packets between Liverpool and Kingston.—*Shipping Gazette*. On the African being paid off on the 8th May, the Lucifer not being ready the officers and crew were turned over to the Lizard, in which vessel Capt. Beechey will continue his important operations till the Lucifer is prepared.

**DOLPHIN, 3**—Lieut. E. Littlehales, 21st April arrived at Portsmouth from Sheerness having been run foul of by the Braganza steamer off the Foreland. She has been repaired, and sailed on the 1st May for St. Helena, she takes out supernumerary boys for the men-of-war on the African station, and despatches to St. Helena, to permit the French government to exhume the remains of Napoleon Buonaparte for burial in France—a commission entrusted to the Prince Joinville.

**LIZARD, (st. surv.)**—Capt. Beechey, 22d May left Woolwich for Portsmouth and Holyhead.

**PEARL, 18**—Com. C. C. Frankland, 28th April left Spithead for South America.

**PERSIAN, 18**—Com. M. Quin, April 28, sailed from Plymouth for coast of Africa.

**PIQUE, 36**—Capt. E. Boxer, 25th April left Portsmouth for Cronstadt; 1st May off Orford.

**RODNEY, 92**—Capt. H. Parker, CB. 28th April arrived at Plymouth from Gibraltar; 12th May paid off; re-commissioned by Capt. R. Maunsell.

**SOUTHAMPTON**—Commissioned at Chatham for the flag of Rear-Admiral Sir E. King for Cape station.

**VESUVIUS, (st.)** Lt. Com. W. Blount, 13th May arrived at Portsmouth from Devonport.

At PORTSMOUTH, *In Harbour*.—Britannia, Victory, Vanguard, Excellent, Royal George, Magicienne, Victor, Jupiter, Dolphin, Messenger.

At PLYMOUTH—Impregnable, San Josef, Rodney, Nautilus, Carron. *In the Sound*.—Thunderer, Cambridge, Inconstant.

PAID OFF—12th May, Rodney at Plymouth re-commissioned. African st. 8th

## ABROAD.

**ACHERON, (st. v.)** Lieut. Com. A. Kennedy, 27th April arrived at Malta.

**ACTEON, 26**, Capt. R. Russell, 27th Feb. at Buenos Ayres.

**ALECTO, (st. v.)** Lt. Com. W. Hoseason, 19th April left Malta for Corfu.

**ALGERINE, 10**, Lieut. Com. T. H. Mason, 25th Feb. left Madras for Trincomalee.

**ANDROMACHE, 26**, Capt. R. L. Baynes CB. 8th April arrived at Madeira, 19th sailed for Cape.

**APOLLO, (troop ship)** Mr. A. Karley, 20th March left Jamaica, with troops for Quebec—56th regt.

**ASIA, 84**, Capt. W. Fisher, 19th April arrived at Smyrna from Vourla.

**ATHOLL, 28, (troop ship)** Master Com. C. P. Bellamy 14th March at Barbados, 24th arrived at Demerara from Grenada.

**BEACON, (st. v.)** Lieut. T. Graves, 8th

April left Malta, for the Levant to resume his survey.

**BELLEOPHON, 80**, Capt. C. J. Austen, 17th April left Malta for Naples.

**BENBOW, 72**, Capt. H. Stewart, 25th April sailed for Naples.

**BLENHEIM, 72**, Capt. Sir H. Senhouse 19th March spoken on way to China in 0 deg. 40 min. N., and 19 deg. 20 min. W.; on the 18th had spoken HMS. Blonde and Nimrod.

**CALLOPE, 26**, Capt. T. Herbert, 22nd Jun. left Monte Video for Pacific.

**CAMELION, 10**, Lieut. Com. G. M. Hunter, 24th March, arrived at Rio from Bahia.

**CASTOR, 36**, Capt. E. Collier, 23d April arrived at Smyrna.

**CHARVREDS, 3**, Lieut. Com. E. B. Tinning, 25th March returned to Jamaica from Chagres.

**CLIO, 16**, Com. J. G. Freemantle, 8th March, left Rio for Bahia.

- COLUMBINE**, (st. v.) 8th April arrived at Teneriffe, 10th sailed for Barbados.
- CONFIANCE**, (st. v.) Lieut. Com. E. Stopford, 20th April arrived at Malta.
- CONWAY**, 26, Capt. C. R. D. Bethune, 6th March, at Kedgerree, 9th sailed.
- CRUIZER**, 16, Com. H. W. Giffard, 31 Jan. arrived at Singapore from Malacca.
- CYCLOPS**, (st. v.) Capt. H. T. Austen, 19th April arrived at Gibraltar, 23rd sailed for Malta.
- DAPHNE**, 18, Com. W. Dalling, 16th April left Alexandria for Naples.
- DIDO**, 18, Capt. L. Davies, CB. April at Constantinople.
- DONEGAL**, 78, Capt. J. Drake, 26 Ap. in the Tagus.
- DAVID**, 44, Capt. Right Hon. Lord John Churchill, 10th Jan. about to sail from Sydney. Captain Robson was landed there, and would proceed to New Zealand, the seat of his government in the Herald.
- ELECTRA**, 18, Com. E. R. P. Mainwaring, 23th January at Valparaiso.
- EDINBURGH**, 72, Capt. W. Henderson, KH. 23rd April arrived at Smyrna.
- FANTOME**, Com. Battersfield, 11th March, arrived at Gambia, 12th sailed for Sierra Leone.
- FAVORITE**, 18, Com. W. Croker, 10th Jan. arrived at Sy lney from Madras.
- FAWN**, Lieut. Com. J. Foote, 24th of March at Rio.
- FIREFLY**, (st. v.) Lieut. Com. W. Winniett, 14th March left Barbados for Demarara.
- FLY**, 18, Com. G. G. Loch, 27th Jan. left San Blas on her return home.
- GORGON**, (st. v.) Capt. Henderson, 16 April left Alexandria for Naples, 27th arrived at Malta from Naples; run foul of by Rodney, with bowsprit, figure heads, bulwarks, and boats damaged.
- GRIFFON**, 3, Lieut. Com. J. D'Urban, 13th March arrived at Barbados from Antigua, 14th left for Demarara.
- HARLEQUIN**, 16, Com. Right hon. Lord F. J. Russell, ordered home from Sierra Leone.
- HASTINGS**, 72, Capt. J. Lawrence, CB. 19th March, arrived at Smyrna from Vourla.
- HECLA**, (st. v.) 22d March arrived at Port Royal from St. Thomas.
- HERALD**, 26, Capt. J. Nias, 4th Dec. Sydney.
- HYDRA**, (st. v.) Com. Milward, 29th April at Naples.
- IMPLACABLE**, 74, 12th April arrived at Malta, from Vourla.
- JASEUR**, 16, Com. F. M. Boulton, 17 April, sailed from Malta.
- KITE**, (st. v.) Lieut. Com. G. Snell, 6th March arr. at Barbados from Antigua
- LARNE**, 18, Com. J. P. Blake, 11th of March, arrived at Sango from China, 12th arrived at Calcutta.
- LILY**, 16, Com. C. Deare, 27th March arrived at Simon Bay from Ascension.
- MEGERA**, (st. v.) Lieut. Com. H. E. Goldsmith, 23d April arrived at Gibraltar, and sailed with Cyclops for Malta.
- MAGPIE**, (st. v.) Lieut. Com. T. S. Brock, 8th April left Malta for the Levant, to resume her survey.
- MELVILLE**, 72, Capt. Hon. R. T. Dundas, 12th Feb. arrived at Cape Coast.
- ORESTES**, 18, Com. P. S. Hambly, 29 Jan. at Valparaiso.
- PARTRIDGE**, 20, Lieut. Com. W. Morris, (a), 9th March spoken off Bahía.
- PHEONIX**, (st. v.) Com. R. J. Robinson, 26th March arrived at Constantinople.
- PICKLE**, 5, Lieut. Com. F. Holland, 10th March left Jamaica on a cruise.
- PILOT**, 14, Com. G. Ramsey, Mar. 27, arrived at Havana from Galveston.
- PLUTO**, (st. v.) Lieut. Com. J. Lunn, 16th March, arrived at Barbados from St. Vincent.
- PROMETHEUS**, (st. v.) Lieut. Com. T. Spark, 13th April arrived at Malta from Marseilles.
- REVENGE**, 76, Capt. Hon. W. Waldegrave, 26 April, in the Tagus.
- RINGDOVE**, 16, Com. Hon. K. Stewart, 15th March left Jamaica for Cathagena.
- SAPPHIRE**, (troop ship,) Com. (act.) 20th Feb. left Barbados for St. Vincent with part of 57th regt.
- SAPPHO**, 16, Com. T. Fraser, 5th Mar. arrived at Jamaica, 12th sailed for Barbados.
- SARACEN**, 10, Lieut. Com. H. W. Hill, 19th March, arrived at Gambia from Sierra Leone.
- SATELLITE**, 18th, Com. J. Robb, 15th March, left Jamaica for Bermuda, 12th April, arrived at Halifax.
- SERINGAPATAM**, 42, Capt. J. Leith, 9th March, left Trinidad for St. Lucia, 16th touched at St. Kitt.
- SKIPJACK**, 5, Lieut. Com. H. Wright, 8th March left Jamaica on a cruise.
- SPARROWHAWK**, 16, Com. J. Shepperd, (b) 28th Jan. at Valparaiso.
- STAG**, 46, Commodore T. B. Sullivan, 24th March at Rio.
- SCORPION**, Lieut. Com. C. Gayton, 4th May arrived at Valencia from Tarragona, 6th sailed for eastward.
- TRINCULO**, 16, Com. H. E. Coffin, 26th April in the Tagus.
- TYNE**, 26, Capt. J. Townshend, 5th April arrived at Malta from Smyrna.
- VESPAL**, 26, Capt. T. W. Carter, 4th April at Halifax.
- VOLCANO**, (st. v.) Lieut. Com. J. West. April 2 at Marseilles, 18th arr. at Malta,

WELLESLEY, 72, Capt. T. Maitland, Mar. 6, at Kedgerree; 10th left Calcutta for Madras and Trincomalee, whence she will proceed to China.

WINCHESTER, 50, Capt. J. Parker, 11th March arrived at Bermuda.

WOLVERINE, 16, Com. W. Tucker, (b) 5th Feb. off Prince Island.

RIO JANEIRO—*In Port*, 24 March.—Fawn, Wizard, Stag, Sparrow, Spider.

VALPARAISO—*In Port*, 28th June.—Sparrowhawk, Electra, Orestes.

MALTA—*In Port*, 29th April.—Princess Charlotte, Implacable, Ceylon, Gorgon, Cyclops, Phoenix, Prometheus, Confidence, Acheron, Alecto.

## BIRTHS, MARRIAGES, AND DEATHS.

### Births.

At the Ray, near Maidenhead, Lady Phillimore, of a posthumous daughter.

At Blackbrook, on the 20th April the Lady of G. T. M. Purvis, Esq. R.N. of a daughter.

On the 19 April, at King's-terrace, Southsea, Hants, the lady of Lieutenant F. Edwards, R.N. of a son.

On the 22nd April, at Dover, the wife of R. Bushell, Esq. R.N. of a daughter.

### Marriages.

On the 5th May, at Henfield, by the Rev. Charles Dunlop, Commander T. Smith, R.N. to Susanna, daughter of the late John Bridge Norton, Esq. of Shoreham Sussex.

At Hedsor, on the 7th May, by the Hon. and Rev. Adolphus Frederick Irby, William Jones Prowse, Esq. Commander R.N. to the Hon. Rachel Emily Irby, daughter of Lord Boston.

At Newbury, Commander Courtenay Hayes, R.N. to Miss Slocock, niece of the Rev. Samuel Slocock.

On the 2nd May, at Kenwyn, by the Rev. G. Cornish, Lieut. Crooke, R.N. commander of H. M. Packet Petrel, to Eliza Keelir, the eldest daughter of William Vice, Esq., of Lemon street, Truro.

At St. Nicholas' Chapel, Copperashill, and afterwards at St George's Church, Edward Kellett Green, Esq. of London, to Marianne Townley, third daughter of Charles H. Townley, Esq. R.N. of Great George's street.

At Horsley Church, the Rev. William Keats Sweetland, A.M. of Newton, to Frances, youngest daughter of the late Vice-Admiral Young, of Bartonend house, Abbott, Devonshire.

On April 29, at Kingston Church, by the Rev. J. K. Greetham, John King, jun. of Loxwood, Sussex, Esq. to Mary the eldest daughter of Admiral Sir Lucius Curtis, Baronet, of Gatcombe house

At St. Thomas's Cathedral, Bombay, on the 25th of February, William Fisher, Esq. of the Madras Civil Service, only

son of Capt. W. Fisher, RN. and nephew of the Hon. Sir J. Rivett Carnac, Bart. Governor of Bombay, to Frances Brice, eldest daughter of the late Rev. Charles Fisher, MA. Rector of Ovington-with-Tilbury.

On the 30th April, at Blandford, Mr. Henry Charles Rogers, comedian, to Ely Jane, relict of George Damsey, Esq. R.N. and eldest daughter of the late Rev. R. Clavell, rector of Marston, Dorset.

At Bombay, Captain John Davies of the Bombay army, to Sarah, daughter of John Harrison, Esq. R.N. late of Upmar-den, Sussex.

On the 14th ult. at Wyke, Samuel Hansard Yockney, Esq. of Corsham, Wilts, to Frances Emily, third daughter of the late Capt. William Holmes, RN.

On the 22nd April, at Barham, in Suffolk, the Rev. John Freeman, MA. of St. Peter's College, Cambridge, to Lucy Charlotte, only daughter of the late R. Kittoe, Esq. RN.

At Guernsey, Philip de Saumarez, Esq. Lieut. RN. to Jane, daughter of the late Lieut-Colonel Barlow, 61st Regt.

On the 23d April at Ivy Bridge, Devon, G. T. Shortland, Esq. Barrister-at-Law, eldest son of the late Commissioner Shortland, RN. to Harriet, second daughter of the late Rev. James Collins, LL.D. Rector of Thorpe Abbots, Norfolk.

Langham-place, William Hussey, Esq. to Jane, daughter of Capt. Hancock, RN. of Weymouth.

### Deaths.

On the 27th April at Wear house, near Exeter, Susanna relict of the late Adml. Sir John Duckworth, Bart. GCB.

On the 6th ult. in Bury street, St. James, Lieut. De Lancey, RN.

On the 27th April at Falmouth, aged 60, John Furse, Esq. late commander in the packet service.

In Dublin, Jane, wife of Richard Ferrell, Esq. Chief Commissioner of the Insolvent Court, and sister of Capt. Keane, RN. of Southsea.

On the 1st ult. at the Royal Naval Hospital, Haslar, in the 20th year of his age, George Rowley O'Maley, late captain's clerk of HMS. Herald, and son of E. O'Maley, Esq. purser of HMS. Britannia.

On the 28th April, at Wilcove. Mr. William Harvey, late second master of HMS. President, brother of the late Lieut. L. Harvey, commanding Wizard, who also died from consumption on the coast of South America.

On the 5th ult. at Topsham, Edwin Wise, Esq. Lieut. RN. aged 36 years.

On the 19th ult. at Seend, Wilts. Amelia, widow of J. Schomberg, Esq. Captain and Commissioner RN. aged 74.

On 23d April at Teignmouth, aged 64, Susan, widow of the late Captain Bowen, RN. and third daughter of the late Admiral Sir William Parker, Bart.

On the 1st ult. at Talgarth, Merionethshire, Eliza, wife of C. T. Thurston, Esq. RN. and daughter of late Adml. Sothby.

On the 26th ult. at Margram, Glamorganshire, William Llewellyn, Esq. aged 67, one of the eldest surgeons in the navy, and a magistrate for the above county.

On the 27th, at Bruges, Mary Campbell, daughter of Capt. Campbell, RN.

At St. Austell, Cornwall, Mr. L. Brokinshaw, master RN. aged 60.

At Chelsea, 12th ult. Ann Sophia Read, eldest daughter of James Read, Esq. RN.

On the 7th ult. at Maidstone, the wife of C. Jefferies, Esq. RN.

On 10th May, at Edmonton, Margaret Powel, youngest daughter of Capt. Deare, RN. aged nine months.

At Rudmore, Portsea, Mr. J. Mears, RN. aged 93.

May 3d, Margaret the wife of Lieut. Charles Peake, RN. aged 37.

On May 12th, Chapel street, Grosvenor square, Henry Wells, Esq. son of the late Vice-Admiral Wells.

At Plymouth, aged 50, Mrs. March, wife of Lieut. March, RN.

*To the Editor of the Nautical Magazine.*

SIR,

In your April number, subject headed "Rambles at Home," by one of your correspondents, I was much pleased to observe the notice taken of the tribute of respect to a very worthy individual, Mr. Charles Moar, (not Moir,) who died in China, when first officer of the Hon. East India Company's ship, the "Duke of York," by his brother officers of the ship, and the Hon. Company's fleet. I beg respectfully to request, you will spare me a place in your truly valuable work, to record a similar tribute of esteem to a most valued individual, the late Capt. Robert Stair Dalrymple, commanding the Hon. Company's ship "Vansittart," under whose command I was an officer; he departed this life, on board his ship in Canton River, when she was on the eve of sailing for England, January 13th, 1820: and his remains were interred on French Island, near Whampoa, by the side of his excellent first officer, Mr. John Foulerton, eldest son of the late Capt. Foulerton, one of the elder brethren of the Trinity House, whom he had attended to the grave only in the preceding October. A considerable number of Foreign ships, as well as a large fleet of the Hon. Company's were lying at Whampoa at the time, and so general was the feeling of respect, and regret, at the death of my excellent commander, that the attendance at the funeral was very solemn and imposing; not only did the president and members of the Company's factory, but all European and American residents, and commanders, officers, &c., of ships, showing the colours of their different nations, and a very large and respectable attendance from the Hon. Company's fleet, and a considerable number of respectable Chinese, who had requested to be allowed to join in the funeral procession, from the respect they entertained for the memory of this truly estimable man.

A plain tombstone, with his name, points out the spot where this lamented individual was interred; but on that of Mr. Foulerton's is a very applicable inscription, by Capt. Dalrymple himself, to his memory; viz.—"Equally respected for his integrity as a man, and ability as an officer."

In the Church of the native town of Capt. Dalrymple, (North Berwick, in Scotland,) a handsome monument was erected to his memory, by subscription of the captains and officers, in the Hon. Company's Service, in 1821.

If, Sir, I have not given too long a detail, probably you will oblige me with a space in your valuable columns, by recording this testimony to the memory of the valued departed.

And beg to subscribe myself, Sir,

Your Obedient Servant,

An officer of the E. I. C. late Maritime Service.

*Hackney, May, 1840.*



## METEOROLOGICAL REGISTER.

From the 21st of April to the 20th of May, 1840.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

Month	Day	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.		
		A. M.	3 P. M.	1 A. M.	3 P. M.	Min.	Max.	Quarter.		Stren.		A. M.	P. M.	
								AM.	PM.	AM.	PM.			
		In Dec.	In Dec.	o	o	o	o							
21	Tu.	30.07	30.11	55	61	43	64	SW	W	2	2	bc	o	
22	W.	30.22	30.26	57	63	46	66	NW	NW	3	3	o	bcm	
23	Th.	30.34	30.32	58	66	48	67	SW	SW	2	2	bc	bc	
24	F.	30.29	30.23	57	70	47	72	S	S	2	2	b	b	
25	S	30.17	30.15	59	72	44	73	SE	E	2	2	b	b	
26	Sa.	30.29	30.29	59	73	48	74	NW	SW	1	1	b	b	
27	M.	30.35	30.31	60	71	45	71	NE	NE	2	2	b	b	
28	Tu.	30.28	30.25	59	72	43	72	NE	SW	2	2	bw	bm	
29	W.	30.28	30.28	61	72	48	73	N	N	2	2	bm	bm	
30	Th.	30.30	30.28	57	69	42	70	N	E	2	3	b	b	
1	F.	30.34	30.32	52	60	47	61	NE	NE	3	4	o	bc	
2	S.	30.28	30.26	53	66	45	67	E	NE	4	4	b	b	
3	Su.	30.16	30.12	58	66	42	68	NE	E	5	5	b	b	
4	M.	30.12	30.10	56	62	45	63	E	NE	2	2	b	b	
5	Tu.	29.91	29.87	55	69	42	69	NE	N	2	2	bcm	o	
6	W.	29.86	29.85	57	67	48	68	NE	E	2	2	bc	bcm	
7	Th.	29.77	29.73	58	68	49	69	SW	SW	2	2	o	o	
8	F.	29.90	29.66	62	68	52	70	SW	S	4	4	or (2)	bc	
9	S.	29.51	29.45	61	67	52	69	SE	SE	2	2	or 1)	bcp 4)	
10	Su.	29.40	29.40	62	68	53	71	SW	SW	2	2	bcp (1)	bcp (3)(4)	
11	M.	29.53	29.57	52	56	51	60	NW	N	4	4	od (2)	od (4)	
12	Tu.	29.66	29.68	57	57	50	64	SE	S	2	2	o	o	
13	W.	29.66	29.66	56	64	49	67	E	S	3	4	or (1)(2)	bc	
14	Th.	29.68	29.64	60	64	50	66	SW	SW	2	4	bc	bc	
15	F.	29.42	29.46	52	56	51	58	SW	SW	2	4	or (2)	bctp (3)	
16	S.	29.40	29.36	50	62	50	63	SW	SW	5	4	qbcp (2)	bc	
17	Su.	29.36	29.36	56	54	45	61	SW	SW	4	4	bcp (2)	bcp (rht) 3)	
18	M.	29.60	29.72	54	62	45	63	W	SW	3	3	o	od 4)	
19	Tu.	30.04	30.13	46	51	44	52	N	N	5	6	qo	qbc	
20	W.	30.02	30.02	51	57	36	58	NW	N	4	5	bcp 2)	qbcp 3)	

APRIL—mean height of the barometer = 30.057 inches: mean temperature = 49.5 degrees: Depth of Rain fallen = 0.11 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The dispatch from our old friend CAPT. HUNTER, has reached us, and we hope he will not be deterred from following it up by any from the American surveying squadron. We congratulate him on his return: his useful paper in our next.

The letter signed, "ONE WHO HAS MUCH TO THANK YOU FOR," is a gratifying assurance of the value of our labours. The subject is important and shall appear in our next.

The useful paper from Mr. Wright, master, RN. in our next.

A LIVERPOOL SKIPPER, will find the directions continued. CAPT. BROWN'S "Inner Passage," assuredly in our next.

The letter on LIGHTNING, from the late Racehorse, must wait for our next. In the mean time the writer should read the discussion of the report in our present number.

## ORIGINAL PAPERS.

JULY, 1840.

### PACIFIC OCEAN.—*New Islands.*

WE have received the following important communications from Capt. R. L. Hunter, of the ship *Marshall Bennett*, to whom our readers are already indebted for contributions of a similar kind, relating to New Ireland\*, &c. There are many parts of the Pacific Ocean to which our knowledge does not extend at all; and many more with which our acquaintance is extremely limited. It is in such cases that communications like the following are most desirable for the commanders of our ships. We also extract the annexed memorandum from Capt. Hunter's note;—"Capt. Millar, a correspondent of your's in the February number of this year, stated that he had seen sperm whales three different seasons on the Pedir coast, in August, which induced me to proceed thither. I arrived there at the end of that month, and cruized five weeks, during which time we saw whales twice, and being tolerably successful amongst them, obtained 120 barrels. They were as he stated very tame, but not plentiful."—See p. 85, vol. for 1839. We take the opportunity of assuring Capt. Hunter that he cannot adopt a better course for promoting the interests of navigation, than by thus communicating his discoveries for the information of his brother seamen, into whose hands they immediately fall by the unexpensive, regular, and authentic channel of the *Nautical*. And while his communications are thus widely disseminated, they always will bear his name for their authority, and reflect on him that of a benefactor to navigation.—ED.

### WOODLARK ISLAND.

As an island of considerable magnitude exists between the Laughlan islands and the Lousiade, which I cannot find inserted in any chart, perhaps the following brief account may be of service, until that part of the world is more minutely explored. "Sept. 27th, 1836—Made the Laughlan islands, (having left the Treasury islands and New Georgia, two days before,) and found their appearances and situations to agree with those given in Horsburgh's Directory. Shortened sail during the night, and headed to the northward. At daylight kept off to the W.S.W., and made all sail. At 11 A.M., saw a small and high rock to the southward. I was not very near to it, but should esteem it to

\* See page 37, vol. for 1839.

be in about  $9^{\circ} 12' S.$ , and  $153^{\circ} 25' E.$  Steering onwards to the westward, made the land ahead, which on nearing was found to be of some extent. Ran towards it until within a mile of the breakers, and tacked off for the night, stood in next morning, and sent two boats in with orders to land, should they see no natives, as there were plenty of cocoa nuts in sight, but before they reached the shore, two canoes shoved off. These our boats pulled to, and obtained a small quantity of tarra and a few fish, giving in return some pocket knives and pieces of iron hooping. I cruized off the north side of the island, at this time, two days, and found it bold to approach, and clear of danger; and in extent about forty miles, nearly E. by S., and W. by N. It is of moderate elevation with some hills in the interior, the highest being of a remarkable sugar-loaf shape. There are one or two bays on this side, and on the western side of the deepest one I observed the entrance of a small inlet or river, but not being in want of water at the time did not examine it. The natives are Papuas, and on cruizing off the island the second time, which was in November following, several large canoes visited us, the men in which seemed well disposed. They came alongside without hesitation, and traded freely what little they had brought, consisting of tarra and cocoa nuts. I gave them in return some fine yams, of which we had a good supply from Cape Denis. They however keep an abundant stock of bows, arrows, and spears in their canoes.

I made the eastern end of this island in  $9^{\circ} 9' S.$ , and  $153^{\circ} 5' E.$ ; and the western end in  $8^{\circ} 53' S.$ , and  $152^{\circ} 24' E.$  I believe it to be narrow in a N. and S. direction with small islets lying off the south side, probably attached with reefs; but not having passed round to the southward, merely form this opinion from what I could see in a mast-head view from its ends. Westward, and in sight from the west end of this island are three small and high islands, not four as is inserted in some charts, the situations of which I made as follows:— Easternmost  $8^{\circ} 50' S.$ ,  $152^{\circ} 00' E.$ , middle  $8^{\circ} 49' S.$ ,  $151^{\circ} 56' E.$ , Westernmost  $8^{\circ} 46' S.$ ,  $151^{\circ} 52' E.$  from hence about ten miles W.N.W. is Jouvaney's island. In running from the Laughlan islands to Cape Denis you never lose sight of the land. I lay no claim whatever to the discovery of this island, it was first pointed out by Capt. Grimes, of the Woodlark of Sydney, which ship I saw there on my return in November, and although it will be seen that Bristow's track in Mr. Norie's charts, passes over the west end of it, and it may seem large to have escaped being known; it is, however, not the less true that it exists there, the longitude agreeing with that in which Cape Denis, the Treasury islands, and Laughlan islands are placed in the charts. Having two chronometers on board, I could not be much in error as to

their relative positions. As the islands hereabouts are not much frequented, it may not be deemed irrelevant to state that all ships ought to be on their guard in their intercourse with the natives; I mean as regards landing amongst them. There can be no danger in allowing them to come alongside, and trading in this way without restraint, although you will generally find them well armed with spears, bows, and arrows; but on no account should landing be made without a particular object, and then well armed. I allude chiefly to the Solomon islands. You may perhaps pull in and go ashore without seeing a soul, but no sooner have you got a short distance from the boat, than they rush out from the thicket in hundreds. This has happened to one or two vessels at New Georgia, and the crews have with difficulty regained the boats with some mortally, and others severely wounded. I may add further that the Lousiade and Solomon islands are very imperfectly known.

#### BOUGAINVILLE STRAIT.

As ships intending to pass through this strait, and depending upon the accuracy of their charts, may consider it has deep water, and is clear of danger, your giving room for the following extract from the Marshall Bennett's journal may induce more caution, and a better look out than might otherwise be deemed necessary:—" July 29th, 1836, noon. A fresh breeze from the S.E., steering to the northward through Bougainville strait. At 1 P.M. very strong rippings, extending across the strait, or as far as the eye could reach, although we had not nearly approached the narrowest part, it being here about thirty miles wide. The ship crossed over several of these; but about 2 P.M., while watching the extraordinary appearance of one, saw the coral bottom plainly under the ship. The masthead men had not observed the discoloured water. Hauled to the wind immediately towards the New Georgia shore, the rippings there appearing less strong. This shoal patch could not have had more than seven or eight fathoms on it. We quickly passed off this, but found now that we had got amongst innumerable patches of the same kind. Got a range of the chain; being able however to pilot the ship through, continued to proceed to the northward, and about 3 P.M., got clear of them, but not without having got soundings of ten and thirteen fathoms on one, which we were unavoidably obliged to pass over; this last appearing to be a barrier shoal and extending from the New Georgia shore as far as could be seen from our mast-head toward the Bougainville side, and I think quite across. The rippings were occasioned by a strong current running in from the northward and meeting these obstructions. They are detached patches of coral rising up in the clear blue water apparently of unfathomable depth,

and although I am not certain that any of them would pick a ship up, some looked so shoal that no one would willingly try without having sounded. In latitude these shoals extend from about  $6^{\circ} 56' S.$ , to  $6^{\circ} 46' S.$ , and there did not appear to be any passage through the straits, by which a ship could entirely avoid them.

#### NEW HEBRIDES.

December 20th, 1835, being off the south coast of New Georgia, and wishing to make a passage to New Zealand, the westerly monsoon having commenced here, steered to the eastward, to pass between Banks islands and Star island, near the northern part of the New Hebrides, as there appeared to be a space of forty-five miles between these islands in the charts, and by this route being enabled to avoid New Caledonia and the contiguous dangers. On the 25th steering in the parallel of  $14^{\circ} S.$ , at daylight saw the Torres islands to the northward, and other islands to the eastward: steered to the eastward towards the channel formed between the two southern islands in sight, which appeared about sixteen miles wide, the southern one of these not laid down in any of Norie's charts, or any other which I can find, and supposing the northern one to be one of Banks group, it extends considerably further to the southward, than the situation assigned to these islands. I made the south end of it in  $13^{\circ} 58' S.$ , and  $167^{\circ} 33' E.$  by chronometer reckoned back from Erronan: the other island, which yet has no name, (north end) in  $14^{\circ} 15' S.$ ,  $167^{\circ} 32' E.$  At sun down we were in the passage, with breakers plainly visible on both sides from the masthead, it being about sixteen miles across, and having a small, and very high island in sight to the S.E., a long way off, which I take to be Star island. Stood to the eastward all night, and at daylight saw a high, round, and small island, bearing S.W. twenty miles, the same which we saw the previous night: this from our view, I should place in  $14^{\circ} 25' S.$ ,  $168^{\circ} 10' E.$  The island here which has not been seen, or omitted to be inserted, lies due south of Banks islands, distant, as I have stated about fourteen or sixteen miles, is of good height and even appearance, sloping at the sides, and as large as any of above-named islands, that is apparently about thirty or thirty-five miles in circumference, with inhabitants, several fires being seen. Star island which is placed in some charts on this meridian, lies further west, is very high, and not above five or six miles round. The weather was fine, and sights clear. I may add that the epitomes and charts differ in the situations of these islands, a thing of very frequent occurrence, as regards the Pacific.

We may append to the above, the following extract from the *Canton Register*, as being important to our whaling ships in particular, and not having appeared in our pages.

LOW HARBOUR.—*Island of Geby.*

When on my passage to China by the eastern route, on the 6th of February last, we were within a few miles of the harbour of Fow on the west side of the island of Geby, and stood in for the south point of Fow island; off which at a mile distance, had soundings, fine sand 20 fathoms, stood into the bight or bay to the S.E. of Fow harbour, and rounded the shoals which lie in the middle of the south channel, leading to the above port, having a narrow passage on the other side; carrying 20 to 24 and 18 fathoms sand round the southern edge of the shoals. We anchored in the bay with the following bearings, in 20 fathoms sand and clay.

South point of Fow island, S.W.  $\frac{3}{4}$  W.; S.W. point of the bay S. by E.  $\frac{1}{2}$  E. Outer shoal patch dry at low water in the same bearing, or on with south point of Fow island.

Body of the middle shoal patch also dry at low water, W.b.N.  $\frac{1}{2}$  N., and the third or inner shoal N.W., upon which we had two fathoms at low water, distance about a large quarter or half mile. And one mile off the Geby shore to the S.E. in the bottom of the bay, distance one three-quarters to two miles, is a fresh water stream or creek with excellent water, into which our boats went at half flood and filled the casks from alongside, but at low water as there is a bar, your boats must anchor outside, land the casks and roll them a short distance up to fill, in which case you have to raft them off; and which may be done with ease and expedition, as the water is perfectly smooth, and must be so during the whole of the N.W. Monsoon. A ship tolerably well manned would have no difficulty in filling 20 or 30 tons in the course of the day. From the mouth of the creek the south point of Fow island bears by compass, W.  $\frac{1}{2}$  N., and may also be known by a bluff cliff or headland, the only one in the bay, rising in a gentle slope of table land from the top of the cliff, towards the hills to the S.E. On the north side of the creek, is a belt of jungle lining the coast from thence to the northward. In Fow harbour ships may anchor much nearer, say within a mile, in 18 to 24 fathoms, but the above anchorage is in my opinion preferable, being more convenient for getting out of the bay with the prevailing winds from October to April and smoother water. Spars fit for yards and masts abound on either shore; vegetables, fruits, and fish are also procurable in abundance from the natives, several of whom came on board; they are a mixture of Malay and Papuas, speaking the above and Tidorian languages, and under the Sultan of the place. We found them very friendly and kind, many of them speaking English, Fow harbour being much frequented by whalers.

My chronometers which were quite correct on arrival at Macao, measured from Singapore, 25° 45' east, or 129° 38' 30" east of Greenwich, latitude 0° 6' 0" S.—J. J. R. BOWMAN.

*Singapore Chronicle, 15th April, 1837.*

THE BOSPHORUS.—*English Bank.*

WE have received the following communication regarding the shoal called the English Bank, in the Bosphorus, from Mr. Wright, acting master of H.M.S. Dido. In our volume for 1833, will also be found some excellent remarks on the navigation of the Bosphorus, by Capt. Middleton, whose nautical experience entitles them to implicit confidence.

*H.M.S. Dido, Constantinople, April 18th, 1840.*

SIR,—Having had occasion to assist several British ships off the shoal situated on the Asiatic shore, and opposite to the village of “Buyukdere,” and, which, from the frequency of the occurrence, has, not inaptly been called the “English Bank,” I beg to hand you a few remarks upon its position, &c., &c. which, if attended to, cannot fail in preventing a repetition of those accidents, which, though unaccompanied by actual danger, are often attended with serious delay, and a loss of property, in anchors, cables, &c. &c.

The northern end of this shoal in five fathoms, commences at about two and half cables S.W. of the point, at the foot of the Giants Mount, the farm on its summit, being then open to the right of the first quarry near the beach, E.N.E. and an old round tower, standing upon the high land, on the European shore, a ship's length open to the eastward of the “Walled Fort,” N.N.E.  $\frac{1}{2}$  E. The black gate of the Russian Ambassador's Palace, at Buyukdere, will then be on with the Scala, and central window N.W.  $\frac{1}{2}$  W. It extends thence, in a southerly direction nearly three-quarters of a mile, to within two cables of the North Point of the bay of the “Sultan's Valley,” or, as it is sometimes called from the monument placed on it, to commemorate that celebrated treaty,—the point of “Unkiar Skelessi,” varying in breadth from 100 to 30 yards, and, in depth six fathoms to six feet, and is composed of a dirty kind of sand and gravel, with detached stones. At this extreme in seven fathoms, the British Ambassador's Palace at Therápia is its own breadth open to the southward of a remarkable grove of trees behind it W.S.W., and the “Sanita,” or Health Office, is just open of the point E.S.E.

Nearly in the centre it is divided by a channel of about 30 yards broad, east and west, having 10 to 13 fathoms, thus forming two distinct patches, and which, in the event of a ship grounding near it might be available; otherwise, from the general strength of the current this passage could scarcely be turned to any account.

It is only in the event of working to the southward, or having a scant easterly wind, that a necessity would arise for borrowing on it; indeed there is no actual necessity, for the channel between it and “Therápia” affords ample room for a ship under any circumstances;

but, I have observed several vessels from the northward skirting the western edge of this bank, as if apprehensive of falling to leeward upon the spit of "Yenikioy Point," forgetting that the current there generally sets out so strong to the S.E. that they could hardly fail in avoiding it.

To the eastward of the bank, there is a very good channel and anchorage, having from 5 to 15 fathoms, and ships from the southward with a commanding breeze, may use it with great advantage, as the current is at all times much less there than in the stream. From the Black Sea, with a northerly wind, this route will shorten the distance considerably, and prevent a necessity for anchoring at Buyukdere or Therápia, should the wind fail.

To sail *west* of the bank from the northward, bring the "Old Genoese Castle" on with the signal post in the Fort at the foot of the "Giants Mountain," until the southernmost high clump of trees opposite Yenikioy Point, comes just on with it, or, if they are obscured—until the old round tower above the Walled Fort on the European side comes open to the westward of its flag-staff. Run thus, until the Health Office is *well open* of Unkiar Skelessi Point, S.E.b.E., when you may haul over for it, as ships generally communicate here. In *working to the southward*, stand no nearer the bank than 12 fathoms, nor open the round tower to the eastward of the flag-staff in the Walled Fort, as it is very bold to, shoaling suddenly from 15 to 5 and 2 fathoms.

Wishing to pass through the eastern channel from the northward, haul round the point as close as you please, in 7 or 8 fathoms, in order to avoid the current which here sets strong towards the shoal; stand into the little bay of "Quarries," until Yenikioy Point comes a ship's length open of the point of Unkiar Skelessi, which will lead through in from 12 to 8 fathoms.

Ships from the southward will have no difficulty in observing these directions in a contrary manner. Another leading mark, and which perhaps would be found more convenient, is a remarkable brown patch on the highest land, above the Walled Fort kept on with its eastern angle. The master of a ship, not wishing to delay at Constantinople, and particularly if in want of water, will find a good and well sheltered anchorage off the Sultan's Valley, and if he takes a boat to Constantinople and arranges his business with the consul, he will, on his return find the ship watered, (the British ship of war rendering any little assistance required) and he clears the "Bosphorus" without having to anchor in the "Golden Horn," which, in winter, from its depth of water frequently crowded and exposed state is, in instances of this kind, very objectionable.

I am, Sir, &c.

To the Editor of the *Nautical Magazine*.

GEO. WRIGHT, Master, R.N.



NAUTICAL DESCRIPTION OF THE BAY OF MOSIMBWA,  
*Eastern Africa, by Capt. W. F. W. Owen, R.N.—Aswatada Islands, continued  
 from p. 401.*

To illustrate the foregoing observations and descriptions, a part of Mr. Dupont's journal shall be extracted.

His voyages on these coasts commence in 1797, when he was chief mate of the *Louisa* of Tranquabar, and traded to Madagascar, on which island his observations will hereafter be noticed. In that year he was made a prisoner of war at Mozambique, where all the officers and crew died except himself, and he was employed by the Portuguese governor, after two years detention, to navigate the *Esperance*, the ship formerly commanded by Monsieur D'Entrecasteaux in the voyage in search of *La Perouse*, which ship was seized at Batavia by the Dutch. Her destination then was to extend the bounds of light, of science, and of freedom, not to rivet the chains of ignorance and slavery under the flag of Portugal, and thus to maintain the reign of darkness.

In 1799 the voyages of Mr. Dupont commenced to the places north of Mozambique, to supply Mauritius, Bourbon, and Seychelles with negroes, and for twenty years he continued this traffic as reputably and humanely as such a trade admits of. Having fixed himself on the Seychelles, he constructed there a small vessel of 50 tons, in which he made a voyage every year to the coast of Africa from Ibo to Zanzibar, and thus was enabled to collect much information; but observes that he did not occupy himself with the history of the countries, "which nevertheless," says he, "if treated by a person equal to the work, would not fail to be very interesting, and would place it in a very different light from any history now existing, and I have had occasion twenty times to observe that the Abbé Reynal had most erroneous notions on all this country which would require ages to civilize. These people being all extremely lazy and never working but for their daily food, if this fail them at any time they resort to robbery, and often to open war, murdering in cold blood such of their prisoners as will fetch no price in the market, and reducing to slavery the others." Here Mr. Dupont moralizes on the great improvement in the state of these negroes by being sold to Europeans, of whom the worst masters never proceed to the lengths of murder, &c. &c., and adds several interesting traits of his adventures to elucidate this happy result of his traffic.

In January, 1807, Mr. Dupont describes Tikimadji as having nothing interesting about it except its anchorage, which is between its N.W. point and point Foonjy. The island is well wooded, but has no water, as is implied by its name.

"Being on shore on this island," he says, "at low water, I had all the banks quite bare, and the pass of Foonjy was dry almost across; at

low water nothing can pass but very small craft, but as the tide rises 16 feet at times, vessels take advantage of high water and a good breeze to proceed by this pass of Foonjy to the isle of Ameer, where the water is deep enough."

This remark contrasted with the observations of Capt. Vidal on the rise of tide shews a great discrepancy. Capt. Vidal remarks the rise of tide seven and nine feet; this must have been deduced from the measures alongside when at anchor, and could never have been very precise. Subsequent observations by Lieut. Boteler, between Mosimbwa and Makalow have determined during his visit five feet to have been the smallest flow in neap tides, and eighteen feet at high springs.

Mr. Dupont's expression which I have rendered by "water is deep enough" at Ameer, is "*on y a grand eau.*" Now Ameer is said to have abundance of fresh water, and sometimes to be visited on that account, but I apprehend the remark merely to affirm that the north-western part of the coast of Ameer has deep water close to it; viz., has no reef to prevent free communication with it, similar to Kisangoola which has no reef that drives off its north shore. It will be seen that Captain Vidal's examination of the coasts of the Islands was not very critical, nor indeed did they seem of importance enough to render any waste of time on them for such a purpose excusable.

It is probable that the coral reef north of Ameer joins its shore near the spot to which it is continued on our charts, and that the reef covers the south shore of Ameer but little farther, than where drawn on the charts.

In like manner the north reef of Kisangoola appears to join the coast of Luhamba near its north-western point, and terminates where we have left it unfinished.

These are the only points where Capt. Vidal's survey does not appear to have been sufficiently critical; and particularly it is precisely on these points only where Mr. Dupont's journal is of any value for these islands.

Mr. Dupont's observations on Cape Delgado have been before given: these were made in January, 1807, and he remarks that the Queen of Tonghy who was sixty years of age, had never before seen a white man, and moreover, that they had no tradition or memory of any white man ever having traversed the Cape or shore before Mr. Dupont, "therefore" he adds "it was not without much dread that I hazarded the undertaking," which was merely to fix his compass on the point of Delgado, and take two bearings. The value of these observations were not worth the trouble or risk, but the account he gives of the character and circumstances of the natives, which were occasioned by the adventure, may well serve as an historical record of their state at that time. Mr. Dupont

proceeds to say "I should not be doing justice to these honest people, if I did not acknowledge the numerous acts of kindness they rendered me, particularly the Queen Moonobassy, the chief Fatoomy Assang, and still more the Queen's brother Sahye, who died not long after.

"All these people are miserably poor, often wanting even common necessaries, for even the Queen's son, a young man of twenty years old, having a large sore on his leg, could not procure linen enough to dress it; but they are not only the most hospitable people I met on the whole coast, but the least of beggars.

"There is no trade whatever at Tonghy. A small vessel visits it occasionally from Johanna, or from Mohilla, to buy a few negroes, and they never return home without stealing something.

"After remaining upwards of a month at Tonghy, I had not completed half my cargo of negroes, and during that time I was visited more than once by the black Portuguese from Mooloor, (in 11° S.) and particularly by the Captain Mor, who assured me that they did not believe Portugal to be at war with France, and that I might visit Mosimbwa safely, where they had no force to seize my vessel, even if it were war, any more than they had at Mooloor; and moreover that at Mosimbwa, I should be sure to complete my cargo of negroes in a few days. The chiefs of Tonghy assured me I had nothing to fear from their force, but they did not believe they had any negroes to sell.

"I therefore quitted Tonghy on the 2nd February, 1807, and next morning found myself in the pass between Rongwy or Rongoohy, and Ameer, or Ameer, with the little island of Keerya-memby ahead. In this position I remarked that Ameer is the largest island in these parts, that the north point is a sort of corallet attached to the island by a sand bank that never covers by the tide; that the south-east coast is very level, and that the reef nearly joins the land, that is the outer parts of the reef do not extend farther than we have marked them as unfinished.

"In former times the Portuguese had an establishment on Ameer, which has been removed to Mooloor river, a little west of point Noondo.

"The north point of the island of Kisangoola, resembles the north point of Ameer in having a corallet attached to it.

"Seeing a fine pass between Kisangoola and Ameer, I bore up through it and steered to pass between two small isles, (Keeha and Kiteena) which I called the Cousins.

"The island of Kisangoola forms two islands, and the inner one is called Luhambas. In passing midchannel between the small islands I carried six fathoms all through. To the northward of Keeha, there is a remarkable corallet formed, like a mushroom, standing on a bank of sand.

"Steering W.S.W. to pass the west point of Luhamba, I hauled over for point Massinghy; when abreast of it, it was low water, and I fell suddenly from six fathoms into one fathom and half, hauling out again I deepened as suddenly to six fathoms.

"I then steered to pass between Isonway and the bank of Changa shoaling gradually until I came on that bank in three fathoms, when Isonway bore east magnetic, and immediately after, had five fathoms always mud bottom. When to the S.W. of Isonway at noon, I examined by eye the Isonway pass north of Mootoondo reefs, and afterwards learnt that vessels often preferred to enter by it.

"I was also assured that on Mootoondo there was abundance of excellent running water. Not finding good water at Mosimbwa, I asked why they did not prefer the island for a residence since it was large and fertile; they answered, that their only motive for not residing there, in preference, was a fear of the Malegash, who, from time to time came on the coast, and devastated the whole country, and that their arrival was so sudden as to leave no time for escape: that during the last year, 1806, no less than sixty large canoes of them established themselves on Mootoondo, and thence made incursions on the main land, through which they carried fire and sword, and took off numerous people.

"From Isonway I continued my route to the W.S.W. until past sunset, when I anchored off the port of Mosimbwa in seven fathoms.

"I was persuaded to enter the port within the island Loopoolooloo, where I had no less than five fathoms, good mud bottom every where. Hearing that Senhor Antonio Albert, (whom I knew well) was governor of Ibo, and having waited a fortnight here without buying a negro, I quitted it, and passed out of the south channel between Timboozy and Mihoojy, and had no where less than seven and eight fathoms. I was told that after doubling Mihoojy, I might pass between (Passeros,) Sparrow island, and the main, but I preferred getting out to sea.

"Senhor Juan Gonsalve was chief of Mosimbwa, he was a native, and all the inhabitants were his kinsmen; he bought his patent as Capt. Mor, from the governor of Mozambique, for two thousand dollars, and as it had the sign manual of Don Juan, the Prince Regent, he was not a little proud of it."

This journal of Mr. Dupont as far as it relates to the natives is of no value, but as a record of the state of the country in 1806.

### A SUMMER'S WEEK OFF THE CAPE OF GOOD HOPE.

AFTER several days of fine weather with a fair wind, we approached the dreaded coast of Africa, from the Mauritius, with sanguine hopes of a speedy deliverance from its dangers, more particularly as we were about to pass it, at the most favourable season, and in the height of summer. Our good ship being heavily laden, (445 tons burthen, and 700 tons of cargo in her,\*) we anxiously enough perused Horsburgh's directions, and comforted ourselves with the belief that the dreaded north-westers were almost as uncommon and harmless in December, as they were frequent and fearful in June.

Since our departure from the Mauritius, up to Christmas-day, the barometer with the exception of a few changes, had attained its maximum: during the 26th however, the mercury fell from 29.80 to 29.56, the breeze during the 25th, 26th, and 27th was very variable, at one moment light, and at another so violent as to split our main topsail; but still with a beautiful, and apparently serene sky: in the latter part (nautical time†) of the 27th, the sky became gradually overcast, and our good breeze seemed at last to be fairly exhausted.

For a few hours all was still, as in a wilderness, the barometer gradually lowering, when just before sunset, the most perfect optical illusion that was ever witnessed, roused us from our listless condition. At almost the same moment every one on the quarter-deck descried bold land right ahead; each, in his own mind, fortified himself against deceptions of this kind, and remembered the oft told legends of "phantom lands," and the "Flying Dutchman," off the Cape of Storms. But this was to no purpose, scepticism gave place to the nervous conviction that we were rapidly running towards *terra firma!* every point, every peak, every hummock of the land kept its position, a fleecy cloud would even now and then be distinguished, sluggishly sweeping past the higher ground, and even tints of vegetation and alternation of barren rock could be separately pointed out. The experienced eye of the old seaman was even riveted to the same spot, and at length after a pause of intense interest, the orders of our excellent commander were given to veer ship, who, with such startling proof before him even against his own reckoning and observations, could not for a moment disbelieve his own eyes.

\* A common instance of the effect of the absurd old tonnage laws, which have been happily superseded, but are not yet defunct, to the discredit of this country, and the injury of her revenue.

† "Nautical time" in the Royal Navy, is the same as civil time, that is the day begins at midnight, and it is high time the same practice was generally adopted in the Merchant service.

While in the act of veering, the horizon appeared to close its dusky limits around us, and a flash of vivid lightning gleamed for an instant, warning us of the trying hour at hand. Its immediate effect was to dissolve the spell which had deceived us. For an instant and an instant only, the sun likened to a huge orb of murky fire, shewed itself half above the horizon, directly beneath the fairy land; which, as if only awaiting this exposure of its phantom form, almost immediately melted, first into the appearance of angry volcanoes, and sweeping water spouts, then gradually subsided into one dark and murky mass all around us. How forcibly this reminded us of the lines

"One wide water all around us  
All above us one black sky."

Our ship had hardly resumed her course, when a sudden calm succeeded, accompanied by darkness and a death-like silence prevailed; all was prepared for the coming blast and every sail furled. A few seconds afterwards a furious wind was forging her astern against the huge swell which was threatening every instant to overwhelm us. The squall passed, the wind lulled, and left us helpless at the mercy of the sea.

Daylight brought with it a clear and apparently serene sky, but only as if to mock us; for, towards evening the same dark and threatening phantom which we had seen the day before re-appeared, but now as if in derision directly astern of us. Again the lightning surrounded us, and after a deafening peal of thunder, came a storm of hail-stones so immense as are seldom seen.

These forebodings, together with the continued fall of the barometer, so truly told our fate, that we failed not to profit by them, and the next day we were snugly running under reefed topsails, on the Agulhas bank in 60 fathom soundings, but with the sea as smooth, almost, as the surface of a river. We quickly lost this advantage, for after veering ship at dark, before midnight we were again on the raging and fathomless waters, under nothing but two close-reefed topsails; the gale increasing and our ship labouring in a tremendous sea.

It will be needless to describe the misery of the next forty-eight hours, and how the uncertain and violent waves almost overwhelmed us on all sides; waves, which the brave heart and quick hand of even an English tar are no match for. Our ship quivered and trembled under their furious shocks, but under Providence weathered all, and but for the curious phenomenon which had preceded the gale our misfortunes would never been further noticed.

So much confidence may be placed in the barometer, that unerring friend of the seaman in these latitudes, that its minutest indications are sufficient to place the intelligent mariner on his guard, to prepare for the worst.

But there is yet another phenomenon which is worthy of attention, on this coast, and which does not appear to have been sufficiently noticed. It is, the remarkable difference between the surface of the sea, during and after a gale of wind off the Agulhas bank, and that upon it. Three times during the gale did we enter from deep water to soundings on the bank, and both in leaving it, and going on to it did we experience this most remarkable change. While in deep water we were exposed to the most turbulent and irregular seas imaginable; some apparently rising close to, and breaking almost over our ship, and at such moments many an anxious look was cast towards the boats and spars. But no sooner did we find soundings with 60 to 75 fathoms, than we were in a sea so comparatively tranquil, as to be enjoyed and appreciated by all hands.

In rounding the Cape therefore, under such circumstances, it would in my opinion be highly advantageous for homeward-bound vessels, both in winter and summer, on an approaching gale from N.W., W., or S.W. to stand in for the bank, making short boards, if possible, till the gale is over, keeping in from 75 to 55 fathoms water. The gale may probably commence at S. or S.S.W., and will most surely blow itself out, following the course of the sun.

On the approach of a south-easter on the contrary, it would be more advisable to keep just off the bank, where smoother water may probably be found than on it, and where the north-westerly current runs strongest. A very little experience will teach the navigator to prepare for a westerly gale, or to take advantage of a south-easter. In the first case an unnaturally clear sky, and a brilliantly defined horizon, cannot deceive him when the barometer is falling, and eventually the thunder and lightning will prepare him for his struggle. On the other hand the same clear sky, with light scud flying, will indicate south-easterly gales, when the barometer is steadily rising. The lighter it commences, the more wind may be expected; and from that, and the long swell the nature of the gale may be anticipated.

J. A. LLOYD.

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REPORT OF THE COMMITTEE UPON MR. SNOW HARRIS'S  
AND OTHER LIGHTNING CONDUCTORS.

*Ordered by the House of Commons, to be printed, 11th February, 1840.*

*(Concluded from page 423.)*

WE have been thus particular in stating, at length, all the objections, urged against the old conductors, because it will be seen that Mr. Harris's conductors completely obviate every one of them. This is shown by the answer of the committee to the fourth question, which, is

“What are the advantages and disadvantages of Mr. Snow Harris’s conductors, as compared with others?”

They say that “the advantages to be derived from the adoption of Mr. Harris’s plan are, the removal, at once, of all the objections and liabilities to which the common chain conductor is exposed.

“A continuous line of metal from the truck to the water is permanently fixed, and if it be found necessary to strike any of the masts, or if one or more be carried away, a safe conductor will still remain. By its connexion with the detached masses of metal used in the fastenings of the hull, and its final junction with the copper sheathing, the important advantages of great electrical capacity are obtained, and of ready means under all circumstances, for the rapid diffusion of the electricity over a vast surface of metal in contact with the water.”

A mass of evidence is published in the report, from officers who have served in ships, fitted with Harris’s conductors, corroborative of the above opinion. The Committee also availed themselves of the important evidence of Professors Faraday and Wheatstone, and of Mr. Rice, naval architect, of Chatham dockyard.

Professor Faraday stated it to be his opinion, that “Mr. Harris’s conductors met every case that he could possibly conceive to occur, and offered no one disadvantage or objection whatever;” Professor Wheatstone stated, that “he could see no objection whatever to Mr. Harris’s conductors in a scientific point of view;” and Mr. Rice at considerable length, and entering much into detail, gave opinions highly favourable to Mr. Harris’s plan.

A committee of the Royal Society, consisting of Dr. Young, Dr. Wolleston, Capt. Kater, Sir H. Davy, &c., appointed in 1823, to consider the merits of these conductors, have also stated their approval of Mr. Harris’s plan.

The Committee next discuss, at considerable length, the disadvantages which have been stated to exist in Mr. Harris’s conductors; they say that all the objections had, to their minds, been sufficiently removed by the evidence adduced before them, nevertheless, they considered it right to state those objections to their Lordships.

They divide the objections under the following heads.

- “1. Those of a scientific nature, involving principles of electrical action
- “2. Those of a practical description, as tending to injure and weaken the spars.
- “3. The indirect defection on account of expense.”

“1st Theoretical objections.

“First. That Mr. Harris’s conductors *attract* the lightning.

“This applies equally to *all* conductors and has been already refuted.



“Secondly. The danger arises from the lateral explosion.”

This objection of “lateral explosion” was most patiently investigated by the Committee, in which they received the able assistance of Professors Faraday and Wheatstone. It appears to have been started by a Mr. Martyn Roberts, who professes to have made some experiments which justified this charge against Mr. Harris’s conductors.

Since the enquiry of this Committee has terminated, this objection of lateral explosion, has found another advocate in Mr. Sturgeon, the author of “Annals of Electricity.” It is unnecessary that we should here enter into a formal examination and refutation of this objection, because it has been so fully, and so well done by Mr. Snow Harris himself, in the January and succeeding numbers of this volume. Suffice it to say, that the objectors appear to misunderstand the conditions under which this lateral discharge can take place; they seem to be unaware that it would be extremely difficult, if not impossible, to obtain a lateral discharge, provided the main conductor be sufficiently capacious. They confound, with the mass of electricity, which is employed in effecting a discharge, a certain quantity, called a residuary charge, which always exists in a free state, after every discharge: but which always bears an extremely small ratio to the total quantity employed in the discharge, when that quantity is considerable. They seem to misapprehend that fundamental principle of electrical induction, which requires that a difference in amount should always exist between the positive and negative states of two surfaces or bodies; and which difference is the only quantity that forms the residuary charge, or that with good conductors, can ever be the subject of a lateral discharge; but which may, and almost uniformly is, simply and quietly dissipated in the return of the bodies to a state of electrical equilibrium.

We have great confidence and satisfaction in referring to the above papers by Mr. Snow Harris, because, not only will the reader find the subject therein fully discussed, and the efforts of his opponents demolished, but it will be seen that Mr. Harris does not wander into wild statements, and vague hypotheses, but confines himself, with true philosophic discretion, to the results of observation and experiment.

We cannot refrain, however, from just adding the following extracts from the opinions of Professors Faraday and Wheatstone.

The former states “that a lateral discharge could not be obtained from Mr. Harris’s conductors, provided the continuity were not interrupted,” . . . . . “nor was there, so far as he could learn, any instance on record of lateral explosion.”

In the minutes of the Committee, dated 3rd July, 1839, it is stated that Professor Wheatstone attended, and read to the Committee his

answers to the objections brought forward by Mr. Martyn Roberts, wherein he states, that the lateral explosion is a phenomenon which has been observed and experimented on for the last half century, and that he conceives it has no application to lightning conductors; and that it was physically impossible that the least accident could occur to a ship, if the known conditions of a good conductor were fulfilled.

The next theoretical objection removed by the Committee is, that the conductors do not afford a continuous line of solid metal. This also forms the substance of the ninth question proposed by their Lordships for the consideration of the Committee.

In reply to this, after quoting again the opinions of the two above-named Professors, as to the little importance to be attached to a slight interruption in the continuity of the conductors, the Committee give their reasons for stating that in no case is an interruption of any consequence likely to occur. They also again refer to the evidence of officers who have served on board ships, fitted on this principle, for a corroboration of their opinions on this point.

The fourth and last theoretical objection brought against the conductors, was, the danger of accidents to men in contact with them at the moment of the electricity descending.

But, first, no accident of this sort has ever been known to occur; and Professor Faraday stated that he believed a man would receive no injury, if he were leaning against Mr. Harris's conductor when the electricity descended, and that any opinion to the contrary must be only assumption.

The Committee next proceed to examine the practical objections that have been urged against these conductors. These objections appear to be—

1. That the spars are injured by the nails used for fixing conductors.
2. That the conductors weaken the spars.
3. On the score of expense.

With respect to the first two of these objections, the most satisfactory evidence is given to disprove them. It had been supposed that the nail holes would cause the admission of wet into the spars, and consequently injure them; but it appears difficult to imagine how this can happen when the conductors are in place, and there was abundant evidence to shew that the conductors do not become displaced. This has been shewn not only by the evidence of officers at sea, on board ships fitted with these conductors, but also by that of dockyard officers who have minutely examined the spars after a term of service at sea.

Mr. Rice also proved, from experiments made at Portsmouth, on a jib-boom, that the introduction of the conductors tended rather to

strengthen than to weaken the spars\* ; and here again, officers who have seen the spars in use, at sea, for many years together, gave it as their opinion, that the introduction of the copper-plates strengthened the spars.

It is impossible, in fact, to conceive a more satisfactory refutation being given to objections, than has been thus given to those brought against these conductors.

Practical objections are of a nature to be either established or disproved by an appeal to experience ; and in the case of these conductors, there is the experience of many years, throughout which many distinguished naval officers concur in doing something more than merely giving to these conductors the negative praise of absolving them from objections.

The last practical objection is on the score of expense ; and here the Committee take a great deal of pains to shew how the expense of these conductors may be diminished by certain alterations, which, they suppose, will not affect their utility. The total expense for fitting a first-rate, is £365 ; an amount made up of about £60 for labour, and the remainder for copper-plate, all of which is valuable after having performed its important duty in the spar, and might be again used for the same purpose in another spar.

In replying to the tenth question, whether any other mode of fixing lightning conductors does not possess the same, or greater advantages, than Mr. Harris's, the Committee describe three plans, which were submitted to them,—one by Mr. Martyn Roberts, which is not much unlike the French plan, already described ; another by Mr. Edye, which consists of using Mr. Harris's plates, as far down as the head of the topgallant mast, (or, if necessary, to the topmast head,) and a wire-rope backstay on each side down to the copper sheathing.

From all that has been said, the objections to both these plans will be sufficiently obvious, particularly their liability to be displaced, or get out of order ; the Committee, however, very patiently shew the inadequacy of both, as compared with Mr. Harris's conductors.

A third plan submitted to the Committee, was the rude notion of placing a ball of glass, (glass being a non-conductor,) at the masthead of a ship, in the expectation that this would prevent the entrance of the electricity into it. But it was shewn that this plan would be dangerous in the extreme, inducing, in many instances, an explosive discharge, where a conductor might have silently and gradually drawn off the electricity.

\* Some of these experiments are already recorded in the *Nautical*.—See vol. for 1837.—p. 828.

The Committee further say that, "after maturely considering the several points now discussed, and the evidence, both practical and theoretical, which has been submitted to us, we are unanimously of opinion, that of all the plans of conductors which we have had under our consideration, that proposed by Mr. Harris affords the best means of preventing the injurious effects of lightning."

The remainder of the report is devoted to the consideration of the question of the expense of the conductors, with a view to ascertain whether this might not be beneficially, (or rather not injuriously,) reduced.

We omitted to say before that Mr. Harris's conductors are applied to all the masts and to the bowsprit. It formed a question, considered by the Committee, whether, with reference to economy, they might not be applied to some and not to all of these. But, we would say, we know the worst of it, if we apply them to all; for little can we calculate upon the risk to life and property which might arise by thus depriving some of the masts of their protection.

In the course of the investigation Mr. Harris read to the Committee the result of 180 accidents which had occurred in the Royal Navy by lightning, (and who can say how far short this may fall of the real number,) by which out of 100 cases, the particulars of which had been ascertained, it appeared that about one-half the ships were struck on the main-mast, one-quarter on the fore-mast, one-twentieth on the mizen, and not above one in a hundred on the bowsprit. About one ship in six was set on fire in some part of the masts, sails, &c.

In half of the cases some of the crew were either killed or wounded; in the whole 62 killed, 114 wounded, exclusive of one case in which nearly all perished, and of twelve cases in which the numbers have been set down as "several" or "many." In these 100 cases there were damaged or destroyed 93 lower masts, principally line-of-battle ships and frigates, 83 top-masts, 60 top-gallant-masts, &c.

Rear-Admiral Carden, in his letter to the Committee, says, "how many instances do we know of vessels being struck by lightning and a small remnant only left to tell the tale; and how many, doubtless, have perished without a record. May not the gallant Troubridge, and the vessel that perished with his, have so gone from the want of conductors? But the numerous cases of ships being struck by lightning, burned, and a few saved, not having conductors, speak volumes to your Committee. Sir Isaac Coffin, now at this place, was burned out of a merchant vessel by lightning."

After all that has been said, we think our readers will be fully prepared most heartily to concur in the recommendation with which the Committee conclude their admirable report.

“Having now” they say, “completed our remarks on the several points to which their Lordships’ instructions directed our attention, we trust we have shewn, from the evidence of facts derived from the experience of many years, as well as by the opinions not only of scientific but professional men, the efficacy of Mr. Harris’s lightning conductors; and considering the number of lives which have been lost by lightning; the immense amount of property which has been destroyed, as shewn by Mr. Harris, and is still exposed without adequate protection; the inconvenience which has arisen, and is still liable to arise from the loss of the services of ships at moments of great critical importance; the difficulty of procuring new spars in times of war on foreign stations, (not to mention the great expense of wages and victuals for the crews of ships while rendered useless till repaired;) we again beg to state our unanimous opinion of the great advantages possessed by Mr. Harris’s conductors above every other plan, affording permanent security at all times, and under all circumstances, against the injurious effects of lightning, effecting this protection without any nautical inconvenience, or scientific objection whatever, and we therefore most earnestly recommend their general adoption in the Royal Navy.”

It now only remains for us to express a fervent hope, that Mr. Snow Harris will speedily receive the reward he is so richly entitled to, for the talent and unwearied exertions he has displayed throughout so many years, in bringing to perfection his splendid system for protecting ships from the effects of lightning.

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#### CHINESE ISLANDS.—No. II.\*

FORMOSA, “the beautiful island” as named by the Portuguese, has been recalled to notice, by the recent insurrections there, and by the prospect that it may be destined hereafter, to attract more the attention of foreigners. The Chinese name is Tae-wan, which signifies Terrace Bay. Its intrinsic and relative importance will justify us in recalling a portion of its history, and in exhibiting a brief description of the island. Its length which is greatest from north to south, includes more than three degrees of latitude; its breadth, which is about 80 miles, is much narrowed towards each extremity. The south-east point of Formosa, according to one authority is in latitude  $22^{\circ} 6' N.$ , but by the observations of La Perouse and Broughton, compared with the Dutch, it is  $21^{\circ} 53' 30'' N.$  latitude, and in longitude  $120^{\circ} 57' E.$  Keshung, the most northern point, is  $25^{\circ} 16' N.$ , and  $121^{\circ} 4' 3'' E.$ , from Greenwich. The channel which separates Tae-wan from the Chinese coast, is from 75 to 120 miles in breadth; in which, and about 25 miles from the island, lie the Pang-hoo or Pescadore islands. They afford good har-

\* From the Chinese Repository.

bours, and were long the resort of Chinese pirates, and of the Dutch, who from this secure station could easily command the passages on both sides.

Though lying opposite to the Chinese coast, and within one day's sail of the port of Amoy, yet Formosa does not appear to have attracted the notice of the Chinese government, till a modern date. According to their history, they had no knowledge of it till 1430, A.D., in the reign of Seuen-tsung, the fifth emperor of the Ming dynasty, when an officer of the court was driven upon the island by storm. More than a century later, a pirate, who had been driven with his fleet from the Pang-hoo isles by a Chinese squadron, took refuge on Formosa. The island was then uncultivated, and inhabited only by savages. The pirate, who was an ambitious man, seized upon the island for himself, and the better to fit it for his purpose, massacred all the inhabitants that fell into his hands, smearing his vessels with the blood of the unfortunate natives. In some such way, doubtless, many Chinese must have gone over to Tae-wan, before its occupation by the Dutch, which we now proceed to relate.

The early voyages of the Hollanders to the East Indies, says Burney in his voyages, were projected by individuals or different companies, and were prosecuted with the spirit of reckless adventurers. The Dutch East India Company was established 1602. Nowhere was the mutual enmity of the Dutch and Portuguese, more actively displayed than in these Indian seas, where commercial jealousy was superadded to many other causes of animosity. Soon after the formation of their company the Dutch began to contend with the Portuguese, for the Chinese trade. The Portuguese successfully opposing their designs, the former in return besieged Macao, in 1622, from which however they were repulsed with much loss. From the tenure by which the Portuguese hold Macao, the Chinese regarded this attack as an act of hostility against themselves. But the Dutch accused them of aiding the Portuguese, and alleged as just cause of complaint, that they were admitted to trade on a fairer footing than themselves. Frustrated in their designs on Macao, they therefore sailed for the Pang-hoo islands. The Chinese having no sufficient force there, the Dutch took possession of them, and began a fort, to forward which, many Chinese crews were condemned to labour. Of 1500 workmen thus employed, it is related, that 1300 died in the progress of the building; "for they seldom had more than half a pound of rice for a day's allowance." The Dutch pleaded in vindication the cruel usage received by their countrymen, who had been imprisoned by the Chinese.

This establishment of the Dutch annoyed all parties; the Spanish by rendering dangerous the commerce between Manila and Japan; and to the Chinese it was "an incessant and intolerable grievance," who

therefore commenced negotiations. The emperor required the preliminary step of their withdrawing from the islands; the Dutch claimed "nothing more than liberty of commerce with China, and the prohibition of it between the Chinese and Spaniards in Manila;" nothing therefore was affected, and the Dutch recurred to their former means of *persuasion*. Eight ships were dispatched at one time to scour the sea and destroy whatever they could seize along the Chinese coast. Negotiations were resumed, and the Chinese promised that if the Dutch would withdraw from Pang-hoo Islands they might fortify themselves upon Formosa without reprehension; a reasonable permission, no doubt, from them who had no right to the islands. In the year 1624, the Dutch concluded peace with the Chinese by which liberty of commerce was granted them. They on their part evacuated the islands, sailed to Formosa, and took possession of a harbour on the south-western side. The best entrance to it was narrow and shoal, there being at high water no more than 13 feet.

Thus the Dutch entered upon Formosa; a small Japanese colony then resident there, soon retired, and the natives offered no opposition. To defend their new establishment, a fort and batteries were built, which protected the principal harbour, Ta-keang; this fort was named fort Zealand. For the defence of the trade between China and Manila, the Spanish Governor of the Philippine Islands fortified the port of Kelung in 1626; from which however the Spaniards were subsequently expelled by the Dutch. Thirty miles from this harbour on the western shore, another settlement was formed, called Tan-shwuy, yet the jurisdiction of the Dutch extended little beyond the towns and villages in the neighbourhood of their principal fort. In these they wisely combined the Dutch and native authority, "they introduced new laws among them, and instead of their councils of elders, constituted one of their chief men supervisor in every village, who administered justice, and was accountable to the Governor of the island." The natives in these districts were reclaimed from many barbarous customs, and became attached to the government of the Dutch.

In 1626, George Candidius, a protestant divine, was appointed minister to the settlement; and he took great pains to introduce Christianity among the natives. At the Governor's request, he gave his opinion on the prospects of propagating the Gospel in Formosa. He considered both the dispositions and circumstances of the people favourable for their conversion to Christianity. "With good capacities, they were ignorant of letters; their superstitions rested only on tradition, or customs to which they were not strongly attached, and which had been almost totally changed within the last sixty years: no obstacles were to be apprehended from their government. God blessed his labours in For-

mosa, so that during a residence of sixteen months, part of which was occupied in studying the language, he instructed 120 of the natives in the Christian religion." The number of Christians it is said, daily augmented; the intermarriage of Dutch and natives was practiced; churches and schools were multiplied, so that in all, many thousands of the islanders were converted to Christianity and baptized. "But the Dutch Governors in India were cautious of encouraging the conversion of the Formosans, lest it should give offence to the Japanese, with whom they had commerce, and by whom Christianity was then heavily persecuted." Thus as often as elsewhere the interests of religion were sacrificed upon the altar of mammon, and the knowledge of salvation withheld for money.

The whole interval of Dutch authority in Formosa was a period fraught with calamity to China, both from the scourge of civil war and foreign invasion. In 1644, the Mantchou Tartars had gained the capital Peking, and the Tartar chief was acknowledged as emperor of China, by most of the northern provinces. At the close of the next year, twelve of the fifteen provinces, had submitted to the usurper: throughout the whole course of this long war, the Chinese were emigrating to other countries to escape the miseries of their own. Early in the struggle, 25,000 families are said to have transported themselves to Formosa. The industry of these strangers gave the island a cultivated appearance, and increased the produce of rice and sugar for exportation. At first the Dutch encouraged this emigration, and at length were unable to prevent it; which influx of foreigners aided in the final overthrow of the Dutch dominion in the island. But the unexpected and unheard of result, that of Europeans being defeated in contest with the Chinese, will excuse a minute description, and demands a brief retracing of some previous events.

These calamitous and turbulent days produced in China, as even elsewhere, some daring spirits who rode upon the storm, and whose names are well known in the history of those times. None of these was more remarkable than the half-piratical, half-patriotic chief, Ching-ching-kung, better known as Koxinga. His father was once a servant of the Portuguese at Macao, and was instructed in the Christian religion, and baptized by the name of Nicholaus; from a petty trader, he grew by foreign trade to be the richest merchant in China, and afterwards equipped at his own expense a small fleet against the Tartars. His success gradually drew around him a vast number of Chinese vessels, till he became the commander of as formidable a fleet as ever sailed these seas. But after many battles, the Tartar chief invited him to court, and offered him the dignity of king, which he accepted, leaving the command of the fleet to his son Koxinga, while himself was



doomed to perpetual imprisonment at Peking. Koxinga, with more than his father's valour, opposed the usurper, and continued faithful to his country. During several years he scoured the seas with his formidable fleet, descended upon the coast, and with the aid of a land force, retook some cities and defeated the enemy in several engagements. But in three or four years the Tartars by force and bribes recovered all, and drove him from the coast, to the numerous islands which line the shore. In this state of affairs, the large and fertile island of Formosa became the object on which the exiled chieftain rested his last hopes. The Dutch foresaw the danger; they were aware that the agents of Koxinga held secret correspondence with the resident Chinese; and the garrison at Fort Zeeland, was accordingly increased in 1650. For several succeeding years, there was no open hostility, and Koxinga being fully employed against the Tartars, neglected Formosa; yet dissatisfaction was mutually increasing between the Dutch and the Chief. But after his severe defeat in the siege of Nanking, he had no resource left but to obtain the island; his followers were dispersing to procure subsistence, and his fleet could not be kept together. He now began in earnest to look at the "beautiful isle." The Dutch also increased their vigilance; took some of the most considerable emigrants as hostages, arrested, and tortured others who were suspected. At the earnest request of Coyat, governor of Formosa, twelve ships were despatched from Batavia, in 1660, with large reinforcements, and orders that if the alarm at Formosa proved groundless, the fleet should proceed against Macao. The garrison at Tae-wan now consisted of 1500 men, a force which the Admiral thought superior to any number of Chinese troops. A categorical answer was demanded of Koxinga, "whether he was for peace or war." The wily chief replied by letter, that "he had not the least thoughts of war against the Company." To remove suspicion, he sent several merchant ships to Tae-wan; but as he still continued his vast preparations for war in his strong hold at Hea-mun, (Amoy) and Kemun, the governor's suspicions were not removed. The majority of his council however were of opinion that there was no present danger, and all the ships were therefore ordered away to their respective places, The Admiral returned to Batavia, and accused the governor of unreasonable apprehensions. The council, wearied with the expenses, and with the false alarm of the governor for several years, suspended him from all office, and ordered him to Batavia, to defend himself. M. Clenk his successor, sailed for Formosa in June 1661.

Widely different from these conjectures were the events then passing at the island. No sooner had the Dutch fleet departed, than Koxinga and his forces were in motion. He embarked 20,000 or 25,000 of his troops in a great number of vessels, and appeared before Fort Zeeland,

and assisted by thousands of his countrymen on shore, began to land. He first stationed a number of his vessels between fort Zealand and fort Province, on the opposite side of the entrance, and occupied with his forces a point which would cut off the communication between the forts. The governor seeing this, ordered out 210 men to dislodge the enemy from this post. Here was the first trial of their strength. By the time of their coming up, 4000 Chinese had already occupied the place; but so confident were the Dutch that the enemy would not stand fire, that they immediately attacked them. "But so far were the Chinese from giving ground, that they returned the fire with musketry and arrows, and sent a detachment to attack us in the flanks. This alarmed the soldiers, who threw down their arms and fled, leaving the captain and 19 men to the mercy of the enemy. One half only of their company reached the fort alive. Nor was the defence by sea any better. The four ships in port attacked the junks, and sunk a few; but one of the four was burnt by the Chinese fire ships, and the rest escaped from the harbour, to which they all returned again, but one which sailed away for Batavia." By passing round the Philippines she reached Batavia in 53 days; the first instance of a passage down against the monsoon. The Chinese landed without any further opposition, and in four hours' time cut off all communication between the forts, and also between fort Zealand and the open country. Koxinga now summoned the fort, threatening to put all to fire and sword, if they did not surrender immediately.

A consultation was immediately held, and it was agreed to send deputies to Koxinga, offering to surrender fort Province rather than lose all. They went to his camp, then consisting of about 12,000 men who were besieging fort Province. They were armed with three different sorts of weapons; the first of bows and arrows; the second of cimeters and targets only; and the third of backswords and pikes, three or four feet long, with broad pointed irons at the ends. The deputies were conducted into a spacious tent, where they waited till Koxinga was at leisure. He meanwhile was employed in combing his black, shining hair, a great ornament among the Chinese; "this done, they were introduced into his tent, all hung with blue, he himself was seated in an elbow chair behind a four square table; round about him attended all the chief commanders, clad in long robes, without arms, and in great silence, with a most awful countenance." Koxinga replied, that, "Formosa had always belonged to China, and now the Chinese wanted it, the foreigners must quit the island immediately. If not, let them only hoist the red flag." Next morning the red flag waved over fort Zealand, but fort Province was surrendered, with all its garrison and cannon.

To prepare for a more vigorous defence, all the men able to bear arms were taken into the fort, and the city set on fire, but not so effectually as to prevent the Chinese from preserving many of the buildings, which afforded them a shelter. They also brought up thither 28 cannon to bear against the fort; but they were so galled by the fire of the Dutch that the streets were covered with the slain, and the besieged making a successful sally, spiked the enemy's guns. Koxinga now finding all his attacks fruitless, began a close blockade, and meanwhile made the open country feel his rage. He made the Dutch, especially the ministers and schoolmasters, prisoners, because they were suspected of secretly encouraging their parishioners to kill the Chinese residing among them; some were crucified by the Chinese, and their crosses erected in their respective villages. One individual event of this kind as related by Nieuhoff is so Regulus-like, that we present it to the reader.

“Among the Dutch prisoners taken in the country, was one Mr. Hambrocock, a minister. This man was sent by Koxinga, to the governor to propose terms for surrendering the fort; but in case of refusal, vengeance would be taken on the Dutch prisoners. Mr. Hambrocock came into the castle, being forced to leave his wife and children behind him as hostages, which sufficiently proved that if he failed in his negotiation, they had nothing but death to expect from the chieftain. Yet was he so far from persuading the garrison to surrender, that he encouraged them to a brave defence, by hopes of relief, assuring them that Koxinga had lost many of his best ships and soldiers, and began to be weary of the siege. When he had ended, the council of war left it to his choice to stay with them or return to the camp, where he could expect nothing but present death; every one entreated him to stay. He had two daughters within the castle, who hung upon his neck, overwhelmed with grief and tears, to see their father ready to go where they knew he must be sacrificed by the merciless enemy. But he represented to them that having left his wife and two other children in the camp as hostages, nothing but death could attend them if he returned not, so unlocking himself from his daughters' arms, and exhorting every body to a resolute defence, he returned to the camp, telling them at parting, that he hoped he might prove serviceable to his poor fellow prisoners.

“Koxinga received his answer sternly: then causing it to be rumoured that the prisoners excited the Formosans to rebel against him, he ordered all the Dutch male prisoners to be slain; this was accordingly done, some being beheaded, others killed in a more barbarous manner, to the number of 500, their bodies stripped quite naked, and buried 50 and 60 in a hole; nor were the women and children spared, many of them likewise being slain, though some of the best were preserved for

the use of the commanders, and the rest sold to the common soldiers. Happy was she that fell to the lot of an unmarried man, being thereby freed from vexations by the Chinese women, who are very jealous of their husbands. Among the slain were Messrs. Hambrocock, Mus, and Winshaim, clergymen, and many schoolmasters, who were all beheaded." Thus ended this tragical scene.

Two days after the council at Batavia had censured Coyet for his fears and had despatched his successor Clenk to Formosa, the Maria arrived with the news from Formosa. They immediately revoked the censure and suspension, and fitted out 10 ships with 700 soldiers for the island; but Clenk arrived first off Tae-wan, where instead of the rich and peaceful station he had flattered himself with obtaining, he saw the red flag flying, and hundreds of Chinese vessels lying in the northern roads. He anchored in the southern, sent his despatches ashore, did not land himself, but sailed for Japan and was heard no more at Formosa. Soon the succours from Batavia arrived, and the besieged began to act on the offensive. They were unsuccessful however in attempting to dislodge the enemy from the city of Zealandia, and suffered the loss of two ships, and many men, in the attempt; the garrisons were now ordered from the two northern ports, Telung and Tan-shwuy, to increase the force of the besieged. "The women and children and other useless persons were sent to Batavia." These preparations checked the approaches of Koxinga for the present, which led to an injudicious act on the part of the besieged. The governor received letters from the viceroy of Fuh-keen requesting his cooperation in expelling the remains of Koxinga's forces from the coast, and promising his whole aid afterwards to the Dutch at Formosa. Five ships were therefore despatched for this purpose, but three were lost in a storm and the remainder returned to Batavia.

This act was just to the wish of Koxinga, and led the besieged to despair of holding out much longer. A deserter from the Dutch encouraged the besiegers and directed them where to press the attack. They now assailed the fort, from three near batteries, and notwithstanding opposition, after many assaults, succeeded in making a breach, and gaining one of the redoubts, from whence they annoyed the Dutch, and seemed ready for a general assault through the breach. Then the besieged began to deliberate, and the majority of the council agreed that the fort was untenable. The governor yielding his opinion to the majority surrendered the public property, but was allowed to embark their private property for Batavia in their only remaining ship. Thus after a siege of nine months, with the loss of 1600 men, the Dutch returned to Java;" where the governor and council of Formosa, after all the hazards and incredible hardships they had undergone, were imprisoned,

their goods confiscated, and the governor condemned to perpetual banishment in one of the Banda isles," but was finally recalled by the Prince of Orange. Thus after thirty years duration ended the Dutch authority in Formosa, in 1662.

Freed from all opposers, Koxinga now distributed garrisons throughout the western parts of Tae-wan, and established an undisputed dominion there. He constituted himself sovereign of the island, assumed a princely style, and fixed his palace and court at Zealandia. Then the island assumed a new aspect; for with their proverbial industry he introduced also the Chinese laws, customs, and form of government. He even looked beyond "the beautiful island," to the rich clusters of islands which almost bordered on his narrow domain. He had threatened the Philippines, and was preparing for an expedition against the Spanish there, when he was arrested by death, only two years after his gaining Formosa, and left his possessions to his son. Ten years after, when the provinces of Kwang-tung and Fuh-keen revolted against the emperor Kang-he, this son resolved to join the king of Fuh-keen: but not being acknowledged by the latter as a sovereign prince, he declared war against the king on the spot, defeated him in several battles, and weakened him so that he was obliged to submit again to the emperor, and receive the tonsure. Kang-he now abolished the title of king, and appointed a governor over Che-keang and Fuh-keen. This man seized upon the Pang-hoo isles, and proclaimed general amnesty to all who submitted to the emperor. His policy had the desired effect of inducing many Formosan emigrants to return again to China, and of weakening the enemy upon the island, till it was finally surrendered to Kung-he by the grandson of Koxinga. Thus ended the sovereignty created by that chief, and Formosa passed into the hands of the Chinese government.

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ÆOLIAN RESEARCHES.—No. V.

[Of the seventeenth century.]

**BRISSES** of all sorts are more constant in summer, than winter; and between the troquiques, then in the temperate zones.

The etesians or anniversary winds are those which blow constantly at certain seasons of the year. The most remarkable species begin in summer about the rise of the dog starre; and last 40 days, being preceded by their prodromi, or fore-runners 8, or 10 days.

The account of Pliny is not much different from Aristotle; as he computes their etesians, in the 2d booke of his *Naturall History*.

Not only the Stagirite and Theophrastus, but of late De Cartes and many other Moderns derive their origine from the colliquated snows and ice, in the northerly regions. For the long continuance of the

sun, neere 6 months together above their horizon, at last overcomes the obstinacy of the cold, and dissolves the snows; which being attenuated into winds, make long marches towards the south, where they find the air more yielding and pure, then the foggs, and grosse vapors of the north.

They were called the Sleepy Winds: *Venti Delicati, & Somniculares*; by reason they intermit in the night time, and rise again with the sun: happily because the vapors were then only sufficiently dilated by the celestiall beams, though in the night time they subside, and hover neere the earth; being too refrigerate and dense to constitute winds, till they are again quicken'd, and put in motion by the approaches of the sun.

I am willing to acquiesce in the aforesaid cause; and I believe wee in England or France, might owe our etesians to Greenland, and other parts of the frozen zones, because wee have no constant visible fountains of any such winds in our own dominions: but if the etesians of Greece, according to the sentiments of Aristotle, doe allways depend on the resolution of snows in the north, they would certainly take Russia, Poland, or Germany, in the way, which lye neerer the Artick Pole, before they arrive at Greece: and yet on the other side of the Taurican hills, they are said to have southerly winds about the time of the Græcian etesians. We may better make judgment of these winds, that being most peculiar to this country, they were no foreigners in their originall, but sprung from particular fountains within it selfe; such as the hills of Macedon and Thrace, that have perennial snows of their own, and these being master'd by scorching heats of summer, may give birth to their etesian winds: which has this advantage over the other opinion, that it clears the difficulty, why they are silent in the night, and blow with fresher gusts at mid-day, when the sun mounts highest in the northern hemisphere, I shall only adde, not to mention severall others of the modern naturalists, that even Cabeus himself, who was a person sufficiently zealous in asserting the peripatetique hypothesis, dissents from the opinion of Aristotle, and will scarce allow the etesians of Greece, a remoter origine then the neighbouring Alps.

I shall not insist upon the mistake, for which some of his own interpreters have severely enough reflected upon Aristotle: That he should first deduce the origine of these winds from the frozen zones, and afterward assign the reason why they blow stronger in the day time; because the liquefaction of the snows is interrupted by the nocturnall cold; when it's notorious, that in those countrys, the sun for many months together, is never depress'd below the horizon.

Towards the Adriatique, and many parts of Asia, they have set winds which arrive from the N. and N.E. Yet all these, which were

reputed the Venti Stati, blow not from the northerly points; for in Gascony, about the same time with the etesians of Greece, they have rather southerly winds; which Scaliger (who was best able to judge of his own country,) observes to be unwholesome and pestilentiall.

At Madrid for the most part of the summer they have a brise from the Pyreneans, or the adjacent Guadarama, which extremely allays the excesse of heat.

You shall have different sorts of winds from the same snowy mountain, according to the situation of the countrys: As was observ'd in those countrys by the foremention'd Cabeus: *Sæpe nobis Boreas, & Borealibus Auster Spirat*: It being not unusual for them in Lombardy to feel a northerly, and at Tyrol, which is situate on the contrary side of the Alps, a southerly wind, at the same time.

In Italy they can never fail of etesians from their own Appennines; and so happily on the shoare of Guzarat, and the Indian ocean, from mount Caucasus: And where ever great chains or ridges of hills run along, as the Caucasean or Appennine, this very often renders an account of most etesians there about: Yet I question whether many authors may not ascribe too much to one cause: for in some places they have anniversary winds, that can never possibly have their rise from the resolution of snows. And, I believe, it would prove extremely difficult, to lay down any tolerable hypothesis, of the monsoons on the coasts of Afric, and India, from the best discoveries wee have yet been able to make of those parts.

There are other stated or anniversary winds, which they called Avicular and White-south winds: either because they were so friendly to the procreation of birds; or rather, that they return'd with nightingales or swallows in the spring: beginning to blow after the summer, solstice by the computation of Aristotle, 70 days, about the beginning of March.

But no longer to dispute the certainty of those observations, which were made by the Greeks, and afterwards transmitted from them to the Romans; who were by farre lesse sagacious in the studies of Nature: I have here in England for some years past, kept by me an exact table, or ephemeris both of the vernall, and summer etesians; but found the winds no lesse variable in those months, then at other seasons.

The monsoons are anniversary winds in the Indian and African seas, call'd by the Dutch moussons (motions), and by our English sea-captains vulgarly monsoons. They blow easterly one half of the yeare; and the other part, from the contrary points. They were unknown to the ancient world who wanting the use of the compasse, made no long voyages by sea; but the industrious moderns have taught us new theorys:

of Nature: they have taken as large a circuit as the sun, and their ambition has known no other bounds but those of the ocean. Heretofore we had no commerce with the East Indies, but by way of the Levant, the merchandize being brought from the Red Sea to Aleppo, and other parts of Syria, and so transported through the Mediterranean, till about the yeare 1500 the Portuguese found out the passage by the Cape of Good Hope. Yet in their first attempts they either happened to be there at the breaking up of the monsons, or other crosse seasons, that scarce one ship in twenty arriv'd safe at Goa: but of late yeares very few of our East India fleets miscarry; since the currents and monsons have been better understood by our pilots and masters of ships.

I have diligently compar'd the accounts wee have from Kircher, Ricciol, and Furnier, of the anniversary winds in the Indian seas, with the English journals; and find those authors generally false: Nay even Varenus himself, who was more conversant with sea-faring men, is no lesse erroneous then the rest. But to omit nothing which may satisfy the curious in these enquirys; I shall insert a relation of the monsons communicated to me from Captain George Swanly, an experienc'd captain, after diverse voyages he had made to the Orientall Indies; which I have set down in his own words.

“ The munsons or monsoons are winds which raign 5 months of the yeare on one side of the compasse, and 5 others on the opposite. There are 2 months in which they change, that have variable winds; (viz.) most part of March and September.

“ From September, on the north side of the æquator, to the tropique of Cancer, and there about, in the Indian seas, they blow from the N.E., and according to course of the months, they veere more northerly.

“ At Surat, Malabar, Pegu, and that coast of India, is the fair season till March: All which time 'tis the fowl season with the same winds on the other side, at Coromandel, Patane, towards China, and Japan: and all the said time, from September till March, on the south of the æquinoctiall, the winds are on the N.W. quarter of the compasse with rain; which there is the fowl-weather monsoon.

“ From March to September, the winds are to northwards of the æquator, westerly, or at the S.W. points, with rains, at Surat, Malabar, and Pegu; at which time it is fair on the coasts of Coromandel, Patane, towards China, and in the way to Japan; and then in the tropique of Capricorn, the winds are at S.E. and that quarter; which are in those parts the dry monsoons.

“ Yet neere all lands between the tropiques on the eastward of Cape Bon Esperance in the fowl seasons there doe happen some fair intervalls; yet in the dry months, seldome any rains interrupt the constant serenity of the air.



“ The fair monsoons are the winds blowing partly off the shoars, and contrariwise the monsoons blowing on the shoars, are the fowl and rainy seasons.”

Yet still happily I shall leave the reader in suspense, whether Ricciolus, and other learned men, or the reports of our seamep, are most to be credited; but I shall not scruple to decide it for the latter; who beside their yearly traffique into those parts, are oblig'd to a very perfect understanding of the monsons; since the mistaking of very few days may sometimes hazard the losse of their voyage for that whole yeare. When as the Jusuites, for the most part, transcribe one from another, without strictly enquiring into the truth of what they write; and Kircher (who of all others is the greatest rhapsodist of falsitys, though he contain some rich oare among much drosse) pretends to have had no other information of these particulars, then what he collected from the English and Dutch Journalls; which I doubt, he never had opportunitys sufficiently to examine or compare.

When one motion ceases, the other does not immediately begin; but there are sometimes longer, and otherwhile shorter intervalls between them: In which, are variable winds, and calms that presage dangerous tempests: for the opposite winds, before one resigns to another, must needs, by their struggling, cause strange disorders in the atmosphere. Wherefore of all seasons of the yeare, our masters of ships ever avoid the seas at the changing or breaking up of the monsons. Its observable, the easterly winds change, sometimes first into northerly, and other times towards the southerly points; which may happen, from the impressions that the changing of the currents make on the air, and that on the exhalations and winds.

These in the Indian seas are farre more certain then other anniversary winds; yet by reason of various accidents, they come later in, and otherwhile continue longer, some years then others.

They are chiefly regulated by the Heavenly motions; changing for the most part under such a phasis of the moon; and are so farre dependant on the sun, that Sir Thomas Herbert in his travels gives this account of them.

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#### RAMBLES AT HOME.

*Newcastle, 10th August, 1839.*

My dear Mr. Editor,

This the last of my rambling letters, I address to you from Newcastle.

I left Edinburgh on the morning of the 30th of July, passing through Dalkeith Park the property of the Duke of Buccleugh, and arrived in the afternoon at Kelso, where I remained till the following morning.

Kelso is a remarkably picturesque spot situated at the junction of the Teviot

with the Tweed. The town is not large, but there is a fine market place; and recent improvements have apparently taken place in some of the streets. I passed an hour at the Museum, which reflects much credit upon those who have set it on foot. It is a very pretty little Museum, and among the collections are many interesting natural, as well as artificial productions; of the former the specimens were generally exceedingly fine, and often rare. The whole was judiciously arranged, according to the several departments, and altogether I felt much gratified with the visit I had paid to it.

The fine estate and noble Mansion of the Duke of Roxburgh, stands on a gentle eminence above the left bank of the Tweed. I much regretted that I was unable to walk through the grounds and visit the mansion, which strangers are allowed to do when the Duke is absent, but as ill luck would have it, his Grace had only arrived the previous day. On the opposite or right bank of the Tweed, or I should rather say overhanging the left bank of the Teviot,—for the streams taking the same course flow nearly parallel, being separated only by a few fields—stands Roxburgh Castle, an ancient ruin of considerable extent, of which however, little more than the walls of the foundation now remain. There is still sufficient to shew that it was in bygone days a place of considerable strength and importance, built on a commanding situation; the mound upon which it once reared its proud battlements, rising abruptly from the river to a height of some fifty or sixty feet. Nothing can be more pleasing than the “meeting of the waters,” and I should have thought them quite as enchanting as those in the sweet vale of Avoca, had they been somewhat of a more limpid character, but, owing I suppose to the late heavy rains the waters were of a very dingy and brick-dust colour.—It is however to be feared that the Teviot is seldom otherwise, for even Scott tells us that

—————“ it sweeps the glade,  
Brawls over rock and wild cascade,  
And foaming brown with double speed  
Hurries its waters to the Tweed.”

There is a very handsome bridge thrown across the Tweed, from which looking up the river the prospect is at once striking and beautiful. I have only now as far at least as my observation extends, to mention the Abbey at Kelso, a fine old ruin of which some of the arches still remain in a tolerably perfect state, and serve to recall to the mind what must once have been the elegance and grandeur of the structure. One of the towers still rises to a considerable elevation, and I was anxious to ascend it to obtain the fine view which must present itself from the summit; but after two or three ineffectual attempts to procure the key, the holder of it being away from his home, I was forced to give it up.

Leaving Kelso I went on to Morpeth, about a stage or so from Newcastle. This is a poor little place, remarkable for nothing that I could see but its gaol, which is a fine massive building. I could not help feeling somewhat amused while seated in the coffee-room alone, and just about to commence my mutton chop, when the door was suddenly and violently opened, and as suddenly and violently shut, the waiter evidently in a state of great excitement,—in which, of course, he supposed I should participate,—exclaiming as fast as he could give utterance to the words,—“ It’s a verdict of manslaughter !” Is it? thought

I to myself, as I recovered from the start, and quietly fell to work discuss my meal, pondering in my head what the case might be, and thinking as the Chartists were at this time parading the streets of Newcastle; something might have recently happened there, but a gentleman with a bag, but no wig, a "traveller," (who are very numerous in these parts,) and not a lawyer, informed me that it was the case of Bolam, who was supposed to have committed a horrible murder in one of the banks at Newcastle, the trial of which had caused great excitement, for some days past.

On the 1st of August I reached Newcastle, and was agreeably surprised to see so fine a town. There are some very handsome streets in it with stone fronts and many superb shops. Grey street, with its handsome column at the top, and statue of Lord Grey, is as fine a street as any I have seen, and though not so long as Regent street is infinitely superior; the houses being of stone. There are many other streets in this new part of the town of great beauty, and the extensive improvements which have been carried into effect within the last few years, and are still progressing, owe their origin, as well as their continuance, to the enterprise of one man—Mr. Grainger.

The News-room, or Central Exchange, as it is called, is really splendid. I was quite astonished when I entered the room: it was originally built for a Corn Market, but has been appropriated to the above purpose. The building is a semicircle, of grand dimensions, with an inner circle, divided off with pillars: here all the newspapers are spread out upon the tables, and I never saw so many in any news-room, and among them strange as it appears, the London newspapers of the preceding day. The ceiling is lofty, and the light is thrown in from the top only, by two rows of glass windows, one above the other; the roof being of a somewhat remarkable, and at the same time of handsome construction. I am inclined to say that it is one of the finest rooms I have ever seen, certainly it is quite unlike any other. Strangers are admitted into the news-room, for a month, upon their names being inserted by members, whose subscription is only 1*l.* per annum, and there are already about 2000 subscribers, the room having only been opened about a month. Attached to the news-room is a convenient and comfortable coffee-room, which any person may frequent, and there is a separate entrance to it.

There is also an excellent Museum at Newcastle, which I have twice visited. Among the specimens of mineralogy there are several from Norway and Iceland. The museum is thrown open to the public.

The market-place is admirably arranged, each market being quite separate from the other, but connected by spacious, lofty, and well aired passages.

The Old Town is dirty and disagreeable; and I fear the New will soon be soiled, for it is a very smokey place, quite equal to London in this respect.

While at Newcastle I attended a *Pic-nic* party to Tynemouth, on some rocks by the sea side. There is a railway from Newcastle to this little watering place which is a great convenience, as the distance occupies only 20 minutes. The old ruined Abbey of Tynemouth stands very beautifully on an eminence immediately above the sea, and not far from the mouth of the river, on either side of which at the entrance stands North and South Shields.

One day I rode across the country to Durham, by a short cut, a distance there and back of about 30 miles, and over some unusually rough roads, which caused

me some fatigue, as it required more than ordinary caution in picking the way to prevent accident. The Cathedral was an object that pleased me much. The river Weir takes a singular serpentine sweep round the hill upon which the Cathedral stands in all its majesty, and the banks on either side are beautifully wooded. There is a delightful walk round this sweep of the river, shaded by fine trees called the Prebends walk: nothing can be more pleasing, or picturesque. The interior of the Cathedral is grand and different in architecture to any I can call to mind; the arches are large and supported by massive pillars, something I should say in the Moorish style of architecture. The town seemed dull and stupid enough; there is not a single fine street in it, and nothing apparently doing. Having seen the cathedral I made the best of my way home, as there was nothing to induce me to remain in Durham a moment longer than necessary.

On another day I went towards the head of a pretty valley to a favorite spot called Shotley Bridge, where there are some mineral springs:—this is becoming a sort of watering place for the folks at Newcastle. There is at this place a very extensive Paper Mill, belonging to Mr. Anandale. Never having seen one, I went through the mill, and was much gratified. The process is so simple, and the result so extraordinary, that there are few things more interesting: to see the dirtiest rags converted in a short space of time to a beautiful white pulp, is curious and interesting. They are bleached in vitriol and magnesian salt, (according to my informant,) and remain in this solution about 24 hours: being then quite white they are placed in a large sort of trough, when they are turned round and round in the centre performing a regular circle in the tub, till they become of a pulpy substance. They are then removed into another large reservoir, and still kept in motion in hot water, and when reduced to a substance resembling thick cream, the stuff is drained off on to a sheet of closely wove wire, (from whence the wove paper is called,) and the water passing through leaves this creamy substance on the sheet of wire:—it is then drawn through several rollers,—passing gently over them, and finally over two or three larger rollers filled with steam, which partially dry it, and the paper comes out as you see this upon which I am now writing, except that it is afterwards necessary to use size, I believe, in order to make it receive the ink, which would otherwise sink into it, like blotting paper. The pulp is drawn out in one continuous sheet of many hundred yards in length, and after passing the heated rollers it is rolled round and round and looks just like so much calico wound up. It is then removed to the cutting machine, the prettiest thing imaginable, invented by Fourdrinier.

Wove paper is made entirely by machinery, Laid paper by hand. The laid paper instead of being placed on the fine wove wire, is placed on wires fixed pretty closely in regular succession, and kept together by seams, as you may see by holding a sheet of the laid paper up to the light. The colouring of the paper is produced by Danish blue, a most exquisite colour in powder; what we generally call vellum paper is coloured with the same material, only less of the powder is used. So much then for the paper manufactory, and now, if you have no objection, I will proceed to a very different subject, from *white* to *black*, a visit to a colliery, the Gosforth Colliery, one of the largest hereabouts. The descent is by a perpendicular shaft, of 181 fathoms, or upwards of one

thousand feet. Having dressed myself in proper costume, and metamorphosed myself into a very queer looking character, as you may suppose, I stepped into a high basket, myself on one side and the *Underviewer* on the other, standing upright, and holding on by the iron chain. The shaft may probably be about three or four feet square, just wide enough to let the basket run easy, and it is boarded, as I was told, and as far as I could see from top to bottom. In a moment away we went into total utter oblivion, "darkness visible," and in less than a minute and a half, reached the bottom, when I found myself in the arms of some kind and considerate, but invisible, gentleman, who whipped me out of the basket, and placed me on my feet: I could see nothing more than a small glimmering light, like that of a glow-worm. When I had recovered my footing, for I felt a little giddy at first, and had been down a few seconds, I began to recover my sight; and my friend the *Underviewer* and myself having lighted a little tallow candle or rush light, we trudged onward. I now began to see still better, a little time having elapsed, but the sudden transition from daylight to darkness had tried the eyesight. I found myself in a rather spacious gallery cut out in the rock, and the roof in many parts finished off with masonry, and on the floor, were two tram-ways or iron rails. Scarcely had I regained my footing, and begun to feel a little at home, when in a few minutes I heard a loud rumbling noise which sounded immediately over head, but in the distance I observed a spark of light which appeared to be approaching rapidly towards us, and presently up came twenty baskets of coal all in a line, drawn by one horse, which was proceeding at a quick trot; a boy was seated on the foremost basket singing loudly and merrily as he went along. The effect in this dark subterranean passage was quite curious. On the approach of one of these trains, it is necessary to stand close up against the gallery, to allow it to pass without grazing, and it was rather close stowage I assure you. There are 40 horses employed entirely under ground, and who never see daylight, with 181 fathoms of the mother earth overhead! they are kept in stables cut in the rock, and it is really a most curious place, reminding one of the "Robbers cave;" strange to say, their mode of life seems to agree with them. They all looked well and healthy, and their coats were as sleek as those of a race-horse. Some had been down in the Colliery 10, some 8 years; the weight they drag is said to be about 8 or 10 tons, which on the rails is nothing. On arriving at the shaft, two baskets-full of coal are whisked up at a time, with surprizing rapidity. Proceeding onward, we had now to turn off into another gallery, running parallel with the main gallery, and used as a sort of foot path for man and horse, as there is here a *bank* as it is termed, and the coals are carried down it on the tram-ways by their own weight, decending with great rapidity, and at the same time, drawing the empty baskets up the inclined plane. It would not be safe to walk by that route, and no one is allowed to do so. Having walked along this parallel gallery we regained the main gallery, at a part where horses are again put in requisition, the way being now level. I had gone about 900 yards under ground, and had not time to proceed farther, which I much regret, but you may suppose what a place it is when I tell you that I had still near a mile and a half to go before I could reach the spot where the men are at present employed digging the coal. The heat was intolerable as I ascended

the little gallery, where the current of air was in our backs; it was almost suffocating, but by turning round we could feel and enjoy the air. The ventilation of the Mine is very remarkable; the air which descends the shaft traverses a space through all the various galleries of about 38 miles, and it is kept in its proper channel by means of double doors to some of the galleries, on the same principle I fancy as water is kept in the *locks* of a Canal. They have as few of these doors as possible to prevent accidents, for the current once interrupted, the consequence would no doubt be calamitous.

On again reaching the shaft I was lifted into the basket with the underviewer, and a little boy wanting to ascend was desired to lay hold of the rope, at a few feet above the chain to which the basket was attached, and round which he clung with his legs. Having put out our lights, away we went again into utter oblivion, and as if by magic in a little more than a minute, we were again brought into broad day-light. The effect of the rapid ascent in the dark was singular; the sensation was precisely that of descending, and this without reference to any *optical* delusion. The underviewer I observed every now and then placed his stick against the boarded sides to steady the basket. When we descended the shaft the basket occasionally touched against the side and twisted about unpleasantly, which probably may have caused the little giddiness I felt when lifted out of it by my invisible friend at the bottom, whose harsh and sepulchral voice I forgot to tell you was well suited to the spot.

I believe I have now told you all I have to say, and hoping that you will not have been fatigued with my "Rambles at Home," and that they may help to afford you some little amusement.

I remain, &c.

A MIDDY ASHORE

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#### NAUTICAL SURVEYS AND NAUTICAL BOOKS OF DIRECTIONS.

SIR,—In your number for this month I perceive an article upon a subject of considerable importance to seamen, and one which required attention drawn to it. I hope the promise will be kept of following the same up in future numbers, I mean "Naval Surveyors and their Surveys." Books of nautical instruction are also therein touched upon, and the superiority of the Admiralty charts asserted, which latter are justly said to be sold at a price next to giving them away.

These charts have authority for them, and that they are pirated and often garbled, by the "manufacturers of charts" is as well known, as that these spurious productions are sold at a great profit, their titles being made as attractive as possible, embellished with abundant fine specimens of penmanship, setting forth their being compiled from the "latest and best authority;" when the ground work of the whole, namely, the Admiralty chart, can be had in its simple and correct form, for next to nothing.

The real fact, Mr. Editor, is, that the business of "chart and nautical

book making" for the use of the merchant-service, is a monopoly in very few hands. It is clearly the interest of the parties possessing it, not to sell the Admiralty charts, but those "highly ornamental ones" of their own fabric. It is quite consistent with my own knowledge, when I say that 99 masters out of 100 in the merchant-service do not even know of the existence of such a thing as an Admiralty chart, and what is more, they put implicit confidence in every thing thus sold to them including "Books of directions." It is these latter productions that have induced me to obtrude myself upon you, Mr. Editor, and leaving in the able hands that have taken up the subject, Nautical Surveys, and the charts produced from them, it is my present purpose to make some remarks on the enormous amount of evil which such books, when incorrect, are calculated to effect, and which I can speak to feelingly, for by such means, not only have I frequently been led into dangers, but have often actually got on shore, and hazarded the safety of ships I have commanded.

It need hardly be observed here, that these books, when printed and sold, are public property, and may be freely criticised, without the least offence being intended to their authors. Those to which I especially allude, are compiled by Mr. Norie, a gentleman to whom I am wholly unknown. I doubt not that he believes his information is good, before he commits his nautical instructions to print. It would however have been much better, when such books consist almost entirely of compilation, had the authorities been always given at the proper places. Something beyond accumulating the names of popular authorities in the title-page, which only serve as a blind for what the book contains, or should contain, and this is the more necessary, should accompany each item of instruction, that the weight due to each authority might at once be capable of being appreciated. The very words in which particular instructions are conveyed should be adhered to. I could easily quote many instances, where a deviation from this rule takes away a great part of the confidence a seaman would otherwise place in what he reads, and I mean to assert as a principle which ought to guide all compilers of nautical instructions, namely, that no one not possessing actual experience and local knowledge, is a fit person to lay down rules for navigating such locality; it is the height of presumption to alter one word of what such experienced man may have used. As much in explanation as may be thought advisable may be added, but leave the original entire, instead of which we see whole volumes written—*reduced from surveys, and all sorts of alterations and curtailments made upon the remarks resulting from actual experience and observation.*

These books are generally written in a familiar, and what is called a

popular style, instead of as they ought to be, with technical precision. But instead of this, they include descriptions of places, their trade, population, &c., intermixed with nautical directions, so as to leave no doubt upon the mind of the ordinary master of a ship, that the whole is "as true as Gospel," and thus, as far as he can comprehend it, he acts implicitly thereon. I say as far as he comprehends it, and I think I shall show that this is an important reservation, the said directions having frequently puzzled me. I have passed the same headlands many times, looking over the printed instructions relating to them, without being able to understand them, and the directions for entering harbours, instead of being at once plain to a stranger, for whose use only they are supposed to be written, are nine times out of ten wholly incomprehensible, referring to marks, to buildings, &c. &c., by *name*, without any clue given by which to make them out.

I have said that no one, except with great experience, and actually on the spot, should presume to give directions for entering a port, and this should be a clear-headed sailor, who can do so in proper nautical language, to be understood by the plainest seaman who can read.

The old masters of the navy have produced specimens of this sort of nautical direction, as a sample of which, see those of Mr. Chapman, on the Admiralty chart, for entering the Tagus; instructions with which the most stupid man that ever had charge of a ship, would not hesitate to run for that river in a gale, and enter it safely either day or night. The very style and language gives this confidence, yet in the "sailing directions for Spain and Portugal," page 13, and those immediately following, we find, after giving some instructions wholly unintelligible, a garbled copy of this fine specimen of a real sailor's directions, (without any acknowledgment) and it is just so far spoiled, and so introduced as to lose altogether the confidence it is in its original state calculated to produce, and which confidence is necessary to enable a seaman to venture upon running a ship through breakers, and difficulties of such a navigation.

As the contrast to these plain directions of Mr. Chapman, and some others by Lieut. Ogle and Mr. Hunter, to be seen upon the same chart, and which combined, contain nearly all that need be said about entering the Tagus, let us see what the book of directions for the coasts of Spain and Portugal provides for us. After "spinning a somewhat long yarn" about a description of Lisbon itself, but from which no one can form the most distant idea of the place, (and which was no doubt written half a century back if we except when it is stated, "its inhabitants are beggarly and slothful, and its streets filthy in the extreme,") ending with informing us that "one *mil-ree* is 1000 rees," and what to many of the present day would be pleasant news enough,—viz. that "that there are



no bank notes, *but all is paid* in gold and silver!" then comes a little nautical description, beginning, "the bar of the Tagus, &c., &c.," for which I must refer to the book itself, for the five paragraphs that follow this commencement, (page 14,) the whole of which is expressed in such unintelligible language, that it is quite impossible it should do otherwise than confuse a seaman. I shall only remark thereon, that in stating the north Catchop to be a rocky shoal, with very little water upon it, the charts do not lay down less than four fathoms upon it, except at one spot three fathoms, on its N.E. extremity, and that its length is about three miles, instead of twenty-two as therein stated! In respect to the south Catchop, in describing a danger at the entrance of the Tagus, surely no one would expect to find included all the dry land to the east of the Bugio, (sand though it be,) and which for some three miles forms in fact the south bank of the Tagus! We are also told that the ebb runs stronger than the flood! a piece of intelligence which most likely we should have presumed upon, though the fact that it runs sometimes seven miles is useful to be informed of, and we might readily have been left to suppose that in such a current "the anchors sometimes come home," probably, however, this does not so often occur in the present day, from the very general disuse of buoys, as we are told that the anchors with buoys to them, "are of no use."

We have next, directions for entering the Tagus by the north channel, which are evidently taken from those already referred to of Lieut. Ogle and Mr. Hunter,—but so studiously altered for the worse, (I cannot qualify this expression, and as usual the authority is unacknowledged,) that it is difficult at first sight to recognize the seaman-like instructions of these officers.

At page 15, we find the instructions for entering "by the great or south Channel," which I shall give at length, as a specimen, (of what these books are from beginning to end) to utterly confound the commander of a ship. "To enter by the great or south Channel, in clear weather, with a fair wind, do not stand so far on as to bring the town of Cascaes on the west slope of the Hill of Cintra, for it will lead you on the W.S.W. point of the north Catchop; but bring the Montegordo, or or Queen's pleasure house, in a line with, or a sail's breadth open to the northward of the Paps, or tops of hills, or bring the Paps in one with the Escadas de Jacob. The said Paps in one with Mirante, will lead along the edge of the south Catchop."

Now, we will suppose a stranger (for whose use alone nautical directions are supposed to be written,) to be off the Tagus, and that he could not procure a pilot, (in bad weather almost always the case,) how are these few precious lines to enable him to enter? For my part, who have been in the Tagus as often as most people, I never could see clearly

which were the "the Paps, or tops of Hills," neither do I know very well what is intended by "the Montegordo," nor is there anything that can convey to my mind a resemblance to the "Escadas de Jacob," (this might as well have been written in English "Jacob's ladder.") Nor do I know what is intended to be described by "Mirante." This acknowledgment may by some, I doubt not, be a proof of the writer being a very stupid fellow, however, I dare say, that if I had found it necessary to learn all these matters, I could after a time, and being half a dozen times in the Tagus, have found them out; but the truth is, I did not think it at all necessary, other more simple marks having sufficed for me. But this, I will venture to say at once,—that no stranger whatever could enter the Tagus from the description just quoted from the book of instructions referred to.

Immediately after these confused instructions is introduced without any acknowledgment, and without even disjoining it from the previous directions, so as to show its being a different authority—a somewhat garbled account of the sensible instructions of Mr. Chapman, but so introduced as to impress the reader with the idea of their being of secondary importance, only fit to be acted upon when the previous instructions cannot be so, (instructions which Mr. Chapman wisely recommends passing by).

And here I cannot but remark how very desirable it would be, if officers, in forming directions for particular places, would invariably keep in view, that the utility of their labours in practice is, *their being understood at once by a stranger*. This is what is to be so peculiarly admired in these instructions of Mr. Chapman, and Lieut. Ogle, and Mr. Hunter, that they are so clear to the commonest understanding, that no one can hesitate in acting upon them, or commit a mistake when he does so,—day or night, I have acted upon them.

With all due deference to the master of H.M.S. Hastings, who has upon a late edition of an Admiralty chart, added to the instructions for entering the south channel; I cannot think (having always reference to the instructing of a stranger,) that his giving a new mark for running in—a palace, *by name*, and not *by description*, adds at all to the advantage of navigation. A man may easily mistake the palace in question, but I defy him to be at a moment's loss in making out, "the point of Lisbon covered with houses, which seems to run into the river."

A word or two more from the book in question, in the way of *information*, about the Tagus. "In order to receive the health visits, you must bring to off the castle of Belem, (bring up is meant,) in 17 to 14 fathoms, after which you will proceed to the road!" The term "road" applied to a ship taking up a berth off the tower of London, would not be a very correct mode of describing that locality, but let

that pass; but certainly those who know anything of the nature of the tides in the Tagus, would never recommend a ship to be brought up in the narrow part of the Tagus off Belem castle, in 17 to 14 fathoms, where the tide runs with, probably, its very greatest velocity, when a much more convenient situation "for receiving the health visit," would be found by sheering into four or five fathoms, in a perfect slack, immediately above the castle.

I will only quote from the same little Book of Instructions for the coasts of Spain and Portugal, one more specimen of confused writing. At page 33, it professes to give some general observations respecting these coasts. "It is a fact not generally understood, that this part of the ocean is subjected to a frequency of currents from the E., S.E., and S., which set along the coast of Portugal, and often occasion the most fatal results." Then a long extract is introduced from the work of Major Rennell, the whole tendency of which is to contradict the above statements!

In noticing the "New Piloting directions for the Mediterranean sea, &c., &c.," also by Mr. Norie, it is evident that my remarks upon such a work must be confined to a very small portion of it, I shall, therefore in general terms state, that open it at what page I may, if it relates to any part of the navigation with which I am acquainted, (which is pretty extensive,) I not only detect palpable errors in the nautical part, but the most unaccountable mis-statements in the general description.

The navigation of the Dardanelles is almost altogether omitted, the little that is said about it however, is both contradictory and incorrect. The charts have led, I verily believe, every commander of a ship that has frequented this strait, (myself included,) on shore upon what the English call "Barbers point;" yet we do not find that danger hardly alluded to, whereas a good deal is stated about that fine clear safe anchorage in the same straits, Gallipole, hardly one word of which is consistent with truth. Arrived off Constantinople, we have a sample of what the non-nautical description may be worth, which must have been written by some one not quite recovered from the fear of losing his head, after a visit to that dreaded city. Even so late as a quarter of a century ago, and it must indeed have been far back into the last century, when the trading intercourse with that renowned city was so rare, as upon the approach of a ship "Jews (from Scutari) crowded on board in great numbers, ready to purchase, &c. &c." But what will most surprise the navigators of the beautiful and placid Bosphorus, are two descriptions thereof introduced into this modern book, by "M. Lechavalier," and "Mr. Sevatopuli,"—see two paragraphs, page 279 headed "Currents," in the first of which is stated that "such is the

force with which the waves!! are sometimes repulsed from the Seraglio point, that they reach back to Scutari, and there form an amazing surf!!" Read this account of "*waves and surf*, ye Stambolines" who are continually crossing this dreadful "*sea*," in the fragile constructions of the Bosphorus, compared to which a London Wherry is a stout boat.

I shall conclude these strictures on nautical books of directions, by a short reference to the descriptions of the places on the Black sea, as set forth in the book already alluded to, and which abounds in the most unaccountable errors; there is literally hardly any thing in nearly the 20 pages devoted to this unknown region, but confusion and misstatement. Of Odessa it is said, "that it has the advantage of hardly ever being frozen over," when it is well known that it is actually frozen up almost every winter. The Bosphorus it is stated, is sometimes frozen over, a circumstance as new to the inhabitants of its banks as the "*waves and surf*" already referred to, and speaking of the light at Odessa, it is stated in page 284 that it is a "*fixed light*," in page 285 that it is a "*red revolving light*," and lastly in page 287, that it is a "*fixed light*." In the name of common sense, Mr. Editor, how can such books do otherwise than bewilder us poor fellows, for whom instructions should be written so plain, "that he who runs may read," and not only read but clearly understand.

I am, &c.

"A SKIPPER."

To the Editor of the Nautical Magazine.

London, February, 1840.

## Naval Chronicle

### DEEP SOUNDINGS.

THE following extract of a letter from Capt. James Ross, R.N., to the hydrographer of the Admiralty, will interest our readers. It will be seen that the mean velocity of the weight in descending 2677 fathoms was 3.2 per hour; the first 50 descended at the rate of 7.1 miles, and the last 100 at 2.4 miles per hour. This is one thousand fathoms less than the soundings in our last number.

*H.M.S. Erebus, at Sea, 3d March, 1840.*

(Lat. 33° 21' S. long. 9° 4' E.)

"I have just obtained another deep sounding, and although we have not yet been able to get down so far as I wished, and still hope to do, I am quite satisfied that if we get into any sea deep enough, we shall have no difficulty in accomplishing it. The weight employed was 540lbs., and we had on the reel something more than 5000 fathoms of line: the first 437 fathoms were a single strand of whale line; the rest was of two strands of three-yarn spunyarn, and the following are the times of each of the marks passing off the reel.

Let go at	h.	m.	s.	Intervals.	
				m.	s.
10	33	58			
50 fathoms	34	23		0	25
100 "	34	53		0	30
150 "	35	22		0	29
200 "	35	54		0	32
250 "	36	26		0	32
300 "	37	3		0	37
350 "	37	40		0	37
400 "	38	20		0	40
477 "	39	32			
next 100 "	40	59			
200 "	42	31		1	32
300 "	44	8		1	37
400 "	45	48		1	40
500 "	47	28		1	40
600 "	49	14		1	46
700 "	51	2		1	48
800 "	52	58		1	56
900 "	54	56		1	58
1000 "	56	56		2	0
100 "	58	56		2	0
200 "	11	0	56	2	0
300 "		2	55	1	59
400 "		5	2	2	7
500 "		7	14	2	12
600 "		9	27	2	13
700 "		11	42	2	15
800 "		13	58	2	16
900 "		16	19	2	21
2000 "		18	44	2	25
100 "		21	11	2	27
200 "		23	37	2	26
<u>Total 2677 fathoms</u>				<u>29</u>	<u>39</u>

stopped exactly at the mark.

29 39 time of sounding.

Crozier took down the time of each mark passing off the reel, and when the weight struck the bottom, it stopped so suddenly that the boats' crews all called out, "It is down." We veered away 50 fathoms afterwards, and then hauled in again, but could not get an inch more than the mark at which it first struck. Nothing could be more satisfactory than this sounding, and it is the more so from shewing very plainly that we have the means of getting soundings however deep the sea may be, and I trust our next trial will be in deeper water. I have ordered the line to be again completed to 5000 fathoms; but it would be useless to attempt it any more on this side of the Cape.

"Ever yours faithfully,

"JAMES F. ROSS."

#### LIGHTNING CONDUCTORS.

SIR.—Your Journal being ever ready to correct erroneous opinions, as well as to give publicity to improvements, I beg to call your attention to the practice in many of our men-of-war of having copper spindles at their mastheads for vane-staves, the injurious effect of which was severely felt on board H.M.S. Racehorse in the river Para, January

12th, 1840. The ship was running with a fresh wind right aft, with studding-sails set on both sides. When off the Bahia de Sol, (River Para,) a heavy thunder squall took the ship aback, carrying away all the topmast studding-sail booms, and while all hands were employed getting sail off the ship, the fore-topgallant-mast was shivered, and the main slightly wounded by lightning. The electric fluid struck the copper spindle at the fore-royal masthead passed right through the centre of the mast, and came out about two-thirds down the topgallant mast, it then passed, conducted probably, by the topsail sheets down the forecable, fused the copper on the bitheads, took a piece out of a beam under the forecable, and passed down to the lower deck where it tore the tin off in the galley.

There can be little doubt, from the known power of copper to conduct electricity, that the spindle at the masthead, attracted the lightning, and was in a great measure the cause of the injury sustained, and there is also little doubt that had not the rain fell in torrents at the time, the ship would have been on fire in many places: after the explosion a cloud of smoke was seen to rise from the larboard fore chains.

Three men were wounded, two only very slightly, and one at the fore-topmast-crossrees had his clothes literally torn from his body.

Metal spindles look very neat I allow, but when the lives of men, and the safety of H.M. Ships are liable to suffer, it would be more prudent in the officers having the arrangement of our men-of-war to pay a little more attention to reason, and after an accident of this sort to substitute something that would answer the purpose equally as well, and not subject the ships and subjects of Her Majesty to the serious injury that *must* occur sooner or later. I have seen accounts from the Racehorse in which it is stated that but for the torrents of rain that fell at the time, the effects of the lightning might have been even more disastrous than that which occurred to H.M.S. Thisbe, in 1786.

I remain, &c.

VERITAS.

*To the Editor of the Nautical Magazine.*

[We recommend VERITAS to peruse the articles on Lightning in our present volume, as he does not appear to have seen Mr. Harris's numerous papers on this subject in our former ones. He will then find that his idea of the vane spindle "attracting the lightning is quite unfounded.—Ed.]

GRAHAM SHOAL.—By the following extract of a letter from the Mediterranean it would appear that Graham Shoal has subsided, and lost all pretensions to a place in our charts.—“We were enabled to ascertain our position with perfect accuracy by intersecting the bearing of Cape Granitola, Maritimo, and the town of Mazzara. This was at 10h. 50m. A.M., and at 12 we had a good meridian observation for the latitude, and two bearings of the land, so that our position was perfectly ascertained: and we were then only nine miles from the shoal. We ran that distance by a quarter past 1 P.M. No appearance of smoke was visible, nor any breakers other than the tops of very heavy cross sea, which was then running.

The land of Sicily was not clearly visible, and we could not obtain a sight of Pantellaria.—We, however, commenced sounding, and found the bank that surrounds Graham Shoal, but being unable from the

heavy sea and strong winds, to lower our boats, we never obtained less water than 32 fathoms; and though we watched most attentively in the neighbourhood of the spot when we had got these soundings, nothing like a breaker was visible. Four hours were spent in most careful sounding. We found the banks small and steep, coming immediately from 40 to 60, and 90 fathoms. During these four hours we could not have been at any time further from the place laid down as Graham Shoal than one mile, and had there been any smoke issuing from any spot within five miles of us, it must have been observed. At 5, we ran back to the coast of Sicily, and obtained cross bearings of Cape St. Marco and Bianco to verify our position."

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ICEBERGS IN THE SOUTHERN OCEAN.—*Extract from the Sydney Herald, dated 29th Nov., 1839.*—"We have been favoured by Capt. Smith, of the ship *Orestes*, with an extract from his log containing particulars of having passed several icebergs a few weeks' sail from Sydney. 'Saturday, November 9th, 1839. At 2 P.M. saw two icebergs bearing north-east ten or thirteen miles; the largest and westernmost appeared a mile in length, of a square form, and perfectly level on the top, it being 60 or 80 yards above the surface of the sea; the other appeared about a mile in circumference, and due east from the former, four or five miles. We have run seven and a half miles in a due east course, placing the dangerous icebergs at this time (2 P.M.) in latitude 44° 30' S., longitude 87° 34' E. At 5 P.M. the largest iceberg bearing N.N.W. appeared like an island: at 3 A.M. saw an iceberg bearing S.W.: at 8 A.M. an iceberg 10 or 12 miles ahead: at half-past 1 P.M. passed within half a mile of an iceberg from 300 to 400 feet high: at 4 P.M. four other icebergs in sight bearing S.S.E. to S.S.W., 12 to 15 miles distant: at 6 P.M. six more icebergs seen, bearing E. by N. to S.E.: at 7 P.M. two icebergs seen ahead from off the fore-topsail yard, having now passed seventeen icebergs since 3 A.M. yesterday. At 3 A.M. passed within half a mile of a long iceberg on the weather bow: at 8 P.M. four other icebergs in sight to the westward; passed very near a sunken piece to leeward of us in latitude 44° 44' S., longitude 94° 48' E.—November 11th, at 4 A.M. passed another iceberg to the southward of us. This was the last in latitude 44° 44' S., longitude 100° E.; thermometer at 46.'

"The *Orestes* arrived Yesterday from Bristol, with 239 government emigrants, under the superintendance of Peter Leonard, Esq. The whole of these emigrants have arrived in a healthy state; and we have to report only the death of five infants, and one female adult, named Sarah Derrett, who died from consumption: certainly great credit is due to the captain, surgeon, and officers of this vessel for her cleanliness; and every person on board speaks very highly of their conduct during the whole voyage."

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LIVERPOOL.—In a former number, (p. 717, vol. 1838,) we expressed our approval of a plan invented by Mr. Tait, for deepening the beds of rivers and harbours, which has been tried at Liverpool with the desired success. Some correspondence between Mr. Tait and the parties at Liverpool has been referred to us, arising from the Dock Committee not

having in his opinion done justice to Mr. Tait,—withholding from him the merits and advantages of his invention. We have not room for the correspondence, but may briefly observe that as it is admitted that the method by which the Victoria channel at Liverpool *has been deepened*, is identical with Mr. Tait's, which he communicated by letter, dated 24th May, 1838; it appears to be an act of gross injustice to him not to allow him the credit of his invention, but to return him his plan in the middle of October following, because they had had under their consideration for some time, an apparatus prepared by their Marine Surveyor, which Mr. Tait naturally enough complains of as being the same in principle as his own. Is this fair play? It does not look much like it; and that is all Mr. Tait requires.

TABLE AND SIMON'S BAY.—*Cape Colony, April 21th 1840.*

SIR,—Your last September Number contains an introduction to Lieut. Bance's R.N. letters, which compels me to review them. The paper "Proposed light for False Bay" was a private memorial to Captain Beaufort. An anticipation (not disappointed,) that the patriotic zeal of that officer would elicit the sentiments of competent persons on the expediency of its object, caused me to throw out some crude suggestions to a gentleman whose unlimited means of information and experience rebut all "insinuations" of unworthy motives; when, however, you inadvertently published what was not intended for the public eye, it gave a harmless action, an invidious aspect. In the general sense of the term Port, the qualities of its immediate approaches are evidently identical; and by "Table Bay" I understand, the beaches which bound and shelter the anchorage and its access. Mr. Bance adopts more restricted limits, hence contradictions in "words," which I shall illustrate by one example. He asserts that in 1834, 1835, 1836, no vessels were "driven on shore" or "materially" injured by "stress of weather" in "Table Bay." I saw the brig Gondolier high and dry 1836, on the side of Robben Island facing the anchorage, having parted from her anchors in a gale, doubtless from "want of timely and proper precaution, or defective ground tackle." Now as Mr. Bance asserts that, "it is a very unusual circumstance which prevents my boarding a vessel any day in the year!!" perhaps he and his colleague are included in the "sweeping charge," against the management or equipment of all the vessels which have suffered in Table Bay. "Stress of weather" does not kill people in this parallel, accidents are equally effectual in putting them "*hors de combat*."

Mr. Bance's Criterion is a mis-statement, there is a partial error of about thirty on both sides of the account for 1838; when four hundred and thirty-two vessels entered Table Bay, ninety-six entered Simons Bay, shewing a measuring ratio greatly in favour of the latter.

The discussion of this subject, beyond what is due to myself, and to the interests of others, is better avoided, and, I therefore submit for your private perusal, the "facts" on which my paper was based, hoping that it will ensure some further notice of the insinuations conveyed by your introduction. Matters of opinion are, of course, free on all sides as the "chartered winds." Beyond those, which others will decide on, my paper to Capt. Beaufort contains no "errors" of the least consequence



to the merits of the question. Mr. Bance's letter is "unique" in the faculty of instilling erroneous impressions, by a strict adherence to "words."

I expressed my regret to that gentleman for the untoward publication, and therefore the mischievous interpretation he has placed on "tyrannical masters of merchant vessels" is less excusable, where he has forgotten that the great body of gentlemen equally above his delicate praises or my censure, who command the India and China Trade, are alluded to in a few preceding lines as commanders, and it is well known that the best find ill-disposed men troublesome near H.M. Ships.

Is he prepared to state that he has *never* heard unkindly expressions towards the "British Pennant," when the well known signal of a discontented crew has been flying in its presence? Is he ignorant that "dislike" and "afraid," are not synonymous? Does his term "masters," apply to all grades? It is doubtless zeal for the "oppressed," like La Mancha's Knight, which causes Mr. Bance to rescue these helpless victims.

I am, &c.

T. P. BARROW.

[We quite agree with Lieut. Barrow that the discussion of the subject beyond what is due to him, and the interests of others is better avoided. It is for the interests of others, and for promoting the general good that discussions in this journal take place; it was with this view alone that his paper was handed to us for publication, not "inadvertantly," and it is well known that much good is effected by such discussions in eliciting facts and placing them in a prominent view before our readers. Much yet, perhaps, remains to be told, of the comparative merits of Table and Simons Bays, what nature affords and denies to each, what the hand of art has already bestowed, or might supply to each; and we shall be always found at our post ready to assist in telling it.—Ed. N.M.]

DANTZIC.—The papers have informed us of late that the Vistula has overflowed its banks and forced a way through the barrier which separated it from the sea, where it ran parallel to the beach for some considerable distance before it arrived at its embouchure, due north of Dantzic. The effect of this overflowing has been to force a channel through this barrier, forming a mouth about a mile to the eastward of the old one. So uncommon an event has naturally excited considerable interest at Dantzic, and has occasioned various proposals to turn this freak of nature to account in forming a harbour for that place. The project which appears to have attracted most attention, is that of Mr. Pickering, an English resident, who proposes to lock up the old mouth of the river by gates, and thus convert the former channel into a harbour. It is said that a meeting of scientific men will take place shortly to take the subject into their consideration.

Rock.—We record the following from an American paper: "We learn from Capt. Crocker, of the General Jackson, that Capt. Halsey, of the whale ship Xenophon, of Sagharbor, reports a rock in lat. 31° 12' S., long. 178° 8' W., from London—bearing E.N.E.  $\frac{1}{2}$  N. from the French rock, which was just in sight from the masthead—the weather being very clear and sea smooth. The rock is about the size of a six-barrel

cask at the top, and even with the water's edge. The ship was within fifteen feet of it when discovered. Capt. H. is of opinion that it cannot be seen sixty yards distant."—*Newport Republican*.

**LAZARUS SHOAL.**—*Mozambique Channel.*—The existence of this shoal in lat. 12° 23' S., and long. 41° 20' W. in the northern part of the Mozambique channel, has been confirmed by Capt Cockle, of the ship *Reliance*, which ship grounded on it in 1833. Capt. Cockle describes it as being from 15 to 18 miles across, in a north and south direction; but both its position and extent are described as very uncertain by Horsburgh, (vol. 1, 4th Ed. p. 219,) and so much so that although in the old charts, and stated to be considered dangerous by the Portuguese, it appears to have been doubted and omitted in Capt. Owen's chart, to which Capt. Cockle has restored it.

**NASSAU LIGHT.**—*New Providence.*—The lamps and lantern of the Lighthouse on Hog Island, Nassau, have been recently replaced by others, similar in construction to those at Abaco; the light being 72 feet above the level of the sea, it may now be visible in clear weather, at the distance of

12.4 miles to an eye elevated.....	10 feet
13.8.....	20
15.7.....	40

*Extract of a Letter from an Officer.*

*Custom House, Cay West,  
Collector's Office, November 1st, 1839.*

**CAY WEST FLOATING LIGHT.**—The Light-Vessel for the north-west bar of this harbour, has been placed at her moorings. She lies about eight miles from Cay West, at the junction of the north and north-west channels, so as to serve as a guide to vessels entering either. Vessels from the westward, coming in by the north channel, will bring the Light-Vessel to bear *due south*, and run directly for her; and, on reaching her station, will then run for the light-house on Cay West. Unless the tide should be extraordinarily low, there is ten feet in this channel at low water, and twelve feet at high water. Vessels coming in by the north-west channel, will bring the Light-Vessel to bear *south east half east*, run for her, and then steer for the light-house as before. This channel is considered the best, having from one to two feet more water than the other. Masters of vessels going out from Cay West, will merely reverse the above directions. The Light-Vessel shows one light at an elevation of about fifty feet, which may be seen in clear weather nine or ten miles.

A. GORDON.  
*Col. and Sup't Lights.*

*From a Local Paper.*

**CAY SAL LIGHT.**—We extract the following from the Nassau Gazette, having yet seen no official announcement of this light.

ENLARGED SERIES.—NO. 7.—VOL. FOR 1840

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*Custom-House, Nassau, N. P.*

Her Majesty's Government having established a Light-house on the Salt Cay Bank, in the Florida Strait, from which a *fixed* light will be exhibited on the 15th day of February next, the following particulars of it, are published for the information of mariners:—

At the north-western extremity of the Salt Cay Bank, on the Elbow, or north-westernmost and highest of the narrow ridge of detached Barren Rocks, commonly known as the Double-headed Shot Cays, this Light-house has been erected, in  $23^{\circ} 56' 28''$ , north latitude, and  $80^{\circ} 27' 38''$ , west longitude.

Its base is 46 feet above high water, and the height of the tower is 54 feet.

The light is fixed and may be seen in all directions, except on the bearing of S.W. by W.  $\frac{1}{2}$  W., (magnetic) where, at the distance of about nine miles, it will be intercepted by Water Cay.

From the Light-house, the south-westernmost of the Double-headed Shot Cays bears S.S.W.  $\frac{1}{2}$  W., (magnetic) distant three and half miles.

The Florida stream is generally found to set strongly to the north-east, within a mile and a half of these rocks, but through the intervals of the Cays, the ebb and flood tides run rapidly off and on the bank, where it is high water at full, and change, at nine o'clock, and the tide rises from two to three feet.

The light being 100 feet above the level of the sea, it will be visible in clear weather, at the distance of

14 miles to an eye, elevated 10 feet,	
15 $\frac{1}{4}$ .....	20 "
17 $\frac{1}{4}$ .....	40 "
20.....	80 "

W. T. HAMILYN,  
*Collector.*

*Bahamas, 22d, Jan. 1840.*

**FLEETWOOD LIGHT.**—Port Fleetwood on Wyre, Lancaster, May 6th, 1840.—(Bearings Magnetic; Distances, Nautic.)—The Directors of the Preston and Wyre Railway, Harbour, and Dock Company hereby give notice, that, on and after the evening of the 6th of June next, a **FIXED WHITE LIGHT** (of dioptric order,) will be **EXHIBITED** at the Light-house recently erected upon the north-eastern elbow of North Wharf-bank, which outlies Rossall Point, forming the southern horn of Lancaster bay. This said Wyre Light will denote the western rounding point from sea up to Port Fleetwood, known as the foot of Wyre, situate 30 miles north-eastward of the Liverpool Light-ship, 54 miles E.  $\frac{1}{4}$  N. of point Lynas, 65 miles E.  $\frac{1}{4}$  N. of the Skerries, and 8 miles S. by E.  $\frac{1}{4}$  E. from the old established revolving light on Walney Island, which marks the northern horn of Lancaster bay. Wyre light-house is elevated 45 feet above half-tide level, transmitting its light over a ten-mile horizon, presenting by day a superstructure of 20 feet diameter, supported on screw-pile pillars, and provided with a deep-sounding self-acting bell, which tolls three strokes every minute in foggy weather. The structure stands two miles off, (due north,) the high-water shore at Fleetwood

town, thereby guarding the approach in 20 fathoms water one mile off, and 3 fathoms within a quarter of a mile; whilst, not brought eastward of E. by S.  $\frac{1}{2}$  S., or westward of S.W.

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**THE NEW LIGHT AT THE NEEDLES.**—*Yarmouth, (I.W.)*—(From a Correspondent).—It is the general opinion of mariners and the pilots of this Island, that the attention of the Trinity-House should be directed to the new red lights. They are considered on all hands inferior to those formerly exhibited, and cannot be seen at any thing like the former distance; and when observed, instead of being a bright red light, it appears comparatively dim, almost as if seen through a haze, and exhibits but a very faint red colour. It is suggested that if the plates or frames of the glasses (windows) were red, and the cylinders of white glass, as before, the reflection would be far superior. On visiting the light-house, the present red-stained cylinders appear to exhibit no proportion to the expanse of the plates; and, by the keeper's account, the inner part of the tower is by no means so light and brilliant as heretofore. St. Catherine's light shews splendidly.—*Shipping Gazette.*

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**AVON LIGHT.**—A light will be exhibited for the first time in the newly erected light-house at the entrance of the River Avon, on the evening of Monday, the 25th instant, and thenceforth continued every night from sun-set to sun-rise.

Mariners will observe, that this light-house is situate on the north-eastern side of the entrance to the said river, and that the light, which will be a fixed White Light, will burn at an elevation of 73 feet above the level of high water spring-tides.—*Shipping Gazette.*

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**PORTSMOUTH FLOATING BRIDGE.**—No sooner do we feel the benefits of any invention, than we wonder how we have done without it before, and this is precisely the case with the floating-bridge just established at Portsmouth. No sooner was steam established at Liverpool than the old watermen's boats which plied across the Mersey gave place to trim little steamboats; rendering what was previously a slow, wet and disagreeable transit, and that not always secure, a pleasant and safe passage at all times, and certainly it is some matter of surprise, that Portsmouth harbour was not traversed by a steam-bridge before the year 1840.

The company have kept their word to the very letter, and have made 296 trips across in six days being four more than were calculated. It is true the weather was fine but still the work was done, and though the weather may occasionally interfere with this regularity, still to a certain extent it will always be depended on. The number of carriages conveyed across in the six days amounted to 532 or nearly 90 per day, and these not mere gigs and other pleasure or curiosity vehicles, but good honest carts, waggons and coaches, all falling as naturally into the new transit as if it had been an old affair. The passengers amounted to nearly 1300 per day, the vessel work very easy, without jerk and is quite under command. The following extract from the Portsmouth paper will give some idea of the passage.

On the flood tide, one morning, the following were the times she occupied in crossing :—

6m. 50s. to Gosport	6m. 14s. to Portsmouth
6m. 25s. to Gosport	6m. 38s. to Portsmouth

The same day, on the ebb, she was 10m. 5s. to Gosport, being stopped 3½ minutes by a vessel dropping out ;

8m. 15s. to Portsmouth	8m. 47s. to Gosport
9m. 45s. to Portsmouth	8m. 0s. to Gosport
7m. 15s. to Portsmouth	

There was no wind the whole day. Point-street, since the working of the Bridge, has assumed quite a gay appearance, gigs, flies, waggons, carts, carriages, and horses, now pass and repass to the great delight of the residents there, and we trust, ultimately, to their profit.

### MARRYATT'S SIGNALS.

*Liverpool, April, 1840.*

SIR.—I have had on many occasions cause to regret that Captain Marryatt's Code of Signals were not to be found on board every British merchant vessel ; their trifling cost, the facility with which they may be used, and their very great utility, I think warrant it. As a proof I will state an instance in which through their instrumentality the vessel under my command was saved, if not from shipwreck, at least from any serious injury.

We were sailing through Torres Straits in company with another vessel, both ships having on board Capt. Marryatt's Code of Signals. Our consort (drawing eighteen inches less water than ourselves, and her commander having passed those Straits only four months previously) led the way. We were sailing at the rate of six miles per hour under plain sail, and the mainsail up, when our consort grazed on one of the innumerable coral patches which intersect those straits. Fortunately she did not stop, but immediately hoisted the signal *Starboard*, which we had just sufficient time to do, and clear the danger, and on passing it had the appearance of a ridge of prickly coral, with deep water all round it.

The vessel I command belongs to Liverpool, and we have on board what is termed the Liverpool Signals ; or more properly speaking the vessel's number, as registered in Watson's telegraphic list of ships' names : but what use would this number have been to us, in the situation I have described (even had our consort his number also) ? None whatever, in fact its only use is, that in passing Holyhead, or meeting a vessel having on board the list of ships' names before alluded to, that by hoisting our number we may be reported ; while by means of Captain Marryatt's Code of Signals any telegraphic communication whatever may with facility be transmitted, and frequently the loss of many lives and much property averted.

Notwithstanding, I really do believe that not more than one vessel in ten is provided with them ; and as regards Liverpool not one in fifty, although most of the latter have their Liverpool Number. Much ! very much good has been effected by your widely circulated and truly valuable periodical. We seamen especially have much to thank you for :

in it you not only furnish us with the most useful information, connected with our profession; interspersed with your own valuable remarks, but also allow us through its medium to make known our grievances, which if not remedied, at least are made public, and perhaps may be.

Did shipowners and underwriters but properly appreciate the value of these signals, no ship would be without them. How much more frequently would they hear from their ships, and as I said before many serious losses and accidents would be averted. Shipmasters should apply for them as part of their stores, if not already provided, and explain the utility of them to their owners, many of whom are not aware of their existence, and few I believe so parsimonious, but would supply them, were they made aware of their intrinsic value.

Should you think the above worthy of inserting in your valuable pages, you will by so doing confer an obligation on

ONE WHO HAS ALREADY MUCH TO THANK YOU FOR.

*To the Editor of the Nautical Magazine.*

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#### PORTER'S ANCHOR.

Sir,—In your last number, for April, page 276, I observe that “a Seaman” has put some queries, touching the efficacy of Porter’s Patent Anchor. Now sir, such an anchor I never saw or heard of until as above. However, let the anchor be what it may, the Seaman in my opinion has not given it a fair trial, as demonstrated in figure (5,) as in all five positions of the anchor there does not appear to be any cable lying on the ground, but at an angle of about 22 degrees from the ring to the ship’s bow, and I think every seaman must know, that no anchor can possibly be expected to hold in such a position. In respect to the cable, if a heavy strain comes on it, as in figure 1st., it will certainly raise the shank off the ground, as in figure 2, at the same time Rodger’s anchor, which has a shorter shank than the old fashioned anchors, will not be so easily lifted off the ground as those that have longer shanks. Commanders of vessels, however, never try the experiment, but always allow of a proportion of cable lying on the ground, and so much according to the strength of the wind or tide where they may come to an anchor, before the attempt to snub them. So much cable should be veered as is sufficient to hold them, when brought up, as when an anchor is let go, blowing hard, it is always better to give the ship cable freely and not to check her, as by so doing she will of course in going astern turn broad-side to the wind, and in such position is easier brought up, than when going direct astern. However, I have no idea of having an anchor formed, so as the upper arm should fall down on the shank, when the lower arm has hold of the ground, merely for the purpose that the anchor should not be fouled on the ship swinging, breaking her sheer, or in a calm when the tide changes, for in such cases there will not be so good a look-out kept, when at anchor, as there now must be, for the turning of tide or at least when it eases, for the watch on deck. (*I speak particular in respect to coasters,*) to call the mate, whose duty it is to swing the ship, and a very nice part of seamanship it is to be perfectly acquainted with; so much so,

that it is a question generally asked by a captain when engaging a mate, "if he can keep a ship clear of her anchor in a tide way." When a ship is riding a weather tide, and breaks her sheer, in most cases if a proper look out is kept, and attention paid, the anchor will not be fouled: but in case the ship does pass over her anchor, then it is proper to sight the anchor, before the weather tide is done, to make sure of having a clear anchor by the time the lee tide makes. Also in a calm when the tide changes it is always customary to shorten in the cable to up and down, and then if there should be a little lift or swell, by laying your hand on the cable close to the hause hole, you will feel the cable give a little jerk, when the ring rises and falls on the shank of the anchor, if so the anchor is sure to be clear. I am not quite aware of the particular construction of the above anchor, but so far as I can judge from the statement in the page before mentioned in your last number, viz., for April, I should not like to trust to it, in any confined roadstead, when blowing fresh. I however must contend, that every ship while at anchor should always have one hand on deck, and he must have something to look out for, if not in all probability, he will bring his stern frame to an anchor on the windlass end, his head on his arms on the bit-head, and sleep his watch out very comfortable, and perhaps the next watch too, unless he should be roused by a steamer running over him. A sailor must always be on the alert while on deck, night or day; if not he becomes like a country plough-boy after his day's work is over. I am afraid I have spun this yarn longer than is necessary for the purpose intended.

I have not the least doubt, but the *Seaman* himself is quite aware of the answer, any sailor would give to his queries: but, he might give one more, viz., in case of a ship parting from such an anchor, and leaving only a few fathoms of cable from the clinch, the buoy gone, or buoy rope broke, perhaps in weighing it, which accidents are as likely to occur with this anchor as with any other; how is it to be recovered? not by sweeping for it, *that's certain; how then?*

AN OLD NORTH SEA CRUIZER.

*To the Editor of the Nautical Magazine.*

*Ipswich, May 2d, 1840.*

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#### CAPE LIGHT.\*

As it is not impossible that this much-talked-of Light may suddenly appear, it may be as well to place before our readers the following opinion of the hydrographer to the Admiralty, on the subject of its position.

Cape Recife being the general land-fall for homeward bound ships from the Indian seas, a light placed there would enable them to run for it fearlessly by night, because by passing three or four leagues to the southward of it they would be sure of avoiding the Doddington Rock, which lies nearly in the same parallel. Even to the eastward of the Cape, this light might be a safeguard to that dangerous rock, for they are only twenty-four miles apart, and in that clear climate a good light would be very visible from aloft at that distance.

\* In our last volume, page 339, will be found a plan shewing the two proposed positions for it.

This light might also be so placed as to lead clear of the Despatch Rock in Algoa Bay, which would be a great benefit to the trade of that thriving settlement; and further, the sheltered anchorage there might by this light become a useful resource to disabled vessels beating to the westward.

Cape Agulhas, the extreme point of Africa, is thirty miles to the southward of the Cape of Good Hope, and as all outward-bound vessels which do not run down their easting in a high latitude should keep near the shore, (where they find much less current than on the other part of the bank,) so they should be able to make this point by day or night. Yet it being a low obtuse elbow of land it is never distinguishable in passing whether to the eastward or westward, and a lighthouse there would be, therefore, essentially useful, particularly to H.M. ships running for Simons Bay.

It has been too generally taken for granted that during the strong westerly gales of winter, the current always sets to windward. Horsburgh admits that it is "sometimes completely repressed for a short time, though it afterwards returns with double strength;" ships therefore, assuming that the current has continued, imagine themselves far to the westward of the Cape, and as in the fatal cases of the Arneston, Jesse, Doncaster, and others, they bear up too soon, and find themselves either embayed or on shore. It is true that the weatherly current is strongest on the outer edge of the bank, and that vessels should generally beat up about the latitude of  $36^{\circ}$ ; but it is also true that those which keep near the shore in winter find the sea so much less violent that they get round the Cape of Good Hope much more expeditiously.

To the eastward of Cape Agulhas there is an extensive and safe bight called Struys Bay which is often the resort of crazy ships, where they find fine weather and smooth water, and by making short tacks there for a day, sometimes for a few hours only they are able to elude the hurricane which continues outside. It is evident that this resource would be rendered infinitely more practicable by having a lighthouse on the pitch of the Cape.

On the whole it appears that both these lighthouses would be highly advantageous to the commerce of this country which passes the Cape, and which by the latest returns amounts to, out and home—360,500 tons. One penny per ton on this would produce £1,500, far more than sufficient to keep up the two establishments, if they were once constructed. Besides, it is probable, the Dutch and Americans, and other nations would readily contribute a certain quota, and part of the Recife expenses might, perhaps, be contributed by the settlement at Algoa, to which it would act as a port light.

Possibly government would have to build only one of these lighthouses, as some of the subscribers to a proposed testimonial in honour of Capt. Horsburgh, have suggested that the fittest monument that could be devised to commemorate his great services, would be the erection of a lighthouse, which should bear his name: and certainly Cape Agulhas which may be said to be the entrance to the wide field of his labours, would be the most appropriate spot in the world for its erection.

21st June, 1837.

F. B.



## HARBOURS.—SOUTH EASTERN COAST.

Return to an Address of the Honourable House of Commons, dated 2d June, 1840, for a Copy of the Report of the Commissioners appointed to Survey the Harbours of the South-Eastern Coast.

*Ordered by the House of Commons to be printed, 5th June, 1840.*

Admiralty-office, Somerset-house, 30th May, 1840.

SIR.—Having completed the inquiry on the subject of the harbours on the south-eastern coast of England, we request you will lay before the lords commissioners of the Admiralty the result of our investigation.

Mr. Wood's letter of the 25th of July last, conveyed to us the directions of their lordships "to visit the coast between the mouth of the Thames and Selsea Bill, and to examine and report on the state of the existing harbours between those points, with reference to their being available as places of shelter for vessels passing through the Channel, in case of distress from weather; and also as places of refuge for merchant vessels from enemy's cruisers in time of war; and more especially as to their being made stations for armed steam vessels employed for the protection of our trade in the narrow part of the Channel;" for which purpose, the harbours being accessible at all times of tide, and their capability of defence were stated to be most important considerations.

Their lordships further desired us, "to report as to what situations we would recommend as best calculated for these various purposes; whether in any of the existing harbours, or at any other places within the assigned limits; and also what works would be necessary to render them available, and what the probable expense of the undertaking would be."

In compliance with these instructions, after several preliminary meetings to arrange the course of our proceedings, &c., we embarked in her Majesty's steam-vessel *Fearless*, on the 8th of August, and visited and inspected the harbours and coasts within the limits pointed out.

At the various places which we examined, we conferred with the commissioners, harbour-masters, pilots, and other individuals, whose local experience enabled them to afford us information as to the peculiarities of the ports, or who wished to submit any plans or suggestions for the improvement of the existing, or for the construction of new harbours.

During the inspection, we found it necessary that we should be furnished with accurate surveys of certain portions of the coast, before we could form a correct opinion as to the practicability and expense of the works we might propose; and on our return to London, agreeably to their lordships' directions, we adjourned our meetings during the time these surveys were in preparation.

We were again summoned to assemble on the 27th of February, 1840; and the following surveys, which had been completed in the interim, by Captain Bullock, (who was ordered by their lordships on this special service,) were laid before us, viz:—

- No. 1. The coast between Margate and the North Foreland.
- No. 2. Dover Bay, from Shakspeare Cliff to the South Foreland.

No. 3. The coast of Hastings, from St. Leonard's Eastgate to Roch-a-nor Point.

No. 4. Beachy Head to Langley Point.

No. 5. Newhaven, and the coast from Burrow Head to Seaford Head.

No. 6. Shoreham, and the coast adjacent.

Since receiving these surveys, we have given the fullest consideration to the important subjects submitted to us; and we have now the honour to lay before their lordships the result of our inquiry.

Before entering into the details of the subject, it will be proper to state that a question arose whether it fell within the province of the committee to offer any remarks on those harbours which were found on inspection to be incapable of access at all times of tide.

A perfect harbour of refuge we understand to mean such as is capable of receiving any class of vessels under all circumstances of wind and tide.

Now, there is no such harbour along the whole range of coast from the Nore to Selsea Bill; nor are any of the existing harbours capable, by any improvements or alterations to their present entrances, of being made accessible at low water even to the extent of six feet, with floating berthage inside.

Most of the harbours on this part of the coast are formed by piers carried out from the main land, and are tidal harbours, dry or nearly so at low water, with bars at their entrances; these harbours would therefore be excluded from our consideration, if their capability of being made available at all times of tide was to be considered a necessary condition.

There can be no doubt, however, that the existing harbours are of importance to merchant vessels, of the smaller classes at various times of tide, according to their draught of water; and though they may not be capable of receiving a large ship, may afford shelter to a smaller one; and thereby become a harbour of refuge to a class of vessels the most numerous and least prepared for heavy weather, or to escape an enemy in time of war.

The value of such imperfect harbours is also increased by the diminution of late years in the size of trading vessels. The large class of ships which were employed in the West India, and the still larger in East India trades, have been succeeded by vessels of much smaller tonnage. The coasting and coal trades are carried on in vessels of comparatively light draught of water; and steam vessels, whose draught is easily compared with sailing vessels of equal tonnage, are rapidly increasing in number, and often supply the places of the larger class of vessels which were formerly employed in the merchant service.

To these vessels, therefore, some of the harbours at the present moment are open for several hours of each tide, and a few of them may be capable of being rendered more accessible by the removal of obstructions at their entrances, or by additional works.

This part of the coast possesses the advantage of a good rise of tide; and though the harbours are only available under special conditions, the numerous instances of shelter and protection afforded by each to ships in distress serve to show their value in a national point of view, and the importance of not allowing them to fall to decay.

Although, therefore, we are convinced that none of them can be made perfect harbours of refuge, we still have considered them as falling within the scope of our inquiry; not as requiring from us specific details of the works which may be deemed desirable, but to explain briefly their present extent and capabilities, and to note generally what may have presented itself to us in the way of improvement; and we therefore propose to consider the objects of the inquiry under two heads, viz: 1st, the state and capabilities of the existing harbours, &c., [in the order in which we visited them;] and 2dly, the situation best calculated for harbours of refuge, and as stations for armed steam vessels in the event of war; confining to harbours for these latter objects, the necessary condition of being accessible at all times of tide.

The river Thames is usually considered to terminate at the Nore. From the isle of Sheppey to Westgate Bay, the numerous sands and shoals which extend in all directions along the coast prevent the approach of vessels of any size; and the cliffs, which consist of sand and clay, are gradually yielding to the action of the sea, and supply a constant source of materials for fresh accumulations.

We did not, therefore, consider it necessary to visit this part of the coast, where no harbours at present exist.

#### 1. MARGATE.

Margate was the first place at which we landed after leaving the river.

The harbour is situated in a small bay between two extensive flats of chalk rocks, the Nayland on the west, and the Fulsam on the east, both of which are covered before high water. The artificial harbour is formed by a stone pier, which commences on the eastern side of the bay (around which the town is situated,) and extends 800 feet to the westward, in an irregular curve, leaving the entrance open to the north-west.

The rise of average spring tides at the pier-head is about 13 feet, and that of neap tides, 8 feet; but spring tides ebb outside of the pier-head, and leave the harbour dry at low water. A wooden jetty has been run out from the foot of the pier, over the Fulsam rocks, to the distance of 1,100 feet, for the convenience of passengers, &c., landing from or embarking in the steam-packets at low water.

The pier and jetty belong to a joint stock company, the chairman, surveyor, and harbour-master of which attended us, and gave us the information we required.

It is evident that the harbour in its present state possesses none of the requisites of a harbour of refuge, and can only be considered valuable, in a national point of view, as affording the means of supplying pilots, anchors, and cables, &c., to vessels driven into the roads in distress.

The surveyor, by order of the directors of the pier and harbour company, prepared and submitted to us a design for constructing a harbour of refuge at this place, by extending curved piers upon the Nayland and Fulsam rocks, enclosing an area of considerable extent on and around the site of the present harbour, and leaving an entrance of 300 or 400 feet in width towards the north-east, with 16 feet depth of water at the mouth.

The expense of such a work is estimated by the surveyor at 275,000*l*. but the costs of deepening the harbour is not included in this sum: and as the bottom rises gradually to the beach, the area possessing even 8 feet water would be very limited, and considerable excavations would be necessary to render it available to any extent.

A second design was submitted to us, said to be formed on a plan suggested by the late Mr. Rennie, who is quoted as having thought highly of the situation for a harbour of refuge. It consisted of an outer harbour of less dimensions than the one proposed by the directors of the pier and harbour company, enclosed by walls; and an inner basin with gates to shut in the water at flood-tide, for the purpose of clearing the entrance at low water.

The power of sluicing at so great a distance as that proposed in this plan could only be applied with advantage to a surface dry, or nearly so, at low water; and the idea of keeping a deep water harbour of any useful width, clear by means of such sluicing, appears to us to be impracticable.

Several other plans were brought before us for the construction of a harbour at this place; but as we shall have occasion to show in the sequel that other situations possess greater advantages for the attainment of the objects pointed out by their lordships' instructions, we do not consider it necessary to enter into any details of these suggestions.

#### BROADSTAIRS.

From Margate we proceeded to Broadstairs. The harbour at this place is formed by a wooden pier, about 100 yards in length, extending from the northern side of a small bay.

The entrance faces south-west, but the harbour is much exposed to the sea, which is driven in by winds from the eastward.

At spring tides there is about 16 feet water at the pier-head, and 10 at neaps, but the whole harbour is dry at low water; and, during spring tides, nearly 100 yards outside the pier is left uncovered.

A plan was submitted to us by the harbour commissioners for constructing a large harbour, by extending piers from the opposite extremities of the bay, 320 yards into the sea, by which 8 feet in the entrance at low water might be obtained. But we do not consider it necessary to enter into further particulars of this project, as it does not appear to us that a work of such magnitude is required in this situation, or that the advantage anticipated would be commensurate with the expense.

The harbour is managed by commissioners, under an act of parliament passed in 1792.

#### RAMSGATE.

Ramsgate harbour, which was the next place we visited, consists of an inner and outer basin, formed by substantial stone piers, extending 1,310 feet into the sea, and encloses an area of 42 acres.

The inner basin is used as a wet dock for vessels to load or unload their cargoes, &c., and contains a dry dock where vessels of 300 or 400 tons burthen can be repaired, &c.

The entrance to the outer harbour is 200 feet in width, and opens to the south-west.

The rise of average spring tides is from 13 to 14 feet at the pier-heads, and of neap tides nine feet, giving in the entrance 19 feet at high water of spring tides, and 16 of neaps.

For the purpose of scouring the outer harbour at low water, powerful sluices have been constructed through the cross wall of the inner basin, the discharge of water from which serves to keep open the channel to the inner basin and the gullies which extend round the harbour at the foot of the piers, in certain portions of which near the entrance of the harbour, the depth increases to about six feet at low water.

The mud which remains in the middle of the harbour serves as grounding banks, and affords a soft bed on which vessels entering with loss of anchors and cables can take the ground in safety, and these banks are considered essential for the purpose.

A new communication between the outer and inner basins has lately been completed, the gates of which are 42 feet in width.

One of Morton's patent slips has also been laid down in the outer harbour, on which steam-vessels, &c. of too great beam to enter the graving dock in the inner basin can be hauled up and repaired.

The situation of this harbour appears to have been selected more from its position with reference to the Downs than from any local advantages afforded by the formation of the coast. There is no natural back-water, so essential in tidal harbours for the purpose of scouring, nor does the line of cliff offer shelter against any winds but those which blow from off the land; and yet in this situation, without one natural facility but that of a chalk foundation, a harbour has been constructed which, notwithstanding its imperfections, is undoubtedly the best on the south-eastern coast of England.

During gales from the southward and westward, which throw a heavy sea into the Downs, and render the anchorage insecure for heavily-laden coasters, and merchant vessels of the smaller classes, frequently unprepared for riding in open roadsteads during heavy weather, this harbour affords a place of shelter where vessels of considerable draught of water may run for protection at tide time.

By the accounts we received from the harbour master of the number of vessels which have annually sought shelter from weather, &c., since the completion of the harbour, it may be inferred that the object for which it was constructed, viz., an asylum for ships in distress in the Downs, &c., has been to a certain extent attained.

No plans for the improvement of this harbour have been submitted to us; and from the nature of the bottom outside, which consists of chalk rock, with not above six feet water at some distance from the harbour's mouth at low water spring tides, it is obviously incapable of being rendered accessible for vessels drawing more than that depth of water. It cannot, therefore, be considered a perfect harbour of refuge, nor is the situation eligible for the purposes pointed out in their lordships' instructions.

The care and management of the harbour is placed, by Act of Parliament, in the hands of trustees.

#### DEAL AND SANDWICH.

From Ramsgate we proceeded to Deal, where a deputation from that town and the borough of Sandwich waited upon us, and submitted to

our inspection plans for the construction of a harbour on the beach, with docks, &c., to communicate with the latter town; the river Stour, which enters the sea through the Sandwich flats, being proposed to be converted into a backwater, for the purpose of scouring the entrance.

The scheme has been under contemplation for many years, but nothing has been undertaken towards carrying it into execution.

We thought it right, however, to inspect the coast in the neighbourhood of the site of the proposed harbour, to ascertain the feasibility or otherwise, by an extension of the plan, of rendering it subservient to the objects of our inquiry.

The shingle, which first makes its appearance about a mile to the northward of Sandown Castle, extends in a vast bank along the shore towards the South Foreland, and is continually moving by the action of the waves in the direction of the prevailing winds, and forming accumulations to the northward. This is an objection to the construction of a harbour on this part of the coast, and it is very doubtful whether vessels in distress in the Downs could make use of one in this situation. These reasons appear to us to render the plan ineligible.

The situation to which we next directed our attention was the space within the Break-sand, and the expediency of enclosing the Small Downs, and the area within, by extending a breakwater along the sand, and a pier from the shore. The magnitude and extent, however, of such a work, which would require a breakwater and pier of upwards of five miles in length—the small depth of water at the northern entrance, and the uncertain nature of the foundation—induce us to abandon the idea of a harbour of refuge at this place.

#### DOVER.

We next visited Dover. This harbour from its proximity to the French coast, and as the principal port of communication between Great Britain and the continent, has been regarded at all times as a place of the greatest importance.

We shall have occasion to refer to the situation in the latter part of this report; and it will only be necessary in this place to give a brief description of the harbour in its present state.

It consists of an outer and an inner basin, with a backwater which opens into the latter, called the Pent.

The outer harbour contains an area of seven acres and a half, the inner basin six acres and a quarter, and the Pent eleven acres and a half. A wet dock, of an acre and a half, opens into the western side of the outer harbour, which again communicates with a graving or repairing dock.

The entrance between the pier-heads (which are partly formed of stone and brickwork faced with wooden piles) is 110 feet in width, and opens to the S.S.E.

The rise of average spring tides is from 18 to 19 feet, and of neap tides from 12 to 13 feet; but the depth at high water in the harbour at spring tides is only 17 to 18 feet, and in the basin 16 to 17 feet, and about three feet less during the neaps.

The harbour is therefore left dry at low water.

The bottom consists of chalk, on which a deposit of mud in certain places has accumulated, but not of sufficient depth to enable heavily

laden vessels to take the ground with safety, especially during easterly winds, when from the confined area of the outer harbour, and the rebound from the upright walls, there is a considerable agitation in the water.

During south-westerly gales, vessels experience difficulty in entering, from the heavy sea to which the harbour's mouth is exposed; and another formidable obstacle arises from the shingle bar, which winds from this quarter throw up across the entrance, and which at times has rendered the harbour inaccessible for several weeks together. Numerous plans and suggestions have been devised, and large sums of money expended for remedying this evil.

Formerly there were only three sluices or culverts, communicating by means of a pipe with the inner basin; but since 1837, a new and expensive work has been completed, consisting of a brick reservoir in the western pier, communicating by means of a tunnel 30 feet in width and 16 in height, with the inner basin and Pent. From this reservoir, five new sluices, seven feet in diameter, lead to the extremity of the pier-head; and from the powerful volume of water thus discharged, and the impetus acquired by the proximity of the reservoir, it has generally been found sufficient, with the assistance of the sluices in the cross-wall, between the basin and the outer harbour, to remove the shingle from the pier-head, and keep the channel clear to a level below that of the harbour's bottom.

We have been informed that since the construction of this work until January last, no instance has occurred of Her Majesty's steam-packets being prevented from entering the harbour at tide-time, in consequence of the bar. But during the violent gales which took place in the latter end of the month of January and beginning of February in this year (1840), the government packets were ordered to proceed to the Downs, to avoid the liability of being shut into the harbour by the accumulation of shingle and the heavy sea at the entrance. There were, however, but three days during which vessels were actually excluded.

It should be observed that these sluices, though efficacious to a certain extent, are not capable of removing the obstruction altogether. The force of the water, which at its exit from the culverts is very great, loses its impetus as it spreads over a large surface, and forces the shingle to a comparatively small distance, where it is liable to form banks beyond the power of the sluices.

With regard to the improvements which might be made to this harbour, it appears to us that the general enlargement of the harbour, the inner basin and Pent, and the widening of the internal communications, would be most desirable, as well as the extension of the stone groin, called Cheeseman's Head, on the western side of the harbour's entrance. But these suggestions, so far as regards the entrances, will be much modified in the event of a harbour of refuge being constructed at this place.

Various plans and suggestions for the improvement of the present, as well as for the formation of a new harbour, were submitted to us by Colonel Williams, Lieutenant Worthington, Mr. Jeffery, Mr. Stuart, Mr. Tait, Captain Meriton, and several other gentlemen; but as we shall have occasion to recommend a plan for the attainment of the objects of our inquiry, in the subsequent part of this report, we do not consider it necessary to enter into the details of these propositions.

The harbour-master and other officers of Dover, and pilots belonging to this, as well as to the other Cinque Ports, waited upon us by order of his Grace the Lord Warden, and gave us any information we required.

The harbour is managed by commissioners, of whom the Lord Warden is chairman, *ex officio*.

ROCK IN JURA SOUND, *Hebrides*.—The following account of a dangerous rock in the middle of the channel of Jura Sound, has been transmitted by Capt. Beechey, R.N. commanding the *Lizard*.

*Coast Guard Office,*

*Leith, 8th June, 1840.*

“Sir,—I have received directions from the Comptroller-general of Coast Guard to acquaint you that the *Mary*, one of the small tenders on the Coast Guard establishment in Scotland, lately struck on a sunken rock E.N.E., one mile from the Isle of Ruesker in the Sound Jura, and not laid down in any chart: its supposed circumference not exceeding a cables’ length, a rapid tide running directly over it ten miles per hour at full and change, proportionally less at neap tides, and not approachable except in slack water, when five fathoms is found close to all round it.

I am, &c.

(Signed)

J. J. ARROW,

*To Captain Beechey, H.M.S. Lucifer, Stranraer,*

*Act. Insp.-Genl.*

THE “FIRE-KING” STEAMER, *versus* THE “RUBY” STEAMER.

*22, Fludger Street, Westminster,*

*23rd June, 1840.*

Sir,—In a letter which appeared in your valuable Magazine for this month, page 449, signed, “A. Billings, manager of the Diamond Steam Packet Company,” Mr. Billings challenged the world that he was ready to “match the Ruby to run from Gravesend to Margate and back for 200 guineas, against any boat afloat, whatever may be her size, power or build.”

The challenge was distinctly given to any boat afloat, and he said, (as “manager of the Diamond Steam Packet Company”) “I am ready.”

I am sorry to say, I find the “Ruby” is not a true one as you shall see.

I accepted the challenge through Mr. Roney, the manager of the Polytechnic Institution, immediately, and submitted that the conditions should be to engage to run on a certain day, 3 weeks notice to be given, —to deposit 200 guineas each,—the course to be from Gravesend round a boat moored off Margate Wood pier, time of starting to be named at once, and to take all chances of weather,—sails to be used or not as the challenger pleases.

Here I will only observe that as I should have to get the “Fire King” round from the Clyde, a distance of 850 miles, I stipulated for the above condition as to time, believing the “Ruby” to be ready.

On the 13th, Mr. Roney received for answer from Mr. Billings, (but not signed by him as manager of the Diamond Company,) asking “the name of the boat, her tonnage and power, and the time she has been running: when I, (*i. e.* Mr. B.) shall be willing to enter upon the



terms of the match." Having read so much of his answer and finding that his former words "*any boat afloat*," and his being "*ready*," were now appearing in a new light, I was amused to find the following philanthropic evasion thrust in, "provided that your vessel is worked by low pressure steam, as I feel convinced that the Diamond Steam Packet Company would not on any account whatever, endanger the lives of their fellow creatures, by permitting their boat to enter into a contest with any vessel propelled by so hazardous an agent as high pressure steam;" and his letter concluded, "I shall be obliged by an answer to the foregoing, before entering upon the details of the match."

I protest, that my regard for the lives of my fellow creatures, is just as great as that of Mr. Billings and his Company, and I do consider that part of the letter mawkish in the extreme.

But the "*Ruby*" was not to get off the match quite so easily. I answered in the following words, "that I accepted the published challenge on the part of the owner, of the "*Fire-King*" of 663 tons, and with 57½ inch cylinders, *low pressure*.—She is private property, and on no station for passengers,—she has been afloat to my knowledge 7 months,\* but that has nothing to do with *your* challenge further than that the '*Fire-King*' comes within the words used by you,—"*any boat afloat*, whatever my be her size, power, or build." Again, I pressed him to conclude the terms of the match, and signed myself as agent for Robert Napier, of Glasgow, who owns the *Fire-King*.

Again, I found the "*Ruby*" at fault, for Mr. Billings replied on the 15th June, that as the "*Fire-King*" is *low pressure*, "there could be no objection to make the match, but that his challenge was published when the *Ruby* was lying up in dock," and says he, "at the present time the season is at its height, and all the boats of the Diamond Company are in full employment, and the *Ruby* could not be spared off her station just now, she being their principal boat. You must therefore let the match stand over until the end of the season, when the *Ruby* can be withdrawn from her station for a few days for the purpose, if, (mark the saving word "*if*,") the conditions are agreed to."

To this I answered, on the 16th June, "your favour of the 15th has I must say, surprised me. In this month's Nautical Magazine, you published your challenge, wherein you had to repeat you were '*ready to match the Ruby to run from Gravesend to Margate and back for 200 guineas against any boat afloat, whatever may be her size, power, or build.*' This was published on the first of this month. Mr. Robert Napier, the owner of the *Fire-King*, met with your challenge some days afterwards, in Glasgow, and although much disinclined to race, he could not allow it to pass unheeded or your ship to be published as faster than the *Fire-King*:—He lost no time in instructing me, and on the 9th instant, your challenge was accepted in London: You publicly stated that the *Ruby* was *ready* both last month and this month, *after your 'season' had commenced*, but now when you have learned that the *Fire-King* accepts your challenge, you object to run until after your '*season*' has finished. I therefore now call upon you, and those concerned with you, to complete the match, as you are bound in honour to do within a reasonable time.

"Requesting the favor of an immediate answer,

"I am, Sir, &c."

\* She has been afloat much longer.

My next and last letter, from Mr. Billings, begs me to recollect that the Ruby is the property of a "public Company, whose engagements being completed for the season, they will not permit the boat to be withdrawn at present from her station," so that the grand challenge ends thus in nothing,—she is neither *ready* nor willing.

I enclose you a copy of the whole correspondence that you may see I have in this letter stated the matter fairly, and I am confident your readers will conclude with me that the Ruby shuns the trial altogether, and many of your readers will think as I do, that the gasconade challenge was given in Mr. Billings's letter, (which by-the-bye condemns "swaggering" and "boasting,") merely to puff the Ruby, or her engines, in the vain confidence that no one would accept it.

I beg to assure you, I intend nothing disrespectful to Mr. Billings, or his Company, or to those behind the scenes. It is a pity they should thus have tarnished the lustre of the "Ruby."

I have now only to conclude by giving to you the "Fire-King's rate of steaming, as ascertained on the Gare Loch last October, in presence of Mr. John Wood, the well known ship-builder; Mr. Lloyd, the assistant surveyor of steam machinery, of the Navy; Mr. J. Scott Russell; Mr. Robert Napier, and myself.

No.	a measured mile	min.	sec.	miles.
1		4	9	14.45
2		3	43	16.14
3		3	58	15.13
4		4	13	14.22
5		4	5	14.69
6		3	42	16.21
7		3	57	15.19
8		4	16	14.06
				8)120.09 aver.

15.01 av. pr. hr.

The miles were measured by us in three different and distinct parties, and the times taken by each individually.

The Fire-King's measurements are as follow:—

Length over stem and stern posts aloft	180ft.	5 in.
Do., of keel and fore rake	175	6
Breadth between paddles	28	0½
Depth in engine room	16	8½
being . . . . .	663 tons O. M.	

Your most obedient servant,

ALEXANDER GORDON.

To the Editor of the Nautical Magazine.

Agent for R. Napier of Glasgow.

**SHAKINGS.**

THE ARCHIMEDES, like all other novelties, has her admirers, and why should she not? for most justly is she entitled to them when she leaves the stormy domain of old Neptune to be encountered by more powerful barques than she is, and sports herself in the less ruffled waters of our harbours and rivers. But as sure as she does venture to screw herself into the arms of old Ocean, notwithstanding, in doing so she may out-

strip some of our old-fashioned steamers, she will do it to her cost; and the turbulent old gentleman, if he does not make more free with her, will send her to shew off her powers in smoother waters, where we shall always be happy to see her, and join in the praises of her various good qualities.

**THE THAMES.**—It is a remarkable fact, that notwithstanding the enormous sum of £125,000 was expended in dredging the river Thames off Woolwich, between the years 1808 to 1816, the river is now in as bad a state as ever, and the mud and silt is accumulating instead of decreasing. In 1816 alone, as much as £29,000 was thus expended, and the sum amounts on an average to £16,000 per annum to such little purpose.

**THE TRAFALGAR.**—The interest which vessels of the magnitude of the Trafalgar, at present building in Woolwich dockyard, excite in the minds of the public is such, that a correct statement of her dimensions must prove acceptable, all the previous descriptions being erroneous:—Length of gun-deck, 205 feet 5 inches; keel for tonnage, 170 feet 6 inches; breadth extreme, 54 feet 7 inches; breadth moulded, 53 feet 9 inches; depth of hold, 23 feet 2 inches; burden 2702 tons. She will be launched in the month of February, 1841.

**ROYAL NAVY.** The following ships are ordered to be built: Prince Albert, 90 Portsmouth; Exmouth, 90, Devonport; Hannibal, 90, Woolwich; Irresistible, 80, Chatham; Lion, 80, Pembroke; Niobe, 26, Devonport; Amethyst, 26, Devonport; Daring, brig, 10, Sheerness; Driver, steam vessel, Portsmouth; Devastation, ditto, Woolwich; Growler, ditto, Chatham; Styx, ditto, Sheerness; Vixen, ditto, Pembroke; Geyser, ditto, Pembroke.

THE inhabitants of Cherbourg have petitioned that the remains of the emperor may be landed in that harbour, and that the military port should resume the name of Napoleon. A similar petition is in progress of signature at Rochefort, for the sake of demanding that the ashes of the emperor may be brought back to Paris by the road he traversed on his way to the Bellerophon.

**ROYAL NAVAL SCHOOL.**—The anniversary festival of this admirable institution was celebrated on Tuesday at the London Tavern, Bishops-gate-street. The Duke of Cambridge presided. There were present the Earl of Hardwick, Admiral Sir G. Cockburn, Major-General Sir James Cockburn, Sir C. Bullen, Sir J. Seymour, Captain P. S. Clarke, Colonel Galloway, Sir F. Ommaney, Sir T. Jones, and about 100 other gentlemen. The usual patriotic and loyal toasts were drunk with the accustomed honours, and followed by appropriate songs. A very handsome subscription was handed in to the Secretary.

#### NEW CHARTS.

Pursuing our notices of new charts from our last number, we have to add to the China Collection the

CHOU KIANG, OF CANTON, from the Second Bar to Canton, by Captain D. Ross, *Bombay Marine*:

In which we find a plan of the city of Canton from a Chinese plan. The soundings appear sufficiently for navigation; and another is the

RIVER DOUG-NAI from Cape St. James to the city of Saigon from a French MS. 1791.

A plan of the city of Saigon is also added to it. The delta of the Saung river which this contains is sufficient to shew the nature of its navigation, but the various plans of it differ as widely as possible from each other, which will be a sufficient notice to place the seaman on his guard who uses it. The scales of these plans are both sufficiently large.

### PROMOTIONS AND APPOINTMENTS.

#### PROMOTIONS.

COMMANDERS—J. Elias retired. J. W. Bailey retired.

LIEUTENANTS—G. L. Bowyer.

SURGEONS—G. Burn, M.D., R. D. Mitchell, J. Ferrier, L. T. Cunningham, C. K. Nutt, J. Reid.

#### APPOINTMENTS.

LIEUTENANTS—E. H. Henney to *San Josef*. G. A. Henry to *Southampton*. J. P. Wells to *San Josef*. T. Smith to *Victory*. H. H. Budd to *San Josef*. P. Campbell to *Southampton*. W. Campbell to *San Josef*. F. Scott to *Rodney*. G. L. Bowyer to *Racehorse*. W. P. Jamieson, W. A. Fellowes to *Winchester*. G. G. Otway to *Southampton*.

MASTERS—D. Lye to *Royal George Yacht*. R. Read to *Victory for Echo*, J. K. Martyn to *Southampton*.

SURGEONS—Dr. I. Sinclair to *Rodney*. C. Inches to *Ocean*.

PURSERS—T. Butcher to *Southampton*. T. Kerrigan to Liverpool Packet establishment. J. Richards to ordinary at Port-mouth.

MATES—H. B. Everest, A. T. Kynaston to *Vanguard*. J. T. B. Wainright, L. C. Tonge, C. S. Dunbar to *Excellent*.

C. Chambers to *Cambridge*. C. J. Ewart W. J. Bate to *Excellent*. G. A. Scale to *Victor*.

ASSISTANT-SURGEONS—W. T. Rogers to *Southampton*. J. W. Roberts to *Victory*. A. J. Pilmore, T. S. Aitind to *Rodney*.

MASTER'S ASSISTANTS—A. Messum to *Wanderer*. C. Parsons to *Victory*. S. W. K. Freeman to *Jupiter*.

SECOND MASTERS—C. J. Hodges to *Nautilus*. J. Jago to *Carron*. J. S. Binstead to *Jupiter*. H. D. Burney (act) to *Plymouth* buoy boat. W. Tozer to *Devon* tender.

MIDSHIPMEN—C. T. Compton, H. Parker, W. T. A. Hood to *Vanguard*.

VOLUNTEERS OF FIRST CLASS—H. N. A. Poulett to *Crocodile*. A. B. Wavre to *Vanguard*.

ENGINEERS—W. Bain, 2nd to *Hecla*. A. Withan to *Victory for Echo*. J. Jago 1st to *Dee*.

The following Midshipmen passed for Lieutenants, at the Naval College, on Tuesday;—Messrs. Wainwright, Rice, Hawke, Brickdale, Preedy, McDonald, Kynaston, late of the *Rodney*; B. P. Seymour, late of the *Britannia*; W. Field, late of the *Pickle*; and R. A. Buchanan, late *Talavera*.

### MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

#### AT HOME.

ÆTNA, 6, Lieut.-com. Wilson, 26th May, arrived at Devonport, from north coast of Spain.

APOLLO, Troop ship, Mr. A. Harley, 16th June, arrived at Portsmouth from Halifax.

BLAZER (st. v.) Lieut.-com. J. M. Waugh, 12th May, arr. at Portsmouth from Mediterranean, and sailed for Woolwich.

BONETTA, 3, Lieut.-com. J. L. R. Stoll, 31st May, arrived at Portsmouth from Cape, having been four years on coast of Africa, and captured 13 vessels with 1600 slaves.

CAMBRIDGE, 74, Capt. E. Barnard, 23rd May, sailed for Westward from Plymouth.

JUPITER, Troop ship, Master-com. R.

Fulton, 15th June, left Portsmouth for East Indies.

LIZARD, (st. v.) Capt. F. W. Beechey, 24th May, left Portsmouth, to resume survey of St. George's Channel.

MAGICIENNE, 24, Capt. F. T. Mitchell 15th June, left Portsmouth supposed for Mediterranean.

VEUVIUS, s.v. Lieut.-com. W. Blount, 16th May, arrived at Cork with troops.

VICTOR, Com. W. Dawson, 4th June at Spithead going to W. Indies, Lieuts. Jamieson and Fellowes take passage in her to join Winchester, 15th sailed for Plymouth.

AT PORTSMOUTH. In harbour, Britannia, Victory, Vanguard, Excellent, Royal George Yacht, Echo.

AT SPITHEAD, Pantaloon.

AT PLYMOUTH. In harbour, Impregnable, San Josef, Rodney, Nightingale,

*Nautilus*, Linnet, Carron. *In the Sound*. Cambridge, Inconstant, Apollo, Victor.

At Woolwich. William and Mary, Alban, Cuckoo, Lightning, Fearless. *In the bason*, Medea, Firebrand, Avon, Lucifer, Locust, Messenger, African, Cygnet.

## ABROAD.

**ACTEON**, 26, Capt. R. Russell, 21st March, at Buenos Ayres.

**ALECTO**, (st. v.) Lieut.-com. W. Hoseason, 6th June, arrived at Marseille.

**ALGERINE**, 10, Lieut.-com. T. H. Mason, 10th March, off Macao sailed for Singapore.

**APOLLO**, Troop ship, Mr. A. Karley, 14th April, arrived at Halifax from W. Indies.

**ASIA**, 84, Capt. W. Fisher, 1st May at Vourla.

**ATHOL**, 28, Troop ship, 7th April sailed from Barbados, 21st May arrived at Quebec, with part of 67th Regt.

**BEAGLE**, Surveying vessel, Com. J. C. Wickham, 3rd Feb. at Swan River. The Beagle was in Cambridge Gulf, lat. 14, lon. 128, on the 9th January, surveying. She had been fortunate enough to discover two navigable rivers; one named Adelaide, in lat. 12, long. 131 E., which extended 120 miles inland, and which doubtless went much further, but the boats wanting provisions, were obliged to give up farther progress. The other was in the same vicinity, up which the boats went 80 miles; but finding nothing but salt water were compelled to return—the thermometer standing then in the shade at 105. We regret to find that Lieut. Stokes was seriously wounded by a native, a party of whom were lying in ambush; the Indian threw a spear a distance of 40 yards from a height, which passed through Lieut. Stoke's arm, pierced his breast, and wounded his lungs; the sufferer, however, was fast recovering.

**BELLEISLE**, 72, Capt. J. T. Nicholas, 1st May at Vourla, 9th at Smyrna.

**BELLEROPHON**, 80, Capt. C. J. Austen, 3rd May at Naples.

**BENBOW**, 72, Capt. H. Stewart, 3rd May at Naples.

**BLAZER**, Lieut.-Com. J. M. Waugh, 18th May, arrived at Smyrna.

**BLenheim**, 72, Capt. H. F. Senhouse, 3rd March spoken in 23° N. 20° W.

**BLONDE**, 42, Capt. T. Bourchier, 19th April arrived at Cape.

**BRISK**, 3, Lieut.-com. A. Kellett, 25th April left St. Helena for Cape.

**BUFFALO**, Store ship, Master-com. J. Wood, 12th Feb. arrived at Hobart Town with Canadian prisoners, 19th sailed for Sydney.

**BUZZARD**, 3, Lieut.-com. C. Fitzgerald, 18th Feb. left Accra on a cruise.

**CALLIOPE**, 26, Capt. T. Herbert, 19th Feb. arrived at Valparaiso.

**CARYSPORT**, 26, Capt. H. B. Martin, 14th May at Malta, from Barcelona, 17th sailed.

**CASTOR**, 36, Capt. E. Collier, 23rd April arrived at Smyrna, 7th May returned to Malta.

**CHARYBDIS**, 3, Lieut.-com. E. B. Tindling, 28th April arrived at Port Royal, 4th May sailed for Nassau.

**CHILDERS**, 16, Com. E. P. Halstead, 25th April, left Bombay on a cruise.

**COLUMBINE**, 16, Com. G. Elliott, 31st March at St. Helena, 1st April sailed for Cape.

**COMUS**, 18, Com. E. Nepean, 19th April arrived at Port Royal from Carthage.

**CONFIDANCE**, (st. v.) Lieut.-Com. E. Stopford, 17th May left Malta for Naples.

**CONWAY**, 26, Capt. C. R. D. Bethune, 9th April arrived at Calcutta with part of cargo of the Richard Bell, wrecked at the Nicobar Islands.

**CRESCENT**, 42, 6th April arrived at Rio.

**CROCODILE**, 27, Capt. A. Milne, 3rd April sailed from Havana, 21st arrived at Jamaica, 26th sailed again from thence for the island Enan, New Hebrides, to obtain the remains of two missionaries killed by the natives, on the visit of the missionary brig Camden.\* Thence she will proceed to the Fejees.

**CYCLOPS**, (st. v.) Capt. H. T. Austen, 27th April arrived at Malta, 7th May sailed for Smyrna.

**DAPHNE**, 18, Com. W. Dalling, 7th May arrived at Malta, from Alexandria and Naples.

**DIDO**, 18, Capt. L. Davies, C.B., 17th May at Constantinople.

**DONEGAL**, 78, Capt. J. Drake, 18th May in the Tagus.

**EDINBURGH**, 72, Capt. W. Henderson, 1st May at Vourla.

**EREBUS**, Capt. I. C. Ross, 18th March arrived at Cape, 6th April sailed.

**ESPOIR**, 10, Lieut.-com. J. T. Paulson, 10th May, in the Tagus.

**FANTOME**, Com. Butterfield, 6th April left Ascension for Cape.

**FAVORITE**, 18, Com. W. Croker, 10th Feb. left Sydney for New Zealand.

**FIREFLY**, (st. v.) Lieut.-com. W. Winniett, 16th April arrived at Trinidad from Barbados.

**FLAMER**, (st. v.) 14th April arrived at Demerara.

\* See notice of her departure, p. 348, vol. for 1838.

**GANGES**, 84, Capt. B. Reynolds, 1st May at Vourla.

**GLENER**, (st. v.) 21st April at Santa Cruz, 16th May at Madeira, 19th sailed for W. Indies.

**GRIFFON**, 3, Lieut.-com. J. G. D'Urban, 16th April left Barbados.

**HASTINGS**, 72, Capt. J. Lawrence, C.B. 1st May at Vourla.

**HERALD**, 26, Capt. J. Nias, 9th Jan, at Sydney, 19th sailed for New Zealand.

**HORNET**, 6, Lieut.-com. R. B. Miller, 21st April left Jamaica for Chagres.

**HYDRA**, (st. v.) Com 15th May at Malta. It is said that the active services of this vessel have obtained for her the name of "Demon of the Deep."

**IMPLACABLE**, 74, Capt E. Harvey, 15th May at Malta, 17th sailed.

**JASEUR**, 16, Com. F. M. Boulbee, 9th May returned to Malta from Naples.

**LARK**, (s. v.) Lieut.-com. T. Smith, 9th May left Port Royal to resume her survey.

**LYNX**, 3, Lieut.-com. H. Broadhead, 23rd March arrived at Accra, 24th sailed on a cruise.

**MODESTA**, 18, Com. R. Eyres, 6th April arrived at Cape Good Hope, having run a slaver on shore, 19th April remained.

**PARTRIDGE**, 10, Lieut.-com. W. Morris, (a) 1st April arrived at Rio from Bahia, 14th sailed for Monte Video.

**PEARL**, 18, Com. C. C. Frankland, 12th May arrived at Madeira, 15th sailed for South America.

**PERSIAN**, 18, Com. M. Quin, 18th May arrived at Madeira, 10th sailed for Africa.

**PHOENIX**, (st. v.) Com. R. S. Robinson, 3rd May at Naples.

**PILOT**, 16, Com. G. Ramsey, 9th April arrived at Galveston in 4 days from Havana, see directions for Galveston in our June No. p. 394.

**PLUTO**, (st. v.) Lieut.-com. J. Lunn, 10th April left Demerara for Granada, 23rd April returned.

**PRINCESS CHARLOTTE**, 104, Capt. A. Fanshawe, 15th May at Malta, 17th sailed  
**PROMETHEUS**, (s. v.) Lieut.-com. T. Spark, 23rd May arrived at Malta from Corfu.

**PYLADES**, 18, Com. T. V. Anson, 19th April, arrived at Cape.

**RACEHORSE**, 18, Com. Hon. E. A. Harris, 7th April arrived at Barbados from Para, 20th April left Bermuda for Barbados.

**RATTLESNAKE**, Troop ship, Master-Com. W. Brodie, 14th March arrived at Ceylon.

**REVENGE**, 76, Capt. Hon. W. Walde-

grave, (a) 6th June sailed from Tagus with Thunderer to try rate of sailing.

**RHADAMANTHUS**, (st. v.) Com. H. Wakefield, 5th May arrived at Malta from Smyrna.

**RINGDOVE**, 16, Com. Hon. K. Stewart, 18th April left Jamaica for Bermuda, 8th May arrived at Port Royal from Carthage.

**ROLLA**, 10, Lieut.-com. C. Hall, 10th April left Bathurst, (Gambia) for Sierra Leone.

**ROSE**, 16, Com. P. Christie, 10th March arrived at Monte Video, from Rio.

**ROVER**, 18, Com. T. W. C. Symonds, 9th April arrived at Havana from Jamaica 26th arrived at Vera Cruz.

**SAPPHIRE**, Troop ship, Master-Com. G. W. Neuthewd, 7th April arrived at Barbados from St. Lucia, 19th May arrived at Quebec.

**SAPPHO**, 16, Com. T. Frazer, 10th April arrived at Jamaica from Barbados, 26th sailed for Honduras.

**SATELLITE**, 18, Com. J. Robb, 15th April left Halifax for St. Johns, 16th May arrived.

**SCORPION**, 10, Lieut.-com. C. Gayton, 23rd May at Gibraltar.

**SCOUT**, 18, Com. R. Craigie, 18th April sailed for coast of Africa from St. Helena.

**SERINGAPATAM**, 42, Capt. J. Leith, 26th March left St. Lucia for Barbados.

**SERPENT**, 16, Com. Hon. R. Gore, 26th April arrived at Vera Cruz.

**SKIPJACK**, 5, Lieut.-com. H. Wright, 8th May returned to Jamaica from cruise.

**SPARROW**, 10, Lieut.-com. R. Lowray, 4th April left Rio for Falkland Isles.

**TERROR**, Com. F. R. M. Crozier, 18th March arrived at Cape, 6th April sailed.

**THUNDERER**, 84, Capt. M. F. Berkeley, 3rd June arrived at Lisbon, 6th sailed for Mediterranean.

**TYNE**, 26, Capt. J. Townsend, 3rd May at Naples.

**VESTAL**, 26, Capt. T. W. Carter, 15th April left Halifax for Barbados.

**VOLAGE**, 26, Capt. H. Smith, 7th March off Macao.

**VOLCANO**, (st. v.) Com. J. West, 27th May arrived at Malta from Marseille.

**WANDERER**, Com. Hon. J. Denman, 1st March arrived at Sierra Leone.

**WIZARD**, 10, Lieut.-com. T. F. Birch, 2nd April left Rio on a cruise.

**WOLVERINE**, 16, Com. W. Tucker, 10th Feb. arrived at Accra, 10th sailed.

**ZEBRA**, 16, Com. R. F. Stopford, 10th May arrived at Malta.

At Malta 27th May, Castor, Daphne, Jaseur, Zebra, Ceylon, Rhadamanthus Gorgon, Hydra, Acheron, Alecto, and Prometheus.

TABLE LVIII.

*For converting Degrees, Minutes, and Seconds into Time, and Time into Degrees, Minutes, and Seconds.*

Deg. Min. Sec.	H.M. M.S. S.T.	Deg. Min. Sec.	H.M. M.S. S.T.	Deg. Min. Sec.	H.M. M.S. S.T.	Deg. Min. Sec.	H.M. M.S. S.T.	Deg. Min. Sec.	H.M. M.S. S.T.	Deg. Min. Sec.	H.M. M.S. S.T.
1	0·04	31	2·04	61	4·04	91	6·04	121	8·04	151	10·04
2	0·08	32	2·08	62	4·08	92	6·08	122	8·08	152	10·08
3	0·12	33	2·12	63	4·12	93	6·12	123	8·12	153	10·12
4	0·16	34	2·16	64	4·16	94	6·16	124	8·16	154	10·16
5	0·20	35	2·20	65	4·20	95	6·20	125	8·20	155	10·20
6	0·24	36	2·24	66	4·24	96	6·24	126	8·24	156	10·24
7	0·28	37	2·28	67	4·28	97	6·28	127	8·28	157	10·28
8	0·32	38	2·32	68	4·32	98	6·32	128	8·32	158	10·32
9	0·36	39	2·36	69	4·36	99	6·36	129	8·36	159	10·36
10	0·40	40	2·40	70	4·40	100	6·40	130	8·40	160	10·40
11	0·44	41	2·44	71	4·44	101	6·44	131	8·44	161	10·44
12	0·48	42	2·48	72	4·48	102	6·48	132	8·48	162	10·48
13	0·52	43	2·52	73	4·52	103	6·52	133	8·52	163	10·52
14	0·56	44	2·56	74	4·56	104	6·56	134	8·56	164	10·56
15	1·00	45	3·00	75	5·00	105	7·00	135	9·00	165	11·00
16	1·04	46	3·04	76	5·04	106	7·04	136	9·04	166	11·04
17	1·08	47	3·08	77	5·08	107	7·08	137	9·08	167	11·08
18	1·12	48	3·12	78	5·12	108	7·12	138	9·12	168	11·12
19	1·16	49	3·16	79	5·16	109	7·16	139	9·16	169	11·16
20	1·20	50	3·20	80	5·20	110	7·20	140	9·20	170	11·20
21	1·24	51	3·24	81	5·24	111	7·24	141	9·24	171	11·24
22	1·28	52	3·28	82	5·28	112	7·28	142	9·28	172	11·28
23	1·32	53	3·32	83	5·32	113	7·32	143	9·32	173	11·32
24	1·36	54	3·36	84	5·36	114	7·36	144	9·36	174	11·36
25	1·40	55	3·40	85	5·40	115	7·40	145	9·40	175	11·40
26	1·44	56	3·44	86	5·44	116	7·44	146	9·44	176	11·44
27	1·48	57	3·48	87	5·48	117	7·48	147	9·48	177	11·48
28	1·52	58	3·52	88	5·52	118	7·52	148	9·52	178	11·52
29	1·56	59	3·56	89	5·56	119	7·56	149	9·56	179	11·56
30	2·00	60	4·00	90	6·00	120	8·00	150	10·00	180	12·00
Sec. Min. Deg.	S.T. M.S. H.M.	Sec. Min. Deg.	S.T. M.S. H.M.	Sec. Min. Deg.	S.T. M.S. H.M.	Sec. Min. Deg.	S.T. M.S. H.M.	Sec. Min. Deg.	S.T. M.S. H.M.	Sec. Min. Deg.	S.T. M.S. H.M.

**Births.**

June 10th in Wetherell place, Clifton, the Lady of Capt. Charles Warde, K.H. RN., of a daughter, being her eleventh child, nine of whom are living.

On Tuesday, in Brunswick-square, Brighton, the lady of Rear-Admiral the Hon. M. J. Henniker, of a daughter.

On the 16th inst. at Kingston Crescent, the wife of Mr. Thomas Giles, Purser, RN. of a daughter.

**Marriages.**

At St. George's Chapel, East Stonehouse, on the 20th May, Thomas Jeffries, Esq. of Brunswick-road, Liverpool, to Eliza Grace, youngest daughter of the late Commander Peter Williams, RN.

At All Saints' Church, Portsea, on the 11th May, W. Radcliffe, Esq. commander, RN. to Miss Julia Pittis Dore, of Mile End, and daughter of the late W. Dore, Esq.

On Thursday the 14th inst. at Shaw, in the County of Berks, Courtenay Osborn Hayes, Esq. Commander RN. eldest son of the late Rear-Admiral Hayes, to Caroline Anne, only daughter of the late Alfred Slocock, Esq. of Donnington Cottage, in the same county.

At Granton, Edinburgh, A. C. Longmore, Esq. of the Exchequer Office, to Isabella, daughter of W. Bain, Esq. RN.

1st June, at Kenwyn, Lieut. W. Luce, Commander H. M. Packet Penguin, to Mrs. Downey, widow of the late Lieut. Downey, Commander H. M. Packet Briseis.

At Sidmouth, on the 14th June, James Blair, Esq., son of the late Capt. David Blair, RN., to Miss Julia Caroline Blake, third daughter of the late Captain John Blake, of the county of Galway, and grand-daughter of the late Captain Durell, RN.

On the 11th June, at St. James's Church, Bath, Mr. John Appleby Pritchard, RN., to Miss Selina Maria Vidal, daughter of Mr. E. E. Vidal, RN.

At Stoke, Plymouth, James Goss, Esq. of the Bengal Medical service, to Rose Anne, only daughter of David Keys, Esq., Lieut. RN.

At Kingston church, on the 18th inst. H. Brehunt, Esq. RN., to Arabella, second daughter of H. Craddock, Esq. RN.

\*The conduct of the officers of the 1st Regt. of Life Guards on the occasion of the melancholy accident, which terminated the life of Captain Otway, was beyond all praise. Captain Otway was immediately conveyed to the rooms of Col. Cavendish, at Knightsbridge barracks, and every possible attention was administered which the case required. Every one felt for the unfortunate sufferer, the gaiety and merriment which had usually prevailed, subsided into silence and mournful feeling, and nothing could possibly surpass the anxiety and concern of every one at the barracks.

At Plymouth, Lieut. Foote, RN., son of Capt. Foote, RN., to Dianah, daughter of James Nicholls, Esq. RN.

At Chaltenham, the 17th inst. the Rev. Wm. Windsor Berry; A.M. Vicar of Stanwell, Middlesex, to Arethusa Georgianna St. Vincent Sarah, youngest daughter of the late Admiral Sir C. Brisbane, K.C.B., &c.

**Deaths.**

In Paris, Admiral Sir William Sidney Smith, G.C.B.

At Taunton, April 25th aged 72, Sir Robert Seppings, F.R.S., M.R.I., &c., late Surveyor of H. M. Royal Navy.

On the 17th May, at Knockholt, near Sevenoaks, Rear-Admiral William Ricketts, aged 68.

In Connaught-square, Capt. Thompson, RN. in his 74th year.

On the 17th May, at his residence, Fratton, (Hampshire,) Josiah Oake, Esq. master RN., in his 77th year.

At Southampton, on the 27th May, Capt. Sir Thomas Carew, RN.

At Epsom, on the 26th ult. Commander James Blandford, RN. aged 70.

At Brighton, May 23rd, Dr. Robert Finlayson, Surgeon, RN.

On the 5th June, at Stoke, Plymouth, Mary, relict of the late John Morgan, Esq. Surgeon, RN., in the 66th year of her age, surviving her husband only 15 days.

Suddenly, at Gillingham, Kent, on the 23rd May, Lieut. Wm. Sturgess, RN., aged 51, leaving a widow and eight children to lament their loss.

Captain A. M'Vicar, RN., of North Leith.

At Knightsbridge, London, on the 27th May, Commander R. W. Otway, from injuries received by a fall from his horse.\*

On the 10th Nov., 1839, of fever, on the Coast of Africa, Mr. S. F. Maddock, Mate of H. M. Brig Saracen, son of the late W. Maddock, Esq., and brother of Mr. W. J. H. Maddock, late clerk of H. M. Sloop Serpent, West Indies.

At Stoke, near Plymouth, on the 20th inst. Mr. John Morgan, Surgeon, RN. (1795).

On the 1st June, at Haynes, near Dover, Henry Sankey, Esq., Lieut. RN., in the 49th year of his age.



METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.  
From the 21st of May to the 20th of June, 1840.

Month	Day	Week Day	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.		
			A. M.	3 P. M.	9 AM	3 PM	Min	Max	Quarter.		Stren.		A. M.	P. M.	
									AM.	PM.	AM	PM			
			In Dec.	In Dec.	o	o	o	o							
21	Th.		30.14	30.20	46	51	89	52	N	N	6	6	qbc	qbc	
22	F.		30.30	30.33	48	54	42	56	N	N	5	4	bc	bcm	
23	S.		30.33	30.29	57	69	38	70	SW	W	2	3	bc	bc	
24	Su		30.17	30.09	61	65	52	66	SW	SW	5	5	qop (2)	qor (4)	
25	M.		29.29	29.74	59	65	54	66	SW	SW	8	8	qor (1)	qp (3)	
26	Tu.		29.80	61.73	53	54	46	65	S	SW	3	4	od (2)	qcp (3)	
27	W.		30.00	30.00	54	65	41	69	SW	SW	2	2	bc	bc	
28	Th.		29.88	29.88	59	70	44	72	SW	SW	2	3	b	b	
29	F.		30.00	30.15	60	64	51	68	NW	NW	5	4	b	b	
30	S.		30.38	30.36	62	71	46	72	SW	SW	3	3	bcm	b	
31	Su.		30.36	30.34	63	73	52	74	W	SW	2	2	b	b	
1	M.		30.18	30.15	67	77	50	78	SW	S	2	2	b	b	
2	Tu.		29.79	29.84	61	53	50	64	W	NW	3	6	bctp (2)	bcp (3)	
3	W.		30.04	30.13	58	59	45	61	NW	NW	6	6	qbc	qbc	
4	Th.		30.18	30.15	52	62	44	64	W	NW	2	2	o	o	
5	F.		30.02	29.95	54	61	51	63	SW	SW	2	1	or (1)	or (4)	
6	S.		29.90	29.90	61	70	49	73	SE	SE	2	4	b	bcp (3) (4)	
7	Su.		30.00	30.02	62	70	55	71	SW	SW	3	3	bc	bc	
8	M.		30.03	30.03	61	71	45	73	SE	S	3	3	b	b	
9	Tu.		29.99	29.98	71	78	56	78	S	S	3	3	bc	bc	
10	W.		29.99	29.99	67	68	53	71	SW	SW	3	4	bc	bc	
11	Th.		30.06	30.02	63	71	49	73	SW	SW	4	4	bc	bc	
12	F.		29.98	29.94	65	73	58	75	SW	SW	4	5	o	qo	
13	S.		29.97	30.05	63	71	56	73	NW	W	4	4	bc	bc	
14	Su.		30.05	30.00	67	72	51	73	S	S	3	3	b	bc	
15	M.		30.02	29.97	63	73	50	74	SW	SW	3	3	b	bc	
16	Tu.		29.85	29.87	68	72	55	73	SW	SW	6	6	qbc	qo	
17	W.		29.79	29.79	62	68	57	71	SW	SW	6	6	qbcp (2)	qbcp (3) (4)	
18	Th.		29.84	29.89	56	66	49	68	SW	SW	6	6	qop (2)	qbcp (3)	
19	F.		29.94	29.86	61	61	48	62	SW	SW	6	6	qor (2)	qbcp (3)	
20	S.		30.11	30.17	59	63	47	67	W	NW	3	3	bc	bc	

May—mean height of the barometer = 29.888 inches : mean temperature = 55.8 degrees : Depth of Rain fallen = 2.10 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The article on "The Old Bahama Channel in a hurricane," from S. J. received far too late for our present number.

The attention of J. H. C. is welcome, if he will wait our convenience for insertion.

Capt. Warde—always—by all means.

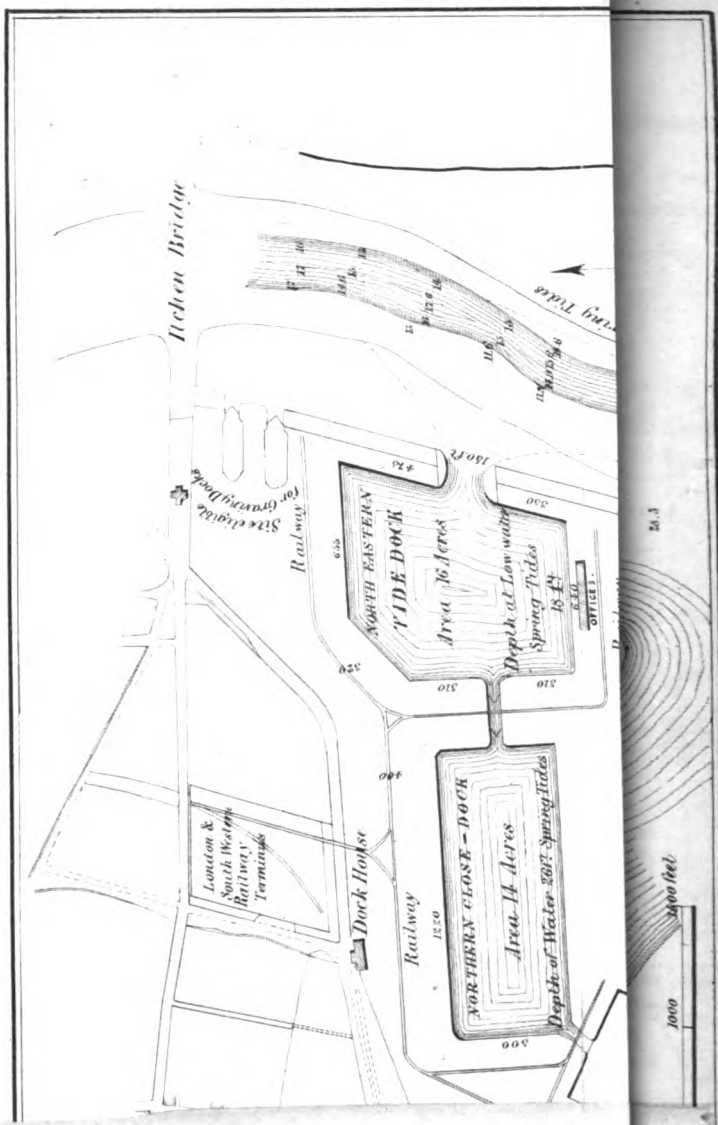
"The change of the weather, &c." from E, if possible, in our next; in which also we hope to continue our Bermuda papers.

A case of severe misfortune by which a gallant and meritorious naval officer with his wife and family of four children, have lost all they possessed, besides suffering from sickness brought on by the calamity which occasioned it, will be found in our advertisement sheet, to which we would direct the attention of his brother officers.

A still severer misfortune, related in another advertisement, has befallen our binder, in which also some property belonging to the proprietor of this journal has become a prey to the flames. We have no doubt there are those who will assist in alleviating the sorrows of the unhappy man whose excellent character is an additional recommendation.

Hunt, Printer, Lower street, Islington.





H. Baynes Esq. & G. Clements Lane

tional recommendat on.

Hunt, Engineer, Lower street, Isington.

## ORIGINAL PAPERS.

August, 1840.

### THE INNER PASSAGE TO TORRES STRAITS.

SIR,—Having made a recent passage through Torres Straits, by the inner route, permit me to give my opinion of the same through the medium of your valuable pages.

The arduous labours of Captain King, in surveying this route, have not yet been duly appreciated by nautical men,—inasmuch as there still remains a great prejudice against it, which no doubt ultimately will give way.

As far as our observations go, too much praise cannot be awarded him, for his very accurate descriptions and positions of the numerous dangers on this coast. With his charts and implicit attention to his directions, under Divine Providence, a safe passage will be ensured.

We were 20 days from Port Jackson to Booby Island: anchored twelve times with bower, stream, and kedge, altogether 175 hours; upwards of 70 (in easterly gales with wet squally weather,) in snug anchorage,—no wear and tear.

Contrast this with the intense anxiety, hard wearing and chafing to both ships and crew if caught outside the barriers, in such weather, and let any candid opinion be taken as to which is the most preferable situation of the two.

Having gone by both routes, I do not hesitate to say, the inner passage only wants to be *known* to be generally adopted, which is also the corresponding opinion of Captain W. Henderson, of the "Garrow." Annexed is a brief abstract of our journal, which may prove useful to some of your nautical readers, who may be induced to try this route, and it is at your service to make what use of you think proper.

Yours, &c.

J. H. BROWN.

*To the Editor of the Nautical Magazine.*

*Commanding the Ship "Arabian."*

On the 21st July, 1839, the "Arabian" sailed from Port Jackson, in company with the barque "Garrow," intending to take the inner passage, carrying fresh and fair winds in steering along the coast.

By the 24th, at 6 P.M. we were abreast of Sandy Cape, 5 miles off the breakers on Breaksea Spit, seen off deck bearing N.W. b. N., steering N.N.W.,

keeping the lead going, wind from the southward with passing showers: at 10, p.m. had 17 fathoms,—considered ourselves to the northward of the spit, hauled to the westward for the night.

At daybreak on the 25th, we were about 20 miles off the land ahead, made all sail, fresh breeze from the southward: at 8 a.m. Round-hill bore S.W.b.W.: at 11 passed close to the rocks off the north point of Bustard Bay, in 17 fathoms, shaping a course for Cape Capricorn, which by sunset we had bearing S. W., and abreast of Hummocky Island;—in all studding sails for the night, steering N.N.W., to pass outside of Flat and Peaked Islands, and from thence to the Northumberland group; being moonlight the different islands were distinctly seen.

On the 26th at daylight kept away W.N.W., passing to westward of Nos. 1 and 2, and half a mile to the eastward of No. 3, (on which the natives were firing the grass as we passed,) the low rock seen on our starboard hand; steering then for the Percy Islands. At 2 p.m., we were abreast of No. 2, of that group, intending to have followed the outer or Bathurst track during the night, but a very heavy thunder storm caused us to anchor here, in 12 fathoms sand. Pine islets E. b. S., No. 5, N.N.W., wind S.E., tide setting two knots to the northward; at 11 p.m. it turned to the southward.

By 4 a.m. the 27th, we were under way steering for Double Island, which we passed to the eastward 2 miles, and following nearly the same course passing to the westward of the islands marked L. 1, Island m., and Sir James Smith's group: at 8 p.m., anchored with the stream in 10 fathoms, sand and mud, Cape Conway N. b. W., Repulse Islands N.W. b. W., 6 miles, light winds and fine.

(This day's run was the only part of the passage where the bearings of the different islands from each other, did not prove satisfactory, yet the safety of the navigation is not affected thereby, as the track is only taken by daylight; we passed to the westward of a small rocky islet, two or three miles to the southward of island L. 1, that does not appear on the chart.)

On the 28th, early under way, with a land-wind. Throughout this day the wind was light from west to east, and left us becalmed at 9 p.m., in Whitsunday passage: brought up with the kedge and warp, in 28 fathoms mud; Pine Head bearing N.W., tide running to S.E. 3 knots: the Garrow not anchoring, was soon hull out of sight, but the return of the tide with a light breeze, brought him by 4 a.m., on the 29th abreast of us, when we weighed and made sail to a fine southerly breeze, passing through this interesting strait with ease. All the way from the Percy Islands here, the scenery is beautiful and picturesque,—numerous fires were seen on the east side of the strait. At noon observed in latitude 19° 54' S. Gloucester Island, W.S.W.; Holborne Island N.W., which at 6, p.m., bore E.N.E., six miles: during the night and great part of the next day the wind was light and baffling, so that at 6 p.m. on the 30th, the trees on Cape Bowling-Green were just seen off deck,—rounded it in 15 fathoms, in all studding sails, steering direct for the Palm Isles, brisk breezes and fine moonlight: 31st by 8 a.m. we were abreast of the large Palm, passing them to the eastward and steering for Cape Sandwich: at 3 p.m. passed one mile to the eastward of the rocky islet off that Cape, in 12 fathoms; hauled to the westward, passing between the latter and Brookes Island, and carrying regular soundings: at 5 p.m. anchored in 5 fathoms mud; Gould Island Peak S.E., a mile and a half off shore: at 6 the Garrow anchored near us.

(This is a very secure anchorage,—and the natives friendly. Next morning although blowing hard and dirty, we had a few of their frail canoes off with two or three men and boys in each, as miserable looking objects as well can be imagined: we presented them with a few baubles with which they seemed highly pleased, but would not come on board: we afterwards went on shore to cut a boom, which proved so hard and heavy that it would not swim, although hollow in the heart; during the time we were employed, some dogs were howling in the bush, but the natives who were perfectly naked were huddled together on the beach inactive and unarmed,—we saw no women.)

Blowing hard with wet squalls during the night, ships riding very smooth: August 2nd, moderating and clearing off, by 4 A.M. we were under way, running out between the Family and Brookes Islands, following the inner track to the Frankland Islands, where we anchored in 10 fathoms, soft bottom, with the extremity of the islands S.E. b. E.  $\frac{1}{2}$  E., to E.  $\frac{1}{2}$  S., High Island N.W. Landing on the northernmost island, we found part of the wreck of a small vessel, (pine built,) which had apparently drifted from the outer reefs; although it blew strong during the night we had but little swell.

August the 3rd, under way at daybreak,—dark squally weather, running under single reefs, passed between Fitzroy Island and the main, and came to under Cape Grafton, in 5 fathoms mud, Fitzroy Island in one with the Cape, bearing S.E. b. E., heavy squalls; lay in smooth water and perfectly sheltered. (Here the natives disputed our landing at the head of the bay, assembling on the beach armed with spears and other missiles, making signs and menaces for us to retreat. The report of a musket fired in the air had the effect of sending them scampering away. We then landed unmolested, but finding the spars too crooked we soon embarked, leaving them some trifling presents on the beach: although we saw none of them while on shore, they evidently had seen us, for as soon as we were in the boat, pulling off, they were running to the spot, and eagerly seizing what we had left. We landed on the island in the bay, and cut some small spars.

August the 4th, the morning proving fine, were under sail by 4 A.M., following the inshore track: by 10 A.M. abreast of Low isles; between Snapper Island and Cape Tribulation, passed a deserted canoe with an outrigger attached. The small rocky islet off the latter Cape we did not see, although close in, running along in 10 fathoms. At 4 P.M., anchored under the Hope Islands, in 10 fathoms mud; extremities of the islands S.E. b. S. to E. b. N., reef A. W.  $\frac{1}{2}$  N., squally during the night, but rode smooth.

August the 5th, early under way, taking the inner track, (had to douse our top-sail in a squall, within the reefs C and D, which were visible dry sands,) up to Cape Bedford. From thence the general route to Cape Flattery, passing between the three isles, and a low wooded isle to the westward of two isles, then a direct course to Lizard Island, under the peak of which we anchored in 10 fathoms, sand. At 3 P.M. landing, found regular soundings to the beach of this bay. This island is large, but uninhabited, its summit rocky and arid, with a profusion of long grass in the valleys. During the night it blew hard from E.S.E. but the ships lay snug and comfortable.

August the 6th, by 5 A.M. had purchased our anchors, and the ships running 6 or 7 knots before we loosed our canvas, but as we ran to the westward it

moderated. Steering for Howick group, No. 3 of which, we passed half a mile to the southward, and taking the middle track up to Point Barrow and Cape Melville, (half-way between the two latter lay a small islet close in shore, off which a shoal extends, about two miles, on which we shoalened to four fathoms soft mud, in consequence of the tide setting us *within* the *proper* track). Passed close to the outer rock of the reef projecting from Cape Melville, in 14 fathoms; Pipon Islands and reefs, on the starboard hand, thence steered for Flinders group keeping a little to the southward of the direct course to avoid reef A. At 5h. 30m. rounded Cape Flinders, coming to in the bay under Flat-hill, in 10 fathoms soft ground; the latter Cape bearing N.N.E.  $\frac{1}{2}$  E. showed a light for the Garrow, who anchored by us at 6h. 30m. Numerous lights and fires were seen ashore.

August the 7th, weighed at 5h. 30m. A.M. steering for sand D, which we passed to the northward, but owing to the haze of the morning, got to the southward of E. and F., had 12 and 13 fathoms within half a mile of them: from thence a direct course to No. 1, Claremont Isles, following the outer track, passing between 4 and 5, and close to the westward of Nos. 6 and 7; the rock to the westward of the former, very visible: not having daylight to fetch Night Island, we came to under a covered reef, directly east of No. 8, in 11 fathoms soft ground,—Cape Sidmouth S.  $\frac{1}{2}$  W. Night Island, N.W. by N., experienced no swell.

August the 8th, by daylight under way with a fresh S.E. wind, following as yesterday the outer track, keeping along the edge of the weather reefs, which were all plainly seen, and the covered ones by the discolouration. At noon reef C, E.N.E. quarter of a mile distant, Cape Weymouth, W.S.W. P.M. steering along the edge of the reef E. (which is apparently bold to and very conspicuous,) and between the reefs H, I, and K, and Piper Islands and reefs, at 4h. 20m. we came to in 10 fathoms sand and mud; easternmost Piper Island, S.E., westernmost do. S.S.W.  $\frac{1}{2}$  W. about a mile and a half off shore; found regular soundings into the beach of easternmost Island.

August the 9th, under way at daylight, and passing between Young Island and reef m, we rounded Sir Everard Home's Islands, steering to the eastward of the Bird Islands and westward of reefs V. and W., (Here we "committed the body" of a Lascar "to the deep," who died during the night, with all the peculiar forms of those superstitious but inoffensive people,) took the centre track to Cairncross Island, which we passed at 2h. 30m. P.M. and continued our course for Turtle Island, where we came to, at 6h. 30m. in 9 fathoms, hard ground, the island bearing S.E. by S. Experienced a deal of swell, as it was blowing fresh from S.E.: this anchorage is by no means recommendable: we were tempted to pass Cairncross Island to make sure of clearing the strait next day, the tides ran strong N.W. and S.E.

August the 10th, under way before daylight, running for Mount Adolphus, 9h. 30m. A.M. passed a quarter of a mile to the southward of the rocky islet A., shaped a course for the S.E. point of Wednesday Island, which we rounded half a mile off, steering then for the rock off Hammond Island. Here the tide was running not less than six knots to the south-westward, and the ship about nine: made it rather a nervous task to run between the reefs of Good Island, and the covered reef D.: kept nearest the former until we saw the latter indistinctly from

the mast head, nearly abeam, when we considered ourselves safely through by the blessing of God! Steering then for Booby Island where the ships separated, meeting again at Anjer after a passage of thirty-six days from Sydney.

#### LEGENDS OF LIBERIA.

IN the year one thousand eight hundred and seventeen, certain citizens met together, beyond the waters of the western seas, with the view to raise sufficient gold and silver for the purpose of emancipating slaves, and to locate them on the African coast. The ostensible object of those citizens was that of ultimately forming these people into a free and independent nation, but certain lawyers said the real motive was to get rid by any means, fair or foul, of a surplus coloured population, which by the distinction kept up, and the general ill treatment they received, would in the course of time become dangerous to the white population of the western world. Accordingly the next year, strangers arrived on the African coast with instructions to select a suitable place for that purpose. After several unsuccessful attempts to persuade the African Chiefs to allow a settlement to be formed on any of the rivers in the neighbourhood of Sierra Leone, that emptied themselves into the river Sherborough, they at length succeeded in getting a footing on an island of that name. A place worse calculated for such a purpose could not have been selected, being both low and swampy, and where no wholesome water was to be procured: and it is difficult to assign any other motive for the selection of it, than that of taking ultimately by force, what the natives seemed determined not to grant by fair means, an imputation which did not assimilate with the character of Samaritans.

Affairs being thus arranged, the strangers called Liberians, were landed, consisting of twelve white men, chiefly of religious and medical professions of the western world, with a great number of coloured people. They had not long been disembarked before the insalubrity of this most unwholesome place began to show its dreadful effects on these strangers, and in a very few months eleven out of the twelve white men fell victims to its malignity. The remaining one having in June, 1820, left the place, retired to Sierra Leone destitute of almost every thing, and was humanely taken to the land of freedom in a free vessel. It might have been expected that this person (who was outwardly a holy man,) for having been so kindly treated, would have expressed his gratitude on this occasion, or that the principal of these citizens would have taken some steps to convey such acknowledgment to those who were instrumental in rendering the above acts of kindness; but vain would have been such expectation.

Other coloured strangers (in 1820,) finding themselves left to shift for themselves, appealed to the humanity of Sir Charles McCarthy,



then governor of Sierra Leone) for assistance, and he with his usual kindness granted them an asylum in that Colony until they could receive succour. There they remained for several months, until they were otherwise disposed of; during which time several of them had settled amongst free colonists, where part of them still remain; others having by their industry made a great addition to their finances have joined their brethren in their new abodes.

These disasters becoming known to the citizens, strangers again appeared in 1821, with a view of selecting a more eligible place for their purpose, in a vessel from the western world. She cruized about for some time, with that object, trying several chiefs without success, finding, as was well known, that the natives were extremely tenacious and jealous of selling any part of their territory, although very willing to allow trading factories to be established in any part of their country. Ultimately however, the strangers succeeded in persuading a native chief, (under the English term of king,) for a small consideration and fair promises, to give them leave to bring their people down from Sierra Leone, and establish them on a small island, not containing 10 acres of ground, situated on a small river named Mesurada, and in the vicinity of the Cape of that name, about 200 miles to the south-east of Sierra Leone. This island in point of fact did not belong to the native chief, having been long before purchased from the natives by a free Captain, and used as a slave depôt during the time this inhuman traffic was legalized and encouraged by an eastern power, and the island is still claimed by the descendants of the same Captain.

Possession of this place was forthwith taken without any obstacle, the right owners not being there at the time alluded to, and if indeed they had, they would have been too weak to have made any successful opposition. The strangers had been but a short time fixed in this situation, before they found it was too limited, and consequently turned their attention towards extending their possessions to the opposite bank of the river, with a view of planting an establishment on the Cape, a promontory of several hundred feet high washed by the sea; the elevation of the land besides its contiguity to the ocean rendered it more salubrious than the place they then occupied, and therefore more desirable. The natives, however, observing their conduct, assembled their chiefs, and requested through them to be informed by what authority they were taking possession of land that did not belong to them. The reply was, "that they had already purchased that land from their king, and to him they might go if they wanted any further explanation on the subject, and that having purchased it, although not having taken possession of it before, they were determined then to have it, even by force, if they could not by any other means." Those chiefs

knew full well that the king, or whatever other title he might then hold, had neither right nor power to dispose of the country, or even to admit settlers without their knowledge and consent. They therefore commenced a direct opposition to their proceedings, and a war was begun between the strangers and the natives, which was continued to the latter part of 1823. In all probability it would have ended very disastrously for the latter, who would ultimately have been driven into the sea or massacred. The natives had already taken some of their people and children prisoners, not, however, without suffering the loss of a great number of their countrymen, by the destructive fire of the strangers. Their provisions and ammunition being partly destroyed, they were in no condition to defend themselves, when a ship-of-war from the land of freedom, chanced to appear and render them assistance. As this vessel could not remain long, (having other duty to attend to,) an officer and twenty-five men volunteered their services to remain with them, and they were left on shore accordingly, and by this assistance they succeeded in checking the progress of the natives, and ultimately gained a more secure footing on the Cape, which they began now to fortify. It is, however, a lamentable fact, that through fatigue and unwholesomeness of the climate to which they were much exposed, the whole of these brave sons of freedom fell victims to its severity. The officer and twenty-three men were attacked by fever, and died at this place, and the two remaining ones were taken, in an emaciated state, to Sierra Leone, by another vessel from the land of the free, and ended their days in the hospital, at that place.

The natives seeing the strangers had received such support, and finding it impossible to succeed in their object of driving them away, were induced by the interference of the commander of the above-named vessel of war, to come to terms with them, allowing them to remain unmolested where they then were, and also giving up the prisoners they had taken. It never could have been contemplated by this officer that such an act of kindness and humanity on his part, would have been instrumental in establishing such tyrannical masters over the poor inoffensive Africans, as their subsequent conduct towards them has proved; and although at first the number was insignificant, every succeeding year brought more strangers, thus increasing the population. They were now too firmly planted to be rooted out by the oppressed natives, whatever their conduct might be, having neither power nor friends to resist their encroachments, which were attended by plunder, bloodshed, and devastation. It will be seen by the following facts how far this character is justified.

The stranger chief in 1824, seeing that his people turned their mind to commercial pursuits, as being less laborious and more profitable than

agriculture, found occasion to quarrel with his weaker neighbours under the specious pretext of suppressing the slave trade, and introduced a new system of traffic not before attempted. The slaving captains knowing by experience that it was only necessary to bring dollars and credit, instead of merchandize as heretofore, being well convinced they could be plentifully supplied by their industrious neighbours, rendered such traffic more secure. If unsuccessful in obtaining a full cargo, the dollars and doubloons were in no risk of being injured even by being taken back; it was also notorious, that slaving vessels could be supplied by those strangers with any article of trade, and usually were, whilst at anchor in the roads of Mesurada, as well as in the neighbouring resorts of slaving vessels. Without any ceremony, therefore, some armed men were despatched into a district within reach, but not within what was usually called the territory of Liberia, who made prisoners of more than one hundred of the natives. These were then termed slaves, and their factory and towns being burnt, they were within the precincts of what was then termed Liberia, and located there to supply the strangers with agricultural produce. These people were no less slaves now than they had been before, only having changed masters, as they were not allowed to sell the produce of their labour to any one but the settlers, and that only at a low price: neither could they if they attempted it, have moved away, as they would have been seized upon by their former masters. It may here be remarked, that all this time the strangers were engaged in a very lucrative commerce with all the slave factories in the neighbourhood, and slaving vessels, by means of small crafts that they had either built or purchased from vessels accidentally calling there; receiving in payment not only large quantities of dollars and doubloons, but bills of exchange of large amount, drawn on merchants in the Havana and other places, receptacles for slaves.

When men are thus disposed to domineer over their weaker brethren an occasion is soon found, and accordingly two of the above located people either from caprice, or ill treatment, or disgusted with their freedom, as it was called, left their pretended protectors, and as might be expected, were claimed by the first trader who saw them, as his slaves; conveyed to a Spanish factory, or vessel, which was trafficking at a place called Trade Town, about 60 miles beyond the confines of Liberia, and there sold. This becoming known to the Great Stranger, a peremptory demand was immediately sent for the two slaves, which if not complied with, the town was to be destroyed and the country laid waste, (a threat that there was not then the means of enforcing). The reply of the trader to this demand was, "that the men in question were not in his possession, nor ever had been, therefore it was impossible to comply with it." This answer was construed into an insult of too deep a dye not to

be resented, and as it happened shortly afterwards (in 1827,) two piratical vessels anchored in the road of Liberia, they were applied to, to assist in carrying the threat into execution. Indeed it could not have been undertaken otherwise, as the distance was too great, and too many obstacles lay in the way for the attempt to be made by land. An arrangement was accordingly entered into, it being known that two vessels were at that time anchored at Trade Town, that these vessels should be taken by the pirates as their share of the booty for conveying the invaders from Liberia to the place of destination, and bringing them back. Accordingly they embarked, and the wind and current being in their favour, they soon arrived at the scene of action. The invaders were landed by the pirates' boats, the town was attacked, and with the factories burnt; several of the natives were shot, and the goods either burnt, destroyed, or taken off on board the pirate, and the vessels according to stipulation were taken possession of by the said pirates; what became of them afterwards, never appeared. This wanton and murderous attack and devastation was effected without a single individual stranger being hurt, as the natives after firing a few random shots retreated into the country, where the principal invader and his gallant associates did not think it prudent to follow them. This conciliatory act being achieved not without great regret, that more plunder could not be secured, owing to the difficulty of getting it off the beach, (the swell being rather high,) the strangers embarked again, after being only a few hours on shore, and were taken back by the same conveyance as they came in, thus not only carrying devastation and plunder among a harmless people, but allying themselves with pirates, to the honour of Liberia! But the town of these Samaritans is one of the chief places for the rendezvous of pirates, there they are supplied with provisions, water, and in fact any thing they want, as well as a mart for the sale of plunder! In 1829, a fine vessel of about 200 tons, laden with various sorts of merchandize, was captured by a pirate and shortly afterwards taken into the roads of Liberia. Both vessel and cargo were sold or rather given away by the pirates as a joint concern, and the goods being divided amongst them according to their rank and society, the vessel was taken into the river for sale, but no purchaser could be found, even amongst the Spanish and French slavers then on the coast. What was to be done, if she were fitted out and sent to sea she would be taken by the citizens, not having been legally condemned, so by way of settling the business, she was broken up and divided piecemeal in the same manner as the goods above-mentioned. The copper which fell to the share of the great stranger, served to sheath a small schooner, called the Mesurada, usually employed like the rest of the small craft in trading on the coast, the equality system allowing the government

as well as individuals, to employ its funds in commercial pursuits. This said vessel although commanded by a person famed for his valour and skill, and defended by the plundered copper from the ravages of the worm, so destructive in the tropical climate, was not long destined to sport the national flag of the colony, as subsequent events will shew.

This hopeful germ of civilization in Africa, having now by yearly augmentation of numbers from the western world, (notwithstanding a great mortality attended them, either on their passage, or after their arrival,) increased to some thousands, and also by their conduct towards the defenceless natives, established their power and superiority over them, was now in some degree to be checked.

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#### CHINESE SKETCHES.\*—Canton.

THE ESPLANADE.—“So pestered is this pinhole here, I’ll be out,” said I to myself, as I sat cramped up in one of the narrow barbarian factories, “I’ll be out;” and forthwith seized my hat and cane, and bolted out at the front of the hong. Here as if moved by instinct, I halted, not knowing which way to turn. The grand esplanade, lay in full prospect before me, and almost every foot of it seemed to be covered with a busy multitude; albeit, not having lost my determination to “walk,” I soon found myself pacing back and forth in front of the factories, jostling my way through a crowd of idle spectators. On one part of the ground there was a long line of victualling stands, furnished with fruits, cakes, sweetmeats, soups, and such like, their keepers constantly calling out to attract the attention of customers: on another part, stood a row of red show-boxes containing marvellous pictures to amuse boys and silly people, and so catch their cash. Some scores of barbers had taken up their quarters within the area; as had also a number of old dames, with their bags of rags, needle, thread, &c. Cobblers, tinkers, and men with baskets of dogs, cats, fowls, &c., for sale, were also on the spot. These were all busy: but by far the greater part of the multitude, were mere loiterers, gazing at a few *fan kwei*, who like myself were trying “to take exercise.” Among the crowd were several tall gentlemen, merchants from the northern and middle provinces; several of these had birds in their hands, perched on sticks or closed up in cages; and what was very odd, these gentlemen when warmly engaged in conversation, would squat down on their “haunches,” four or five of them in a circle, seemingly in a most uncomfortable mode; when their debate was ended, they would “rise” and again saunter about. I had now extended my walk several times across the esplanade; and in doing so, had in one or two instances, counted my steps, which numbered 270, from which I judged the whole length and breadth of

\* From the Repository.

the grand esplanade from the creek to the Danish hong, and from the factories to the river, might be 45 roods by 10. So large!

THE CREEK or ditch, at the east extremity of the esplanade, attracted my attention, for the tide being high, it was covered with boats passing and re-passing, some outward, and others inward bound. The creek perhaps is 25 or 30 feet wide, and so shallow that at low water it is quite dry; it extends along the whole western side of the city, 10 or 15 roods distant from the walls. Several hundred boats belong to the creek, or the creek to them, and they never leave it, whether it be wet or dry. There are on it also many that are employed for the transit of passengers, merchandize, provisions, building materials, manure, and such like; when the water is high these are all in motion.

TWO CUSTOM-HOUSES,—so called, stand on the esplanade. These are the offspring of the Grand-hoppo's department, and are filled with his domestics, who serve him as "long eyes" to watch the fan kwei. It was these faithful servants who reported to his excellency last July, the arrival of "four English devils," viz., Lord Napier, Dr. Morrison, Sir George Robinson, and Mr. Davis. By the laws of the land, if I have been rightly informed, these tide-waiters are required to live on the river; and this in part they do, one side of their houses rising out of the water, and the other standing on land. Both of these are of very good dimensions, for Chinese houses, and have grown up in due form according to old custom. The best of the two stands near the creek; first there was a small bamboo shed, next some posts; and by-and-bye, brick walls appeared; and last year, a large mat shed came over the whole, and after a few weeks, when it was removed it disclosed a neat brick house.

THE COMPANY'S GARDEN, which occupies a part of the esplanade, undertook a few years ago to expand itself in the same manner as the custom-houses have done; and it actually did encroach several feet on the river. The re-doubtable Fooyuen, however, got wind of this, reported this case to Peking, received his Majesty's will; and one fine morning, (the 12th of May, 1834,) accompanied by the Hoppo, came to the spot in great wrath, and the poor garden soon shrunk back to its former dimensions; occupying, I suppose, full 10 roods by 4, which is the largest and almost the only retreat for barbarians in all Canton, and even this is private ground, inherited by the heirs and executors of the late British factory.

A LANDING PLACE is built close to the garden, and extends several roods beyond it, straight out into the river, and was equally guilty with the garden, and ought to have suffered in the same way. The landing place is for one of the many ferries between Canton and Honan, and is a good specimen of the whole. The ferry is supplied with *eighty* boats,

each making one share in the proprietorship, and allowed to pass only in regular rotation. Each boat takes eight passengers at a trip, who collectively pay sixteen cash or about two cents. An individual paying the same amount may have the whole boat for himself.

**CUPPING.**—While out this evening, I witnessed a case of this, in which a bamboo was used instead of the cupping-glass. The operator had the man bent down in a triangular form, with his hands on his knees, while he himself was applying the bamboo to his back. One application had already been made; very little blood, however, seemed to have been drawn; but I could not perceive in what way the scarification was performed, or whether indeed there was any such operation; for a throng having gathered round the man as I stopped, made it necessary that I should push on and leave them. The operator seemed a mere charlatan; and the only peculiarities which I noticed about him, were his broad hat, the brim full six feet in circumference, and a roll of European newspapers.

**NUNS.**—While returning I saw a great many old women, who had been to one of the public altars to pray for rain; among them was a nun, and as I passed by the altar, which stood by the way-side, I saw another on her knees before an idol to which she was performing the *kow-tou*, literally knocking her head on the stones of the street. Nuns here do not hesitate to go abroad, and on such occasions they are usually dressed precisely like the priests of Budha, and have their heads shaved in the same manner.

**HOG LANE.**—This elegant name is purely foreign, and is quite unknown to the Chinese, who call it *Tow lan* or Green Pea-street. It is a great thoroughfare, connected with the ferry and landing-place above-mentioned. Its character is indicated by “Old Jemmy Apoo;” “Old godd Tom, old house;” “Jemmy good Tom;” “Young Tom, seller of wines of all kinds and prices;” and other signs of similar character. This street is not frequented by many foreigners, except sailors, who make it their chief place of rendezvous. Jemmy good Tom “sells straw hats, tobacco, &c.”

**GUARD-HOUSE.**—Barbarians will not understand reason; therefore, it has been enacted, that when the English barbarians and others “are lodging in the factories of the Hong merchants, the latter are to be held responsible for keeping a diligent control and restraint over them, not allowing them to go in and out at their pleasure, lest they should have intercourse or clandestine arrangement with traitorous natives.” See the Hoppo’s edict, dated Taoukwang, 14 year, 6th moon, 28th day; August 3rd, 1834. To make the imperial favour more impressive, it was long ago determined to add to the two custom-houses on the esplanade, a military post to aid the hong merchants in keeping up a

diligent control. This guard-house stands close by the American hong, and is occupied by a detachment from the Kwangheé, consisting of six or eight brave soldiers. Their courage, however, is merely painted on the back of their jackets, which they seldom wear; and of course it is not always apparent. Ordinarily their accoutrements consist only of rattans, raw-hides, lanterns, and a conch-shell. The latter they blow furiously in the night, to let thieves and robbers know that they are on their guard.

OLD CHINA STREET, is distinguished for its breadth, being twelve feet from side to side, the widest that can be found throughout all the suburbs of Canton. Its southern entrance is close to the guard-house, protected by a strong gate, which is guarded by an old watchman on one side, and by a stone altar on the other. At the north end it has two narrow entrances, both of which are secured by strong doors, which, as well as that on the south, are closed at night, though sometimes at a very late hour. The whole length of the street is about thirty roods.

FORTUNE-TELLERS, and such like, find this a spacious and convenient resort. Passing through the street to-day, about two o'clock, P.M., I counted twelve of these fortune-tellers, ten medical establishments, and five money-changers. Two of the first were priests, one Buddhist and the other of the Taon sect. They were all poor, filthy, and beggarly in their appearance; and each had gathered around him a circle of idlers of the same description.

NEW CHINA STREET, through which I made my way home, seemed to have been modelled after the old one, from which it differs very little from Hog-lane. Old and New China streets, are all within the narrow area, which is designated *sheih san hong*, "the thirteen factories," and to which the barbarians are restricted.

The dress of the Chinese during the month has presented a medium between the winter and the summer dress. Hats and caps, (I speak of the common people,) have been laid aside; the number of jackets reduced to two or three; and the tight trowsers exchanged for loose ones. The gentry and officials have reduced their dresses in a similar manner; while the poorest of the common people appear not only bare-headed, but with bare feet and bare backs, having but a single garment reaching from the loins to the calf of the leg.

The eatables seen in the markets during the month are the leche, taou, sheih lew, kin kwa, suh me, yang taou, yang mei, ling keo, fuh show, mung kwo, se kwa, sha le, nan hwa le, poo taou, &c., these are the native names of fruits; the kinds of fish are numerous, the following are the most common, namely, the tsin lung, keen, kwei, sang, tang sheih lung le, hwang, tsang pei, hwang kuh, pih fan, woo, ma tse, seun ko, hwa, leen, hae la, hwan, sung, ma, and tsze woo; of flesh



of the animal kind, I may mention, tsouyang, new, choo, ke, ya, ngo, ma, and kowjow; of birds there are the pih ho, the pih ko, shay koo, pan kew, ngan shun, heën yá, keën ke, shuy yu, &c., such are some of the most common vegetable, fish, beast, and birds, which constitute the eatables of the Chinese at this time of the year.

N.B. The word "esplanade" is not employed with strict accuracy in the preceding paragraphs. I have used it, because I could not find a better. The same plot of ground sometimes is called the "respondentia walk," the "square," and by the Chinese it is called "the rear of the thirteen factories."

CHINESE CHARACTER.—The Chinese in many respects are a most extraordinary people, and actuated by the rules of contrariety. If you offend a Manila-man or a Malay, they will attempt to stab you, but a native of the Celestial Empire goes quite a different way to take his revenge. If there is any law in the country, he entangles his enemy in a law-suit, whereby he loses house and home, and then feels himself repaid for the injury he has suffered. If he however wishes to ruin his opponent once for all, he does not return the blow struck at him, or draws a knife when the other flourishes it, but quietly receives the stab or the castigation, and then repairs elated with his good fortune to the public court, which is always full of harpies who are only too glad to handle a case whereby money is gotten. There being ocular proof of his having been maltreated, the accused is soon stripped of his whole property in order to pay the penalties of the law. Hence people are here not so very ready to commence a brawl, for they are certain of being made beggars as soon as the matter is brought before the magistrate. We know of an old captain who had amassed a very great fortune by constant exertions, so as to attract the envy of his neighbours. He was rather a stingy man, money was his idol, and none in the whole village were able to wring a single cash out of him. Finally however, there was a malicious fellow determined upon having fair play with the miser, and to get from him, if possible, his whole hoard. He therefore tried by some means or other to provoke him to wrath. In this he succeeded beyond his most sanguine expectations. The old man was irritated, he rose and aimed a blow at the scoundrel. Instead of avenging the blow, the latter received the whole force of it. Whilst however the blood was streaming from his mouth, and also one tooth knocked out, the injured party turned round to the old fellow, and calmly asked of him, whether he would compound with him for the offence committed, naming a decent sum to be paid into his hands for insuring his silence of the whole affair. This was rather too much for the miser, he indignantly resisted the offer, and thrust the man out of the door. Nothing abashed, this impudent fellow turned round

and said, "you shall bleed for this." Bespattered with gore, he instantly hastened to the mandarin. This worthy was surprised to see the poor sufferer in such a state, and having heard from his own mouth who had treated him in this barbarous manner, and that the culprit was the rich captain, he at once declared it an attempt upon the life of the man. There stood the hoary-headed captain denounced as a murderer, and the sage judge sitting in the chair and giving orders, that he should immediately, with the evidence collected, be sent to the provincial city. Shackled and manacled he soon perceived his wretched condition, still he could not yet part with his money. But when his very life was threatened, when he was thrown into a dark dungeon, and delivered over to lingering starvation, then his courage failed him, he asked how much his redemption would cost him, and his whole property was the ransom demanded. At first he hesitated, but when the chillness of death crept over him, and he saw no escape from inevitable ruin, he consented—the money was paid down, his valuable estates sold, and he was thrust into the wide world a helpless object with a numerous family. In that state we met him, still he did not despair, but by dint of industry and perseverance he had again accumulated a few dollars. All the villagers testified as to his previous wealth, and one of his best friends also told us, that he had been once a commander in Apoochae's squadron. So certain it is, that ill-gotten riches never thrive.

Gutzlaff gives the following picture of the Junks which trade annually from Siam to the coast of China, leaving Siam in the months of May, June, and July.

"These vessels are about eighty in number. Those which go up to the yellow sea take mostly sugar, sapan-wood, and betel-nut. They are called Pak-tow-sun, (or Pih-tow-cheun, white-headed vessels,) are usually built in Siam, and are of about 290 or 300 tons, manned by Chaout-chow-men, from the eastern district of Canton province. The major part of these junks are owned either by Chinese settlers at Bankok, or by Siamese nobles. The former put on board, as supercargo, some relative of their own, generally a young man, who has married one of their daughters; the latter take surety of the relatives of the person whom they appoint supercargo. If any thing happens to the junk, the individuals who secured her are held responsible, and are often very unjustly thrown into prison. Though the trade to the Indian Archipelago is not so important, yet about thirty or forty vessels are annually despatched thither from Siam.

"Chinese vessels have generally a captain, who might properly be styled a supercargo. Whether the owner or not, he has charge of the whole of the cargo, buys and sells as circumstances require; but

has no command whatever over the sailing of the ship. This is the business of the Ho-chang, or pilot. During the whole voyage, to observe the shores and promontories is the principal duty which occupies his attention, day and night. He sits steadily on the side of the ship, and sleeps when standing just as it suits his convenience. Though he has nominally, the command over the sailors, yet they obey him only when they find it agreeable to their own wishes; and they scold and brave him just as if he belonged to their own company. Next to the pilot, (or mate,) is the To-kung, (helmsman,) who manages the sailing of the ship; there are a few men under his immediate command. There are, besides, two clerks, one to keep the accounts, and the other to superintend the cargo that is put on board. Also a Comprador, to purchase provisions; and a Heang-kun (or priest,) who attends the idols, and burns, every morning, a certain quantity of incense, and of gold and silver paper. The sailors are divided into two classes; a few, called Tow-muh, (or head men,) have charge of the anchor, sails, &c.; and the rest called Ho-ke (or comrades,) perform the menial work, such as pulling ropes and heaving the anchor. A cook and some barbers make up the remainder of the crew.

"All these personages, except the second class of sailors, have cabins; long, narrow holes, in which one may stretch himself, but cannot stand erect. If any person wishes to go as a passenger, he must apply to the Tow-muh, in order to hire one of their cabins, which they let on such conditions as they please. In fact, the sailors exercise the full control over the vessel, and oppose every measure which they think may prove injurious to their own interests; so that even the captain and pilot are frequently obliged, when wearied out by their insolent behaviour, to crave their kind assistance, and to request them to show a better temper.

"The several individuals of the crew form one whole, whose principal object in going to sea is trade, the working of the junk being only a secondary object. Every one is a shareholder, having the liberty of putting a certain quantity of goods on board; with which he trades wheresoever the vessel may touch, caring very little about how soon she may arrive at the port of destination.

"The common sailors receive from the captain nothing but dry rice, and have to provide for themselves their other fare, which is usually very slender. These sailors are not, usually, men who have been trained up to their occupation; but wretches who were obliged to flee from their homes, and they frequently engage for a voyage before they have ever been on board a junk. All of them, however stupid, are commanders, and if any thing of importance is to be done, they bawl out their commands to each other, till all is utter confusion. There is no subordination, no cleanliness, no mutual regard or interest.

The navigation of junks is performed without the aid of charts, or any other help, except the compass; it is mere coasting, and the whole art of the pilot consists in directing the course according to the promontories in sight. In time of danger, the men immediately lose all their courage, and their indecision frequently proves the destruction of their vessel. Although they consider our mode of sailing as somewhat better than their own, still they cannot but allow the palm of superiority to the ancient craft of the "Celestial Empire." When any alteration for improvement is proposed, they will readily answer, if we adopt this measure we shall justly fall under the suspicion of barbarism.

The most disgusting thing on board a junk is idolatry, the rites of which are performed with the greatest punctuality. The goddess of the sea is Ma-tsoo-po, called also Teen-how, "queen of heaven." She is said to have been a virgin, who lived some centuries ago in Fuh-keen, near the district of Fuh-chow. On account of having, with great fortitude, and by a kind miracle, saved her brother who was on the point of drowning, she was deified and loaded with titles, not dissimilar to those bestowed on the Virgin Mary. Every vessel is furnished with an image of this goddess, before which a lamp is kept burning. Some satellites, in hideous shape, stand round the portly queen, who is always represented in a sitting posture. Cups of tea are placed before her, and some tinsel adorns her shrine.

When a vessel is about to proceed on a voyage, she is taken in procession to a temple, where many offerings are displayed before her. The priest recites some prayers, the mate makes several prostrations, and the captain usually honours her by appearing in a full dress before her image. Then an entertainment is given and the food presented to the idol is greedily devoured. Afterwards the good mother, who does not partake of the gross earthly substance, is carried in front of a stage to behold the minstrels, and to admire the dexterity of the actors; thence she is brought back, with music, to the junk, where the merry peals of the gong receive the venerable old inmate, and the jolly sailors anxiously strive to seize whatever may happen to remain of her banquet.

The care of the goddess is entrusted to the priest, who never dares to appear before her with his face unwashed. Every morning he puts sticks of burning incense into the censer, and repeats his ceremonies in every part of the ship, not excepting even the cook's room. When the junk reaches any promontory, or when contrary winds prevail, the priest makes an offering to the spirits of the mountains, or of the air. On such occasions, (and only on such,) pigs and fowls are killed. When the offering is duly arranged, the priest adds to it some spirits and fruits, burns gilt paper, makes several prostrations, and then crying out to the sailors,

—"Follow the spirits!" they suddenly rise and devour most of the sacrifice. When sailing out of a river, offerings of paper are constantly thrown out near the rudder. But to no part of the junk are so many offerings made as to the compass. Some red cloth, which is also tied to the rudder and cable, is put over it; incense sticks in great quantities are kindled; and gilt paper made into the shape of a junk, is burnt before it. Near the compass, some tobacco, a pipe, and a burning lamp are placed, the joint property of all, and hither they all crowd to enjoy themselves. When there is a calm, the sailors generally contribute a certain quantity of gilt paper, which, pasted into the form of a junk, is set adrift. If no wind follows, the goddess is thought to be out of humour, and recourse is had to the demons of the air. When all endeavours prove unsuccessful, the offerings cease, and the sailors wait with indifference.

Such are the idolatrous principles of the Chinese, that they never spread a sail without having conciliated the favour of the demons, nor return from a voyage without shewing their gratitude to their tutelary deity. Christians are the servants of the living God, who has created the heavens and the earth; at whose command the winds and the waves rise, or are still; in whose mercy is salvation, and in whose wrath is destruction, how much more, then, should they endeavour to conciliate the favour of the Almighty, and to be grateful to the Author of all good! If idolaters feel dependent on superior beings; if they look up to them for protection and success; if they are punctual in paying their vows; what should be the conduct of nations who acknowledge Christ to be their Saviour? Reverence before the name of the Most High; reliance on his gracious protection, submission to his just dispensations; and devout prayers, humble thanksgiving, glorious praise of the Lord of the earth and the sea, ought to be habitual on board our vessels; and if this is not the case, the heathen will rise up against us in judgment, for having paid more attention to their dumb idols than we have to the worship of the living and true God.

The Chinese sailors are, generally, as intimated above, from the most debased class of people. The major part of them are opium-smokers, gamblers, thieves, and fornicators. They will indulge in the drug till all their wages are squandered; they will gamble as long as a farthing remains; they will put off their only jacket and give it to a prostitute. They are poor and in debt; they cheat and are cheated by one another, whenever it is possible; and when they have entered a harbour, they have no wish to depart till all they have is wasted, although their families at home may be in the utmost want and distress. Their curses and imprecations are most horrible, their language most filthy and obscene, yet they never condemn themselves to eternal destruction. ▲

person who has lived among these men would be best qualified to give a description of Sodom and Gomorrah, as well as to appreciate the blessings of Christianity, which, even in its most degenerate state, proves a greater check on human depravity than the best arranged maxims of men.

The whole coast of China is very well known to the Chinese themselves. As their navigation is only coasting, they discover at a great distance, promontories and islands, and are seldom wrong in their conjectures. They have a directory, which, being the result of centuries of experience, is pretty correct in pointing out the shoals, the entrances of harbours, rocks, &c. As they keep no dead reckoning, nor take observations, they judge of the distance they have made by the promontories they have passed. They reckon by divisions, ten of which are about equal to a degree. Their compass differs materially from that of Europeans. It has several concentric circles; one is divided into four, and another into eight parts, somewhat similar to our divisions of the compass; a third is divided into twenty-four parts, in conformity to the horary division of twenty-four hours, which are distinguished by the same number of characters or signs; according to these divisions, and with these signs, the courses are marked in their directory, and the vessel steered.

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#### NAUTICAL RAMBLES—*Bermudas*.—No. II.

So little has been published respecting these islands, that persons who may have heard of them can form but vague ideas of their nature, and productions; and even of their geographical position, as we have seen them included among the West India islands! We extract the following brief notice, from an old work now scarce, and nearly forgotten; it is worded in the quaint style of the period,—140 years ago. “The air of these islands is reckoned extraordinary healthful to breathe in, the sky being almost always serene and smiling. But when overcast at any time, then they are sure of a terrible tempest, attended with frightful claps of thunder and flashes of lightning. So healthful are these islands to breathe in, that the inhabitants now (1710) in number four or five thousand,\* are seldom visited by sickness, and generally arrive to a good old age.

“The soil of these islands has been hitherto reckoned very rich and fertile, yielding the labourer two crops a year; and the arable ground is of such an excellent mould, that it affords neither sand, flints, pebbles, nor stones, so hard as are fit to grind knives. But how rich and

\* They are now, (1840) between 10 and 12,000, so that they have little more than doubled in 180 years.

plentiful soever these islands have been heretofore, they are now upon the declining hand, and grow apace both poor and barren. For which is commonly assigned a two-fold reason, viz. the fall of the cedars, which formerly did shelter their fruit from hurtful winds, whereas now they are continually blasted. A certain worm or ant which has lately bred so much among them, as to consume the greater part of their corn.

“The chief commodities of these islands are oranges, cochineal, tobacco, cedar wood, some pearls, and ambergris, in considerable quantity. Observable are these islands for nourishing no venomous creature, none such being found upon them, nor able to live if brought thither. Here indeed are many spiders, but these no way poisonous, and very remarkable for their webs, having the resemblance of raw silk, and woven so strong, that little birds are sometimes entangled in them.

“If wells are dug in Bermudas above the surface of the surrounding ocean, the water is sweet and fresh; but if lower, then salt or brackish; and all of them have some sensible flux and reflux with the sea.

“Upon the coast of these islands is sometimes taken that remarkable fish termed the *file-fish*, [a species perhaps of the *Balistes*,] “being so called from a part of his back bone, which hath the exact resemblance of a file.”

To complete as far as possible the old picture of these interesting isles, we shall add another extract of the date of 1720, from miscellaneous papers.

“The islands are supposed to take their name of Bermudas from certain black hogs that came out of a Spanish ship, which was cast away on their shores. And by some from one John Bermudas, a Spaniard, the first discoverer of the islands.

“The Spaniards held these islands first, and after them the French; but the supplies that was sent them from France, miscarrying by shipwreck, they were obliged to abandon the islands. After this, one Wingfield, a merchant, in London, sent in two ships, Captains Gosmel and Smith, with people to settle there; but there was not much done till 1612, when a company was established at London, by letters patent by King James the first, who immediately sent Captain Moor, with 65 men, where he was two years fortifying the islands, against the attempts of any invasion, from either the French, Spaniards, or Indians.

“In about three years after the first plantation, by Captain Moor, there was sent them another supply of men and provisions by Captain Bartlett, who returned with a hundred weight of ambergris.

“The next year, there arrived 500 men and women, with tradesmen of all sorts. In 1616 one Tuckard succeeded in the government, and was very serviceable to the plantation, in bringing and planting several

trees and tobacco. He also divided the country into acres, and parcelled it out to the tenants.

“The form of the islands as they lie, resembles something of a lobster, with its claws off.

“The chief of the islands is called St. George’s, and is divided into eight parts, besides the general land.”

We may here remark that, if the word “chief,” is used by the above writer to signify the *largest* island of the group, of which there seems to be little doubt from the statement of its having been divided into eight parts, then we must consider that the names were subsequently altered, and that which is here termed St. George’s, is now the Great Bermuda; and the name of the tutelar saint of England, had been transferred to an inferior island, lying to the north-eastward. The expression of the “general land,” probably means all the other islands.

“The soil in some places is sandy or clay, and in others ash-coloured, white, and black; about two feet deep under the ash, is found great slates, which the inhabitants make use of several ways; and under the black is found a stony substance, something like a sponge or pumice stone.”

Is the substance alluded to so briefly, a decomposition of vegetable remains, or is it the vitrified scorix produced by volcanic action? There is scope, small as the islands are, for the close inspection of a practical geologist,—a voyage thither perhaps would repay the trouble, or rather add to the pleasure, of any scientific whatever, disposed to an ardent investigation of the structure of the globe. Indeed so little is known of these islands, interesting in many points of view, that a very compact field of observation is open for the display of talent, in some fellow of the R.G.S. We would therefore beg leave to draw the attention of the society to these specks of the ocean.

“No venomous-creature will live in any of the said islands. There are many plants; as the prickly pear, poyson weed, purging bean, red pepper, and costive tree; and the sea-feather which grows on the brink of the sea. There is another plant called nuchty which grows in the niches of the rocks, washed by the waves of the sea, and produces a fruit like a pear, which they call the speckled pear from its spots.

“There are 23 parish churches, besides chapels; the laws and religion are the same as those in England.”

The remark about Captain Moor fortifying the islands against incursions from the French, Spaniards, or *Indians*, if it were not made under a wrong impression, of the distance of the group from the continent, would appear curious enough. There is no reason for believing that the islands were inhabited before their discovery; and it is quite un-



likely that the Indians of the eastern coast of America would venture on a voyage of 600 miles, even supposing their canoes were suited to to such an enterprise, and that they possessed a knowledge of the existence of such islands.

These extracts although short and incomplete, are not without interest; a more lengthened notice would no doubt be very acceptable, but we may search in vain,—as such a connected account of the islands from the date of their discovery to the present time is a desideratum in our literature. It has indeed been said that there are not materials enough to form a sufficiently interesting volume; it is probable, however, that the contrary would be found to be the case, if close research were made in the archives at home, and of the colony, and the descriptive power of some competent person were brought into requisition. Indeed it seems surprising that among the talented natives,—such for instance as Justice Forbes, not one should have been found inspired with the desire of narrating historically the events and statistics of the colony. It is a little world within itself, separated it is true, by the boundless ocean, from the vast theatres of man's ambition; but, should our curiosity be the less excited on that account? So small a speck of the great globe we inhabit,—affording so limited a scope for the exercise of those stirring events, which whether they embrace the perfections or defects of our nature, still arrest the attention of mankind, may by those restless spirits who delight more in strife than in peace, be considered too insignificant to be noticed among the grand physical features of the creation; but by the contemplative mind would such be esteemed as of sufficient force to shroud the beauties and the blemishes of the little world in the veil of forgetfulness? In the works of the great Author of the universe, there is no limit from the visible to the invisible, and we find that among the most curious productions which rivet our attention, and call forth our admiration, are those whose minuteness require the aid of the microscope, even to develop their forms. In the rational desire for information, which is an inherent principle in man, the contemplation of the objects of nature is not arrested by magnitude alone.—Is the mere isolated rock a fathom, or a mile, or a league in extent, less an object of scrutiny to the philosopher, than the gigantic form of the mountain of 36,000 feet of elevation? or, is the study of human nature confined to a few miles of range, less worthy to be pursued than when embracing an area of thousands of leagues of a vast continent? We may comprehend, but not admire the vulgar prejudice which measures the amount of respect to be paid to an individual or a community by the length of his, or its purse. Injustice or neglect but too often dooms the unassuming and worthy, to the shades of oblivion,—poverty in itself is not a crime, and riches can never purchase virtue,—the

Bermudians and their rock-bound isles have been strangely neglected by the historian, they are a poor, inoffensive, and exemplary people; as such we honour them, and if I have dwelt long and earnestly upon the point, I have done so with the hope of inducing a remission of such neglect.

I shall now endeavour to describe briefly such portions of the islands as came more immediately under my observation, commencing at the point of entry, and the only premise I shall make is, to beg of the reader to remember that the writer is a seaman, and unpossessed of those attractive powers of description which belong to the man of letters.

The eastern extremity of St. David island is rather a conspicuously rounded head-land, clothed with cedar, at the base of which there is a cavern that renders it still more remarkable. After rounding this, we open the passage which leads into the snug harbour of St. George: at first, this recess seems to be merely an apparent break in the continuity of the land, from indentation ending there. This is a common feature in the hydrography of the world, and is one which in voyages of discovery has often been the source of erroneous opinions when time would not admit of a strict or critical survey. In this instance the cause of the deception proceeds from Smith island, which lies abreast of the entrance, and locks in with the north-west point of St. David. Proceeding up the inlet, we leave Paget isle and fort on the right; when within these, we find the channel taking an abrupt turn from about W.S.W. to N.W. for a mile, before we enter the harbour of St. George. Between Paget isle and the south-east point of St. George, there are two or three islets, with shallow channels between them, which are used by boats only, and are called 'cuts:' and here we may hang out a hope, which is,—that, our modern naval surveyors, who are gentlemen of polished minds, will rescue our hydrographical nomenclature, from inelegant and inappropriate terms.\* To follow and perpetuate a bad precedent in these matters, would be, and is quite as absurd as a son binding himself to the use of ardent spirits, because his father had been a drunkard!

On entering the harbour, we behold the town romantically situated on a level beneath a continuous ridge of land of about one hundred feet elevation. It is a corporate town and the capital of the islands, and as such it is perhaps the smallest in the world, occupying no more space than an ordinary hamlet or a small village of England. The first things which engage the attention of the stranger, are, the beautiful cedar trees, and the glaring whiteness of the houses. Abreast of the parade ground we perceive a small Cay, with buildings and wall occupying its whole extent; these are the ordnance office and stores, excel-

\* Such for instance is that attached to Canoo.

lently arranged: the merit of this work belongs to the late store-keeper, Mr. Frazer, who unceasingly devoted his talents and time in bringing it to maturity.

On looking around, we find ourselves in one of the most beautiful and secure harbours in the world; land-locked and well sheltered from all winds, with the water as smooth as a mill-pond; the scenery is every where novel and pleasing: indeed the imagination can scarcely picture to itself a shipping station more decidedly attractive and interesting; for it certainly realizes the *ne plus ultra* of what may be considered the *beau ideal* of a refuge haven! To those persons who are susceptible of the impressions which the natural objects of a landscape, where a combination of land and water are harmoniously blended and embellished with the works of art, create, it is in the harbour of St. George that they will revel in luxury of such a sight, and with the addition of having their minds attuned to the remarkable stillness, and air of peace which reigns around the magical scene! For my own part, accustomed as I was to scenery of every degree of possible variety, from the most luxuriant to the most sterile,—and familiar too with the great ocean in its movements of extreme agitation, down to the placidity of its profoundest state of quiescence; I have never been more under the dominion of those happy sensations resulting from the effects produced on the mind, by a display of Nature's beauties, and the influence of serene weather, than at my visits to these blooming oases in the midst of the wide waters. The bard of Erin gives the following short description of this place: "nothing can be more romantic than the little harbour of St. George. The number of little islets, the singular clearness of the water, and the animated play of the graceful little boats gliding for ever between the islands, and seeming to sail from one cedar grove into another, form altogether the sweetest miniature of nature that can be imagined."

"The morn was lovely, every wave was still,  
When the first perfume of a cedar hill  
Sweetly awak'd us, and with smiling charms,  
The fairy harbour woo'd us to its arms."

The objections to this beautiful anchorage are, a rocky bridge across the channel of entrance, which exclude men-of-war larger than a small sized frigate, and the abrupt turning of the passage. If the first has not been remedied, it can easily be so,—a few pounds of powder expended after the fashion of Colonel Pasley, would soon clear away the obstruction, which is of small extent, and composed of soft sand stone; and the second may be obviated by the use of steam-tugs: the outer or fair-way anchorages being conveniently situated for the application of such means, and although the vicinity is studded with rocky patches,

no danger need be apprehended from the tide, which is here inconsiderable. There is good depth of water within the harbour, and the ground is of stiff pipe-clay, and sufficient space for laying down moorings, either for ships of the line or large frigates, where they would lie secure, and might be conducted to sea in a very short space of time upon any emergency, advantages which are often of considerable importance during a period of war.

I should imagine, that there cannot be any apprehension that the removal of the bar would be opening the passage for the entry of an enemy; there are other parts less guarded where he might try to gain a footing, should he be so inclined, besides, the rocks outside are much more formidable to ships than the forts would be, and if additional security were required, an enfilading battery on Smith island, abreast of the entrance would effectually guard it. If, however, this should be considered insufficient, then there might be a chain, or boom, kept in readiness to be placed across the narrowest part of the channel, but I think such minute precaution would be unnecessary. There are no enemies with whom we are likely to contend, giving them credit for an active spirit of enterprise, that would venture among the shoals to batter the fortifications, or attempt by a *coup-de-main* to capture the islands; indeed, nature herself has thrown an effectual guard around them in an extended barrier of super and sub-marine rocks, the very sight of which would be sufficient to give a caution to the boldest foe to keep at a respectful distance! It would not be at this entrance that we should be apprehensive of assault, and at no other could it be attempted but by boats, a sort of enterprise that seems to be peculiarly suited to the fear-nought *dash* of British seamen, such never yet having been successfully, if ever attempted by other nations, in their belligerent achievements against our country. Our friend Jonathan on the other side of the warm sea-river, who has all the stamina of John Bull,\* is too young yet, and too weak in the sinews of war, although he has the good sense to build large ships, to think of "pinking" us at a venture of this sort: should he ever be so unwise again to break a lance with his brother, he must command the ocean first; and indeed would have to feel too much anxiety about his own waters and coast towns, to find time to play at such a game of chance. The annals of maritime warfare contain a monition which no doubt any enemy of Britain would keep in mind.—She herself has afforded the example,—the coral rocks of the

\* We allude to the officers; for, strictly speaking, the amount of native seamen, and these are principally black, would scarcely man more than one or two ships of the line; the Yankee tar may generally be distinguished by his ear-rings!! and red flannel shirt; when he speaks, you cannot mistake him: his christian name is usually scriptural.

Mauritius saved it from an enterprise unparalleled for boldness and energy of purpose: are the rocks and reefs of Bermuda less formidable?

The advantages to be derived from the removal of the bar in question would be more important to the navy than to the mercantile interests, as the trading vessels which visit these islands can always find water enough to admit them. As steam will assuredly be an agent in extensive use in any future war, and it would be impossible for large men-of-war steamers to pass over the bridge with safety, on this account, if on no other, it were desirable that it should be removed. There is no contemplating where the *new element*, as steam has been termed, will end in its application in the useful or the destructive arts! It is a matter worthy of serious consideration, whether in small forts which are liable from their position to be assailed by armed boats, the defendants might not be very much assisted in their efforts to repel or disconcert an enemy, and *cool* and *damp* his courage, by a sudden and continued discharge of *cold water*, "*scalding hot*," humanity would strictly forbid, although it does sanction *red hot* shot, shells, grenades, and a host of other "*infernals*," ejected from a steam-engine. *Warm water* would create *evaporation*; would the *spirit* of the assailant *go off* with it? cold is better, as it would be apt to bring on the "*shakings*," and such a *fit unfits* a man for *steady* work. Besides, the confusion that would be created in the boats of the assailants, the latter would be unable to see what they were about, or at least what they should be about; the ammunition would be spoiled, and the boats half filled with water, and not improbably brought to a "*stand still*," and thereby become exposed to showers of shot, as well as water, from the engines of the repellants. There is indeed no knowing how such a provoking aguish hot and cold surprise would act on the physical or moral man. This would perhaps depend on country: at all events, if it did not swamp the boat and drown the body, we may be assured that it would mystify the ideas, and in all probability distract the attention from the one sole and engrossing point of action, and bring it to inaction, and ultimately perhaps to reaction.

We may now advert to another subject of more importance: on account of the great extent and formidable nature of the shoals and reefs, which environ these islands, they are generally run for on a parallel, and the disregard of this prudential measure may involve a ship in peril, let the navigator's skill be what it may, on account of the currents. We have known an instance when the confidence reposed in a chronometer was so great, that the Captain determined to run *during the night* upon a meridian which cut the north rocks that lie out of sight of the land,—the consequence was, that to the surprise of that

officer the ship "bumped" heavily upon the heads of the huge masses of detached rocks beneath the surface, (with more than one hundred fathoms between them,) and but for the promptitude and judicious measures of the first lieutenant, she would probably have laid her ribs there.

On coasts where the soundings may be taken as a guide in fogs, or during the shade of night, the navigator is assured of his position with reference to the land, and can act with as much confidence as when the whole line of coast lay before him in the sunshine of day. Nevertheless it has been considered of paramount importance to his safety, that additional confirmation of his exact position should be made manifest to him by the display of a distinguishing light. If, therefore, this care be scrupulously exercised for his preservation on coasts where soundings are to be obtained, how much more should it be attended to on those which have no such guide? The lead will not serve to guide or direct a vessel on her approach to these islands, indeed prudence dictates that they should not be sighted but in broad day-light, but the currents may frustrate such caution. The points generally, and properly run for as land-falls, are Wreck-hill, Castle Island, and St. David Head: a light-house on the former and the latter, would be of advantage to the mariner, whether bound to the islands or only intending to make them on his run across the Atlantic.

The town of St. George which lies in  $32^{\circ} 22' 23''$  N., and  $64^{\circ} 37' 40''$  W., is situated on an uneven piece of land below the southern side of the Tank Hill, a portion of which elevation is enclosed as a sort of miniature park to the residence of the governor. This enclosure has a romantic and inviting appearance, without however, having received any studied aid from the landscape gardener, nor, indeed, does it require it: Mr. Capability Brown would assuredly have been foiled here, there are no lofty elms wherewith to form such unpicturesque groups here, as was his boast and pride.

With the exception of the barrier reefs, physical nature seems to be moulded in miniature here; the people however have maintained their stature; but, the cattle which I saw were very diminutive and remarkable for their symmetry. To complete the picture,—according to the taste that would associate objects of animation with woods and lawns as productive of rural effect, and which would undoubtedly add a pleasing embellishment to this temporary domain of the chief magistrate, and the representative of majesty,—the tiny musk deer of Nepal which is only two feet in height, and as gentle as a lamb, should be introduced.

From this eminence the view is highly interesting; nothing, indeed, as Mr. Moore justly observes, can be more attractive: In the fine sunshiny weather of this clime, and there is much of that here, notwithstanding the proverbial character for storms which the islands have gained, there

is a delightful serenity breathing over the entire scene, which to those who have been busy in the noisy world affords that pleasurable feeling which of all others, perhaps, comes nearest to our ideas of human happiness; and which even the most restless and turbulent spirits appreciate, and are thankful to enjoy. On the mind of the seaman this effect is more apparent, and the cause more forcible, than on that of others connected with his profession; this may arise in a great measure from contrast, and displays itself in that light buoyancy of spirit which has often been mistaken for levity and recklessness of disposition, but which really has no alliance with such characteristics. The truth of this every sea-faring man will subscribe to, for at some time or other he must have felt its force; repeatedly have I experienced its impression on this very spot, as elsewhere.

The houses are principally built with the coarse sand-stone of the islands, and are, I believe, without an exception entirely white-washed. The reason assigned for this universal practice is, that, by exposure to the air the sand-stone becomes quite black from the chemical agency of the atmosphere. The contrast of the pure white colour of the buildings, with the dark green foliage of the cedars is not displeasing, but the glare produced by the reflecting rays of the sun in the unsubdued colouring matter, is not very agreeable to the eyes; of the two extremes however, the white is preferable to the black. The streets are irregular, and the houses generally detached with small gardens around them, but which are not tastefully laid out, or attended to with that care that distinguishes those of the mother country: and this is the more remarkable, as there is little doubt that from the mildness of the climate, most of the ornamental productions of the tropical and temperate regions would flourish here. Excepting a few balsams, geraniums, and the common cabbage-rose, I saw no other flowers. I really think that a portion of the parade ground might be enclosed and converted into a public ornamental *parterre*, and leave ample room for exercise. Those voyagers who have landed at the Havana, will remember with satisfaction the pretty little public garden laid out with some degree of taste, which they unexpectedly light upon a few yards from the wharf, and which is so creditable to the authorities; should the Anglo-Bermudian be less refined than the Spano-Cubian? The architecture and contour of the buildings might with very little expense be improved, so as to harmonize with the beauty of the surrounding scenery. In this matter there seems to be a lamentable deficiency of taste here as in England generally, although it must be admitted that latterly we have certainly begun to improve at home. The semi-civilized nations of the East have long held forth an example in this respect to all Europe, which, after the lapse of ages seems only now to be exerting its influence. Not being

a poet, and possessing but a very slight attainment of the painter's art, I could never, however willing to be deceived, and susceptible of fascination, transform the clumsy white domicile of the native into a Grecian Temple, as the fanciful imagination of the Bard of Erin was inclined to do; no! not even when such, relieved of its heaviness and formality by the graceful foliage of the cedars, glistened in the rays of the enlivening sun beams. Something more effective and permanent appears to be necessary to the realization of such a picture than mere imagination; it is within the reach at least of the influential inhabitants.

In a central position bordering on the margin of the harbour, there is an open space called the Parade Ground. There the politicians meet to discuss the affairs of the little world; and, I suppose, as the name implies, the soldiers assemble to exercise, although I have never seen them there.

The Church, which is a plain building, and, like the dwellings, comes in for its share of white-wash, is situate on a bank adjacent to the Parade Ground; although small, it appears to be spacious enough for the church-going portion of the population of the parish, as, a division of our ship's company often found room in it on Sundays. It must be observed that many, if not most of the blacks are Dissenters, which may probably account for the circumstance.

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#### CHINESE ISLANDS, No. III.—*Formosa*.

LITTLE change ensued in the government or customs upon this change of masters. The imperial authority on the island, though often assailed by insurrections during the last 150 years, is still maintained. The lands possessed by the Chinese in Formosa were at that time divided into three districts; the subject natives composed 45 towns or villages. Little can be said with certainty of the events which have since transpired there.

The two most prominent events are the destructive inundation in 1782, and the rebellion in 1788. The official report of the former disaster states, that in May (which is not the month for typhons,) a wind, rain, and swell of the sea together, for 12 hours threatened to overwhelm the island; on its cessation, the public buildings, granaries, and most of the private houses were in ruins: of 27 ships of war, 12 had disappeared, and 12 more were wholly ruined, of other ships about 200 were lost. Without the harbour a prodigious number of barks and small vessels disappeared, and left not a piece of wreck behind. The emperor directed that all the houses thrown down should be rebuilt at his expense, (*i. e.* from the public treasury,) and provisions supplied to the people.



"I should feel much pain," says he, "were one of them to be neglected." Subterranean winds, says the narrator, may have conspired with the winds to aggravate this calamity.

This event was followed six years later by the most important and bloody rebellion which Formosa has yet witnessed. The particulars of it cannot be given, but its suppression by cruel punishment and almost indiscriminate proscriptions, tarnished the name of Keen-lung, the emperor. M. de Grammont states in a letter of March, 1789, that "the troubles of Formosa are ended at last, but at the cost of a shameful and expensive war to China. She has lost at least a hundred thousand men, destroyed by disease, or the sword of the rebels; and she has expended more than two millions of taels. The only advantage that she has secured, is the re-capture from the Formosans of the two places they had seized. According to the returns of the Chinese general to the emperor, the renowned rebel leader, Sin-chwang-wan has been captured and cut into a thousand pieces; but according to private advices, the rebel still survives, and the real sufferer was only a Formosan bearing the same name."

A brief geographical description, adapted to its present condition will be found at the close of this account. One prominent object with the Chinese government in retaining Formosa, second to preserving it from the possession of foreigners, is to prevent its becoming a rendezvous for criminals and desperadoes from the empire. For this purpose they have always maintained a numerous guard of soldiery upon the island. The officers stationed there have been strict, even to vexation, in granting passes to the applicants who come thither from China to trade or to reside. Many hundred thousand emigrants from Fuh-keen, Kwang-tung, and Che-keang, have peopled the villages of Formosa, and it is said a regular system of extortion is practiced by the officers upon the new comers. They demand a fee so large, that poor settlers have no other means to pay it, than to bind themselves to the officers in a certain portion of their profits till the whole demand is discharged. Thus on their arrival, many of the emigrants find themselves in a manner slaves to the mandarines, as to them much of their hard earnings must revert. "Though they are industrious," says a recent observer of the island, "yet the emigrants have deservedly a reputation for insubordination and lawlessness. They associate much in clans, and clannish attachments and feuds are cherished among them; but they are very fond of intercourse with foreigners, many of them are unmarried, or have left their families in China, to whom they hope to return after amassing a pretty property." Having just escaped from the grinding of the mandarines at home, they naturally wish to enjoy more freedom in their voluntary exile. But the mandarines of Formosa on their

part also, by being removed from the supervision of their superiors, can proceed to more open and extreme extortion than in China itself, since complaint is difficult, and relief still more so. Thus mutual dissatisfaction is excited and cherished, on the one hand by new acts of oppression, and on the other by new acts of evasion or resistance; hence in no part of the empire have insurrections been so frequent as in Tae-wan. The late threatening rebellion there has been just closed, though for some time it has ceased to excite any conversation or interest. The reports from the seat of war were so imperfect or contradictory, that it is either difficult or impossible to obtain satisfactory information.

It appears that the naval and military forces stationed on the island were no ways contemptible as to number. An imperial report states, that 20,000 of the troops there in garrison had been allowed by their officers so to mingle in the employments and interests of the people, that on the breaking out of the rebellion, no effective force could be mustered on the island. The general cause of the war doubtless was, and the emperor at last acknowledged it, the growing oppression of the officers of government. But there was no unity among the rebels, nor any previous concert to rise against the government. The occasion of the insurrection is said to have been a quarrel between two clans, one of which by appealing to the officers, brought in the other for an unusual fleeing from the mandarines, which in this case was not endured. The opposition burst forth about 15 miles from Tae-wan, the capital, and 20 or 30 officers with near 2000 men were killed at the first explosion. This news soon spread, and there was a general rising throughout the districts, and the imperial troops were destroyed or fled into the mountains; they *disappeared*. While troops were being levied and despatched from the four south-eastern provinces of China, the insurgents were expending their strength against each other; it was said that one clan had seized the capital, and kept possession of it with 30,000 men, and that 50,000 of the hostile clan were marching against them. The navy and most renowned officers were despatched to suppress the rebellion, commissioners were sent from Peking for the purpose, and woe be to such officers in China, who are not successful by some means or other. At length by force and money, if report be true, not much less by the latter than the former, the insurrection was checked; but it broke out again at different times and places till June 1833. After a continuance of eight or nine months, "now all are again quiet," says the final report, "and the mind of his majesty is filled with consolation."

After this sufficiently extended sketch of the history of the island, we proceed to its form of government and productions. Formosa, together with the Paug-hoo islands, form one *foo* or department of the pro-

vince of Fuh-keen. It is immediately subject to the foo-yuen of that province. For an account of its present divisions, we refer to a geographical description in the Canton Register, the writer of which drew from Chinese statistical books. This department defined as above, comprises six *heens*, or subordinate districts; five of which are in Formosa, the remaining one includes the Pang-hoo isles. The aboriginal inhabitants of the western parts have been mostly subdued and enslaved by the Chinese; but they do not continue in quiet submission to their conquerors, except the small proportion which are styled *matured foreigners*, and are civilized. Tae-wan heen, the chief district, is a narrow tract of land, comprehending a town, 21 Chinese and 3 native villages. The capital Tae-wan, is in latitude 23° N. Its harbour had formerly two entrances, one of which called Ta-keang is now entirely blocked up by the accumulation of sand; here stood the fort Zeelandia. The other is so shallow and intricate on account of shoals that it is impracticable without an experienced pilot. The city of Tae-wan is described as ranking among cities of the first class in China, in the variety and richness of its merchandize and population. Its streets are covered many months of the year to avoid the rays of the sun. Tung-shan heen, lies south of the former, and includes a town, 8 villages, and some plantations of Chinese. The native villages are 73, of which 8 only are occupied by the civilized natives. Choo-lo heen lies north of Tae-wan, and comprehends a town, 4 Chinese and 33 native villages, 8 belonging to the civilized natives. Chang-hwa heen, besides its town, has 16 villages, and 132 plantations of Chinese, and 51 native villages. Tan-shwuy heen has a town, 132 farms, and 70 native villages. Pang-hoo-tong, according to Nieuhoff who visited it, "has several good harbours and two commodious bays, where ships may ride safely at anchor in eight or nine fathoms of water. It contains many populous villages, the islands being all well stored with inhabitants, with fat cattle, especially cows, and birds of all sorts, with an incredible number of fine large cocks. Here are always seen many Chinese vessels for fishing and traffic; the islands are many in number, the two most famous are Fisher island, (which is the western,) and Pahoo. The south-east side of Fisher island is so barren that it produces not a tree." Perhaps this last remark may aid us to understand other accounts which represent these islands as desolate and barren.

A chain of mountains divides the island in its whole length, from north to south, forming in general, the barrier between the Chinese on the west, and the independent natives of the unexplored eastern side. Many of these mountains are very lofty, and sometimes slightly covered with snow; some are volcanic and sulphureous.

Of the native inhabitants there are three classes; *first*, those who have not only submitted to the Chinese, but also have adopted many improvements from them, and have advanced beyond their former rude state towards civilization. These were instructed by the Dutch as has been related; but having lost their teachers and pastors together, it is not to be supposed that they retain much knowledge of Christianity now, after a period of 170 years. The jesuit Du Halde, who wrote seventy years later, and who would not have judged too favorably, says, "the people adore no idols, and abominate every approach to them, yet they perform no act of worship, nor recite any prayers. There are many who understand the Dutch language, can read their books, and who in writing use their letters, and many fragments of pious Dutch books are found amongst them."

The *second* class is composed of the aborigines, who though acknowledging the authority of the Chinese, yet retain their primitive customs, and are called "raw natives." This class comprises much the greater part of them who are subject to the Chinese; the *third* portion, all the unsubdued and independent tribes and villages, of whom we have an imperfect knowledge. It appears however, that they have no books or written language; that they have no king or common head, but petty chiefs, and councils of elders and distinguished men, in that respect, much like the North American Indians. It does not appear whether they have any separate priesthood, but it is probable that there is none beyond the conjurors and enchanters of all savage tribes; nor any ancient and fixed ceremonies of divine worship, or system of superstition. They are represented by the Chinese as free from theft and deception among themselves, and just towards each other, but excessively revengeful when outraged. In their marriages, which are made by mutual choice, the bride takes home the bridegroom to her parents' house, and he returns no more to his father's; "therefore they think it no happiness to have male children." They are of a slender shape, olive complexion, wear long hair, and clad with a piece of cloth from the waist to the knees; they blacken their teeth, and wear ear-rings and collars. In the southern part, those who are not civilized live in cottages of bamboo and straw, raised on a kind of terrace three or four feet high, built like an inverted funnel, and from 15 to 40 feet in diameter. In these they have neither chair, table, bed, nor any moveable; they place their food on a mat or board, and use their fingers in eating, as the apes. They tattoo their skin. In the north part, they clothe themselves with deer skins.

That portion of *Formosa* which is possessed by the Chinese well deserves its name; the air is wholesome, and the soil very fruitful. The numerous rivulets from the mountain fertilize the extensive plains

which spread below; but throughout the island the water is unwholesome to drink, and to unacclimated strangers it is often very injurious. "All the trees are so beautifully ranged, that when the rice is planted, as usual, in a line and checkerwise, all this large plain of the southern part resembles a vast garden which industrious hands have taken pains to cultivate." Almost all sorts of grain and fruit may be produced on one part of the island or another; but rice, sugar, camphor, tobacco, &c. are the chief productions. Formosa has long been familiarly known as the granary of the Chinese maritime provinces. If wars intervene, or violent storms prevent the shipment of rice to the coast, a scarcity immediately ensues, and extensive distress with another sure result, namely, multiplied piracies by the destitute Chinese. Some idea of the exports from the island may be formed from the reports of an European who has visited it, and who is intimately acquainted with the maritime provinces of China. "The quantity of rice exported from Formosa to Fuh-keen and Che-keang is very considerable and employs more than 300 junks. Of sugar, there annually arrive at the single port of Teentsin upwards of 70 loaded junks. Much of the camphor in the Canton market is supplied from Formosa. The greater part of the colonists are cultivators of the soil, but many of the Amoy men are merchants, fishermen, and sailors. The capital which they employ is very great, and the business profitable. The natives have receded farther and farther towards the sea coast, and have been partly amalgamated with the planters. The whole population may amount to *two or three millions*."

The position of Formosa is admirable as affording facilities for trade; within 30 leagues of China, 150 of Japan, and less of the Phillippines, its situation and resources make it a desirable station for the commerce which is now opening, and yet to be opened in these long forbidden lands. But except Ke-lung, there is no good harbour yet explored on the whole coast; at Tae-wan, the greatest depth at high water is eight or nine feet. The Lord Amherst, which stopped at Formosa a few days in 1832, could not approach within several miles of the shore. Junks also lay a long way outside, and receive their cargoes in lighters. It is well known that the harbours are becoming shoaler, and the land is increasing by constant and large accretions of sand. The current in the channel is very strong, so that unless the wind be fair, Chinese vessels cannot bear up to regain their course; and in passing from Fuh-keen to Formosa, they have often been driven so far to the south, that they could not reach their destination, when not unfrequently they bring up at Cochin-China or Siam, there to await a change of the monsoon. But foreign ships, during the last and present winter, beat up the channel against the full strength of the northeast monsoon and the current; yet this can be accomplished only by strong and superior sailing ships.

VOYAGE OF H.M.S. BEAGLE ON A SURVEY OF THE COAST OF AUSTRALIA.—*By a Naval Officer.*

HAVING completed our crew, and being in all respects ready, we weighed anchor at four in the morning on the 5th of July, 1837, and stood out of Plymouth Sound with a light air from the northward. When a few miles outside the breakwater, we fell in with H.M.S. Princess Charlotte, bound to the Mediterranean with the flag of Sir Robert Stopford as Commander-in-chief. Soon after speaking, a breeze sprung up from the southward, and both vessels stood down channel, with a scant wind, until eight in the evening. We were then about ten miles off Falmouth, when the wind shifted to the north-east. Our course was shaped to the W.S.W., and with a light breeze, and fine pleasant weather, we crossed the Bay of Biscay; passed Cape Finisterre on the 11th, and on the 14th in lat.  $39^{\circ}$ , and long.  $14^{\circ}$  W. took a fresh N.E. wind. After touching at Tenerife, Rio Janeiro, and the Cape, we shaped our course for Swan River.

When within six hundred miles of the coast we commenced sounding, and continued it each day at noon, without obtaining bottom with 170 fathoms of line, until the island of Rottenest was seen, at 8 A.M. on the 15th Nov. bearing E. b. S. about five leagues off. From the time we began to sound, a northerly current was experienced of half-a-knot per hour, and the last day it ran at the rate of one knot each hour. At 11 a fresh sea breeze sprung up S.S.W.: at 2 we passed the north side of Rottenest, at a mile and a quarter off shore, and shoalened suddenly from eleven to four fathoms on a patch off the centre of the island. At 2h. 30m. passed the N.E. end of Rottenest, and at 4 anchored in Gage road in four fathoms, over a sandy bottom, with the pier bearing east three-quarters of a mile distant.

The settlement at Swan River was established in the year 1829, under the direction of Sir James Stirling, R.N., at which time nearly the whole of the present settlers arrived. For some time they were in a miserable plight, living on the beach in tents, with all their property exposed to the mercy of the waves, which made great havoc during the north-westerly gales that blow in the winter season, when they were unfortunate enough to arrive. As they became more settled the country was explored, and where good land was found different parties took up their abode; the sites of townships were marked out, and names given,—such as Perth, Guildford, York, &c. and the place at which they landed was called Freemantle. In consequence of this they became much scattered, and remain so to this day.

The principal settlement and seat of government is Perth, situated on

the right bank of the river, about twelve miles from its mouth. As yet it consists of a number of scattered houses, just sufficient to mark out the line of streets, which are difficult to walk through from the quantity of loose sand, like steel filings, with which the ground is covered.

The principal buildings, are the government house, court-house, (which serves also for a church,) and the public offices. The latter has a good effect when approaching; and leads the stranger to suppose the town to be of greater magnitude than he afterwards finds. The approach to Perth for the last half-mile is shoal; a boat frequently touches after passing the low point on which the mill is situated. This is much against the situation chosen for the town; but no doubt as the soil is good in the neighbourhood, and fresh water in abundance, it has advantages over other parts, which more than compensate for its want of a good landing place:—as goods might be landed abreast of the mill, and carted up at a small expense.

I saw no fortifications here, nor do I believe any exist. A detachment of the 21st regiment are stationed in the colony, and distributed in the different inland towns. Their only services are to keep in awe the natives of the country, who at times become troublesome; but in general behave well, and are treated kindly. They are constantly to be seen in the town, and occasionally render their services to the settlers as servants, in drawing water, cutting wood, &c.

As little was seen of the interior by any one in the Beagle, no description can be given of it here. I shall, therefore, pass over Guildford, York, &c. and mention something about Freemantle, the sea-port of the settlement.

It is situated on the left bank of the river, on a low sandy isthmus at the back of Arthurs Head, the southern entrance point of the river Swan. It contains about 300 inhabitants, the principals of whom are the president and harbour-master.

The houses are built chiefly of limestone, taken from Arthurs Head, and do not exceed two stories in height. The streets are laid out at right angles, pointed out by the different detached houses; which give it more the appearance of a deserted village, than a rising town. If ever it be completed it may probably have some appearance of comfort, to which, at present, it has no pretension.

The most conspicuous buildings are the gaol, and the court-house, situated on Arthurs Head, and assist in pointing out the anchorage after passing Rottenest. There are several lodging-houses, where accommodation may be obtained on reasonable terms, considering meat is 1s. 3d. per lb., and all other things in proportion, except soap, which is three shillings; this would scarcely be credited in England, but such, nevertheless, is the case; indeed, at times, some articles are not to be pur-

chased, as there is generally an interval of from three to six months between the arrival of vessels trading to this place.

In 1836 a whale fishery was established and carried on for some time with spirit. A tunnel has been cut through Arthurs Head for freer communication with the town, and a jetty has also been run out, with shears for cutting in the whales. In 1837 the first cargo from this colony was sent to England, consisting of oil and wool; but some differences arising among the shareholders of the whaling company; it is now in the hands of a very few, and it seems doubtful if they will go on with it. This season has not been so fruitful as the former: so late as the middle of June only one whale had been taken.

During our stay at this place in June, the anniversary of the establishment of the colony took place; to celebrate which the best horses are generally brought to Perth, and races are established. A cup and several other prizes are run for. There is also some amusement afforded by the natives throwing the spear at loaves of bread, running for pigs with greasy tails, and so on. These evenings are generally concluded with a ball, at which all who can pay their guinea are admitted. It is now more select.

Our captain being attacked with a severe dysentery, delayed our departure from Gage Road, until the 4th of January. During that time the approach to the anchorage, and a channel south of Rottenest was surveyed, and various observations made on shore. On the morning of the 4th we departed, and continued in the neighbourhood sounding until 5 P.M. when a course was shaped to the northward, with the intention of passing the reported locality of a shoal. But after running sixteen miles in that direction, and the soundings being quite regular, we gave up further search for the time, and steered N.W. towards the spot at which the survey was to commence. Nothing of any moment occurred during this passage, the winds were generally between S.S.W and S.S.E., a moderate top-gallant breeze with fine pleasant weather, until we rounded the north-west Cape on the 9th. The air then became insufferably hot, although the thermometer did not exceed 85°, yet the heat was so intolerable both by day and night, that few on board could obtain rest, and the worn-out appearance that most of us had in so short a time is scarcely conceivable.

The winds from this time were light and variable round the compass, and we did not arrive off Cape Villarêt till about midnight, on the 15th, when the anchor was dropped in 14 fathoms water, over a fine speckled sandy bottom.

We had not been here more than two hours, when a violent squall came on from E. b. S., and drove us for more than a mile,—these squalls have been described with great accuracy by Captain King, but as we



had the two preceding nights, felt them while under sail, I for one, thought from the small and badly found vessel that Captain King was in, he had been led to suppose them of more consequence than they really were; but I felt this night how much I had wronged his judgment, and determined not again to draw such hasty conclusions upon so slight a foundation.

Generally speaking, these squalls give sufficient warning of their approach; the air becomes dry and parched,—heavy clouds arise in the eastern quarter, from whence issue continued flashes of sheet lightning for two or three hours previous. During this time the wind generally dies away and a short calm ensues.

When this takes place, if a vessel be under way, no time should be lost in reducing sail, for the breeze comes on almost immediately, and with great violence, accompanied with rain in torrents, and a short chopping sea. Their duration is not more than an hour and a half, when they are succeeded by comparatively cool and pleasant weather.

Leaving our anchorage the next morning one arm of the anchor was found broken off. This was most disheartening, as from our having broken one at Swan River, only two were now remaining at the commencement of the work, when anchors would be invaluable. However to make the most of what remained, the broken anchors were secured together, and formed a substantial sheet in case of necessity.

Cape Villarét being at a suitable distance, we examined the shore from thence to the eastward, until abreast of a small opening on the south shore at the entrance of Roebuck Bay, when having shoalened our water to seven fathoms, the anchor was dropped on a clear sandy bottom.

As Captain King supposed this bay either communicated with the large expanse of water on the east side of Cape Levêque, or that a river of some magnitude emptied itself here, all hands were on the alert, and anxious for the morning, that the examination might go on with the boats.

Accordingly, at break of day the boats were detached in different directions, myself with a whale boat to ascertain the extent and direction of the opening, seen the previous day. After pulling about four miles in a south-east direction, we landed on the western edge of a sandy flat, that ran off the shore, with the intention of walking to a hillock on the beach about two miles distant, but had not proceeded above half a mile, when five natives armed with spears were seen approaching. I therefore thought it prudent to return towards the boat until we had ascertained whether their intentions were friendly or not.

By the time the necessary bearings were taken for fixing the limit of the sand, the natives had closed to within two hundred yards.

To this distance they had come boldly on, but seeing we had no intention of taking immediately to our boat, they became more cautious, stopping every six or eight paces to reconnoitre, and when about a hundred yards off a stand was made, and they appeared deliberating whether it would be safe to approach nearer.

After a short consultation, the decision was against it, and they commenced yelling and making signs for us to draw near; upon which, I walked towards them alone, until within thirty yards, when they retreated, keeping at that distance from me. I followed till hardly within musket shot of our party, but as they continued going away, and beckoning to the land, I returned to the boat and anchored her a short distance from the bank to get our breakfast.

While thus engaged, the natives again approached, hallooing and talking loudly, and this time walked breast high into the water towards the boat. One of the boat's crew being anxious to go to them, I gave him permission, as they were not more than twenty yards from us. He shook hands with the nearest; his breast was minutely examined for marks similar to their own, and each began asking a multitude of unintelligible questions. They soon became on friendly terms, and the seaman put his hat on the head of one of them, which he naturally enough took as a present, and would not return. This annoyed the man, and he attempted to take it by force, upon which the native poised his spear and placed himself in a threatening attitude. I instantly called the man to the boat, and they walked off, no doubt well pleased at having obtained something from us without a return.

After breakfast, we pulled towards a clump of trees, situated on a steep sandy beach, about two miles distant, and as it afterwards appeared the western point of a mangrove creek, (the opening seen from the ship,) which I named Native Inlet, a mile and a quarter across at its mouth. Leaving three men to take care of the boat, the rest of the crew accompanied the other officer and myself a short distance along its left bank, and found it running to the S.S.W., that at low water it was left dry, with the exception of a small stream on the side we then were. As it was useless to follow it further, we were returning, when to my surprise I found the natives, (having added two to their number) had crossed the sandy flat from the opposite point of the creek, and were then between us and the boat, but as we were four, and well armed, there seemed little probability of an attempt to molest us. We walked quietly on, and they in the same manner passed us in an opposite direction, each party eyeing the other askance.

After giving directions about the boat, we trudged on to the westward about half a mile along the beach, to a suitable position for taking bearings, and viewing the coast. This being done we returned, and

found the natives sitting quietly down a short distance from where the dinner was cooking, watching every movement with eagerness.

Upon enquiring, I found things had not been quite so well during our absence, for one of the natives after seeing the use of an axe, had endeavoured to make off with it, and had just been discovered in time to save it; that after this, the coxswain had paraded before the fire with a musket over his shoulder, which caused them to withdraw to the respectable distance at which we found them. To prevent interruption during dinner, the things were removed to the boat, and she was then shoved a few yards off the beach, and we commenced our repast.

As we took to the water they arose, and followed us close, but in the act of shoving off, the boat hook being pointed over the bow, they one and all involuntarily stepped back a couple of paces thinking no doubt it was one of our spears, which to them must have appeared a formidable weapon; but seeing no harm was intended, they remained at the waters' edge watching us narrowly whilst at dinner.

At this time I had a good opportunity of examining them. They were about the middle age, from five feet six inches to five feet nine in height, broad shoulders with large heads, and overhanging brows; but it was not remarked that any of their teeth were wanting, (as was afterwards observed in others,) their legs were long and very slight, and their only covering was a bit of grass suspended round the loins. There was an exception in the youngest, who appeared of an entirely different race, his skin was a copper colour, whilst the others were black, his head was not so large, and more rounded; the overhanging brow was lost, the shoulders more of the European turn, and the body and legs much better proportioned; in fact he might be considered a well-made man at our standard of figure. They were each armed with one, and some had two spears, rude pieces of stick about eight feet long and pointed at each end. It was used after the manner of the Pacific Islanders, and the throwing-stick so much in use by the natives of the south, did not appear known to them.

After talking loudly, and using extravagant gestures for some time without any of our party replying; the youngest threw a stone which fell close to the boat. As this was quite unprovoked, I thought it time to make them aware of our means of defence, and immediately fired a pistol, the ball of which passed a few yards to the right of the group. This astonished them to such a degree, that with one accord they gave a loud cry of whoo—whoo—and ran off at full speed without once looking behind; indeed one in the haste to get away, stumbled and rolled on the ground, but recovered himself with amazing quickness, and rejoined his companions. Thus ended our first interview with the natives of the N.W. coast, and it fully confirmed me in the opinion I

had previously formed, that we had nothing to fear from them openly, but at the same time it would be necessary to guard against treachery in our intercourse with these children of nature.

Soon after their departure, the tide having risen sufficiently, we pulled to the hillock before-mentioned on the opposite point of the creek, and from thence had a tolerable view of the neighbouring coast; this point was called East Point.

From East Point, we pulled towards the ship, in a N.W. line over the bank that we saw dry in the morning, till about a mile and a half from the shore; from thence it deepened gradually to six fathoms, a cable's length from the ship, at the distance of three miles from the shore over a clear sandy bottom. We arrived on board about six in the evening tolerably well satisfied with what the day had produced.

At daybreak in the morning, the ship was shifted a mile and a half to the eastward, and at eleven, I left her with the view of extending what had been done yesterday on the south shore. Pulling in an E.b.N. direction, the water was found to shoal quickly, and a mile and a half from the ship, with East Point bearing south by east, there was only four feet at low water.

We then steered more northerly, and crossed a narrow channel with two fathoms and a half at low water, and shoalened again on an opposite bank, in a line between East Point and Point Janthueame; from thence to the S.E. the soundings were irregular, from one to four fathoms over a muddy sand.

Proceeding for four miles in this direction, and finding no fit place for a vessel to anchor in, we pulled towards a hillock seen before leaving the ship. As we neared the shore, it was found to be fronted with mangrove bushes, and the tide being high, enabled the boat to pull among them a considerable distance.

We landed, and walked to the hill, which, although not more than seventy feet high, gave us a good view of the surrounding country. As far as the eye could reach, was a level plain, studded with red ant-hills, (which at first sight were taken for the habitations of the natives,) and scarcely any vegetation. With extraordinary high tides, or probably strong westerly winds, the country around appeared to have been inundated. At the foot, and partly up the slope of the hillock on which we were standing, three quarters of a mile from the coast, quantities of shells had been deposited by the sea, and now lay whitened in the sun. Were it not for these sand hills that stretched along parallel to the coast, I have no doubt, that during the westerly monsoon, a boat at this point might proceed some distance in the interior. Whilst returning, two natives were seen in the distance, but as soon as they perceived us, they made off, and we saw no more of them.

During our absence, we found the tide had taken so rapidly off a flat that extended from the coast, that it was with difficulty the boat could be kept afloat, and we were compelled to walk half a mile out to her. We afterwards found this flat ran out above a mile from the line of mangroves.

As it was now late, and I was fearful of becoming entangled among the banks, we made all haste to the ship, and arrived on board at 7 P.M.

It was now deemed impracticable for the ship to proceed higher up the bay, and preparations were made for finishing the examination with the boats. Being equipped with five days provisions, I started again the next morning, accompanied by Lieutenant Eden in another boat. Our course was held to the part where I had left off the previous day, but in crossing the banks the tide fell suddenly, and left us dry for an hour and a half. Whilst the boats were lying here, I walked to the northern limit of the bank, and took a round of angles for fixing its position from this station. I found it was of far greater extent than I had previously imagined, it continued to the N. b. W. four and a half miles from East Point, and was connected with the shore from the west point of Native inlet, to the flat off sandy hillock. To the northward was another dry bank, and it was between the two we found the narrow channel yesterday.

During our stay on the sand, we were visited by one of our former friends from Native creek, he came down alone, and after talking some time, had the impudence to seize the boat's bailer, and endeavoured to make off with it, but upon chase being given, he dropped it and ran away.

As soon as possible we were on the move, and pulled to the eastward over shoal ground, until abreast of a sandy hillock, where the boat was anchored to take a round of angles. While thus employed, we were joined by a party of six natives, that had run along the flat, and were hallooing at the top of their voices for us to land,—and so eager were they to communicate, that they waded up to their necks in water. As it would not detain us, I was willing to satisfy their curiosity, and as soon as we had finished, the boat was pulled quickly in, so that before they had time to reach the shore we were between them and it. I never before saw so much terror as was manifested by these people, they trembled violently, could only utter a few incoherent sounds, and point to the shore. What caused them so much alarm I am at a loss to imagine, unless it were the sudden movement of the boat, which must have appeared to come on them at a bound.

That they might be sure we had no intention of offering them harm, the oars were rested until they all landed safely: we then resumed

our course, at half a mile distant from the line of mangroves. Pulling in this direction for two miles, we came to an opening a quarter of a mile in width, which we entered and found to be a similar creek to Native inlet, (dry at low water.)

Taking angles for its position, both boats pulled again along the mangroves for four miles, when we came to another of these salt water inlets. From this spot the coast trended north, and as I considered it to be the head of the bay, all hopes of a river vanished.

In consequence of the water flowing among the thick impenetrable mangrove bushes, landing was out of the question here, so we came to an anchor and waited till the tide made off the bank sufficiently to enable us to land. In the mean time observations for the longitude were obtained.

By six the tide had ebbed, so as to leave about half a mile of hard sand from the line of mangroves,—at the edge of this flat the theodolite was put up, and an excellent round of angles obtained, accompanied with the true bearing of the sun. We then re-embarked, and anchored the boats for the night.

At daylight, on the 20th, we again commenced our examination, keeping a northerly course. We passed along a similar coast to the preceding day, a line of thick mangrove bushes; but a short distance from them was a range of level land about a hundred and fifty feet in height slightly wooded at the top.

After pulling six miles in this direction, the coast took a sudden turn to the westward, and entirely altered its character, broken, detached, red sand-stone cliffs, from fifty to a hundred and fifty feet, thickly wooded on the top, was the general feature; and large lumps of the same lie off them, to the distance of a mile and a half on a flat that dries at low water.

We landed at the eastern end of these cliffs, and got observations for latitude and longitude, as well as a round of theodolite angles, for continuing the triangulation. The heat at this spot was intense: between ten and eleven o'clock finding the sun very oppressive, I went behind a projecting part of the cliff, and thought it delightfully cool. Imagine my surprise, on placing the thermometer there, to find it stand at 93°.

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#### ÆOLIAN RESEARCHES.—No. VI.

[Of the seventeenth century.]

THE monsoons are anniversary winds, which blow constantly one way for so many months; beginning exactly, from the sun's entrance into a sign of the zodiack; and the other halfe yeare, the contrary way, or

till the sun enters into the opposite degree: which if seamen neglect, they goe near to loose their passage into India.

Their principall efficient is the sun: and though it will be difficult to explain the particular mode, yet both the currents and the winds are most certainly influenc'd by that sovereign planet: which alternately resolves the snows, and bringing summer with it to either tropique, attenuates the clouds and stagnant air, which condens'd in the winter. By this means, passing from one hemisphere to another, and surveying the elementary world, allways finds or provides materialls for the anniversary winds; which occasions the monsoons to blow with little variation, at the same seasons of the yeare; especially in the Indian ocean, where the currents are more constant, and fewer inequalitys, then in narrower seas, where they never keepe the same quarter long, but are repercus'd from the promontorys, and come down in changeable puffs, and eddys of wind; as both Drake and Candish found in the straits of Magellan; which renders the passage so very difficult into the South Seas. But were the whole sublunary globe of the same equall and uniforme superficies, we should have winds in most places no lesse constant then the monsoons, and as regularly govern'd by the course of the sun. It will be no hard matter to explicate the cause of the easterly monsoons; this being the perpetual course of the trade-wind all the year round between the tropiques: But that they afterward revert to the west, may possibly be occasion'd from the great magazine of vapors lodg'd about the island of Madagascar, and the coasts thereabout; which are reflected from thence by the advent of the sun into the tropique of Capricorne: for winds are both the result of rarefaction and condensation also; and the rarify'd vapors not only cause a more vehement protrusion of the air after their delatation; but being over much compress'd in one quarter, as often by the elasticall power thereof, beget a reverse wind in retiring to their former places: So that there can scarce be a moment's rest in the universe, the atmosphere being as one continued scene of action and passion, that I believe the air even in the calmest days is almost every where agitated, at least by some insensible wind. But thus farre of their distinct species, and particularly of the monsoons.

In relation to their qualities: I before rejected the hot and dry exhalations, as too narrow, and insufficient to resolve the innumerable phænomena of winds; for they consist no lesse of omnigenous vapors, salts, and mineralls, with other different species of matter; and we must expect their qualities to be various, as they have greater or lesse allays of such bodyes.

Some of them are corrosive, others suffocating and pestilentiall; they are sometimes hot, and then cold from the same quarter, and so successively

capable of all qualities and extremes, according to the diversity of their constituent parts, or mediums in which they blow. This might appear from many obvious experiments: Let them pass thorough a tunnell or pipe of a convenient length, but much wider at one end then the other, that it may give free admission to the air: in the cavity of which strew severall sorts of aromatics and odorous herbs, such as thyme, roses, violets, &c. then let it be stuck in the wall of some house expos'd to the open fields, with the larger end obverted to the winds, and the lesser so plac'd to convey them into the house, (somewhat after the manner of the Italian ventiducts,) and you shall have the whole roome perfumed with a pleasant smell: But instead of these, if you put in herbs or mineralls, with virulent, and deleterious qualities; you shall have some complaining of their heads; others seas'd with lipothymies, and inclin'd to sleepe, when the stupefactive fumes enter together with the winds, and surprise the spirits. The same we may conclude of all such whose component particles are either noxious in themselves, or make their entry through unwholesome places, which are stor'd with anti-mony, mercury, or other putrid and arsenicall vapors.

I made divers tryalls of this nature: instead of common water, I fill'd the æolipile with water distill'd from roses, which generated winds with a very gratefull perfume; afterwards, I experimented the same with severall sorts of liquids; I likewise cast in camphire, and then small shavings of juniper wood, into the æolipile, that sent out flatulent steams according to the nature of the bodys injected: which makes it evident that the qualities of winds are oftentimes deriv'd from their constituent particles. But as to the medium through which they passe; I judg'd the use of the æolipile by no means suitable to my design in discovering their degrees of heat or cold; the winds generated therein being actually hot before: so I caus'd to be made a tinne pipe about 4 foot long, which I fitted to the nose of a pair of bellows, and covering it with a mixture of snow and ice; perceiv'd the wind which pass'd through the pipe to be very excessively cold: but because our organs are not allways equally dispos'd, nor indeed are they sufficient criteria to be rely'd on in such nice cases, I therefore made use of an hermetically seal'd weather-glasse; and blowing thereon, found a very visible alteration in the liquor of the weather-glasse, which being ventilated from the same bellows wrought no such effect, before the frigorific mixture was apply'd. I afterwards heated the pipe in the fire, through which the winds should passe, and there came forth an exceeding hot blast. So farre upon all accounts may the disposition of the medium influence the transient winds.

If wee further enquire upon what account winds thus farre sympathize with their mediums: wee must acknowledge it to be no dreame of the pie-



creans, that continuall effluvioms doe issue from all materiall concretes; and the winds not only bear off with them those particles which are already disengag'd from their textures, but help to loosen others; that ther's scarce any body so solid, which pays them not as they passe. Those which have made no farre excursions from their fountains, cannot be much adulterated in the way, and so preserve their first qualittys entire: But the travelling winds, that arrive from remote countrys, and drive before them different species of air, and mingle with other heterogeneous exhalations in their passage, that are at last quite overcome by them; and so farre influenc'd by their long intercourse with the medium, that they almost universally borrow their temperament and propertys from thence. The winds in Italy which blow over the groves of myrtle doe often perfume the air for many miles; and in those countrys where the rosemary grows wild in the fields, the smell thereof has been carry'd a considerable distance from their coasts. The Levants are accounted soultry and troublesome in Spain; yet on the shoars of Murcia, where they come off the Mediterranean, they are agreable and pleasant. The Tramontanas at Rome are often more piercing then the sharpest north winds, either in England or France; because they blow from the snowy mountains. And I might instance in a remarque out of Captain James. "The southerly wind was then coldest: the reason I conceive to be, for that it did blow off the main land, which was all cover'd with snow, and the N. winds came out of the bay which was hitherto open. I conclude, that winds have more frequently their qualittys, from the places or mediums through which they passe, (or at least from the fountains that gave them birth,) then from the quarters which are reputed hot or cold, or otherwise qualify'd for producing such winds."

As in Holland, and the lower parts of Germany, they have very often colder weather with the midland winds, though from the south, then with the N. or N.E. which passe over the sea, and mingle with the tepid vapors of the ocean. The southern blasts to us here in England are accounted noxious and pestilentiall; but to certain African provinces, healthful and pleasant. The northerly are coldest in our European world, and the southerly on the other side of the æquinocciall. For the arctick and antarctick winds must needs be of the same nature, blowing from either of the poles, where the cold is equally predominant. So that the qualittys of many winds seeme not so much to respect the points of the compasse, as the course of the sun.

The eastern winds according to Aristotle are hot and dry: nor is their siccity only remarkable in Greece, Palestine, Asia the Lesse, and most parts of Africk, where they make long marches over the parcht and barren sands; but likewise in the more temperate climes of Hol-

land and France; by reason they *pass* through Poland, Germany, and other vast tracts of land; and lastly arriving at our Isle, they can suffer no considerable alteration in their qualities, by so small a passage over the narrow seas.

They are no very welcome guests to us in England, being ominous to our gardens and fields, by blasting the corn and fruits. I have known strange destruction done in one night, when they come late in the spring. Sometimes they not only blite the leaves and blossoms, but kill the trees with their poysonous breath. They bring after them swarms of caterpillars, and other devouring insects; or those dry and tabid mists, which corrupt the lungs, and cause epilepsys, consumptions, &c. whether by driving before them the putrid air from Holland, or however they contract that malignity in their natures. Nevertheless wee can make no general conclusions of their propriety from hence, which are chang'd by innumerable accidents. For though in these countrys of Great Britain, they are inauspicious both to animals and plants: yet in the West Indies, the eastern brise is refreshing, and healthful above all other winds. In Arabia and those Asiaticque regions they are exceedingly dry, by travelling for many thousand leagues over the sandy desarts; yet Blondus observes them to be rather humid in Italy, and to occasion a relenting in the air, where they blow immediately from the Adriatique seas.

In relation to their degrees of heat, though Aristotle declares they are much hotter then the westerly, wee find by experience that with us in England, the easterly are at certain seasons of the yeare exceeding cold, and very often the most freesing winds, especially if they hang somewhat towards the north.

I need assign no other cause, for the frigidity of the easterly winds then that they have their first rise from the continent, where the midland air is much colder then the maritime.

The south winds are generally reputed hot and moist, on this side the line, being heated in their entry through the torrid zone; or because they consist not of melted snows, as the northern, but of the tepid and sulphury steams from Africk, and other sun burn'd climes.

They *pass* over no seas of any large extent, just crossing the Mediterranean, and British, yet they moisten and relax the air, and cause wet weather by dissolving the clouds into rain, which are rather dissipated and blown over by the impetuous norths.

Yet I think it very irrationall to conclude that all the southerly, should have their rise from the torrid; or the northerly winds, from the frigid zones. Since it is not unknown to the curious that in part of Italy and Provence, they have very often northerly winds (rising as is suppos'd from some places about the Alps,) whereof they are not at

all sensible in other countrys of France, through which they must of necessity passe, if they came so farre north. In like manner at Mar-seilles, and in the Mediterranean, they have oftentimes southerly winds; when they blow from contrary points on the African continent, which lyes more to the south.

I believe very few of the south winds here in England ever took a longer flight then from the Mediterranean sea, or the lower parts of France; and it can scarce be suppos'd that the same numerically exhalations could ever travell from between the tropiques, and not be spent in the way, long er'e they arrive at the British coasts; yet happily by protruding the ambient air, and that successively the contiguous to it; the motion may at length be propagated many hundreds of miles beyond the reach of those vapors which caus'd the first agitation. So that it is not impossible, but that a wind which began neer the æquinoctiall, may by this means, be continued, even to the poles of the world. However I shall make no longer digressions concerning their extent, but proceed to the qualitys which are vulgarly ascrib'd to the southerly winds.

They are laxative, stupefactive, and pestilentiall; they cause epilepsies and pains in the head. They render men shagrin and melancholy, and in some of the Azore islands, the children are said to sit dejected and leave their playing when they blow. For first they open the pores of our bodys by their heat, and then insinuate the malignant influences; and the parts being pointed and volatile have not only an easy ingression into our blood, but thaw and unloose the textures of ice and snow: Nay it's most certain, that iron itselfe takes the file much better, when the south wind blows, then at other times.

They many times cause a farre rougher sea then the most tempestuous winds from the north happily because they blow more obliquely, and rake the surface of the water; when as the northerly oftentimes descend, as from a precipice downwards, which immediately deads and weakens their force.

They magnify visible objects: As our seamen observe their ships to appeare bigger at a distance, either in misty weather, or when the south wind blows. For the humid and nebulous vapors of which they consist, distort the visual beams, and by refracting them to the perpendicular, cause more rays of light to enter into the eye (which makes the object seeme larger,) then otherwise would arrive at it in strait lines.

Many who are naturally inclin'd to stammering in their speech, do find their infirmity evidently worse, when the wind is towards the south: Probably because the moisture of the air, causeth a greater relaxation of the nervs, and thereby a tremulous and unstable motion of

the muscles at that time. Which perhaps have more power upon the vocal muscles, then others, because they lye in the road, and are more expos'd to the invasions of whatever is breathed in at the mouth or nostrils, then others are. Whence also we find the tongue more apt to falter; (though somewhat in a different manner,) whence however it is overmuch bedew'd with strong and vaporous liquors.

Smells are said to be most fragrant in these winds, when the air is humid and lax to convey the odoriferous particles. They anticipate the spring; and cause the trees to blossome, and bud forth before their time; and by this means exhaust their spirits and nutritive juyce. They damp linnen and paper, though never so carefully guarded from the air, cause flesh to rot, and upon all accounts hasten putrefaction in bodys.

The western have been counted the mildest, and most auspicious of all others; and were so highly in favour with the poets, that they thought them worthy the golden age, and to refresh the elysian groves. They are indeed cherishing to animals, they cause fertility in the earth, and paint the flow'ry meades with all the verdant beautys of the spring. But though the breathing zephyrs are so much celebrated in poems and romances, and happily were kinder to the delicious countrys of Italy and Greece, yet wee find no lesse malignity in their natures from particular accidents and climats then what wee have observ'd of other winds.

In the Isle of Jersey (as I was lately inform'd by an ingenious gentleman of that place,) they taint and blast all the plants and trees, except the white poplar, (which flourishes best in those winds,) and suffer nothing to grow a good distance from the western shoare: when the midland of the country, and other parts, even to the brink of the ocean, is very fruitfull and universally planted. They have an observation there; when it rises on a suddain in storms, it continu's for 9 days or thereabout.

They blow in this isle the greatest part of the yeare, but chiefly about the æquinoxes; and particularly in autumn, when they are boysterous, having nothing to checque their rage between that and America: and these they call the Michaelmas storms. Beside what is said of this island, the same effects are known in Normandy, and many parts of our British coasts, especially towards Cornwall and the Lands' End; but they render the Norman shoare inhabitable by reason of the sand they blow over it: where are few or no trees to be seen neer the sea, and those very shrubs. When they take a point of the north, they are worst, but not lasting.

The greatest winds which have been known of late yeares, were either westerly or from the collaterall points between the west and

north. One about the death of Oliver Cromwell: And another famous for demolishing so many houses and buildings which in diverse places it levell'd to the ground. It did considerable damage to most of the colleges in Oxon: blew down two and twenty elms in the grove of Trin. Coll., and severall of the strongest fabricks in England scap't not without some marks of its violence. For many of those houses, which either by their strength or situation were able to resist its furious assaults, lost their roofs, or had their chimneys and barns blown down. But that which makes it still memorable in most parts of the kingdome, was the great numbers of trees, and sturdy oaks that fell in this tempest. You might see the spoiles of the villages and woods all the country round. An event, scarce to be parallel'd in the former age; and which would require a large history to transmit all the particulars thereof to posterity.

The westerly winds are often-times thus tempestuous in England and Flanders; which receive their first efforts from the wide seas, where they bring terrible storms; sometimes snow, and then in large flakes; but usually in the spring time rain: especially the S.W., which are the most humid and pluvius, because they travell by sea many thousand miles, and must needs wet their wings in so long a flight or'e the western ocean. By some writers they are esteem'd geled and moist; but with us they are warmer than the east or north:—either because they consist of the tepid vapors and air, which are heated by the declining sun; or that being sea winds, they are therefore generally hotter in the temperate zones, than those which blow off the land.

Lastly, the northerly winds in these parts of Europe, are accounted cold and dry: by reason they arrive from frigid climats of the north, and consist for the most part of resolv'd snows and ice.

They cause a sude and serene sky dispersing the clouds; wherefore Boreas in Homer is styled *Serenator Boreas*: yet in Africa they cause rain, and are moyster than the south; which according to the complexion of those countrys, has a greater degree of nicity and heat.

In some places of Holland and Flanders, where they gather the vapors from the German or Scottish seas, the north winds often bring with them cloudy and wet weather. And wee have known as great falls of rain here in England; the wind being at N. and N.E. but then it usually continued at S. or S.W. for some days before. So I have suspected, that those vapors and clouds, which gather'd, and blown over by the southerly, were afterwards reduc'd back again by the northerly winds.

They render the northern men vegetate and healthfull, to extreme

old age, by hindering the exilition of the spirits; when as the Africans are at 40, where the continuall heat open the pores, and suffers the vital flame to transpire.

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## Nabal Chronicle.

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### SECOND ANTARCTIC VOYAGE OF THE FRENCH CORVETTES ASTROLABE AND ZELEE.—*Under the command of Captain Dumont d'Urville.*

THE following is Captain d'Urville's narrative. "I hasten to transmit to you the results of our second excursion in the polar regions of the south. These results are, I trust, of a nature to excite general interest; and will, in particular, I venture to hope, be favourably received by the king, who, himself, directed my researches towards the Antarctic latitudes. His Majesty will see that, in fulfilment of his wishes, in spite of the fatigues, the dangers, and the dreadful scourge by which my first attempt\* was attended, I have taken it on myself to risk another, in a direction the very opposite of that which had been indicated to me. To this I was impelled by two powerful considerations. *First*, the field was one wholly unexplored: no navigator having ever penetrated further than the fifty-ninth degree: † *secondly*, from the few variations of the magnetic needle hitherto noticed in much lower latitudes, natural philosophers had been led to place the southern pole in that direction.

"My only regret was that of having to deal with crews, exhausted by twenty-eight months of the most active navigation ever accomplished, and recently decimated by a frightful dysentery. Finally, the expedition of the English Captain Ross, and the American Captain Wilkes, contributed to my determination. We weighed from Hobart Town, on the morning of the 1st January; but it was not till the 4th that we made real way, with a gale that, from that day, did not cease to blow between W.N.W. and W.S.W., so that we were enabled to make good a regular course S. by W., for a distance of more than 450 leagues, without any sensible deviation.

"From the 12th January, M. Dumoulin, as often as the state of the sea permitted, observed the dip of the magnetic needle, which continued to increase with a regularity the most satisfactory, from 74° to about 86°, the highest point which we could reach. Several times a day too, the variation of the needle was noted. The temperature decreased regularly and uniformly until the 15th January, when it was as low as 2° above freezing, both in the air and on the surface of the water. On that day, we crossed the route of Cook, in 1773; and from that time were in a sea that no keel had ever ploughed before our own. On the morning of the following day in 60° of latitude and 141° of longitude,

\* In our volume for 1838 p. 779, an account of this first attempt will be found.

† See p. 734 of our volume for 1839, for a condensed statement of all the approaches yet made to the south pole.

we saw the first ice, a mass of 50 feet in height by 200 in length, a shapeless fragment, long beaten, no doubt, and diminished by the action of the waves. Thenceforward, we saw icebergs daily, widely scattered however, and of moderate dimensions. On the 17th, in  $62^{\circ}$  and  $63^{\circ}$ , the icebergs became numerous, and presented imposing masses, several of them being three or four hundred toises in length, by 100 to 130 feet in height. \* \*

“On the 21st, at one in the morning, I took advantage of a gentle breeze from the S.E., to steer S.S.W. towards the land. To reach it, we had to make our way through an immense chain of huge icebergs, tabular in form, and prodigious in their dimensions. And from two o'clock to six, our corvettes sailed tranquilly through these straits of a novel description. At times the channels presented a width of not more than three or four cables' length; and then our ships appeared to be buried beneath these glittering walls, towering perpendicularly to a height of from 100 to 150 feet, and seeming ready to overwhelm us with their giant masses. Then, suddenly opening out, we issued from them into spacious basins, surrounded by icebergs of strange and fantastic forms, recalling the palaces of crystal and of diamonds, which dazzle so abundantly in fairy tales. A clear sky, delicious weather, and a propitious breeze, helped us through this daring navigation. At length, we issued from these narrow and winding channels, whose lofty walls had long shut out the land from our view; and found ourselves in a comparatively disencumbered space, from whence we could contemplate the coast, in all its visible extent.

“Distant from us about eight or ten miles, was an immense strip of land, stretching out of sight from S.S.E. to W.S.W., from two to three hundred toises in height, and entirely covered with ice and snow, which lay heaped up on its summit, marking the ravines on the land-slopes, as well as the bays and points upon the coast. In parts, the ice presented a smooth and uniform covering, of a dull and monotonous white; in others, its surface was ploughed and shattered and broken, as if it had been subjected to the action of some violent convulsion, or of a sudden and irregular thaw. Numbers of huge ice-hills, recently fallen from the coast, had not yet been borne away, and made the approach to it impossible.

“This solid barrier forbade all progress southward; but the line of no variation could not be far off to the westward. M. Dumoulin had already observed nearly  $86^{\circ}$  of dip; and I might at least endeavour to approach as nearly to the southern magnetic pole as the land would permit. A gentle breeze from the E.S.E. seemed favourable to this design. I steered, therefore, westward; and our corvettes coasted the land at five or six miles distance. At noon, excellent observations gave  $66^{\circ} 33'$  of southern latitude, and  $138^{\circ} 21'$  east longitude. All the compasses in the ships veered in a remarkable manner, and on board the *Astrolabe* the reversed compass in my poop-cabin was the only one which marked the route with anything like precision. Our newly discovered land, then, lay precisely under the Antarctic polar circle, since it ran nearly east and west. And further, we were evidently at a very short distance from the magnetic pole.

“At five in the evening, the breeze gave way to a calm; of which I took advantage to dispatch Messrs. Dumoulin and Coupvent to a large

iceberg, distant about two miles, for the purpose of observing the magnetic dip, variation, and intensity. These operations took them three hours; and they returned on board at half-past nine, well satisfied with their station. In the mean time, all eyes on board, aided by all the glasses of the ships, had minutely examined the coast, but without discovering a single point which the ice had left uncovered. Notwithstanding the great improbability of a compact body of ice of such extent 1,500 feet high, doubts might still be entertained of the positive existence of land. Besides, I ardently desired to present to our geologists, samples of that portion of our globe, the first specimens, beyond all doubt, ever submitted to the inquiring gaze of man.

“At length, about half-past five, after many disappointments, M. Duroch directed my attention to some black stains, situate on that portion of the coast which was nearest to us, but which had hitherto been masked by a long chain of icebergs, which extended between it and us. After a short examination, I could no longer have any doubt they were rocks piercing the surface of the snow. For a moment I hesitated to send boats so far (nearly six miles) from the ships; for I knew how variable are the winds and how thick and frequent the fogs in latitudes like these. It was a terrible idea that I might be forced to leave the crews of two boats to certain and dreadful death, if a shift in the wind should drive me suddenly from this dangerous coast. Nevertheless, I dispatched a boat from each corvette towards this interesting portion of the coast.

“Messrs. Duroch, Dumoutier, and Le Breton, embarked in my whale-boat, and Messrs. Dubouzot and Lequillon in Captain Jacquinot's cutter. The sailors, who shared the enthusiasm of their officers, rowed with incredible vigour; and at eleven at night, the two boats returned on board, after having accomplished their task. They were laden with specimens broken from the living rock. These were granites, of various hues. They brought, besides, some penguins, which seemed to me of a different species from those which we had noticed in our first visit to the ice-fields. They had seen no other trace of any organized being belonging to either the animal or vegetable kingdom.

“From the aspect of these rocks, no one on board retained the slightest doubt as to the nature of the formidable barrier which closed all further progress against our ships. Then I announced to the assembled officers, in presence of the crews, that this land would henceforth bear the name of *Adélie*. This designation is destined to perpetuate the remembrance of my profound gratitude for the devoted companion who has three times consented to a long and painful separation, to enable me to achieve my projects of foreign exploration. During that night and the day following, (22nd of January,) I continued to follow the line of coast, at a distance of two leagues, with a gentle eastern breeze. The weather was still fine, but very cold. In the night the mercury fell to 5° 5' below zero of Réaumur; and at mid-day, the water which fell on the deck instantly froze there, in the shade.

“On the 23rd, I was desirous of still continuing to skirt the land, which stretched indefinitely to the west; but so early as four in the morning, the ice began to close; and when we were sufficiently near to it, we perceived that the icebergs were held together by a floe of it, which seemed to stretch from the land in a northern direction. This



unexpected barrier I strove to double; but, after every tack, ice presented itself anew, and seemed to envelope us in its long windings. No other resource was then left but to work between the land and the shoal, in the hope of freeing ourselves from the melancholy *cul-de-sac* in which we had become involved. Twenty-four hours later, after two long reaches, we were yet on the edge of the shoal, which seemed still to run north-east, as far as the eye could extend. Hitherto, however, it had been merely an affair of patience and vigilance; for, after all, under ordinary circumstances, we could always reckon on at least returning by the way we had come. But the weather, which for four days had been unvaryingly fine, suddenly changed. The sky was, in all directions, overcast; the wind rapidly freshened in the E.S.E., and, by noon, blew a gale, heightened by sudden and violent gusts. These gusts were laden with a thick snow, which froze as it fell on the deck and rigging, and frequently limited our horizon to a few ships' lengths.

"Hemmed in, as we were, between the land and the shoal, and obliged to manœuvre in a space encumbered with icebergs, our position became most menacing. Without having passed through a trial like ours, it would be difficult to imagine all that our crews had to suffer in these circumstances. The most trifling manœuvre required for its execution the concurrence of all hands, and was rendered of extreme difficulty, on account of the ice, which stiffened the cordage and prevented its play in the blocks,—themselves covered with a crust of frozen snow. In spite of all our efforts, and the alarming crowd of sail which we carried, I soon perceived that we were driving to the westward, and that, if the storm should last four-and-twenty hours longer, we had but little chance of safety. At midnight, however, the wind gradually lulled, the sea subsided, and the horizon expanded to half a mile, and sometimes a mile; and on the morning of the 25th, hope once more dawned within us. Towards evening, a gentle breeze sprang up in the south-west; and, for a moment, I entertained the hope of being able to follow the land in an easterly direction, since we had been so abruptly stopped in the west. The whole day of the 26th was, in consequence, employed in regaining the land, and in repairing the damage we had sustained in the gale, and by evening we were not more than three or four leagues distant. In twelve hours, our sails and rigging had suffered more than six months' previous navigation. On the 27th, at midnight, however, the wind shifted round again to the E.S.E., and rapidly freshened, accompanied by gusts and snow-flakes. Abandoning, therefore, all further projects of exploration on this portion of the land of Adélie, I bore northward, for the purpose of escaping the labyrinth in which we were involved. Towards five o'clock, we found ourselves in a space where the icebergs, more widely scattered, permitted us to navigate with less peril; and it was time that such should be the case—for the wind blew afresh from the east with extreme violence, making a heavy sea, and wrapping us in a thick and continual snow-storm, which entirely shut out the horizon.

"I bore successively, however, to the N.N.W., N.W., W.N.W., and even W., to gain, as soon as possible, the line of no variation. The fragments of ice were numerous on our path, but only some of the larger ones were visible to us, the snow concealing the rest. About fifty

minutes past three, we found ourselves suddenly in the midst of a very thick bed of the same icebergs,—which led us to imagine that we had at length doubled the northern point of the wearisome floe of ice that had given us so much trouble three days previously. This second tempest lulled towards midnight.

“On the 28th of January, the wind blew between the south and south-west,—with a cloudy sky and constant snow, which continually restricted our horizon to a very short distance. Nevertheless, we pursued our route to the west. In the course of the day following, the wind again shifted to the east, fresh and gusty, and driving before it a thicker snow than ever, which kept us in complete ignorance of everything that might be about us. About three in the afternoon, the sky cleared, but the horizon remained still in haze. However, I steered to the south-west, and at half-past three our route was barred by a floe flanked by large fragments of floating ice, and distant at most three or four miles. Some of the sailors in both corvettes fancied they descried portions of land beyond the bank,—a fact, however, which needs confirmation. I am, myself, very confident that the land Adélie, of which we had traced about 150 miles in extent, must prolong itself thus far—but probably too much to the southward to be visible from the point of view at which we now were. On the 30th, at three in the morning, the wind freshened anew—blew with great violence by five, and brought with it snow and sleet. But the horizon being somewhat less cloudy, I stood to the south-west, making six knots through a heavy sea. At twenty minutes past eight, the look-out announced land a-head. At first it showed like a simple line, low, light, and uncertain; but gradually it defined itself, and presented at length a novel spectacle to our eyes. It was a wall of ice, perpendicular on the sides and horizontal at the summit, elevated from 120 to 130 feet above the waves, and not the slightest projection broke its uniformity throughout the twenty leagues of its extent that were traversed on this day. At noon, the observations gave  $64^{\circ} 30'$  south latitude, and  $129^{\circ} 54'$  east longitude. The lead gave no soundings at 160 fathoms.

“Touching the nature of this enormous wall, opinions were again divided. Some held it to be merely a huge mass of compact ice, independent of any land,—while others, and I for one, maintained that this formidable belt served at least as a covering or crust to some solid base—whether of earth or rocks, or scattered shoals projected in advance of a great land.

“However, this may be, after having run W.S.W. for the space of twenty leagues, this frozen rock took suddenly a direction to the S.W. It was then ten in the evening, and I continued my course to the S.W., expecting to find it again at daylight next morning. But on the 31st, at three in the morning, although I had turned southward, we found in its place only a formidable chain of large islands of ice,—and further to the S.W. we once more fell in with a field of ice, which spread as far towards the W. and N.W. as the eye could reach from the mast-head.

“The variation, which had been N.E., had now become N.W., and and that pretty strong. We had passed then the line of no variation. Messrs. Dumoulin and Coupvent thought themselves in possession of facts sufficient for determining the position of the Southern Magnetic Pole, within a degree, and that pole could only lie in the land of Adélie

itself, or at least on the compact ice which adjoined it. I concluded, therefore, that our task was completed. No doubt it might have been possible to push further westward, to trace in that direction a greater extent of field-ice, perhaps even to find the land again in that quarter,—for my opinion is, that it surrounds the greater portion of the polar circle, and will present itself at nearly all points to the mariner who is bold enough and fortunate enough to clear the masses of accumulated ice which usually girdle it—provided only, that insurmountable fields of ice do not frustrate his efforts. But, taking into consideration the state of the crews, I felt that it would be cruel to abuse their courage, and the confidence which they had shown me in following me thus far without murmuring, by dragging them into further perils.

“On the 1st of February, 1840, therefore, in  $65^{\circ} 20'$  south latitude, and  $128^{\circ} 21'$  east longitude, I bade a final adieu to these savage regions, and turned our prows northward for Hobart Town. Our return was accomplished without difficulty or incident; and we arrived in the evening of the 17th of February. The ice followed our track for a long distance, and we saw the last of it in the parallel of  $57^{\circ}$  south latitude.”

To the foregoing we may add the following ANTARCTIC DISCOVERY:—

“An interesting geographical discovery has been made in the Southern Antarctic Ocean, of a Continent with a coast of about 1,700 miles from east to west, highly useful for seal and whale fishery. The most singular coincidence is, that it was discovered by the French and the Americans on the same day, January 19, 1840, at the distance of 720 miles from each other.

“Amongst the arrivals to be found in our shipping list of this day, is that of the United States ship *Vincennes*, under the command of Charles Wilkes, Esq. The *Vincennes* has been absent from this port almost eighty days, most of which time has been spent in southern exploration, and we are happy to have it in our power to announce, on the highest authority, that the researches of the exploring squadron after a southern continent have been completely successful. The land was first seen on the morning of the 19th of January, in latitude  $61$  deg.  $20$  min. south, longitude  $154$  deg.  $18$  min. east.

“The *Peacock*, (which ship arrived in our harbour on the 22nd ult., much disabled from her contact with the ice,) we learn, obtained soundings in a high southern latitude, and established beyond doubt the existence of land in that direction. But the *Vincennes* more fortunate in escaping injury, completed the discovery, and run down the coast from  $154$  deg.  $18$  min. to  $97$  deg.  $45$  min. east longitude, about seventeen hundred miles, within a short distance of the land, often so near as to get soundings with a few fathoms of line, during which time she was constantly surrounded by ice islands and bergs, and experiencing many heavy gales of wind, exposing her constantly to shipwreck. We also understand that she has brought several specimens of rocks and earth procured from the land, some of them weighing upwards of one hundred pounds.

“It is questionable whether this discovery can be of any essential benefit to commerce; but it cannot be otherwise than highly gratifying to Captain Wilkes and the officers engaged with him in this most interesting expedition, to have brought to a successful termination the high trust committed to them by their country, and it is hoped that so noble a commencement in the cause of science and discovery, will induce the Government of the United States to follow up by other expeditions that which is now on the point of termination.

“We understand that the *Vincennes* will sail on Sunday or Monday next, for New Zealand, where the *Porpoise* and *Flying Fish* will rejoin her, should they have been equally fortunate with their two consorts in escaping from the ice. The *Peacock* will follow as soon as her repairs are completed; whence they will all proceed in furtherance of the objects of the expedition.—*Sydney Herald*, 13th March.”

## WRECKS OF BRITISH SHIPPING.

[Continued from page 207—c.a. crew saved—l. lost.]

VESSELS.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED	WHEN.
193 Aldborough			Jersey	Southton	Guernsey	Jan. 30 cs.
Arcturus	Whitby		S. Leone	Sundrln	Tees	
195 Albion		M'Arthur	London	Quebec	at sea	April 30 cs.
Atlantic	Perth	Morton	Dundee	Quebec	Labrador	May 5 cs.
Arabian	Doubtful		Glasgow	Montreal	Gaspee	May 1, 8 l.
Ann and Mary			Sydney	N. Zelnd	not hrd of	since Dec. 11
Black Nymph		Wilson				April cs.
200 Britomart	Hobart T.	Gluyas	P. Philip	Hobart T.	Goose I.	Dec. 22 all i.
Chipewa	Greenock	Miller	Glasgow	Montreal	C. Rozier	April 30.
Cordelia			Youghal	London	Goodwin	Feb. 4 cs
Derwent			Sundrln	Cophngn	Thistle R	Mar. 12 cs
Earl Talbot		Stock	Sundrln	Holland	Goree I.	May 19 cs
205 Eagle			Yarmoth	Wexford	Wxid. Br	Feb. 20 cs
Fortitude	Milford	Nicholas	Sandersft	Cork off	Milford	June 8 cs
Francis Charltc		Metcalfe	Manilla	Sydney		Oct. 9 ceps
Flora			Liverpool	Antwerp	off BehyII	May 21 cs
Helen	Maldon				Sussex	
210 Henry	Liverpool		Smyrna	Glasgow	Gibraltar	March 5 cs
Hero	Ipswich	Fish	Liverpool	London	Bude	Feb. 7 cs
Hero					Anticosti	May cs
Heroine	Glasgow					
Jack Tar			Cape G H	Algoa B		Jan. 12 cs
215 Jemima Sophia	Hartlepool		Quebec	London		
Lady Wallace		Wallace	Singapor	Bombay	Tucco'nC	Dec. 14 cs
Liffey	Dublin		Dublin	Barbados	PortoBilo	Feb. 4 ceps
Liffey		France	Liverpool	Spn Mex	Long I. ri	Jan. 25
Little Sam	Yarmouth	Newark			off Filey	Feb. 7
220 Lively		Hicks	Liverpool	Dordrecht	Dordrecht	May
Liverpool	Woodbridg'	Bridges			C. Crnwll	Feb. 5
Mahon			Hull	Leith off	Yarmoth	Feb. 7 cs
Manchester	Liverpool	Wilson	Bombay	Liverpool	at sea	Aug. 2 cs
Margaretta			Bangor	N. Ross	Saltees	Feb. 18 cs
225 Margaret		Grans'be	Lima	Liverpool	Ferdo N	Feb. 8 cs
Maria			Swansea	Plymoth	Mullion I	March 9 cs
Mary	London	Wills	Stockton	N. York	abandon'd	Mar. 20 cs
Mary		Rosewell	Honduras	Liverpool	S Dom'go	Dec. 8 cs
Mars		Gardner	Manilla	China	Pratas	Jan. 13 cs
230 Mercury	Wexford				Morris C	Feb. 5 cs
Minerva	Whitby		Stockton		Knock S	Mar. 12 cs
Newcastle					I. Fanoe	Jan. 26
Paragon		Ogilvie	Calcutta	Maritius	Table B	April 2 cs
Pavillion	Shoreham			Shoreh'm		June 20 cs
235 St. Lawrence	Caernarvon		Chaleur	Canarvon	Tralee B	
Rapid					Hebrides	
Recovery					Brest	
Robert	Beamawris	Owen	Bangor	London	Cornwall	Feb. 27 cs
Salisbury	Sunderland				North sea	Jan. 22 cs
240 Sarah			Belfast	Aarnus	Baltic	Feb. 13 cs
Sunda		Greig	London	China	Hainan	Oct. 17d 15e
Scotia	Wick				Cunna	April 22 cs
Surrey	Plymouth		S. Leone	Plymo'th	abandon'd	April 6 cs
Thos. Gelston		Patterson	Belfast	N. Orleans	Cay Wst	Dec. 20 21
245 Topaz			Stockton	London		
Venerable			Maritius	Cork	C. Laguls	Feb. 22 cs
Voyager	Sunderland				Mal Bay	
Vulture		Wylde	London	Petrshrg	Oesel	May 8 cs.
William Cowle	Newcastle	Timber L	Memel	Lowestof	Haisbro's	May 11 cs.
250 Will. Skinner			Liverpool		at sea	
William	London	Spence	London	Hartpool		
William			London	Newcastl	abandon'd	Jan. 19

## HARBOURS.—SOUTH EASTERN COAST.

*Continued from page 527.*

## FOLKSTONE.

FROM Dover we proceeded to Folkstone. This harbour was constructed under an act of parliament in 1809, by a joint stock company, to whom the property belongs, but at present it is in the hands of the Exchequer Bills Loan Commissioners.

The harbour, which is entirely artificial, is formed by rubble-stone piers, and encloses an area of 14 acres. The western arm extends in a S.S.W. direction 140 yards across the beach, and is united with the main pier, which is carried in a straight line east and by south about 317 yards. A projecting pier has since been run out from the shore, on the eastern side, towards the south-west 236 yards, leaving an entrance of 123 feet in width open to the east and by south.

A groin has been constructed near the eastern extremity of the main pier, which extends at right angles 130 feet seaward, for the purpose of preventing the shingle from obstructing the harbour's mouth. This, however, has not overcome the evil; for the shingle having accumulated along the southern side of the main pier to the line of extension of the horn, finds its way round the extremity, and creates a bar nearly across the entrance.

The rise of spring tides averages about 18 to 20 feet, and neap tides from 12 to 14 feet, but the harbour is left dry at low water; and the greater part of the interior is blocked up by a bank of shingle rising to the height of several feet above high water, and leaving only a channel of inconsiderable width along the side of the main pier.

A small stream is pent up at the north-western side of the harbour, for the purpose of scouring at low water; and with the assistance of manual labour, in addition to this very inadequate backwater, the channel is kept open so as to allow vessels of 10 to 12 feet draught to come alongside of the main pier at the top of high-water.

This harbour, in its present form, is not capable by any improvements of being made available for the purposes of our inquiry, and we do not consider the situation eligible for a deep-water harbour.

## HYTHE.

From Folkstone we proceeded to Hythe, and inspected the coast to Dungeness. No harbours at present exist between these places, and from the nature of the coast, the situation is inapplicable for their formation; but several plans having been submitted to us for the construction of a harbour at Dungeness, we landed for the purpose of examining the beach, and ascertaining the practicability or otherwise of the propositions.

Vice-Admiral Sir Edward Owen, in a communication which he subsequently addressed to the committee, stated, that "during the late war, when the presence of the flotilla and the encampment of troops on the opposite coast demanded unceasing vigilance, and the employment of many armed cruisers of the smallest description, the inconvenience of sending these vessels to Sheerness for the purposes of trivial repairs, and payment of the men, &c.; was greatly felt, both in the loss of their immediate services, and from the interruption to the more regular and important arrangements of defence; and Dungeness being then consi-

dered the rendezvous of greatest moment, he contemplated the formation of a basin within the shingle, in a position between No. 2 battery on the east, and No. 4 battery on the west, with an outlet on either side, by which vessels might enter or put to sea when their services were required."

The propositions submitted to us by Mr. Potter and Mr. Douglas were of a similar nature; and there can be little doubt, from the prominent position of this extensive point of land, and the anchorage it affords to vessels on either side, according to the direction of the wind, that the situation is desirable for a harbour.

The shore at the southern extremity is extremely steep, and descends at once into deep water; but the whole promontory consists of a vast accumulation of shingle, constantly increasing and extending seaward; and were a basin to be constructed in the centre, the entrances on either side would speedily be choked up, and, in our opinion, no scouring power would be able to keep the channels clear below the level of low water. However desirable, therefore, the construction of a deep-water harbour may be in this situation, the physical obstacles to its formation and maintenance appear to us to render the scheme impracticable.

In corroboration of this opinion, and the constant motion and increase of shingle, it is worthy of remark, that the site of the present lighthouse, when first erected in 1792, was only 100 yards from the sea, and now, in the lapse of 47 years, the beach has extended 118 yards to the southward, leaving the lighthouse 218 yards inland.

The former lighthouse, which was pulled down when the present one was completed, was at that time upwards of 640 yards from the extremity of the Ness.

#### RYE.

Rye, which was the next harbour we visited in our progress round the coast, is situated in the bight of the bay formed by Fairlight Head, on the western side, and Dungeness on the eastern. The harbour is formed in the channel of the river Rother, at the point where it enters the sea, after receiving the waters of the Tillingham and the Bride, two small rivers which unite with it near the town of Rye. A wooden pier of piles has been constructed on the eastern side, and embankments have been thrown up on the western side, leaving an entrance between of 160 feet in width.

The average rise of spring tides is about 17 feet, and during neap tides from nine to twelve feet at the pier-head, whilst the lift in the bay is 22 feet. At low water the harbour is left dry.

The depth of the channel up the river decreases gradually to the town, where there is 14 feet water at the top of spring tides, but during neaps seldom above nine feet.

The approach from the bay to the entrance of the harbour is very intricate and difficult, especially to sailing vessels, arising from the sandbanks and the tortuous course of the channel.

The shingle, which extends on both sides of the harbour's mouth is accumulated at the entrance with winds either from the westward or eastward of south, and forms banks on either side (according to the prevalence of the wind,) which, in combination with sand, serve to block out the sea, and render the channels crooked and uncertain.

There can be no doubt that these natural causes have mainly contributed to the deterioration of this port, formerly of greater capacity, and a place of importance; but at the same time it should be observed, that the encroachments which have been made from time to time on the original extent of the river, have proved a powerful cause of injury. Individuals interested in the maintenance and improvement of the harbour are fully aware of this fact, and the contests which arise on the subject of drainage, between the landowners and those concerned in the navigation of the river, have become a fruitful source of litigation. Extensive low lands over which the river formerly flowed at high water, have been reclaimed for the purposes of agriculture, and the powerful backwater which was thereby acquired, and operated as a scour during the ebb to clear the channel and keep the entrance open, has been diminished, and at the present moment is almost destroyed, by the erection of sluice-gates, across the river, a little distance above the town, for the purpose of draining the lands at low water, and of preventing the flow of water up to its natural channel, which, if not thus obstructed, would again inundate the lands below the level of high-water.

No cause has operated more extensively to injure the entrances of harbours of this country than excluding the tidal waters from lands below the level of high water, which served as natural reservoirs at flood tide, and were the means of affording a powerful discharge during the ebb. The portion of the river between the embankments formed for the purpose of excluding the high water, is often benefited by the contraction of the channel, and the consequent acceleration of the current, but the communication with the sea below such embankments is injured, and nothing more deserves the vigilant attention of government, or of the parties entrusted with the conservancy of harbours, than the subject of encroachments, which are usually made gradually and silently, as dictated by private interest, and are difficult afterwards to remove.

At the present moment, a stone wall is in progress of erection from the eastern pier-head, and is intended to be carried out as far as low water across the extensive flats which form the bar at the entrance, in a south-half-east direction. By this means the water, which on its exit from the harbour spreads over the sandbanks, and forms a crooked passage as it meets with obstructions, and is deflected from side to side, will be directed in a straight line; and there can be no doubt that the continuation and completion of this stone groin will render the navigation of the entrance less difficult, and at the same time enable vessels of greater draught of water than at present to enter at tide time.

By straightening and deepening the channel up to the wharfs or quays at the town, a considerable improvement may also be effected; but from the limited means at the disposal of the commissioners, it will necessarily take a long time to complete these works.

*(To be continued.)*

**PORTSMOUTH HARBOUR.** We understand that the great importance of knowing at the present time the exact condition of Portsmouth Harbour, and ascertaining by comparison with a former survey, the precise nature of the changes which it has undergone of late years, has

induced the Admiralty to direct that a careful examination of it be forthwith made. This important duty has been entrusted to that zealous scientific officer Lieutenant Sheringham, who with his experienced assistants Lieutenants Otter and Church, and Mr. Wood, mate, R.N. has been called from his work on the coast of Cornwall, for the purpose. We understand the survey is to include the approaches to the harbour from Southsea Castle, and the coast to the entrance of the Southampton water, no examination of these parts having been made since Mackenzie's survey, in the latter part of the last century.

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### NEW LIGHTHOUSES.

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#### NEW LIGHT HOUSES AT GIFLE AND EGGEGRUND.

*The Swedish and Norwegian General Consulate,  
17, Great St. Helen's, July 6, 1840.*

Sir,—I have the honor to communicate to you the following translation of a notice issued by the Royal Navy Board at Stockholm, on the 8th of May:

“The Royal Navy Board hereby make known, for the information of mariners navigating the Gifle-bay, in Norrland, that two lighthouses are erected there—the one at Eggegrund, situated without the southern entrance to Gifle, in latitude N. 60° 43' 30", and longitude 35° 42' 30" E. from Ferroe; and the other, which is a port-light, on the Boonan, near Groherget, (the Grey Mountain) on the fast sand, situated W.N. W.  $\frac{1}{2}$  W., 1 $\frac{1}{2}$  miles from the Eggegrund, and serves to guide the vessels which may arrive in these waters, and wish to anchor for the night under the Graberg.

“The light on Eggegrund is placed in a lantern erected on the top of a house built for that purpose, situated immediately south of the beacon which stands on the same rock, and consists of two parabolic mirrors placed together with the flame in their mutual centre. The light is stationary, and about fifty-three feet above the level of the sea, and ought consequently to be visible from the deck of a vessel during clear weather, at about two to two and a half miles distance.

“On making this light the rock, when steering course W. b. N., should be left north of the vessel, or to starboard, at  $\frac{1}{4}$  to  $\frac{3}{8}$  mile distance.

“A vessel which intends to anchor under the Graberg, should, in order to pass free of the Graskalsbodan, which lie W. b. N. from Eggegrund, not steer more northward than the above-named course, until they make Eggegrund Lighthouse E. b. N., when the course should be changed to N.W., at which time the light on the Bonan will be a little to the larboard. Steering this course, the dangerous Limoggrund is avoided immediately upon making the light on the Bonan in W. to S., steer at once towards it and anchor.

“The lighthouse on the Bonan is an octagonal building, whose lantern is 54 feet above the level of the sea, and ought to be seen at one to one and a half to two miles distance.

“Both of the above-named lights will be exhibited in the middle of August, and burn until the end of December, every year, at the same time as other lights in this kingdom.



"The miles here mentioned are German, or sea miles, and the point of the compass referred to are after the compass.

"The anchorage under the Graberg is open in all winds, and in stormy weather a heavy sea runs there. The depth is about ten or thirteen fathoms.

"I have the honour to be, Sir, Yours &c.

"CHARLES TOTTIE."

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#### THE NEEDLES LIGHTS.

SIR,—I find that the Lights at the Needles have been altered, and in a remark in this month's number of your Magazine, I see "it is the general opinion of mariners and pilots that the attention of the Trinity-House should be directed to these lights."

It appears to me, that the "attention" of that erudite body has been already too much directed to the lights at the Needles, and I consider that the removal of the light from the Island is to say the least of it exceedingly inconvenient, for I will defy any one to see the Hurst Castle Lights in any thing approaching to bazy weather, at a greater distance than 2 leagues from them; and no one would like to trust himself in doubtful weather, with the wind far to the southward, or even S.W. much within that distance of the Needles; whereas, you were always able to see the Needles light long before those of the Hurst Castle, which are in fact only leading marks to clear the shingles, and of no sort of use, as regards "making" the Needles.

I remain, &c.

July 1st, 1840.

UNITY.

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#### LIGHT ON CAPE CARTHAGE.

*Admiralty, 17th June.*

"Sir,—I am commanded by my Lords Commissioners of the Admiralty to acquaint you, for the information of the committee for managing the affairs of Lloyd's, that it appears by a despatch from Her Majesty's agent and Consul-General at Tunis, that the Tunisian Government have erected on Cape Carthage, at the entrance of the Gulf of Tunis, a light-house, which will be regularly lighted every night for the future. It is a light which revolves every three minutes.

"I am, Sir your most humble servant,

"To Wm. Dobson, Esq., Lloyd's.

"JOHN BARROW."

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#### LIGHT AT THE KENTISH KNOCK.

*Trinity-House, London, July 7th.*

This Corporation having, in compliance with the request of the owners and masters of vessels interested in the navigation of the North Sea, caused a vessel to be prepared for exhibiting a light near the sand called the Kentish Knock, notice is hereby given, that the said vessel will be stationed at the east side of the sand, a short distance to the eastward of the situation in which the beacon buoy now lies, and that the light on board the same will be exhibited on the evening of the 1st of September next, and thenceforth continued every night from sunset to sunrise.

The light on board this vessel will be exhibited from a single lantern;

it will revolve, and will burn at an elevation of 38 feet above the level of the sea.

Note.—The Kentish Knock Beacon Buoy will be taken away when the new light vessel is stationed, but the small watch buoy will be continued.

By order, J. HERBERT, Secretary.

*Jamaica, May 1st.*

THE LIGHT HOUSE.—It will be interesting to the commercial and shipping interests to learn that Her Majesty's steamer Spitfire, Commander Evans, has returned into port from off the east end of the island, bringing the pleasing intelligence, that after a minute inspection of the ground, a lighthouse can be erected without difficulty. The commissioners, under the act of the island legislature, passed at the recent session, who visited the spot, were Messrs. Dallas, Hyslop, and Barclay, accompanied by the island engineer, the master of the Magnificent, and Captain Cosens, of the merchant service. We understand that Commander Evans, with the island engineer, is preparing two plans to be presented—one to the Governor, and the other to the Board, from which a speedy commencement of this important undertaking may take place.

PENZANCE, July 16.—(From our correspondent.)—In our report of yesterday we stated that the beacon on the Wolf Rock was completed, and soon after the buoy yacht returned, having placed the pole and ball on the beacon, which makes a finish of the work. The beacon is a cone of 18 feet at the base, and at the top is a ball six feet in diameter. Its elevation above the surface of the rock is 46 feet.—*Shipping Gazette.*

#### NAVAL TACTICS.

SIR,—Your valuable little work having been the means of conveying much useful information to the practical seaman, I herewith send you an account of H.M.S. Andromache getting on shore on an unknown rock in the Gulf of St. Lawrence, in October last, with the description of a plan suggested by the writer for getting out an anchor by which means the ship was hove off.

By inserting it in the pages of the *Nautical* it may afford a hint to others similarly situated, and you will oblige, Sir,

Yours, &c. G. PEACOCK.

H.M.S. Andromache on rounding the N.E. point of Entry Island, (one of the Magdalens,) when in charge of an old experienced coasting pilot, struck on an unknown sunken rock, going eight knots, and remained immovable. The sails were thrown aback, forty tons of water started, twenty tons of shot thrown overboard, and all the guns brought aft, but the ship's stem having been lifted nearly three feet on to the rock, all was of no avail, notwithstanding the stream anchor had been carried out astern, and a heavy strain hove on the cable. There was no boat on board fit to carry out a bower anchor, and the guns having been slung in readiness for throwing overboard were about to be consigned to the deep when the master suggested the following plan for getting her off.—A top block was lashed to the crow's of the small bower anchor, and a five-inch hawser rove through it, from a leading

block close aft on the larboard side; the end brought back and hitched to the aftermost breeching bolt. The anchor was eased down by a stopper from the fore chains, and thus transported under the bottom a plumb with the taffrail. The anchor taking firm hold of a rock with twenty-four fathoms of cable out, a three-fold purchase was clapped on, and the ship soon went astern. Having weighed the anchor, which broke in the operation, sail was made on the ship, and she was anchored in safety in Pleasant Bay. A gale of wind from the S.E. dead on the shore, commenced very shortly after, and we had to congratulate ourselves on our good fortune, and Providential escape, for nothing could have saved the ship from destruction had she remained four hours longer on the rock, and the probability is very few lives would have been saved, the east side of Entry Island presenting an inaccessible range of cliffs from four hundred to five hundred feet high.

#### LAW DECISIONS.

**CITY OF LONDON.**—*Wages.*—A seaman was hired in London, on the 12th of March, for a voyage to New South Wales, the East Indies, and home, which voyage occupied sixteen months and twenty days; articles were signed on the hiring and on 14th before commencement of voyage he was discharged. The seaman obtained employment in other vessels, and now sued for the difference between what he actually did earn, and what he would have earned if he had not been discharged. Dr. Lushington decided the seaman was entitled to redress for the breach of agreement and his summons, petition was therefore admitted.

**BUTTERFLY.**—This vessel was made prize of by the British brig of war, *Dolphin*, on suspicion of being a slaver. Captain Morris who commanded her has been arrested. The question to be decided is whether he is to be held to bail. Judge Betts decided that there was sufficient evidence to warrant the holding of Captain Morris, of the *Butterfly*, charged with being engaged in the slave trade, to bail in the sum of 3000 dollars, to appear to answer the charge when called up.

**KONINGSBERG.**—*Collision.*—This was an action brought by the owners of the fishing smack *Wanderer*, against the *Koningsberg*, a foreign vessel, for damage done by collision, and the loss of fish caused thereby.

The *Wanderer*, on the 7th August was fishing off the Smith Knowl Sand, on the coast of Norfolk, with about 50 fathoms of fishing gear out, when she was run foul of by the foreign vessel. The damage sustained, including loss of fish was £73. The *Trinity*-masters were of opinion that the blame was attached to the *Koningsberg*, and the court condemned her owners in the amount of damages, and with costs.

#### SHAKINGS.

**MR. PALMER'S BILL** for prohibiting Deck Loads in Timber Ships has been renewed for another twelvemonth, with some salutary amendments calculated to effect the purpose for which it was intended.

**IRON STEAM VESSELS** are becoming the fashion in this age of novelties. Like all other inventions they have their advantages and disadvantages.

**STEAM NAVIGATION** is at length likely to be adopted in the Pacific, the place over all others best adapted for it. Two steamers, the *Peru* and *Chile* have left the Thames for Cape Horn, to ply on the coasts between Valparaiso and Panama. We congratulate the natives on the realization of Mr. Wheelwright's plan, which we noticed long ago. The effects will be rapid and most beneficial.

THE NIGER EXPEDITION is attracting attention, the vessels being in a forward state, and it is said Captain Trotter is appointed. In our April number, (p. 266,) we laid before our readers the objects in view.

THE NELSON COLUMN it appears is not yet decided to be in Trafalgar Square. (We thought this had been determined on long ago.) Omnious enquiries have been made whether the metropolis will not afford a better site, and no answer has transpired. It is reported that the column is to be of bronze, from the guns of the Royal George, and further that the figure of Nelson which is to surmount it is to be of Portland stone! This seems strange,—we should have expected the reverse: but if persevered in a few years will carry away the remaining arm, besides making sundry inroads on the hero's weatherbeaten frame.

THE LATE SIR PULTRNEY MALCOLM'S MEMORY is to be perpetuated by a marble monument in St. Paul's, not less than eight feet high, and to cost one thousand pounds.

THE POST.—A new stamp for the postage envelope is already prepared, to supersede the Mulready landscape of savages, camels, barrels, and Britannias. It consists simply in a well-executed likeness of the Queen, resembling the label, but circular in form, and is to be printed on the right-hand upper corner of the envelopes and covers.

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#### NEW BOOKS.

NAUTICAL SKETCHES.—By *Hamilton Moore, Jun.*, with illustrations.—London: W. E. Painter, Strand.

There is unhappily a taste, which has become the fashion of the present day, and followed by our naval authors, to look for the subjects of their writings *before the mast*; and we have accordingly scenes described, which perhaps truly enough depict the character of the British seaman, with all its well-known attributes,—of generosity,—a recklessness of danger,—a propensity for drinking, and company not the most select, or language the most polite,—a profound ignorance and its consequent attendant superstition of the grossest kind;—all this we have served out to us *ad nauseam*, while the quarter-deck is deserted, and traits of character among officers which are to figure in their country's future naval history pass away observed by few, and recorded by none. Of what real use can the former be, retold and repeated as it is? whereas the latter would serve as a useful lesson for the rising youth to imitate or avoid, and become matter of sterling value to the historian. We might enlarge on this topic, but for the present we throw out the hint in the hope that it will have the effect of producing something of a more lasting and useful kind from the quarter-deck, the captain's or the admiral's cabin, with such interesting adventures as these can afford, rather than scenes from Jack's resort with his favorite Poll, y'clepp'd the "tween decks." Of Mr. Hamilton Moore's Sketches little need be said after the foregoing: assuredly they bear that stamp of inexperience in writing, which might be anticipated from a "Junior," (his assumed title); and we hope his next "nautical" essays will at least have the saving merit of being useful, if they should fail of being entertaining.

NARRATIVE OF AN EXPEDITION TO THE POLAR SEA IN THE YEARS 1820—23.—*Commanded by Lieutenant (now Admiral) Ferdinand Von Wrangle of the Russian Imperial Navy.*—*Edited by Major Edward Sabine, R.A., F.R.S.*—London: Madden and Co.

We record with pleasure the appearance of this volume assuring Major Sabine

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that his fair translator, who has cast off its German dress, and clothed it in an English garb, has made a valuable contribution to the history of Arctic voyages,—one which will necessarily take its place by the side of those of our own gallant countrymen who have successively adventured their lives in the geographical discovery of the polar regions. The north-eastern coast of Siberia forming the shores of the polar basin from the mouths of the Lena to Behring Strait is the part comprised by the expedition, the account of which is preceded by a brief view of the different voyages undertaken by Russian officers along the coast of Siberia from the earliest times. The narrative is interspersed with much useful and interesting information, given in a form which the experience of Major Sabine, (the companion of Sir Edward Parry in his first Arctic voyage,) so well enabled him to put together.

**A DESCRIPTION OF BRITISH GUIANA, *Geographical and Statistical.*—By R. H. Schomburgh, Esq.**—Simpkin and Marshall, 1840.

Mr. Schomburgh has here presented a mass of information concerning the resources of his favorite land, which will prove most useful to merchants and capitalists inclined to turn their attention towards it.

### NEW CHARTS

(Published by the Admiralty.)

**THE HARBOURS OF ALEXANDRIA, from the French Survey of M. Le Saulnier de Vauhello, 1834.**

This plan is on a scale of 3 inches to the Nautic mile, and comprehends the coast between the Marabout Islands to the S.W., and the ruins of Cæsar's camp to the N.E.,—a distance of about 10 miles. Both the old and new harbours are minutely sounded, and the various rocks and shoals with the "passes" into the harbour are clearly shewn. Brief sailing directions are given, with a general view of the city, and two views of the leading marks into the Old Harbour. The soundings are given in English feet.

**PORT UNDERWOOD, in CLOUDY BAY, (New Zealand, South Island,) by Mr. G. Johnson Machee, of H.M.S. Conway, Captain C. R. Drinkwater Bethune, 1837.**

The practical experience of Mr. Johnson, as a surveyor, and the talent of Captain Drinkwater Bethune, are guarantees sufficient to give full confidence to any work from their hands. The scale of the plan is 2 inches to the Nautic mile.

**TUTUKAKA HARBOUR and NONGODO RIVER, in the Gulf of Shouraka, (New Zealand, North Island,) surveyed by Mr. N. C. Phillips, Second Master of H.M.S. Buffalo.**

The shores are drawn with minuteness, but more soundings would be desirable.—The River Nongodo is given to the distance of 6 miles from the entrance. The outer soundings in the plan are marked in fathoms,—the river soundings in feet.

**PORT NICHOLSON, or WANGENUETERA, (New Zealand, North Island,) from a sketch by Mr. T. Barnett, 1826.**

This Port, which is on the eastern side of Cook's Strait, is given on a scale of 1 inch to the Nautic mile. It is a capacious and apparently a very accessible harbour, with anchorage in all parts of it.

**DOUBTFUL, ANCHOR ISLAND, FACILE and PICKERSGILL HARBOURS, (New Zealand, South Island,) the 1st. by Don Felipe Bauza, 1793, the other from Vancouver's Voyage, 1791.**

The scales of these vary from 3 quarters of an inch to 3 inches to the Nautic mile. These are mere sketches, but may eventually become useful.

TABLE LIX.

*For reducing Cagliari Palms to English Feet, and English Feet to Cagliari Palms.*

1 Cagliari Palm = 0.6646217557 English Feet.

1 English foot = 1.5046152062 Cagliari Palms.

Cag. palms or Eng. feet	English feet and Dec. parts	Cagliari palms and Dec. parts	Cag. palms or Eng. feet	English feet and Dec. parts	Cagliari palms and Dec. parts	Cag. palms or Eng. feet	English feet and Dec. parts	Cagliari palms and Dec. parts
1	0.665	1.505	40	26.595	60.185	79	52.505	118.865
2	1.329	3.009	41	27.249	61.689	80	53.170	120.369
3	1.994	4.514	42	27.914	63.194	81	53.834	121.874
4	2.658	6.018	43	28.579	64.698	82	54.499	123.378
5	3.323	7.523	44	29.243	66.203	83	55.164	124.883
6	3.988	9.028	45	29.908	67.708	84	55.828	126.388
7	4.652	10.532	46	30.573	69.212	85	56.493	127.892
8	5.317	12.037	47	31.237	70.717	86	57.157	129.397
9	5.982	13.542	48	31.902	72.222	87	57.822	130.902
10	6.646	15.046	49	32.566	73.726	88	58.487	132.406
11	7.311	16.551	50	33.231	75.231	89	59.151	133.911
12	7.975	18.055	51	33.896	76.735	90	59.816	135.415
13	8.640	19.560	52	34.560	78.240	91	60.481	136.920
14	9.305	21.065	53	35.225	79.745	92	61.145	138.425
15	9.969	22.569	54	35.890	81.249	93	61.810	139.929
16	10.634	24.074	55	36.554	82.754	94	62.474	141.434
17	11.299	25.578	56	37.219	84.258	95	63.139	142.938
18	11.963	27.083	57	37.883	85.763	96	63.804	144.443
19	12.628	28.588	58	38.548	87.268	97	64.468	145.948
20	13.292	30.092	59	39.213	88.772	98	65.133	147.452
21	13.957	31.597	60	39.877	90.277	99	65.798	148.957
22	14.622	33.102	61	40.542	91.782	100	66.462	150.462
23	15.286	34.606	62	41.207	93.286	150	99.693	225.692
24	15.951	36.111	63	41.871	94.791	200	132.924	300.923
25	16.616	37.615	64	42.536	96.295	250	166.155	376.154
26	17.280	39.120	65	43.200	97.800	300	199.387	451.385
27	17.945	40.625	66	43.865	99.305	350	232.618	526.615
28	18.609	42.129	67	44.530	100.809	400	265.849	601.846
29	19.274	43.634	68	45.194	102.314	450	299.080	677.077
30	19.939	45.138	69	45.859	103.818	500	332.311	752.308
31	20.603	46.643	70	46.524	105.323	550	365.542	827.538
32	21.268	48.148	71	47.188	106.828	600	398.773	902.769
33	21.933	49.652	72	47.853	108.332	650	432.004	978.000
34	22.597	61.157	73	48.517	109.837	700	465.235	1053.231
35	23.262	52.662	74	49.182	111.341	750	498.466	1128.461
36	23.926	54.166	75	49.847	112.846	800	531.697	1203.692
37	24.591	55.671	76	50.511	114.351	850	564.928	1278.923
38	25.256	57.175	77	51.176	115.855	900	598.160	1354.154
39	25.920	58.680	78	51.840	117.360	1000	664.622	1504.615

## PROMOTIONS AND APPOINTMENTS.

## PROMOTIONS.

**VICE ADMIRAL OF THE BLUE**,—Sir Jahleel Brenton, Bart. KCB., taking rank next after Vice Admiral Sir E. Brace, KCB.

**CAPTAINS**—T. Bushby, James Wilkinson, Hon. F. T. Pelham.

**COMMANDERS**—J. Simpson, (c) G. K. Wilson, C. Richards, E. Holland, T. F. Birch, Hon. C. G. J. B. Elliot.

**LIEUTENANTS**—D. Miller, for passing the best college examination, G. B. Williams, F. A. Cudlip, J. C. Pittman, A. B. King-ston, A. P. E. Wilmot, G. R. Wilson, C. Richards, J. E. Vallock.

## APPOINTMENTS.

The Queen has been pleased to direct letters patent to be passed under the Great Seal of the United Kingdom of Great Britain and Ireland, granting the office or place of Lieut.-Governor of Greenwich Hospital unto Rear-Admiral Sir James Alexander Gordon, K.C.B.

**DOWNING STREET, JULY 4.**—The Queen has been graciously pleased to nominate and appoint Admirals Sir Wm. Hotham and Sir Josias Rowley, Bart., and Vice-Admirals Sir Charles Rowley, Bart., and Sir David Milne, Knights Commanders of the Most Hon. Military Order of the Bath, to be Knights Grand Cross of the said Order. Her Majesty has been further pleased to appoint Vice-Admiral John West and Rear-Admirals Sir Charles Dashwood, Knt., Sir John Wentworth Loring, Knight, CB., Sir Robert Barrie, Knight, CB., Sir James Hillyar, Knight, CB., and Lord William Fitzroy, CB., to be Knights Commanders; and Captains Charles Gordon, (a), RN., Charles Dilkes, RN., William Goate, RN., Thomas Tudor Tucker, RN., Christopher Bell, RN., Henry Weir, RN., and George Le Geyt, RN., to be Companions of the said Order.

**COMMANDERS**—Digby Marsh reappointed—T. Edwin, C. Spettigue to the *Coast guard*. James Creagh and Arthur M'Greggor Skinner, to be inspecting Commanders of Coast guard. Hon. C. J. G. B. Elliot, to *Hazard*.

**LIEUTENANTS**—J. Haines, to command *Defence*, rev. ves. W. Y. Gill, to command *Victoria*, rev. ves. vice R. Jones, and M. B. Jones, time of service expired, J. Robinson, (b) C. Moss, D. B. Grant, C. Gale, to be chief officers. J. H. Lloyd F. Scott, to *Rodney*. W. Campbell, J. P. Wells, to *San Josef*. E. Roberts, agent for superintending mails between Liverpool and Halifax. Oliver John Jones, to *Southampton*. David Miller to *Rodney*. E. Wilson, to command *Cygnet*. William Henry Goddard, to *Poitiers*. Valentine Herbert Jones, Agent on board contract steam vessel for the conveyance of mails between Liverpool, Halifax, &c. George Wm Tomlin to command *Nimble*, rev. v. Ramsey, time of service expired.

**MASTERS**—W. Miller to *Victory*. G. H. Cole, to *Sapphire*.

**SURGEON**—J. Lawrence, to *Poitiers*.

**MATES**—J. Bull, L. Mackinnon, G. C. Briggs to *Vanguard*. W. T. Newenham, H. L. Griffiths, to be chief officers of Coast Guard. W. C. Marshall, to *Southampton*.

**MIDSHIPMEN**, G. J. Loch, to *Royal George*. C. Wood, to *Cambridge*.

**ASSISTANT SURGEONS**—Alexander Wilson (1839), MD., to *Princess Charlotte*. Edward George Irvine, MD. additional acting to *Princess Charlotte*.

**CLERK IN CHARGE**—R. J. Little to *Cygnet*.

**CHAPLAIN**—R. J. Oliver to *Rodney*.

**NAVAL INSTRUCTOR**—Gustavus Diltman, to *Rodney*.

**SECOND MASTERS**—G. H. K. Bower to *Scorpion*. J. W. M. Hall, to *Cygnet*.

**MASTERS' ASSISTANT**—C. Parson to *Cygnet*.

**VOLUNTEER 1st CLASS**—H. M. Dawson, to *Vanguard*.

## MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

## AT HOME.

**ÆTNA 6**, Lieut.-com. J. Wilson, 6th July arrived at Plymouth from Spain, 7th sailed for the eastward.

**APOLLO**, Troop ship, Mr. A. Karley, 28th June passed the Downs on her way to Woolwich.

**ATHOL 28**, Troop ship, Master-Com. C. P. Bellamy, 25th June arrived at Portsmouth, from Plymouth and Quebec.

**BLAZER**, (st. v.) Lieut.-com. J. M. Waugh, June paid off at Woolwich.

**CAMBRIDGE**, Capt. E. Barnard, 3rd July arrived at Spithead from Plymouth.

**CYGNET**, 10, Commissioned at Woolwich 9th July by Lieut. Edmund Wilson.

**HARLEQUIN**, 16, Com. Rt. Hon. Lord F. J. Russell, 17th July arrived at Portsmouth from Sierra Leone which she left 6th June.

**INCONSTANT**, 36, Capt. D. Pring, 29th June sailed from Plymouth, 2nd July arrived at Kingston, Dublin.

**JUPITER**, Troop ship, Master-Com. R. Fulton, 23rd June left Plymouth for East Indies.

**LIZARD**, (st. v.) Capt. W. Beechey, 1st July arrived at Donaghadee and sailed again on survey.

**MAGICIENNE**, 24, Capt. F. S. Michell, 21st June left Torbay for Mediterranean, 27th touched at Lisbon.

**MEDUSA**, (st. v.) Lieut. Phipps, 24th June left Milford for Liverpool.

**NAUTILUS**, 10, Lieut.-com. G. Beaufoy 8th July left Falmouth for coast of Africa.

**PIQUE**, 36, Capt. E. Boxer, 11th June arrived at the Nore from Copenhagen in 7 days, the Marquis of Clanricarde and Suite, were transferred to HMSV. Lightning, for landing, 29th in the Downs 10th July sailed for Portsmouth, remains at Spithead.

**PLUTO**, (st. v.) Lieut.-com. J. Lunn, 16th May left Bermuda, 29th June arr. at Portsmouth principally under canvas.

**RODNEY**, 92, Capt. St. Parker, 20th June taken out of dock at Devonport. It is stated that she is to be fitted with Harris's lightning conductors.

**SAPPHIRE**, Troop ship, Master-com. G. W. Nembhard, (act) 9th July left Portsmouth for Greenock, 16th arrived.

**VEUVIUS**, (s. v.) Lieut.-com. W. Blount, 3rd July arrived at Deal from Westward, 16th arrived at Hull with troops.

**VICTOR**, Com. W. Dawson, (a) 24th June left Plymouth for West Indies.

AT PORTSMOUTH. *Spithead*. Cambridge and Pique. *In harbour*. Britannia, Victory, Vanguard, Excellent, Royal George, Seaflower, Echo.

AT PLYMOUTH. Impregnable, San Josef, Rodney, Linnet, and Carron.

#### ABROAD.

**ALECTO**, (st. v.) Lieut.-com. W. Hosenason, 30th June arrived at Marseilles, from Malta.

**ARROW**, 10, Lieut.-com. W. Robinson, 19th April arrived at Rio from the Falklands.

**BEACON**, (sur. v.) Lieut. T. Graves, 26th May arrived at Rhodes.

**BELLEROPHON**, 80, Capt. C. J. Austen,

13th June arrived at Malta from Naples, 27th sailed for Vourla.

**BLENHEIM**, 72, Capt. Sir H. F. Senhouse, 1st May arrived at Cape.

**BLONDE**, 42, Capt. T. Bouchier, 26th April to sail with Melville for China, 28th getting under way.

**BUFFALO**, Store ship, Master-com. J. Wood, 16th March about to sail from Sydney for Norfolk Island with the Canadian rebels.

**CASTOR**, 36, Capt. E. Collier, 9th June left Malta for the Levant with the Gorgon.

**CHARYBDIS**, 3, Lieut.-com. E. B. Tindling, 28th April arrived at Jamaica from Santa Martha.

**CHILDERS**, 16, Com. E. P. Halsted, stated to have suffered from cholera and dysentery.

**CLEOPATRA**, 26, Capt. I. Lushington, 15th May returned to Port Royal, 2nd June sailed for Bermuda.

**CLIO**, 16, Com. S. G. Freemantle, 17th May arrived at Bahia from Pernambuco.

**COLUMBINE**, 16, Com. G. Elliott, 29th April arrived at Cape from St. Helena.

**COMUS**, 18, Com. E. Nepean, 25th May sailed from Port Royal for Hayti, 29th arrived at Port au Prince.

**CONWAY**, 26, Capt. C. R. D. Bethune, 8th May sailed from Calcutta.

**CROCODILE**, 26, Capt. A. Milne, 21st May arrived at Bermuda.

**CRUIZER**, 16, Com. H. W. Giffard, 15th April at Macao.

**CURACOA**, 24, Com. W. Preston, 17th May arrived at Bahia from Rio.

**CYCLOPS**, (s. v.) Capt. H. S. Austen, 26th June arrived at Therapia, and sailed for Alexandria.

**DAPHNE**, 18, Com. W. Dalling, 15th June left Malta for Naples.

**DEE**, (st. v.) Com. J. Sherer, 17th May arrived at Port Royal from Carthage.

**DIDO**, 18, Capt. L. Davies, cb., 28th June at Constantinople, to be relieved by Talbot.

**DRUID**, 44, Capt. Right Hon. Lord J. Churchill, April arrived at Macao.

**EDINBURGH**, 72, Capt. W. Henderson, 4th June left Smyrna on a cruise.

**FAIR ROSAMOND**, 2, Lieut.-com. W. B. Oliver, 2nd May arrived at Cape.

**FLY**, 18, Com. G. G. Lock. Has arr. at Rio with a freight on her way to England.

**GANGES**, 84, Capt. B. Reynolds, cb., 4th June left Smyrna on a cruise.

**GORGON**, (st. v.) Com. W. H. Henderson, 9th June left Malta for Levant, 17th arrived at Smyrna.

**HASTINGS**, 72, Capt. J. Lawrence, cb., 4th June left Smyrna on a cruise.



**HERALD**, 26, Capt. J. Nias, 29th Jan. arrived at the Bay of Islands New Zealand, with Capt. Hobson, RN. Governor.

**HORNET**, 6, Lieut.-com. R. B. Miller, 19th May arrived at Port Royal from Chagres, 23rd June sailed for Chagres.

**JASEUR**, 16, Com. F. M. Boulbee, 6th June left Malta on a cruise, 23rd arrived at Gibraltar.

**LARK**, (st. v.) Lieut.-com. T. Smith, (a) 19th June arrived at Port Royal.

**LARNE**, 18, Com. J. P. Blake, 16th April at Panang.

**MAGPIE**, (st. v.) Lieut.-com. T. S. Brock, 26th May arrived at Rhodes from Malta, 30th June at Smyrna.

**MELVILLE**, 72, Capt. Hon. R. S. Dundas, 20th April at the Cape, to sail 26th with Blonde for China, 28th getting under way.

**MODESTE**, 18, Com. H. Eyres, 28th April getting under way for China, to touch at Mauritius in her way.

**PICKLE**, 5, Lieut.-com. F. Holland, 20th May arrived at Port Royal.

**POWERFUL**, 84, Capt. C. Napier, 4th June left Smyrna on a cruise.

**PRINCESS CHARLOTTE**, 104, Capt. A. Fanshawe, 13th June arrived at Malta from Naples.

**PROMETHEUS**, (s. v.) Lieut.-com. T. Spark, 30th June arrived at Gibraltar, and sailed for Malta.

**PYLADES**, 18, Com. S. V. Anson, 27th April sailed from Simons Bay.

**RACEHORSE**, 18, Com. Hon. E. A. Harris, 18th May returned to Bermuda with troops.

**RATTLESNAKE**, Troop ship, Master-

com. W. Brodie, 3rd May left Ceylon for Singapore.

**RHADAMANTHUS**, (st. v.) Com. A. Wakefield, 19th June arrived at Malta from Corfu.

**RINGDOVE**, 16, Com. Hon. K. Stewart, 3rd June, arrived at Pictou from Halifax.

**SAPPHO**, 16, Com. T. Fraser, 28th May arrived at Port Royal from Honduras, 3rd June sailed.

**SERPENT**, 16, Com. Hon. R. Gore, 6th June arrived at Port Royal from Havana.

**SKIPJACK**, 2, Lieut.-com. H. Wright, 2nd June arrived at Port Royal.

**SNAKE**, 16, Com. J. B. P. Hay, 14th May arrived at Port Royal, 3rd June sailed for Carthage.

**TALBOT**, 26, Capt. H. J. Codrington, 6th June left Corfu for Levant.

**THUNDERER**, 84, Capt. M. F. F. Berkeley, 13th June arrived at Malta from Lisbon.

**VESTAL**, 26, Capt. T. W. Carter, 18th May arrived at Bermuda, 3rd June arr. at Pictou.

**VIPER**, 6, Lieut.-com. R. Burslem, 4th April sailed for Acera.

**WASP**, 16, Com. G. Mansell, 18th June arrived at Gibraltar from Tarragona 1st July sailed for Malta.

**WEAZLE**, 10, Lieut.-com. J. Simpson, (a) 6th June left Corfu for Levant.

**WELLESLEY**, 72, Capt. T. Maitland, 15th April at Macao.

**WINCHESTER**, 50, Capt. J. Parker, 14th June arrived at Halifax from Bermuda.

**ZEBRA**, 16, Com. R. F. Stopford, 11th May arrived at Malta.

## BIRTHS, MARRIAGES, AND DEATHS.

### Births.

At Newton House, near Bingham, the lady of Capt. G. Martin, RN. CB., and daughter of Sir Thomas Briggs, of a son and heir.

At Newhaven, Sussex, on the 24th June, the lady of Lieut. Robert Parry, RN. of Babbicombe, Devon, of a son.

On the 30th June, the lady of Lieut. Spurin, of the Coast Guard, Cowes, of a daughter.

At Stoke, Plymouth, on the 3rd ult. the lady of Lieut. Newman, HMS. San Josef, of a son.

On the 5th ult. at Reculvers, Kent, the lady of Lieut. E. F. Wells, RN., of a son.

At Yarmouth, Norfolk, on the 26th June, the lady of John Bracey, Esq., daughter of Lieut. de Montmorency, RN. of Greenwich Hospital of a daughter.

At Falmouth, on the 14th ult. the lady of Capt. J. H. Plumridge, RN., and superintendent of HM. Packet establishment, of a daughter.

### Marriages.

At Boulogne, Captain Donnelly, RN. son of Sir Ross Donnelly, to Miss A. Finch, niece of Lady Gerrard Noel.

On the 30th June, at St. George's, Hanover-square, Commander Alexander L. Montgomery, RN., second son of the late Sir Henry C. Montgomery, Bart., to Caroline Rose, daughter of James Campbell, Esq. of Hampton Court.

On the 16th June, at Sidbury, Frederick A. Smith, Esq. Lieut. RN., second son of the Rev. George Smith, of Ottery, to Dorothea Louisa, widow of the late Wm. Carew Hunt, Esq.

On the 17th June, at St. Mary's church Cheltenham, the Rev. Wm. Windsor Berry, M.A., vicar of Stanwell, Middlesex, to Arethusa Georgiana St. Vincent Sarah, youngest daughter of the late Admiral Sir C. Brisbane, K.C.B., &c.

On the 24th June, at Stoke Church, the Rev. Robert I. Oliver, chaplain of HMS. Rodney, son of Mr. R. Oliver, navy agent, to Miss Rawling, daughter of the late Mr. E. Rawling, and granddaughter of the late Mr. J. Liscombe, brewer, of Devonport.

On the 7th June, at Milton Keynes the Rev. Richard George, only son of the late Captain Thomas Young, R.N., to Catherine Hester, eldest daughter of the Rev. Edward Jones, rector of Keynes and Newport Pagnell.

On the 25th June, at Ideford, James Hellyer, youngest son of the late Capt. Arcott, R.N., of Chudleigh, to Anne Sophia, youngest daughter of the late R. Hallett, Esq., of Axminster, Devon.

At Everton Church, Liverpool, Mr. Roberts, R.N., of HMS. Redwing, to Lucy Mary, eldest daughter of Charles Chamberlain, Esq., her Majesty's ex-Consul for Coquimbo, Chili.

At Charles Church, Plymouth, by the Rev. W. T. Coppard, of Plympton St. Mary's, Lieut. Walter Reid, R.N., to Mary Willmothe, daughter of B. Crocker, Esq. R.N., of Hampton House, Plymouth and Ridgeway, Devon.

On the 10th June, by special licence, at St Hener's, Jersey, Alfred J. Buxton, youngest son of J. Buxton, Esq., late Pay-master of the 24th Regt. of Infantry, to Ann, youngest daughter of the late Capt. James Grant, R.N.

At Stoke Church, Plymouth, on the 9th ult., Colonel Lash Szyrma, of the Guard of Honour of Poland, and Professor of Moral Philosophy in the University of Warsaw, to Sarah Frances Field, youngest daughter of the late Captain P. Somerville, R.N.

At St. Martin's-in-the-Fields, on the 10th ult. Lieut. C. Simmons, R.N., to Julia Frances Stanley De Chair.

### Deaths.

On board HMS. Victory, on the 3rd ult. Mary Louisa, youngest child of Capt. Loch, R.N. aged four years

At Carisbrooke, on Saturday, the 4th ult. aged 22 years, Fewster, youngest son of the late Thos. Bayley, Esq. Capt. R.N., and grandson of the late Colonel Fewster Johnson, of Ebersham Hill, Durham.

On the Coast of Africa, on the 3rd of May, on board Her Majesty's Sloop Wolverine, Mr. W. D. Smedman, Acting Purser of that vessel.

At Camberwell, on the 8th ult. aged 35, Alexander John Cranstoun, third son of the late Capt. Wright. R.N.

At Gosport, Mrs. Henry Burney, wife of Dr. H. Burney, after a long illness and much suffering.

On the 10th ult, at the Royal Naval Hospital, Stonehouse, Mr. John Boone, aged 21, late clerk of Her Majesty's Ship Cleopatra.

On Friday, the 5th ult. at the house of his brother, aged 65, Goswell-road, London, James Jackson, Esq. surgeon, R.N., son of Mr. Jackson, formerly of Berwick-on-Tweed, in the 37th year of his age.

On the 4th ult. at Yealmpton, Mr. Reed, purser, R.N., aged 61.

On the 28th June, at West Cowes, Emily, fifth daughter of Mr. Cannon, Master of the Royal Navy, aged 21 years.

In St. Thomas's-street, Portsmouth, on the 30th ult. aged 75 years, Hannah Myles, wife of James Augustine Creuze, Esq., formerly of the Royal Naval College.

On the 13th ult. at his residence, Regency-square, Brighton, Robert Lewis, Esq. R.N., late principal officer of her Majesty's customs, Brighton, fourth son of the late M. Lewis, of Spring-hill, Dublin.

On the 29th June, at Antwerp, Eliza Coffin Brown, only daughter of Ford Brown, Esq. R.N., in the 23rd year of her age.

At Dover, on the 18th inst., Charles John, third son of the late Admiral Wilson, of Redgrave Hall, Suffolk.

On the 27th June, Goulden-terrace, Islington, the wife of Lieut. James Lash, Royal Navy.

At Brighton, on the 13th ult. the Hon. Mrs. Edward Rodney, widow of the late Honourable Captain Edward Rodney, R.N.

A fatal occurrence has taken place on board the Megera steam-packet, Lieutenant Commander Goldsmith. Mr. J. Whitehair was walking the deck on Saturday evening last (when it was quite dark,) and fell down the hatchway, immediately over the stoke-hole a depth of eighteen feet, and, pitching on his head, caused a concussion of the brain, of which he died on Monday evening. He was highly respected by his commander and shipmates.—*Malta, 6th June.*

## METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory,

From the 21st of June to the 20th of July, 1840.

Month	Day	Week Day	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.		
			A. M.	3 P. M.	A. M.	3 P. M.	Min.	Max.	Quarter.		Stren.		A. M.	P. M.	
									AM.	PM.	AM.	PM.			
			In Dec.	In Dec.	o	o	o	o							
21	Su		30.18	30.08	66	73	52	74	SW	SW	2	3	b	b	
22	M.		29.81	29.78	61	67	54	70	SW	SW	5	6	qbcp 1)	qop (4)	
23	Tu.		29.72	29.68	60	64	49	67	SW	SW	4	5	bc	bc	
24	W.		29.79	29.85	53	58	47	61	NW	NW	5	6	qbc	qbc	
25	Th.		29.99	30.01	55	56	46	62	NW	NW	5	5	o	o	
26	F.		30.14	30.17	58	58	48	63	WN	W	3	3	o	op (3)	
27	S.		30.19	30.16	64	66	54	70	NW	W	3	3	bcm	o	
28	Su.		30.08	30.04	63	68	58	71	NW	E	2	3	o	o	
29	M.		30.08	30.06	62	73	53	74	SW	SW	1	1	o	bc	
30	Tu.		30.01	29.95	64	70	55	71	SW	SW	2	4	o	op (4)	
1	W.		29.90	29.83	60	66	49	69	SW	SW	5	6	qo	qo	
2	Th.		29.76	29.72	60	67	58	68	SW	SW	6	6	qod (2)	qo	
3	F.		29.52	29.50	56	62	54	65	W	SW	7	7	qop 2)	qbcp (3)	
4	S.		29.85	29.90	58	67	51	69	NW	W	5	6	bc	qbc	
5	Su.		29.72	29.70	63	67	56	68	SW	W	7	7	qbc	qbcp (3)	
6	M.		29.78	29.74	60	64	51	66	SW	SW	5	6	bc	qor (4)	
7	Tu.		29.60	29.70	56	63	48	65	W	W	6	6	qbc	qbcp (3)	
8	W.		29.80	29.74	62	67	52	68	W	SW	5	5	bc	or 3) (4)	
9	Th.		29.85	29.95	58	65	49	66	NW	NW	5	5	bcp 2)	bc	
10	F.		29.99	29.95	60	61	48	62	W	W	3	3	bcm	bcm	
11	S.		29.96	29.95	56	61	50	62	NW	NW	3	4	bcm	bcm	
12	Su.		29.98	29.97	53	57	48	59	NW	NW	5	4	bc	o	
13	M.		29.99	30.06	52	57	45	58	N	N	4	4	bcp 1) 2)	bcp 3)	
14	Tu.		30.27	30.29	55	65	43	66	W	NW	2	2	bcm	bcm	
15	W.		30.28	30.23	60	71	54	72	SW	SW	2	2	b	b	
16	Th		30.15	30.03	63	72	53	73	SW	SW	2	2	bcm	bc	
17	F.		29.98	29.93	59	65	52	66	W	W	1	4	bc	bc	
18	S.		29.77	29.76	62	64	57	66	W	W	4	4	o	o	
19	Su.		29.71	29.63	61	66	57	67	SW	SW	5	5	qo	qor (4)	
20	M.		29.55	29.54	59	65	53	66	SW	SW	4	5	op 2)	qbcp (3)	

JUNE—mean height of the barometer = 29.987 inches : mean temperature = 60.4 degrees : Depth of Rain fallen = 1.50 inches.

**SOUTHAMPTON DOCKS.**—Our present number is accompanied by a plan of these docks, alluded to in a former, (p. 445.) We shall take a future opportunity of referring to it, with the report of the Commissioners appointed to consider on the best port for a Packet Station on the southern coast.

## TO OUR FRIENDS AND CORRESPONDENTS.

THE "BRITISH NAVIGATOR" we believe will appear shortly. In our next we will give a more direct reply to our Correspondent.

MR. WATKINS will hear from us.

We have received the papers of our correspondent "E" and will dispose of them as soon as our little means will allow. We have already been obliged to reserve several of his papers.

MR. ALLAN'S letter in our next.

## ORIGINAL PAPERS.

SEPTEMBER, 1840.

### OBSERVATIONS ON STEAM NAVIGATION TO SPAIN AND PORTUGAL,—with remarks on Major Rennell's Treatise on such "Currents of the Ocean" as affect it.

THESE remarks on a navigation, which most people will consider sufficiently well known, may, perhaps, at first sight appear superfluous to such as have not had some practice in Steam Navigation. But to those who have, it will be well known, that the courses adopted are so very different to those of sailing vessels, that although a man may have been all his life sailing, for instance, between England and Gibraltar, yet he will have much to learn of the whole coast, when undertaking for the first time, the conducting of a steam vessel; and which it becomes necessary to make himself acquainted with before he can make with confidence *those direct runs*, from point to point, which are essential to the quick passages of steamers. I have therefore put the following remarks together, to serve to quicken a conveyance, so fast progressing towards a general one.

Leaving Falmouth, a S.S.W. course, (compass courses and bearings always, except otherwise expressed,) clears the Manacles. A buoy has recently been laid off these rocks; it is very useful, and shews that this course will clear them well. But in night time, or thick weather, when the compass alone is the guide; I consider it is taking rather too much liberty with them, especially coming out of Falmouth to the west of Black rock; and that S.b.W.  $\frac{1}{2}$  W. for half an hour, is no more than prudent. The mark used before the buoy was laid down, of "Mawnan church well open of Nare point till the Beast comes in sight," is very bad to make out, and should I think be made more conspicuous, either by a beacon placed upon it, or by being white-washed; and Nare point itself is very ill defined; a mark should be placed upon it likewise. (I have passed within the Manacles.)

Leaving the Lizard, a S.W. course will *generally* take a steamer just clear of Cape Torinana, which should always be referred to, as the S.W. boundary of the Bay of Biscay; and on which for the facility of Steam Navigation, a light is quite essential, and not on Cape Finisterre.

In respect to the currents supposed to be generally in operation in the Bay, and which have often proved fatal, by setting ships out of their course, there can be no doubt of the fact. But be the wind as it may, I think a steamer should always steer S.W.; because the sooner she gets to the southward, and shuts out the British channel, *the sooner she gets into fine weather*. I am satisfied that on reaching latitude  $47^{\circ}$  the weather will, in tempestuous westerly gales, be found different there, than on reaching the same latitude, steering W.S.W.; because the latter course will keep the channel longer open, into which such gales have a tendency to draw; and of course you are longer in reaching this latitude. Nineteen times out of twenty, an observation will be got, on reaching  $47^{\circ}$ , by the course recommended, or at all events the day following; it will then be time enough to consider how the current is likely to operate: on approaching the southern limits of the Bay, a sight for chronometers enabling you to *ascertain* how it has already acted upon the vessel's course, and the propriety of the course then to be adopted, must be come at, from the following considerations.

It seems to me to be quite clear, that admitting water to be forced into the Bay, along the north coast of Spain, at the commencement, and probably during the whole continuance of the S.W. gales, that this water must find its way out again, as supposed by the theory of the late Major Rennell, (in spite of the opinion of Captain Martin White): and it therefore appears probable, that a steamer keeping a straight course, that is to say, steering S.W. will make Torinana, the same as if no current existed at all; supposing the whole distance to be run, during a steady gale, *which had blown for some days*; and that the tides in crossing to the parallel of Ushant, had operated equally on the ship, which is probable would be the case. But it will be evident, that all the circumstances must be well considered: for instance, a ship leaves the Lizard *at the tail* of a S.W. gale. She will then probably experience a strong N.W. current in the early part of her passage. After getting past Ushant and falling calm, or the wind coming east, on reaching  $47^{\circ}$ , a S.W. course continued, will carry her *right out of sight to the west of Torinana*, because the waters will in such cases, *instantly cease*, being forced into the south part of the Bay, and will in fact there, as in every other part, *set out* to resume their level. Again, leaving the Lizard in fine weather, or in east wind, the probability is, that on reaching  $47^{\circ}$ , observations will place a ship in pretty nearly the situation, the course and distance would indicate her to be in. But should a gale then come on, from anywhere between south and west, it will be apparent, according to the theory admitted, that most serious danger would be the consequence, of not allowing for a very considerable inset into the south part of the Bay. For

it is probable that at the commencement of such gale, the water is impelled to the east along the north coast of Spain, at its greatest velocity. That at the conclusion of west gales, *the whole water of the Bay* recedes to the west, I can have no doubt whatever, and under such circumstances, the S.W. course will also carry you to the west of Torinana, which will also result from crossing the Bay during fresh easterly breezes. A view of these effects, caused by different winds, will readily determine the course after reaching latitude 47°, about which situation it may pretty well be calculated upon, that the violence of a S.W. gale will be lessened, if as recommended, a S.W. course has been adopted from the Lizard.

Much consideration is further necessary, as to the greater length of time a steamer is subjected to one current, more than to the other. She may be detained by very heavy gales, under the influence of the N.W. current, and feel comparatively little inset into the south part of the Bay, through a considerable abatement of the violence of the gale, enabling her to pass it quicker. It is clear according to the foregoing, that in returning across the bay, from the south, a serious error may also be made, by not duly considering these causes and their effects. Suppose the Bay to be entered at the *conclusion* of a S.W. gale, it will be surcharged with water, its level will be higher than the ocean and the certain tendency thereof, will be, to seek a return to the west in every direction. This will set a ship a long way to the west of the Lizard, in steering N.E., and in winter months, error in reckoning on the homeward passage is of the greatest importance, because the approach to the channel, is lessening the chance of correcting it by observation. The best plan under such circumstances, is to make Ushant, for though the lead would be a certain guide for the longitude, could you depend upon the distance run, so as to assume the latitude, with any thing like confidence; it will be found, that this cannot be depended upon, as in very bad weather, *very great errors*, are continually committed, in estimating the rate at which a steamer goes through the water, the log being of little use; and I am convinced it will require a very considerable experience, to come to any thing like a fair judgment on this point, a steamer being more impeded by sea, than wind, some more than others, under the same circumstances, and all differently affected in different trims. Again, if either outward or homeward, you enter the Bay at the *commencement* of a S.W. gale, the outset in the north of the Bay should not be reckoned upon. Coming from the south, you will pass so quick through it, that, especially should the wind be far west, you will find a strong indraught into the Bay right across; for there will not be time so to elevate the waters, as to cause them to force an outlet to the N.W., and this will be still more felt in crossing to the

south; should a gale come on when abreast of Ushant, it will be experienced in the whole run.

The opinion however entertained by Major Rennell and mostly adopted by writers of books of Nautical directions, though I entirely assent to it, as respects the water actually being forced into the Bay of Biscay, during heavy gales, from the west and south, as well as the same finding its way out to the N.W.; I must totally reject it when Cape Torinana is passed. I can find nothing to warrant the idea he has published; "of a general tendency of the water of the Atlantic, between latitude  $45^{\circ}$  and  $30^{\circ}$ , and from 100 to 130 leagues off the shore, setting into the Straits of Gibraltar!" Only imagine about 400,000 square miles (of surface) of water, continually moving towards a Strait eight miles wide! Why the least possible movement upon the remote part of such a superficies, would accumulate to such an amount, when collected at what may be almost called in comparison a point, as would cause a current greater than the imagination can figure to itself; and this current, according to the opinions entertained by the authority above quoted, is supposed to be, not merely a "surface current," but, (though not so stated in this particular instance,) we must believe from his opinions of the great currents of the ocean generally, to be supposed to extend to a very considerable depth.

It seems extraordinary how books of Nautical directions can contain such a statement, and almost in the same page, assert some strong facts (as they are called,) to shew that there is an under current setting out of the Strait, and that it runs out sometimes at the surface. Some very respectable authorities have asserted, that they have witnessed it running out. A ship coming out with a violent "Levanter" will pass out so quickly, as to give every appearance of having the current with her,—but I should like some proof of its being so, rather than the mere opinions of seamen, however respectable, who appear to have adopted such opinions, under the circumstances I have supposed, namely coming out in a strong Levanter. The same is asserted of the waters of the Bosphorus sometimes running up,—and there is not a man, forming an opinion from being in a boat, going up or down that Strait in a strong south wind, who would not at first view of his progress think the same, seeing the effect of the wind was such as to cause his progress to be so sensibly different, to what he had been accustomed to, or expected: but, nevertheless, I think that the waters of the Bosphorus running up, or those of the Straits of Gibraltar running out, may be shewn to be impossible.

Some facts have been stated, tending to shew, that the current does sometimes run out of the Straits of Gibraltar, such as sunken ships having been drifted on shore, much to the west of the spot where they

had been lost, and in fact making their appearance on the opposite side. But, as the tides are known to set out along each shore, it is by no means improbable, that the western tide may have set wrecks a long way in that direction; and that a strong wind acting obliquely on the Straits, and they (the wrecks,) floating at the surface, as they must have done, aided by the extraordinary eddies and races prevailing all over the Straits, may fairly account for the position in which they have been found. The idea of wrecks being set to the westward by an *under current* really seems to me the most extraordinary statement, and evinces a want of consideration unaccountable, on the part of those who have made it. The wrecks were, *either floating or were at the bottom*, one or the other is quite clear,—if they had any heavy cargo in, or from any cause they were specifically heavier than water, they must have rested upon the ground! Does any one seriously believe that it is possible, even supposing the most furious current imaginable, that it would move a sunken vessel? But granting for a moment that it does so, would it not inevitably break her to pieces, before she had been propelled over the ground many hundred fathoms?! If on the other hand, from the cargo or ballast washing out, or from any cause, the weight in the ship being got rid of, to the extent of rendering her lighter than water, (and which in the cases alluded to certainly took place,) then she would float at the surface, be under the influence of tides and winds, and have made her appearance, under these influences, probably to the westward, and perhaps even on the opposite side, in the manner already stated to have occurred, and her being proof of an *under current*, vanishes! How otherwise than from the effects of a strong “Levanter” did part of the wreck of the “Don Juan” drift from Tarifa, where she went to pieces to Cape St. Vincent? a westerly tide, and the wind having some southing in it, (it is generally S.E., immediately after leaving the Straits, during what is termed a “Levanter” at Gibraltar,) evidently set it there. No one supposes a current to run in that direction, though from what will be said hereafter, it will appear that within a line drawn from Cape St. Vincent to Tarifa, that is to say to the north of such line, there is a state of eddy and uncertain set of current and tide, at variance with, and often opposite to the general set towards the Straits, which would offer no opposition to this part of the wreck of the “Don Juan” drifting, by aid of wind, in the direction it did, nor interfere with the opinion already given, that in fact the current in the middle of the Strait is always to the east.

The great depth of water in the Straits, added to its constant current, seems to have defied any actual operations being carried on, to ascertain this long disputed point,—but such facts as could be come at, and upon which the latest charts have been constructed, have led to the drawing



of certain lines, (a good deal imaginary I apprehend,) at some distance from both shores, within which, and the shores, it is stated that the tides do regularly act. These very lines, *are proof of the conviction of those who drew them, that the attraction of the heavenly bodies is not sufficient to counteract the powerful tendency of the great body of water, to set east in the centre at all times!* If therefore, at spring tides, the whole body is not acted upon, there is very strong reason to conclude, that some cause exists for this enormous supply of water from the Atlantic, which can be no other than that the Mediterranean is actually lower than the ocean. To suppose that such a useless operation is constantly going on, as that these waters are running one way at the surface, merely to take the opposite direction below, is an assumption founded neither upon rational data, nor to be borne out by any sound reasoning, and what is more, is I believe without example any where. There can be no cause for a stream running in any direction, uninfluenced by the attraction which causes tides, or heavy gales, or constant winds, *but to find its level.* If the difference of level be considerable, which in this case it must unquestionably be, as no one even pretends that the strongest tides can overcome it, (the tides according to Captain Smyth, make a difference in the level of Gibraltar Bay of  $4\frac{1}{2}$  feet, some say 5 or 6,) it is unlikely, that any degree of wind can operate so as to cause the water to recede, and *run up hill* to the west,—what would be the certain consequence of such operation upon the level in Gibraltar Bay? A gale from the east, in conjunction with a spring tide, would surely be felt in such an inundation at Gibraltar, as would leave the subject no matter of doubt,—unless it can be supposed that such a gale at the same time, could have the effect of *lowering the whole body of water in the Atlantic*, within the extent of something like “the grand area of waters” supposed to be always running the other way by the theory of Major Rennell, and the writers of Nautical directions; and which, as this alteration of level, could not possibly but amount to a very considerable quantity, would surely shew itself in its effects upon the neighbouring shores; which no one pretends it ever does.

The firm belief which I entertain of the immense volumes of water, which are constantly pouring into the Mediterranean at both ends,—to say nothing of the great rivers which run into it, certainly involves a very formidable difficulty,—which is, what becomes of the water which continually pouring into this enclosed sea, never fills it to a level with the Black Sea, and Atlantic Ocean?! Some speculators on the subject of the quantity taken up by evaporation, have imagined such an enormous amount, as would readily dispose of the whole; but most of this water *must come back again into the same sea!* in the shape of rain. We may however, perhaps dispose of a prodigious bulk; by supposing

that the prevailing north winds on the whole of the south shore, and at the east end, blowing 10 months out of the 12 in the same direction, throughout all the Grecian Archipelago, down to Egypt, carry a vast quantity of this vapor, to supply rivers that discharge themselves *elsewhere than in the Mediterranean!* such as the Niger, &c. &c. Philosophy, I apprehend, will not allow that any particle of the water impelled into this sea *is lost*,—there is no such thing as a manufactory of new water,—therefore, all taken up by evaporation, must re-appear in rain. The idea is new, I think, of this mode of disposing of the excess of water the Mediterranean is always receiving.

Major Rennell's notions on this subject, are somewhat remarkable, he often alludes to a *waste* of water, from evaporation! he states that the water always runs into the Mediterranean; and he supplies this from the Atlantic, as before-mentioned, through the enormous space thereof, which he positively states to be always furnishing such supply. And he goes even further, and alludes to the effect of this indraught, influencing the level of the Atlantic, in positions very much beyond "the great area" already mentioned; and he says, that the level of the east part of the Mediterranean is proved to be much lower than the Red Sea; and from which he infers, that the great supply from the Atlantic, becomes necessary—the said inferior levels, being referred to *evaporation*. But he seems, as well as other writers, never to have considered, that the water taken up by evaporation, *must come back again*,—it is not lost; the whole comes back to the earth, or sea, eventually the whole to the latter.

In supposing a depressed level, in some parts of the Atlantic owing to enormous evaporation, he seems to have overlooked, that in these very latitudes, he in these cases refers to, the most complete torrents of tropical rain descend. Here however, "waste" is alluded to, as caused by evaporation, whereas, I conclude, "no waste" can by possibility occur. Matter once created, remains; it may disappear for a time, accomplishing the useful ends for which it was created; but that there is a certain quantity of water, belonging to our earth, which "is never wasted," that it returns when taken up by evaporation, every atom of it to the ocean eventually, and that "waste," is not to be applied to any of the Creator's works.

But, to resume the consideration of the nature of the currents, as they affect the navigation of the coasts of Spain and Portugal.

I have said that I commence my doubts of the generally received notions of them, after leaving the Bay of Biscay. I can by no means agree to believe that from the latitude of 45°, *we begin to perceive the effects of the indraught into the Straits of Gibraltar*; but I do believe that after boisterous weather in the Bay of Biscay, and after a cessa-

tion of the winds, which mostly prevail there, viz. between south and west, that the waters returning from their unnatural level, caused temporarily by such weather, have a tendency to return south from whence they came, and thus cause a current down the coasts of Spain and Portugal, which is also aided by the north wind, which is certain on these coasts to accompany such change of weather in the Bay. At the same time, I very much question, this current amounting to any thing like what is generally believed, except immediately after, and for a short time only, the change that takes place to the north; and I object to this current being considered *as always running to the south*, as stated in Norie's book of directions for these coasts. *It as certainly sets the other way during the south gales*, which coming far from the south of the parallel of the Straits of Gibraltar, range along the whole west coast of Portugal and Spain, and produce in part, the supply of water for the indraughts into the Bay of Biscay, along the north coast of Spain: the superficies of ocean, imagined to be constantly supplying the Mediterranean, being thus, occasionally, in a very great part of it, under quite different influences; and we may fairly conclude, that during south gales such supply is only afforded to the Mediterranean, by a portion *diverging* from the stream going north, as it approaches the opening of the Straits.

This view of an occasional current coming from the south during south and south-west gales on the coasts of Portugal and Spain, and of which I feel perfectly certain, will account for the very uncertain set of the current, and the extraordinary eddies, experienced on the south coast of Portugal, towards Cadiz and Tarifa. So precarious these are well known to be, that from Cape St. Vincent, the same course steered will sometimes take a ship to St. Lucar, at others to Cape Trafalgar; and it being no unfrequent occurrence to confound the Lights of Tarifa and Cadiz. The same error will often be found, in a course N.W.b.W. from Cadiz sometimes taking a ship on shore on Cape St. Mary, at another, giving her a great offing from Cape St. Vincent. This navigation, is perhaps rendered even more uncertain still with a north wind, and the current coming down the west coast of Portugal. It cannot turn suddenly round Cape St. Vincent, and must clearly leave the south coast in a state of eddy. The unaccountable losses which are not unfrequent between Cape St. Vincent and Tarifa, may be placed to this cause, which has further been aided in its uncertain nature, by the absence of all knowledge of the tides, no one ever pretending as far as I know, to understand any thing about them.

I will conclude these observations on currents, with a few remarks upon the late Major Rennell's work on "Currents of the Ocean;" as they relate to some of those of the North Atlantic. He truly states

the great difficulty of the subject; first owing to the want of chronometers during most of the period, when his active mind was occupied in considering it, and perhaps practically, the whole of the time he had opportunities of personal investigation; and next from the very scanty means afforded, by the generally speaking vague observations of those, who, since the general use of these invaluable instruments, have afforded him data, upon which to found a theory, (or system he terms it.) His work however, professing as he does, only to draw outlines, is certainly a valuable production; and it is to be hoped, that during these times of peace, it may afford employment to a set of scientific officers, for the special survey and investigation of the great currents he treats upon, and filling up the details of his system as far as it is found to be correct. An attentive perusal of it, cannot but in the mean time interest all navigators, and lead them to such consideration and attention to the subject, as must in the end, tend to throw great light upon the nature, of what at present is professedly known very little about.

After a man has devoted a life of study and observation to such an extensive field, as is embraced by the late Major's work, it is proper that in attempting to refute any of his opinions, except by positive facts, it should be done with courtesy, and some degree of diffidence. I have however, ventured upon opposing his opinions, as to the vast effect of the current of the Straits of Gibraltar, upon the waters of the Atlantic, (over so enormous a surface as he has imagined,) because, I think the conclusion I come to is self-evident, as well as *consistent with experience of facts*, and that the Major has certainly overrated it. If weight is to be attached to his idea of the *depth* to which such currents extend, the effects over such a prodigious area would appear almost impossible. He draws a distinction betwixt drifts or streams, and currents, the two former being principally the effect of wind—acting more or less superficially,—but he states his belief, that “ocean currents” extend some hundred of fathoms down, and comes to this conclusion, from the known fact that in many instances currents are actually diverted from one course, and pursue another, at edges of banks of a very great depth. With submission, I cannot help entertaining very considerable doubts on this part of his subject, and would suggest the possibility, that the limits of the banks themselves may have been formed from deposits, owing to the currents ceasing there from natural causes,—such for instance, as the impulse which caused them being expended, and a new one coming into operation, having a tendency to alter the course given by the first. If, however, they do extend to such a depth, how prodigious must be the volume of water running into the Straits of Gibraltar, which is known to be about 1000 fathoms deep!! Moreover, if it does extend in this

particular instance to the bottom, it is surely quite impossible that any cause acting merely upon the surface can ever alter it.

I must further take the liberty of questioning Major Rennell's opinions respecting the Gulf stream, and express a strong doubt about its ever reaching the European coast. It appears to me, that this has been a convenient and ready mode, which has occurred to the Major's imagination for supplying *his current* into, and round the Bay of Biscay, when he might have accounted for such elevation of the waters of the Bay by much more simple means; and without putting the imagination to such a trial, as he does by bringing the *warm* water of the said stream, to the coast of France. I have already said, that the stream described by Major Rennell, and known by his name, unquestionably exists *at times*, and that it is no part of the Gulfstream. I consider it may be easily proved by *the fact*, of which I am most *positively certain*, that this current does not run at all, except when caused by W. and S.W. gales. The whole theory upon which this extension of the Gulf stream is founded, and contended for in the Major's book, is improbable. The finding upon two occasions a little warm water in the Bay, for which there might probably be a score of reasons at hand, if looked for by one, not determined to bring it in aid of a particular theory,—the drifting of bottles, and especially the bowsprit of the Little Belt, from the coast of America, are facts just as readily accounted for, by prevalence of the west gales, between the Western Isles, (the bowsprit and bottles being brought thus far by the Gulf stream,) and the coast of Europe, north of Cape Finisterre. If the Gulf stream actually comes away to this Cape, and enters the Bay, we surely ought *sometimes* to find the Gulf weed there! And here it may be as well to observe, that the origin of this same weed is not quite certain,\* it having become a question whether the great quantities of it, always found in that part of the Atlantic, termed "the sea of Sargasso," does in fact come out of the Gulf of Florida, or whether it is produced at the bottom of the sea, where it floats,—there is however, no doubt, both plenty of weed, as well as many other things, always to be found in the Gulf stream, and which according to this theory, should be continually found in the Bay of Biscay!

Currents disposed of, let us proceed, with observations upon the navigation, after passing the Bay of Biscay, and here it is necessary to notice the confused account given in the little book of directions before alluded to, by Mr. Norie, of the head lands, &c. about Cape Finisterre. A navigator must pass them many times before they can be made out by such description, which leads to nothing but confusion. Cape Vil-

\* It has been found growing among the Bahamas.—Ed.—see p. 9 of this volume.,

lano will probably be the most particularly observed from its very peculiar form, being like a ruined castle, upon a very abrupt and bold situation, approaching it in this direction, when first seen, it may be taken for a cutter, with gaff-topsail, and square-sail, it is very conspicuous, and there is a short way to the eastward of it, a very remarkable sandy hill, but observe, not entirely sand, but of a mixed nature, with black patches amongst it, (and further to the eastward there are two or more similar patches,) which distinction it is necessary to keep in view, not to confound it with a more particular sandy hill, which is between Capes Torinana and Nave, and which is a pure unmixed sandy hill, (to all appearance) of considerable extent. Proceeding to the S.W., after seeing Cape Villano, Cape Torinana will appear, low, and rugged, and like anything but what Mr. Norie's book describes it, namely, the "awning of a galley." What could have caused Tofino, (whose description of this coast is copied and much garbled by Mr. Norie,) so to describe it, I cannot imagine, and I suppose the said description to be intended for the remarkable sandy hill, above alluded to, as to the south of the Cape, and even for that it is not a happy one; (probably some error here in the translator.)

On approaching Torinana, off which to the N.E. there are some sunken dangers, and one about a quarter of a mile due west, on which the sea *generally* breaks, Cape Nave will open, and then Finisterre, off both which, small rocks will appear; the southernmost being between the two Capes. Round and standing a little off the shore, about half a mile from the latter Cape, one mile to the N.N.W. of this rock, Tofino says there is a shoal, about the size of a man-of-war, with two and a half fathoms,—and south, three cables from Finisterre, another similar danger. In respect to the first, I think Tofino is wrong, (or perhaps his translator,) and that instead of one mile, it should have been one *cable*. Any near approach to the coast must now be avoided, as it abounds with dangers, till you approach the island of Ons; a S.  $\frac{1}{2}$  W. course is safe, from an offing of two miles, for about 28 miles, when you will be past the Corrobedo Banks; and the north entrance of Vigo Bay, will be S.S.E. about 18 miles. South from Ons, is the smaller island of Onza; which, only requires to be given a moderate birth to. Tofino says, "there is a rocky bank, three quarters of a mile to the S.W., (true) with five fathoms; on which the sea sometimes breaks," but I have never observed this. The position of the Corrobedo Banks, seems somewhat undefined, as well as the water over them; heavy breakers, may always be seen hereabouts, therefore the shore must not be made free with; they appear to lay just to the south of a remarkable red sandy beach, with an abrupt termination, and they are certainly nearer the shore than laid down in

the Admiralty Charts. There are eddies all along this coast, a good way in the offing; which sometimes cause alarm; but I believe, are only the effect of sets of tides out of different bays coming in contact with an opposing current outside.

Tofino's directions, would render the Bay of Vigo easy enough to navigate by daylight were it not for what I consider a great omission in his book, as well as most others. Giving instructions for navigation, the directions should clearly be such, as a person going into a bay, river, &c. *for the first time*, can easily understand. Where marks are given, it is evidently not enough, to say, "N.S. del Alva," "N.S. de la Guia," the Convent, &c. &c., without at the same time telling us, how we are to find out such buildings, and know them. It would evidently also be a great improvement, in the directions for entering Vigo Bay, to give the bearings by compass, of Mount Ferro, when the said Mount is brought about mid-channel of the north entrance. This would serve a double purpose, first to confirm a stranger, that the hill he had brought in such a position, is *Mount Ferro*, and next having got it in a proper bearing, should a sudden fog, or thick weather, come on, he could steer for it. The bearings would greatly facilitate a stranger to proceed up to Vigo Town, without being at a loss, as he now is, on first entering the Bay, to know which is "N.S. del Alva," (which I have not yet exactly found out,) which is "Cape del Mar," and which is "N.S. de la Guia," to be certain about all which, I will defy a stranger, from the information the present books afford; and these remarks apply with increased force, when we come to the Tagus, into which river no one could possibly take a ship, if Mr. Norie had not copied, (though in a very incomplete manner,) the sensible instructions, to be found upon the Admiralty Charts, by Mt. Chapman, Lieut. Ogle, and Mr. Hunter.

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## THE SHINGLE OF THE COAST OF THE ENGLISH CHANNEL.

*To the Conservators of the Cinque Ports.*

I. TIME and the elements have for ages been active in deteriorating the ports, havens, and anchorages of this island, on the coast of the English Channel, from Portland to the North Foreland; and all the anxious care and science exercised with a view to counteract the ill effects, have hitherto been without avail.

Some time since, my attention being directed to this particular subject, I drew up a paper on the disintegration of the Needles Rocks, at the Isle of Wight; the shoaling of the Estuary of the Severn, and the transit of shingle along the coast of the English Channel.

I shall merely state here the conviction which I arrived at from the

consideration of the latter phenomenon, as connected with the ports, the entrances of which are so often obstructed by these roaming pebbles.

My belief is that, what are called local *improvements*, or attempts by forming piers, &c. to improve those places of shelter for vessels, generally tend to aggravate the evil; and that nothing short of waging an active war of extermination against these sub-marine wanderers, if I may so express myself, can effect a cure.

The idea of removing by human agency such vast accumulations of loose stones, which have for ages past been gradually increasing in numerical strength, may seem to those who are not accustomed to surmount apparently formidable obstacles in the way of desirable improvement, chimerical. But, let us pause a moment, look around us, and contemplate the Herculean tasks accomplished by nautical labour, and the all-powerful aid of steam; and then say, whether the removal of pebbles, for the most part thrown up, as it were into our laps, by the hand of Nature herself, has any thing so discouraging in it as to be decisive against the probability of success?

Look at that remarkable undertaking—the Thames Tunnel:—cast an eye on the hundreds of miles of lines of rail-roads; the excavation of coal-pits; the formation of close-ports, and havens by digging; the turning of navigable rivers into new channels; not to mention canals, and lastly, let us reflect on the accomplishment of the “Great Wall” of the Chinese! Shall we be out-done by the “Celestials?”

Without entering into minute detail, we may here briefly state that, if the male convicts were employed for two, three, or more years, at the Chesil Bank, (should it be found necessary to begin there,) and on the shingle beaches thence to the North Foreland, in removing the pebbles as fast as hove up by the waves; there is no doubt the evil would be ultimately cured, at an expense, perhaps, not much exceeding the cost of transporting those unhappy beings to the Antipodes. The pebbles would serve for lime; for porcelain; and for mending the roads; and we should hear no more for a century at least, of our harbours being blockaded by a host of sub-marine wandering stones. I confidently pronounce this plan, the only remedy for the evil so long complained of: common-sense indeed dictates this; and it is one which eventually must be adopted, either wholly or in part, according as observations shall decide, if we are really desirous of improving the line of coast along which the migrations are carried on. To excavate new havens before a remedy be applied, would advance the subject contemplated in their creation but very imperfectly.

A practice may be alluded to here, which is carried on at Portland, to which it behoves the proper authorities to put an immediate stop; it is that of throwing into the sea on the west side of the Peninsula, the fragments of “useless” (so of course considered;) rocks excavated from



the quarries. There is no doubt that from this source much, if not the greater portion of the shingle of the banks originates; for, as soon as these fragments become rounded by attrition, they join the migrant tribes, and probably travel eastward along the bare flat chalk bottom of the channel, and are distributed along the shore. The loose deposits under the cliffs on the entire line of coast should also be removed where such detritus consists of pieces of stone, without earthy matter to consolidate them; for to the neglect of this necessary measure, by the conservators of the coast, may in part be attributed the accumulations of shingle which have become such a nuisance. This office should not be performed indiscriminately, but as often as when binding and adhesive matter falls with the fragments of stone, and makes a lodgment at the foot of a cliff, such deposit becomes a protection to its base from the friction of low tides.

II. Since the above remarks were written, Mr. Tait, C.E. has proposed the erection of isolated havens. The idea is, I believe original, at least in these latitudes; yet there seems to be reasonable doubts of its efficacy, if not of its practicability on an open coast. He says that a salient angle of the coast would be available for his purpose. The erection of the haven, however, for obvious reasons, should be to the eastward of the point. He considers that the form of such a haven must be modified according to a variety of local circumstances. It appears to me that one of the main things to be considered in an undertaking of this sort is, to guard against the accumulation of shingle, and other marine deposits; consequently, the only two shapes applicable to an isolated haven are—a circular or oval one, as it is obvious, that to allow a free course to the transits of the shingle, there should be no angles in the construction below the high-water mark, because an angle of any sort would arrest the pebbles, and accumulation follows. Indeed, whatever shape may be given to the walls of the haven, some deposit would take place. The finer detritus held in suspension, from any neighbouring river, would, at slack-water in calm weather, find a resting place at the base; and the sand of the bed of the sea, if there should be any there, would be heaped up by the action of the waves and of the tides; so that under all circumstances a round shape would seem to be preferable to any other, as being less likely to assist in the formation of spits. And, it seems to me that in the preliminary process of laying the foundation, unless every stone be lowered singly, and placed in the position it is designed to hold, a nucleus would be formed for the accumulation of the shingle; and the progress, towards the surface rendered very difficult if it did not prove impracticable.

I have briefly pointed out what I think to be the only effectual remedy for the existing evil, viz. bars of shingle formed across the entrances of the ports. And although apparently of great magnitude,

I believe it to be more feasible than the plan of the civil engineer; and what is of more value in the amount of good to be rendered by either plan,—it would prove a *general* cure for the evil complained of; and, of course, in that case, would supercede the necessity for artificial havens, unconnected with the land.

Supposing it necessary to remove all the shingle along the entire line of coast, (of which we are not certain,) the plan I have proposed would appear doubtful, only from the imagined quantity of shingle being very great. But, I think that the estimate which we should naturally be inclined to form from reasoning upon the accumulations beheld by the eye, combined with the extent of coast to be cleared, would exceed the reality,—for this reason, that the process is a mere alternation; the same pebbles being hove up, and then partially, or in whole, removed, to be again returned when the waves are high; and if an unusual quantity be occasionally deposited in any particularly exposed place, dependent on its position with reference to the prevailing wind, a diminution takes place somewhere else. The annual increase on the aggregate quantity which is migrant, I should imagine to be comparatively small, and principally occasioned by the refuse thrown into the sea; the addition from the cliffs and from the streams is probably trifling, and were it all removed, it would require ages for the reproduction of such a quantity as now exists, by natural means alone. The process of beach accumulation is an extremely curious one, modified according to circumstances,—the position of a place acted on, the slope of the beach, the direction and force of the wind, especially, regulate the amount and disposal of the pebbles; the itinerant ability seems to me to be governed by the pushing action of the tide, and the lifting influence of the undulatory impression, which is felt at some depth. I have had opportunities of making remarks from observations on this point, but principally in waters not subject to periodic tidal motion, or but so in a very trifling degree.

On a beach of several miles in extent, forming an inclined plane of two or three hundred feet depth, and of a crescent shape, I found the action of the surf according to its violence, which was not always regulated by the wind, to produce very surprising effects. The beach in calm weather was generally, if not always, covered for a foot in depth with large sized pebbles; underneath this super-stratum, there was a layer of coarse gravel, and beneath that, a sub-stratum of fine sand. If the surf rose high the shingle was entirely removed, the beach being steep-to, leaving the gravel uppermost, when the commotion was of short duration; but if it continued, the gravel would also disappear, and the fine sand remain uppermost; until from a recurrence of the billowy action the gravel was thrown up, and then the shingle, which I found

always of an undulatory form, whilst the sand invariably presented a smooth inclined surface. This difference perhaps was the result of the sand being very fine, which indeed may have been firm by an admixture of clay, upon which tenacious material it probably rested; the ridged disposition in which the pebbles were left, was no doubt occasioned by the diminishing action of the billows as they subsided, upon a yielding body. The coarser the sand the more liable it is to retain the impressions produced by the waves. It was remarked too that after the commotion had finally subsided on any of the occasions alluded to, the shingle remained uppermost. It is probable that under similar circumstances the process is much the same everywhere, although in tidal waters there may be some trifling difference. The inference to be drawn from these facts is, that it requires a great mass of water, the gravitating velocity, or re-fluent action of which, being proportionate to the impetus imparted to it by the force of the wind on its ascent, to carry away the accumulated body of pebbles; and that a moderate wave is unable to effect this, although combined with the flood tide it may add to the deposit already formed above water.

The impression on the mind of a casual observer of the deposits along an extended line of coast, and at the entrances of some of the harbours, would probably be that the store whence these were derived must be inexhaustible; a correct knowledge of the whole natural process would, however, tend very much to revise the judgment and rectify such an inference.

I conclude, let the aggregate amount of shingle be what it may, no person will attempt to disprove the fact, that ages must have passed since it first began to accumulate; and, if this be true, the process in the formation of each individual roller must be very slow. It seems also clear that unless the amount be very much reduced by human exertion,—that is, by the removal of the deposits from the shore, no other remediable measure can be adopted with a prospect of success,—at least none that I can imagine,—and that the evil will grow worse and worse, as time advances, until eventually from the causes which operate on the land side, in conjunction with those on the sea-board, the harbours of Sussex and Kent will be blocked up and converted into dry land, a result, as is well known, that has overtaken some spaces which were the resort of vessels during the time of the Romans, and I believe others of a much later date.

From the concurrence of present circumstances, may I not affirm that the evil cannot cure itself, notwithstanding that from abrasion the pebbles must be gradually reducing towards that minute state which their constituent parts once assumed? Although not impossible, yet we have no reason for expecting that a convulsion of nature will relieve us of

these pests, by sinking the central bed of the Channel with a precipitate slope from our shore, so as to admit of their final departure, with a north wind and ebb tide! \*

The present peculiar disposition and nature of the bed of the channel along the line of coast from Portland to the Wight, the travelling highway of these migrant rollers, if they do proceed so far, is such, combined with the direction of the tide, and west wind, that we may correctly infer that few if any of the pebbles escape into deep water. The bed is a flat chalk rock, as level nearly as a bowling-green, and the depth of water not being great, the action of the tide probably reaches to the bottom, so that whether there be or not an undulatory motion from the effects of high wind, some portion of the pebbles, may perhaps be more or less in motion at all times; and we may suppose that in boisterous weather, the heaps are constantly being shifted. Eastward and westward along their "high-road" the pebbles are borne; but it seems to me highly probable, the greater proportions are attached to particular localities along the line of coast, and merely undergo the alternation of ascent and descent upon the beaches, and are piled up, or spread around the knolls, or rocks upon which they find a resting place, during the varied operation of the natural agencies. It seems obvious, that if the depth of water on the land-board of the channel increased precipitately, the stones would be carried off as soon as they attained their locomotive power, that is to say, as soon as they became rounded by attrition, and there would be no complaint of their presence as blockaders of our ports.

In the radical remedy I propose, would be secured one very great advantage, namely;—the effort of Nature herself would effect a portion, much the most difficult portion of the labour which the gatherers would have to accomplish, that of heaving up the shingle upon the beaches from under water, ready to be removed by hand; whereas she would be, not only a formidable, but an almost incessant opposer to Mr. Tait's plan; and after all the exercise of his talent, care, and perseverance, he may, upon the completion of his labours, have the mortification to behold his haven filled or blocked up by these restless rollers, and to discover that he had at a vast expense, been constructing, not a place of refuge for ships, but, a snug nest for those sub-marine wanderers. † This is what *might* happen; a contingency not unworthy of being held in mind. What *would* occur it is not possible theoretically to predict

\* The whole of Sweden is said to be slowly rising; philosophers have come to this conclusion, a rather more reasonable one than the subsidence of the Baltic which they once advocated. Is it at all unlikely that some other land, not remote, may be as slowly sinking? How stand our old high-water marks?

† The same is, or would be applicable to any new harbours formed in the land.

with any degree of certainty ; very different results often take place in these matters, from those which have been anticipated, in fact, although the scientific and practical mind can, and generally does prove correct in its deductions ; under peculiar circumstances, such as the one we are alluding to, which is novel, the ablest and most profound judgment is liable to be deceived. Now, though this plan should fail, and it could only fail from want of determination to continue the exertion necessary ; we should at least have the negative satisfaction of lessening the numerical strength of these extraordinary sub-marine blockaders of our ports. But, supposing it brought to a happy issue, in that case, the benefit would be *general*, not *partial*, the bed of the channel on the land-board cleared of one of the greatest detriments to its free navigation ; and the authorities of the Cinque Ports and other harbours, be left free to contend alone with the deposits formed by rivers and tides.

As to the magnitude of the undertaking, there is nothing discouraging in it,\* when aided by the wonderful power of the steam-engine, even though we should have to clear the whole line of coast. It would probably turn out a good speculation for contractors, allowing them the aid of the male convicts. Government, if it be made a national concern, which on account of the general benefit to commerce that would arise from it, the undertaking ought to be, instead of losing may be expected to gain by the adoption of the plan. The convicts' transit money would be saved, and the cost of their keep, which should fall on the contractors, would be so likewise. The materials when calcined, ground into powder, and broken up for the repair of roads, would probably be ample remuneration ; but upon this particular point I shall not however insist.

I should doubt whether there would be hidden from view beneath the water, after any great accumulations have been hove up, more than a hundredth part of the entire quantity seen from Portland to the North Foreland ; and it seems highly probable that the travelling pebbles, in their transit, occupy but a narrow breadth, and that immediately near the shore. This may easily be ascertained.

(To be continued.)

#### LEGENDS OF LIBERIA.

(Concluded from p. 516.)

IN Feb. 1829, rumour said that a vessel of the Gauls was about to land her cargo at Digby, a town quite unconnected with what was considered Liberia, and in fact which had never been claimed by this colony, as

\* Like most new schemes, this may be considered by some persons as visionary : had I a fortune of £100,000, I would stake it upon the issue.

forming any part even of the district. It proved true, and a letter by land was sent to her master, stating that he would not be allowed to trade there. The natives having by some means ascertained the nature of the contents of this letter, would not allow the messenger to deliver it to the Gaul, but sent him back without his errand having been fulfilled. On his return to the Strangers' seat of government, it was immediately determined that an expedition should be sent to capture the town; and after setting fire to it to drive the inhabitants into the bush, for having dared to commit such an insult, and immediate preparations were accordingly commenced. The supply of cartridges not being sufficient, and night coming on, those employed in filling them were assembled in the Stranger Chief's house, busy in this occupation, determined to set off on their march before daylight. By some accident or carelessness an explosion took place, and eight of these people were blown up, together with the house, and with the exception of one were killed. This catastrophe contributed to stay the thirst for conquest, and it is said the natives were not molested on this occasion.

Although this retribution, as it might be considered, quieted for a time the marauding propensity of the Strangers, it did not annihilate it; on the contrary the feeling gathered new strength as the number increased, and a few months after this event took place, it was again displayed at a town called Little Bassa, governed by a native chief called Tom Bassa. This chief had enjoyed his authority in quiet for a number of years previous to the formation of the colony. A man from Iberia, by name Don Miguel, of some note in slave traffic, and possessed of a large property, brought two vessels, both laden with valuable cargoes, and purchased from this chief and his brethren a small piece of ground, for the purpose of carrying on his trade. Here he landed his property, and the crews of both vessels assisted in building him a suitable house, and in protecting the property, among which it was reported he had a large quantity of doubloons and dollars. Don Miguel, however, had not been long settled in his new abode before the news of his being in possession of great wealth reached the ears of the Strangers. Some pretence or other was formed to quarrel with him: he had spoken disrespectfully of their colour; reflected on their occupation of the country; their insignificant pretences; their chief it was alleged, was not exempted from his remarks. In 1830 the Great Stranger took his departure for the western world, and a secret expedition planned by a set of volunteers, who are never found wanting when plunder is the object of pursuit, only waited the event to be put in motion. To remove suspicion religion was called to their aid, and a holy man was invited to take his passage with them, as he had a wish to see more of the country.

The man accordingly embarked in the Strangers' vessel above-mentioned, and with their flag flying she anchored near Little Bassa. The commander and some others, including the holy man, landed and surveyed the town, and situation of the premises occupied by Don Miguel, and his merchandize, together with some slaves he had purchased, as well as the barriado he had caused to be made round his premises, for the protection of his property, a customary measure in that country. Having thus minutely surveyed the premises, and without stating the object of their visit, they returned to their vessel; not however without a private conference, in which none, even of the natives themselves, were allowed to be present, and the nature of which did not then transpire. The vessel then was got under way, and proceeding down the coast, disappeared. At about three o'clock on the second morning after this visit, long before the break of day, Don Miguel was suddenly aroused by some people breaking down the fence of his premises, and having looked out of the window in an upper room where he usually slept, was enquiring who it was, and calling out to his countrymen in the lower part of the house to protect his property, when a shot was fired, which killed him instantly. Some of his men having also been wounded, they all deserted the premises, and the work of plunder began. The natives, however, suspecting what was likely to happen, had assembled in great numbers; and now that the murderous deed was done, would not allow the plunder to be removed, claiming it as their own. Notwithstanding this resolution on their part, a quantity of doubloons were seized, sufficient to make them more plentiful than they had previously been known in Liberia. It is right to say in justice to the holy man, that he was in no way accessory to this affair. On the return of the vessel to Liberia a few days after this transaction, the authorities reflecting no doubt on the atrociousness of the deed, denied all knowledge of it, and to substantiate their declaration, the commander of the vessel, and his followers, were put under an arrest. This, however, did not amount to a privation of personal liberty: and they were of course examined, when the commander endeavoured to exculpate himself, by stating that he had verbal instructions to do as he had done, previous to the departure of the Great Stranger. The examinations, with a full statement of the transaction, were transmitted to the Samaritans, beyond the Western Waters, and it was generally expected the parties would have been summoned before them, to take their trial. In the mean time the Strangers were so alarmed, fearing a retaliation either on themselves or their small craft, by some of the slaving vessels on the coast, that they hauled them up, and durst not send them out of harbour for several months. Even the boasted national flag of Liberia, could not be unfurled on the ocean, so great was the terror of Iberian

revenge, and so conscious were they of having justly provoked it. However, months passed away, and the fever of fear gradually abated, which the arrival of a Great Stranger accelerated, particularly as it appeared that no notice was likely to be taken by the Samaritans, or even the Iberian government; trade was therefore commenced with confidence, and the Strangers' vessel was again sent to sea, with her former commander.

Notwithstanding, it was generally supposed that the affair had entirely passed over, the Strangers vainly deceived themselves. Soon after this vessel, with her bold commander, had been at sea, she was met with by a vessel of Iberia, when he and his crew experienced the full measure of that revenge which they had so long dreaded. They had now fallen into the lion's mouth. It was generally believed, that the punishment the commander received, was the loss of his eyes before his death. What became of him or the crew, has never been correctly ascertained, none of them having returned to tell the tale, although report said that the vessel was sunk. One of the crew, who had assisted in the affair of Don Miguel, escaped this time from not being on board when the vessel fell in with the Iberians, and it is remarkable that he was the man who fired the shot, by which Don Miguel fell: but it was only for a brief period that his life was thus spared. Perhaps for a brief period, the revenge of the Iberians will not be satiated without another victim, and murmur was rife, that the caution of the Great Stranger himself in visiting the various parts of the colony, by land or canoes in the rivers, when his duty calls him, is not without reason!

A native of one of the neighbouring towns for some cause or other lately took refuge in Monrovia, on which his chief sent a message to demand his return. The reply sent to him was, that the man was in a free country, and that it would not be permitted. The chief had not the means to enforce his claim, and he was obliged to submit. Some months afterwards, one of the people of Liberia, previously captured from the natives, thought proper to leave this land of liberty, and took refuge under the same chief. An order was sent forthwith to him to deliver him up as he was a runaway slave. It is a general custom amongst the natives of Africa to shelter all their countrymen claiming protection, and consequently the chief returned the following answer, "You have set me an example, by keeping one of my people some time since, and I shall follow it at present, but if you will send my man back, your's shall be returned." This very natural reply so insulted and wounded the pride and consequence of these new masters of African soil, that without further intimation, war was declared, and an expedition immediately fitted out, and thus the favourite pursuit of



extermination was carried on. The system adopted is most favorable to the instigators of this mode of civilization, as those are placed foremost in the affray, and thereby certain to reap the full benefit of their position, while the principals retain their *honorable* post in the rear. How well this expedition succeeded, and the result of it, is in the Liberia Herald of May, 1832; but the concluding paragraph speaks volumes as to the future conduct of the Strangers towards the unhappy natives. The person alluded to in the above-mentioned letter, "that was shot by the natives, and so *sincerely regretted*," is the very man who murdered the unfortunate Don Miguel, a retributive justice overtook him, and he fell by the weapon which he had chosen.

But it is painful to see falsehood and misrepresentation fostered by a plan of systematic deception, and growing luxuriantly in the chosen soil, passing through the books of the Samaritans to prey on the credulity and feelings of the sons of freedom, inducing them under the laudable intention of civilizing the real native Africans to contribute large riches for that purpose; but which riches are perverted from their real object, absorbed by adventurers in ridding the Samaritans of the coloured people, of whom they live in fear, and transporting them to African soil there to tyrannize over the native Africans. Can any instance of kindness towards the natives be produced? What African that has received any instruction or benefit from these new masters, and has he not received curses and stripes? Let those who doubt it enquire, let those Philanthropists who really feel a true interest for the well-being of the poor, defenceless, and oppressed Africans, let them enquire before they appropriate part of those riches, which will in all probability be applied to support a system, the object, and most certainly the result of which will be to add tenfold oppression upon the heads of those whose condition they profess to ameliorate and improve. Let them employ a part of those riches in sending a person properly qualified to sift the subject with energy throughout. If they will do so, he will be sent out without charge by an individual who possesses a right feeling for the distressed situation in which the native Africans are now placed by their tyrannical masters; and every attention would be paid to his health and comfort, while making himself thoroughly acquainted with the merits of this interesting subject, one in which deception has been, and is still going on to a degree rarely equalled.

The extent of territory at present called Liberia, (nearly the whole of which has been forcibly taken from the natives,) reaches from Cape Mesurada south-eastwards to the Junk River, a distance on the line of coast of about twenty miles; and about ten miles in an opposite direction N.W. to a place called Digby, and from the coast inland it reaches about fifteen miles. It also includes about four or five miles on the right

bank of the river St. John, and a small detached situation on Cape Mount. The two last mentioned places have been lately purchased, and are in fact the only parts of the coast ever occupied by the Strangers with the consent of the natives, all the rest having been forced from them. It is a fact beyond dispute, that the above extent is the whole at present held by the settlers, the number of whom does not exceed four thousand souls, notwithstanding the assertions lately made to the contrary.

It may be asked by what means such a system of misrepresentation has been so long and so successfully carried on without detection, when it is considered the greatest part has been promulgated by means of the Samaritans, whose object is to get rid of their coloured population. It is not marvellous that Englishmen who have written on the subject have been deceived by their plausible statements: and even the outward manners of the Liberians themselves, are manners which are likely to impose on a transient observer. *First.*—The Sabbath-day is to outward appearance kept with all due solemnity by a regular attendance at prayers at stated times; the houses of trade are closely shut up, neither is any mention made of business, so rigidly are the forms of religion observed. *Second.*—Their habitations being much neater, and their villages laid out with some pretensions to regularity, make a far superior appearance to those of the natives, whose villages are meanly constructed of bamboo, and huddled together in confusion. *Third.*—A great number of the Strangers having received a tolerable education in the Samaritans' land, and several having been brought up in genteel families, assume the air and manners of their *ci-devant* masters: visitors are also received with a shew of hospitality, and invited to inspect their villages, which exhibit the same superior marks of cultivation, and without making any enquiry of the miserable looking owners of the soil, they have given flattering accounts of civilization, including in one burst of encomium and admiration the whole inhabitants, when in point of fact, a greater contrast of comfort and misery could not be produced in any country, Ireland excepted. It may be further observed, that the only class of visitors hitherto seen in that country are naval officers, and those of trading vessels, the former having been hospitably treated, and having no specific object to make particular enquiry, have formed their opinions from what they have been told, and not from attentive observation on their own part. The other class merely attend to their business, and trade where interest brings them; which business being finished they depart on their voyage without either feeling or enquiring into the miserable state of the natives. It must not be forgotten however, that some among the Strangers feel themselves free men,—are comfortable; and their situation is no doubt materially im-

proved by the change. They will, perhaps, say, they feel themselves relieved from their former station of inferiority so general in the land of the Samaritans, a station in which they were heavily burthened, and that it is now for the first time that they have ever breathed the air of freedom and equality. But at the same time they assume a more than ordinary proportion of that superiority towards their ignorant neighbours, and readily follow the example set them in the early and present system of the lands they came from, in a progressive warfare of extermination, as the Indians of that land have experienced to their cost.

Lastly, the native Africans are without hope of freeing themselves by their own feeble means from the further tyranny of the 4,000 Liberians, with their superior means of attack and defence, which means are employed at pleasure, in the full assurance that no one will call them to account for their conduct. Africa by this is looked on as a conquered country, and one which no one will take the trouble to defend.

There are but few checks to the rapid increase of unprincipled men: one here is a great mortality on their passage out and after their arrival. In some cargoes, as much as 70 or 80 have fallen victims, the climate being so fatal to their constitutions. Another is the want of riches, to send them from the shores of the Samaritans. But this latter want has lately been amply met by the mistaken, but philanthropic feeling of the benevolent people of England! One hope, and one only remains, for these unhappy and much abused Africans, which is, that their cause should be espoused by their real friends in Great Britain, and that they be rescued from their present state of tyranny, ere it be too late.

It is not intended by the foregoing remarks to insinuate that the new coloured settlers are discontented with their situation, or that they generally express any wish to return whence they came;—on the contrary they feel more independent, and in fact really are too much so. They observe rigidly all the outward forms of religion, and pretend to a great share of sound morality; they express great anxiety to have their children educated, to live in a comparatively civilized state; they affect a great deal of consequence and shew, exhibiting much finery in their furniture, as well as in their apparel,—but all this only regards themselves, not one solitary thought is ever given to the situation of their neighbours, the poor natives whom they have dispossessed of their country, and whom they drive away from their territory for their own accommodation. In the publications of the Great Strangers, the condition of the *native Africans* is never mentioned or thought of as if they may be driven away from their homes like bullocks from a field, to make way for the new comers without any consideration! These prints would persuade their readers that the poor Africans are quite

indifferent as to their present situation, and even confidently state that the Liberians have been invited among them. But this is totally owing, as well as the assertion that they are contented that the new comers should occupy their country. Nor did they give them possession of that country voluntarily. It has been obtained from them by stratagem, or wrested from them by force. In fact the natives do not mix with the Liberians, they do not consider themselves bound by their laws, and do not obey them unless by force to do so, and they are in every respect a distinct people. They do not even intermarry with them, nor admit the children into their schools, nor in any way attempt their improvement, and the whole drift of their policy is to keep them as much at a distance as possible, to secure their own benefit without the least consideration as to the extent of misery produced to the natives.

#### THE OLD BAHAMA CHANNEL IN A HURRICANE.

LUCKLESS indeed must be that vessel which is caught in the Old Bahama Channel by a hurricane! It is, however, probable that when the nature of these storms becomes more generally known and understood, few British seamen will be found fool-hardy enough to attempt running through this passage during the hurricane season, but rather take the outer one round Cape Antonio to the Havana.

The chances would be a hundred to one against the preservation of any vessel that should be overtaken whilst on the north coast of Cuba by one of these furious tempests, act how she may. To run on the Great Bank of Bahama, if it could be accomplished, would be very questionable in its result; but, it is highly probable that if practicable at all, it could be effected only from the western side of the channel, where if a vessel happened to be at the onset of the storm, her best plan would be to bear away westward if the wind would admit of her doing so, and run into the Havana could she manage that point.

It is not improbable that, in some instances, the northern margin of a meteor may merely brush the Old Channel, in a progressive course to the W.N.W., then, indeed, a vessel might take advantage of the circumstance, should the commander be able to judge of that course, and run away under poles, with the easterly wind to the north-westward upon the bank, and get clear of the storm altogether; but there can be no certainty of a conjecture as to the line pursued by it, being correct; and if the progression happened to be to the N.W. it is clear that the vessel would be running with the storm. Again, if a meteor be progressing to the N.W. and a ship in the Old Channel gets the first wind of the storm from the west, the body of the circle will be to the northward of her position, and she will be south of the axis of rotation;

in which case, her best plan would be to run to the east under poles. When the circle has passed, she would probably experience a shift of wind to the south-eastward, with smart squalls; and if sufficiently clear of the dangers of the channel, she may heave to under the expectation of the trade wind speedily resuming its wonted steadiness.

On a nice consideration of this sort, we must have "all our wits about us," for there are contingencies which it is essential to bear in mind when resolving on what is best to be done on so exciting and perilous an occasion. The first absolute "*pauler*" to any pre-conceived notion of propriety of action to be followed in the adoption of a particular plan is, that it is difficult to predict from what quarter the onset of the storm will come\*—for this reason,—that the line of path of these meteors is not always precisely the same, being sometimes more northerly, and at other times more southerly, which will necessarily vary the changes upon any given spot. The course upon which the circle here, as it were, runs, varies from W.b.N. to N.W.; it is obvious, therefore, that upon any given spot, the first wind of a storm may be from the N.E. one year, and in the next (or, indeed, in the same season of the first year,) be from the north, or from the N.W.; in fact, in different storms, the first wind may be from any point between east, by the north, round to west, according to the parallel the focus of the circle moves on, or approaches the spot where the storm is felt.

It seems clear, upon this consideration, that the winds which would aid a vessel in running on the bank —*i. e.* southerly ones—can never be experienced at the onset of a hurricane in the Old Bahama Channel.

If, indeed, the seaman chooses to take his chance on the bank, and is pretty well assured from the prognostics that a hurricane will follow, he may run with the precursor gale, if it should not be from the north, (which it generally is,) into soundings, and drop his anchor; but, let him take especial care that the depth of water is sufficient to prevent its breaking and foundering his vessel should the anchor hold, which it probably would not do unless it hooked a coral rock, and then, perhaps, only for a very short time. Such an evolution is fraught with peril—so much so indeed, as, in my opinion, to be likely to realize the old adage of getting from the "frying pan into the fire." On this head, I shall endeavour as briefly as possible, to make my reasons as plain as the intricacy of the subject will admit, so that every seaman may judge of the matter for himself; for it is one of great moment to such as may hereafter be placed in such an unenviable situation.

Another weighty consideration, is the direction in which the vessel will drift, supposing she drags her anchor, of which there would be

\* Should there be sufficient sea-room lying to a few hours might contribute towards doing this. Ed.

little doubt. Now, here again we should be foiled, for we cannot anticipate, but must submit to circumstances as they turn out. The vessel therefore may be drifted into shoal-water, and be overwhelmed in a moment; the waves here acquiring additional weight by the admixture of sand.

It should be recollected also, that the sub-marine knolls in the agitated state of the sea, are subject to shift, and new channels formed; this was the cause of the loss of old Captain Edgcombe in a Government schooner, with all his crew, except one man, in attempting during a hurricane to run across the Bank.

It is scarcely necessary to point out to the seaman the fearful responsibility attached to a determination of this sort, when we state that one of the most experienced pilots of the Bank (abovenamed,) perished in such an attempt! Few seamen though acquainted with the Bank, we think, would venture to take a short cut in stormy weather, from the Old Channel, where shifting sands are known, unless there was no other alternative; and fewer still, who are not familiar with the navigable channels, would hazard the loss of their vessel in running through any of them by the aid of the chart, without a pilot, even in moderate weather. We know, indeed, that the Americans do so at all risks rather than go outside, but we have seen some of their wrecks, and have heard of many more, upon the reefs of rather wider channels between the islands, than are to be found among the *deeps* of the bank!

Be it remembered likewise, that in trying to reach upon soundings from the southward, a vessel *may* do so in *front* of the approaching meteor, if starting with the precursor gale, and so run directly into a position, perhaps, where she would experience the *heaviest weather*; the main object of the seaman whenever he does make an attempt to run, being to keep clear of the vortex, by endeavouring to reach the margin, or to get clear of the storm; such an essay in restricted navigation, unless shelter lies under the lee, would be a "forlorn hope."

Very erroneous opinions seem to be entertained respecting the capability of a vessel carrying sail after the onset of a hurricane. Much depends upon the point of entry, and the course of the storm; if a ship is just brushed by the lateral margin, she may, if her canvas be stout, run before the gale with impunity, provided the wind should be *west*, and will soon be clear of the commotion; but with the blast from the *east*, she will run on with the storm and be necessarily detained: the difference is worth remembering. She may do so also for a *short time* under the anterior margin sometimes; but any sail set transversely to the course of the wind, would be riven into shreds. Hauling up, therefore, is out of the question; for however clear an evolution of this sort

may seem theoretically, when attempted to be put into force during a circular storm, it would be found impracticable.

It may be said, that getting upon the Bank is the best alternative that presents itself, to a vessel under the circumstance of being caught in the channel, by a hurricane, as, if she were to heave to, there would be scarcely a doubt of her being wrecked. Unquestionably the chances of escape would be greatly against her, as we have already said; but, her fate would in some measure depend upon her particular position, the size of the passing meteor, and the other points alluded to above: the drift-course, when there are several shifts of the wind, it must be recollected, is always a curve. Eastward or westward of the strait or narrowest part of the channel, as it widens, there would be a chance of safety, if the first wind was from the N.W., and the progressive velocity of the meteor not very slow, or its size not very great—for four points of the changes, a vessel thus situated, would drift *towards Cuba*, gradually inclining to the east, and ultimately to the N.E. *towards the Bank*, so that, if the bight of her drift line swept clear of the Cuba dangers, she would be safe by lying-to.

Although advice offered respecting the mode of conduct to be adopted by a seaman, may not be rejected by him,—let him scan it well with a view, at the moment of need, of ascertaining whether the circumstances under which he happens to be placed, will admit of his acting up to it. Whatever opinion he may form of the capability of the giver, he should never blindly follow it, as his attempt to extricate his vessel from impending danger must be principally governed by the circumstances of the case.

If the dangers and the various anchorages of the north side of Cuba, were well known, the most feasible plan, to ensure safety of life at least, would be to run, directly there was reason to expect a hurricane, for shelter (if that allowed only time to beach the boats,) under some of the high islets; or better still into a harbour, or cove; anchor the vessel, or run her upon a sandy beach, (hatches on and deadlights in,) and land the crew. One thing, perhaps, would happen in the latter case, if the anchorage became exposed to on-shore shifts of wind and sea,—the vessel would be hove up so far inland as to prevent the possibility of her being got afloat again.

Hempen cables cannot be trusted on the Bank. H.M.S. Hunter, had her cables unlaidd by the ground swell, and the action of the tides and currents on the Bank and coral rocks would saw them through in a short time. Every seaman should follow the recommendation given long ago in this work, to study closely the law of circular storms. With a knowledge of the subject as far as it is yet understood and explained, and the resources of his own mind, the captain of a ship will be ready

for all exigencies; as he then would be capable of appreciating the value of any advice given by writers.

The following brief notice may perhaps prove interesting to those seamen who voyage among the Polynesia, as affording them a caution that, however sunny and fine the general character of the weather may be in the tropical regions of the vast Southern Ocean, it is subject equally with the northern hemisphere, to the visitation of the awful circular storm. The late worthy and indefatigable Missionary to the "South Sea Islands,"—Mr. Williams, whose shocking murder by the savages has been recently made known, has given in his entertaining and valuable publication\* an animated account of a dreadful hurricane experienced at the island of Rarotonga, situated nearly in the corresponding parallel south, that Cuba is in the north.

It appears, that the approach of this storm was announced on the morning of the 21st of December, 1831, by a heavy swell rolling into the harbour, and the threatening aspect of the atmosphere. The tempest commenced the next day, and the rain fell in torrents, from morning until night. As the day closed the violence of the wind increased; trees and houses were blown down, and the land flooded; during the night the storm continued to rage with devastating effects. On the 23rd, hurricane unabated, attended with rain, vivid lightning, and heavy thunder, and the whole island trembled to its very centre as the infuriated billows burst upon its shore! "The crisis had arrived; this was the hour of our greatest anxiety," (says the narrator;) "but, 'man's extremity is God's opportunity;' and never was the sentiment expressed in this beautiful sentence more signally illustrated than at this moment; for the wind shifted suddenly a few points to the west, which was a signal to the sea to cease its ravages, and return within its wonted limits; the storm was hushed, the lowering clouds began to disperse, and the sun, as a prisoner, bursting forth from his dark dungeon, smiled upon us from above, and told us that 'God had not forgotten to be gracious.'"

The Missionary schooner of about 60 tons, (which had been built by Mr. Williams in a very ingenious manner,) had been washed over a bank of ten feet in height, carried across a swamp by the force of the wind, and power of the waves, and lodged nearly unhurt, among a grove of large chesnut trees, several hundred yards inland! Every particle of food in the island was destroyed; thousands of the largest trees were prostrated, and nearly all the houses were blown down. The

\* "Narrative of Missionary Enterprises," (Snow, 35, Paternoster Row, London.) We strenuously recommend this work to the notice of all seamen; its perusal will amply repay them,—there is both pleasure and instruction to be gleaned from it.



popular idea, therefore, that the "Pacific" is exempt from hurricanes is erroneous. We believe Captain Kotzebue was the first navigator who corrected this mistaken notion.

It is to be regretted that the changes of wind in this memorable storm were not given. It is impossible to say whether the wind commenced from the south-eastward, and drew round to the westward, with the meteor progressing to the south-westward, or whether it began from the north-eastward, and veered to the westward; the meteor proceeding to the south-eastward. It may be necessary to state here, that the course of the gyrating current of air is in the southern hemisphere, from left to right, or *contrary* to the mode of operation in the northern part of the globe. I have found since writing this, that the same hurricane was felt at Tahiti, to the N.E., and also at the Navigator's isles, to the N.W., but as dates are not given, I cannot say whether the meteor was moving from the eastward, or from the westward; the difference of latitude between Tavaii, the northernmost of the Navigator's group and Rarotonga is about 9°.

STORMY JACK.

[To the above letter of our intelligent correspondent Stormy Jack, we annex the following extract from an early volume of the Philosophical Transactions.]

*"Captain Langford's observations on his own experience upon hurricanes and their prognostics. Communicated by Mr. Bonivert."*

"It has been the custom of our English and French inhabitants of the Caribee islands to send about the month of June, to the native Caribees of Dominic and St. Vincent, to know if there would be any hurricanes that year; and about ten or twelve days before the hurricane came, they would constantly send them word; and it very rarely was erroneous, as I have observed in five hurricanes, in the years 1657, 1658, 1660, 1665, 1667. From one of these Indians I had the following prognostics.

*"First.*—All hurricanes come either on the day of the full, change, or quarters of the moon. *Second.*—If it be to happen on the full moon, observe these signs, during the change; the skies will be turbulent, the sun redder than usual, a great calm, and the hills clear of fogs, or clouds over them, which in the high lands are seldom so; likewise in hollows, or concaves of the earth, or wells, there will be a great noise as of a storm; and at night the stars will look very large with burrs about them; and the north-west sky very black and foul, the sea smelling stronger than at other times; and sometimes for an hour or two of that day the wind blows westerly out of its usual course. On the full of the moon you have the same signs, with a great burr about the moon, and frequently about the sun. The same signs must be ob-

served on the quarter days of the moon, in July, August, and September; the months when the hurricanes are most prevalent; the earliest I ever heard of, was the 25th of July, and the latest the 8th of September; but the usual month is August.

“ The method of avoiding the danger is to keep the ship sailable, with good store of ballast, the ports well barred and caulked, the top-masts and tops down, the yards laced a-port, keeping the doors and windows of the ship fast, and she will lie as well as in other storms; thus the ships being in readiness, they may stay in the road till the storm begins, which is always first at north, so to the north-west till it comes round to the south-east, and then its fury is over. So with the north wind they may run away to the south, and get themselves sea-room, for the drift of the south-west, where it blows very fiercely. By these means, I have, with God’s blessing, preserved myself in two hurricanes at sea, and in three at shore, greatly to my advantage, as I lost not a sail, yard, or mast in two great hurricanes.

“ The causes of these hurricanes, according to experimental observations of my time, are these :—

“ 1.—It is known to men of experience, that to the southward of the tropics there is constantly a trade-wind, or easterly wind, which goes from the north to the south-east all the year round; except where there are reversions of breezes and inlets near the land; so that when this hurricane or rather whirlwind, comes in opposition to the constant trade-wind, then it pours down with such violence as exceeds any storms of wind. In the hurricane at Nevis, I saw the high mountain that was covered with trees left in most places bare.

“ 2.—It is remarkable by all men, that have been in those parts where the sun comes to the zenith, that at his approach towards it, there is always fair weather; but at his return southward, it occasions off the north parts of the equinoctial, generally much rain and storms, as tornados, and the like; which makes the wind in the tornado come on several points. But before it comes, it calms the constant easterly winds; and when they are past, the easterly wind gathers force again, and then the weather clears up fair.

“ 3.—The wind being generally between the tropics and the equator easterly, unless at such time as before-mentioned; meeting with the opposition of these hurricanes, which come in a contrary course to that trade-wind, causes that violent whirlwind, on the sun’s leaving the zenith of Barbados, and these adjacent islands; by which the easterly wind loses much of its strength; and then the west wind, which is kept back by the power of the sun, with the greater violence and force pours down on those parts where it gets vent. And it is usual in sailing from Barbados, or those islands to the north, for a westerly

wind, when we lose our easterly wind, to have it calm, as it is before hurricanes; and then the wind springing up, till it comes to be well settled, causes the weather to be various; but after the settled westerly wind comes fresh, they have been constantly without those shufflings from point to point.

“ Here it is to be observed, that all hurricanes begin from the north to the westward, and on those points that the easterly wind blows most violently, the hurricane blows most fiercely against it: for from the N.N.E. to the S.S.E. the easterly wind blows freshest; so does the W.N.W. to the S.S.W. in the hurricane blow most violent; and when he comes back to the S.E. which is the common course of the trade-wind, then it ceases of its violence and so breaks up. Thus I take the cause of hurricanes to be the sun’s leaving the zenith of those parts towards the south: and secondly, the reverse or rebounding back of the wind, which is occasioned by the calming of the trade-wind.

“ But it will be objected, why should not the storm be all over these parts of the West Indies, as well as Barbados and the Leeward Islands; to which I answer, that it has about twenty-five years of my experience, taken its course from the Bermudas to the Caribees; but seldom or never carries such a breadth as from the latitude of 16 to 32 degrees, which are the latitudes of the places; but it has been observed, that when hurricanes have been in Martinico, which is within two degrees of latitude, and two degrees of longitude, according to the miles of that circle, yet no hurricane has been in Barbados; nor could I ever call any of the former storms at Barbados hurricanes, till that last year in 1675. Again it has been noted, that hurricanes have done the like to the northwards; for when the hurricane has been in Antega and St. Christopher’s, those ships that were only in the latitude of 20 degrees, had no hurricane, but constant westerly winds, reasonably fair, and then there were no hurricanes in Bermudas; and when the hurricanes were at Bermudas, the Leeward or Caribee Islands had no hurricane; nor had those islands the hurricane when Barbados had it.

“ It may also be objected, why the hurricane was never known to go further to the westward than Porto Rico, which lies in or near the latitude of those islands of St. Christopher’s? To this I answer, that from Porto Rico, downwards, both that island and Hispaniola, as well as other adjacent islands, are of vast magnitude, and very high lands, that of themselves most commonly give reversal or westerly winds at night, through the year; for there for the reason aforesaid, the easterly wind towards night calms, and those lands afford a loud wind, which the other islands cannot do, by reason of the smallness of those Caribee Islands; but very near the shore, the trade-wind having its full power till this general whirlwind comes for the reasons aforesaid. I do

imagine likewise to the southwards of Barbados, where the tornados come frequently, there are no hurricanes; nor was there at Barbados, when these tornados commonly come there, which made some small reversal, though it was but for two or three hours; yet the easterly wind giving some way by the sun's declining from that zenith, prevents this furious reverse, where it has no vent till it is forced by the violence of the two winds."

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ÆOLIAN RESEARCHES—No. VII.

[Of the Seventeenth century.]

THAT which makes the Fortunate Islands truly so, is the kind salute from the northern winds, after they have been somewhat heated in their progress towards the south.

The gates of cities, in the opinion of the wisest architects, ought always to be directed towards the north; and the situation of Tornay in Flanders is celebrated by Fromundus upon that account. Hippocrates prescrib'd the north wind as the greatest antidote against the plague in Greece: and Varro is said to have preserv'd his whole family during the raging plague at Corcyra, by stopping up the windows towards the south, and giving free admission to the northern air. Yet one of the ancient physicians gives a worse character of the northerly winds: That they cause acute pains, and defluxions from the head to the stomach: Breed the stone, and stop the passages of the ureters: hinder the transpiration of those peccant juyces which nature endeavours to throw off from the blood; and produce many more distempers which are reckon'd the effects of siccity or cold. They are searching and astringent; scarce to be endur'd by those who have infirme habits of body, and yet agreeable to healthfull and robust constitutions. Sir Walter Raleigh in his voyage to Guiana takes notice that neer the coast of Braail, they had one half of the year northerly, and in the other part southerly winds: And further towards the south in the kingdomes of Magellana and Chili, they have them the whole year round southerly; which raign most in the tropique of Capricorn, as the north winds at Island, and those countrys which lye neere the north pole; especially in the winter, so that the Hollanders which winter'd in Nova Zembla, during most of the time, had the wind from some of the northerly points. Thus the sun, as he approaches either of the tropiques, subtiliseth the air, driving away the grosser exhalations into the frigid zones, where they are laid up in vast magazines till winter; but then the spaces being able to contain no more, they

circulate again to the middle of the world. For the solar motions, being excentricall to the earth, cause so unequal a distribution of heat and cold, that the air must of necessity be denser in some parts than in others; and consequently lyable to the frequent disturbance of winds: and the vapors, according to the distinct seasons of the yeare, being continually either retiring from the poles, or on their voyage thither, the sun, as the prince of the atmosphere, obliges them to a motion no lesse constant than his own: Insomuch that neither these or indeed any other winds, are so fortuitous as many suppose, but proceed from regular causes, and are guided by the certain conduct of nature, though happily the manner of it may not be fully understood by us.

The norths are often exceedingly impetuous on the shoars of Florida and Virginia, taring up forrests of vast trees by the roots, and wasting the whole country like hurracanes. They blow very hard towards the Orcades and on that side the British coasts. But they must needs be very sensible of their effects in Finmark and Russia which lye more expos'd to their fury. The Bishop of Upsal in two chapters (*De Vehementiâ Ventî Circii. and De Vent. Sept. Violentiâ*) informes us of many disasters, which happen by them in Norway and Island: particularly, that at the port call'd Vestrabord, the N.E. wind blows with such vehemence that it dismounts the horsemen and souldiers, driving them away before it. On the western shoars of Norway, it suffers not so much as a tree or the least shrub to grow, that the inhabitants are forc'd (if you believe our author) to roast their meat with fire made of great fishes bones. And in Bothnia, and that part of Norway which they call vichia, the northern whirlwinds are so terrible, that they carry away the roofs of their houses, and of the churches which are cover'd with lead, blowing away great beams and rafters, removing windmills, stones, and even castles, and villages, from one place to another. If this be an author suspected, the annals of our own country will furnish us with relations of the same nature, which would require as large a share of credulity to believe them, if the rage of these tempestuous winds was not sufficiently understood in most parts of Europe, though happily in remoter climates, which are less acquainted with the great disturbers of the northern world, they might seem fabulous. Some of which are solemnly recorded in our histories, that even exceed the hurracanes of the West Indies. Yet I have heard, that those winds, which we count very great stormes here in England, would be thought no wonder in Scotland, where they are accustomed to these violent blasts; and for this reason build their houses universally with stone, exceeding thick, low, and with narrow windows. But not to be prolix in their history; we might offer at the cause whence this strang vehemence and impetuosity of the north winds does proceed. Shall we

say from the great quantity of exhalations laid up in the treasuries of the north? or because they find the resistance lesse toward the south, where the atmosphere is rarified by the heat of the sun, so that they glide without opposition through the yielding air, especially in the day time, wherefore the aforesaid northerly winds are observ'd to blow harder by day then night.

They are more sonorous then other winds, because they rage with greater violence, and so make a stronger collision of the air.

I have thus farre considered their nature in the remoter parts of Europe, where they are nearest their source: But after they have made a long progresse southwards, and are heated in their approaches towards the sun, we find them in Africk to be farre different from what they were in Norway or Island; and their qualities no lesse various then the temperature of the heavens. So likewise in America, (and as Acosta observs more particularly of some countrys in Peru,) the northerly wind is counted unwholesome, and the southerly extremely cherishing to men and beasts: the first is not penetrating nor disperses clouds, as among us, but causes rain: and the south wind is just qualify'd in those climes as the north is in our country's that lye nearer the arctic pole: nay, not only comparatively to different situations, and places, but the judgment to be made concerning the qualities of winds, from the quarters whence they blow, is very various and fallible, in relation to one and the same latitude. Many of the hardest frosts, which have happened in England, began with a southerly wind, (and then commonly are the more lasting and violent) which nevertheless is generally much hotter then any other, which arrives at the British coasts.

I took notice, no longer since then the 11th of January last: that in the morning we had much rain (the wind being N. and N.E.) which ceasing about noon, there followed, first a showre of haile, and then a considerable fall of snow (the wind still continuing at N. and N.E.) which was the most part of it dissolv'd by 3 or 4 in the afternoon: then the wind vering to full south, it froze exceedingly hard for the time. So little certainty is there in observations of this nature, that we had rain with a northerly, and frost with a southerly wind in the same day. And not only thus, but it appear'd by the weather-glasse, to which I had recourse upon this occasion, that there was a very suddain mutation in the air from heat to cold, when the wind came about to the south, more then in the morning while it continued at N. and N.E.

Wee must expect these so different qualifications of wind, to happen even in the same climate: since not only the variety of their component particles, and the fountains which gave them birth; but either the cutting down forrests: draining of fens: changing the currents of great rivers: their vicinity or distance from the course of the sun: whether

they blow off from land or sea, or snowy mountains; and a thousand extraneous accidents are sufficient to alter the properties of winds.

Neither are the laws of their motions reducible to such certain rules, as Aristotle pretends; that two opposites alwaies blow at contrary seasons of the year: as the N.W. about the vernal, and the S.W. at the autumnall æquinox: and it would likewise be examin'd whether the same contrariety happen constantly between the solstitial winds. Others have observ'd, that we commonly feel a southerly wind at midnight, an easterly at the rising, and a westerly after the setting of the sun; and last of all, a northerly about noon, when the solar rays are most powerful to resolve the grosser mists and clouds in the north. For winds, being for the generality, nothing but dilated vapours or air, they almost wholly depend on the presence of the sun, at least are generated from the heat left behind him in the earth and waters. Whereupon De Cartes ingeniously remarks, that we should have no such variety in the qualities and production of winds; if the whole terraqueous globe were of one uniforme superficies: as we may perceive that in wide seas, their motions are farr less irregular then by land; since the great diversity of climates, mountains, and lakes, varies them exceedingly.

I have thus farr discours'd of the four principall: the collaterall or intermediate winds (if any right judgment could be made of their natures from the quarters whence they blow) might be suppos'd hot, dry, moist, &c. as they are farther remov'd, or hang nearer towards the cardinal point. But we are like to expect little satisfaction from the generality of writers concerning the temperature of winds: for who can with patience bear the impertinence of those notionall men, that enquire no further, but declare! That the south wind is allways hot and moist, the north; cold and dry: the west, &c., which obliges us in the following discourses, to offer at some more accurate account of their qualities, and the most universall causes from whence they proceed.

First: winds are moist; either because their constituent parts are made up of vapid or aqueous corpuscles, such as rain, dews, watry clouds: or by reason they make long voyages by sea, or over great lakes, morish countrys and fenns; and so are tainted with the qualities of the medium through which they passe. Those which proceed from melted snows, have some small allay of the terrene, but approach neerer the moist.

The siccity of winds is from their saline, and terrestriall parts: or that arriving from those parch't and torrid regions neer the line, they are exsiccated as they travell by the ways of the sun.

I shall not dispute whether this has been cautiously enough minded by most writers. How many nice circumstances are to be consider'd in judging the qualities of winds; and how difficult it is, to make a

just estimate of their severall degrees of heat and cold. For there must not only be especiall regard had to the temperament of our senses, but to the climes in which they blow; and seasons of the year; since those which would seem hot at christmas comparatively to the winter cold, should the same happen in July; when wee had been long accustom'd to a different temperature of our organs and the ambient air, would undoubtedly appeare exceedingly cold. Then we denominate winds either gelid or hot, in respect of those that usually blow in such climats: as the southern blasts with us here in England (though they are colder then the ambient air) may be reputed hot, comparatively to the N. or N.E. which are much more refrigerative in these parts of the world. Thus wee ought not rashly to make judgment of their qualities: but first consider what symptoms of heat, they betray in relation to weather-glasses, or the winds that commonly blow in such countrys: as likewise, what mutations happen by them in the temperature of the air: and afterwards compare all these circumstances with the present disposition of our organs, least wee determine concerning the positive qualities of winds, from only the prejudices, and hallucinations of sense.

There are severall causes productive of heat: as their passage through hot regions; or because they consist of the ignite and suffocating air, which infests the burning zone; where the whole masse is corrupted with such intolerable heats, that the winds which are either generated therein, or only pervade the torrid regions, must needs, for some time, retain their temperament and qualities: till at length they loose them in long voyages, and the calorifique particles languish and dwindle away by degrees, being oppres'd with multitudes of heterogeneous exhalations in their course. Then, I think it not improbable, but that the solar rays, or whatever parcells beside of the subtil and ætheriall matter, may by mingling with them, actually advance the heat of winds. And lastly: the ignite damps such as wee sometimes discover in colepits and mines, and all other of the minèrall and metalline kingdomes, that finding no vent, cause earthquakes in the bowells thereof, if they escape through the pores of the earth, occasion presters and hot winds: and those fiery eruptions, which in many places of Calabria and Sicily, are continually breathing out from the subterraneall regions, must needs diffuse the seminalls of heat through the whole body of the air and winds; especially, such as come reaking from under burning mountains; or at least are the results of those calorifique mixtures by which some mineralls and salts, fermenting together in the cavitys of the earth, emit hot fumes: like severall chymical preparations, such as oyl of tartar and spirit of vitriol, which cause a strange ebullition and heat by their commission only. And if wee suppose any thing analogous to these under ground (where nature in her own elaboratory often exceeds the



greatest sagacity of art) why may not the tepid steams and vapors that ascend from thence, be able to produce so considerable a degree of heat in the air, that might occasion scorching winds? And happily the rencounters of certain mineralls with each other, in those passages where the waters flow, may likewise by their mutuall ferments, be the most probable cause of many hot baths and springs. Nevertheless Fromundus, and some other naturalists of late, in the number of which wee may reckon our countryman Mr. Hobs, affirme that all winds whatever doe actually refrigerate, and oftentimes so intensely, that they prove the fittest instruments for the congelation of liquids: and I must confesse, it seldome falls under our observation, that in any parts of Europe, the winds are comparatively hotter then our sensories, or the ambient air; yet in many provinces of Afric and Arabia, but most of all near the Persian Gulf, where they come just off from the burning sands, they are intolerably hot and suffocating: as appears from the relations of the Portugalls first voyages to the East Indies, where they felt gales of the E. and N.S. wind so hot, that the air seem'd to be inflam'd and scorching like fire. So likewise Gasparo Balbi in his travells speaks of four persons, that weary'd in their journey, sat down near the banks of the Euphrates to refresh themselves a while, and were all stifled by one of these hot winds. And wee have a more surprising narrative from Marcus Polo that, when the king of Chermain sent an army of 16 hundred horse, and 5 thousand foot against the lord of Ormus, for not paying his tribute, they all perisht by these suffocating blasts. But if wee distrust the integrity of these writers, Olearius in his voyage to Persia, describes the intemperature of the air in those countrys to be such; that with the north or east wind they felt a cold which depriv'd them of their limbs, and on the contrary the S. winds were ready to choak them with the extremity of heat. But Della Valle, a nobleman of Rome (whose curiosity led him through most of the eastern kingdomes) reports, that 'towards Arabia there was a wind so scorching and dry, that it left behind it like marks of fire, wherever it came; and the excessive heat forc'd them to keep their legs naked, which became so red and inflam'd, that without greatest torment, they could not endure to set them on the ground. In some places of the country, these soultry gales last from 9 in the morning, till noon; which are ready to stifle the inhabitants, and blowing immediately from the scorching sands, the people many times lye in the water to rescue themselves from the intollerable heats. Della Valle says, that they call'd in the annalls of Persia, bad semum, i. e. burning and venomous winds.

I have heard the like relations from many of our sea captains, who trade on the Arabian or African coasts: so that I think Mr. Hobs or

any other of the modern naturalists had little reason to question the heat of some winds: though in these parts of the world, where they travell not over such sandy deserts, and are more remov'd from the ways of the sun, they are more sensibly cold.

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NAUTICAL RAMBLES.—*Bermudas*.—No. III.

I HAD no opportunity of enquiring into, or of gaining information of the statistics of the colony, but conclude from the established purity of the climate, and the longevity of the inhabitants, that the births exceed the deaths. In this case, supposing the premise to be correct, we imagine that the rooted attachment to the growth of cedars, which the land proprietors seem to feel, must ultimately give place to the necessity that will press upon the community at large, for an extension of cultivation, in order to increase the means of subsistence.

The accession from new comers is trifling, and emigration is unpractised by the natives; some few have settled in the eastern Bahamas, and employ themselves in the manufacture of salt, which is sent to Newfoundland; others pay transient visits to the United States; and the more wealthy extend their voyages to Europe. I recollect that having by chance called at Funchal, Madeira, I there, to my surprise, found one gentleman (Mr. Harvey of Salt-kettle,) waiting anxiously for a passage to Bermuda. But that disposition for roaming to far distant settlements, so conspicuous in their countrymen of the mother-land appears to have been eradicated in them. Perhaps the only instance of a native Bermudian having ever reached so far as the Antipodes is to be found in the late Chief Justice of New South Wales, Sir — Forbes.

The cultivable land of the entire group does not probably exceed in extent two or three noblemen's estates in Britain: the portions which are now planted with Indian Corn, and culinary vegetables, and covered with grass, is with reference to the amount of population, extremely limited; the people, however, do manage to exist, but this fact is no proof of the return from the land, being equal to their support. Exclusive of the importations of the necessaries of life, we may safely consider that the sea is more prolific than the land; and to it the mass of the inhabitants is principally indebted for daily food. This would seem to the full-fed Englishman whose insular home is somewhat more extended, and whose storehouses are never empty, rather precarious tenure by which human life is held; and so indeed it is, although the concurrence of circumstances necessary to the production of an extreme effect has, happily, never yet, that we are aware of, led to actual starvation. But there is not a season that passes without the liability of such a calamity attending it; a bad crop, a drought, a furious hurricane, or

continued stormy weather; empty stores, and the absence of foreign supplies, would reduce the inhabitants to a state not far removed from it.

Under such circumstances we may reasonably infer that, eventually, the whole of the land capable of being brought into a state of productiveness, must, if the population increases in the same ratio as it does in other countries, become insufficient for the support of augmented numbers. It is difficult to conceive how the emancipated blacks will contrive to live, now that they are thrown upon their own resources in such a confined and uncultivated space; and their condition of life so completely altered. No doubt many will desire to remain in their former situation of domestic servants, not only as a means of support, but from attachment to their masters and mistresses. The number of that class will, however, be necessarily reduced, as the difference between free-labour and compulsory duty is of an opposite extreme; and we may readily believe that when the duties of the servitors are to be paid in cash, the employers will not be unwilling to sacrifice a portion of the pride of an unnecessary display of their household establishments, to their purses. Besides, if the same disposition manifests itself here as in the other colonies where slavery existed, many of those released from a state of bondage will feel no longer disposed, than necessity compels them, to submit to the drudgery of domestic servitude,—becoming suddenly free, they also become intoxicated with the inspiring draught of liberty poured out to them, and thus, for a time at least, it is not to be expected that they should be sobered by the calmer dictates of reason,—unquestionably this is the working of human nature, it is the essence of that spirit which binds it to existence,—innate, powerful, and universal, need we then wonder at its emanation?

An instance in illustration will show that we do not reason from probable conjecture, but from facts,—the cases are general in the West India islands.

A lady in Jamaica informs us, that among the numerous domestics which were born on her estate, and bred up in her house from infancy, only *two* little girls under fourteen years of age, consented to remain in her service, notwithstanding that they were all treated in the kindest manner, and with one exception had never received a lash in the course of their lives. All expressed attachment, and indeed warm affection for her and her family, but could not resist the supreme pleasure of doing as they pleased. We can vouch for the general considerate treatment of these people from personal observation, and declare never to have seen a body of persons living in a social state, which appeared more completely happy and free from care.

Others of the Bermudian working class will no doubt hire themselves

as fishers; this is an occupation which under any circumstances must be attended to, but those who have been bred to this calling, unless aided, have not the means of following the occupation in an independent way, so that pressing as the necessity is for its support on an extended scale, a falling off may be expected in this line also. And it is clear that here where there is little or no tillage, or pastoral employment, there can be but a trifling demand for labourers; and, if the sable peasantry increase in numbers, it will also be equally certain that should the state of the islands remain as it has been hitherto, the excess over the demand for working hands will progressively increase, until an evil will arise that assuredly must end in the rooting up of the cedar tree.

We cannot well picture to ourselves a condition more wretched than that which such a super-abundant race of sable freemen would be reduced to, should the land be allowed to continue in the state of wilderness which it has been in for centuries. The necessity for a general cultivation of the best portions of the soil, will probably force itself on the attention of the landed proprietors, now that the relative connexion between them and the labouring class has been so materially changed. We do not know whether the event we have anticipated has even entered into the contemplation of the inhabitants themselves, but considering the number of *banyan* days which those who are not affluent have for years been obliged to endure, it would seem to be not unworthy of their mature deliberation.

The Custom and Court Houses of the town of St. George, are situated on the Parade ground close to the beach; markets are held under the latter; the supplies brought here are scanty and without variety: little else than fish and Indian corn is to be seen, excepting in the duck and onion season, which is one of reasonable gratification to those who sojourn at Bermuda, as it affords them a few choice meals; the obtaining such at other times being a matter of some difficulty. The singularity of this species of domestic bird being more abundant than any other in a land devoid of springs and fresh-water pools, is not lessened when we find them cheaper than the common barn-door fowls, a circumstance contrary to what occurs in most other countries.

Considering the difficulty which we experienced in procuring even the commonest articles of food at this place, we were at a loss to know how the inhabitants contrived to provide themselves with dinners all the year round. That those who are in easy circumstances are often exposed to this dearth of substantial provisions, as well as the poorer classes and the visitors, we infer from knowing that the most acceptable present that could be made to them is, something which is eatable. I recollect taking charge of a dozen tubs containing pickled rounds of

beef, prepared at Halifax, from a late gallant officer, to a gentleman of the islands, from whom he had received some civilities; the worthy doner, I am sure, could not have felt more satisfaction in scoring off obligation, than did the receiver delight in acknowledging the kindness of the action; and this brings to mind an anecdote of a lieutenant commanding a schooner, which occurred whilst we were on the station, and well known among the old stagers.

Late in the year the vessel departed from Halifax for Bermuda; the the purveyor of Lady —, (the Naval Commander-in-chief's wife,) came alongside with a boat load of tubs, barrels, &c. of preserved meats, just as the anchor was a-trip; he told the officer that, according to the lady's desire, he had brought some supplies for her, which he was directed to tell him "he *must* take on board." This peremptory mandate, insisted upon by the functionary of good cheer, nettled the lieutenant, and as the schooner was ready to cast, he hastily told the man of the tubs, that "he had mistaken the vessel—H.M.S. which he commanded was not a victualling transport!" Whilst the applicant stood in dumb amazement, the schooner paid off, and soon left him and his freight far astern!

I cannot certainly admire either the gallantry displayed towards her ladyship, or the respect shown to the good and very distinguished old Admiral on the occasion; neither do I think that a reasonable excuse can be offered in justification of the refusal; but I have reason for believing that it was a mere ebullition of temper, free from any feeling of personality, and arising from worry, and the unseasonable moment when the application was made.

It must be acknowledged however, that the lady in question, who may have been extremely amiable, for aught we know to the contrary, had the unenviable merit of busying herself with the routine of the services allotted to the ships of war; and from that cause, I believe, arose her unpopularity among the officers—which was notorious. The sequel of this tale being *outrément*—offensive, cannot be minutely explained. It appears that the next vessel of war which sailed from Halifax brought the long expected and valuable supplies; and, as a matter of course, an explanation why they were not sent before.

Far be it from me to insinuate aught which savours of malicious revenge in the bosom of any fair dame; nor do I pretend to determine whether more than a little harmless pleasantry was intended in what followed; but certain it is, that immediately after the supplies had arrived by the ship, the lieutenant above alluded to, received an order from the Admiral's office to shift his berth, and anchor the schooner directly opposite, and close to the Commander-in-chief's mansion. The cause of so unusual a mandate, the consciousness of having incurred dis-

pleasure, helped the lieutenant to an explanation; and the quarter whence it originated was shrewdly guessed, as the Admiral had not taken the least notice of the transaction, and probably was not acquainted with it. Be that as it may, the unyielding lieutenant, more from a desire, perhaps, to outwit his petticoat chief, than to increase the umbrage he had already created, at all hazards meditated a plan which he thought must needs shorten the duration of this sort of espionage, apparently without meaning, but which he believed was intended solely for his annoyance. The schooner was accordingly shifted to the part of the harbour pointed out to him, and he moored her with her *head* towards the house, placing a screen across the break of the quarter-deck.

The order was perfectly legitimate, although an unusual one, unless for some specified reason. In this instance there was no professional cause apparent, or that could be inferred from the state of the vessels. The prompt obedience of it was favourable to the zeal of the lieutenant, and the manner in which the vessel was secured could not be found fault with; as to the screen, it served to keep off the sun, of course—of essential covering in that way farther forward, we suppose it was quite an omission on the side of the unsuspecting officer, who doubtless being very busy, had not time to think of minutæ! For the first day the telescope, at a particular window of the dwelling, was it appears often directed towards the smart little craft. To the surprise, no doubt, of the lieutenant, he received another order to resume his former station early the following morning, the cause of which he could not of course this time conjecture—poor innocent fellow! Nevertheless, he chuckled a little at the thought of having worked to windward of the devising and intelligent power he had so unluckily got entangled with. The reader may imagine, as did the lieutenant, that this undignified sort of covert warfare between brogue and petticoat was at an end. No, no, the ungentle aggressor had not yet met his deserts; he was still unpunished; and she who wielded the assumed power had never “suffered persecution, and learned mercy.” As soon as the season admitted the lieutenant was ordered to the inhospitable coast of Labrador, there to brood over his folly in attempting to foil a woman’s resentment. We hope, although not admiring the object, that the effect upon his mind tended to improve his manners.

If we were to judge from the general scarcity of provisions, we should not be wrong in considering the amount of consumable articles to be equal only—and at times barely so—to the immediate wants of the residents; and hence the difficulty which strangers experience in obtaining food of any sort. Perhaps one of the concurrent causes of the good health and lengthened years of the natives, may arise from a restricted allow-

ance of solid food ; their simple easy mode of life, and exemption from any stirring or exciting events calculated to rouse and agitate the passions into rebellious commotion, may also contribute to the establishment and preservation of bodily health ; yet, there is no external appearance of this ; their complexions being sallow, and their deportment and tone of voice affording no indication either of mental or physical vigour.

Although enjoying constant intercourse with their countrymen of the mother country it is impossible for a visiter not to be struck with the change in their personal appearance and speech, which time and peculiar circumstances have wrought. The causes which lead to these shades of difference are probably not difficult of explanation ; but they are nevertheless very curious ; climate, we imagine, although influential in some degree, does not appear to be the chief cause, as we observe the effects among the Anglo-Americans, the Creoles of the West Indies, and the Bahamians.

The dearth of food in a land which is stated to contain 20,000 acres, and only 10,000 inhabitants, might appear incredible to those persons who are not aware that the greater portion of the islands is covered with the cedar tree, or in a state of waste ; and that either from constitutional want of energy, or from a misconception of the value of the wood for ship-building, the owners of the soil have suffered it to remain in its primitive state, to the exclusion of all improvement, and to the manifest disadvantage to the least affluent among the inhabitants. The inconvenience resulting from this indisposition to cultivation, has been borne passively by the majority who are principally the sufferers ; but we may reasonably suppose, not without regret, from the first settlement of the islands to the present time. That it should have been so with the descendants of John Bull seems inexplicable. This paucity of the first articles of necessity is anything but agreeable to the blue-jackets who drop in here to refit and recruit : their expectations of the latter are seldom to be realized ; indeed, the straits to which they are often exposed are exceedingly provoking, especially to those who may have previously visited Halifax, a few degrees to the northward, where abundance of all good things may be readily procured. We may venture to exemplify the scarcity we have so long dwelt upon, by an anecdote or two, without, we hope, being tediously minute. All we have said, and may say, on this subject, will act as a caution to naval officers who may hereafter serve on the Western station, never to rely on any supplies for the table being procurable at the Bermudas.

At a time when several men-of-war were at anchor in Grassy Bay, one of the commanders, whether on his own account, or as a joint concern did not transpire, after an unsuccessful cruize of his *locum tenens*

determined to try what magic there might be in a brace of epaulettes. If it should be considered that the office was somewhat undignified for a commandant, yet, indisputably it will be admitted that it was a very natural one: hunger levels all distinctions, sticks not at trifles, and where there is room for loco-motion, gives vigilance to the eyes, spring to the heels, and additional pretension to the fingers. Away started our hero, and, like an honest man, with money in hand, every nook and cranny round the anchorage was searched, and the good housewives well plied with soft beseeching words: long and toilsome was the search, for the natives were not to be won even by gold, or cozened by the accents of a mellifluous tongue, to part with that which was to support their own lives. Compassion, however, at last settled the exchange; and the successful and gallant officer had the indescribable gratification of returning with—what think you well-fed reader?—A fine fat hog! No indeed—no such thing, a few, only a *very few* hen's (doubtful) eggs!! and which, so valuable was the merest trifle of fresh food considered, he held up with an air of triumph and excusable delight, whilst passing close under the cabin windows of his brother officers' ships, in returning from his arduous mission!

Singular as it may appear, an omelette in which flour predominated, was a *bon-bon* not to be despised at Grassy Bay, even by the aristocratic palates of Captain-colonels, and Commander-majors of the Royal Navy! As for the "Luffs" those "workers" of the wooden floating hive, they had seldom time left them to think of hunger; to the Royal Drones, (not invidiously so termed, for they are invaluable,) who are incomparably the most efficient caterers of a mess, was left the enviable pleasure of supplying all the wants pertaining to the table.

With respect to the Middies, those "d—'s chicks" as the old dames of Hampton, in the United States, designated them, one way or other they found means for assuaging the cravings of the ungovernable appetite. Eternal ferretters they could, would, and did, under most discouraging circumstances, contrive to live in the luxury of fresh viands!

Even such trifling supplies as eggs were not always to be procured at Bermuda, although fowls appeared every where to be abundant. It is not to be supposed from this, that there was any want of generosity or of good nature in the natives; on the contrary, we believe them to be compassionate and considerate; but the necessity for husbanding their resources to ensure self-preservation, when an hour or a day might leave them destitute, undoubtedly is the cause of the apparent selfishness, which is observed in their intercourse with visitors. Literally they have no room, (speaking generally,) for the display of hospitality, for they are barely enabled to supply their daily wants; the non-com-



pliance, therefore, with the wishes of applicants for an exchange of gold or silver for commodities, is exercised from the dictates of common precaution; and, it would be expecting too much of them, that they should starve to feed others, who, as in the case of naval officers, are not absolutely destitute.

The soldiers in recounting their adventures by "flood and field," have given us abundant instances of the prolific resources, when rations were scarce, or the Commissariat at fault, of their trusty Sanchos in foraging for "prog." Doubtless they, (the officers,) were as innocent as babes in these matters, and could never guess whence the good things came from! The *fovl* deeds of the Mids were not so prominently put forward, and, although not so frequent, these were not a jot less ingeniously exercised. Whether such "larcenies" are placed under the head of practical jokes, justifiable necessities, or any other apologetic term, they clearly display the "stick-at-nothing" sort of feeling which banishes from the mind a precept that ought never be absent from it. "Do as you would be done by." Hunger it must be acknowledged is an enemy to peace of mind and to the comfortable sensations of the body, creating both moral and physical revolution, and time out of mind has the all-potent action of the gastronomic faculty produced the wonderful phenomenon of the transposition of *tuum* into *meum*! 'Twere an insult to the understandings of our readers to insist upon this view of the case, it is notorious, and dominant all over the habitable world; but, at the hazard of being considered too minute, we shall venture to add a singular instance in point.

The Captains of men-of-war were pretty often indebted to the hospitality of the Admiral, (who, being a man of good fortune kept an open table,) for a recruiting diet; fortunately it was so, or those who had not reserved some of the stock obtained at other places, would have been reduced to Purser's allowance. It so happened that the Captain of a frigate recently arrived from Old England, when about to sail on a cruise, left on St. George's isle, a fine South Down wether, to graze until his return, when, no doubt, as he was a kind-hearted and considerate man, becoming aware of the difficulty of obtaining fresh viands, he would have given a grand feast to his brother officers. The Fates, however, ordained it otherwise, so far at least as he himself was concerned! In the mean time those Tritons and other sea-gods in harbour, were in a most lamentable state of destitution for fresh-meat dinners, for, to have quartered daily on the good Chief, would have detracted somewhat from the dignity of their stations; and we all know how delightful it is to the pride of state to make a show of independence, albeit we should be on the verge of starvation! More than once we have heard the truly excellent flag-officer gently rebuke these

gallant spirits for preferring their "salt junk" to the choice fare to which they were at all times welcome: the delicacy observed in these instances of self-denial is unquestionably to be admired; but, alas! how often our best resolves vanish before the imperious calls of necessity? At the time, not a single article could be procured for money, or indeed for any thing else. Had they condescended to beg, it were vain, there are no givers at Bermuda. Had they attempted to borrow, it would have been equally unsuccessful, there are no lenders in the islands. To steal (*genteelly, i.e., to force a loan!*)—pshaw! were they Mids? perish the thought! What then could they do? To vegetate on "beef mahogany."

"And yet, to feed on such condition,  
Almost amounts to prohibition."

Day after day as they landed, the first object, conspicuous on the green turf, that met their enquiring eyes, was, the solitary wanderer bounding along to meet them, no doubt to communicate by his plaintive bleatings, the strange sensations he felt in so lonely, and, to him, outlandish land! What an odd piece of machinery is the sensorium of man, can it be believed that these simple sounds which betokened the want of an associate, should, like those of the fowls of romance, have been interpreted, "come eat me?" But, what frail mortal, fiercely hungry withal, could withstand such temptation? Let no man revealing in plenty venture the answer.

Alas! the pangs that do our vitals tear,  
Know no restraint from forms of law,  
Ah! who can tell how hard it is to bear,  
The cravings of a hungry maw!

A consultation, so the story goes, took place, and after deliberating on the awkwardness of their situation with reference to the property upon which their longing eyes were cast; and, of course, contrasting that with the pitiable state of wretched deprivation from fresh meat in which they were placed, passing a censure on the natives who were stupid enough to rear cedar trees instead of sheep; and, summing up with a complimentary eulogy on the worthy owner of the—to be—victim; it was resolved *una voce*, that necessity being above all law, *ergo*, the unconscious brute should die! and he died accordingly. A "glorious feed" without doubt followed, and we may give credit for a benediction:

"Thanks —— for your mutton, for finer or fatter  
Ne'er rang'd near a forest, or smok'd on a platter."

The only period of the year when there may be any apprehension of

the consequences of repletion, and this principally with reference to the blacks is, in the spring when whales are caught. May is a glorious month to the indigent 'Mudians; whale-steaks smoke upon their boards, and whether agreeable to the palate of the master or not, certain it is, that the man displays the hearty feeling of delight which energizes him upon such an occasion most unequivocally; a strong proof notwithstanding Dr. Lamb's\* opinion and practice to the contrary, that, however much necessity may compel these men to the observance of a vegetable diet, it does not obliterate, even by the force of long habit, the carnivorous propensity which is so universal among human beings, whether that be a natural or an acquired taste.

Of the Balena, the hugh leviathan of the deep, we are tempted to introduce here an amusing extract, from a work† of great merit, the style of the author of which is somewhat peculiar; but every thing which drops from his pen is marked by ability, and fails not to instruct.

“ The domestic manners of whales are but little known, as we have them but in snatches, and these generally from those whose avowed business it is to kill every whale they see. They are rather cumbrous museum subjects, and can be preserved only in skeleton, as the flesh, though sweet, and even wholesome, and far from unpalatable, when young, in the recent state decays sooner in the air than that of land mammalia. From the gentleness of their manners, the mild and intelligent expression of their eyes, and many other circumstances, there is reason to believe that whales would not be difficult to tame; and it is not among the absolute physical impossibilities, that some future Neptune may yoke them to his car, and so circumnavigate the globe in five or six weeks; but the process is not yet begun; neither has it been ‘brought out’ as a scheme by any one of those marvel manufacturers who are always astonishing the ignorant, and too often cheating the simple, by projects which involve plain and palpable impossibilities.”

Abstractedly, there can be little doubt that the whale may be tamed, and that is all that can be said of the matter; to effect it is impracticable, and if it were practicable it would be productive of no farther benefit than is at present derived from the destruction of the animal in its wild state. The idea of harnessing such unweildy creatures to the car of a sea-god is not quite so feasible as a ship under canvas taking advantage of a circular storm to cross the Atlantic in about the time that a steamer would do so in a smooth sea and light winds, and is of course a mere piece of pleasant sarcasm on the wild schemes

\* A celebrated Physician of London, who advocates and practices a vegetable diet.

† Brit. Cyclopædia.

of those mercenary projectors whose design is to entrap the unwary that possess neither judgment nor common sense enough to guard their purses.

For the improvement of the condition of the inhabitants of the Bermudas, next to the general cultivation of the land, perhaps, the best thing that could be done, would be the infusion of a commercial spirit among the natives, by which their habitual indolence would give place to energy of thoughts and action. Yet, we confess that there appears some difficulty in devising the means by which such a desirable end would be effected. We believe the amount of their exportable articles is very inconsiderable; arrow-root starch being the only commodity manufactured, if we except drip-stones made from the porous rock of the islands. The castor-oil nut might be greatly increased in quantity as it grows freely; but the quantity annually imported from the East Indies into Britain, is so great, that a speculation of this sort would probably disappoint the expectations of the growers; we may observe, however, that the oil expressed from these seeds still holds its high price in England. But why not grow the orange and the lemon extensively? The climate is favourable, probably more so than that of the Azores, those islands being six degrees more northerly than the Bermudas; the latter, indeed, lying 27 degrees farther to the west; but as steam navigation will probably become general over the Atlantic, the use of that class of vessel would equalize the distance; but even allowing the employment of the fast-sailing schooners and brigs of the islands, the run to England may be accomplished in from 12 to 20 days.

These fruits, as is well known, meet a ready sale in England, and are distributed nearly over its whole surface, and so great is the demand for them, that they are even exported from Italy, and Sicily, as also from Lisbon, and other parts of the Peninsula. Notwithstanding the quantity imported there is still room in the home market for increased supplies of these luxuries. We imagine that these fruits would yield incalculably more profit than the cotton which has been attempted to be cultivated in the islands. Of this article, it appears that in 1809, the produce amounted to 21,656 lbs., and in the following year only to 9,000 lbs! In 1810 the general imports are stated to have been to the amount of £1,137, and the exports to £36,613. The year before, the imports were £11,648, and exports £31,279. These variations are worthy of notice: the cotton is an extremely tender shrub, and the climate of the isles is not congenial to it; next to the plantain the orange may be considered as the most productive of fruit trees, and requiring little or no care after reaching to maturity. As to any apprehension of the fruit being blighted or injured by the stormy weather,

we do not entertain it, as they may be sheltered; and we know that there is much more continued bad weather at the Azores than at the Bermudas, and they are equally subject to hurricanes. The ladies too would find their account in dividing their attention between the orange and the arrow-root, the returns from the latter might then be considered "as pin money," and as Grecian fortunes are reckoned in olive trees, so those of the fair Bermudian may be in that of the golden fruit Hesperidean, so long the theme of fable and of story! Arrow-root starch will soon become a *drug* in the markets.—The Polynesians send home quantities through the Missionaries, and recently it has been discovered that a starch equally good and nutritive as that of the *maranta arundinacea* can be manufactured from the Mango fruit, (as also a spirit equal to Hollands,) a manufactory of which has been established in Jamaica.

### Naval Chronicle.

HAPPILY, distinct as our occupations are from the turmoils of the political world, it is yet our duty in the records of Nautical events, which we lay before our readers, to notice the following affair in which the conduct of one of our steam-boat companies has been implicated. We allude to the recent "essay" as it has been termed, at revolution by Prince Napoleon, and his followers. The transaction is best recorded in the extracts, which are annexed from the daily journals, among which will be found the exculpatory letter of the company, and the courteous reply received.

*To the Editor of the Boulogne Gazette.*

*"Boulogne-sur-Mer, Monday, 8 p.m.*

"SIR,—Having just perused in your *Gazette* of this day the account of the hiring of the City of Edinburgh, belonging to the Commercial Steam Packet Company, and the incidents that followed your statements being in general correct, but, as there are some passages calculated to convey an erroneous impression of the conduct of the captain, excuse my forwarding for your information the real statement of every occurrence from the time the boat was hired till she entered the port of Boulogne.

"Mr. E. Rapello, a member, it is believed, of the Stock-Exchange, and whose office is in Angel-court, Throgmorton-street, hired the City of Edinburgh on the 6th of July. The following is his agreement with the company:—

"Mr. Rapello agrees to hire the City of Edinburgh for one month to go on a party of pleasure wheresoever he and his friends should desire. He will give two days' notice previously to requiring her services. In consideration of the above, he agrees to pay 100*l.* a week from the 6th day of July to the 6th day of August. But in case his friends should change their minds, and that the party of pleasure should be deferred, then he agrees to pay 100*l.* forfeit for not executing this agreement. The crew and the company on board are to be provided for according to the orders of Mr. Rapello, this expense to be afterwards repaid by him to the company."

"In pursuance of the above agreement Mr. Rapello gave notice for the vessel to be ready on Tuesday last. Early on the morning of that day nine horses and two carriages were put on board: several gentlemen of the most respectable appearance went on board a little before nine, and at nine she started from London. By order of one of the gentlemen, numerous passengers were taken on

board at various places as they descended the river. At Gravesend a French pilot joined them, and the captain was informed that he must obey his orders: he did so, and the vessel was afterwards steered by his directions.

"On leaving London the directors and captain understood the party were bound to Hamburg. At Gravesend the captain was informed that the gentlemen had changed their minds and had resolved to visit the coast of France.

"On Tuesday evening they arrived at Margate; they started again at 4 o'clock on Wednesday morning. Late on Wednesday evening they arrived off Vimereux, and the captain received instructions to enter there. This he refused, pleading his ignorance of the place, and stating also his opinion that there was not a sufficient depth of water for his vessel, but he offered to enter Boulogne. This was declined, but he was informed that they would land the next morning at Vimereux. On this the captain turned in, giving directions to the mate to call him when the gentlemen desired to go on shore. At 3 o'clock he was called, and his astonishment may be imagined when he saw the whole party on deck in uniform and armed. They desired the boat to be lowered, and were taken on shore in several trips. On their leaving, the captain asked for instructions. The reply was 'When you see a white flag on the pier head of Boulogne, enter the harbour and land the baggage, horses, and carriages.'

"About a quarter-past 4, seeing the City of Boulogne starting for England, he signalled her to approach, and desired Captain Tune to inform the company where he was. The steward at the same time threw a letter on board of the City of Boulogne, addressed to the secretary, requesting him to inform his (the steward's) wife that he was off Boulogne. When they separated he approached the harbour of Boulogne, and let go his anchor. Some time after this a regular pilot, M. Huret, put off to them, and demanded if they wished to enter the harbour. Captain Crowe replied that his orders were to remain where he was till he saw a white flag hoisted at the pier head. The pilot on landing came to me, as the agent of the company, and detailed the conversation that had passed between himself and the captain. Unfortunately I was then busily engaged in the performance of my duty in the corps of the National Guard, to which I belong, or I should instantly have gone off and desired him to enter the harbour.

"After some time the captain saw the white flag flying at the end of the pier; he immediately gave orders to get the steam up and raise the anchor, imagining that his gentlemen intended to remain. Fearing, however, that there was not sufficient water to enter the harbour, he sent his boat to the pier head to examine and make inquiry. While his crew were executing these orders the harbour-master went on board, and was received without opposition or suspicion.

"It is said the captain refused at first to enter the harbour, and would not obey Captain Pollet. Now, when Captain Pollet went on board he ordered one of his own men to the helm; this Captain Crowe objected to; and as Captain Pollet does not understand English, nor Captain Crowe French, and as the latter was not aware that he had done anything wrong, and saw no reason why Captain Pollet should command his vessel, or his man take its helm, it may be easily supposed that in the excited state Captain Pollet was he would misconstrue the reasons of Captain Crowe's opposition. At last, however, Captain Crowe gave way, he obeyed the orders given, and was entering the harbour, when a discharge of musketry at the vessel took place, and several bullets whizzed by Captain Crowe's head. He immediately gave orders to back the vessel; but on the firing ceasing he resumed his course and entered the harbour. On the custom-house officers taking possession of his vessel he learned for the first time, the unlawful use to which it had been applied; till then he had been at a loss to understand what was going on.

"In conclusion, Sir, I am ready to depose, in the most solemn manner, that neither the crew nor the captain had the least suspicion that Prince Louis Napoleon, nor any other person animated with hostile or criminal intentions against this country, was on board their vessel.

"I am, &c., A. D. Bosson,

"Agent to the Commercial Steam Packet Company."

*" To the Editor of the Shipping and Mercantile Gazette.*

*" Commercial Steam Packet Company, Chief-office,  
" Fish-street-hill, Saturday evening, 10 o'clock.*

**SIR,**—I beg to send a copy of a communication forwarded to the mayor of Boulogne, and to request the favour of an insertion of the same in your journal.

*" I am, Sir, yours obediently,  
" JOHN BLEADEN."*

*" A Monsieur le Maire de Boulogne-sur-Mer, &c.*

**SIR,**—It is with the deepest and most unfeigned regret that the directors of the Commercial Steam-packet Company find that they have been made the unconscious instruments of transporting to the shores of France a body of persons whose object was to excite tumult and dissatisfaction among a people with whom and with whose government the people of Great Britain have so long been, and hope ever hereafter to be, in perfect peace and amity.

" Believing, as they do, that there exists in the minds of the enlightened and well-disposed of both countries an earnest wish that no event may occur to disturb the pacific relations happily subsisting, and themselves heartily participating in this feeling, the directors of the company are anxious to take the earliest opportunity of formally and publicly declaring that not one of their body, nor, as they firmly believe, any one under their orders, or in their employ, had the most distant notion of the wicked and insane purpose for which the vessel was hired.

" The application to the company was not made, as has been erroneously represented, by Prince Louis himself, or by any one known to be connected with him, or professing to act for him or on his behalf. It proceeded from a gentleman of the name of Rapello, a member, as is understood, of the Stock Exchange, whose house of business is in Angel-court, Throgmorton-street, and the vessel was engaged for the professed object of taking a party of his friends on an excursion in the Channel and along the English coast.

" The directors hope and believe that any such disclaimer on their part is unnecessary. They feel assured that the French people will be too just to impute to them any connivance or participation, however remote, in this treacherous and base attempt to disturb the peace of a friendly nation. It is less to convince the people of France than to satisfy their own feeling that they make this public declaration. To the authorities and inhabitants of Boulogne in particular, from whom the company has received so much encouragement and kindness, they are more especially anxious to express their abhorrence of an enterprise, the effect of which might have been to involve their peaceful and flourishing town in bloodshed and pillage, and to tender to them their heartfelt congratulations that the loyalty and bravery of the inhabitants so promptly and effectually crushed the hopes of the infatuated invaders.

" The directors are willing that the captain of the vessel should undergo the strictest scrutiny. They feel certain that the result will be his entire and honorable acquittal; but they desire not only that he should be pronounced blameless, but that every inhabitant of France should be satisfied that he is so.

" Finally, Sir, the directors desire to convey to yourselves the assurance of their distinguished consideration.

*" London, Aug. 8th, 1840,*

*" Signed by order of the Board,  
" JOHN BLEADEN, Secretary."*

*" To Mr. John Bleadon, Secretary, &c., &c.*

**SIR,**—I received the letter which you did me the honor of writing on the 8th instant, concerning the unhappy event which has put your steam packet, the Edinburgh Castle, under the sequestration of the French authority.

" Before your communication was made known to me, I felt convinced, sir,

that the honourable directors of the Commercial Steam Packet Company were completely strangers to anything concerning the mad attempt of Louis Napoleon. The assurance you give me on that subject is quite unnecessary; and I hope your captain will succeed in justifying himself in the most satisfactory manner.

"I have sent your letter to the Procureur-General of the Royal Court of Douay, who is charged with the instruction of that affair, and it will remain amongst the pieces of the criminal proceedings.

"Receive, sir, the assurances of my perfect consideration.

"(Signed) AL. ADAM, *Mayor of Boulogne.*"

Fourteen seamen and a cabin boy belonging to the steam-boat City of Edinburgh have arrived in Paris from Boulogne, and after remaining two hours at the Conciergerie were transferred to the prison of St. Pelagie, where they remain. The other prisoners are expected at the Conciergerie this day, where forty cells are prepared for them.

#### STEAM BOAT TACTICS.

SIR,—In answer to your correspondent "S," I beg to point out to him that part of my letter which says, "I will venture to assert that it may be laid down as a certainty, in Steam Boat evolutions, that the stern will *invariably* come up into the wind with a back turn." And again, "in a *calm*, a steamer will sometimes obey her helm when going astern, but it is not at all to be depended on."

I refer him also to the article on "Steam Boat Tactics," which appeared in your April number.

In the case I have supposed, the helm was put to port, to point out the apparent anomaly of a vessel not steering stern foremost. The result, as "S." concludes, would unquestionably be the same, without a rudder she would have described the same course.

Sailors, Sir, will, I am sure, be very unwilling to give up the idea that the rudder assists to pay a ship's head off with stern-way. It is my opinion, and I submit it with deference, that it is entirely useless. At any rate it is so in a steam vessel, and it shall be found that such is the case in sailing vessels, it will be advisable not to cause any unnecessary strain to the rudder pintles by putting the helm over. Fancy a 74-gun ship in a sea-way, with her helm hard over, and going perhaps three or four knots astern. What a very great pressure there must be on the aft side of the rudder, and what a strain on the pintles.

I am desirous of calling the attention of your readers to this subject, and am, Sir, Yours, &c.

ROBERT C. ALLAN.

*H.M. Steam Vessel Volcano, Malta 9th June, 1840.*

#### AUXILIARY STEAM POWER.—"Earl of Hardwicke," *East Indiaman.*

THIS vessel of 1000 tons\* burthen, belonging to Messrs. Green, of Blackwall, and bound to Bengal, arrived on Thursday noon at Portsmouth from the Thames. She is fitted with a steam engine of 30-horse power, intended to propel her in light airs and calms, with paddle

\* Wrongly stated 1,600 tons in the *Hants Telegraph.*



wheels so arranged that they can be shipped or unshipped in a very short space of time. She has also a very simple and elegant contrivance on board by which the wheels can be disengaged from the engine in one minute, whenever the vessel is to use her canvas only: indeed so quickly can this operation be effected that the wheels were connected and disconnected several times while the vessel was tacking. The space occupied by her boilers and engine is very small, being 24 feet in length and 10 feet in width of the main-deck, between the fore and main hatchway, the whole enclosed between decks, no part going into the hold, nor above deck. This engine of 30-horse power propels her in calm and smooth water five knots, and her consumption of fuel is three tons in twenty-four hours; she draws 17 feet water, and is full of passengers, troops, and cargo. On Saturday, the 8th inst., this ship left the East India Docks with a large party of naval and scientific gentlemen on board, including Capt. Jones, R.N., Capt. Bushby, R.N., Capt. Henning, R.N., Capt. Denny, &c., to witness the action of the engine. She worked her engine down to Gravesend, but owing to the wind coming in brisk from the east, she had the assistance of a small tug; the wind lay dead on end, but she ran down to Gravesend in two hours and a half, going at the rate of six knots through the water, with all her yards square; upon heaving round at the end of Gravesend reach, the tug was cast off, and she steamed up to the town again by her own engine, at the rate of four knots, on a strong ebb tide. On Monday at noon weighed anchor, light airs W.S.W., steamed down to the Nore Light in three hours by her engine, and arrived at Spithead at 3h. 50m. P.M., on Thursday, the 13th, beating the "Wellington," which she had passed on Monday night, by eighteen hours. (The Wellington is generally reputed to be one of the fastest sailing vessels out of the Port of London). The steam engine was of most essential service, working upwards of 40 hours. She was to take her departure for Calcutta on Sunday, and it is fully expected that she will make the voyage to Calcutta in 75 days.

On the Friday previous to her departure, she was visited by Admiral Bouverie, Sir Edward Codrington, Mr. Blake, master shipwright of Portsmouth dock-yard, and many other naval officers and persons connected with the Navy, who expressed themselves highly pleased with the plan.

The "Vernon," a sister ship, upon which the experiment of auxiliary steam was first tried, made the voyage from Calcutta to Spithead, in a very bad season, in 86 days, notwithstanding she had calms and light airs all the way down the Bay of Bengal, when she used her steam consecutively for eight days and nights, and she came from the Cape to Spithead, in 42 days, being we believe, the shortest voyage upon record, during which time she used her steam nine days. Mr. Green, the spirited proprietor of 14 of these splendid East Indiamen, intends to apply generally auxiliary steam; and there can be little doubt but it must soon be adopted in our men-of-war; the space occupied by the machinery being the same amount as that formerly occupied for a cable tier.

It is a rather curious coincidence that the day on which the "Vernon" sails for India, the 10th September next, is also the day fixed for the sailing of the "India" steam vessel, of 320-horse power,—thus an ex-

cellent opportunity will be afforded for ascertaining the comparative advantages of the two plans. Many bets have already been made at Lloyd's, that both the "Vernon" and the "Hardwicke," of 30-horse power each, will make the passage out in less time than the "India" of 320-horse power.

Should this prove to be the case it will satisfactorily establish the superiority of steam applied merely as an auxiliary over large steam power applied in the usual way.

## HARBOURS.—SOUTH EASTERN COAST.

*Concluded from page 596.*

### HASTINGS.

No harbour at present exists between Rye and Newhaven; but the construction of one at Hastings having been frequently contemplated, we visited that town. The mayor and other gentlemen of the place attended, and laid before us several plans which had been prepared for the purpose; and Colonel Williams, late of the Royal Engineers, afforded us much information, together with his suggestions on the subject.

We do not, however consider it necessary to enter into the particulars of these plans, as a few remarks will show the unfavourable nature of the situation for the objects.

The coast runs, with little deviation, in a straight line, nearly east and by south, and west and by north, and is entirely exposed to the prevailing southerly and westerly winds.

There is no natural backwater, nor the facility of making an artificial one to any useful extent; the shore composed of shingle and not above four fathoms water at a distance of three quarters of a mile from the beach, which would give but a limited area of twelve feet water (at low water) in proportion to the size of the harbour, were piers to be carried out to such an extent.

A small tidal harbour for the use of trading vessels, &c., would, no doubt, be a valuable adjunct to the town and neighbourhood, but we do not consider the situation adapted for any national work.

### CUXMERE HAVEN.

At Cuxmere Haven, which is situated on the western side of Beachy Head, there is no artificial harbour. The shingle beach crosses the entrance and rises several feet above low water, and the interior of the haven is left dry at three-quarters ebb. We did not consider it necessary to land at this place, but proceeded round the coast to Newhaven.

### NEWHAVEN.

The harbour of Newhaven is formed in the channel of the river Ouse, at its entrance into the sea, by wooden piers carried out in a southerly direction across the beach. The river is navigable as far as the town of Lewes, and open to the flow and ebb of the tide for four miles further up the stream, or twelve miles altogether, and affords a powerful backwater for scouring the entrance.

The average rise of spring tides at the harbour's mouth is from 19 to 20 feet, and of neap tides about 14 to 15 feet. The bar, however, is left dry at low water spring tides, but within the piers there is about two feet water at such times, and this depth continues uniform for a mile up the channel.

The distance between the pier-heads is only 106 feet; on the western side of the harbour, the wooden pier, which extends about 250 yards, has been continued inwards by a stone embankment nearly three-quarters of a mile in a straight line; and the bar, which formerly extended from the western side nearly across the mouth of the harbour, has been considerably reduced since the completion of this work, the extension of the eastern pier, and other improvements which have of late been made in straightening and deepening the river above the town.

During the flood-tide and fine weather the harbour is easy of access, from the indraught and eddy-tide which set towards the mouth; but from the rapidity of the stream during the ebb, it is not considered safe for a sailing vessel to enter, and the flag at the pier-head is in consequence lowered at high water.

This harbour appears to be one of considerable value, and to possess facilities for further improvements; and there can be little doubt that an additional depth of water might be obtained by the adoption of judicious measures.

The observations we had occasion to make on the subject of encroachments, when treating of Rye, are equally applicable to this harbour; but great care should be observed, in straightening the river, to exclude the waters only from such places as afford a loose soil and serve to silt up the channel.

The piers at present only extend to the line of low water on the beach; and to render the harbour more available, it would be advisable to continue them some distance into the sea, and at the same time, by deepening and enlarging the river above the harbour, a large body of water would flow up at tide-time, and give a commensurate discharge on the ebb. A dock or pent might be constructed on the low ground on the western side, between the entrance and the town, called Sleeper's Hole; and a groin extended from Burrow Head into the sea, would facilitate the ingress and egress of vessels, by protecting the harbour's mouth from the swell occasioned by south-westerly winds, and serve to keep off the approach of shingle to the entrance. The expense, however, of these works cannot be stated without previous minute surveys, &c.

The harbour is managed by trustees.

#### SHOREHAM.

Shoreham, at the mouth of the river Adur, was the next harbour we visited.

The river, which formerly entered the sea nearly at right angles with the line of coast, has been gradually diverted from its original exit by the shingle, which constantly travels from the westward, and until a few years ago flowed along the shore in an easterly direction for three or four miles, before it at length found its way through the shingle bank into the sea.

This accumulation of shingle, consolidated by the alluvial deposit from the river, now forms an embankment between the river and the sea, varying from 200 to upwards of 300 yards in width; and an area of considerable extent is left within, into which the sea flows.

The entrance which existed at the eastern extremity of this estuary, once the river's mouth, has been blocked up, and an artificial channel has been cut through the shingle embankment about a mile from the town of Shoreham. This opening is preserved by wooden piers (formed of piles) 218 feet apart, which run in a south-west direction across the shingle into the sea. Within this entrance a third pier has been built out from the shore nearly across the harbour, for the purpose of directing the waters on the ebb, from the eastern and western sides of the inlet, directly to the mouth. The great body of water which thus ebbs and flows through the entrance serves to keep the channel open; and though the width is so considerable, the stream runs between the pier-heads at the rate of five or six miles an hour. The harbour's mouth is nevertheless subject to a bar, which rises occasionally above the low-water level, and shifts its position from 60 to 160 feet from the pier-heads.

The lift of spring tides is about 15 feet, and neaps about nine feet. The depth of water over the bar at high water is from 14 to 17 feet, according to the tides and state of the bar.

From its proximity to Brighton, this harbour is of importance to the local trade. We are informed that upwards of a thousand vessels enter annually. It is capable of improvements; the most obvious of which are, the extension of the present piers and the filling in of the centres with rubble, which are now partly open, and admit the shingle into the entrance.

The interior of the harbour might, at the same time, be deepened and generally improved, but we do not consider it capable of being converted into a deep-water harbour for the purposes pointed out by their lordships.

The harbour is the property of a joint-stock company, established by act of parliament.

#### LITTLEHAMPTON.

Littlehampton, which is the next harbour on the coast, is formed by the channel of the river Arun, which is led in a southerly direction into the sea between two piers, composed of piles, with an extension of dicker work.

The depth of water in the entrance between the piers is two to three feet below the level of low water, but a bar extends outside the dicker work, across the mouth, which rises about two feet above the general surface, and is left dry at low water.

The lift of average spring tides about 16 feet, and of neaps 11 feet.

The larger vessels which enter usually remain near the river's mouth, at Littlehampton; but a vessel of 13 feet draught, when she has passed the bar, can proceed to Arundel Bridge, a distance of six miles, the bottom continuing of an uniform level throughout that extent.

The tide flows nearly 25 miles up the river, but the backwater thereby afforded proves of little value, in consequence of the narrow-

ness of the channel and the sluggishness of the stream. It is scarcely necessary to add, that the harbour is not available for the objects of our inquiry, and the shoalness of the water on this part of the coast renders the situation inapplicable for any national undertaking.

The harbour is under the management of trustees.

#### PAGHAM.

Pagham was the last place we examined; it consists of low ground of very considerable extent, over which the tide flows at high water, and is entered by a crooked channel which continues some distance inland; vessels of 40 tons and under, with coals or manure, are the only traders to the place.

There is no artificial harbour, and the situation is not deserving of attention.

Having now completed our remarks on the state and capabilities of the existing harbours, &c., it is evident that there is no port at the present moment between Sheerness and Selsea Bill which can be considered an available harbour of refuge at all times of tide, or that possesses the capability of being rendered efficient for such a purpose, by any improvements or alterations which could be made.

We proceed, therefore, in conformity with their lordships' instructions, to point out the situations which, in our opinion, are best calculated for stations for armed steam vessels during war; and the works necessary to render them available for such a purpose, and at the same time to combine all the objects for which refuge harbours are so much required for the security of shipping navigating this part of the Channel.

We are decidedly of opinion that deep-water harbours on this part of the coast must be formed in the sea by means of breakwaters detached from the main land, on the same principle as that in Plymouth Sound, or connected with the shore by piers, similar to the harbour at Kingstown, near Dublin.

The situation which appears to us to be of the greatest importance, and at the same time offers the most eligible position for a deep-water harbour, is Dover Bay. Independently of its proximity to the Continent, this bay possesses considerable advantages. The depth of water at four hundred yards from the shore, is two fathoms at low water of spring tides, and but six fathoms at 1,100 yards; which, therefore, affords a sufficient width for the construction of a capacious deep-water harbour, without getting into such a depth for the site of the piers or breakwater as would add greatly to the expense of the works. The principal feature of the proposed plan is a breakwater, at the average distance of 1,000 yards from the shore, with piers projected from the land towards its eastern and western ends, leaving one or more entrances.

These piers and breakwaters to consist of large blocks of the hardest chalk rock, with a thick covering of stone, either granite or hard limestone.

The space between the piers, or length of the harbour, as shown upon the plan, is 2,300 yards, and the area enclosed would comprise 450

acres, of which 320 would have from six to two fathoms at low water, and 130 acres under two fathoms. The breakwater may be connected with the east and west piers, and have but one entrance in the middle 600 or 700 feet in width; or it may be detached from the piers, so as to leave an entrance nearly opposite the present harbour, and another opening at the eastern end.

The advantages of two entrances, one at the eastern and the other at the western end, instead of one only in the centre, would be that vessels might enter or leave the harbour with the wind from any quarter, and a ready access be afforded to the mouth of the present harbour from the western entrance, without passing through the centre of the new harbour.

On the other hand, one entrance in the middle would have the advantage of rendering the interior of the harbour in some degree quieter than with two entrances.

On consideration of the subject, our opinion is in favour of the two entrances at the east and west ends; but the decision of the question need not delay or interfere with the execution of the work, as it might be proceeded with along its whole extent (with the exception of the entrances,) and the result of the advantages, or otherwise, be tested by actual observation.

As a second place for a harbour of refuge, we recommend the bight to the eastward of Beachy Head, and westward of Langley Point, and the formation there of a detached breakwater, curved or in kaults, the main body running nearly parallel with the shore, leaving entrances to the eastward and westward, to enable vessels to sail out or in with any wind.

There is a sufficient depth of water near the shore, and but a small increase of depth for a considerable way out; affording a large harbour space, and facility for the formation of the necessary works. Looking at the locality as nearly equi-distant from the South Foreland on the east, and the harbours and anchorages within the Isle of Wight on the west, and to its relative position with many harbours on the opposite shore; also to its proximity to the elevated promontory of Beachy Head; we think it offers important advantages, both as an asylum harbour and station for armed steam-vessels.

The breakwater, if built in five fathoms water, and one mile from the shore, would give a width of about half a mile, having in no part less than two fathoms depth at low water; the area of course depending on the length.

One and a half mile of breakwater, including the arms, would give shelter over 450 acres of surface.

The third and last situation we recommend for a harbour of refuge is under the chalk cliffs to the eastward of Margate. The Chalk Bank and Longnose Spit stretch out to the north-east from Foreness Point. Upon this site we propose a pier to commence at the shore, and to be extended 1,000 yards clear in a north-east direction; thence to turn west-north-west for a length of 2,000 yards; terminating in a round end, to form the northern head of the entrance. The western pier to be carried out from the shore in nearly a north-east direction, and to be in the same length as the east pier.

This would enclose a harbour of 460 acres, of which 352 acres would be not less than two fathoms, increasing to six fathoms, and 108 acres, would be under two fathoms at low water.

The entrance, opening in a north-westerly direction would receive the protection of Margate Sand, and an opening in a west-north-west bearing would also permit vessels to sail in with winds from the south round westward to north-east, and out with winds from the north round eastward and southward to south-west. And in extreme cases, when the harbour could not be entered by sailing vessels, shelter would be given them under, or to the eastward or westward of it.

The construction would be, as at Dover, a core of chalk blocks from the adjoining rocks, faced with stone.

The advantages of this situation will be apparent when it is remembered that our eastern coast is literally without shelter from easterly winds for vessels of any magnitude.

A harbour off Foreness must, therefore, be regarded as one of refuge for vessels stationed in the North Sea, and would more particularly have reference to every thing connected with the opposite ports eastward of Calais.

For the mercantile marine, especially, navigating the northern part of the English Channel, the situation would be most desirable; inasmuch as vessels bound to the westward from the river Thames or the North Sea, arriving off the North Foreland, and then finding the wind strong from the southward and westward, would, in order to avoid anchoring in the Downs, and the liability to accidents which so frequently occur there in south-westerly gales gladly avail themselves of the shelter which this harbour would afford.

To vessels, also, caught in the Downs by tempestuous weather, or having received damage, a harbour off Foreness, accessible at all times of tide, would prove an invaluable asylum, where heavily-laden ships would escape the danger of grounding; and a considerable fleet of such vessels would lie in perfect security from storms or an enemy, until a change of wind would enable them to proceed down channel.

Similar advantages would be experienced during easterly winds, by vessels from the westward bound to ports upon the east coast; whilst to steam vessels the harbour would be accessible in all winds and weather.

The cost of each of the three harbours of refuge we have recommended, may be taken as nearly equal; none of them less than 2,000,000*l.* sterling, nor much exceeding that sum. An addition of a quarter of a mile to the length would give an increased area of one hundred acres, and would add about 300,000*l.* to the estimated expense of each harbour.

We have not considered it necessary to enter into any details as to the defences which might be required to these places of refuge but there can be no doubt of the practicability of rendering them secure.

The introduction of steam navigation will render a rapid communication along the coast an object of far greater importance than heretofore; and we consider that railways along the coast, on each side of

Dover, may be extremely useful in sending support in the shortest possible time to any point where the presence of troops may be required.

(Signed)

JAMES A. GORDON, Rear-Admiral.

ALEX. T. E. VIDAL, Captain

ROBERT THOMPSON, Lieut.-Col. R. E.

RD. DREW, Elder Brother of Trinity-house.

J. WALKER, W. CUBITT, Civil Engineers.

*R. More O'Ferrall, Esq., M.P., &c., Admiralty.*

#### STATISTICAL REPORTS ON THE HEALTH OF THE NAVY.

A RETURN of a very voluminous character has been made to the House of Commons upon the health of the navy, which, in a medical point of view, is invaluable, affording a mass of statistical information upon the various diseases which prevail in the navy. This report is extended through 323 pages, of which it would be impossible to give analysis in a Magazine. The report embraces a period of time comprised between the years 1830 and 1836 inclusive. The tables have been deduced from documents deposited in the office of the Physician-general, and transmitted to that office from each ship in the service. The report will, no doubt afford groundwork for the medical profession to draw conclusions, which will enable them to adopt means of preventing those diseases which are most prevalent. It does not appear that this object formed any part of the compiler's duty, but it is to be hoped that the medical staff of the navy will be called upon, with reference to these statistical tables, to take the whole subject into consideration with a view of effecting sanitary precautions for the prevention of disease among so valuable a class of men as the sailors in her Majesty's service.

Dr. Wilson, the compiler of these returns, ascribes the improved state of the navy, as regards the health of the seamen, as compared with former times, to the abundant supply of wholesome and nutritious food. He states that previously to the year 1797, the nutriment supplied by public rations to this branch of the service was at least a third less than it is now. It is, upon the credit of this gentleman, at present abundant, but not excessive. Putrid fevers, ulcers, dysenteries, and scurvy, are nearly banished from the navy. This happy result is attributed to the improved mode of victualling introduced into the navy in modern times, and those diseases, particularly the scurvy, which at one time were considered evils inherent in a sea life or intimately connected with it, are now proved to be no more dependent on residence in a ship than a house. The great improvement in the health of seamen has been effected by the more abundant supply and better quality of their food. The substitution of iron tanks instead of water-casks has also contributed in no small degree to this improved state of health in the navy. Water in these tanks suffers no deterioration however long kept, at least none from decomposition, the metal no doubt becomes oxydised to a certain extent, but being indissoluble it is held in mechanical suspension in the fluid, from its greater specific gravity falls to the bottom, and the water is drawn pure and clear, and is not tainted with any thing offensive either to the palate or the smell. So far from this slight chalybeate admixture being injurious to health, it may be in such minute portions beneficial. Tanks have been in general use in the navy since the year 1815. This report is very interesting, and at some future period we may give an abridged analysis of its leading points.



"MARACAIBO.—British Consulate, Maracaibo, May 28th, 1840.—Sir,—I beg to transmit to you the following literal translation of an official notice by the government of this republic, which I shall feel obliged by your having the goodness to make public, in order that it may reach the knowledge of the merchants and shipmasters engaged in the trade with this port:—'Republic of Venezuela, Treasury Department, April 9th, 1840.—The frequent instances of vessels, as well national as foreign, engaged in the interior trade with the port of Maracaibo, not being able to pass the bar in consequence of their cargoes causing them to draw a draft of water greater than the depth of the channel! and it sometimes occurring, that even in ballast, they cannot overcome that difficulty on account of their excessive draft; the executive power has resolved that, for the intelligence and guidance of the foreign commerce, through the medium of the ministers and respective consuls to whom it shall be officially communicated, and for the information of national merchants by the publication of the present notice in the Gazette, it shall be made known to all, that the greatest depth of water on the bar at high tide, during almost every season, is ten feet, and that the lowest draft, at ebb tide, is seven and a half feet, but that, in the former case, vessels cannot enter or go out, drawing more than nine feet, and in the latter, more than six and a half, it being absolutely necessary to allow a foot for the pitch. The breadth of the bar is not more than twenty varas (33 inches) distance from point to point.

"Therefore, notice is hereby given, that vessels will not be permitted to put into Los Taques for the purpose of transshipping cargo, under the pretext of not being able to pass the bar on account of their excessive draft, and that they can do so only in the ports where importations and exportations are authorized to be made. By order of the executive. (Signed)—SMITH.' But although vessels are prohibited by the foregoing notice, from discharging at Los Taques, a safe and convenient harbour, at the distance of 85 miles to windward of the bar, I have authority for stating, that there exists no hindrance to their repairing to that anchorage for the purpose of taking in such part of their cargoes, conveyed hence in lighters, and regularly cleared at this custom-house, as the shallowness of the bar may not permit of their loading in this port. I am, sir, your most obedient servant, R. MACKAY, British vice-consul. To the principal collector of her Majesty's customs at the port of Liverpool."—*Gore's Liverpool Advertiser.*

SOUTHAMPTON DOCKS.—These great and important works are rapidly progressing. The exclusion of the tide from the close Dock is effected: three railways, and a large number of men are in active work therein removing the soil to form the embankments of the tidal or outer Dock, as well as the land on the north side of both Docks for warehouses, sheds, tram-roads, &c.; the whole number of men now employed being five hundred. One coffer-dam is complete, and the piles receiving their final driving preparatory to the building of the quay wall: within a month the masonry will be commenced. A second coffer-dam is in progress, and a third is forming for the erection of the pier-heads at the entrance of the tidal dock from the Itchen. A vast quantity of mud has been removed in barges, and a dredging engine of the most powerful construction will be almost immediately in use. In short, they are rapidly progressing, and form an object of great attraction both to the Southtonions and to the numerous strangers, that now flock to their town per railroad.

These Docks adjoining the terminus of the railway, there being only a road between them, seem to offer the most perfect accommodation to trade that can well be imagined, both from their situation and construction, containing in the two Docks an area of thirty acres of water, with an abundant quantity of land for all dock purposes. The entrance

at the mouth of the Itchen is perfectly sheltered, having access at all times of tide, and eighteen feet water in the tidal Dock at dead low water spring tides; the close dock will have twenty-six feet depth of water.

The success of these Docks, (as of all others,) must depend on their affording to the merchant and ship-owner a safer and less expensive mode (by means of railway,) of carrying on their trade, than by the dangerous and more circuitous route of the narrow seas.

In connection with this view, it may be observed that Southampton will in all probability become a large bonding port, there being 300,000 tons that annually pass it for London, to be re-shipped at a greatly increased expense, and conveyed westward for the supply of that part of England and for exportation.

**PADDLE WHEEL versus SCREW.**—*Trial of Strength.*—A few days ago the following experiment was made in the river to test the power of the Archimidean screw, as compared with the common paddle wheel in presence of Mr. Fawcett, the eminent steam engine builder of Liverpool; Mr. Barnes, and other gentlemen. The *Archimides* with Mr. Smith's screw propeller, and the *William Gunston* tug-boat, with common paddles, were lashed together, stern to stern, but with an interval between them of from twenty to thirty feet. The former vessel has two engines of 25-horse power each; the latter two of 20.

The *Archimides* was employed to tow the *William Gunston* with her engines and paddle wheels in a state of rest, and this she did with ease; the object of making this preliminary trial being to ascertain that the working efficiency of the screw was not impaired by the relative position of the two vessels. The steam was then let on to the engines of the *William Gunston*, and a fair trial of strength commenced between them. In a little while the *Archimides* was seen to have lost all power over her rival: a minute or two more and the *William Gunston* was tugging the *Archimides* after her in spite of the superior engine power employed on the opposite direction; and in spite also of the aid of her much-lauded screw propeller—at first slowly, and as it were intermittingly, but at a constantly increasing rate of speed, till at last it reached the usual tug-boat speed of from eight to nine knots per hour.

So complete and convincing an experiment as recorded in the above extract from the *Mechanics Magazine*, (vol. 32, p. 149, No. 885 for July,) must indeed have been a most interesting sight; the result of which has fully confirmed our opinion of Mr. Smith's invention, as being one of those that are theoretically most ingenious, but in practice deficient. In the midst of the laudatory accounts of the doings of the *Archimides*, which followed her all round the coast like so many wonderful *tales*, (that is *tales*,) we briefly recorded our opinion among our "Shakings," and that too in spite of her beating an old Government steamer at Liverpool. We ask then where is the power of the *Archimides* to contend with the ocean wave? And "echo answers where!" Let her keep to still water, and Mr. Smith's propeller will prove as good in practice as it has in theory. We understand it is being adopted on canals.

**THE BRITISH NAVY.**—In pursuance of our usual practice to offer names and enumerate figures in support of assertions, against which objections have been taken by other parties, we submit a list of the line-of-battle ships possessed by England, which are either at present in active service, in sound and serviceable condition, or capable, with moderate repairs, of being made fit for commission within a reasonable time; and to these we have added the list of ships building. All our line-of-battle ships employed as receiving ships, dépôts, quarantine vessels, hospitals, convict ships, or which may be so badly out of order as to require very extensive repairs, to fit them for sea, more than twenty in number, have been omitted from this list, which is given as a fair statement of the solid strength of the British Navy in the line of battle. On a future day we may offer an equally particular enumeration of the frigates, steamers, and smaller vessels. We would merely observe that our information is derived from authentic sources, and may challenge investigation.

In Commission.—Britannia, 120; Howe, 120; Impregnable, 104; Rodney, 92; Ganges, 84; Asia, 84; Powerful, 84; Thunderer, 84; Vanguard, 80; Bellerophon, 78; Cambridge, 78; Belleisle, 72; Benbow, 72; Blenheim, 72; Donegal, 72; Edinburgh, 72; Hastings, 72; Implacable, 72; Melville, 72; Revenge, 72; and Wellesley, 72.—Total 21.

Demonstration Ships, or Reserve.—Caledonia, 120; St. Vincent, 120; Queen, 110; Camperdown, 104; Queen Charlotte, 104; Agincourt, 72; Cornwallis, 72; Hawk, 72; Hercules, 72; Malabar, 72; Pembroke, 72; and Russell, 72.—Total, 12.

In good condition.—Royal William, 120; Nelson, 120; Hibernia, 120; Neptune, 120; Prince Regent, 120; Royal George, 120; Waterloo, 120; Royal Adelaide, 104; Nile, 92; Formidable, 84; Vengeance, 84; Clarence, 84; Monarch, 84; Bombay, 84; Calcutta, 84; Foudroyant, 78; Indus, 78; Achille, 76; Ajax, 72; Wellington, 72; Imaum, 72; Black Prince, 72; Illustrious, 72; Carnatic, 72; and Egmont, 72.—Total, 25.

Repairing, ● wanting repairs.—Canopus, 84; Minden, 72; Talavera, 72; Armada, 72; Bellona, 72; Defence, 72; Devonshire, 72; Hague, 72; Minotaur, 72; Pitt, 72; Redoubtable, 72; Sultan, 72; Tremendous, 72; Invincible, 72; Kent, 72; and Medway, 72.—Total, 16.

Building.—St. George, 120; will be launched on the 27th; London, 92. do. on the 29th; Trafalgar, 120, do. in February; Algiers, 110; Royal Frederick, 110; Victoria, (in frame), 110; Albion (in frame), 90; Prince Albert, 90; Colossus, 80; Collingwood, 80; (nearly planked); Mars, 80; (in frame); Majestic, 80; Superb, 80; (in frame); Lion, 80; Irresistible, 80; Hindostan, 80; Centurion, 80; Goliath, 80 (nearly planked); Boscawen, 70; Cumberland, 70; and two ships of 80 guns each, building in India, not yet named.—Total, 22.

Total number of line-of-battle ships 96.—*Devonport Independent Telegraph.*

TABLE LX.

*For reducing Cracow Feet to English Feet, and English Feet to Cracow Feet.*

1 Cracow Foot = 1.169381659 English Feet.

1 English Foot = 0.855151944 Cracow Feet.

Cracow or Eng. feet.	English feet and Dec. parts.	Cracow feet and Dec. parts.	Cracow or Eng. feet.	English feet and Dec. parts.	Cracow feet and Dec. parts.	Cracow or Eng. feet.	English feet and Dec. parts.	Cracow feet and Dec. parts.
1	1.169	0.855	40	46.775	34.206	79	92.381	67.557
2	2.339	1.710	41	47.945	35.061	80	93.551	68.412
3	3.508	2.565	42	49.114	35.916	81	94.720	69.267
4	4.678	3.421	43	50.283	36.772	82	95.889	70.122
5	5.847	4.276	44	51.453	37.627	83	97.059	70.978
6	7.016	5.131	45	52.622	38.482	84	98.228	71.833
7	8.186	5.986	46	53.792	39.337	85	99.397	72.688
8	9.355	6.841	47	54.961	40.192	86	100.567	73.543
9	10.524	7.696	48	56.130	41.047	87	101.736	74.398
10	11.694	8.552	49	57.300	41.902	88	102.905	75.253
11	12.863	9.407	50	58.469	42.758	89	104.075	76.109
12	14.033	10.262	51	59.638	43.613	90	105.244	76.964
13	15.202	11.117	52	60.808	44.468	91	106.414	77.819
14	16.371	11.972	53	61.977	45.323	92	107.583	78.674
15	17.541	12.827	54	63.147	46.178	93	108.752	79.529
16	18.709	13.682	55	64.316	47.033	94	109.922	80.384
17	19.879	14.538	56	65.485	47.889	95	111.091	81.239
18	21.049	15.393	57	66.655	48.744	96	112.261	82.095
19	22.218	16.248	58	67.824	49.599	97	113.430	82.950
20	23.388	17.103	59	68.994	50.454	98	114.599	83.805
21	24.557	17.958	60	70.163	51.309	99	115.769	84.660
22	25.726	18.813	61	71.332	52.164	100	116.938	85.515
23	26.896	19.668	62	72.502	53.019	150	175.407	128.273
24	28.065	20.524	63	73.671	53.875	200	233.876	171.030
25	29.235	21.379	64	74.840	54.730	250	292.345	213.788
26	30.404	22.234	65	76.010	55.585	300	350.814	256.546
27	31.573	23.089	66	77.179	56.440	350	409.283	299.303
28	32.743	23.944	67	78.349	57.295	400	467.753	342.061
29	33.912	24.799	68	79.518	58.150	450	526.222	384.818
30	35.081	25.655	69	80.687	59.005	500	584.691	427.576
31	36.251	26.510	70	81.857	59.861	550	643.160	470.334
32	37.420	27.365	71	83.026	60.716	600	701.629	513.091
33	38.590	28.220	72	84.195	61.571	650	760.098	555.849
34	39.759	29.075	73	85.365	62.426	700	818.567	598.606
35	40.928	29.930	74	86.534	63.281	750	877.036	641.364
36	42.098	30.785	75	87.704	64.136	800	935.505	684.122
37	43.267	31.641	76	88.873	64.991	850	993.974	726.879
38	44.436	32.496	77	90.042	65.847	900	1052.443	769.637
39	45.606	33.351	78	91.212	66.702	1000	1169.382	855.152

**LAW DECISIONS.**

**DIANA.**—*Collision.*—This case which has stood over for decision for a length of time, has now terminated in the blame being decided as imputable to the master and pilot, and that there was evidence of the want of a good look out. The master was therefore condemned in damages and costs, the latter to commence when the act on petition was written to with reference to the merits of the case.

**PROTECTOR AND BERZELIUS.**—*Collision.*—Pilot proved to be in fault, causing the collision, the owners of the Protector not chargeable with the amount of damage and therefore dismissed.

**SHAKINGS.**

**THE BRITANNIA,** the first vessel of Mr. Cunard's line of packets from Halifax, has arrived at Liverpool, in the short space of nine and a half days from that place, her outward passage having been made in twelve.

**RAMSGATE.**—A temporary Red Light is now substituted for the usual light on the west pier head, until the repairs which have been going on since the 12th of August are completed.

**THE SKERRIES LIGHT** concerning which the proceedings of a meeting will be found in our March number, (page 192,) are no longer to be a heavy tax on vessels passing "from one Irish port to another." So says a decree from the Treasury, thus abolishing what has long been considered a heavy and obnoxious tax.

**THE THAMES TUNNEL** is to be opened for foot passengers next spring, when John Bull will have the gratification of walking over or under his favourite river.

**THE CALEDONIAN CANAL** has been made over by act of parliament to the care and management of a joint stock company, and it is said is to be made "seviceable."

**SIR HARRY NEALE.**—A monument is to be erected to the memory of the late Sir Harry Neale, on Mount Pleasant near Lymington.

**THE RUNDLE STONE** is about to become a beacon for Mariners under the direction of the Trinity House.

**H.M.S. PELORUS, Com. (act.) A. L. Kuper** suffered most severely in a hurricane at Port Essington in November last, by which her boatswain and seven seamen were lost. It appears that the brig was driven on shore, and lay on her beam ends in the mud, in the harbour, but by great exertions has been got afloat and will proceed to Sydney. The new town of Victoria has also suffered considerably, the principal house having been carried by the violence of the wind a considerable distance over the quay. H.M.S. Britomart rendered great assistance.

**NEW BOOKS.**

**A NARRATIVE OF THE BATTLE OF ST. VINCENT,** with anecdotes of Nelson before and after that Battle:—By Colonel Drinkwater Bethune, F.S.A.—Saunders and Otley, Conduit Street. 1840.

We read in the preface to this narrative that it is published "with the view of adding any profits which may accrue from the sale, to the sum already contributed to the fund for erecting a memorial to do honor to the immortal Nelson." So worthy and excellent a motive is beyond praise, and we cordially wish the pains and trouble which the gallant author has employed, may be attended with all the success which so noble an object deserves. To the work itself the artist has not spared himself,—it is throughout "well finished" to use a term of trade. A beautifully engraved frontispiece of a bust of Nelson, while in command of the *Captain* (in which ship he contributed so largely to the suc-

cess of the battle,) introduces the "narrative," which is also enriched with plates, shewing the position of the hostile ships at eight different periods of the action. The naval reader will see the importance of these in a historical point of view, and will appreciate the facts detailed by the Colonel from a knowledge of the favourable position which he occupied on board the *Lively* for observing them. In making these remarks to our professional readers, we shall again remind them of the grand motive which led to the appearance of the volume, and commend it on this account in particular to their patronage, as we regret to find by the report of the committee, that the funds are yet far short of the estimate for the proposed memorial!

### NEW CHARTS.

(Published by the Admiralty.)

ENGLAND.—*West Coast.*—THE FRITH OF SOLWAY.—*Surveyed by Lieutenant C. G. Robinson, R.N. 1837.*

The Cumberland shore in this important chart (to the trade of Carlisle,) is included as far south as Harrington, and the opposite one of Kircudbright to Abbey Head,—and it shews the whole navigation up to that city, as well as up the river Nith to Dumfries. It contains ample soundings, leading marks and views for the navigator, and is highly creditable to the assiduous and skilful surveyor whose name it bears.

NEW ZEELAND.—SOUTH ISL.—ROWABOUKI ROAD.—*From a Sketch communicated by Lieutenant Orlando Wilson, R.N. 1839.*

This is one of those fugitive pieces of hydrography which a zealous attention to the wants of others brings to a copper-plate engraving. Many such we have no doubt are in the hands of our merchant captains, to whom we recommend the example of Lieutenant Wilson. It is doubtless well known to our New Zealand traders, and will be a useful plan to those frequenting Goulburn Island.

PART OF THE COAST OF CHINA, *from Namoa to Amoy.*—*From a Sketch by Felix Dayot, Captain of the Diana, 1805.*

AMOY HARBOUR.—*By the same.*

The above appear together in one sheet, the former being a portion of coast contained in sheet 3 of the series noticed in our June number,\* and the latter a careful plan, which will apprize the seaman of the known dangers in approaching one of the most frequented harbours on the whole China coast. We have before said that our acquaintance with Chinese hydrography is very limited, and a comparison of the sheets above-mentioned is alone a sufficient proof of it. Still until we have the improved data of our modern surveyors, the careful seaman will consult all extant authorities, and this sheet has a peculiar claim to his attention from the great importance of the harbour it contains, and the known correctness of Captain Dayot, in the detail which he gives.

### PROMOTIONS AND APPOINTMENTS.

#### PROMOTIONS.

[We perceive that Lieut. J. Simpson (c) whose promotion as commander we recorded in our last number, was the Senior Naval Lieutenant afloat in the regular service, having been wounded in action, and twice in the Gazette, besides having held five commands, and gained the approbation of all his commanding officers.]

*From the Gazette.*—*Admiralty, Aug. 17.*—This day in pursuance of her Majesty's pleasure, the undermentioned retired rear-admirals have been transferred to the Active List of Flag-officers of her Majesty's fleet:

*To be Vice-admirals of the Blue.*—J. Chesshyre, Esq., taking rank next after Vice-Admiral R. Lloyd; B. R. Littlehales, Esq., taking rank next after Vice-Admiral Sir F. W. Austen.

*To be Rear-Admirals of the Red.*—C. Wollaston, Esq., taking rank next after Rear-Admiral H. Hill; C. Tinling, Esq., taking rank next after Rear-Admiral Sir G. Munday; R. Peacocke, Esq., taking rank next after Rear-Admiral F. Warren; N. Tomlinson, Esq., taking rank next after Rear-Admiral the Earl of Dundonald; J. Katon, Esq., taking rank next after Rear-Admiral G. McKinley.

*To be Rear-Admirals of the White.*—R. Poulden, Esq., taking rank next after Rear-Admiral the Hon. D. P. Bouverie; P. Ribouveau, Esq., M. Buckle, Esq., J. Allen, Esq., and J. Noble, Esq., taking rank between Rear-Admiral J. Dick and Rear-Admiral A. J. Griffiths; F. H. Coffin, Esq., J. Baron de Raigersfeld, and C. J. W. Nesham, Esq., taking rank between Rear-Admiral A. J. Griffiths and Rear-Admiral Sir C. Bullen; J. Wight, Esq., H. F. Edgell, W. Butterfield, Esq. and W. Young, Esq., taking rank between Rear-Admiral Sir C. Bullen and Rear-Admiral E. Galway; J. Walton, Esq., taking rank next after Rear-Admiral E. Galway; B. M. Præd, Esq., S. Mottley, Esq., E. W. Browne, Esq., J. R. Smollett, Esq., Hon. W. Le Poer Trench, E. S. Clay, Esq., and C. Carter, Esq., taking rank between Rear-Admiral S. C. Rowley, and Rear-Admiral T. Browne; W. H. B. Tremlett, Esq., taking rank next after Rear-Admiral Sir S. Pym; S. Butcher, Esq., taking rank next after Rear-Admiral R. Jackson.

*To be Rear-Admirals of the Blue.*—M. Goodwin, Esq., taking rank next after Rear-Admiral Lord G. Stuart; Sir S. Davenport, Knt., c.b. and k.c.h., taking rank next after Rear-Admiral Sir H. Pigott; F. Temple, Esq., taking rank next after Rear-Admiral C. Richardson; H. Gordon, Esq., taking rank next after Rear-Admiral Sir A. Farquhar; J. S. Carden, Esq., taking rank next after Rear-Admiral J. R. Dacres; J. W. Holland, Esq., J. Impey, Esq., H. M. Ommaney, Esq., A. Duff, Esq., taking rank between Rear-Admiral J. Sykes and Rear-Admiral Hon. D. H. Mackay; Hon. Major J. Henniker, taking rank next after Rear-Admiral F. Mason.

**COMMANDERS**—Sidney Colpoys, Dacres, (commanding the *Salamander* steam vessel,) and Nicholas Cory, of the *North Star*, to the rank of Captain, for services on the Coast of Spain.

**LIEUTENANTS**—George Thomas Gordon (of the *Comet*), and the Hon. Edmund Plunkett, (of the *Savage*), to the rank of Commander, for services on the Coast of Spain.

**MATES**—Marcus Knox, 1831, Robert Chas. Whyte 1832, Robert Robertson 1832, to the rank of Lieutenant. J. E. Vallack, T. F. Birch, all of the *North Star*.

**ASSISTANT-SURGEON**—James Salmon, of the *North Star* to the rank of Surgeon.

#### APPOINTMENTS.

**SHEERNESS**—Aug. 4.—Vice-Admiral Sir Henry Digby, K.C.B., &c. &c., has this morning taken command as port admiral here; his flag was hoisted, and saluted agreeably to the routine of the service. Sir Robert Otway, Bart. kcb. our late vice-admiral, will leave here in a few days for town.

**CAPTAINS**—Sir H. J. Baker, to *Howe*, flag-ship at Sheerness. H. D. Trotter, to command the Niger expedition.

Captain Henry Smith, commanding her Majesty's ship *Volage*, doing duty in China, has been appointed a Companion of the Honourable and Military Order of the Bath.

**COMMANDERS**—W. J. Williams, to *Stromboli*. J. N. Nott to *Excellent*. F. Warden to *Medea*.

**LIEUTENANTS**—G. W. Tomlin to command *Nimble*. J. S. Freeland to *Stromboli*. W. Houston to *Impregnable*. W. Edmonstone to command *Weazle*. V. H. Jones agent for packets at Liverpool. J. H. Murray (flag) to *Howe*. G. G. Otway to *Medea*. H. Douglas to *Phæ-*

*nix*. B. L. Le Mesurier to *Daphne*. E. B. Stewart to *Victory*. J. Steane to command *Sheerwater*.

**MASTERS**—G. Grant to *Stromboli*. S. B. Cook to command *Firebrand*, vice Saunders deceased. G. G. Wilson, (act.) to *Medea*.

**SURGEONS**—T. H. Nation to *Stromboli*. T. W. McDonald to convict ship *Lord Lyndhurst*.

**PURSER**—E. Rowe to *Stromboli*. J. Mountsteven to *Medea*.

**SECOND MASTERS**—W. Lidstone, to *Cuckoo*. J. Dor (act. mast.) to *Lucifer*. W. S. Hele to *Sheerwater*. H. Paul to *Athol*. E. M. Fox, J. Hughes to *Apollo*. J. W. Lawson to *Sheerwater*.

**MATES**—R. Webber to *Rodney*. H. Smith to *Vanguard*. E. Boyd to Niger expedition. J. G. Napier to *Vanguard*. B. Helpman to command *Champion*. Col. Schooner at Swan River. W. C. C. Chamberlain to *Stromboli*. B. Proctor to *Rodney*. A. P. Greene to Niger expedition. T. Belgrave to *Rodney*. C. Sullivan to *Excellent*. G. C. Briggs to

*Vanguard*. W. Marshall to *Southampton*. W. J. Marshall to *Stromboli*.

ASSISTANT-SURGEONS—A. Wilson to *Princess Charlotte*. E. G. Irvine, M.D. to *Princess Charlotte*. J. Fisher, J. Dill to *Impregnable*. O. T. Miller to *Princess Charlotte*. J. J. L. Donnet, D. G. A. Nicol, F. A. Gray to *Britannia*. W. Houghton to *Stromboli*. J. C. Walsh to *Impregnable*.

CLERKS IN CHARGE—W. G. Hopkins to *Sheerwater*. W. L. Inch to *Rolla*. G. Fuller to *Espoir*. J. D. Barnes to *Waterwich*.

VOLUNTEERS OF FIRST CLASS—F. Moresby to *Pique*. W. Bowden to *Stromboli*. G. Parker to *Britannia*.

### MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

#### AT HOME.

*ÆTNA*, 6, Lieut.-com. J. Wilson, 30th July left Portsmouth for north coast of Spain.

*ALBAN*, (st.) M. J. King, 26th July arrived at Woolwich from Chatham.

*APOLLO*, (tr. s.) Mr. A. Karley, 25th July at Portsmouth, refitting.

*ATHOLL*, 28, (trp. s.) Master.-com. C. P. Bellamy, 22nd July at Liverpool, 29th arrived at Portsmouth, 4th August sailed for Cork, 10th at Greenock, 12th sailed for Portsmouth.

*CAMBRIDGE*, Capt. E. Barnard, 26th July left Spithead for Mediterranean.

*FLY*, 18, Com. G. G. Loch, July arrived at Portsmouth from Rio, 25th arrived at Plymouth to be paid off.

*HARLEQUIN*, 16, Com. Rt. Hon. F. J. Russell, 20th July passed Sheerness on her way to Chatham.

*INCONSTANT*, 36, Capt. D. Pring, 30th July arrived at Cork.

*NAUTILUS*, 10, Lieut.-com. G. Beaufoy, 29th July arrived at Grimaby.

*NIGHTINGALE*, Mr. G. Hicks, 30th July left Woolwich for north coast of Spain.

*PIQUE*, 36, Capt. E. Boxer, 26th July sailed from Portsmouth for Plymouth, embarked mates and sailed 27th for Mediterranean.

*SAPPHIRE*, (trp. s.) Master-com. W. Nembhard, 22nd July arrived at Liverpool.

*SHEERWATER*, (s. v.) Lieut.-com. J. Steane, Woolwich, commissioned 13th August.

*VANGUARD*, 80, Capt. Sir T. Fellowes, 1st August at Spithead.

*VESEVIUS*, (s. v.) Com. W. Blount, 4th August left Portsmouth for Cork.

AT WOOLWICH,—*In Harbour*—The William and Mary (yacht:) Firebrand, Albion, Alban, Cuckoo, African, Fear-

less, Monkey, and Beaver, (steam vessels;) Falmouth, unloading stores from Portsmouth and Plymouth; Sinbad tender, and Thames, fitting for a convict hulk.

IN DOCK—The Blazer (s.)

In the Basin—The Medea, Avon, Lucifer, Locust, Messenger, Pluto (steam vessels;) and brig Cygnet.

AT PORTSMOUTH—*In Harbour*—Britannia, Victory, Excellent, Royal George, Stromboli, Apollo troop-ship, Echo steam tug, and Cracker tender.

AT SPITHEAD,—*Vanguard*, Palmvra, Pestonjee Bomanjee, transport, Earl of Hardwicke, and Wellington East Indiamen.

AT PLYMOUTH—*Remaining in Hamoaze*.—*Impregnable*, San Josef, Rodney, Sapphire, Adventure transport, Carron steamer, Duck lighter.

#### ABROAD.

*ACHERON*, (st. v.) Lieut.-com. A. Kennedy, 15th July arrived at Gibraltar and returned to Malta, 20th arrived.

*ACORN*, 16, Com. J. Adams, 13th May arrived in Algoa with shipwrecked seamen, and negroes, 19th arrived in Simon's Bay.

*ALECTO*, (st. v.) Lieut.-com. W. Hobsason, 28th July arrived at Malta from Beyrout and Alexandria.

*ALLIGATOR*, 26, Capt. Sir J. J. G. Bremer, 27th April arrived at Singapore.

*BELLEISLE*, 72, Capt. J. T. Nicolas, K.H. 31st July left Malta for England.

*BELLEROPHON*, 80, Capt. C. J. Austen, 5th July arrived at Vourla.

*BENBOW*, 72, Capt. H. Stewart, 31st July arrived at Malta from Naples.

*BLENHEIM*, 72, Capt. Sir H. F. Senhouse, K.C.H. 13th May sailed from Simon's Bay for China.

*BLONDE*, 42, Capt. T. Bourchier, 30th April left the Cape for China.



**BUFFALO**, store-ship, Master-com. J. Wood, 5th April left Sydney for New Zealand.

**CALLIOPE**, 26, Capt. T. Herbert, 15th April at Valparaiso.

**CAMBRIDGE**, Capt. E. Barnard, 7th August arrived at Lisbon, to sail next day for Genoa.

**CASTOR**, 36, Capt. E. Collier, 4th August at Beyrout.

**CLEOPATRA**, 26, Capt. J. Lushington, 20th July arrived at Halifax from Bermuda.

**CLIO**, 16, Com. J. G. Freemantle, 4th June arrived at Pernambuco from Bahia, and returned to Bahia.

**COLUMBINE**, 16, Com. G. Elliott, 12th May at Cape.

**COMUS**, 18, Com. E. Nepean, 18th June left Port Royal for Havana.

**CORACOA**, 24, Com. W. Preston, 28th April arrived at Rio from Bahia.

**CURLEW**, 10, Lieut.-com. G. Rose, 13th May arrived at Cape.

**DAPHNE**, 18, Com. W. Dalling, 5th August arrived at Malta from Naples.

**DONEGAL**, 78, Capt. I. Drake, 20th July in Tagus.

**EDINBURGH**, 72, Capt. W. Henderson, 30th June left Vourla for Beyrout.

**ELECTRA**, 18, Com. E. R. P. Mainwaring, 14th March arrived at Callao.

**ESPOIR**, 10, Lieut.-com. J. T. Paulson, 14th July sailed from Lisbon on a cruize, 20th in the Tagus.

**FANTOME**, Com. Butterfield, 2nd May arrived at Simon's Bay.

**GRECIAN**, 16, Com. W. Smyth, 25th April arrived at Rio from Monte Video.

**GRIFFON**, 3, Lieut.-com. J. G. D'Urban, 5th June left Barbados for St. Vincent.

**HASTINGS**, 72, Capt. J. Lawrence, cb. *Extract of a Letter dated H.M.S. Hastings, Vourla Bay, July 18.*—On the 9th instant, when going out of the bay for a short cruize, having on board a skilful pilot, the wind light, weather beautiful, and water smooth, at 5 A.M. she grounded, and remained for nearly 30 hours, as quiet as if she had been in dock. The masts were all struck, two bower anchors with two hempen cables on each, were laid out by the Bellerophon, and her stream cable fast to the Hastings. When this was done, hove taut; the boats were hoisted out, water started, guns, shot, stores, and provisions got out, which lightened her more than 2½ feet bodily, when she floated off without heaving. We weighed our bower anchors, and took up our old anchorage near the Princess Charlotte, and commenced taking in the guns, shot, iron cables, stores and provisions; crossed top-gallant yards, and in

little more than 48 hours from the time of her getting on shore every thing was on board, and the ship ready for sea excepting her water. All this was done without a single accident or injury to any of the boats; this astonished the French ships-of-war lying there. The officers and men were exemplary in their exertions; everything went on so quietly,—the boats passing and re-passing as if only in their ordinary occupation. The ship has sustained no injury, except a small part, about 6 feet of her false keel abaft the main chains off, and a small piece just abaft the fore foot, indeed, she had not even lost a sheet of copper. The cause of her getting on shore was the pilot's saying port instead of starboard.

**HAZARD**, 18, Com. J. Wilkinson, 10th July arrived at Malta from Barcelona.

**HERALD**, 26, Capt. J. Nias, 26th Mar. arrived at Sydney from New Zealand.

**IMPLACABLE**, 74, Capt. E. Hervey, 31st July arrived at Malta from Naples.

**JASEUR**, 16, Com. F. M. Boulbee, 28th July arrived at Gibraltar from Malaga.

**JUPITER**, (tr. s.) Master-com. R. Fulton, 30th June arrived at Madeira and sailed for China.

**MAGICIENNE**, 24, Capt. F. F. Michell, 15th July left Gibraltar for Malaga, having arrived on the 8th, and landed his H.R.H. Prince Ernest, 5th August arr. at Malta.

**MELVILLE**, 72, Capt. Hon. R. S. Dundas, 30th April left the Cape for China.

**MODESTE**, 18, Com. H. Eyres, 30th April left the Cape for China.

**NIMROD**, 20, Com. C. A. Barlow, 2nd May arrived in Simon's Bay and sailed for China.

**ORESTES**, 18, Com. P. S. Hambly, 15th April at Valparaiso from Callao.

**PARTRIDGE**, 10, Lieut.-com. W. Morris, (a) 18th May arrived at Rio from Monte Video.

**PEARL**, 18, Com. C. C. Frankland, 6th June spoken lat. 8° S. 24° W.

**PHOENIX**, (st. v.) Com. R. S. Robinson, 6th July left Corfu for Vourla.

**POWERFUL**, 84, Capt. C. Napier, C.B. 30th June left Vourla for Beyrout.

**PRINCESS CHARLOTTE**, 104, Capt. A. Fanshawe, 7th July arrived at Vourla, with flag of Adml. Sir R. Stopford.

**RACEHORSE**, 18, Com. Hon. E. A. Harris, 3rd June arrived at Barbados.

**RINGDOVE**, 16, Com. Hon. K. Stewart, 7th July arrived at Prince Edwards Island from a cruize.

**SATELLITE**, 18, Com. J. Robb, 27th June arrived at St. John's.

**SERINGAPATAM**, 42, Capt. J. Leith, 5th June left Barbados for Antigua.

SERPENT, 16, Com. Hon. R. Gore, 13th June left Port Royal for Barbados.

TALBOT, 26, Capt. H. J. Coltrington, 31st of July left Malta for Constantino-ple.

THUNDER, (s. v.) Com. E. Barnett, 29th June arrived at Havana.

THUNDERER, 84, Capt. M. F. F. Berkeley, 2nd July left Malta for the coast of Syria.

TYNE, 26, Capt. J. Townsend, 17th July at Corfu.

VESTAL, 26, Capt. T. W. Carter, 24th June arrived at Gaspee from a cruise.

VOLCANO, (st. v.) Lieut.-Com. J. West, 21st July arrived at Malta, 29th at Malaga, 30th sailed for Malta.

WASP, 16, Com. G. Mansell, 16th July left Malta for Levant.

WEAZLE, 10, Com. J. Simpson, 19th July at Zante.

WOLVERINE, 16, Com. W. Tucker, 14th March arrived at Accra, 18th sailed on a cruise.

## BIRTHS, MARRIAGES, AND DEATHS.

### Births.

At Waterloo Ville, the lady of Lieut. T. B. Brown, R.N., of a son.

On the 22d of July, at Banff, the lady of Lieut. Woodham, R.N., of son.

### Marriages.

At St. Paul's, Southsea, on the 12th ult., J. O. McWilliam, M.D. Surgeon, R.N., to Margaret, daughter of T. Gallo-way, M.D., Surgeon, R.N.

At Kingston, on the 25th of July, Mr. R. S. Godden, second-master, R.N., to Louisa, second daughter of Mr. J. Ayles, of Buckland, Portsca.

On the 28th July, at Kilrush Church, Robert Mills, master of the Kathleen, of St. John, N.B., to Margaret, daughter of Peter J. Fryer, Esq., R.N., chief-officer of Coast-guard.

At St. George's Church, Bristol, on the 14th ult., Capt. Baker, R.N., to May Grace, youngest daughter of T. Harrison, Esq., M.D.

At Mo.ckstown, near Dublin, on the 29th of July, Hugh, eldest son of John Gray, Esq., of Carnaleck, county of Sligo, to Mary, widow of Capt. T. Mason, R.N.

On the 21st of July, at Alverstoke, Hants, D. R. B. Mapleton, Esq., R.N., Dartmouth, to Ann, daughter of David Compigne, Esq., of Gosport.

On the 16th ult., the Rev. D. Capper, A.M., rector of Huntley, Gloucestershire, to Horatia, eldest daughter of Captain Slade, R.N.

On the 12th ult., at Islington, T. J. H. Wood, R.N., to Lydia Margaret, daughter of the late J. Dobson, Esq.

At Brussels, Capt. Louis Wyatt, to Mona, daughter of Capt. W. B. Rider, R.N.

### Deaths.

At the Royal Hospital, Greenwich, on the 11th ult. Carlota Elephinstone Fleem-

ing, eldest daughter of Admiral, the Hon. Charles Fleeming, Governor of that establishment.

In Gloucester-place, Portman-square, on the 13th ult., Madalene, the wife of Capt. R. C. Mangin, R.N.

On the 10th ult. at Vevay, in Switzerland, Dorothy, the wife of Rear-Admiral Noble.

At Darmstadt, Charlotte, wife of M. Jules de Briedenbach, and daughter of Vice-Admiral Sir Charles Ogle, Bart.

In Guernsey, recently, Capt. Lihou.

On the 29th July, at Trevallyn, Cheshire, Capt. H. M. Mestyn, R.N.

At Morice Town, Devonport, on the 25th July Mr. S. Jane, H.M. dock-yard, Plymouth, only brother of Capt. Jane, R.N. of Looe.

At Hayfield, Hants, on the 30th July, in his 85th year, John McArthur, L.L.D., a gentleman long and well-known as the author of the "Principles and Practice of Naval Courts-Martial," and "Life of Lord Nelson."

On the 26th July, at Stonehouse, H. T. Shewen, commander R.N.

At Brockhurst on the 29th July, Ann, daughter of the late Lieut. J. Little, R.N.

At New South Wales, in March last, Marian, the wife of Edward Caldwell, Esq., surgeon to H.M.S. Cambridge, and late of Millbrook.

At Bradwell, Essex, Mrs. Dix, aged 77 years, formerly of Haslar Hospital and mother of Mr. George Dix, purser of H.M.S. Hyacinth.

At Torpoint, on the 17th August, aged 48, Mrs. Mary Walker, widow of the late Mr. Grylls, purser R.N., and relict of the late Mr. Walker, surgeon R.N.

At Brudenell-place, New North Road, London, on the 26th July, Lieut. Stephen Dawson Philpot, R.N.

At the Royal Hospital, Plymouth, Mr. Richard Webber, mate of H.M.S. Rodney, second son of the Rev. Samuel Webber, Tisbury Vicarage, near Hindon, Wilts.

## METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of July to the 20th of August, 1840.

Month	Day	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.	
								Quarter.		Stren.			
		9 A.M.	3 P.M.	9 AM	3 PM	Min.	Max	AM.	PM.	AM	PM	A. M.	P.M.
21	Tu.	In Dec.	In Dec.	o	o	o	o	W	SW	3	3	bc	bcp 3)
22	W.	29-60	29-65	59	63	52	66	W	W	2	2	bc	bc
23	Th.	30-00	30-04	56	62	52	63	NW	W	2	2	op (2)	o
24	F.	30-08	30-00	60	64	53	66	SW	SW	3	5	o	qop (3)
25	S.	29-81	29-76	58	66	56	68	S	SW	4	4	or (2)	opt (3) 4)
26	Su.	29-70	29-66	60	62	53	63	N	NE	1	2	or (1)	bcp (3) 4)
27	M.	29-92	29-94	61	66	51	67	NW	SW	2	3	bcm	bcm
28	Tu.	30-08	30-11	62	71	51	72	SW	SW	2	2	o	bcm
29	W.	30-24	30-24	64	72	59	73	N	NE	2	2	bc	bc
30	Th.	30-14	30-10	64	71	56	73	SW	SW	2	3	o	op 3)
31	F.	30-18	30-20	60	64	55	65	NW	NW	4	4	bcm	bc
1	S.	30-24	30-20	60	68	47	71	NW	W	2	4	bcm	bcm
2	Su.	30-21	30-20	63	75	51	77	SW	SW	2	4	b	b
3	M.	30-21	30-17	64	76	56	78	W	W	1	4	b	b
4	Tu.	30-16	30-14	64	74	57	76	W	N	1	1	b	bm
5	W.	30-13	30-09	65	72	58	74	E	E	2	4	bc	b
6	Th.	30-00	29-99	67	75	59	77	E	NE	3	4	b	b
7	F.	30-00	30-01	68	71	63	76	E	E	2	4	bcm	o
8	S.	30-02	30-14	64	72	59	74	E	NE	4	4	bc	bc
9	Su.	30-25	30-21	59	73	51	76	NE	NE	1	2	b	b
10	M.	30-09	29-98	65	76	58	79	SW	SW	1	2	bcm	bcm
11	Tu.	29-62	29-56	62	69	59	71	SW	W	5	4	o 1) (2)	bc
12	W.	29-63	29-64	63	66	58	69	W	W	4	5	bc	bc
13	Th.	29-62	29-63	61	67	54	68	SW	SW	3	6	bc	qbc
14	F.	29-52	29-60	58	61	55	64	W	SW	3	6	or 2)	qp (3)
15	S.	29-79	29-71	58	63	50	64	SW	W	5	5	bcp (2)	bcp (3)
16	Su.	29-95	29-99	61	65	51	66	SW	SW	2	4	bc	bc
17	M.	29-25	29-25	58	59	55	63	S	SW	10	9	qor (2)	qp (3)
18	Tu	29-35	29-57	57	59	49	62	W	W	9	8	qo	qo
19	W.	29-70	29-76	56	66	52	70	SE	W	3	3	or 1) (2)	o
20	Th	30-00	30-02	65	75	57	77	SW	SW	3	3	bc	bc

JULY—mean height of the barometer = 29.897 inches : mean temperature = 59.4 degrees : Depth of Rain fallen = 1.58 inches.

**MELANCHOLY DEATH.**—A letter from H.M.S. Thunder, at Nassau, states that Mr. T. Walker, acting purser of that ship, after being missed three days from the ship, (on which a reward of a hundred dollars was offered for his discovery,) was at length found in the woods a corpse, and in so dreadful a condition that it was difficult to recognize him. It is supposed he lost his way while taking a walk.

## TO OUR FRIENDS AND CORRESPONDENTS.

"THE PRACTICE OF NAVIGATION," and not *The British Navigator*, by Lieut. Raper, R. N., will be published before our next number appears.

A pressure of other matter has obliged us to suspend our papers on the African Coast; the Coast of Wales; and the Beagle's voyage, which will be continued, as well as the important papers on Hurricanes and the Weather.

Hunt, Printer, Lower-street, Islington.

## ORIGINAL PAPERS.

OCTOBER, 1840.

EXTRACTS FROM THE REMARKS OF H.M.S. CONWAY,—CAPT.  
R. D. BETHUNE, *on a voyage from Port Jackson to the Southsea Islands.*

LEFT Port Jackson the morning of the 12th of October, 1837,—land wind and fog: cleared the Heads by 8: stood off with the sea breeze—wind hung to the N.E. for two days, then hauled more to the northward. As I could not lay up for the north end of New Zealand, steered for Cook Straits. Got a glimpse of the land the 19th,—supposed to be Cape Egmont, wind N.N.W. drizzling thick weather. At noon, blowing very hard from N.W., thick weather; made land ahead, and shortly after anchored under Capati.

CAPATI OR ENTRY ISLAND,—Is situated on the east side of Cook Straits. The anchorage may prove very useful to vessels bound either way: Conway anchored off Robullo Point, in 25 fathoms. Hummock Island bearing S.  $\frac{1}{4}$  W. we had much difficulty in reaching the anchorage, owing to a strong lee tide, and fearful gusts of wind from the land. A more convenient berth is betwixt Hummock Island and the Brothers; both are open to a S.W. swell, which occasionally comes in heavy. It may be approached either from the north or south, the only dangers being round the islets. The tide or current runs chiefly to the southward,—we learnt from the whaling party, that they could seldom tow up a whale killed in that quarter. Running for the anchorage under the Brothers, from the northward, keep the passage betwixt them and Entry Island, open. Running out to the southward and eastward of Hummock Island, bring the south point of Entry Island open of the fall of South Brothers, before you haul to the westward.

Wood and water plentiful. Pigs, (fishy,) and potatoes can be procured. The most useful articles for barter, are good blankets, calico, white and blue, negro head tobacco, and pipes.

S. b. W. 15 or 20 miles lies the island of Mana, where I was informed there is anchorage of a similar character.

Left Entry Island the 22nd, in the evening, and anchored in Cloudy Bay the next day.—It lies S.  $52^{\circ}$  W., true, 45 miles.

ANCHORAGE IN CLOUDY BAY.—The harbour at Cloudy Bay, or Port Underwood, is situated at the northern extremity of the Bay, at the

S.E. entrance of Cook Strait; it lies nearly north and south, terminating in two branches. In it there are many coves where vessels may lie secure from all winds; even in the centre of the harbour the anchorage is perfectly secure, as it is sheltered; though at a distance of six miles by the White Bluff there are none but visible dangers. It is preferable to anchor on the western shore, as N.W. winds prevail. The tide is said to rise six feet. Wood and water in abundance.

Conway anchored in eight fathoms and a half, south point of Ocean cove, W.  $\frac{1}{2}$  S. East Rocky entrance S.  $\frac{1}{4}$  W.

About four or five miles along the Bay towards the White Bluff is a river, up which about ten miles is a forest of Cowrie; this makes from the sea as an island. From the hills at the head of the harbour, a view of Queen Charlotte Sound is obtained. The southern entrance to it is said to be about nine miles from the entrance to this anchorage. Pigs (fishy) and potatoes and the tops of a kind of wild turnip (rape?) are to be procured.

Cloudy Bay is much frequented by whalers, from May to September, they anchor in the harbour and employ their boats outside; there are also shore parties in each of the coves. In the season, the natives congregate for the purpose of barter, and to receive payment for the ground occupied for the fishery.

They are a dirty craving set, not improved in this neighbourhood by their intercourse with foreigners.

CLOUDY BAY to TAHAITI.—Left Cloudy Bay in the morning, light variable airs; at noon a breeze from N.E., which rapidly freshened to half a gale of wind from north, and died away at night; then light unsettled weather. The 28th it blew hard from N.E., hauling round in 24 hours to north and N.W. On the 30th in  $40^{\circ}$  S.  $181^{\circ}$  E., got a steady breeze from north and N.N.W., sea perfectly smooth. I wished to get to the northward, but could not lie any higher than N.E.b.E. On the 9th November,  $39^{\circ}$  S.  $210^{\circ}$  E., tacked to the northward, after a day of baffling weather, got wind from N.b.E. kept on to the N.W. coming up gradually. On the 11th rain, wind hauling to westward and S.W.; in  $31^{\circ}$  S.  $209^{\circ}$  E., fresh S.E., trade. Passed in sight of Tubuai the morning of the 15th, made Tahaiti at sun-set the next evening, and on the 16th at noon anchored in Papeete.

SOCIETY ISLANDS.—In the Polynesian languages the vowels should be pronounced as in Italian. Every syllable terminates with a vowel. There is little distinction between the P and B. At Hervey's group, Samoa, and Toga, the *g* has a nasal sound; I write therefore  $\hat{g}$ .

*Ex.* Toga-tabu,—written, is pronounced Tong-ha-taboo.

At Samoa and Toga, no distinction is made between *l* and *r*, though always written *l*,

The above imperfect note may assist in the pronunciation of the following names, which follow the native orthography.

The Society Islands, or Tahaitian group, consist of the following islands, arranged as politically connected.

To prevent confusion, I annex the names of the same as given on Norie's Chart of the South Pacific Ocean 1825, with addition from lon. 110° E. to 60° W., between the parallels of 60° S. and 12° N.

<i>Proper</i>	<i>Norie.</i>
Tahai'ti . . . . .	Otaheite.
Ai'meo or Mu'ria . . . . .	Emao.
Tetuaro'a . . . . .	Tethuroa.
Maiti'a . . . . .	Maitea.
Mati'a 15° 53' S, 148° 20' W. . . . .	Not marked
Huahai'ne . . . . .	Huahene.
Maui'ti . . . . .	Sir Charles Saunders.
Raiati'a or sometimes I believe "Ulitea" . . . . .	Ulieta.
Taha' or Taha'a . . . . .	Otaha.
Tubai' . . . . .	Tabai.
Bo'la bo'la . . . . .	Balabola.
Mani'te . . . . .	Marua.
Mopiha' . . . . .	Mopielia.

The Sovereign of Tahaiti, is looked up to by the other islands: this may arise at the present moment by the principal chiefs being related by blood. He, however, neither possesses, nor exercises any authority over them.

The sovereignty of Tahaiti is also acknowledged by some of the Pomotu islands, and some others; and I believe they pay tribute.

The islands of Scilly and Bellinghausen are not considered as belonging to this group.

Norie's Manua, situated W.S.W. from Emao, does not, I believe exist.

The productions of these islands are very similar. Pigs, fowls, vegetables, and fruits are plentiful. Beef on the larger islands. Sugar succeeds, and the cultivation is on the increase. Sugar, arrow-root, and cocoa-nut oil, may be considered the staple.

My short visit does not enable me to say much touching the inhabitants. I will remark, however, that the progress which the islanders have made, and are making, must be considered almost a miracle. The great confusion that has existed in the nomenclature of the Polynesian islands, has doubtless arisen from the want of a written language. As that desideratum has been long supplied, and a knowledge of it is becoming circulated, we may hope for improvement.

The principal harbour at Tahaiti, is Papeete; but there are ten or twelve other anchorages round the island.

PAPETE.—Should be approached from the eastward: calms prevail between Aimeo and Tahaiti. In approaching from the eastward, the

north-western part of the island will make as a long sloping point, having an excrescence on it. Papeete lies to the eastward of this point. As you run down, you will open a remarkable rock called the Crown; keep it in sight betwixt the hills, and you will lead down a mile or two to windward of the harbour. Do not approach the reef without a breeze, and if detained outside, do not get betwixt Aimeo and the island. The present pilot is a good one; all you require from him is, that he point out the opening in the reef, and the other reefs inside as they occur: take his opinion also as to whether the breeze blows home. There are no leading marks: rather avoid the western side of the entrance. Inside you may rub sides with the reefs or anchor any where. A rock with four fathoms lies just within the entrance; it may be passed on either side. Water may be procured in abundance: we filled after rain, and fancied it was very good. At this season fruit and vegetables were scarce.

Papeete is the name of the watering place, and the different lands surrounding the harbour have distinct names. However as water forms an important feature in a harbour, the name is not improper.

There are two harbours at Aimeo. I entered only one, in which I believe, no British man-of-war had ever been since Cook. It is known generally as Talu, though as at Papeete, this is the name of one of the settlements in it.

TALU lies on the north side of Aimeo; the entrance is betwixt two reefs; the only danger not above water lies on the larboard hand going in. The land wind blows out generally strong. Excellent water. Aimeo may be considered the cradle of Christianity among these islands: it first took root here, and has since spread among them all.

HUAHAINE is composed of two islands separated by a boat passage.

Huahaine	{	nui	.	large
		iti		small

The harbour is situated at the north-west end of the island. Run round the north end of the island which is clear, and you are off one entrance. Conway did not go in. Shoot up as far as you can; if the wind is scant, anchor and warp in. There is another entrance more to the southward, marked by a small wooded cay. The name of the settlement is Fari. At Raiatia we anchored

UTUROA.—This is a reef harbour; there are two or three entrances, we went in at the most northerly. From Huahaine steer across for a bluff, that forms the northern extreme of Raiatia, and you will fall upon two islets, betwixt which is the passage. Some foul ground runs off on the larboard hand running in. If bound to leeward, it is usual to run out through a passage to leeward of the island, keeping round inside the reefs: to do this you must be able to lay up south on the lar-

board tack. Raiatia, Toha, and the reefs form a beautiful sound which merits examination.

At all these islands native pilots come off, who can shew the passages, and give common directions: of course they cannot handle a ship,—except he at Tahaiti.

There are missionaries at Tahaiti, Aimeo, Huahaine, and Raiatia, they are all anxious to oblige, and very useful.

HERVEY'S GROUP, consists of

<i>Proper.</i>	<i>Norie.</i>
Mitie'ro . . . . .	Island, no name.
Atiu' . . . . .	Wateo.
Takute'a . . . . .	Cloakootara.
Magai'a . . . . .	Mangeea.
Mauti' . . . . .	Parry's Islands.
Rora toga . . . . .	Orurute.
Rurutu' 20° 20 S., 160° 0 E.	Not marked.
Aituta'ke . . . . .	Whytootacke.
Manuai' } . . . . .	Hervey Islands.
Aoutu' }	

Armstrong and Roxburgh islands do not, I believe, exist, neither Mahowara. Rurutu is 50 or 60 miles N.b.E. from Roratoga (nearly). An island is said to exist about 150 miles east from Magaia. I passed Mitiero in the night; it appears to be four or five miles from north to south; highest at its southern end. Rounding the north end of Atiu I saw Takutea bearing N.W. by compass. The landing at Atiu is difficult. I communicated with a whale-boat on the south-western side; the settlement is situated in the centre of the island.

Atiu, Mitiero, and Takutea are connected, the others are each independent. Roratoga is a beautiful island, of a similar character to Tahaiti. Two missionaries have resided for ten years on Roratoga, and the progress of the inhabitants in knowledge is very pleasing. There is no anchorage. I communicated with a settlement on the north side; there is another more to the S.E. There are landing places all round the island. Population 7,000. Pigs and fruit to be obtained. Some sugar grown.

(To be continued.)

OBSERVATIONS ON STEAM NAVIGATION TO SPAIN AND PORTUGAL,—with remarks on Major Rennell's Treatise on such "Currents of the Ocean" as affect it.

(Continued from page 620.)

TOFINO'S directions for entering the south channel of Vigo Bay, are I think susceptible of a little improvement; it is very well to bring "Mount Peneda in the middle of the opening" or, "to get Cape del



Mar on with N.S. de la Guia,"—but the former is bad to make out, and the other not much better, and in thick weather cannot be seen at all. Therefore, as the rocks on the starboard hand are always plainly to be seen, adopt a course more in mid-channel, and which pilots do, and then steer E.N.E. In the south channel too it is as well to observe, that if immediately after passing Boeiro Rocks, you should haul up for Cape Bicos, and which running in, in very bad weather, it is probable would be done if near night, to anchor under the islands. Some rocks which only shew themselves at low water, and which are not noticed in the charts, would be passed *very close indeed*; for entering the south channel by night an observation or two may be useful. Pass Cape Silleiro, (coming from the south is here understood,) at a moderate distance; steer N.b.E. until you get Cape Bicos (of the south island,) in such a position, that by shaping a course N.E.b.E., you have it a little open on the larboard bow; this course will take you safe into the middle of the Bay.—If coming in from seaward, bring south end of the island E.S.E.,—steer for it, and then you will not fail to make Boeiro Rocks, which you will then round at any convenient distance, and you have your exact position.

Having objected to the *want of description* in Tofino, and other Nautical books, I will subjoin what I think he should have said of Vigo Bay. I omit all soundings, as I think in steam navigation they should never be referred to, if possible to be avoided, for reasons which will be stated hereafter. To enter Vigo by the north channel, pass near the island of Onza:—steer S.b.E. or S.S.E. according to your distance from it, till you bring Mount Ferro quite open in the passage between the island and the main; the Mount will then bear south a little westerly, and is a black round hill on the south side of the Bay. Steer for it, and when in the passage, edge over to Cape del Hombre, and Subrido Point, giving them a moderate berth. When Cape del Mar comes well open of Subrido Point, bearing S.E. steer S.E.b.E.; this is a point only to be made out by being one with *the only low sandy patches* in that direction. Steering about this course three and a half miles, keeping the sea open astern of you, between Subrido and the islands, if on approaching Cape del Mar, the sea is *only just* kept open, you will be in the right channel and clear of the rocks, which run out from Cape del Mar; this is useful to observe in the night, as it insures your being clear of the dangers on *both* sides: you will open Cangas Church clear of Point Fanequira; when you are clear of the shoals off it, and you may steer for the Chapel of N.S. de la Guia, which will bear E., and which course will lead you right up to abreast of the town of Vigo, where you may anchor in five fathoms, very near the shore. This Chapel of N.S. de la Guia, is not readily recognized by a stranger. It

is a very small whitewashed building upon a hill apparently half the height of those beyond it, and is the next projecting land beyond Vigo, but it is of little consequence the finding it out; steering just clear of Vigo town, or east will answer equally well. Leaving Vigo, steer for the middle of the south Bayona Island about west; if for the north channel take care not to lose sight of Cangas Church before you open the sea. When Cape del Mar is passed, if for the south channel, a course between W.S.W. and W.b.S. according to the distance at which you pass Cape del Mar, will carry you right out to sea,—distance ten miles from Vigo town,—the distance from sea in the north channel being seven miles and a half:—high water in the Bay,—full and change at three o'clock; there appears to be only a very moderate rise and fall, the tide scarcely perceptible.

Leaving Vigo Bay for the south, after *well out*, fifty-eight miles on a S.b.W.½W. course, will carry you off Oporto Bar; the whole coast from Vianna being faced with dangers, mostly above water. This course will, however, carry you quite near enough, to require fine weather, and a good look out; as a small error in compass, or bad steering, might lead into danger; but if the weather admits of seeing the land, it is desirable in the night to pursue such course, to be sure of making the light at Oporto, which you cannot depend upon doing beyond three or four miles. There is off this coast a bank, not to be found in the charts. I have not sounded upon it; but in moderate weather it is covered with fishing boats, anchored upon it: coming from Oporto Bar you will go over it. I have seen a bank marked in red ink upon an Admiralty chart, about three miles to the northwest of Villa de Conde, which I suppose refers to this bank; but it is certainly a great deal further out, and should be sounded,\* as I apprehend if the sea does not break upon it in very bad weather, it must be seriously agitated.

The directions given by Mr Norie's book, respecting Oporto, might well be changed into these few words: "It is a place, next to impossible to enter without a pilot." It would, however, have been as well, if he had given a little information about some particulars there—such as the nature of the light, the water on the bar, &c. These observations, as they only have reference to steam navigation, and only contemplate a steamer calling off the bar, need no further extension, in regard to this place, than that the light is one of very second rate order, and revolves; but it is much too long wholly eclipsed; its period of revolution being difficult to make out: but it is considerable, and is called four minutes. In calling off at night, it is prudent to bring the

\* I have passed twice over this bank, but could never hit it since.

light E.S.E. or E.b.S., and steer for it by the lead, at a slow rate, into ten fathoms.

The coast to the south now becomes entirely free from danger; and in day time, may be passed at any convenient distance, being one continued bold and sandy beach all the way to Cape Mondego. At night steer S.W.  $\frac{1}{4}$  S.; this will carry you to the Burlings which it is always best to pass inside of; unless, (which will rarely happen,) the weather is such, as to create doubt about seeing them. They are better to make out when betwixt you and the sea horizon, than when on with the land, for this is often enveloped in a sort of haze, which prevails all along this coast, to a degree its fine latitude would not lead one to expect. Attempting, therefore, to pass outside the Burlings, is to confound them with the land, unless very clear weather causes an uncertainty about the distance you are from them, and induces a greater berth to be given them, which increases the distance considerably. Soundings must be the principal guide in passing outside in thick weather. The course above recommended, will carry you right in mid-channel between Peniche and the Burlings, which passage being six miles wide and free from dangers, Mr. Norie tells us "fleets may pass through in safety." Passing Peniche light, (which is a very miserable one,) a S.S.W.  $\frac{1}{4}$  W. course carries you down to the rock of Lisbon. The light there is certainly the worst in the world; and sometimes goes out altogether; there is however, hardly any occasion for a light, as it is placed upon such an enormous mass of mountain, as nobody can mistake. Mr. Norie's description of this most conspicuous land, is curious and unintelligible. The reef he alludes to as off it, is a sunken rock, so close that no vessel could by any chance pass near it. Abreast the lighthouse, a course S.b.W. four miles, carries you off "Cape Razo;" which is low, off which Mr. Norie's book tells us there also is a "reef," *which there is not*; the sea merely breaks a little way from it, as it does upon all rocky low points. This frequent mention of "reefs" serves only to distract the timid, but supposing there was any necessity for giving this Cape Razo a good berth, which there is not, it would have been as well, to have given some course to have avoided it; a course which should be steered, until a certain light (Guia) comes open, or bears in such, or such direction. Instead of which, you are merely told, that off the rock of Lisbon, and off Cape Razo, there are reefs; but no hint even given as to how to avoid them. Having steered about four miles, from one mile offing from the rock lighthouse, Guia lighthouse (which is much better than those already noticed on the Portuguese coasts,) comes open; it is a fixed light, bring it E.S.E., then steer towards it; and if the weather is tolerably fine, you will see a boat under it, which will shew a light,

and if you stop, a pilot will come on board. But should the weather be bad, it is pretty certain that none will offer; in which case, steer S.S.E., until you bring Bugio light, (which is an excellent one and revolves; but its least brilliancy not being sufficiently different from its greatest, it is not immediately seen to revolve,) to bear east, and then act upon the excellent directions of Mr. Chapman, before referred to.\*

\* "The best leading mark over the bar of Lisbon, through the south channel is the King's look-out-house, a sail's breadth open to the northward of the Paps or tops of hills.

"But should a stranger be close off the bar, without a pilot, and the wind and weather such as to make him apprehensive that he cannot keep an offing for the following day, I would advise him not to attend to the above marks, but proceed according to the following direction. He could not be mistaken in the Bugio, (a small round Fort with two tiers of guns, and above them a small Lighthouse;) it is built on the south Catchop forming the starboard side of the entrance, and quite alone. Neither could he be mistaken in the point of the city of Lisbon, it is the only point of land covered with houses, and which appear to run into the north side of the river, about eight miles above the Bugio. They should be brought on with each other before you run in for them; they will then bear very nearly east per compass: bear round up and run in for them without fear, and when you are about four miles from the Bugio, you will suddenly begin to shoal your water to six fathoms on the bar or bank, which unites with the two Catchops, at about one-third of a mile to the southward of the north Catchop. Run in on the same direction until you have crossed the bar, and are within two miles and a half of the Bugio. You will again deepen your water to ten or twelve fathoms. As soon as St. Julian Castle bears N.E.b.N. by compass, you will be about mid-channel, and your soundings will likewise shoal gradually as you approach the south Catchop, on this line of direction; but having the above bearing of St. Julian you should steer directly between it and the Bugio, and when up with them, keep on the north side of the river as there is good anchorage all along that shore." By attending to these marks, I have frequently run in from sea, and never found a stranger who did not readily understand them. The only fear is when a strong ebb tide is running, which with a strong wind from the sea, makes a complete break sometimes all across, in which a vessel is often almost unmanageable, and the tide may sheer her about, but when near mid-channel the direction of the tide is straight through.

"The tide flows on full and change days on the Bar, until half-past two, and spring tides rise nearly 16 feet."—*W. Chapman.*

The leading mark through, between Fort St. Julian, and the north Catchop is Guia lighthouse on with the centre of Fort St. Martha; the depth at low water spring tides is six fathoms. When the tower of Bugio comes on with mount Cordova, by keeping them in one, until the north side of the Tagus is open with the Castle of St. Julian, clears every danger. The only danger in running through this channel with an ebb tide is, when you open the river to the eastward of St. Julian, where you will meet the tide setting very strong, on the north end of the north Catchop, and if the wind fails anchor immediately, and weigh on the flood which sets directly through the channel. Being in the centre of the channel off Point Rana with the boats, they drifted through it, with the leading marks on; the flood tide sets very strong. There is little ebb tide until the river is open.

*Note.*—"By running with Guia lighthouse on with Fort St. Martha and paying no attention to mount Cordova you will pass a spot with only five fathoms."—*Lieut. Ogle, and Mr. Hunter, Master of H.M.S. Spartiate, 1837.*

If a fine clear night when off Guia light, and should there have been much rainy weather, and reason to apprehend freshes in the river, and it be at the same time ebb tide, and the moon near full or change, a good deal of time will be saved by entering through the north channel; to do which, steer S.E.b.E., and it will take you to Fort St. Julian, to pass between which, and the north Catchop, you must depend entirely on your eyes. But it is by no means difficult. The Castle may be passed very close. The only precaution necessary in approaching this narrow channel, is not to get the light, (a fixed one,) to the south of the above course, until you are sure you are past the low point of the coast, marked on the chart as Point Rana. Then steer between the breakers on the north Catchop, which are always readily seen, (except in extraordinary fine weather and slack tides, when sometimes the sea does not break at all,) and the Castle. There often is a very great annoyance in approaching either of these channels in the night, from the number of fishing boats which you will encounter.

As soon as a steamer appears coming round Cape Razo, such a multitude of brilliant lights will start up, right in your way, as will defy all attempts at discovering the lights at Bugio, and Fort St. Julian; but steer your course right through them; they are however often so numerous, as to require great care not to run over them, and as this fleet of small craft, is a good distance outside the entrance, you will be clear of them, so as to see the lights in sufficient time.

Having entered, at either channel, you can hardly fail seeing your way up the river: a course of E.b.S. or E., according to your being over on the north shore, (as you should be,) or in the middle of the river, will take you to Belem, five miles just above which sheer in towards the north shore, about half a mile above the Castle, and anchor in five fathoms, in a situation of perfect slack. By no means bring up in fourteen to seventeen fathoms, as recommended in Mr. Norie's book, for there you will be in the strength of the tide, which at the springs runs with very great velocity; sometimes, when much rain has fallen, as much as seven knots.

In proceeding up to Belem, if ebb tide, and you keep well over to the north shore, you will meet the tide running with very diminished force, and you may continue just so near as to keep the bold southern shore (which is well up the river, a little above where the men-of-war lay,) open of Belem Castle; in other words, keep the river open, if you cannot see to do this, bring up.

On leaving the Tagus, by the south channel, just reverse the directions given by Mr. Chapman, for entering, and if going south, when (with an ebb tide,) St. Julian bears N.N.E., you may keep away

S.b.W., which will carry you to Cape St. Vincent, (on it) 99 miles, but should there be much sea, or flood-tide, or strong west wind, bring St. Julian to bear N.E.b.N., either of these proceedings, will, according to the circumstances, carry you clear of the south Catchop. Coming from the south, these courses reversed, will serve. Get St. Julian on one of the above bearings, steer for it till Bugio comes on with the Point of Lisbon, referred to by Mr. Chapman; or if night, bring the light east, and then steer betwixt the two; which will be about an E.N.E. course and which will carry you safely in, and up to the north shore.

### SHINGLE OF THE COAST OF THE ENGLISH CHANNEL.

(Concluded from page 626.)

WE have hitherto been looking at one side of the question only, the advantages which would result to our ports by the *entire* removal of the shingle as thrown up by the waves. It becomes equally necessary to direct our attention to the disadvantages, should there be found any, that may follow the fulfilment of the plan recommended in the preceding remarks.

Mr. De la Beche observes when treating on the accumulation of detritus on coasts by means of breakers, that "on those parts of coasts which are nearly on a level with the sea when tideless, or which rise little, if at all, above high-water in tidal seas, the observer will find that there is a tendency to force shingles and sands on shore; long lines of shingle beaches or sandy dunes being accumulated in front of level tracts of country so situated. Such beaches or sandy dunes not only protect lowlands from the inroad of the sea, but frequently modify the lowlands themselves, either by preventing the minor drainage of the country, or are the *cause*, if composed of sand, of great inroads of such sand, which is blown over the neighbouring districts, whole bodies of it even advancing at a slow but certain rate, as is well known in the line of sandy dunes extending from the Garonne to the district of Bayonne."

From this extract it would appear that shingles do perform certain transits—at least we may infer so, as level tracts do not in general produce stones for their formation, unless by means of torrents or mountain streams running through them; but we are still entirely ignorant of the extent of such migrations, which probably varies on different coasts, and on parts of one coast according to local circumstances.

There is no doubt that upon a flat coast, where the water is shoally, a bed of shingle occupying the line of beach not composed of rock, is of

some advantage in restraining the surf from being injurious to the soil; but I believe that we have not along the line of coast, we have been speaking of, any level tract answering to such a description; for the most part of the coast is cliffy, and if there should be spaces which are level, and their beaches composed of shingle, the pebbles may perhaps be safely left in their location, as on a level shore the mass of shingle may be expected to retain its general station, from the action of the waves or breakers being modified by the peculiar disposition of the sub-marine approach to the beach. It is only where the beaches are shelving, and the water steep to, that the shingle is removed, to re-appear again under altered circumstances of wind, &c. But it is questionable whether their conservative effect is apparent on beaches that slope, and are exposed to the violent action of the billows during on-shore gales of wind, as the friction must be greatly increased on the bed of the strand over or up, and down which they are alternately moved. It is probable, however, that where the pebbles are accumulated to the depth of two or three feet, the resistance they offer to the rush of the fluent wave in a moderate gale, checks its ascent, and prevents its reaching so high up the beach as it would do if the strand were composed of a smooth sand, or flat rock. Any apprehension of the water obtruding itself upwards, so as to become detrimental, or annoying, may be remedied by a terrace, breast-work, or even simply by a bank of shingle piled up into a ridge above high-water mark.

That a line of coast of the latter description would suffer degradation from the abrasion of the waves and tides if the shingle were removed, may be probable in degree, but not so much so, or at all events not more so under certain circumstances, than when the pebbles undergo their alternation; which process must assist in abrading the face of the beach, unless it be of clay, the tenacity of which in a consolidated form is sufficient to resist the friction of the water and pebbles. The same may be said of very fine sand. It must be obvious that the incohesive nature of the shingle and its mobility from being rounded, renders it a less protecting cover for inclined beaches than fine sand or clay.

As I have watched for hours the process we are speaking of, earnestly intent on acquiring information, I may, perhaps, be excused for adding here the conclusions I came to; and I do so the more readily as these are not foreign to our subject. It appears to me that a direct action alone does not effect the removal of the shingle from a beach. First, as to the direct impinging of the volume of water, the huge longitudinal wave, the dashing of which upon a strand, we call a breaker,—the effect of this impetuous billow, which generally curls and swells up to a head, is to loosen, agitate, and heap up in a ridge the pebbles during its ascent; but when it becomes unsupported from behind, the whole

mass of water gives way, rushes back, and sweeps the ridge of shingle off the bank; and so on until not a pebble remains,—hence although the direct action assists, yet it is the re-action that clears the beach. The apparently surprising part of the matter is, that the stones may remain many hours out of sight, although the power of the breakers continue the same; one would have suspected, without knowing, that the heavier waves would be more effective in throwing up the deposit from below, but this is not really the case. When a less violent wind and more moderate action of the waves succeeds the removal, the pebbles are thrown up and replaced, usually in the same order as they were before being disturbed from the strand. It does at first, appear very curious, that it should seem to require greater energy in the wave to roll down from an inclined plane, a mass of loose pebbles, than to throw them up it from beneath the water, from 6 to 12 feet perhaps.

We must consider, however, that though the impetus of the one ascending wave which denudes the strand, is greater than that of the other which re-covers it, its upward movement acts in opposition to the descent of the pebbles, whilst the whole of the force of the lesser wave, still urged on and supported from behind, is directed in up-heaving the stones; to sustain which in their first lodgment the bed of the bank seems to be sufficient, the wave soon becoming powerless, from not generally curling, but expending itself by spreading, and gravitating of course with less impetuosity. In this way the pebbles get up the bank by "little and little," and as at every "throw" the supporting volume of water has less weight to sustain, its remaining power is exerted in thrusting the stones higher and higher, until its force is spent. It is probable that the heavier waves do really lift the pebbles up, but that the gravitating rush drives them down again:—Upon the particular beach\* where my observations were made, when the sand remained uppermost, which indeed was never long, the surf and billows subsided rapidly, so as not to admit the medium wave, which would have hove up the shingle at once. This is the secret of the matter as far as I was able to make it out.

I cannot perceive that any detriment could arise to the beaches, if the shingle which now occupies them were removed. Indeed, I think if any alteration should proceed from that circumstance, it is not improbable but that it would be rather beneficial than otherwise. On a subject of such great national importance as this assuredly is, it is necessary in the consideration of it to embrace all points, in order to arrive at just conclusions, and to see clearly our proper course in following out the proposed plan.

\* Nice.



A preliminary step, therefore, seems to be absolutely necessary to be attended to; and this being adopted, we should know from the result the extent of the undertaking, which after all, may prove less extensive, and consequently less laborious and expensive than imagined; as, although surmised, we are by no means yet certain that the migrant pebbles travel the whole distance from Portland to the South Foreland, about 220 miles. The line of coast being a little northerly of east, westerly winds being prevalent and strong, the direction of the flood tide, and the flat chalky nature of the bed of the sea, are favourable to such a supposition; but it requires to be confirmed, and may easily be so or refuted, by any experienced geologist, by simply travelling the line of coast and examining the nature of the shingle, from point to point.

The mineral structure of Portland stone is, I believe, somewhat different from that of the cliffs which lie easterly of the peninsula; and the pebbles proceeding from the latter, could be readily distinguished from those of the more eastern cliffs. It would be necessary therefore, to trace how far easterly any body of these Portland stones are found, to determine the distance to which they rove, and so on with any others which may be peculiar to any locality, and differing from the flint of the chalk.

If it should turn out that the former are in great quantities along the whole line of coast, of course it would be necessary to clear away all the accumulations on the sea-board. But if, as I should rejoice to learn, it was ascertained that the Portland pebbles were confined to the Chesil bank, or even wandered as far as the shoal called the Shingles, and Hurst Castle, but no farther—short of 50 miles, we might infer that the greater portion easterly is composed of flints, dropped from the chalk cliffs.

It is questionable what the effect would be on the Chesil Bank if all the shingle were removed. The extent of that singular isthmus is, from ten to eleven miles, and its breadth narrow; probably some portions of it might be washed away, and so form Portland into an island, which it is supposed to have originally been. It is stated in a recent account that the pebbles of the bank are from four to five and six feet in depth; and are chiefly composed of a white calcareous spar, (these are called Portland pebbles,) but partly of quartz, chist, jasper, &c. The bank slopes on either side towards the sea, and the inlet called the Fleet; it rises gradually towards Portland, being there, composed of pebbles as large as swan's eggs, but in its course along the Dorset coast, the stones gradually diminish in size; at Abbotsbury they are about the size of horse-beans, and more westward they degenerate into mere sand. The pebbly covering is continually shifting;

a north-east wind clears away the pebbles in parts, leaving the blue clay exposed; but the bare spaces are soon covered again by the heavy sea which the south-west wind drives against the bank.

It appears that the cliffs to the eastward as far as St. Alban's Head, are composed of a hard calcareous grit-stone, shelly lime-stone, and chist; the dip of the strata is about  $45^{\circ}$  to the north.

At Swanage there are a great many stone quarries, from whence, probably, much of the shingle which lodges on the shoal of that name may be derived. The rock produced, is called Purbec marble; it exhibits different degrees of fineness, and is full of organic remains.

In the interstices of the strata of lime-stone at Peverel point, are found glittering crystals of selenite, formed in a sort of fibrous marl; and the surface of this marl is, here and there, covered with a fine farinacious gypsum; and it appears also in an indurated state, constituting alternate strata with the limestone. Pyrites abound in the latter, and hence the sulphuric acid concerned in the formation of the selenite and gypsum seems to be obtained.

At the South Haven Point, the boundary of Pool Harbour, the cliffs are composed of a compact yellow sand-stone.

Ferruginous sand-stone abounds throughout the north-east part of Purbec isle. Brownsea isle is composed of a sandy soil.\* Hordel cliff, eastward of Christchurch Bay, is composed of reddish coloured stone, and abundance of organic remains.

The spit on which stands Hurst Castle, is gravelly with a covering of shingle.

The cliffs and ravines of the south shore of the Isle of Wight furnish flint, copperas stones, free-stone, lime-stone, and pieces of coal. The noted shoal called the Shingles, is stated to show itself sometimes "18 or 20 feet above the water; at other times it is entirely out of sight; sometimes it rises near the Isle of Wight, at other times nearer the Hampshire coast. It consists of a very extensive bank of pebbles, so near to the surface that the force of the tides and currents drive it from one side to the other, according to the direction in which they prevail." This extract is mainly correct, and we may add that the base which forms the nucleus of attachment for the pebbles, is a solid rock. If it be practicable to clear away the shingle from this rock, by taking advantage of the neap tides, and otherwise using a sort of trawling machine worked by steam, similar to those which are used for clearing the bed of a river of silt, but fitted for rough work, and an oval pier were erected upon it, so as to enclose it entirely; would not such be of advantage to the navigation of the channel? It may be

\* Dr. Maton.

said that the shoal as it is at present, is equal to a fort or battery in securing the passage from the attempt of an enemy to penetrate into the Solent, and burn the ships at Southampton, Cowes, &c. A battery on Sconce Point would be more efficacious; but though the channel was clear of any danger, I should not apprehend a visit from an enemy; in a time of war, our steaming cruisers would be in the *qui vive*; and the fleet at Spithead would be an object sufficiently formidable to induce a foe to prudently keep at a distance. If every portion of the rocky base of the shoal were built over, so as to leave no rough spot for the pebbles to rest upon, the probability is, that the migrant shoals would pass on to Hurst Point, from which they may be removed. If there should be any fear of the spit being washed away, a parallel break-water of large stones may be formed under water, a few fathoms from the western beach. A beacon light on the proposed oval pier, and one on the extreme of Hurst Point, would allow ships to run in during the night.

Examinations may be advantageously made with the diving bell, along the base of Deal beach, Haslar, and on some parts of the coast of the channel, in order to ascertain the state of the shingle; a competent knowledge of its extent outward from the beaches; the quantity below water as compared with that above, &c., are essentially desirable as a preliminary measure.

It would be a good opportunity before Colonel Pasley closes his labours, for the experienced "divers" he employs to examine the base of the Shingles shoal, particularly to notice if the pebbles are widely spread, or lie in a compact heap. And the Coast Guard officers when in their boats, going along shore, before, and after gales of wind, may be directed to sound with a lead having a broad disc, and well armed, for the purpose of ascertaining how far out the pebbles lie from the shore.

As we find the shingle occupying the shores of Spithead, even up to Haslar, we may infer that it is migrant along the bed of the enclosed waters, as there are no rocky cliffs in the immediate neighbourhood to produce it in such abundance; we know not whence the store has been derived, but this could easily be ascertained by examining the pebbles; the flood tide, and undulatory impression, however, direct the shoals of rollers up the inlets which break in upon the coast line; but it is questionable whether those which have found a lodgment in the enclosed water, ever leave it again. I am inclined to think that they do not, but merely undergo the alternation already described, in which case if they are not an inconvenience, they may be safely left where they are at present.

It strikes me that, upon examination, the whole of the shingle from St. Alban's Head to Portsmouth, will be found to come from the west-

ward, and that little of it goes easterly beyond Selsea Bill. If this should be confirmed by observation, that is, by examining the mineral structure of the pebbles along the line of coast, from which these places of origin may be determined,—the clearing away of the shingle, should that plan be carried into execution, may commence at those ports which are subject to be blockaded in Sussex and Kent, and the local authorities would, perhaps be willing to adopt it at their own expense, having the assistance of convicts.

The excavation of new havens on the above coasts, as recommended by the Refuge-harbour Commissioners, would not answer the end designed, unless the pebbly nuisance be first got rid of; experience has proved the inutility of throwing out piers, the sluices are but of temporary benefit, and may be rendered useless at a critical moment for want of a supply of water.

I here close this essay, and have only to add that, the spirit which urged me to venture upon it, is purely patriotic, and I believe that in submitting the remarks to the consideration of the high authority before whom they will be laid, I only perform, as a naval officer, an imperative duty.

JOHN EVANS, (a.)

*Bedminster, Somerset, July 1840.*

*Lieutenant Royal Navy.*

#### ATLANTIC STEAM NAVIGATION.

SIR.—My attention having been called to a letter on “Atlantic Steam Navigation” in your number for June, I am induced to submit the following remarks upon the statements made in that letter, regardless of the contempt with which the observations of a plain practical man may be received by your talented theorist “Mercator.”

That the existing steam boats are defective in many points of their construction is felt and acknowledged on all hands, and by none more than the bungling shipwrights into whose heads it has now entered to perceive what “could be required in the steamer.” It might not be very difficult to show how these defects have been copied from one vessel to another; and that the blame does not rest with the shipwright, as he has in a majority of cases only to build from a drawing furnished him by pseudo-naval architects, whose mode of procedure has been, to obtain drawings from various individuals, and then by taking from each, such parts as fall in with their notions of what a steam boat ought to be, a drawing is made, the result is as may be expected, a bungling compound of ill-assorted notions. On the contrary, where the shipwright has been left to the unfettered exercise of his judgment, the vessels most approved for models, and efficient for service have been

produced. I will only name two out of several that might be mentioned, "The Great Western" and the "Orwell." The constructors may be told again by your correspondent "that they are altogether wrong." I am sure that they are quite ready and willing to be set right, and that they are using their utmost diligence and ability to arrive at correct principles of construction, to which, it is admitted they have not yet attained.

Mercator considers that they should be constructed upon totally different principles from sailing vessels, and that it has been entirely overlooked that they are propelled by a power at the waters-edge instead of one acting upon the immense leverage of the masts, and that they are to overcome the fury of the sea acting right on end upon them. And lastly, that "in the general form of the sea-going steamer there is no difference (an increase of length only excepted,) between her and the old form of a ship built for the attainments of sailing properties, the qualities required in each being as different as it is well possible to conceive."

As the paragraph, the substance of which is just quoted, contains some extraordinary propositions, it may be well to examine them before we receive them as demonstrations. The form of steamers has never been considered upon correct principles. This is a bold assertion for a writer to make, who it is evident from his subsequent remarks does not know, or does not perceive the immense difference there is between the form of almost every steamer afloat and the sailing vessels; and that many of the steamers are never intended to carry sail at all. The attention which has been paid to the ascertaining the best position for the paddle wheel, completely disproves his assertion, that the fact has been overlooked of their being propelled by a power at the waters-edge.

Mercator refers to an opinion expressed by the late Lieut. Campbell in his wish, "that he had left his masts at home." I had the pleasure of acquaintance with Lieut. Campbell, and have heard him express his opinion that in the case of the "Atalanta," he should have done better without her masts, because he steamed out, keeping close to the African coast, but if he went out again, he would pursue a different route, and doubted not that with the aid of his sails he should make a better and quicker passage. He was thoroughly convinced of the practicability of making the passage to India by the Cape of Good Hope in about ten days longer time than was required for the overland passage; and used to talk with evident pleasure and confidence of its being done by sailing steamers. Here at least the opinion of one of the most experienced steam commanders is in favor of a practice so decidedly condemned by Mercator. In the opinion entertained by Lieut. Campbell, Capt. Austen concurs, from his experience in H.M. steam vessels.

Mr. Peacock who was with Capt. Austen in H.M. Service, and has since left this country in command of the "Peru," belonging to the Pacific Steam Navigation Company, entertained a strong conviction of the necessity and advantage to steam vessels from having efficient masts and sails. On one occasion which he mentioned, it was found absolutely necessary to alter the course, so as to set the storm sails, because the vessel could not withstand the fury of the gale, when steaming head to wind. Capt. Hoskin of the Great Western has pursued the same practice with advantage as is proved by his successful passages across the Atlantic in all seasons. Mercator forgets that one at least of the "ordinary merchant ship" steamers has made the passage to and from New York, and not been "torn to pieces."

With regard to the rare occurrence of bad weather in the Bay of Biscay, I must leave Mercator to convince your nautical readers of this, if possible.

A correct solution of the question "of what form and proportions should a steamer be to make head against a gale and head sea?" is certainly of the greatest importance. Mercator does not appear to have furnished a satisfactory reply to this enquiry, although he has given a lengthy description of various kinds of boats in illustration of his views. In the comparisons which he has made, he seems to have entirely overlooked the difference in size between a boat and a steamer, and forgotten that there is in the nature of things a much greater disproportion between the strength of a boat, as compared with the shocks it has to sustain, and that of a steamer as compared with the shocks to which it is subjected from the strokes of the sea. The absolute strain upon certain points of a steam vessel when fifty feet of the forebody is entirely unsupported by the fluid, approaches very nearly to the entire strength or power of resistance of the materials employed in that part. If he will calculate the weight of the forebody, and multiply that into the distance between the centre of gravity of that part and the fulcrum, or axis, about which it has a tendency to revolve, he will find an amount of tension which sufficiently explains the cause of such extensive straining in large steam vessels, without asserting that it has never entered into the head of the shipwright, that great strength could be required in the steamer. Shipwrights have thought much more on this subject than Mercator imagines, and many of them are able to demonstrate the nature and amount of the strains, although from the nature of the materials employed sufficient strength or power of resistance cannot be obtained.

It is undoubtedly true, and has been repeatedly proved by experience, that a long bow is advantageous; but it has not yet been found that "extreme sharpness forward" is most advantageous for a sea-going steamer.

The north country coble has a long bow, yet it is of considerable capacity or displacement aloft, so as to lift readily in the sea. The Massulah boat of the Coromandel coast has a long bow, but is not remarkable for extreme sharpness forward. The Kentish gigs and Revenue galleys have also long bows; and as compared with many sea-going steamers are not remarkable for "extreme sharpness forward."

The remarks upon the African canoes do not appear to be at all applicable to the case of steam vessels, they are intended for rapid evolutions by means of their paddles, and are therefore without "the absurdity of a gripe." Their main breadth is generally about the middle of their length.

The London wherry being intended for the conveyance of passengers seated in its after end has of necessity its main breadth and centre of displacement abaft the middle of its length. My experience has led me to the conviction that it is totally unfit\* to contend head on with the mimic waves on the Thames, without being put stern on to these seas.

Whale boats are built expressly for contending with the sea; these boats are remarkable for their buoyancy and amount of displacement and are not by any means extremely sharp forward, not even so sharp, as the Kentish gigs or Revenue galleys of which "Mercator" has spoken in such high terms.

The next illustration adduced in support of his theory is the Baltimore clipper. It is an undeniable fact of which any one may satisfy himself, by comparing the lines on the draught of one of these vessels with those of a whale boat, that they (the Baltimore clippers) have much fuller bows than whale boats; yet forsooth a Baltimore clipper is adduced in support of his theory, that "extreme sharpness forward" is essential to the construction of a good sea-boat.

The wholesale censure passed upon the "Wilberforce," the Tagus, and the Phoenix, and generally of all the sea-going steamers; does not require a comment after the preceding remarks upon Mercator's illustrations of his theory; yet I cannot forbear adverting to his extraordinary assertion, unsupported either by fact or reasoning, that "this very fullness causes them to pitch," and to be half drowned when going against a head sea. A ship pitches when the volume of water displaced by the bow is not equal to its weight; and it has yet to be shown that extreme sharpness forward displaces more water, than a fuller bow. Had he said that great fullness forward, with a lean after-body would be likely to make the ship uneasy in a sea, by causing her bow to lift too soon, he would have been correct.

The "centrifugal force" of the water I cannot comprehend. It is recorded as the result of observation and experience that the particles of

\* We pointed this out long ago.—Ed.

water are deflected from the bow at an angle exactly equal to that of incidence; and not at a tangent. The figure resulting from the impinging of successive particles of the fluid against an obstacle, and against each other is a curve very nearly approximating to a parabola, therefore the section of the bow in the direction which the fluid takes, or line of least resistance, should be a curve of parabolic form, determined by the intended or expected velocity of the boat. This form has the further advantage of being the one which ensures the most easy motion in going against a head sea.

How the tendency of the paddle wheel is to raise the boat is beyond my powers of comprehension. The paddles enter and emerge from the water at the same angle, and must therefore neutralize each other, or nearly so; as to any sensible effect in lifting the bow of the boat.

Mercator having occupied upwards of seven pages of your Magazine, in remarks on existing steamers, at length comes to the performance of the task which he undertook in the second paragraph of his letter, where he promises to give the constructors of the great steamers "some plain hints, as to what a steamer ought to be." Now plain hints, to be useful ought to be founded upon well known facts, or be deductions from recognized principles. Mercator does not trouble himself to lay before the Directors of the Royal Mail Steam-packet Company, any facts upon which his hints are founded; but after having written several pages about "cobles, Massulah boats, gigs of the Kentish coast, Revenue galleys, African canoes, London wherries, whale boats, Baltimore clippers, the steamers Orwell, Star, Vesper, and Sons of the Thames," all which are remarkable for their freedom from straight lines, he goes *per saltem*, to the conclusion that steamers should have their water lines "*as nearly straight as possible.*" This hint at least is not founded upon the practice of constructors in those boats and vessels which he has so highly extolled as models for imitation; nor does it appear to be deduced from any recognized principles, and is therefore to be marked *Q.E.D.* His mode of proceeding in constructing the drawing is altogether empirical, and contrary to the laws which regulate the motions of fluids.

Water as is well known will not flow past an obstacle in straight lines; yet "Mercator" recommends as the best form, a model made up of straight lines. In a note he states that the commanders of ocean-going steamers are under "the necessity of trimming their ships three or four feet by the stern." I happen to have a tolerably extensive knowledge of our mercantile steamers, and do not know any one instance in which this is the case; but on the contrary find that they are complained of as being out of trim, unless they are an even keel, or nearly so.



He recommends that the forebody should have "a tolerable expansion above the water line so as to form the bow somewhat flaring." This appears to me very much like adopting the present practice of the stupid constructors who do so for the express purpose of preventing the steamer plunging too deeply forward. Is not this too bad?—first to abuse the constructors of the great steamers for doing so, and then to attempt to palm it upon the Directors of the Royal Mail Steam-packet Company as an original hint, and an essential part of his own plan!

The remarks about the knee of the head are judicious, so far as they go to reduce the weight forward, but no farther.

The reduction of the weight in the forebody is now very generally practiced and carried to as great an extent as is consistent with the necessary strength: but to reduce from an eight-inch plank to three-inch, and all other parts in proportion, is an extent to which no one conversant with naval architecture can assent.

How it is that the gripe prevents the direct progress of a steamer through the sea does not distinctly appear; it is usually rounded and considerably thinner at the forepart than the stern, so that if any effect be produced upon the velocity, it will be rather to increase it, by diminishing the direct resistance. Its effect upon the steerage is simply increasing the diameter of the circle which the vessel describes in turning round, to what extent it does this is scarcely appreciable in one of the large sea-going steamers.

The recommendation to give the stem "a prodigious rake" is extremely vague, and indefinite, because no data are given by which we are to determine what is "a prodigious rake." Every one conversant with the practice of naval architecture is aware how differently the amount of rake is estimated in different ports—in one 6 feet is termed a good rake, in others 12 feet is thought not too much. Capt. Ross in his work on Steam Navigation published some years since, recommended that the rake of a steamer's stem should equal its height above the keel. Some recent steam boat constructors in the Irish channel placed the stem perpendicular to the keel; but none of them have defined what is meant by a prodigious rake. It must be borne in mind that as the rake of the stem is increased it becomes more difficult to give the requisite strength and combination to the several parts of the forebody: this in itself is a strong reason for not increasing the rake of the stem beyond what is necessary to clear the cable of the fore foot when riding in a tide-way.

I most cordially agree with Mercator, in recommending that the forebody should be kept as light as possible, and that the anchors, &c. should be stowed as near the centre of the ship as possible.

With regard to the proportions of length, breadth, and depth it does appear singular that Mercator should not have been aware that the existing sea-going steamers have generally the proportions which he recommends; viz. the length from  $5\frac{3}{4}$  to  $6\frac{1}{4}$  times the breadth of beam, and the depth from half to three-fifths of the breadth; but it has not yet come to my knowledge that any great steamer has been constructed whose depth is equal to her breadth, and I therefore think on this point he has been misinformed.

Mercator's remark "that with the present form of forebody the requisite strength cannot be obtained," is altogether without foundation. It matters little what the form of the body is, when the question is simply one of strength; the same or nearly the same facility for combinations of material exist in all cases, and by exercising "such mechanical art in the construction as common sense would suggest," the necessary strength can be obtained whatever be the form of the body.

Whether "Mercator" is still "thoroughly convinced that the subject is misunderstood" is not for me to say; at all events the perusal and examination of his letter to the Directors of the Royal Mail Steam Packet Company, has convinced me that he has undertaken to write upon a subject which he does not understand so well as those upon whom he has so unsparingly laid the lash of his displeasure.

I am like him an enthusiastic admirer of steam navigation, and look forward with confident expectation to see its benefits extended to every part of the globe, uniting men of every colour and clime in one common bond, which is the best safeguard and guarantee for the continuance of peace; and am desirous that every means should be employed to develop more clearly the laws of resistance to floating bodies, and entitle naval architecture to be ranked amongst the exact sciences: to this end we must be content to study by induction, and make Nature interpret her own laws by a patient, studious, and truthful observation of the phenomena presented to us, carefully avoiding the generalizing mania of our French neighbours, who are, nevertheless, entitled to the honour of having produced some of the finest models of steam navigation in the *Castor* and *Pollux*, and some other vessels of the same class. The subject naturally divides itself into two parts, form and construction; in each of them our present practice undoubtedly admits of improvement. Those who have devoted many years to the study, must feel that they have only reached the threshold, and therefore dare not, at present, presume to the honour of having mastered the arcana of naval architecture.

Apologizing for the extreme length of this letter,

I am, Sir, &c. A SHIPWRIGHT of 1812.

To the Editor of the *Nautical Magazine*.

London, Aug. 8th, 1840

VOYAGE OF H.M.S. BEAGLE, ON A SURVEY OF THE COAST OF AUSTRALIA.—*By a Naval Officer.*

(Continued from page 579.)

WHILST we were taking our dinners in the boats, anchored a short distance from the shore, we were visited by two natives, with their women, and dogs: on their approach, they commenced hallooing and beckoning us to the land, and as I was anxious to communicate with them, the boat was instantly pulled towards the beach, but before we could land, they ran off at full speed, much to our mortification.

In the afternoon, we pulled against a strong N.W. wind for three miles, which brought us to the termination of the cliffs. I landed on the westernmost one, and had a good view round the Bay. From this point the low mangrove coast again commenced, and ran to the W.N.W. about a league, and then turned abruptly to the northward. From this, and the appearance of the land, about Point Janthueame, (sand hills slightly covered with verdure,) I began once more to entertain hopes of finding an opening before our return to the ship; but anxious as we all were to set this point at rest, the night closed in upon us, and we had only to anchor the boats off, and wait till the return of day. One can scarcely conceive the source of annoyance the flies were to us, from their constantly lighting on the face, and in the corners of the eyes, obliging us to be incessantly keeping our arms in motion to frighten them away, which with such a temperature, kept us in a profuse perspiration;—and, as if a league had been formed against us, no sooner had the flies left with the setting sun, than we were pestered with mosquitoes till it rose again, which, with the turbulent motion of the boat gave little time for rest.

At dawn of day we were on the alert, and full of hope, our course was directed to the point seen the previous evening: by seven we had passed the mouth of a creek, of which this point formed the commencement; it was of shoal approach, but appeared to run some distance inland to the north; we therefore crossed to the opposite shore, and soon after, Mr. Helpman, (mate,) and myself, walked to a hillock about half a mile from the beach.

From hence, we had a good view of the surrounding country. To the north and N.E. was a boundless plain of an autumnal green, with occasional clumps of the gum tree, and here and there a small herd of kangaroo, quietly grazing in the distance. Round to the west the eye met nought but barren sand-hills, making the contrast still more striking; altogether it had rather a pleasant appearance, but the river, the object of our care, was no where to be found.

The before-named creek divided, and was lost about two miles from

its mouth, and disappointed as we all were, I was forced to the conclusion that *Roebuck Bay* had been rightly named; and, that if an opening to the interior existed on this part of the coast, it must be sought elsewhere.

As the orders I had received had now been executed, we were returning to the boat with all speed, so as to get on board the ship before dark: but had scarcely walked twenty yards from the foot of the hillock, when I heard close behind me the report of a musket, and felt at the same time a sharp twitch in the right side, and immediately after found myself lying on the ground, weltering in blood, and in the most excruciating pain.

It appeared that a twig had caught the trigger and fired off the musket which Mr. Helpman was carrying horizontally in his hand; that the ball had entered my right side, a short distance from the spine, midway between the lower rib and the hip bone, carrying with it a portion of the leathern pistol belt that encircled the waist, with every particle of dress that came in its course, and made its exit in a line with the navel.

Fortunately, there was three of the boat's crew with us, who immediately took my bleeding body on their shoulders to the boat; the unavoidable position I was placed in when going up or down the sand hills made the pain acute indeed; and as a number of natives were collecting, my situation may be more easily conceived than described. When on reaching the place at which we had landed, the boats were found to be at the edge of a mud flat, extending a quarter of a mile from the shore,—however, up to their knees in mud at every step, the crew succeeded in carrying me safely to the boat.

The accident occurred at about 10 A.M., and as the ship was fifteen miles distant, it was not till after six in the evening that we succeeded in reaching her. I was soon hoisted in, and received every care and attention that could be possibly shewn, both professionally and otherwise: indeed the anxious care and solicitude depicted on every countenance, was highly gratifying to my feelings, and contributed in no slight degree to the almost unprecedented recovery, that at the end of eight weeks I experienced.

As *Roebuck Bay* was found to be much encumbered with sand banks, which dried at low water, and sufficient had been done to set at rest the possibility of a river emptying itself there; we weighed the next day, and with a moderate breeze from the westward, stood along the land to the north. Finding some difference between the coast, as laid down by Captain King, and what it appeared to us, the shore was traced as far as *Cape Leveque*.

Its general feature was low and sandy, with shoal patches extending

from half a mile to three miles off. The interior seemed tolerably well wooded with the gum tree, about eighty feet in height: two passable bays were found, the best of which was named after our little bark. As there was a good beach for the seine here it was taken on shore, but after toiling for a couple of hours, a few small fish was all that was obtained.

Whilst the party were thus occupied, they had a visit from some natives, whether intentional or not they could not decide; but I should rather think that as they were travelling to the south, the meeting was accidental; however, they put a bold front on it, and through the conciliating and amusing manner of the surgeon who went through all the eastern form of meeting, (which they exactly imitated,) a friendly feeling was established, and after much unintelligible conversation on both sides, they passed on apparently as much amused as our party were with them, and with an invitation to accompany them to their place of abode.

All on board were glad that this meeting had taken place,—as it not only put us on an amicable footing with those we were likely to be some time amongst, but it gave us an opportunity of proving of what value the Swan River native which we had as an interpreter was likely to be. I am sorry to say, we were much disappointed in him,—for from his timidity, it was with difficulty he could be prevailed on to approach them, even after all our party had shaken hands, and when he at last did, it was with fear and trembling that he asked in English, “how do you do.” To add to the disappointment, he could not understand a word they said.

Upon questioning Miago as to the reason of his fears, we found there was a tradition among his tribe, that the northern men as he called them, were a race of large and powerful men, and although he could see by comparison with our people, that they were not above the ordinary size, still he could not divest himself of the idea that was born, and had grown with him.

From Cape Levêque which is a red clifty point about eighty feet high, the coast trends suddenly eastward, and with Point Swan forms a shallow bay; here we anchored one night, and the next day with a fresh westerly wind passed through a heavy tide ripple that runs off the latter point for upwards of a league; and came to an anchor in a tolerably good bay, close round the south side of it, the same that Captain King describes as being the one in which Dampier anchored, and spoke of as “being a good place to hale on shore.” We could not trace the resemblance, but as it seemed likely to afford wood and water, of which we stood in need, the ship was moored and preparation made for carrying on our occupation.

In the end we had ample reason to congratulate ourselves on so opportunely arriving at this anchorage, for from this date the 26th of January, until the 9th of the following month, there was scarcely a day that it did not blow a gale, accompanied with heavy rain, thunder, and lightning, the wind varied between N.W. and S.W., but as the ship was not more than half a mile off shore, the wooding was soon completed; but all our endeavours to obtain water by digging were fruitless; several days were occupied in this way without success, and it was quite by chance that a large pool of water was discovered near the spot where the observations were taken, sufficient with the help of a few smaller ones to supply our wants; these pools were caused by the heavy rains lodging in the holes in the rocks close to the sea; and this was the only means we had of obtaining supplies, (with the exception of Port George 4th,) during our stay on the N.W. coast.

Several excursions were made to the interior during our stay at this anchorage. The country was found to be tolerably level with occasional patches of good soil, and thickly studded with the black gum tree. There was little difficulty in travelling owing to the small quantity of underwood, but owing to the continued sameness that existed, more than one party lost their way, and when they returned to the ship, were much worn out with thirst, in consequence of excitement and travelling about in the sun, with the thermometer at nearly 90°.

The small sized Kangaroo were plentiful; but from being continually harassed by the natives, were so excessively shy and wary, that only one was shot. There was little difference between it and those we had seen to the south. One peculiarity it had, which occasioned many mirthful surmises and conjectures; this was no less, than a nail at the end of the tail, precisely similar to a bird's claw; whether this was a single freak of Nature, or that it was common among the species on this part of the coast, we could not decide, for as I before said it was the only one we had taken.

Many birds of a beautiful plumage were shot, some rare shells and abundance of fish were also found. Of the latter some were an enormous size, one mullet weighed as much as six pounds and a quarter, and was twenty-five inches in length.

We had several interviews with the natives, all of which were satisfactory, inasmuch as no misunderstanding had arisen; but it was quite evident that we should never be on a more friendly footing than casual acquaintance, which, circumstanced as we were, was probably better than being on the closest intimacy.

On the 10th February we quitted this anchorage, which had been named Swan Bay, and with a rainy day and fresh breeze from N.W., stood towards the Sunday Strait (of Captain King,) and entered the

extensive opening into which he was drifted, and narrowly escaped being wrecked. In remembrance of that event it was named King Sound, and the cluster of islands running out at right angles to the western side of the Sound, we called Roe Group, after the present surveyor-general of Swan River, who accompanied Captain King in his arduous services on this coast.

The four following days were fully occupied in examining these islands, their curious formation was all that was worthy of remark. Large blocks of sand-stone in the last stage of decay, had been heaped together by some convulsion of nature in the most fantastic shapes, and were now covered with a parched up stunted brush-wood, rendering walking difficult in the extreme.

We found a tolerable stopping place out of the strength of the tide in a cove on the north side of the easternmost island, and another on the south. At the latter we were placed in a critical situation, a hard gale came on from the W.S.W., and the sea got up immediately, so as to make the vessel roll her hammock nettings under; as we were not more than a quarter of a mile from the shore astern, it was to our great relief that the wind and sea had subsided before night came on.

On the 15th we stood across to the west side of the Sound and anchored in a bay seven miles to the southward of Roe Islands, connecting this part with what had already been done: the ship was again moved two leagues to the southward of Carlisle Head.

This being the furthest south Captain King had penetrated, and as extensive sand banks began to make their appearance, it was determined on examining with the boats the practicability of moving the ship further up the Sound.

Accordingly the ship was moored in a tolerable snug berth in four fathoms, between the shore and a bank of sand running parallel to it. And the following morning Lieutenant Stokes, with the yawl and a whale boat provisioned for a week, left the ship and stood to the southward.

During the absence of the boats, the coast on either side the vessel was fully examined, and some magnetic, and tidal observations made. From Foul Point which is the southernmost cliff, and about two hundred feet in height, with a cluster of bushes on its summit; the coast trends to the eastward, and with Valentine Island a small cliffy lump which at low water joins the main, sixteen miles to the S.E. of the before-named headland forms a rather deep but shoal bay. The interior was found to be similar to that already described.

We experienced two of those heavy squalls from the eastward, which gave us some anxiety for the safety of the boats, but on the 7th March

they returned all well, and with the pleasing intelligence of having discovered a river at the head of this extensive opening, but not apparently of sufficient magnitude to admit a vessel of any burthen. Mr. Stokes describes it thus, "its general direction was south, varying in breadth from fifty yards to a quarter of a mile, and in depth from three to twelve feet; the short distance of twenty-five miles changed the appearance of Fitzroy river from a clear rapid stream to almost stagnant pools, joined by various shoal rapids; the country around was as level as the horizon, in some parts thick forests, in others grassy plains. The tide rises on the flats at the mouth between twelve and eighteen feet, a vessel therefore may be taken within two miles of where the water is constantly fresh."

In consequence of the above information, the vessel was moved on the following day to the S.E., and under the guidance of Lieutenant Stokes we anchored off a low mangrove point, which he had visited, and from the annoyance he experienced from mosquitoes had named Point Torment.

To examine more fully Fitzroy river and its approach, on the 9th Captain Wickham and Mr. Stokes, with two whale boats proceeded to the south; and another boat under the direction of Mr. Helpman was detached to ascertain the extent of a bay running to the eastward.

The result of the former was, that from the point we were then anchored off to the mouth of the river, a continued line of mangroves fronted the sea, intersected by deep creeks which at high water would admit a boat some distance to the interior.

The opposite coast corresponded to this, and fronting the mouth of the river, and about three miles from it, there were several small islands, with extensive flats running off them on either side; so that although we had found a river, it was one not likely ever to become of much utility in itself, but it might ultimately be the means of furthering our knowledge of the interior.

At some period of the year Fitzroy river appears to be subject to heavy floods, which bring with them large branches of decayed timber, these were deposited in the forks of the trees on the banks, full twenty feet above the present level of the stream. Whence arise, or what causes these inundations, is a matter of speculation for those who hold the theory of an inland sea existing in the interior of this vast continent. The rainy season may be adduced in proof, if so, why was it not swollen at the time of our visit, for we certainly experienced very heavy rains during our stay at, and after leaving Swan Bay?

Very few natives were met with, and those so shy that no communication was held with them.

On Mr. Helpman's return, we found that he had traced the shores



of an extensive bay for four leagues to the eastward of Point Torment, where it terminated; and thence to the north-west, until he fell in with two islets off the commencement of a range of high land. The whole of this bay was encumbered with banks of sand, which at low water uncovered several feet. The shores were an interminable line of mangrove bushes, through which the water flowed, and in some places was divided by deep creeks.

One of these (about five miles from Point Torment,) he entered, and proceeded to the southward for ten miles. Here his course was interrupted by stumps of trees, and large stones; and as it narrowed to a cable's length, he considered it would be a loss of time to endeavour to penetrate further, there was no change in the appearance of the country; as far as the eye could reach was the same monotonous mangrove, from which the mosquitoes issued at all points, to the constant annoyance of all boat parties.

This bay was named after Lieutenant Stokes, to whose indefatigable exertions we were indebted for our knowledge of the greater part of King Sound.

As we had pretty accurately examined the eastern side, and depth of this opening, on the 15th the anchor was again weighed, and with a favorable wind from the eastward, we stood across Stokes Bay, and in the afternoon came to an anchor about a mile and a half to the southward of the islets before mentioned, (which were named Helpman Isles,) with a bank of sand that ran off them a quarter of a mile from us.

The short run of fifteen miles had completely changed the character of the country, instead of low mangrove bushes, and extensive sand banks, the eye was gladdened with a high and bold coast, thickly covered with trees of no inconsiderable dimensions, and of a verdant hue. We were all anxious that these heights should be ascended, for hope had not yet left us that an opening might be found to the interior, and all felt assured that from the summit of this land something would be seen to lead us on.

In consequence of the weather, which was exceedingly bad from the westward, it was not till the fourth day of our stay here, that any thing in the exploring way could be done: but as soon as it cleared up, Captain Wickham, Mr. Stokes, and two or three of the other officers, formed a party to ascend the hill over our anchorage; and as I was now able to get about again, it was left for me to examine the coast to the westward, with one of the whale boats.

Proceeding in the above direction for eight miles, we came to a sloping point with a low island lying off it, having a remarkable clump of trees on its centre. On rounding this point, a small, but snug har-

bour opened to our view, with abundance of wood on the surrounding heights, and a stream of water that was likely to supply our wants, running into the sea.

On the north side of the Bay was a narrow inlet, through which the tide ran about three knots in the hour. This was more than enough to excite our curiosity: we therefore entered, and by dint of hard pulling arrived at the end of two miles at the extremity of the opening,—from hence a large expanse of water became visible, studded with numerous small clifty islands; the most distant northern land about two leagues off, seemed more than a thousand feet in height, and as far as could be seen to the eastward, there was no termination to the water; however, with this unsatisfactory information, we were obliged for the time to be satisfied, as the day was closing in upon us: so taking a hasty sketch we returned to the ship by 8 P.M.

The party that had ascended the hill, had a most satisfactory and extensive view. The principal points on the western side of the Sound and the whole of the coast to the eastward, had been distinctly seen and connected from this point; to the N.E. was a series of thickly wooded hills running in an east and west direction, but no water could be discovered, and on comparing notes, they had also seen the space of water that I had entered, and reasoned from analogy that it terminated in a mangrove flat, which afterwards proved to be the case.

On the following day, the ship was removed to the harbour discovered yesterday, which from being my first discovery, after the accident I had received, was named Port Usborne.

The following day was occupied in looking round to the north and N.W., and preparing a boat expedition for the examination of the labyrinth of islands, seen in those directions; and on the 23rd, Lieut. Stokes with one whale boat, provisioned for a week, and myself with another, with three days' provisions, left the ship, and proceeded towards our several destinations.

During the absence of the boats, sundry operations were going on, such as wooding, watering, &c., besides observations on the tides dip, intensity, and variation; the collectors in natural history had also their occupation, and whatever could in any way tend to interest those who cared about the expedition, was considered and remarked on. Among other things, numerous kangaroo rats were seen, which seems to me a sure indication of water being in the neighbourhood.

At the end of the third day, having completed the part that was allotted me, I returned to the ship. There was little in this trip to interest one, with the exception of the mere surveying; a more barren spot than that I had visited is scarcely to be found. I allude to the large island to the N.W. of Port Usborne, lumps of stone heaped together,

and just sufficiently covered with shrubs, to deceive one into the idea of there being tolerable travelling, which to his cost he soon finds is a delusion.

From this island to the entrance of the Strait there are numerous small islets, which form the eastern barrier of the Sound, all seemed equally uninviting, with strong tides and whirlpools running between them. Mr. Stokes returned at the end of a week, having partially examined (at much risk from the above causes,) the whole group of islands to within a short distance of Colliers Bay: and it was his opinion that the vessel ought not to attempt a passage among so dangerous an Archipelago, particularly as he felt quite convinced that no opening to the interior existed in that direction, having narrowly scanned every indentation on the coast, that held out the slightest prospect of success.

All now that was in any way useful in King Sound had been finished, and we were almost as far from the main object of our search as at the commencement of the season. It is true a large extent of coast had been examined with much labour, under a burning sun by day, and the mosquitoes, the greater evil by night; and I firmly believe that those who had borne the drudgery, felt that our present knowledge was scarcely a recompense for the toil they had undergone.

There was only one point now left, that a chance remained of meeting the desired object, and as a "drowning man catches at a straw," so did we at Colliers Bay:—and early on the morning of the 30th of March, the ship was underway, and with baffling winds from N.W. to S.E. reached by sunset a Bay on the west side of the Sound, about a league north of Point Cunningham. In standing across the soundings varied from ten to twenty fathoms, over at times a shingle, at others, rocky bottom. The stream of tide in mid-channel was trifling, compared with its strength near the shores.

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#### CHINESE SKETCHES.—No. II.

(Continued from p. 555.)

**RATS.**—*Non est disputandum de gustibus*, surely thought I, when I saw an old man approaching me in the street, carrying on his shoulder a long pole or bamboo, loaded with rats. My attention was attracted to him by the tinkling of little bells, which he carried in his hand, fastened to the end of a short stick. There were about a dozen and a half of rats, and they were suspended from the pole which lay across the man's shoulder, precisely in the manner described in some of the old European books about China. On enquiry, I ascertained that the rats were not for sale; this indeed I suspected when the man passed me, for

the animals seemed to be nothing more than rats' skins stuffed, and such I understand is the fact. The man was by profession, if I was correctly informed, a rat catcher, and those which he carried on his shoulders were designed to point out his occupation. He and his fraternity have various methods of destroying rats, but the most usual is by poison.

**AN OUTCAST.**—Parts of the suburbs of Canton, which border on the open country, are inhabited by rich and opulent people. The houses are spacious, and the streets unfrequented by travellers. A little before sunset this evening, I passed through one of those streets into the fields beyond the suburbs. After a short excursion among the gardens, fish-ponds, &c., I turned my course homeward, and on entering another of the private streets, saw a poor child which had been cast out among the rubbish, from the houses of the rich men. The child was in a basket, and appeared to be about a year old. The way which I had to pass in order to reach the entrance of the street was very narrow, and the basket was so placed that I was obliged to step over it; several individuals, (natives,) had passed along just before me, and seemed not to notice the child at all, nor did I till I was actually raising my foot over the basket. The sight shocked me, and gave me a sensation which I shall never forget: I gazed a moment at the pitiful object, and the Chinese gazed at me. They seemed as much amazed at the fan kwei, as he was at the dead child. The basket was quite small, and the child was doubled up and crowded into it, so that its head hung over one side; the face was fair and only a little swollen.

**CONSOO HOUSE.**—At the north end of old China-street stands the public hall of the hong merchants, called by foreigners the Consoo house. It is not built on a large or magnificent scale; it seems however, to be sufficiently spacious for all the public buildings of the cohong, and also occasionally to serve for other purposes. It was here that the murderers of the crew of the *Navigateur* were tried in 1827. Here to on every eighth day may be seen a group of children and others to be vaccinated; such an assembly I witnessed this morning.

**THE FACTORY-STREET,** called by the Chinese *sheih-san-keae*, the Thirteen Factory-street, is so named because it is adjacent to the Thirteen Foreign factories, several of them opening into the street on the north. It runs parallel to the front of the factories, but extends far beyond them towards the east and west, forming one of the longest streets and exhibiting perhaps the greatest variety of shape that can be found in the suburbs of the city. The traveller about Canton will often find it convenient to take his departure from this street, and should therefore know its bearings in the outset.

**ARCHERY** is inculcated by the classics and required by the laws of China, as a fit exercise for the soldiers of the Celestial empire. This

afternoon, walking across the sandy ground near the river, and just beyond the western suburbs of the city, I met a small party engaged in this exercise; they were Tartars, a corporal and four privates, who had been sent out on a drill. The target was placed about eight rods distant from them; they had each a bow, strong and neatly made, and their arrows were pointed with iron and feathered. The corporal was an adept, every time he drew the bow an arrow hit the mark. The bow and arrow were grasped at the same instant *à la Tartare*; the heels were placed together, with the body erect, the mark being off on the left. As the archer drew the bowstring, he poised on his right foot, throwing the left a little out, bending the body forward, swelling the breast, and extending the arms at full length, with the hands elevated to the level of his eyes, gave a savage grin, and let fly the arrow.

TEA SHRUB IN HONAN.—The island of Honan situated on the south of the river, opposite to the foreign factories, is many miles in extent, and produces a considerable variety of trees and shrubbery. Among the latter is the tea shrub, which cannot fail to attract the attention of the botanic traveller.

Having received a very polite invitation from—— to visit the tea plantations in Honan, I stepped into a boat of one of the hong merchants, under the direction of an old and faithful native guide. We dropped down the river with the tide three or four miles; then entered a creek, which we ascended till we came to a small temple; and there leaving our boat, we reached in about five minutes time our place of destination. The tea, though not cultivated to a great extent, affords a tolerable specimen of the manner in which it is produced in the more northern parts of the empire. There is also in Honan, as well as on this side of the river in the suburbs of the city, establishments for curing tea. In these may be seen scores of hands, men, women, and children, employed with various apparatus in picking, cleansing, firing and packing teas, and fitting them for the market.

CIRCULATING LIBRARIES.—I have often heard of circulating libraries but before I reached this country, I never saw them carried through the streets so as to accomodate every man at his own door. As in the countries of the west, some of the circulating libraries here are stationary, and every customer must go or send to the depository for the books which he wishes to obtain. Often however he is saved this trouble.

The librarian, with an assortment of books in two boxes, suspended from a bamboo laid across his shoulders, and with a little rattle in his hand to advertise his friends of his approach, sets off on his circuit, going from street to street and from door to door. In this way he passes his whole time, and gains his livelihood. He loans his books usually for a very short time, and for a very small compensation;

they being generally small volumes and only a few in a set. The books thus circulated are chiefly novels, and sometimes those of a very bad character. The system however is a good one, and worthy the attention of the friends of useful knowledge. The librarian, whom I met at the door of the hong this afternoon, loaning his books to the servants and coolies of the factories, said that his whole stock amounted to more than 2,000 volumes. He had with him, however, not more than 300 volumes; the others being in the hands of his numerous customers.

THE CHAPEL.—Passing along in front of the foreign factories, at an early hour yesterday morning, (Sabbath morning, June 28th,) my attention was attracted by a sign board, hung out at one of the gates. It contained the following public notice, "*Divine Service will be performed this morning at No. 2, American Hong; service to begin at 11 o'clock.*" At the appointed hour I repaired to the place. About five-and-twenty gentlemen were assembled. The silence and solemnity of the auditory well became the worshippers of the Most High. The service was performed by the Rev. W. H. Medhurst. His sermon from 2nd Corinthians, 6th chap. 2nd verse, was a clear and forcible exhibition of scriptural truth, delivered with ease, simplicity and earnestness. The scene was exceedingly pleasing: it was pleasing to see Englishmen and Americans (and there was an equal number of each,) thus unitedly engaged in the public solemnities of Christian worship. Under such circumstances, far from the temples where their fathers worshipped, and without any one to hurt or to make afraid, though surrounded by multitudes who know not the Lord or his Sabbaths, well might they adopt the language of the sacred poet and sing

"Day of all the week the best,  
Emblem of eternal rest!"

Perhaps I ought not to call the place where this little congregation was assembled, a chapel, it being nothing more than one of the rooms of the factory. The factory of the Hon. East India Company built a neat and commodious chapel in Canton; but since the dissolution of the factory, that chapel has been closed.

RESIDENCE OF THE SIAMESE AMBASSADOR.—Wishing to see something of eastern splendour, for which the Siamese are said to be celebrated, I determined this afternoon, to visit the residence of the ambassador of the king of Siam. Having made my way up into Physic-street, I turned westward and passed on about ten rods from the market at the corner of Shoe-street, where I came to another leading due north. This led me to the ambassador's residence, over the door of which is written in large Chinese characters, *Tsëenlo kwò kung kwan*, Residence

of the Siamese tribute-bearers. The whole establishment is in ruins. One of the overseers, a Chinese, conducted me to the apartment of the chief ambassador, whom we found smoking opium, and so stupefied as to be almost incapable of conversation.

FLOGGING with the rattan is the most common punishment in China. It is adjudged and inflicted by the lowest officers or servants of the police, with the utmost despatch, and without the least regard to any formalities of time or place. A poor ignorant person led on by his vices becomes a bankrupt; then driven by hunger he has recourse to theft and robbery to obtain food; the officers of the police seize him, and perhaps while his booty is still with him, pinion him, strip off his jacket, if he chance to be so clad; then with a chain or cord about his neck or arms, and a soldier before him beating the gong, and another behind him with a rattan beating his bare back, he is marched through the streets and market-place to be a terror to evil doers. Within the last few days I have seen several persons flogged in this way. One I saw to-day so beaten that the blood ran down to his heels.

PUPPET SHOWS.—Two of these have been exhibited in the streets during the present week; and among all the dumb shows and sing-songs of the Celestial empire, none are more dull and stupid than these puppet shows. Their managers select a place which is likely to be frequented, there erect a temporary stage, and commence their exhibition for the amusement of boys and idle vagrants. The shows are a mere exhibition of children's toys.

A FEAST.—Loopan, if I have been correctly informed, is held by the Chinese to be the patron and protector of those who work in wood and stone. They venerate him as the inventor of their crafts, and celebrate the anniversaries of his birth with processions and feasts. Walking with a friend along one of the retired streets just at sunset, we came to a house where a pavillion or covering had been thrown over the street, so as to afford both shelter and shade to those who might chance to be at the door. We perceived at once, as we came near the house, that the inmates were in a merry mood. Though entire strangers to them all, some one in perfectly good humour, civilly and urgently invited us to walk in. We did so, and found ourselves among a crowd of sturdy carpenters and bricklayers, all at work right lustily. The two principal apartments were supplied with two or three rows of tables; round each of which six, eight, or ten were seated. The chandeliers were lighted up; and the wines were circulating briskly. The assembly was as noisy as it was merry; but having no disposition to join in the festivities, we wished them health and left them in the midst of the feast.

HOUSE OF MOURNING.—We passed but a few doors, after leaving the

house of feasting, before we heard the voices of weeping and lamentation. When we came opposite to the door we unconsciously paused for a moment. The door of the house was open, but a screen before it prevented us from seeing the inmates. One of the neighbours, who had also stopped at the door, told us that the funeral of the deceased was to take place at an early hour on the following morning. The cries and howlings of the mourners were dismal, and can only be conceived by those who have heard them.

GRINDING AT THE MILL.—Often when passing through the streets I have witnessed the operation of grinding grain. The mill commonly used consists of two circular stones placed horizontally, two or three feet in diameter. The lower stone is made fast in the ground or a floor; and the upper one is placed above it, on a wooden pivot, and is turned round by a handle or crank, made fast to the top or side of the stone. A hole, which with a tunnel, is made to serve as a hopper, is drilled quite through the upper stone, a short distance from the centre; through this the grain falls upon the lower one, and is ground by the friction between the two. I have generally seen these mills worked by men; and I have been informed that they are also worked by women, and in a manner not unlike that described in Sacred History, and which is now common in Palestine. To-day, while passing near the west end of the Factory-street, (sheih-san-keae,) my attention was arrested by the sight of oxen working at the mill. They were in the rear of one of the flour shops: I ask permission of the headman of the establishment to go and examine the operations. This was readily granted. There were nine sets of stones, worked by nine oxen; one ox at each mill. The stones were about four feet in diameter. Each ox was harnessed in such a manner that he was compelled to move round close to the stone. They were grinding wheat. The process of bolting was going on at the same time. This was done by human strength operating on a square sieve in a most awkward manner. One of the workmen told me that in the interior of the country they have water-mills for grinding grain. Since writing the preceding account, I had an opportunity of examining another of the establishments for grinding grain. It is situated in the same street, and not far distant from the other. I visited it after the workmen had finished their labours for the day, when some of them were washing themselves, while others were catching chow chow! The establishment extended from the street to the river, a distance of twelve or fifteen rods in length, but it was not one-tenth of that extent in breadth. It was furnished with eleven sets of stones and forty oxen: the oxen occupied a long stall at the lower end of the mill, and were eating chow chow, which consisted of coarse grass; that of the men consisted of rice and vegetables. The stones of



two of the mills were being repaired, the upper ones being turned off from the lower ones that their faces might be "pecked," or sharpened. The stones were of granite, and their faces were cut into grooves, which were divided into eight sections, and in such a manner as to give the grain a centrifugal motion as the stones move round. According to European notions it is judged best that the upper stone should be supported by an axis or some other contrivance, so that the distance between the two may be adjusted according to the fineness which it is to produce in the meal or flour. Among the Chinese no such machinery is deemed necessary; and the face of the upper stone is allowed to rest directly on that of the lower one; but the motion of the mill is so slow that by this bad construction no great injury is occasioned either to the stones or to the flour. All the grain that I saw in the mill was wheat, and of a very good quality.

LABOURERS STANDING IN THE MARKET-PLACE.—Early this morning, while picking my way among the tubs, baskets, temporary stalls, &c. which almost blocked up the street, at a market-place near one of the gates of the city, I suddenly found myself surrounded by a gang of coolies forty or fifty in number. Some of them were standing up; others were sitting down. Their only implements were bamboo poles, with short ropes attached to them. Some of them were shod with sandals made of plaited grass; and others were bare-footed. They were without hats or caps or any other kind of covering for their heads; and the only garments on their bodies were, a light pair of trowsers and a short frock or jacket; indeed only a few of them had jackets. They were all idle, except that their tongues were busy in joking, and in making remarks on those who were at the market or passing along the street. During the morning and even past mid-day, such gangs of men are often to be seen collected at the corner of the streets, market-places, and gates of the city. On enquiry I found that they are job and day labourers, formed into companies, having each their respective districts. They take the place of beasts of burthen; but claim the right of doing all of certain kinds of work which is to be done in the streets or landing places; where they exercise their jurisdiction. Their muscular power is sometimes very great, and they are the most healthy and robust class of men that I have seen in China. Their custom of "standing idle in the market places" is like that of the labourers mentioned in the Gospel of Matthew, the coolies whom I saw this morning were all standing idle "because no man had hired them."

## Naval Chronicle.

### WEST INDIA MAILS.

RETURN to an order of the Honourable the House of Commons, dated 7th May, 1840; for a copy of the instructions of the Lords of the Admiralty, for regulating an inquiry as to the comparative advantages afforded by different ports in the channel, as ports for the departure and arrival of the West India mails.

*“Admiralty, 20th May, 1840.*

“Sir.—The chairman of the Royal Mail Steam-packet Company having submitted to my Lords Commissioners of the Admiralty, that Southampton be fixed on as the port for embarking and landing the mails to and from the West Indies, &c., I am commanded by their lordships to request you will act as chairman of a committee, to examine into the claims of the different ports in the British channel, and to report to my lords which port may be considered most eligible for the purpose,—with regard to facility of access at all times,—and with reference to the internal arrangements of the post-office, for despatch in the transmission of the mails.

“Captain Drew, an Elder Brother of the Trinity-house, and Mr. Lawrence, assistant-secretary to the Post-office, have been requested to associate themselves with you in this inquiry; and, in the event of your undertaking the investigation, my lords wish the committee, in the first instance, to call on the directors of the Royal Mail Steam-packet Company, to place before them reasons for the selection of Southampton; and then to consider the memorials from any ports in the English channel, (notice of the inquiry being previously given to each port,) and if deemed necessary, to call before them any individuals who may wish to be examined as to the points set forth in such memorials.

“The committee are also to examine into the advantages of selecting any other port in the English channel, other than those which shall have come before them by memorial, and for such purpose shall give such public notice as they shall think necessary, and shall examine evidence if they shall think fit.

“The principal points for consideration, after having ascertained the draft of water of the vessels to be employed in the service, will have reference to facility of access at all times of tide, and safe moorings for the vessels in the harbour; as also the prevalence of winds and currents at all periods of the year, along the coast adjacent to the harbour.

“The committee are to consider all objections raised by the company, and will, as far as possible, consult the interests of the company, so far as they may be consistent with the public service.

“The facility of transmitting letters by land to the port of departure is an important advantage, which, if combined with naval security, should considerably influence the decision of the committee; but as the safety and regularity of the service will much more depend on naval consideration, the committee will give particular attention to this latter object.

“The report of the committee will decide where the mails shall be placed on board, the company having the power to start their vessels from any port they please, provided they can be at the port appointed at the hour agreed on.

“ I am, &c.

(Signed)

“ R. MOORE O'FERRALL.

“ Rear-Admiral Sir James Gordon, K.C.B., &c. &c. &c.

“ H. F. AMEDROZ, Chief Clerk.”

“**COPY** of the Report of the Committee appointed by the Lords of the Admiralty to inquire as to the comparative advantages afforded by different ports in the channel, as ports for the departure and arrival of the West India mails.

“*Admiralty, Somerset House, 6th August, 1840.*

“**SIR.**—In accordance with the desire of my Lords Commissioners of the Admiralty, signified in your letter of the 20th of May, 1840, to Rear-Admiral Sir James Gordon, and in fulfilment of the instructions contained therein, we, the undersigned, have prosecuted the desired examination, and inquired into the advantages respectively afforded by the ports in the British channel, for the efficient performance of the public service, undertaken by the Royal Mail Steam-packet Company.

“The points to which their lordships have been pleased to direct our especial attention in the investigation of this important question are to require, in the first instance, the reasons on which the chairman of the said Steam-packet company had submitted that Southampton be fixed on as the port for embarking and landing the mails to and from the West Indies, and then to examine into the claims of the different ports in the British channel, reporting to their lordships what port we might consider most eligible for the purpose, with regard to facility of access at all times, and with reference to the internal arrangements of the post-office for despatch in the transmission of the mails.

“We now beg leave to report, for their lordships’ information, that, the directors of the Royal Mail Steam-packet Company having furnished the committee with a statement, setting forth the contemplated advantages which they considered would result to the public, and to the proprietors whom they represented, by the adoption of Southampton, we proceeded to the coast, and visited, in the following order, the ports of Southampton, Portsmouth, Dartmouth, Plymouth, and Devonport, and the waters connected therewith; also, Falmouth, and Mounts Bay.

“From each of these places memorials had been presented to her Majesty’s government, and copies thereof had been furnished us for our guidance. The authorities of each port were previously apprized of our intended visit and examination, accompanied by a request that they would be prepared to adduce such evidence, either verbal or written, as they might consider essential in support of their respective memorials; and upon our arrival at each place, we made further communication to the gentlemen deputed to conduct the case on the part of the memorialists of the objects we had in view, and our readiness to receive any evidence, however extensive, which they might consider desirable to produce.

“Notwithstanding our previous practical acquaintance with these several ports and their localities, we, on this occasion, felt it our duty to examine most attentively their respective capabilities; and we endeavoured to elicit, by strict interrogatory of the witnesses, any points bearing upon the subject of our investigation which might have escaped our personal notice in past or present time.

“Throughout the whole course of our proceedings a deep interest was invariably manifested by the parties to whom the task of representing the alleged advantages of each particular port had been assigned; nor can we withhold this expression of our sense of their zeal and intelligence.

“The period of a week passed at Southampton, the same time at Portsmouth, four days at Dartmouth, ten days at Plymouth, including Devonport, and seven days at Falmouth—a large portion of which time was devoted to the reception of evidence—will, we trust, sufficiently testify to their lordships our anxious desire to obtain the fullest information upon every point connected with this investigation.

“Their lordships were pleased to authorize us to examine into the advantages of selecting any other port in the English channel than those which might come before us by memorial; but we have not judged it expedient to avail ourselves of this authority beyond a cursory survey of the harbour of Fowey, on

our return to the eastward from Mounts Bay, in her Majesty's steamer Meteor; and this port does not call for remark with reference to the subject before us.

"Upon our arrival in London, we addressed a letter to the chairman and directors of the Royal Mail Steam-packet Company, inviting them to lay before us any objections which they might have to offer against the selection of Portsmouth, Dartmouth, Plymouth, Devonport, or Falmouth, should it appear to us on a review of the evidence produced, that one of those ports was eligible for the contemplated purpose of a packet station. We have received from that company their reply, and we have given it our serious attention.

"Before we advise their lordships of the result of our investigation, or state the reasons on which that result is founded, we beg to offer a few introductory observations.

"We consider that while in this country the locomotive engine and its important uses continue to occupy the attention of men of science, and a redundancy of capital encourages the spirit of energetic enterprise, it is not unreasonable to suppose that a railroad may at some future period be prolonged to the S.W. land's end of England, and a harbour constructed in that neighbourhood, where the mails may with facility be put on board and landed from the largest steam vessels; and provided such a railroad and harbour now existed, we should unhesitatingly recommend the latter for their lordships' adoption, assured as we are that expedition and security are more attainable by railroad conveyance than by steam navigation. The expression of this opinion will at once convey to their lordships that we consider a western port most desirable for embarking and landing the mails to and from the West Indies, and upon which we shall hereafter further observe.

"We believe the requirements of a port for a packet station to be comprised, chiefly, in its adjacent headlands, as landfalls; the light or lights exhibited thereon; its comparative freedom from outlying dangers; the depth of water in the entrance to and within the harbour, regardless of the state of tide; the rise of tide, the strength of its stream; and most especially the tranquility of its waters.

"The advantages of a quiet and not much frequented harbour must be obvious; and we think that many objections present themselves to the selection of a large naval port as a packet station, subject as it is, not only to the great national maritime operations, but, in some cases, to the influx of shipping seeking shelter therein, and which would necessarily occasion much obstruction to the departure or arrival of the mail steam-packets.

"Their lordships may rely that no occasion has been allowed to escape us of insuring to the parties advocating the claims of the several ports the fullest opportunity of tendering unlimited evidence upon their respective merits; and we have exercised a patient diligence in our inquiries into their capabilities, and into the localities of the towns immediately connected with them.

"Having, therefore, given the fullest consideration to all that has been adduced in support of the claims of Southampton, Portsmouth, Dartmouth, Plymouth, Devonport and Falmouth; and having most anxiously and deliberately viewed the whole question in its various bearings together with the concluding paragraph of their lordships' instructions;

"We beg to state our opinion, that Dartmouth will be found the most eligible port wherein the mails to and from the West Indies may be embarked and landed.

"In coming to this conclusion, it behoves us to state the reasons which have governed us in this selection; and in the endeavour to set forth the advantages which we consider Dartmouth to possess for the contemplated service, as they apply to the packets, the Post-office, and the public generally, we shall abstain from bringing it into direct comparison with any other port further than to exhibit their respective distances by sea and land from a given point, and the probable time that would be occupied in the transmission of the mails to and from two great centres—viz. London and Birmingham; the result of which we find to be not unfavourable to Dartmouth, independent of the superior qualifications we deem that port to possess.

"This comparison, in a tabular form, we append to our report; but it is proper to premise, that in the selection of a western port as a station for the delivery and reception of the West Indian mails, in preference to one that may be situated more to the eastward, we have taken into account the greater degree of uncertainty which is attached to the transport of mails by steam vessels compared with that in which a coach or a railroad becomes the medium of conveyance; and as respects the eastern port, it should be borne in mind, that the correspondence for and from the western part of our shores would be subjected to a carriage, in both cases, by sea and land, very wide of their destinations.

"That, as already adverted to, if we regard London and Birmingham as two great centres of communications, the former in connection with the south of England and the continent of Europe, together with its own vast importance, and the latter in reference to our great manufacturing districts, the north of England, with Scotland, and with Ireland, it becomes obvious that the conveyances from a western port towards these centres would have to pass through an extensive and populous country, and many towns of much consideration, which, independent of their individual importance, have for the most part, "forward" post-offices, and are thereby constituted fresh centres for the distribution of correspondence in their own vicinity and the surrounding country.

"In illustration of our opinion upon the requirements of a port for the present purpose, and upon the possession of these by the port of Dartmouth, we have to remark, that the bold headlands of the Start, a few miles S.W., and of Berry Head, a lesser distance N.E., render the approach to that port easy, and its precise situation readily distinguishable.

"It is true that at a short distance without the Start Point the Pear Tree rocks lie; and at a space which forms a wide and sufficiently free passage between them the Skerries are situate; but we do not regard these as presenting any important interruption to the navigation in this quarter, a bearing of the Start light being available for the purpose of clearing them by night; and the least experienced pilot need not apprehend danger from them by day; yet we know not any reason why steamers in their passage to Dartmouth from the westward should not pass outside the Skerries, and consequently the Pear Tree Rocks; in which case, little account need be taken of either.

"As respects the Berry Head, it is well known to be so steep and abrupt in its feature, that a vessel of large dimensions may lie alongside of it, and be afloat.

"In the entrance to Dartmouth from the westward, the Home Stone is in the way; and in approaching from the eastward the ledges must be avoided; but upon these dangers we need only state our conviction, that with no great amount of lighting and buoyage, the harbour may be rendered most easy of access to steam vessels by night and by day. Any other port which might have been chosen by us would have required the same assisting guides, and some to a much greater extent.

"There is an abundant depth of water in the Channel to and within the harbour of Dartmouth; and from the contracted state of the former, vessels when at anchor in the latter, are, in the most comprehensive meaning of the expression, "land-locked." The rise of tide is ample, and the strength of its stream moderate.

"Under all circumstances, the waters of Dartmouth cannot but be perfectly tranquil, so that in the most tempestuous weather the mail steam-packets would not thereby be prevented from embarking and landing the mails, or from receiving coals from floating depots, moored either above or abreast the town, or from wharfs carried out from either shore; but for this latter purpose the west side appears most eligible.

"At a short distance above the town, on the west side of the river, there is a capacious dry dock, together with an extensive ship-building yard.

"These are now untenanted, and in a state of some dilapidation; they are, however, susceptible of re-instatement, and in their adaptation to the purposes of a dockyard may be rendered importantly useful.

“Dartmouth harbour, from its narrow entrance, and the frequent adverse direction and unequal force of the wind, occasioned by the surrounding high lands, offers difficulties of access in heavy weather to sailing vessels, and they are, therefore, prevented resorting to it as a place of refuge.

“To steam vessels, however, these circumstances offer no impediment, and the absence of other vessels is of much importance to the uninterrupted execution of the mail steam-packet service.

“We have thus stated the considerations which induce our recommendation of Dartmouth as the most eligible mail steam-packet station; and we now beg to draw their lordships' attention to the reasons upon which we have adopted a certain basis for calculations as to the departure from and the arrival of the packets at a port, and the transmission of the mails to their various destinations.

“We apprehend that the power of the royal mail steam-packets will enable them to be navigated, under ordinary circumstances, upon straight lines between the ports of departure and arrival, so that the line from the port outwards to Barbados will differ from that followed in the return passage from Samana to the port of arrival; and the direction of these lines will also be considerably affected by the situation of the packet station in the British channel.

“Referentially to a berth off Ushant, in passing that island either outwards or inwards, it is doubtful whether any two individuals would agree in the selection of such berth until the station in the English channel shall have been determined.

“The berth, therefore, from which we have deduced our calculations, namely 50 miles N. by W. (magnetic) from Ushant, may in some degree be regarded as imaginary.

“We allow to the royal mail steam-packets, on an average speed of eight miles, to the mail coach ten miles, and to the railroad carriage twenty miles per hour; if any acceleration be conceded to the first mentioned conveyance, the third must be allowed the like advantage, it being possible that the speed of these two may be increased; but if so, we think the excess of the increase will be in the railroad carriage.

“The sorting of the letters and making up the mails for shipment, and the sorting and preparation for transmission inland, will occupy the same space of time, whatever station may be selected; and we trust that such arrangements will be made by the Post-office, that no delay beyond the period necessary for sorting the letters shall occur in forwarding the mails, should their arrival take place at prescribed hours, either after or before the departure of the regular daily mail coaches.

“We have it in evidence that the largest mails seldom, if ever, exceed the quantity which a mail coach can accommodate, with its accustomed number of passengers.

“In the statement to which we have referred as an appendix, we have taken railroad credit on two routes leading to London, viz., from Southampton to London, and from Bridgwater *via* Bristol to London; and upon those lines, in connexion with Liverpool, to take the Southampton route to London, and from thence to Liverpool, and with the before-mentioned road between Bridgwater and Bristol, we assume the line to be continuous from Gloucester to Liverpool; but we are of opinion that the time will shortly arrive when the entire line between Exeter and Bristol will be complete and open to the public; and at no very distant period the projected lines of railroad between Bristol and Gloucester may be effected; in which case or cases the merits of a western port as a packet station will be considerably augmented.

“We have the honor to be, sir, your most obedient humble servants,

JAMES A. GORDON, Rear-Admiral, Chairman  
 RICHARD DREW, Elder Brother of Trinity-house  
 THOS. LAWRENCE, Assist. Sec. General Post-office.  
 M. DIXON, Commander R.N., Secretary.

*B. More O Ferrall, Esq., &c. &c. &c.*

*Admiralty, Somerset House, August 11th, 1840.*

"Sir,—The instructions of my lords commissioners of the Admiralty, conveyed to us in your letter of the 1st of June, 1840, directs us to inquire and report, for their lordships' information, as to the best port of arrival and departure for contract steam-vessels of 300 or 400 horse-power, employed in the conveyance of her Majesty's mails between England, Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, with reference to any future contract which may be made for this service at the expiration of the existing one.

"We now beg leave to report, for the information of their lordships, that the merits of the harbour of Dartmouth, as set forth in our reports of the 6th and 10th instants, have again influenced our decisions in this more recent examination; and we are hereby induced to recommend it as the best port in the English channel for the departure and arrival of steam-vessels employed in the conveyance of her Majesty's mails between England, Vigo, Oporto, Lisbon, Cadiz, and Gibraltar.—We have the honor to be, &c.

(Signed)

JAMES A. GORDON, Rear-Admiral, Chairman.

RICHARD DREW, Elder Brother of Trinity-house.

THOMAS LAWRENCE, Asst.-Sec., General Post-office.

M. DIXON, Commander, R.N., Secretary.

*R. More O'Ferrall, Esq., &c. &c. &c.*

#### APPENDIX.

"Assuming that the mails be conveyed from Dartmouth to Bridgwater by mail coach, and from thence to London by railroad, or *vice versa*, and that the railroad is available between Southampton and London; and, as respects Birmingham and Liverpool, the mails be forwarded from Southampton, to those places by railroads; from Dartmouth to Bridgwater by mail coach, thence to Bristol by railroad; from Bristol to Gloucester by mail coach, and from thence to Birmingham and Liverpool by railroad, or *vice versa*; the comparison between Dartmouth and Southampton, as ports for embarking and landing the West India mails, will stand thus—viz:—

As relates to the transmission of the mails to London from Dartmouth or Southampton, the comparison will be as follows; viz.—

	Mls.	Fr.	Hs.	Mn.
From the given berth off Ushant to Dartmouth	113	—	14	8
Dartmouth to Bridgwater	73	4	7	21
Sorting at Exeter	—	—	—	30
Transfer from mail coach to railroad	—	—	—	30
Bridgwater to Bristol	33	—	1	39
Transfer to Post-office, and sorting	—	—	1	—
Bristol to London	117	3	5	52
Transfer to Post-office	—	—	—	—
Time occupied between given berth off Ushant and London <i>via</i> Dartmouth				31 35
From the given berth off Ushant to Southampton	204	—	25	30
Southampton to London	75	6	3	47
Transfer to Post-office	—	—	—	35
Time occupied between given berth off Ushant and London <i>via</i> Southampton				29 52
Time occupied between berth off Ushant and London <i>via</i> Dartmouth				31 35
Ditto ditto <i>via</i> Southampton				29 52
In favour of Southampton				1 43

As regards Falmouth and Plymouth, in comparison with Dartmouth, it will stand thus:—

If to Falmouth we subtract a difference in the sea distance of 47 miles, or in time . . . . .	Hs. Mn.
And add 82 miles mail coach, or in time . . . . .	6 —
	8 —
Leaves in favour of Dartmouth . . . . .	2 —
And if to Plymouth we subtract a difference in the sea distance of 16 miles, or in time . . . . .	2 —
And add 15 miles mail coach conveyance, or in time . . . . .	1 30
Leaves in favour of Plymouth . . . . .	— 30

	Mls. Fr.	Hs. Mn.
From the given berth, 50 miles N. b. W. (magnetic) off Ushant, to Dartmouth . . . . .	113 —	14 8
Dartmouth to Bridgwater . . . . .	73 4	7 21
Sorting at Exeter . . . . .	— —	— 30
Transfer from mail coach to railroad . . . . .	— —	— 30
Bridgwater to Bristol . . . . .	33 —	1 39
Transfer to Post-office, and sorting . . . . .	— —	1 —
Bristol to Gloucester . . . . .	35 6	3 34
Transfer from mail coach to railroad . . . . .	— —	— 40
Gloucester to Birmingham . . . . .	51 —	2 33
Transfer and sorting . . . . .	— —	1 20
Birmingham to Liverpool . . . . .	97 2	4 52
Transfer to post-office . . . . .	— —	— 10

Time occupied between the given berth off Ushant and Liverpool *via* Dartmouth . . . . . 38 17

From the given berth off Ushant to Southampton . . . . .	204 —	25 30
Southampton to London . . . . .	75 6	3 47
Transfer to Post-office—sorting and re-transfer to London terminus of Birmingham railroad . . . . .	— —	2 —
London to Birmingham . . . . .	112 —	5 36
Transfer . . . . .	— —	— 30
Birmingham to Liverpool . . . . .	27 —	4 51
Transfer to Post-office . . . . .	— —	— 10

Time occupied between berth off Ushant and Liverpool *via* Southampton . . . . . 42 24

Time occupied between berth off Ushant and Liverpool *via* Dartmouth . . . . . 38 17

In favour of Dartmouth . . . . . 4 7

THE SHIP MERMAID.

SIR.—Herewith I have the pleasure to forward you a detailed narrative of the mutinous conduct of the Company's recruits on board the ship Mermaid, which will clearly shew the necessity of obtaining some more correct and efficient system of preserving naval and military discipline



on board all vessels conveying troops, especially upon a long voyage. In my humble opinion the fault in the case referred to, was principally owing to *leniency at first*, which generally ends with *severity at last*. A lax state of order and regularity in the controul of the recruits, led from one act of irregularity and insubordination, until the evil reached that crisis which might have been attended with very serious consequences.

There are some suggestions conveyed in the narrative which are worthy of observation, and I hope salutary measures will be adopted as shall prevent the occurrence of such practices on board every ship hired for the purpose of conveying troops to India. If there are not sufficient military officers embarked with recruits to convene a Court of Enquiry, or a Court Martial, the senior-officer in charge, should be empowered to claim the aid and assistance of the commander and chief-officer of the ship; and the first attempt to violate a well defined system of discipline and good order, should be deliberately tried and strongly coerced.

Independent of commissioned officers, there should be several old soldiers of approved character to serve as sergeants and corporals on board every ship with recruits, but at present a number of raw lads freshly enlisted, and ignorant of every notion of restraint and forbearance, are launched on a new life, and have no experienced or practical guides to lead them, or instruct them, and a long voyage affords ample time and opportunity for unruly spirits to riot, plunder, and revolt. The disgraceful occurrence on board the *Mermaid* is by no means a solitary instance of that extreme insubordination which prevails on board ships with recruits, and all commanders agree as to those preventive measures which are necessary to ensure and preserve a better system.

In extreme cases, it is the bounden duty of commanders of vessels to assert their own power and authority, there can be but one commander embarked in the same ship, he alone is responsible for the lives and property entrusted to his charge, and when a spirit of insubordination displays itself, whether amongst soldiers or seamen, it behoves him to insist that order should be restored, and the well being of discipline which involves safety and protection, shall be maintained.

But as it is of the highest importance that a mutual good feeling and understanding should always prevail between the military officers and the commander of the vessel and his officers and crew, those well defined rules and regulations which were enforced on board the ships in the Hon. Company's late Maritime Service, should be reverted to and renewed, inasmuch as they forcibly relate to those essential points which enjoin a cordial naval and military co-operation for the welfare and preservation of health, comfort, and good order.

There is another subject connected with the safety and security of commerce to which I beg leave to urge your attention, viz. the dangerous and inexcusable use of lights, and careless practice of stowing and broaching spirits on board ship, this question is discussed and exemplified in the *Madras Spectator*, which I also send you.

I have the honor to be, Sir, yours, &c.

CHRISTOPHER BIDEN,  
Late Commander H. C. M. S.

To the Editor of the *Nautical Magazine*.

P.S.—The recruits who were brought on shore as prisoners from the *Mermaid*, were tried, convicted, and sentenced to several periods of solitary confinement according to the crime proved against the greatest and least offenders of the party. The Major-General commanding the forces, confirmed the sentence of the Court-Martial, but declared his opinion, that the punishment awarded was much too lenient.

*Madras, 9th May, 1840.*

**BETWEEN** the hours of nine and ten o'clock on the evening of the 25th of December, 1839, several recruits came aft and knocked at the cabin door, requesting a glass of grog it being Christmas, and they would be happy to pay for the same; the request, of course, was not granted, especially as they had already been indulged with an extra allowance of porter, and to those who preferred it, spirits in lieu. For a short time they retired inurmuring, then returned and persisted in demanding it, upon payment: the impropriety of their conduct being pointed out by Capt. Neeve, they retired below. At about 1 a.m. on the morning of the 26th, Mr. Sawell, the officer of the watch, reported that the after hatches had been taken off, when Capt. Sedgwick, Capt. Neeve, Lieut. Burt, myself, and the rest of the officers, having armed ourselves, took a lanthorn and proceeded to the after hatchway; having gone down the ladder we threatened to fire, if those below did not answer, thinking to intimidate the scoundrels; but soon found they were determined to resist, as an assault was soon made by some men on the lower deck, attempting to throw us into the hold, but not succeeding they began pelting us with broken bottles, tin pots, mess kids, &c., using the most threatening and horrid language; during the scuffle one of Capt. Sedgwick's pistols went off, which was only loaded with blank cartridge, thinking intimidation would have the desired effect, but of course did no mischief; the rush then became so great that we were obliged to retreat up the hatchway, Capt. Neeve, and myself being the last up; we had just reached the top of the hatchway when the ladder was pulled from under us, I received a severe cut in the knee, and had hardly got on the quarter-deck when four of the principal ringleaders surrounded me, one of whom collared me, at the same time I felt something running down my back, which I thought was blood, but afterwards found it to be coal dust, he having previously been pelting the crew with large lumps of coal, I presented my pistol to his head and snapped it, but it did not go off, I then had recourse to my cutlass, and with the assistance of the sailors drove them forward; in the scuffle I had my left pistol snatched out of my belt by one of the principal ringleaders, who cocked and presented it at my head, but it was fortunately knocked out of his hand by one of the corporals, and delivered back to me. James Carroll, one of the officers' servants, also saved my life, by warning me of my danger, when Dennis Connel, also one of the principal ringleaders, was in the act of lifting his hand to stab me with a case knife. We then thought it advisable to retire to the poop, the rush now becoming great, and the recruits having succeeded in obtaining some of our boarding pikes which they used as formidable weapons of assault: feeling anxious to spare the effusion of blood we accordingly retired, when the scoundrels taking advantage of our prominent situation, began pelting us with missiles of all descriptions—iron belaying pins, large coals, hog-sty, ladders, &c. A large coal aimed at Capt.

Sedgwick only grazed his shoulder, but unfortunately struck (Kingsbury,) a seaman such a severe blow on the nose as to break it, and make a frightful gash, we all received several blows, but none of much consequence. After some of the most riotous went below, the captain, officers, and crew remained on deck all night under arms; and about 5 A.M. Capt. Neeve called a parade, and read to the men extracts from the Articles of War, and Mutiny Act; and then demanded of them the names of the ringleaders, and pointed out to them how thankful they ought to feel, that so much forbearance had been shewn to them without bloodshed.

In consequence of secret information received during the day of the 26th of December, and from which it was discovered that there was a conspiracy hatching, to take the ship from us, but on the night of the mutiny had not been sufficiently matured, it was deemed prudent to call a general meeting of the officers on board, for the purpose of taking into consideration the best measures to be adopted for the better preservation of the ship, and the lives entrusted to our charge, the urgency of the case required that Capt. Sedgwick, should take the chief command, Capt. Neeve undertaking to act under him, and enforce all orders he might deem it necessary to issue. At the meeting it was thought advisable for the well being of the ship and of the lives of those on board, to place the ringleaders of the late mutiny in confinement, "for the following reasons."—"First, Notwithstanding the greatest forbearance had been shown to the mutineers during the night of the mutiny, from the circumstance of many of them being in an intoxicated state, originating from the wine they had stolen from the hold, and afterwards drank, yet they did not appear to appreciate our lenity and forbearance. *Secondly*, During the afternoon of yesterday, several of them were heard to say, that they would make another attempt to break open the hatches during that night, in consequence of which report, the whole of the crew, with their officers remained under arms (upon the poop) all night. *Thirdly*, On the evening of yesterday, they were also heard to say, that if we did not keep a sharp look out, they would take the ship from us before two days had elapsed. *Fourthly*, That when forward they threatened to throw two of the seamen overboard for having taken part with their officers. *Fifthly and lastly*; that the captain and officers of the ship had their lives threatened individually." Resolutions to this effect were signed by Capt. Sedgwick, Capt. Neeve, Lieut. Burt, myself, and the other officers of the ship; also, at the above meeting a parade was ordered, and the following measures finally resolved upon; namely, that the whole ship's company should be mustered upon the poop deck, armed with firearms and cutlasses; and so stationed as to make a formidable and efficient show; at the same time that the detachment of recruits should be drawn up on the starboard side of the ship, and the better disposed amongst them called out, formed into a guard, and placed under the command of Lieut. Burt; all being settled, Capt. S. took his station in front of the poop, and addressed the men, nearly as follows; "Perhaps many of you are not aware, that for the time being, I hold a magistrate's commission upon the high seas, to act as a judge, and that being placed in a most trying situation, I deem it incumbent on myself to use the utmost circumspection, as the property under my charge is of great value, he

then read a few extracts from the "articles of war," and the "mutiny act," also a copy of the resolutions passed by the officers, stating it to be his determination to place the whole of the ring-leaders in confinement, he then called upon those who did not then wish to be shot, or hung, upon their arrival at Madras, to give him their assistance, and those who did not do so he should consider as mutineers, and that their blood would be upon their own heads. After which, he called over the names of the different ring-leaders,—each separately, being fourteen in number, and ordered that they should deliver themselves as prisoners to Lieutenant Burt, who consigned them one at a time to my charge, when they were immediately placed in irons.

I am happy to say our formidable appearance had the desired effect, as no attempt at rescue was made. After the ring-leaders were thus disposed of, Captain S. addressed the men of the detachment, cautioning them to behave well in future, as he to a certain extent had put the ship under "martial law," that he did not wish to deprive them of their amusements, but at the same time that none of them would in future be allowed to come abaft the mainmast, except those on guard. After which, he thanked those men who had come forward to assist us, although happily he had not occasion for their services. Captain Neeve then undertook the arrangement of his guard, and we placed our men under strict discipline, by putting them in watch and watch, and making every person belonging to the ship keep one, including servants and petty officers, and by night mounting four sailors (armed,) to keep watch over the prisoners, and two by day. Captain Sedgwick, Captain Neeve, and Mr. Ratsey, 3rd officer keeping the first watch. Myself, Lieutenant Burt, Mr. Bragg, midshipman, and the boatswain, the middle watch; and Mr. Sawell, 2nd officer, Mr. Jeffery, 4th officer, together with Dr. Wade, and Mr. F. Sedgwick, the morning watch. Captain Sedgwick at the same time issued the following orders: That no officer on duty was to be without his fire arms, night or day: That the men on watch were to have cutlasses by night, and the watch below were to sleep in the cuddy with their cutlasses alongside of them. In the first watch it was reported that a party were getting up to attempt a rescue, however the night passed over quietly. About noon the next day, we boarded a Dutch vessel bound to Batavia, for the purpose of getting leg irons, of which we procured four, she having no more on board.

Up to the date of this letter every thing has gone on quietly, the spirit of mutiny seems to be completely stifled, still every night the ports on each side the poop are secured, to prevent the fellows attacking us astern, or in the rear, as military gentlemen would express it. The incessant rain we have had lately, together with the extreme heat, have almost rendered the cuddy untenable.

Having now given you an account of the mutiny, it will be as well to take a general view of the voyage, and as I have no doubt the whole of the transaction will be laid before the directors of the Honourable East India Company, I will endeavour to point out the glaring defects of the system at present adopted for sending out their recruits. If I can only be instrumental in drawing their attention towards this subject, so as to confer a benefit on my brother sailors, I shall be amply repaid.

We were getting on extremely well till just before Christmas, Capt.

Neeve's conciliating manner having no doubt kept off the rising storm. The men had their own way too much, and as for rules and regulations of the ship they were set at nought, for without punishment of some kind, it was impossible to get them enforced; our greatest dread the whole voyage was, that the hatches might be opened, to prevent which every precaution had been taken, yet there had been two previous attempts, but both unsuccessful. The proportion of Irishmen was too great, they were constantly bullying the English, to such an extent did they bully them, that I am told many protestants were afraid to own their religion. Affairs were altered after the mutiny, when we proclaimed martial law punishments commenced, the men appeared to be happier, many of them said they could sleep in peace now that the ringleaders were confined. It is a pity, a just but strict discipline should not be kept up from the commencement of the voyage.

From evidences collected which I have, and will at some future period send for your information, it seems there was a spirit of mutiny existing, and a plan about to be arranged for taking the ship, but they were evidently not prepared on the night that the hatches were opened, and although resistance was made, it was partly in consequence of their not being prepared, that saved us the necessity of shedding blood. As we observed several of those who were afterwards placed in irons endeavouring to get the most riotous below, with a view no doubt of blinding us, till a better opportunity occurred; that was the cause of our acting so much on the defensive, while the precautionary measures afterwards adopted stifled any future attempt. It is a well known fact, men's minds are apt to brood mischief when unemployed. To obviate this, I wish to point out a few alterations which might take place when sending out Company's recruits, although it may be attended with a little more expense, still it will be economy in the end; for I maintain that in a well concerted conspiracy, if the sailors were to join, it would be doubtful whether the officers got the upper hand, and quite impossible, should the men know where to get the arms. In sending out 150 men, I should suggest, there ought never to be less than three officers, who should take it by turns to keep watch night and day, there should also be at least ten or twelve old disciplined sergeants, and corporals, who should be divided with the men, in three watches; those on watch should be made to assist in the working of the ship, (not that they are actually wanted, for every ship going to India is supposed to have sufficient crew on board to work her,) but to keep their minds employed; for as was the case with us, after the novelty of the voyage had worn off, the men got so lazy that they would scarcely get on their legs to assist in setting a topmast studding sail, except Captain Neeve was on deck. I would have this regulation strictly enforced with slight punishments, as stoppage of beer, &c., as it is of the first importance to keep their minds employed.

As regards punishments, I think every commanding officer should be allowed to use his own discretion, punishments are necessary on shore, how much more so must they be on board ship. I am no advocate for corporeal punishment, it is better avoided if possible, it does the person but little good who receives it, and hurts the spirits of those who are looking on; except of course in some cases when it is absolutely necessary. I should suggest, however, instead, that when chartering a ship,

the Hon. E. I. Company should have a place allotted as a black hole, the men to be placed there in irons, or not, as the case required. All regulations the commander of a ship wishes to adopt, should be sent to the Company for their approval, prior to sailing; and if passed, the commanding officer should have them enforced. I would also suggest that the books sent on board for the use of the troops should not be issued till half the voyage was over. A fidler, drummer, and fifer would be excellent additions; for the bad fiddle we had on board, kept the men amused for the greater part of the voyage. I am likewise of opinion that a pint and a half of porter is too much (daily,) one pint is quite sufficient for men having nothing to do.

I have now nothing more to add, but that the prisoners are awaiting their trial, pending a reference to the Governor-general of India, and I sincerely hope it will not detain the ship here long.

(*A true account.*)

(Signed)

CHIEF OFFICER.

JAMES SEDGWICK, Commander.

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### MERCHANT SHIPPING.

SIR,—Having so frequently read in the columns of your valuable Magazine, and also in the "Shipping and Mercantile Gazette," of the many shipwrecks on our coast, and of ships foundering at sea, by which so much property is totally lost, and so many valuable lives sacrificed, and the zeal you generally show in laying these disasters before the public, in your columns as they come under your notice. As I think it is for the benefit of the shipping interest generally, and all those concerned in it, I now beg to call their particular attention as to the cause of a ship suddenly springing a leak at sea, and making so much water that the pumps are not able to keep her afloat, and the crew obliged to take to the boats, as the only chance of saving their lives, sometimes in so much haste, as not to be able to save a stitch but what they stand in, and sometimes to see her go down a short time after quitting her.

Now, Sir, though we do often hear of these sad disasters, I never can find that any inquiry is ever made as to the cause of these dreadful calamities, either by the Owners, Underwriters, or any society that has been formed for the protection of the shipping, or the seamen that navigate them. If the real cause of the above disasters are never known, no remedy of course can be applied. But it may be said, who is to call such inquiry? my answer is, the owners! if the ship is not insured; but if insured then the underwriters! If this were done, the true cause in all probability would be ascertained, as well as in other cases of shipwreck, and remedies sought for and applied. It is my humble opinion, that when a ship suddenly springs a leak as before described, it is in consequence of a butt-end giving way either in the bend of the bows or the quarter. If this should from inquiry, or by better judges than myself be considered the cause, would it not be advisable to pursue a different plan of securing them, particularly in small vessels, (say under 150 tons,) as where the ends of the planks meet on so small a timber the fastenings must be so near the ends of the planks as sometimes to cause them to split in driving them in, and must be also very

near the sides of the timber. Would it not be a better plan to have the planks scarfed across the timbers with two fastenings in the centre, which I think would be more secure than the present plan. It might be considered still more secure to have the planks scarfed across to two timbers, but that I must leave to better judges than myself. I have mentioned this plan to persons concerned with shipping, and the only answer I can get is "that it would be more trouble and consequently more expense." This reason I do not think sufficient for not trying it, if it is considered to be of greater security and safety to our smaller vessels, and last but not least, the lives of our valuable seamen. I do sincerely hope the above may meet the eye of some person that is capable and willing to make such inquiry, as sailors who are saved from their ships in such situations, would be most willing to give the necessary information.

In the case of the "Fortitude," that foundered off Milford, in the early part of last June in moderate weather, when all hands perished, according to the account in the Shipping and Mercantile Gazette; but in the Nautical Magazine, page 593, August, c.s. is opposite to her name; also, of the bark "Hero," lost off Bude, February 5th, c.s. is also opposite her name, when also all hands perished, but the latter was in a heavy gale. It appears that the crew took to their boat some time before the vessel touched the beach. There must have been some reason for so doing, but they were all lost.

Since writing the above, I have seen an account of the loss of the brig "Rochdale," William Kewley, master, that suddenly sprung a leak, Lundy Island, bearing S.E.b.S. nine miles, August 5th. The crew it appears took to the boat, and saved only a part of their clothes, and were picked up by the schooner "Gower," of St. Ives, who was not far off, when they saw the "Rochdale" go down with all her sails set: the crew were landed at Llanelly on the 6th. These cases certainly ought to be inquired into, and *this* is a good opportunity as all hands were saved.

"AN OLD NORTH SEA CRUIZER."

Our correspondent has touched one of the many rotten timbers of our Merchant Shipping, and that one lies in the very keel; it is well known to be the root of all evil called money. It would be too much expense to build a safe ship, but not so to build one for insuring. A butt end starts, the ship sinks, the seamen are drowned, and the money is handed over to the underwriter, who, if he loses on one, gains on one hundred, and there's an end of the matter, except that insurance is raised in proportion to loss,—a kind of sharpening at the expense of the whole country, sapping the very root of its power,—for if we can afford to lose property we can't afford to lose seamen. We hear of nothing about butt ends starting in men-of-war. Seamen are not drowned by whole crews in H.M. ships as they are in our Merchant ships, because that hydra-headed monster insurance, or in other words the money making system, is happily unknown among them. This subject has long since been the theme of many a page in the Nautical, as our tables of wrecks and others will shew, and if our correspondent will bring forward cases in point as they occur to his notice, he will be working in a good cause, and shall be heard in his turn,—but we tell him beforehand the cancer lies deep. With regard to the c. s. to which he alludes, we must plead the difficulty of getting at the truth in these matters, as in other occult sciences, which may be an additional inducement for him to assist us. The task which we have imposed on ourselves is a most difficult one, and we cannot expect to perform it properly even with crews or vessels. True it is, the former are too easily lost, and though a total loss, rather than a partial one, is desired by certain parties, the same vessel will be wrecked half-a-dozen times over before she becomes one.—  
ED. N.M.

## WRECKS OF BRITISH SHIPPING.

(Continued from page 503.—c. a. crew saved.)

VESSELS.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED	WHEN.
253 Albion	Sunderland	Kirkman	Hambro'	Sundrlnc.	Vogel S	Aug. 14
Africa		Hamond				July 2 by fire
255 Ann		Scott	Petrab'rg	Newcastl	Hogland	
Arab					Mobile	17th by fire
Arnes	Glasgow	Lawson		Hull	Vogel Sd	
Belmont		Young				
Brittannia						
260 British Far	Whitby	Blenkorn	St John	Dubln	Arklow B	July 13.
Brompton	Sunderland		Sundrlnc	Boulogne	Whitby	Ap. 15 cs.
Camden			Singapor	China	Mindane'	Dec. 16 cs.
Ceres		Bibben	Sheilds	London	Albro'	Aug. 17
Chase*	Newcastle	Brown	Hull	Petrab'rg	Baltic	May 12 cs.
265 Coronation					Carmar'	Aug. 17
Dorothy	Dundee	Fleming	St JnNB	Timbr C.	at sea	Jan. 29 cs.
Emerald		Neilson	London	St Vincent	Barbados	July 13
Emulous	Penzance	Strout	Llanely	St. Ives	St. Ives	July 19 cs.
Euterpe		Cuming	Marac'bo	Liverpool	Domingo	June 8 cs.
270 Falcon			London	Domingo	Anegada	cs.
Flora	St John NB	Cowing	Liverpool	Savana	Frying p.	Mar.
Harriet	Sydney				N. Zeel'd	Ap. 29
Helena	Halifax	Outeri'ge	Halifax	Jamaica	Cayman	June 5
Hope		Baddely	Tabl Bay	Algeo B	C. Recif	Mar. 11 cs
275 Lord W. Bentick		Ord		Bombay	Bombay	June 5
Lord Castlereagh					Bombay	
Mars		Windsor	Hamdr'g	Newfland	Vogel S.	Aug. 14
Mary			Isl. Man	Bristol	Beaumris	Mar. 4 cs.
Mary Howland					CayWest	Nov.
280 Matilda		Kirby	Jamaica	London	Caymans	Jan. 30 cs.
Methom Castle			Stettin	Liverpool	I. Skye	Aug. 9
Palestine					Looe str.	
Patriot			Singapor		Maurtius	
Ravensworth	Sunderland	Newman			Hindon	Sept. 1
Red Rover	Hull	Hare	Hambro'	Hull	Vogel S.	Aug. 14
Richard Bell	S. Sheilds	Millman	S. Sheild	Calcutta	Nicobars	Jan. 17 cs.
Quebec		Boyling	Quebec	Sundrlnc	Maincog'	8th
Shark		Green	Newfland	Liverpool	Scotland	7th Feb.
Success	Sunderland					Mar. 4 cs.

## ROCK OFF CAPE DE GATT.

CAPT. Toup Nicholas of H.M.S. Belleisle has made the following report of an important unknown danger off Cape de Gatt. Our seamen will be cautious how they pass the Cape.

On the 13th of August, when coming down the Mediterranean near

\* *Handsome Testimonial.*—On Thursday last a very elegant coffee and tea-pot were presented to Capt. Arrowsmith, of Sunderland, bearing the following inscription:—"Presented by Gee and Co., of Hull, to Captain John Arrowsmith, of the Canada, of Sunderland, as an acknowledgment for his kind assistance to Captain Dale Brown, and the crew of their brig Chase, which vessel was unfortunately lost on the 12th of May, 1840, on her voyage from Hull to Petersburg, by striking a piece of ice, and sunk about twelve miles from Nargen Island."—*Boston Herald*, July 22.



Cape de Gatt, and when I had stood inshore to get a fresher breeze, seeing the vessels near the land with much more wind than we had, we passed a sunken rock looking green *close outside of us*, when full a mile, and in my belief nearer a *mile and half* from the shore, than a mile, if not more.

I had the Admiralty chart in my hand at the time, and also the Admiralty book of directions, which I had just been reading to the master who was alongside of me on the poop looking out; the leadsmen were in both chains but could not get any bottom, and the signal men were at the mast-heads looking out for shoal and broken water, agreeably to my uniform custom when within five miles of any supposed danger. I had also just taken the bearings by Tofino's large chart, which placed us well clear of the rock as marked on it, and on the Admiralty chart at half a mile from the Cape. A few days afterwards, after I got to Gibraltar, I found an old book of directions for the Mediterranean, published in 1750, by *Mount and Page*, Tower Hill, giving a copy of "*Michelot's Mediterranean Pilot*," wherein I discovered the following remarks.

"To the S.W. b. S. from these white spots on Cape de Gatt, at about a little mile distance there lies a ridge of rocks, with very little water over them, but you may pass between the land and the danger, ranging along the point at discretion at two or three cables distance, or else keep out about four miles in the offing, because some say there lies ANOTHER DANGER about a league out to the S.W.b.S., there is likewise near the point of Cape de Gatt, a rock almost level with the water, which you must not come near."

The charts in this old book of directions lay down the rock above a mile and a half from the shore, whereas, the Admiralty charts, and Tofino, also place this danger within *half* a mile of the land, and when we were abreast of Cape de Gatt, we were nearer a *mile and a half* from it, than a mile, and the Admiralty direction book states, at page 22, "Cape de Gatt may be readily known by the *Torre de la Testa*, a watch tower on its summit, in latitude  $36^{\circ} 44' N.$ , and longitude  $20^{\circ} 13' W.$  At half a mile from the tower of la Testa, on the east, is the castle of *St. Francis de Paula*, or *Corrolete*, on a hill, which is perpendicular towards the sea; a lofty islet is close to it, with many steep rocks,—hereabout are many cross currents, which seem to be governed solely by the wind, and which add to the danger of the coast. *Among the latter is a rock of white marble, at half a mile south,  $4^{\circ}$  east, [south  $26^{\circ}$  east] from the castle, with only nine feet over it.* There is a passage between it and the shore, with six and seven fathoms, but it is not safe with a scant wind, unless to those perfectly acquainted with the coast."

Thus the rock we saw under water could not possibly be the one here referred to in the English book of directions, but I think it is most likely to be the ~~only~~ danger alluded to in the book directions, of 1750. Captain Boulbee, of the "*Jaseur*," will however, no doubt report fully upon these dangers at an early period, agreeably to my request to him to examine them without delay. Had not the easterly wind been freshened, I certainly should have shortened sail, and hove to, to have examined this rock at the time, but as I knew that I should meet the "*Jaseur*" at Gibraltar, I considered that Captain Boulbee would have

more time to search for this rock, and to examine the soundings round it accurately than we could have had, the "Jaseur" being on the Gibraltar station.

I should further state, that before the sunken rock was reported on our port bow, I had observed to those around me on the poop, that I was sure I saw with my spy glass, the water breaking on the known rock at about half a mile off the point of Cape de Gatt, and which I still feel confident that I did. We were steering W.N.W. to W.b.N. by compass, and had just got the fresher breeze for which I had stood nearer to the land. The old building, or Fort on Cape de Gatt bore about N.N.E. by compass, and the white mark in the rock to the eastward of the Cape, about N. ~~W.~~ b.N. by compass/variation just two points westerly.

X E.

That the white mark on the beach of the Cape is from this rock (supposed)

THE ARCHIMIDES.

SIR,—In your number for this month, and I think in one or two preceding ones, you have admitted some remarks upon the Archimides steamer, which I must be free enough, Mr. Editor, to say have found their way into the *Nautical*, contrary to the usual vigilant discrimination exercised in its management. The drift of the remarks alluded to, upon Mr. Smith's propeller, is to the effect, that although it may answer in smooth water, it can never do so at sea. Now, I am a totally disinterested party, but I have paid particular attention to the progress of the Archimides, and although I am far from stating positively that the screw is under all circumstances superior to paddle wheels, yet of one thing I am most certain, that if it has any advantages as a propeller, it must be in bad weather at sea.

It is somewhat odd, that the contributor of the remarks in your recent numbers, above referred to, should overlook the notorious fact, that the Archimides has made a voyage to Portugal,—has been round England, and across the German Ocean, upon all which occasions she has performed much the same, (certainly fully as well) as other sea-going steamers, and that in asserting (for nothing like proof is attempted,) that she is unfit for sea-going purposes, all this should be lost sight of, and a sort of proof given of her want of power in smooth water! namely, when she was opposed to the power of a steam tug in the river. The description of this trial has been much distorted, to say the least of it, facts have not been fairly stated, as regards the relative power of the two vessels, especially as that power is proportioned to the two vessels themselves.

It must be so clear that the advantage is in favor of the screw at sea, (admitting it to have sufficient power as propeller any where,) as it is always acting in its proper medium under water, however disturbed the surface may be,—that it is surprising how any one can choose to place the paddle wheels in comparison with it, when under their most unfavourable action in a heavy sea, one half the time neutralized,—or worse.

I will conclude by expressing my hopes, Mr. Editor, that you will allow these remarks, merely to call upon the public to allow fair play to "screw *versus* paddle wheels."

I am, &c.

"MERCATOR."

London, Sep. 1840.

To the Editor of the *Nautical Magazine*.

STEAM NAVIGATION.—It is remarkable that this science, did not for many years after its invention and application, make such progress as one would conceive its palpable merits and advantages entitled it to. It was not until the year 1828 that the Navy of England possessed a single steam-vessel, and in 1835 we had only twenty-one, of the aggregate of 3000 horse-power. From that date this species of force has multiplied greatly, and now amounts to nearly eighty, under the pendant of 11,000 or 12,000 horse-power. France has done her best to keep pace with us, having between forty and fifty steam-vessels afloat and building, but none equipped of more than 220 horse-power. By arming her packets she makes considerable display; but her resources for increasing this force on emergency are feeble as compared with our own, for the mercantile steam tonnage of the United Kingdom, progressing as it is in a prodigious ratio, presents the most stupendous element of Naval power (by giving facility of operations) that the world has ever witnessed. We recollect when the expedition for the attack on Copenhagen was projected, in 1807,—the completest and best-appointed expedition that ever England sent forth—although preparations were commenced in March, it was not until so late in the season as the 26th of July that the first division of the fleet sailed from Yarmouth Roads, leaving but little time to execute the objects of the campaign before the winter set in. Now England at this moment possesses such an amount of steam tonnage, (according to the last official returns published, 810 vessels, 157,840 tons, 63,250 horse-power,) that a portion of it could convey the necessary troops, with all the usual appendages, and tow a squadron of ships-of-war to the scene of action, in less than one quarter of the time occupied in the former expedition, should circumstances ever render it necessary for us to occupy the island of Zealand, or any post in the Baltic. The fact is, that steam navigation, not only as directly applied to vessels-of-war, but in aid of combined expeditions for sudden descents upon different points, enables the country possessing it in the greatest force to harass an enemy's coast with a small but well-appointed army, and to carry destruction to every town and village within a dozen miles of the sea, unless they are regularly fortified and garrisoned, or covered by large bodies of troops. It is stated by an old author, that “in the year 1647 the Dutch, with a fleet and but 4000 men on board, alarmed the whole coast of France, and obliged the French King to keep near 100,000 men upon the maritime coast, as not knowing where they would fix.”

If such was the case with vessels when movements were dependent on winds and tides, and whose operations were under such circumstances necessarily slow, how much more so it will be with the aid of steam, when, by means of vessels of light draught, heavily armed, not a boat will be permitted to pass out of gun-shot of the shore, nor a harbour left open for egress or ingress any day in the year.—*Naval and Military Gazette.*

The letter of a correspondent is then annexed, who, deluded by Mr. Parish's statements, appears to be ignorant that we have long since adopted pieces of the same capabilities as “Paixhans” for the armament of our war steamers, and also introduced them in ships-of-the-line and frigates. These are guns of eight and ten-inch calibre, for projecting shells horizontally.

## NEW LIGHTS AND BEACONS.

*(From the Shipping Gazette.)*

**THE GOODWIN BEACON.**—We are informed by our correspondent at Deal, that a Beacon has at length been erected on the Goodwin Sand, which, we have reason to hope, will be instrumental in preserving the lives of many valuable seamen, and a large amount of property, hitherto annually sacrificed. This Beacon has, we learn, been erected at the suggestion and under the superintendence of Captain Bullock, of the surveying vessel Boxer, and was constructed under the immediate inspection of Captain Boys, of the Royal Navy. We congratulate our nautical friends on this improvement, which has been too long a desideratum; and we trust we shall in a few days be enabled to furnish them with an official account of the position and bearings of the Beacon.

**SPURN NEW SAND FLOATING LIGHT.**—*Hull, September 10th.*—A new light vessel was on Saturday last fixed to her moorings on the New Sand, off the mouth of the Humber. She is a very fine vessel, coppered, and of the same tonnage as the old vessel, which had buffeted the storms of twenty years, having been placed on the sand in 1820, and only twice since brought to Hull for repairs. She is to be offered for sale. An alteration has been made in the light itself, which was formerly permanent, but is now revolving, appearing for half a minute and then disappearing for the same period. It can be seen at some distance further than the one which has been removed.—*Eastern Counties Herald.*

**ST. JOHN (N.B.)**—We understand that Cape Enrage Light-house, near the Head of the Bay of Fundy, is in full operation,—a plain white light.

**NOTICE TO MARINERS.**—A new lantern has been put on Cape Henlopen Lighthouse, lighted with eighteen lamps and eighteen large reflectors.—*Extract from the Delaware Gazette.* Masters of vessels having to pass on the Bahama Banks, are hereby notified, that there is a fixed light on the Doubleheaded Shot Keys, discernible eighteen to twenty miles in the night, and fifteen in the day. Several vessels have nearly been lost, in taking the above light for one on the Florida shore.

**EYEMOUTH HARBOUR LIGHTS.**—These Lights have been recently erected for the benefit of the fishermen frequenting the port of Eyemouth during the herring season. To those who resort thither from distant parts of the coast, and who are therefore less able than those belonging to the port to find it in a dark night, these lights are of special service. Last year, during one stormy night a Newhaven boat was very nearly lost from missing Eyemouth Bay. The advantage of the lights has been most signally proved this season, by having enabled the fishing boats to find the harbour at once, on two several occasions, when it was necessary to make for shore. The brightest of the two lights is erected on a post about twenty-six feet from the ground, and is seen at a distance of more than six miles. The smaller light is placed at the pier head, and whilst it indicates the entrance to the harbour, it is in such a position relatively to the other light as to afford a leading mark, when the lights are brought into one line, for the best passage into

Eyemouth Bay. The erection of these lights adds greatly to the importance of this port as a fishing station. They are found useful also to vessels not only trading with Eyemouth, but sailing along the coast, by distinctly informing them where they are, and enabling them, if necessary, to run at night into the Bay for shelter.—*Berwick War-der.*

### HURRICANE AT PORT ESSINGTON, WESTERN AUSTRALIA.

(*From the Sydney Herald of May.*)

On Monday, 25th November, 1839, Port Essington was visited by one of those awful hurricanes so common and destructive in the West Indies, Mauritius, &c. The day previously there was nothing indicating any extraordinary change, as commonly precedes these storms, either in the appearance of the heavens, or in the temperature. About seven o'clock in the evening, however, a squall from the southward worked gradually towards the settlement, and extended itself in a very heavy thunder storm, accompanied with most vivid forked lightning, with rain and wind. This continued for about three hours. The heavens were illuminated beautifully, there being scarcely a moment's cessation between flash and flash, and it appeared to issue from all points of the compass. The thunder almost instantaneously succeeded the flashes as the rain descended in torrents; gust followed gust so thickly that the whole scene was terrifically grand. When the fury of the elements was spent, the sky gradually became clear, but sheet lightning more than ordinary was seen during the night. On Monday the aspect of the heavens changed to a heavy lowering sky. A fresh breeze arose, with spitting rain—a certain precursor of an increasing wind. At eight the wind moderated, but the sky was still lowering, and threatened heavy rain. At noon the wind increased, rendering it dangerous to venture in a boat to the shipping. At five P.M., the wind increased to a strong gale, but not the most distant apprehensions were entertained that so awful an hurricane would succeed it. At eight P.M., it was blowing a heavy gale, and the barometer continued to fall; at ten the hurricane commenced, rendering the scene altogether fearful in the extreme. Trees were torn up, and falling about in every direction; large branches were carried by the force of the wind some hundred yards. Even the very stones themselves seemed animated and flying, as it were, from the fury of the hurricane. Every house in the settlement, with the exception of the officers' mess-house, store, and hospital, was blown down. Government house was thrown from the piles on which it was built, upwards of ten feet, and fell on the ground, without, however, much injury. Every person was looking for a place of safety, but none appeared within their reach—they were expecting every moment to be crushed to pieces by the falling of heavy trees. Some escaped most providentially; one person was actually pulled out from under the ruins of a house. It happened that no lives were lost, or material personal injury sustained. The harbour was one sheet of foam. Her Majesty's ship *Britomart*, was seen to drift before dark, and Her Majesty's ship *Pelorus* was riding heavily at her anchors. Both vessels were evidently preparing for the impending danger. From ten till daylight the hurricane raged with un-

abated fury. At midnight the wind changed from south to east, and in a few minutes afterwards, from east to north; blowing with redoubled effort, as if determined to root every thing out of the ground.

At daylight, the scene of devastation was melancholy in the extreme. The *Pelorus* was on shore on her broadside at Minto Head, having lost eight men including Mr. Keltie, gunner. Many of the ship's company, were up to their necks in water, and others were holding on by the weather rigging, the sea breaking violently over them. The church was blown down. All the houses, boat-sheds, armourer's shop, &c. were destroyed. Every boat in the colony, amounting to about twenty, were complete wrecks. The only boats left were two on board the *Britomart*. The pier with great quantities of provisions, tanks, casks, &c., was all washed away. The bananas, plantain, and all other kinds of trees and plants, were destroyed. The limbless trunks of a few trees were all that remained. Never could such a scene of devastation have been witnessed. Garden Bay, Mangrove Point, each participated in the surrounding ruin. Garden Bay was inundated, and the spars and boats driven a long distance inland. One well was filled up and strongly impregnated with salt; the water only became fresh after the wet season which followed. At Point Record the sea had made a clear breach; the tide is supposed to have risen ten feet higher than usual. The wells there were salt three months after heavy rains. The *Pelorus* parted her cable and went on shore soon after the commencement of the hurricane. All the bodies save one of the unfortunate men were picked up. The *Britomart* drove with the gale with three anchors ahead during nearly the whole time of the hurricane, and was seen at daylight out towards Spear Point, distant about a mile from where she was anchored, close to the *Pelorus* off the pier. The bottom being a soft tenacious clay, it was thought next to impossible that a vessel could drive; and at times vessels have been obliged to wait for the flood tide to weigh them by purchase. Since the hurricane not a bird of any kind has been seen; many were found dead the morning after it. In the settlement 8,000lbs. of biscuit were destroyed, and in the *Pelorus* about 5,000lb.; several bags of rice, and quantities of other provisions. Port Essington is now a perfect wilderness, and the injury done it will take no little time to repair; in fact; what has been done during the last eighteen months by 100 men is entirely destroyed.—*Perth Gazette*.

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#### AUSTRALIA.

THE following extract from a letter of a Naval Officer, containing an account of his journey from Sydney to Port Philip, will give our readers some idea of life in our New Australian Settlements.

IN consequence of the great drought, and six parties having preceded me with herds of cattle on the same route, I found the greatest difficulty to contend with, was a scarcity of food for the cattle; and having started with 700 head, I arrived with only 620, having been obliged to leave the rest on the road too weak to travel, with the exception of those killed for the consumption of my party, consisting of twelve persons: and amongst the number knocked up were nearly the whole of the working bullocks, (our supplies being carried by two bullock drays,) which obliged me to break in others from the herd to supply their places, by no means an easy matter under such circumstances.

These circumstances combined with the trouble and constant attention required in driving a large herd of cattle through a new country, admit but of little time for observation. In fact, I always slept in my clothes,—had seldom time to take any refreshment between daylight and dark, and was seldom off my saddle during that period; after which, came the nights' watching, in which I took my turn with the men, dividing the night into three watches, our custom being to collect the cattle up in a circle, with fires all round them.

In consequence of the weakly state of our cattle, from a want of food, we were four months on the road, a much longer period than I had anticipated, or provided for: we were therefore on short allowance a month before we arrived, and for the last fortnight subsisted entirely on beef and water, having no substitute whatever for flour or vegetables: excepting when, occasionally we found some penny-royal in the river, which we made into tea, and smoked the stem in our pipes; our tobacco being all expended with the other supplies.

On starting from New South Wales, I crossed the Murrumbidgee, at the crossing place of the Port Philip road, and kept the left bank to its junction, with the Murray and that part of the latter river which is commonly called the Hume, for the whole of this space, with the exception of the river flats, the country as far as the eye can reach is one vast desert of plain; destitute of herbage, and with the exception of a few stunted trees of the Eucalyptic tribe, and some salsolaceous shrubs, without a symptom of regulation. The soil is of a loose rotten description, in which a horse goes over his fetlock at every step, and must I should think in the rainy season be one vast swamp. For the whole of this space, there is not a single tributary falling into the Murrumbidgee, from the northward, with the exception of the Lachlan, the bed of which we found dry, and the country of the same barren description.

We now kept the left bank of the river Murray, a much more noble stream than the Murrumbidgee, and which viewed from some of those stupendous and almost perpendicular fossil cliffs, described by Captain Sturt, has a grand and imposing appearance. The predominant fossil in this immense and singular bed is the common oyster. The river flats are much more extensive than those of the former river; but the country northward as far as can be seen by the traveller, is for the most part extremely barren, being covered with a dense scrub, on deep coarse red sand. The thickness of this scrub, which is only varied by occasional fine ridges, combined with the heavy red sand, renders the travelling on this part of the route very irksome and arduous for the working cattle. After rounding the N.W. angle of the Murray, we still kept the river bank for thirty-five miles, when we struck westward through the dense scrub, separating it from the fine country laying eastward of the ranges of mountains which bound the plains of Adelaide on that quarter. We were obliged to camp the cattle one night in the scrub, and to travel all the next day without water, and when in the evening we found some in a deep gully, the holes were too small to admit of the whole herd drinking from them, the consequence was, that 200 head with two horses entered the scrub at this spot, and worked through it, making the river at the very spot they had left it. I was obliged, therefore, with two of the men to follow their tracks, we found where they had bedded one night in the scrub, and still following the tracks, we suddenly heard the voices of men driving cattle, and following the sound, we came on the road we had taken on leaving the river; and found a Mr. Toole just camping his cattle for the night. He had started from N. S. Wales a few days before us, and we overtook him when near the Darling, and we occasionally passed each other afterwards, interchanging civilities, and sharing our provisions until both parties had expended all; he however again had an opportunity of evincing his hospitable feeling, and regaled us with a damper, (unfermented bread,) informing us that a Mr. Mundy from Port Philip, with a herd of cattle had left them a few hours; having picked up our cattle making the river at the spot I had left it. I slept at Mr. Toole's camp that night, I started at three o'clock in the morning, making a direct course through the scrub for our own camp which I reached in the afternoon. I found Mr. Mundy's party encamped

close to my own, whom they had kindly assisted with flour, &c., but to my great chagrin, I found they had not picked up the whole of my cattle, there being 40 head with two horses still absent. I was therefore the following morning again obliged to enter the scrub, and reached the river in the evening, our horses getting very weak.

The next morning in seeking for our own we found about 100 of Mr. Mundy's cattle, they having played them the same trick. We therefore secured them in an angle of the river, and that evening we found the horses, which was fortunate, they being fresh, while those we rode were quite knocked up. The following morning we were joined by a gentleman and two men of Mr. Mundy's party in search of their cattle which we had found; on the fourth day we succeeded in finding all that were missing, and on the fifth we rejoined the main herd.

Three days travelling brought us into the beautiful, fertile and well watered district of mount Barker, and when we stopped to allow the the cattle to feed, the sight almost repaid one for all the hardships of the journey, as the luxuriance of the pasturage far surpassed any thing I had seen during an absence of six months from the colony.

We found the Darling almost stagnant, it is the only tributary running into the Murray from the northward excepting the Rufus, of which there are some doubts as to its being a river, some people alleging that it is merely the back water from the Murray. We travelled round it on dry land, but this is no criterion by which to judge, as several of our rivers in this country are in many places only a succession of pools, while in other parts, a continuous stream is running, and in fact these pools are not stagnant, but find a course under the soil which separates them. It is an odd circumstance that nearly all the creeks and lagoons in the neighbourhood of the Murray are salt, as is the case with some of the small rivers and lakes in this province.

We found the natives very numerous, but generally speaking friendly, although I think them treacherous, and that they mistake kindness for timidity. I however insisted on their being treated kindly, without allowing them too near the camp, although my party were much incensed by an attack from them before we reached the Lachlan.

I desired the men on starting never to leave the camp unarmed, and they obeyed my orders strictly, until one evening after a very long and fatiguing day's journey I was just rounding the cattle up for the night, and the two bullock drivers had taken the working bullocks about a quarter of a mile from us to feed, when they suddenly came running back, calling out that the blacks were rushing on the cattle, they being without fire arms for the first time; three men and myself instantly gave chase well armed, and pressed them so closely, as to oblige them to leave the bullocks and take to the river, it was then too dark to see them, or I should certainly have shot some of them. We were the whole of the two succeeding days collecting our bullocks, some of them having been so much frightened, as to run with hobbles on a distance of twelve miles in different directions; we found one with eight spears in him, and as the poor beast of course could not rise we shot him. We saw no natives for many days afterwards, and my men never went without their arms again.

This colony is progressing most rapidly, as you will perceive by the accompanying statistical account which was compiled by a friend of mine with much attention and labour. There have been 32 special surveys, and £4000, paid for each by parties in the colony during this year, but this has been rather detrimental to the smaller capitalists, as from the inefficient working of the survey system, the greater part of the good land in districts near the town has been monopolized by the proprietors of these surveys, they having a right to demand a survey on payment of £4000 in any part of the colony, while other parties have to wait until the survey's reach those districts before they can select their land.

With capital in this colony, a fortune may be made with common attention, but without it nothing can be done, excepting by the mechanic or labourer.



No half-pay officer should in my opinion come here with less than £1000; if he obtained a government appointment, from the low salaries as compared with the price of provisions and labour, he could not expect to lay by money unless he had some little capital to set afloat.

I have been rather fortunate in being able to make a start, and I will give you such particulars as will enable you to form some idea of a colonist's life in this province. I told you in a former letter, I had been offered a herd of cattle on thirds by a friend in New South Wales, if I would bring them here at my own expense. Not having sufficient capital, I applied to one of our largest capitalists to join me, and since my arrival, this gentleman has taken the sole management of them, giving me half the profits to be derived therefrom. The *whole* profits are one-third the increase divided annually, by which means, at the end of seven years, (the period for which I have them,) and on the lowest calculation, and allowing cattle to fall in value to one-third their present price, the value will amount to £16,000; the dairy profits and commission on sale of fat cattle will amount to £1000 a year. In the mean time until the cattle accumulate, I am doing a little in the farming way, and as I considered it my duty to live out here where the cattle are running, to attend on branding and mustering days, &c., I offered the gentleman above alluded to three pounds an acre, for an eighty acre section, he having a special survey in this district, but he would not take seven pounds an acre, and therefore I was obliged to become a tenant, and have a lease of 80 acres for fourteen years, at a yearly rent of twelve shillings an acre, with a right of run for 100 head of cattle;—therefore, I give you in my own person a fair example of the bad working of the Commissioners' regulations respecting the survey and appropriation of land.

I shall of course purchase myself when the surveys are more extended, and this section will always be worth the rent, as the whole of it is available for agriculture, being of the richest description of soil, well watered, and the pasturage adjoining a thick sward of the most nutritious grasses. Labour is so high at present, that I have not a very large establishment, two men at twenty-five shillings a week, a boy at ten shillings, and a woman at twenty-five pounds a year, and their board comprise my household. To provide for so many is very expensive, as flour is at present 10d. per lb., and beef 8d., but as I kill my own beasts, the latter is not so expensive to me, and next year I hope to have plenty of wheat of my own. But the market prices are equivalent,—for instance, I have sixteen cows; two Alderneys I brought from England, and fourteen very fine milkers, for which I paid twenty pounds a head, in September last, when I came out here; eleven of them have been in milk ever since and the others are near calving. I send my butter into town, and sell it at 2s. 6d. per pound, and never receive less than £5 10s. per week for butter and cheese, besides fattening pigs, and poultry,—therefore you will perceive my own little dairy more by a great deal than pays the wages of my people, and the milking only takes up one hour of the mens' time, morning and evening, as I milk three cows myself for amusement and health.

It was so late in the season when I came out here, that there was not time to get more than eight acres into cultivation, but this I did with potatoes, turnips, and maize; these little crops I send into market next month, excepting the maize, which will be a month later; and expect to realize between two and three hundred pounds, although the ground had never been ploughed before.

I have about twenty acres fenced in preparing for next season, and am about to put in a few acres of potatoes, that will be out of the ground in time for sowing oats or maize. I have already ploughed the ground once for next year, and I find the heat breaks the soil as much as the frost would do. I have two acres of a garden also in a good state of preparation, I hope therefore next year to have a tolerable return for the money I have laid out, and to live afterwards on the profits of this little farm, and lay by those of the herd for a rainy day. I sold an acre and cottage in town for £950, and expended the whole on this little farm, and the stock about it. In addition to the cows before-mentioned, I bought a buli, some working bullocks, a mare and pony; the remainder was

expended in building, fencing, a cart, agricultural implements, tools, &c. My little furniture, cooking and dairy utensils, I brought from England with me. Therefore, you see a person could not place himself in my position under a thousand pounds, unless he could plough himself, as two men are the least number that would carry on agricultural operations on the smallest scale. These colonies will soon be getting of vast importance to the mother country. There is a fine country only just coming into notice in the neighbourhood of Portland Bay, and I am sure money laid out in land there will be a most excellent investment for it.

### GULF OF SIAM.

*To the Editor of the Nautical Magazine.*

SIR,—Having observed in your Magazine, of July, 1839, page 495, by an extract from the Singapore Free Press, that considerable discrepancy prevails respecting the true position of several points in the Gulf of Siam, I took some pains, by means of repeated observations, and with good instruments, to ascertain which of the charts is the most correct. And the result of my calculations, taking the mean of repeated observations, is strongly conformity of Captain Brown's statement.

The following are the particulars, from observations made on board this ship:—

Pulo Panjong I find to be in latitude  $9^{\circ} 17' N.$ , instead of  $9^{\circ} 5' N.$ ; and in longitude  $103^{\circ} 40' E.$ , instead of  $104^{\circ} 16' E.$ , as laid down in Horsburgh's chart.

Pulo Way is in latitude  $9^{\circ} 58' N.$ , instead of  $9^{\circ} 53' N.$ ; and in longitude  $102^{\circ} 52' E.$ , instead of  $103^{\circ} 36' E.$

In Horsburgh's chart, No. 1, of the China Sea, Pulo Way is laid down in latitude  $9^{\circ} 56' N.$ , and in longitude  $103^{\circ} 23' E.$ , making a difference of thirteen miles between the positions of this place in the two charts,—namely, Horsburgh's chart, No. 1, of the China Sea, and Horsburgh's chart from Calcutta to Sunda, which includes the Gulf of Siam.

Pulo Losing I find to be in latitude  $7^{\circ} 29' N.$ , and in longitude  $101^{\circ} 59' E.$ ; the breakers off the south end not laid down.

Poulo Cora I find but by rather indifferent sights, to be laid down about twenty miles too far east. And about two miles to the southward of this place, there is a rock about six feet above the water, but not marked in the charts, although dangerous for vessels passing at night.

The anchorage at Siam bar, in a quarter less five fathoms, with the river's mouth bearing north, a little westerly, is in latitude  $13^{\circ} 23' 45'' N.$ , longitude  $100^{\circ} 34' E.$ , as calculated by two good chronometers, found to be correct by Pedro Branca. But by the mean of several sets of lunar observations, I make the longitude  $100^{\circ} 26' E.$

The growing importance of the ports to which I refer, and the interest which I feel in the general improvement of nautical charts, induce me to place these notices at your disposal.

Yours, &c.

M. M. M. MILWARD,

*Master, Ship James Anderson.*

*London Docks, Sept. 18th 1840.*

**SHAKINGS.**

**THE ARCHIMIDES.**—*A Challenge.*—Sir,—Various paragraphs having appeared in certain publications tending to detract from the merits of the Archimides screw-propeller steam-ship, I consider the only way to determine the matter, after the successful performances that vessel has already made in circumnavigating Great Britain, and in her recent voyages to Oporto, Amsterdam, &c., is to publish this challenge—to run the Archimides against any paddle-wheel steamer in the kingdom, the power of which is not superior, the tonnage and draught of water not less than that vessel. The trial to take place in the open sea, over a distance of 100 or 500 miles, for the sum of One Thousand Guineas.

The trial must take place before the 15th day of October next, and the challenge does not extend to vessels with *high pressure engines.*

FRANCIS PETTIT SMITH, *Patentee.*

1, *Wade's Terrace, East India Road,*  
*London, Sept. 16, 1840.*

**AN EXAMPLE.**—The *Fly* paid off on the 1st of August, had been four years in commission, visiting during that period the coast of Brazil, River Plate, Chili, Peru, Southsea Islands, and northern ports of Mexico, having traversed in all about 73,000 miles. This ship, which was manned by a steady Devonshire crew, has by all accounts been a model of perfection in point of discipline and good order on her station. She has not lost a man by sickness or accident.

Between forty and fifty of the seamen belonging to her, partook of a dinner on Tuesday last, at the Pear Tree, Stoke. After the removal of the cloth, the president, William Harvey, proposed a variety of loyal and appropriate toasts, commencing with the "Queen," followed by "The officers of the *Fly*," and "Three cheers for Tom Bailey," which were all duly honoured; vice-president G. Farren. After which some of the party retired to an adjoining room, where they tripped on the "light fantastic toe," while others amused themselves with songs, and thus they spent a few hours in the most perfect harmony. One of their toasts was their "Safe return, and thanks to God for their preservation from disease and death, during their long voyage." There was no drunkenness, no disorder; and several of the company, on their return, finished the day at Hilson's Rising Sun, Devonport, in the same spirit of good fellowship with which it was begun.—*Devonport Independent.*

A melancholy event has lately occurred at St. John's, Newfoundland, on board Her Majesty's ship the *Cleopatra*. The following are the particulars:—On Saturday, the 22nd of August, one of the seamen went aft on the quarter-deck, and going up to the lieutenant in command, in an insolent manner said, "Are you the commanding officer?" To which the lieutenant replied, "What do you want?" "I want," rejoined the other, "to strike you," at the same time giving the lieutenant a blow. This being, according to the Articles of War, a capital offence, the lieutenant immediately ordered the man to be put in irons, and while his orders were being complied with the seaman drew a knife, and deliberately stabbed the sergeant of marines, who was close to this officer. The poor sergeant reeled and exclaimed, "My God! Sir, he has stabbed me." The murderer was secured, and the knife taken from him covered with blood. The poor sergeant died of the wound on the following evening. He went off like a man going to sleep, saying a short time before that he felt himself much better. He was buried on the 25th. This horrible murder has thrown a damp upon every one, for the sergeant was an excellent man, and much beloved by every one on board. In consequence of this, the *Cleopatra* proceeded to Quebec, where the ships were to assemble to try the prisoner.—*Times.*

The London Assurance Corporation and the Royal Exchange Assurance Corporation, have generously given a donation of twenty-five guineas each to the "Shipwrecked Fishermen and Mariners' Benevolent Society."—*Times.*

The blockade of Alexandria commenced on the 1st inst., and a few Egyptian vessels had already been sequestered by the British squadron.—*Shipping Gazette.*

TABLE LXI.

*For reducing Hanoverian Feet to English Feet, and English Feet to Hanoverian Feet.*

1 Calenburgh Foot = 0.9614086888 English Feet.

1 English Foot = 1.041403812 Calenburgh Feet.

Calenburgh or Eng. feet	English feet and Dec. parts	Calenburgh feet and Dec. parts	Calenburgh or Eng. feet	English feet and Dec. parts	Calenburgh feet and Dec. parts	Calenburgh or Eng. feet	English feet and Dec. parts	Calenburgh feet and Dec. parts
1	0.961	1.040	40	38.456	41.606	79	75.951	82.171
2	1.923	2.080	41	39.418	42.646	80	76.913	83.211
3	2.884	3.120	42	40.379	43.686	81	77.874	84.251
4	3.846	4.161	43	41.341	44.726	82	78.835	85.292
5	4.807	5.201	44	42.302	45.766	83	79.797	86.332
6	5.768	6.241	45	43.263	46.806	84	80.758	87.372
7	6.730	7.281	46	44.225	47.846	85	81.720	88.412
8	7.691	8.321	47	45.186	48.887	86	82.681	89.452
9	8.653	9.361	48	46.148	49.927	87	83.643	90.492
10	9.614	10.401	49	47.109	50.967	88	84.604	91.532
11	10.575	11.442	50	48.070	52.007	89	85.565	92.572
12	11.537	12.482	51	49.032	53.047	90	86.527	93.613
13	12.498	13.522	52	49.993	54.087	91	87.488	94.653
14	13.460	14.562	53	50.955	55.127	92	88.450	95.693
15	14.421	15.602	54	51.916	56.168	93	89.411	96.733
16	15.383	16.642	55	52.877	57.208	94	90.372	97.773
17	16.344	17.682	56	53.839	58.248	95	91.334	98.813
18	17.305	18.723	57	54.800	59.288	96	92.295	99.853
19	18.267	19.763	58	55.762	60.328	97	93.257	100.893
20	19.228	20.803	59	56.723	61.368	98	94.218	101.934
21	20.190	21.843	60	57.685	62.408	99	95.179	102.974
22	21.151	22.883	61	58.646	63.449	100	96.141	104.014
23	22.112	23.923	62	59.607	64.489	150	144.211	156.021
24	23.074	24.963	63	60.569	65.529	200	192.282	208.028
25	24.035	26.004	64	61.530	66.569	250	240.352	260.035
26	24.997	27.044	65	62.492	67.609	300	288.423	312.042
27	25.958	28.084	66	63.453	68.649	350	336.493	364.049
28	26.919	29.124	67	64.414	69.689	400	384.563	416.056
29	27.881	30.164	68	65.376	70.730	450	432.634	468.063
30	28.842	31.204	69	66.337	71.770	500	480.704	520.070
31	29.804	32.244	70	67.299	72.810	550	528.775	572.077
32	30.765	33.284	71	68.260	73.850	600	576.845	624.084
33	31.726	34.325	72	69.221	74.890	650	624.916	676.091
34	32.688	35.365	73	70.183	75.930	700	672.986	728.098
35	33.649	36.405	74	71.144	76.970	750	721.056	780.105
36	34.611	37.445	75	72.106	78.011	800	769.127	832.112
37	35.572	38.485	76	73.067	79.051	850	817.197	884.119
38	36.534	39.525	77	74.028	80.091	900	865.268	936.126
39	37.495	40.565	78	74.990	81.131	1000	961.409	1040.140

## ADMIRALTY ORDERS.

Admiralty, 12th August, 1840.

Her Majesty has been graciously pleased by Her Order in Council of the 10th inst. to establish the following regulations in respect to the promotion of Flag-officers:—

First.—That so much of the Order in Council of the 30th of June, 1827, as relates to the promotion of Captains to be flag-officers, be rescinded.

Second.—That in all flag promotions every captain whose seniority brings him in turn for advancement, shall be placed on the list of flag-officers, provided he has served or offered to serve as a captain, and shall not have declined service at any time when called upon, and that there be nothing against his character as an officer and a gentleman; but that the half-pay of those flag-officers who have not commanded one or more of Her Majesty's rated ships four complete years during war, or six complete years during peace, or five complete years of war and peace combined, shall not be increased beyond that of Rear-Admiral, unless they shall have rendered, as flag-officers, sea service of equal length, to complete the period above mentioned of which they were deficient as captains.

Third.—That in any future promotion which may include a captain of Greenwich Hospital, such Captain may, if he prefer it, be placed on a retired list of captains.

Fourth.—That those captains who are not considered eligible to be promoted, shall be removed from the list of officers of the Royal Navy, and receive a civil pension equal to their half-pay; and that their widows shall be considered eligible to pensions as captains' widows, according to such regulations as are now in force or may hereafter be established.

By command of their Lordships,  
R. MORE O'FERRALL.

To the Flag-officers and Captains  
of Her Majesty's fleet.

Admiralty, 12th August, 1840.

By Her Majesty's Order in Council of the 10th inst. It is directed, that Secretaries to flag-officers shall in future be appointed by commissions or warrants from the Lords Commissioners of the Admiralty upon the recommendation of the officers under whose flags they are serving.

That the full-pay of secretaries to the admirals of the fleet shall be five hundred pounds a year.

That the full-pay of secretaries to all flag-officers, and commandants in chief shall be four hundred pounds a year.

That the full-pay of secretaries to all other flag-officers, and commandants of the first class shall be three hundred pounds a year, and—

That after twelve years of actual service as secretaries they shall be entitled to half-pay at the rate of twelve shillings a day.

This regulation is to commence from the first of July, 1840.

By command of their Lordships,  
R. MORE O'FERRALL.

Admiralty, 12th August, 1840.

Her Majesty has been graciously pleased to direct by Her Order in Council of the 10th inst. that the following alterations shall be made in the pay and half-pay of Lieutenants in the Royal Navy, commencing the first of July next.

## FULL-PAY.

Lieutenants of seven years standing in that rank, being senior lieutenants of sea-going or rated ships, or in command of any of Her Majesty's ships other than those on the Packet or Surveying establishment, to receive eleven shillings a day, or fifteen pounds eight shillings a lunar month.

All other lieutenants to receive ten shillings a day, or four or five pounds a lunar month.

The extra pay of sixpence a day at present allowed to lieutenants in flag ships to be discontinued.

## HALF-PAY.

All lieutenants hereafter promoted to that rank, to receive four shillings a day, to be increased to five shillings a day after three years' service as lieutenants in sea-going ships, and to advance as at present by seniority to the rates of six and seven shillings a day; but the Lords Commissioners of the Admiralty are empowered to place any lieutenant on the five shillings list, when, through illness contracted in the service, shall have been unable to serve three years at sea in that rank.

By command of their Lordships,  
R. MORE O'FERRALL.

To all Commandants-in-Chief, Captains,  
Commanding officers, and Lieutenants  
of H.M. ships and vessels.

Admiralty, 12th August, 1840.

With the view of placing the Medical Officers of the Royal Navy, in respect to rank, pay, and additional pay for length of service, and also with respect to half-pay on a scale more nearly corresponding with that assigned to officers of the Medical Department of the Army, Her Majesty has been graciously pleased by Her Order in Council of the 10th inst. to direct:—

First: That from the first of July last, the annexed scale of rank, pay, and half-pay marked A, shall be established for Naval Medical Officers, but that this benefit shall not be extended to any Medical Officer upon half-pay,

or who may hereafter come upon full or half-pay, until he shall have served a period of three years subsequent to the first of January, 1828.

Secondly: That the Medical Officers of the Navy shall be permitted to reckon the whole period of their full-pay service as Assistant Surgeons and Surgeons, in claims to increased pay or retirement; and

Thirdly: That when employed in any Naval Hospital at home or abroad, or in the Royal Marine Infirmary at Chatham or Woolwich, which are also Naval Hospitals, they shall be entitled to the rates of pay, or half-pay, agreeably to the length of their respective services in those Establishments, as set forth in the table B, also attached hereto.

Her Majesty has further been pleased to direct that no officers of whatsoever rank, who shall retire from their respective employments without the approbation of the Lords Commissioners of the Admiralty, or who shall refuse or avoid service, if found capable of serving, shall be allowed to receive half-pay, and that their names shall be removed from the list of officers of the Royal Navy.

By command of their Lordships,  
R. MORE O'FERRALL.

To all Commandants in Chief, Captains,  
Commanding officers, and Surgeons of  
H.M. ships and vessels.

TABLE A.

Scale of rank, pay, and half-pay for Medical officers of the Royal Navy.

	full-pay per diem £ s. d.	half-pay per diem £ s. d.
Inspectors of Hospitals and Fleets	1 11 6	1 5 -
After ten years service as such	2 2 -	1 1 -
Deputy Inspectors of Hospitals and Fleets, (with such further allowance when employed in hospitals on shore as the Board of Admiralty may think proper)	1 1 -	15 -
Surgeon	11 -	5 -
Above six years full-pay service, including service as Asst. Surg.	12 -	6 -
Above ten years ditto	14 -	7 -
Above fifteen years ditto	14 -	8 -
Above twenty years ditto	18 -	10 -
Above twenty-five ditto with leave to retire	18 -	13 -
Above thirty ditto with leave to retire	18 -	15 -
Assistant-Surgeon	7 -	2 -
Above three years full-pay service if serving in small vessels under ten years full-pay service	7 6 -	3 -
Above ten years full-pay service if serving in small vessels	8 -	4 6 -
Above twenty years	10 -	5 -

TABLE B.

Rates of full-pay and retirement for officers serving in Hospitals, &c.

	full-pay	per diem
Inspector of Hospitals	1 13 -	1 13 -
On first appointment	-	2 2 -
After ten years service	-	2 2 -
Retirement after ten years Hospital service	1 6 -	1 6 -
Ditto fifteen ditto	1 4 3	1 4 3
Ditto twenty ditto	1 7 -	1 7 -
Ditto twenty-five ditto	1 9 8	1 9 8
Ditto thirty ditto	1 12 6	1 12 6
Deputy Inspectors of Hospitals	1 7 6	1 7 6
On appointment	-	17 6 -
Retirement after fifteen years Hospital service	19 9 -	19 9 -
Ditto twenty ditto	1 2 -	1 2 -
Ditto twenty-five ditto	1 4 3	1 4 3
Ditto thirty-five ditto	1 6 6	1 6 6
Surgeons of Hospitals—full-pay	-	-
On appointment with less than 20 years service	-	16 6 -
Above twenty years service	-	11 6 -
Retirement after ten years Hospital service	11 6 -	11 6 -
Ditto fifteen ditto	12 10 -	12 10 -
Ditto twenty ditto	14 3 -	14 3 -
Ditto twenty-five ditto	15 7 -	15 7 -
Ditto thirty-five ditto	18 3 -	18 3 -
Surgeons of the Royal Marine Infirmary at Chatham and Woolwich—full-pay	-	-
On appointment	1 4 8	1 4 8
Retirement after ten years Hospital service	11 3 -	11 3 -
Ditto fifteen ditto	16 3 -	16 3 -
Ditto twenty ditto	18 4 -	18 4 -
Ditto twenty-five ditto	1 1 -	1 1 -
Ditto thirty ditto	1 2 6	1 2 6
Ditto thirty-five ditto	1 4 6	1 4 6

Admiralty, 12th August, 1840.

Her Majesty has been graciously pleased to direct by Her Order in Council of the 10th of August, 1840, that the full pay of Masters in the Royal Navy shall be as follows, commencing the 1st of July last:

For masters serving in first, second, or third rates, eleven shillings and eight pence a day; or sixteen pounds, six shillings, and eight pence a lunar month.

For masters serving in other rated ships, ten shillings a day, or fourteen pence a day; and for masters serving in sloops and smaller vessels, eight shillings and four-pence a day, or eleven pounds fourteen shillings a lunar month.

By command of their Lordships,

R. MORE O'FERRALL,  
To all Commanders in Chief, Captains,  
Commanding officers, and Masters in  
the Royal Navy.

Admiralty, 15th August, 1840.  
Respecting the rank, pay, and half-pay of Masters, as estab-  
lished by Her Majesty's Order in Council, of the 10th  
August, 1840.

All Midshipmen who shall have passed such examina-  
tion respecting their qualifications for the appointment of  
Lieutenant, as the Lords Commissioners of the Admiralty  
may from time to time direct, (if abroad, for seamanship  
and navigation, and if at home also at the Royal Naval  
College) shall be considered eligible to have Warrants or  
Commissions as Mates in whatever ship they may be ser-  
ving; such Warrant or Commission will be given by the  
Lords Commissioners of the Admiralty, upon the recom-  
mendation of the Commanding officer of the ship in which  
the person may be serving, transmitted by the Commander  
in Chief or Senior officer on the station.

During their first three years of actual service as Mates  
in the Royal Navy they will take rank with ensigns in the  
army, and after three years' service with lieutenants in  
the army, according to their seniority as mates, to be  
computed from the dates of their original warrants from  
their respective Captains, under the former regulations in  
respect to mates.

Commanders in Chief on Foreign stations may give  
Acting Warrants as Mates to such midshipmen as may  
pass abroad for seamanship and navigation, which Warrants  
will be confirmed from their original dates if approved  
by their Lordships, provided they pass their examination  
at the Royal Naval College in two months after their  
arrival in England, but no person appointed to act as  
mate or lieutenant is to be sent home from a Foreign sta-  
tion or for the purpose of passing such an examination.

The sen pay of mates is to be three shillings and seven-  
pence a day, or five pounds a lunar month.  
The half-pay of mates is to be at the rate of two shillings  
and six-pence a day, when unable to obtain com-  
pensation in Her Majesty's service, provided their con-  
duct during service shall have been satisfactory, and pro-  
vided they do not decline or avoid service when called  
upon.

The above Regulations as to pay are to take place from  
the 1st of July last.

The Lords Commissioners of the Admiralty are em-  
powered to allow any Mate to retire from the service with  
a pension of two shillings and six-pence a day, after  
twenty years actual service, during ten years of which he  
must have held the rating of mate.

By command of their Lordships,

R. MORE O'FERRALL.

Admiralty, 12th August, 1840.  
Regulations for the qualification, pay, and half-pay of  
Naval Instructors and Schoolmasters, as directed by  
Order in Council of the 22d Dec. 1836, and 10th Aug.  
1840.

No person will be considered eligible for the situation  
who is under 20 years of age, or more than 35.

Before any person can hereafter receive an appointment  
as schoolmaster in a ship of the line or frigate, he will be  
required to produce a certificate of his age, and testimo-  
nials of good character, and to pass an examination as to  
his qualifications to instruct the young officers in the fol-  
lowing branches:—

1. Common Arithmetic, including Vulgar and Decimal  
Fractions.
2. The first six, the eleventh and twelfth books of  
Euclid; their application to the measurement of Planes  
and Solid Bodies.
3. Algebra, progressing to the highest order of Equa-  
tions, and its application to the solution of Geometrical  
Problems.
4. Plane and Spherical Trigonometry, and the various  
problems in Surveying, the measurement of Heights and  
Distances, Navigation, and Nautical Astronomy, particu-  
larly the principles on which the various formulæ  
for ascertaining the longitude are constructed; and practical  
Astronomy, so far as may be required for deter-  
mining the latitude and longitude in all cases.
5. The uses of Mathematical and Nautical Instruments  
—the Quadrant, Sextant, Compasses, and Chronometers.

6. The theory of projectiles, and its application to  
Gunnery.

7. The Classics, to such as enter with some knowledge  
of Latin and Greek.

Although the knowledge of French, as well as of other  
modern languages, and of the principles of drawing will  
not at first be required as indispensable qualifications, it  
is very desirable that Naval Schoolmasters should be able  
to give instruction in these branches of education; and  
preference will always be given to such as possess these  
attainments.

Schoolmasters established by the above-mentioned  
Orders in Council are to be designated "Naval Instructors  
and Schoolmasters."

The full-pay of Naval Instructors and Schoolmasters is  
to be—

Upon their first entry in the service	7 0 a day
After three years' service on full-pay	7 6 "
After seven years	8 6 "
After ten years	10 0 "

And five pounds a year for each young gentleman who  
shall receive instruction from them; but the bounty of  
£30 a year heretofore allowed is to be discontinued.

The half-pay of Naval Instructors and Schoolmasters is  
to be—

After their first entry	2 0 a day
After three years' service on full-pay	3 0 "
After ten years	4 0 "
After twenty years	5 0 "

But no Naval Instructor or Schoolmaster who shall re-  
tire from his employment without the approbation of the  
Lords Commissioners of the Admiralty, or who shall re-  
fuse or avoid service, if found capable of serving, shall be  
allowed to receive half-pay; and his name in such case  
will be removed from the List of Naval Instructors and  
Schoolmasters.

In the event of a Chaplain of a ship being appointed to  
act as Naval Instructor and Schoolmaster, he will be  
entitled to the Bounty of £30 a year, and £4 from each  
young gentleman instructed by him, in addition to his  
pay as Chaplain.

The foregoing rates of pay and half-pay are to commence  
from the first of July last.

By command of their Lordships,

R. MORE O'FERRALL.

Admiralty, 21st August, 1840.

Her Majesty has been pleased to command, that Mates  
in the Royal Navy shall wear the same uniform and ap-  
pointments as Lieutenants, but without the epaulettes and  
strap, or gold lace on the trousers; the lace on the coats  
to be three quarters of an inch wide.

The under-clothing of Mates to be the same as that of  
Lieutenants, without the epaulettes and strap.

By command of their Lordships,

R. MORE O'FERRALL.

Much inconvenience having been frequently experi-  
enced from the smallness of the Store Clothing supplied  
for the Marines serving in Her Majesty's ships, the Lords  
Commissioners of the Admiralty are pleased to direct,  
that whenever Store Clothing is required for Marines  
serving abroad, or in ships fitting for Foreign service,  
Size Bills of the Detachment shall invariably accom-  
pany the demands for such Clothing to the Head Quar-  
ters supplying the same.

By command of their Lordships,

R. MORE O'FERRALL.

To all Captains, Commanders,  
and Purasers of H. M. ships  
and vessels.

Admiralty, 24th August, 1840.

Her Majesty having been graciously pleased by Her Or-  
der in Council, dated the 10th day of August, 1840, to direct  
that fifty of the senior Commanders on the list of the  
Royal Navy, shall have the option of receiving the retired  
rank of Captain, with the pay of ten shillings and six-pence  
a day, being the lowest rate of half-pay allowed to a Cap-  
tain, and that they shall be placed on a separate list as  
Retired Captains; I am commanded by the Lords Com-  
missioners of the Admiralty to desire you will report forth-  
with whether you wish to avail yourself of this promotion  
to the rank and title of Retired Captain, observing that  
if holding an out-pension from Greenwich you must re-  
tinue the same, and that you will not on any future occa-  
sion be allowed a similar option, should you now decline  
it.

I am, &c.

J. BARROW.

To Commander —

COMMODORE LORD JOHN HAY.—The poor of Passages (to whom his lordship  
left a quantity of old hospital stores,) together with the shopkeepers and others  
who supplied the *North Star*, *Salamauder*, and *Comet*, with provisions and small  
stores, entered into a subscription to pay for masses for the safe voyage of the  
British squadron, and for the eternal welfare of all belonging to the British co-  
operative force under Lord John Hay's command.—*Shipping Gazette*.

**SULPHUR FROM ICELAND.**—Aberdeen, Sept. 16.—The *Thingore*, Jensen, of Copenhagen, arrived here last week from Iceland, with a cargo of sulphur. We are led to believe that, in future, this sequestered country will supersede the necessity of applying to his Sicilian Majesty for this useful article; and show to the world that our merchants can be supplied independently of his kingdom, and ultimately be the means of more speedily bringing the sulphur dispute to a satisfactory adjustment.—*Shipping Gazette*.

### PROMOTIONS AND APPOINTMENTS.

#### PROMOTIONS.

**LIEUTENANTS**—W. Greet.  
**MASTERS**—H. J. Loudon, G. Harvey.

#### APPOINTMENTS.

**CAPTAINS**—Sir S. Roberts to *Calcutta*.  
**COMMANDERS**—G. K. Wilson to *Calcutta*. H. L. Richards to *Plymouth Ordinary*, R. Douglas to *Chatham Ordinary*, W. Chasman to *Southampton*. T. Henderson, to *Vesuvius*. C. Robinson, E. Williams, W. C. C. Dalyell, J. Corbynn, to *Greenwich Hospital*, in conformity with N and M report.

**LIEUTENANTS**—R. T. Livinge, to command *Buzzard*. J. Bowker, to command *Savage*. H. Wingrove, to *Magnificent*. S. Tancock, agent for mails to *Egypt*. G. Green, agent for mails to *Malta*. B. G. Le Mesurier, to *Daphne*. C. Edmunds, J. R. Engledue, R. J. Otway, W. N. Russell, to *Calcutta*. Lord H. Russell, to *Princess Charlotte*. T. S. Hall, to *Coast Guard*. J. Simmonds, to *Coast Guard*. G. Harvey, to *Medea*.

**MASTERS**—W. Miller, to *Victory*. G. H. Cole to *Sapphire*. J. Lawson to *Shearwater*. W. Purdo, master-attendant, to *Portsmouth dockyard*. F. W. R. Sadler, master-attendant, to *Chatham dockyard*. C. Brown, assistant master-attendant, at *Portsmouth dockyard*. R. Easto, assist-

ant master-attendant at *Sheerness*. A. Karley, assistant master-attendant, at *Chatham*. W. White, to command *Apollo*. D. Gosman, to *Impregnable*. S. Northcote, to *Calcutta*. G. Harvey, to *Niger* steamers.

**PURSER**—J. Martin, to *Calcutta*. T. Stones, to *Howe*.

**MATES**—J. J. Paterson, to *Magicienne*. W. C. Chamberlain, C. Hawkey, to *Stromboli*. E. M. Leyceston, to *Vanguard*. B. B. Hawke, to *Excellent*. Hon. T. A. Pakenham, to *Excellent*. W. C. Willie, J. M. Neill Boyd, to *Niger* steamers. W. H. Bridge, R. Moorman, to *Excellent*. E. Heimpsted, to *Medea*. C. Willie, to *Britannia*. J. H. Stevens, to *Medea*.

**SECOND-MASTERS**—H. W. T. Green, to *Atholl*.

**SURGEONS**—J. Noot, to *Medea*.

**ASSISTANT-SURGEONS**—J. M. Deas, to *Calcutta*. R. N. Clarke, to *Shearwater*. J. L. Donnell, to *Vesuvius*. W. Hobbs, to *Cygnat*. A. Lillie, to *Southampton*. Dr. R. Clarke, to *Winchester*. G. R. Compton, to *Britannia*. J. M. Boyd, to *Niger* steamers. J. W. Webb, to *Medea*.

**MIDSHIPMEN**—J. Hunt, to *Stromboli*. G. R. Compton, to *Britannia*.

**NAVAL INSTRUCTOR**—J. L. Hodgson, to *Vanguard*.

**CLERKS IN CHARGE**—C. Richards, to *Stromboli*. T. Piddock, to *Medea*.

### MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

#### AT HOME.

**ÆTNA**, 6, Lieut.-com. J. Wilson, September arrived at Woolwich, from North Coast of Spain.

**APOLLO**, (Troop ship,) Mr. A. Karley, 1st September arrived at Cork, 5th sailed for Mediterranean.

**ATHOLL**, (Troop ship,) Master-Com. C. P. Bellamy, 25th August arrived at Portsmouth, 11th sailed for Quebec.

**BELLEISLE**, 72, Capt. J. T. Nicolas, R.H. 7th September arrived at Plymouth from Malta.

**CALCUTTA**, 84, Commissioned at Devonport, by Capt. Sir J. Roberts, c.b.

**COCKATRICE**, Lieut. J. Douglas, 27th August arrived at Plymouth from Rio.

**COMET**, (st. v.) Lieut.-Com G. T. Gordon, 7th September arrived at Woolwich from St. Sebastian.

**CYGNET**, 10, Lieut. E. Wilson, 3rd September arrived at Nore, 6th sailed, 10th put back to Portsmouth, 17th sailed for Cape.

**DONEGAL**, 78, Capt. J. Drake, arrived at Plymouth 15th September, and sailed for Portsmouth.

**INCONSTANT**, 36, Capt. D. Pring, 26th August left Cork for Plymouth, 3rd September left Cork for Gibraltar.

**LIZARD**, (st. v.) Capt. F. W. Beechey,

26th August at Stranraer, September at Holyhead.

**NORTH STAR**, 26, Capt. Rt. Hon. Lord J. Hay, 11th September arrived at Portsmouth from North Coast of Spain, 17th moved into harbour.

**RODNEY**, 92, Capt. H. Parker, c.b. 10th September left Plymouth for Cork.

**SALAMANDER**, (st. v.) Com. S. C. Dacres, 20th August arrived at Portsmouth from North Coast of Spain, 3rd September left for Chatham, 5th arrived at Woolwich to refit.

**SHEARWATER**, (st. v.) Lieut. Stean, 5th September left Portsmouth for Barbados. Put back.

**SNAKE**, 16, Com. J. B. P. Hay, 12th September arrived at Spithead from Halifax, and left for Chatham to pay off, 16th at Sheerness.

**SOUTHAMPTON**, Capt. Sir W. Hillyar, 31st August sailed from the Nore, 3rd September in the Downs, 6th sailed for Plymouth, 8th arrived.

**STROMBOLI**, (st. v.) Lieut. 5th September left Portsmouth for Malta.

**SAVAGE**, 10, (st. v.) Com. Hon. E. P. Plunkett, 15th September arrived from North Coast of Spain.

**VANGUARD**, 80, Capt. Sir D. Dunn, 6th September arrived at Plymouth, 9th sailed for Cork, 10th arrived, 13th sailed for Gibraltar.

**WOOLWICH**. *In Harbour*.—William and Mary, Salamander, Comet, Fearless, Monkey, African. *In the basin*. Medea, Avon, Lucifer, Locust, Meteor, Pluto.

**PORTSMOUTH**. *At Spithead*.—Cygnet. *Inharbour*. Britannia, Victory, Excellent, Royal George.

**PLYMOUTH**. *In harbour*.—Impregnable, San Josef, Calcutta, Belleisle, Nightingale, Shearwater, Carron. *In the sound*. Rodney, Southampton.

#### ABROAD.

**ACHERON**, (st. v.) Lieut.-Com. A. Kennedy, 5th August arrived at Malta.

**ACORN**, 16, Com. J. Adams, 30th May at Simon's Bay, 20th June at Algoa Bay.

**ACTAEOON**, 26, Capt. R. Russell, 16th May at Buenos Ayres.

**ALGERINE**, 10, Lieut.-Com. T. H. Mason, 30th May left Singapore for China.

**ANDROMACHE**, 26, Capt. R. L. Baynes, c.b. 31st May arrived at Cape, 12th June remaining.

**ARROW**, 10, Lieut.-Com. W. Robinson, 1st July left Rio for Monte Video.

**ASIA**, Capt. W. Fisher, 29th August had sailed from Basikia.

**BASILISK**, 6, Lieut.-Com. J. Russell, 2nd May left Valparaiso for Arica.

**BEACON**, (sur. v.) Lieut. T. Graves,

19th August arrived at Smyrna, 29th remained.

**BEAGLE**, (sur. v.) Com. J. C. Wickham, 5th April left Swan River for North West Coast.

**BELLEROPHON**, 80, Capt. C. J. Austen, 26th August at Alexandria.

**BENBOW**, 72, Capt. H. Stewart, 5th August at Malta.

**BLONDE**, 42, Capt. T. Bouchier, 10th June in Sunda Strait.

**BRISK**, 3, Lieut.-Com. A. Kellett, 19th July left St. Helena for Ascension.

**BRITOMART**, 10, Com. O. Stanly, 25th November at Port Essington. Drove with three anchors down in the gale in which the Pelorus suffered; 30th April arrived at Sydney from Port Essington.

**CAMBRIDGE**, Capt. E. Barnard, 14th August left Gibraltar for Genoa, 2nd September arrived.

**CARYSPORT**, 26, Capt. H. B. Martin, 14th August arrived at Malta, 21st sailed for Levant.

**COLUMBIA**, (st. v.) 20th June left Barbados for St. Lucia.

**COMUS**, 18, Com. E. Nepean, 22nd July arrived at Port Royal, 27th sailed for Carthage.

**CROCODILE**, 26, Capt. A. Milne, 30th July left St. John's N. for Labrador.

**CRUIZER**, 16, Com. H. W. Giffard, 30th May left Singapore for China.

**CURACOA**, 24, Capt. J. Jones, 1st July arrived at Rio.

**CURLEW**, 10, Lieut.-Com. G. Rose, 30th May at Simon's Bay, 6th June arr. at Algoa Bay, 9th sailed for Mauritius.

**CYCLOPS**, (st.) Capt. H. T. Austen, 13th August left Beyrout for Smyrna.

**DAPHNE**, 18, Com. W. Dalling, 2nd August left Malta for Vourla.

**DEE**, (st. v.) Com. J. Sherer, 17th July at Port Royal from Montego Bay.

**DONEGAL**, 78, Capt. J. Drake, 25th August left the Tagus for the Mediterranean.

**DRUID**, 44, Capt. Rt. Hon. Lord J. Churchill, 27th April at Capsingmoon, 23rd May at Macao.

**EDINBURGH**, 72, Capt. W. Henderson, 3rd August at Beyrout.

**ESPOIR**, 10, Lieut.-Com. J. T. Paulson, 6th September in the Tagus.

**FANTOME**, Com. Butterfield, 28th May left Simon's Bay for West Coast.

**FAWN**, Lieut.-Com. J. Foote, 2nd June arrived at Rio.

**GRECIAN**, 16, Com. W. Smyth, 21st June sailed from Rio.

**GRIFFON**, 3, Lieut.-Com. J. G. D'Urban, 1st July arrived at Demarara from Barbados, 10th arrived at Trinidad.

**HASTINGS**, 72, Capt. J. Lawrence, 29th August had sailed from Basika Bay.



- HAZARD**, 18, Com. J. Wilkinson, 5th August at Malta, 20th August at Smyrna.
- HORNET**, 6, Lieut.-Com. R. B. Miller, 25th July left Jamaica for Chagres.
- HYACINTH**, 18, Com. W. Warren, 27th April at Capsingmoon, 23rd at Macao.
- HYDRA**, (st. v.) 13th August left Malta.
- IMPLACABLE**, 74, Capt. E. Harvey, 5th August at Malta, to proceed to Barcelona for stores of Tribune.
- JASEUR**, 16, Com. F. M. Boulton, 20th August at Gibraltar.
- LARNE**, 18, Com. J. P. Blake, 23rd May at Singapore.
- MELVILLE**, 72, Capt. Hon. R. S. Dundas, 10th June in Sunda Strait.
- MODESTE**, 18, Com. H. Eyres, 22nd May left Mauritius for China.
- ORESTES**, 18, Com. P. S. Hambly, 2nd May left Valparaiso for Arica.
- PARTRIDGE**, 10, Lieut.-Com. W. Morris, 22nd June arrived at Bahia.
- PEARL**, 18, Com. C. C. Frankland, 30th June arrived at Bahia from Rio.
- PELORUS**, 16, Com. F. Harding, 25th November at Port Essington, driven on shore in a gale in the harbour under Minto Head, by which eight men were drowned,—vessel too much injured to proceed yet to sea. Names of those drowned,—Mr. Kelly, gunner, J. Kennedy, cook, J. Taylor, armourer, J. Lyon, J. Bond, P. Davis, J. Hancock, D. Baylis, boy.
- PERSIAN**, 18, Commander M. Quin, 24th June arrived at Accra, 25th sailed for Princes Island.
- PILOT**, 16, Com. G. Ramsay, 16th July, arrived at Halifax.
- PIQUE**, 36, Capt. E. Boxer, 6th August at Gibraltar, 7th sailed for Malta, 12th arrived, 22nd sailed for the Levant.
- POWERFUL**, 84, Capt. C. Napier, 5th August at Beyrout.
- PRESIDENT**, 50, Capt. J. Scott, 8th May at Callao, 31st sailed for Talcahuano.
- PRINCESS CHARLOTTE**, 104, Capt. A. Fanshawe, 26th August arrived at Alexandria.
- RACEHORSE**, 18, Com. Hon. E. A. Harris, 27th June arrived at Trinidad from Curacao, 17th July at Grenada.
- RACER**, 16, Com. G. Byng, 1st July arrived at Port Royal from St. Thomas.
- RATTLESNAKE**, (Troop ship,) Master-Com. W. Brodie, 30th May left Singapore for China.
- REVENGE**, 76, Capt. Hon. W. Waldegrave, 10th August arrived at Malta, 15th sailed for Levant.
- RHADAMANTHUS**, (st. v.) Commander A. Wakefield, 25th July left Malta for Smyrna.
- SATELLITE**, 18, Com. J. Robb, 27th July left St. John's for Bay of Fundy.
- SCORPION**, 10, Lieut.-Com. C. Gayton, 22nd August arrived at Valencia from Taragona.
- SERINGAPATAM**, 42, Capt. J. Leith, 20th June arrived at Barbados from Antigua, 22nd July arrived at Antigua.
- SERPENT**, 16, Com. Hon. R. Gore, 11th July arrived at Barbados, 27th left Jamaica for Bermuda.
- SKIPJACK**, 5, Lieut.-Com. H. Wright, 29th July left Port Royal for Montego Bay.
- SPARROWHAWK**, 16, Com. J. Sheppard, 28th April left Valparaiso for Cobija, 23rd May left Callao for Valparaiso.
- TALBOT**, 26, Capt. J. H. Codrington, 21st August arrived at Constantinople.
- TERMAGANT**, 10, Lieut.-Com. H. F. Seagram, 28th May arrived at Accra, sailed next day.
- TRINCULO**, 16, Com. H. G. Coffin, 6th September in the Tagus.
- VESTAL**, 26, Capt. T. W. Carter, 12th July arrived at Pictou, 15th August arrived at Quebec.
- VICTOR**, Com. W. Dawson, 17th July arrived at Barbados, and sailed for Jamaica.
- VIPER**, 6, Lieut.-Com. R. Burslem, 20th April at Accra.
- VOLAGE**, 26, Capt. H. Smith, 27th April at Capsingmoon, 23rd May at Macao.
- WELLESLEY**, 72, Capt. S. Maitland, 20th May left Singapore for China.
- WINCHESTER**, 50, Capt. J. Parker, 15th August to leave Halifax for Quebec.
- WIZARD**, 10, Lieut.-Com. T. F. Brisk, 15th July arrived at St. Helena, on return from Cape to Rio.
- WOLVERINE**, 16, Com. W. Tucker, 7th June arrived at Accra, and sailed for St. Thomas.
- ZEBRA**, 16, Com. R. F. Stopford, 23rd July left Smyrna, 11th August left Malta.
- AT MALTA**, 5th September, Ceylon, Rhadamanthus, Confidence, Volcano, Sovereign.
- ALEXANDRIA**, 26th August, Princess Charlotte, Bellerophon, Daphne, Cyclops, Hydra.
- AT RIO**, 22nd June, Stag, Crescent, Arrow, Fawn.
- AT VALPARAISO**, Calliope, Basilisk, Electra.
- (From the *Hants Telegraph*)
- AT ALEXANDRIA**, Princess Charlotte, Bellerophon, Daphne, Zebra, Cyclops, Confidence.
- AT BEYROUT, or neighbouring coast**, Powerful, Thunderer, Ganges, Revenge, Edinburgh, Benbow, Pique, Castor, Magicienne, Carysfort, Gorgon, Hydra, &c.
- OFF CAPE BABA**, to accompany Turkish Squadron, Asia, Wasp.

## BRITISH SHIPS OF WAR COMPOSING THE CHINESE SQUADRON.

*(All these vessels are supposed to be already before China.)*

At China, on the 19th of May, her Majesty's ships *Druid*, 44 guns, *Hyacinth*, 18, and *Volage*, 26.

Left Singapore, with despatches for Macao, on the 19th of May, her Majesty's ship *Alligator*, 28 guns.

Sailed from Singapore, on the 30th May with steamers and transports, her Majesty's ships *Wellesley*, bearing the flag of the commodore, 74 guns, *Cruiser*, 18, and *Algerine*, 10.

Was to sail on the 4th of June, her Majesty's ship *Conway*, 26, from Singapore. Remaining at Singapore, to take on the April mail at the same date, the *Larne*, 18.

Were spoken in the Anjeer channel, on the 10th of June, on their way to China her Majesty's ship *Melville*, 74, (bearing the flag of the Admiral Commander-in-Chief,) *Blonde*, 46, *Modeste*, 18, and *Pylades*, 18.

Under orders for sailing from the Cape to China, on April 25th, her Majesty's ships *Columbine*, 18, *Nimrod*, 20, *Blenheim*, 74, and *Orestes*, 18.

## BIRTHS, MARRIAGES, AND DEATHS.

**Births.**

At Kingston, Portsmouth, the widow of the late gallant and lauded Capt. Richard Dickinson, CB. RN., of a son.

At Bath, the lady of Capt. B. M. Festing, RN., of a daughter.

**Marriages.**

At the Palace, Valetta, on the 6th of August, Lieut. Edward Ward Stopford, RN., to Mahalia Maria, eldest daughter of the late Capt. Wilbraham, RN.

At York, Capt. James Maitland, RN., to Frances Harriet, third daughter of the late Richard Samuel Short, Esq., of Edlington Grove, Lincoln.

Captain Thornton, RN., son of the late Samuel Thornton, Esq., m.r. for Surrey, to Emily, daughter of the late Rev. John Morgan Rice, of Lower Tooting, and Brighton.

At Stoke Church, L. Tripe, Esq., of Devonport, to Ann, daughter of Rear-Admiral Curry, CB.

On the 20th ult., at the church of All Saints, Poplar, by the Rev. John Graham, Sydney J. Jame, Esq., to Margaret Campbell, daughter of William Bain, Esq., RN., of Granton, Edinburgh.

**Deaths.**

At Ringwood, Hants, on the 14th of September, Admiral Edwards, aged 95.

At Bath, on the 14th September, Lady Dacres, relict of the late Vice-Admiral Sir Richard Dacres, G.C.H.

August the 14th, at his residence, North Hill, Captain Francis John Nott, RN., aged 74 years.

At Wimpole-street, on the 15th ult., after a long illness, Frances Jane, second daughter of the late Vice-Admiral Sir J. Tremane Rodd, K.C.B.

At Anglesea, on the eve of completing

her 73rd year, Mrs. Tobin, relict of the late Rear-Admiral Tobin.

At Feltham-hill, Middlesex, Lieutenant Charles Fleetwood, RN.

At Blackbrook, near Fareham, on the 1st ult., Janette Esther Elizabeth, the infant daughter of G. T. M. Purvis, Esq. aged four months and ten days.

On the 17th ult., Elizabeth, relict of George Vandeput Crosbe, Lieutenant RN., aged 56 years.

At Stonehouse, on the 18th ult., Mrs. Symons, relict of the late Lieutenant Symons, RN., formerly of the Royal Naval Hospital, Stonehouse.

At Forton, near Gosport, on the 8th ult., Mrs. Frances Garrett, widow of Lieut. William Garrett, RN., aged 66.

At Ecclesfield Vicarage, aged 72, the Rev. Dr. Scott, Vicar of Catterick, Chaplain of the Victory, at Trafalgar, when it fell to his lot to sooth the dying moments of his friend and chief, the immortal Nelson.

On the 15th, on board her Majesty's ship *Ocean*, of apoplexy, Lieutenant J. A. Croke, RN.

At Plymouth, a few days since, Richard Dechamp, Esq., one of the retired Commanders.

At the Coast Guard Station, Burnmouth, Ayton, Berwickshire, on the 8th of August, Lieutenant Ralph Hay, RN.

At Zante, on the 4th of August, Mr. Richard Hardy, Second Master and Pilot of H.M.S. *Weazle*.

On the 1st ult., at Kensington, at Captain Sawyer's residence, Commander William Denton, Indian Navy, aged 43.

On 30th August, at Liverpool, in the 57th year of his age, Mr. Martin King, RN.

At Greenwich, on the 7th ult., James Fuller, Esq., Purser, RN., aged 59.

At Southsea, on the 2nd ult., Nathaniel F. Edwards, son of Lieutenant N. F. Edwards, RN.

## METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of August to the 20th of September, 1840.

Month	Day	Week Day	BAROMETER.		FAHR. THER.				WIND.				WEATHER.		
			9 A.M.	3 P.M.	In the Shade.				Quarter.		Stren.		A. M.	P. M.	
					9 AM	3 PM	Min.	Max	AM.	PM.	AM	PM			
			In Dec.	In Dec.	o	o	o	o							
21	F.		29.94	29.91	67	74	57	76	SE	S	3	2	b	bc	
22	S.		29.82	29.83	64	71	63	74	SW	SW	3	3	o	bc	
23	Su.		29.96	29.95	62	67	51	69	W	W	4	2	b	bc	
24	M.		30.02	29.98	60	69	50	71	W	SW	2	1	bc	bc	
25	Tu.		30.00	29.98	59	67	48	70	SW	SW	2	3	bm	o	
26	W.		30.02	30.06	63	66	59	68	SW	SW	3	1	bcm	o	
27	Tu.		30.07	30.02	61	67	57	69	SW	SW	2	2	o	bc	
28	F.		30.05	30.06	62	98	56	70	SW	SW	3	2	of	bc	
29	S.		30.17	30.19	62	57	58	69.	E	E	2	2	of	bm	
30	Su.		30.11	30.13	62	74	55	76	N	SE	2	1	b	bc	
31	M.		30.15	30.12	62	71	56	72	NE	NE	4	2	bc	b	
1	Tu.		30.02	29.91	65	75	62	77	NE	NE	3	2	bc	b	
2	W.		29.74	29.70	69	70	63	73	SW	SW	2	5	bc	bc	
3	Th.		29.64	29.75	56	59	55	61	W	W	4	5	bcp 1)	bc	
4	F.		29.80	29.80	56	59	47	60	SW	SW	4	5	bcm	oqr 3) (4	
5	S.		29.98	30.03	55	60	51	64	SW	SW	3	3	bc	bc	
6	Su.		30.22	30.21	55	67	44	69	SW	W	2	2	b	bc	
7	M.		30.10	30.09	60	64	55	65	SW	W	2	2	bc	op (3)	
8	Tu.		30.14	30.14	55	62	50	64	W	W	2	2	bm	o	
9	W.		30.01	29.98	60	65	53	66	SW	SW	4	4	od (2)	od (3)	
10	Th.		29.96	30.00	60	66	59	67	W	NW	4	3	op 2)	b	
11	F.		29.96	29.93	57	63	48	65	W	W	2	3	bc	bc	
12	S.		29.97	29.95	51	62	43	63	W	W	5	3	bc	b	
13	Su.		29.86	29.75	50	58	40	59	W	NW	1	2	bcm	bc	
14	M.		29.50	29.31	49	53	40	54	W	SE	3	3	o	or (3) (4	
15	Tu.		29.30	29.30	48	54	46	55	NW	NW	2	3	bcm	bcp (3)	
16	W.		28.91	28.83	49	52	43	53	SW	NW	4	6	qbcp (2)	qp (3)	
17	Th.		29.50	29.64	49	58	44	59	W	W	4	4	b	b	
18	F.		29.85	29.85	47	57	36	58	N	NE	3	4	b	bc	
19	S.		29.84	29.88	50	53	45	54	N	N	5	9	qbc	qo	
20	Su.		29.99	30.00	46	52	37	54	NW	NW	1	1	bcm	o	

August—mean height of the barometer = 29.937 inches : mean temperature = 64.2 degrees : Depth of Rain fallen = 1.02 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The letter of S. J. with his other useful papers on the same subject shall appear as soon as we can find space.

Thanks to our Madras correspondent for his *items*—all useful in their way.

A. M. Ross of Chatham-place, should send us a cut of the dead-eye.

PETER PROSER shall be heard in our next. The Report on the Packet Station having occupied so much of our space has obliged us to defer several communications.

We are again obliged to defer the notices of several books, as matters of pressing interest to navigation must take precedence.

We have inspected the model forwarded to us of Mr. Rapson's Patent Steering Apparatus, the principle of which justifies our full approbation, and the testimonials of its performance in the President steam ship amply recommend it for general adoption.

## ORIGINAL PAPERS.

NOVEMBER, 1840.

AUSTRALIAN HYDROGRAPHY.—*Dangers in Banks Strait.—From Capt. C. M. Lewis, Harbour Master, at Port Philip.*

THE importance of knowing the true position of sunken dangers is so great, that we place the following extract of a letter to the Hydrographer at the commencement of our present number, for the special attention of our captains.

*“Harbour-Master’s Office, Port Philip, Jan. 28th, 1810.*

“The following are particulars respecting some very dangerous reefs and shoals, lately discovered on the coast of Van Diemen’s Land. Their positions I have every reason to believe are nearly correct, and of their existence there can be no doubt. They are gleaned by me from different persons of respectability at this place;—one of whom, the commander of the brig *Caroline*, was nearly wrecked on the reef off Swan Island, having struck and remained upwards of three days in that perilous situation, and got off by throwing his cargo overboard. This *CAROLINE*\* reef bears by compass N.N.W.  $2\frac{3}{4}$  miles, off the north point of Swan Island.

“Another, the *BANKS ROCK*,† stands about mid-channel between Swan Island and Clarks Island, with only ten feet of water on it.

“The *BLACK REEF* extends out about four miles from the rocks that are above water in a N.E. direction.

“A reef called *BROUGHAMS REEF*, lies in latitude  $32^{\circ} 38'$  south, and longitude  $132^{\circ} 36'$  east.

“*CHEVIOT ISLAND* bears S.W. from the island of St. Francis, about fifteen miles.

I am, &c.

C. M. LEWIS,

*Harbour-Master.”*

\* The north point of Swan Island is not a sufficiently distinct point, a considerable portion of the island lying east and west by the present charts. Some rocks appear off it, but not at so great a distance as here specified.—Ed.

† See page 658 of our vol. for 1839, for a notice of this rock, with which we were favored by Mr. Doutty.—Ed

EXTRACTS FROM THE REMARKS OF H.M.S. CONWAY.—CAPT.  
R. D. BETHUNE, on a voyage from Port Jackson to the Southsea Islands.

(Concluded from page 685.)

SAMOAN GROUP, OR NAVIGATOR'S ISLANDS.\*—The Navigators Islands, or called by the native name Samoa, consist of four principal islands. These are named, commencing from the eastward,

<i>Proper.</i>		<i>Norie.</i>
Manu'a	. . .	Toomahlooah.
Tutui'la	. . .	Tootooillah.
Upo'lu	. . .	Oahtooah.
Savai'i	. . .	Oteewhy.

The French using the Toga appellation call them Les Isles Hamoa.

Strictly, Manua applies to a group of three islands,—the largest is called Manua-tele “large,” and is about thirty miles in circumference. At the west end, separated by a ship channel of four or five miles, is the islet of Orisega, and nearly adjoining this, farther west, is another islet called Ofu. There are few landing places on Manua-tele. I communicated with the principal settlement Tau, situated at the west end, and was informed that there was another a little to the southward: there are I believe seven in all. The population is thought to be about 1,500. The island Kordakew marked on Norie's chart east from Toomahlooah is doubtful.

Next to the westward is Tutuila, called by Bougainville, Manua or Maouna. Off its east end is an islet called Aunuu; we stood in to the westward of this islet, and got ten fathoms coral, about one mile off shore. From this the western point of Tutuila, off which is a single rock above water, bore by compass S.W. b. W. four or five leagues. About midway between the islet and the rock, lies the harbour of Pago Pago, it is distinctly marked by a conical hill on its western side, and a flat or elliptical topped hill to the eastward, (see Pago Pago farther on.) At the west end of the island is the large and flourishing village of Leone, numbering 1,000 inhabitants,—from it the island of Upolu is seen, bearing W. N.W. ten or twelve leagues. Tutuila is about sixty miles in circumference, and reckons about 10,000 inhabitants. The islet of Aunuu is five or six miles in circumference, and has six or seven hundred inhabitants. The accounts of the populations of this and the other islands, may be considered pretty correct; the dimensions are vague.

Upolu is about 130 miles in circumference, and numbers 20,000 inhabitants. Off the east end lie four islets, three or four miles from the main; the two northern appear connected with Upolu by a reef.

\* See vol. for 1838 for further information on these islands.

<i>Proper.</i>		<i>Norie.</i>
The N.E. islet is called	.	Maapelua.
“ N.W. “	.	Anamua.
“ S.E. “	.	Fanua tab'u (sacred land.)
“ S.W. “	.	Nuutele.

I may here remark that *Fanua*, signifying land, is in general use among the islands, and has led to many mistakes. For instance, an island is called in Tahitian *Fanua-iti*, small land. Three or four leagues to the westward is an islet or harbour called *Fagaloa*, (see farther on,) and as far beyond, the reef harbour of *Apia*, (see farther on.)

Off the west end of *Upolu*, lie the islets of *Manono* and *Apolima*. *Manono* is about four or five miles from the main, and is connected by a reef. It has a population of 7 or 800, which are included in the 20,000 mentioned, and is remarkable for its political importance; its inhabitants have always been great warriors, and its chiefs consequently powerful. The possession of the neighbouring islet of *Apolima*, which is quite impregnable to native attacks, tended to keep up their influence.

The quarrel at *Tutuila* on the north side, which unfortunately led to the murder of *La Peyrouse's* colleague, *M. de Langle*, and his companions, is supposed to have been instigated by a party from *Manono*, then on a journey or visit. Finding they could not participate in the advantages arising from the trade with the French, in consequence of being far from home, and having nothing to dispose of, they first wished to borrow from their friends at *Tutuila*, but did not find them anxious to let in the strangers to a share,—they therefore got up a row, that they might help themselves in the confusion. The whole population has long laboured under the disgrace of this act, and visitors have looked on them with great suspicion. From all I can collect, their general character is quite the reverse.

The distance from *Manono* to *Apolima* is a short mile,—from the west end of *Manono* the reefs extend about one-eighth of a mile, terminating in a small islet called *Nulopa*. The remainder of the channel three-quarters of a mile appears clear. *Conway* ran through it, no bottom with hand lead. From *Nulopa* the reef runs to the southward; we got soundings in six fathoms, one-eighth of a mile from it, and being then hove to deepened gradually as we drifted off shore. A small rock lies off the eastern end of *Manono*. I think anchorage might be found about here.

From *Apolima* to *Savaii*, which is the most western of the group, the distance is about seven miles, four or five of which is clear for ships. About one-eighth of a mile west from *Apolima* is a small rock, and the reef runs off from *Savaii* two or three miles.

Savaii is the largest island of the group, being about 140 miles round, with 20,000 inhabitants. I did not visit it, but collected the following. There are no harbours; and vessels may anchor off Safune, a village and Missionary station in a bay at the N.W. end of the island; here the average distance of the reef from the shore is half a mile, with boat channels through. Anchorage is about a mile off shore, nearly abreast of the village, under the east point of the Bay, in eight or ten fathoms. Water may be obtained from a lake a quarter of a mile from the sea, but running into it. Another Missionary station is on the east end at Sapa-palii,—reef three miles from the shore with several boat entrances. A third at Satupaitea, on the S.W. end. No anchorage, but boat entrances through the reef: a great part of the north coast of this island is completely iron bound, and is much dreaded by canoes.

These islands seem well adapted to all tropical productions. Tutuila will perhaps excite attention the first, from the circumstance of its possessing a harbour; but Upolu appears decidedly the most important island, so far as vegetable productions are concerned. They are of volcanic formation. I understand Savaii appears to be more recent than the others, it has not consequently such good soil. All the islands appear well watered.

The dress of the inhabitants consists simply of a girdle, made of the leaves of the "Ti" tree,—the men wear it in front, the women all round. These leaves are coloured naturally, red, yellow, and green, and present the appearance of sea-weed; and as they are as often seen dripping wet or dry, the natives being quite at home in the water, the delusion is kept up. I think La Peyrouse states they were made of sea-weed.

The canoes were beautifully constructed, the pieces are tied together with sinnet; great care is used in forming the joints, which would bear comparison with European work. They cannot be used without an out-rigger.

The roofs of the houses are beautiful specimens of gigantic wicker work. The construction is not very mechanical, but the symmetry of the workmanship is superior to anything I have seen among the islands. The Samoan mats are beautiful, and highly prized. The rapidity of communication between the islands is remarkable, the canoes can paddle six or seven miles an hour, and they go fifty or sixty miles without a check.—A sail is used with a fair wind.

PAGO PAGO—is situated about the centre of the southern side of Tutuila, and may be distinguished by lying betwixt two hills; that on the west, conical; that on the east, square or elliptical. It is sometimes called Cuthberts Harbour, after the commander of the first ship that entered it. I prefer the native name.

One mile and a half S.S.E. from the entrance is a bar with four or five fathoms on it; it is probable that this extends to the eastward to the island of Aunuu. Within the entrance lies a rock with ten feet on it. I have requested the Missionary and the Pilot to have two beacons erected as a mark for this. Besides this there is no danger under water. The prevailing wind blows in, and generally hauls more to the eastward as you run in. The land-wind will bring you out, though many vessels hang by a warp, get their anchor, and then beat out. Coming out with the land-wind keep over on the eastern side; generally a puff comes out of the bay, which carries you out clear. Water may be filled at low-water and floated off at high-water. Pigs and fruit to be obtained. It is a walk of fifty minutes across the island to the watering cove of La Peyrouse, in Massacre Bay. The height of the Pass by barometer is 625 feet; it is a steep pitch: a tree about half way used as a resting place is 316 feet.

FAGA LOA—lies three or four leagues west from the east end of Upolu. I sent from Apia to have it examined; two or three vessels have been in, but I cannot recommend it as an anchorage.

APIA.—Eight or nine leagues west from the east end of Upolu is a reef harbour, and not much shelter; but the holding ground is good, and the depth of water reasonable. No danger not visible. I laid a kedge out astern to bow the swell. It is situated at a poor part of the island, but as it is now a Missionary station, this will probably improve. Water in abundance.

Missionary stations on Samoa:—

Tutuila	.	.	.	.	Pago Pago.
					Leone
Upolu	.	.	.	.	Apia
					Manono
Savaai	.	.	.	.	Safune
					Satupaitea
					Sapa palii

SAMOA TO VAVAU.—Left Apia on the 9th with a light air off the land in the afternoon: at three got a breeze from the eastward, and at sunset ran between Manono and Apolima. Hove to under the Manono reef in six fathoms. Bore up with a light northerly breeze. From 10th to 11th calm: made Boscawen's Island. Passed in sight of this island unexpectedly. Norie lays it down 30' too far west. The whalers speak only of Keppel Island, and I believe the natives of Toga include both under the name of Niua tabú tabú. A shoal is said to exist west from it a short distance, and a rock N.b.E. from it five or six leagues. It makes from the eastward as a round hummock, and is from a rough calculation 2,000 feet high. Pigs, yams, and cocoa nuts.



On the 11th got the trade. At noon on the 12th abreast of the island of Fanua-lei, called by Norie, Amargura, and shortly after made the low island of Toku, not marked on the chart. Anchored at Vavau at 10h. 30m. P.M.

On Norie's chart west of Niua tabú tabú lies the island of Onookfow. This I suspect should be Niua foou.

THE FRIENDLY ISLANDS—are composed of three groups:—

Haafuluh'ao	. . . . .	Principal island	. . . . .	Vavau
Haabai	. . . . .	The most southern island	. . . . .	Nomuka
		Principal island	. . . . .	Lifuka
Toga	. . . . .	Ditto	. . . . .	Toga tab'u

They are familiarly called the Toga Islands.

I visited Vavau only. The harbour called Port Refuge has not the most distant claim to such a title; it is of great extent, but has nearly throughout from 50 to 60 fathoms water. The natives call it Taulaga, which means simply The Harbour. As Vavau is the principal island of the group, it may take its name naturally. The anchorage is at the head of the harbour, under the hill called Talau, near the village of Neiafu, where King George resides when at Vavau. He, however, affects the Haabai more. The best berth is off the patch of the Point, as it is awkward to get out with a westerly wind, if up higher. Wood can be obtained, but little water, and that bad—in dry seasons none. The island was just recovering from the effects of a hurricane; refreshments were, therefore, not plentiful. On ordinary occasions—pigs, excellent yams, &c. Yam season commences in January. The inhabitants consider themselves to have come originally from Samoa: they have also relations with the Fiji islands, where they build their double canoes—some of them seventy or eighty feet long; these sail fast on a wind. I believe water can be procured at Nomuka, (Annamooku of Norie,) at all seasons.

Savage Island lying to the eastward of Vavau is called

Inine	. . . . .	Native
Felekaho	. . . . .	Toga.

The inhabitants are jealous of visitors. One white man who was left there from a whaler, was kept afloat in a canoe for some days until taken off by a vessel. He was supplied with food daily.

*General remarks on the Weather among the Islands.*

In November unsettled weather commences. Westerly winds often occur, and much rain may be expected. You may get perhaps three weeks of fine weather (trade), but cannot reckon on it, thus it remains till about April.

In December hurricanes have occurred among Hervey's Group; and in February at Vavau. February is considered the worst month among the Fijis.

During the other months, May to October, the south-east trade is regular.

**VAVAU TO PORT JACKSON.**—Attempted to leave Vavau on the 19th of January; baffling weather; got clear out on the 20th. Light breeze from the N.E., hauled gradually round to the N.W.; and so by south to S.E. in lat.  $24^{\circ} 0' S.$ , long.  $178^{\circ} 5' E.$

I had been informed that there was a small low island in lat.  $26^{\circ} 4' S.$ , long.  $173^{\circ} 25' E.$  On the 26th I ran near the spot; it is not within twenty miles on either side, in this parallel. Made Norfolk Island on the 29th; light weather. Left it on the 30th; light breeze from the northward, gradually freshened: made Balls Pyramid and Howes Island on the 5th of February. For the last five days baffling, ugly, squally weather. On the 6th, about twenty miles west from Howes Island, wind at N.E., squally weather; ugly appearances; much lightning, but little thunder. A severe squall suddenly from the S.W. lasted about an hour; heavy rain and quantities of lightning: in the next twelve hours wind round the compass—settled at last in S.E. which carried us in on the 9th.

**NORFOLK ISLAND**—makes from the eastward high at the north end, This is Mount Pitt, about 2,000 feet high. Philip Island is, I imagine, a little higher. Ran to the northward of it, and betwixt it and Philip Island. The tides ran strong; in light weather it is an awkward place; there is anchorage, but the bottom is very foul, and vessels seldom get their anchors. The landing is difficult. Capt. Bradley's chart appears correct, except in his directions as to landing: at present a blue flag is hoisted when it is dangerous. When it is impracticable to communicate with the settlement vessels run round to the other side of the island, where at Cascade Bay you may land. I was told the anchorage off that spot is better than off the settlement.

Vessels can be supplied with vegetables from the Government gardens, and also with fresh beef where it is absolutely necessary; they seldom kill beef for their own use. It would be difficult to procure water, though it abounds on the island.

There are about 1,000 acres cleared, and under cultivation by hand labour—1,300 or 1,400 convicts guarded by 160 men. The Norfolk pine, when young, is a symmetrical beautiful tree; it does not answer for masts, but supplies good plank. It is said to be durable under water; not so when exposed. Good limestone and grit for drip-stones.

HOWES ISLAND.—Howes Island and Balls Pyramid lie about N.W. and S.E. by compass; distance apart about 10 miles: the channel between appears clear. On the north-east and eastern parts of Howes Island are several islets and rocks from one to two miles distance. There is a small settlement on the north end where pigs and potatoes may be got in small quantities. There appears to be an islet or two off the north-west end of Balls Pyramid. Height of both perhaps 2,500 feet.

## ABSTRACT OF LATITUDES.

Hummock Island, Entry Island, New Zealand	40° 52' 26.2" S.
Observation Point, on east side at Cloudy Bay	41 20 15.3 "
Cape Pallisser	41 37 1 "
Position in Pago Pago harbour, Tutuila, Navigator Islands	14 16 9.7 "
Position at Apia, Upolu, Navigator Islands	13 49 6 "
Sandy Point, at Vavau, Friendly Islands	18 38 58.1 "

## FROM SEA HORIZON.

North End Island, Tubuai	23 22.2 S.
Centre Island of Mitiero	19 49.7 "
Centre of Island Atiu	19 58.2 "
Island of Rarotoga, North End	21 15.5 "
Niua tabu tabu, or Boscawens Island, centre	15 50.3 "
Island of Fanua lei Peak	18 0.5 "
Islet of Toku, centre	18 7.5 "
Norfolk Island, Nepean Island	29 2.0 "
Howes Island, Islet off N.E. end	31 22.6 "

## ABSTRACT OF LONGITUDE.

			h.	m.	s.	
Rio Janeiro, Fort Vilgagnon			2	52	31.3	W.
Trincomalee dock-yard, flag staff east from						
Madras	0	3	56	6		
Do. Do. again	0	4	4.5			
Do. Do. again	0	3	56.8	5	25	7.3 E.
Rangoon Town, east from Madras	1	3	43	6	24	51 "
Amherst Pagoda Do.	1	9	21	6	30	29 "
Tahaiti, Papeete harbour, east from						
Port Jackson	3	56	50.9	14	1	48.9 "
Hummock Island, Entry Island, New						
Zealand, east from Port Jackson	1	34	48.9	11	39	46.9 "
Observation Point, Cloudy Bay, do.						
east from Port Jackson	1	31	43.3	11	36	41.9 "
Cape Pallisser, east from Cloudy Bay	0	4	34.6	11	41	16.5 "
Aimeo, head of Talu harbour, west						
from Papeete	0	1	0	14	0	48.9 "
Raiatia, Uturoa harbour, King's wharf,						
west from Papeete	0	7	17	13	54	31.9 "

			h.	m.	s.
Tutuila, Pago Pago, west from Papeete	1	24	13·8	12	37 35·1 E.
Upolu, Apia, west from Papeete	1	28	27·2	12	33 21·7 "
Vavau, west from Apia	0	8	57·1	12	21 24·6 "

## FROM SEA HORIZON.

Tubuai, north end, east from Papeete	0	0	39·5	14	2 28·4 "
Atiu, centre, west from Papeete	0	34	6·2	13	27 42·7 "
Mitiero, centre, east from Atiu	0	1	59	13	29 41·7 "
Roratoga, north end, west from Papeete	0	40	41·8	13	21 7·1 "
Manua tele, west end, west from Papeete	1	19	55·9	12	41 53·0 "
Tutuila Islet of Aunuu, west from Papeete	1	24	7·9	12	37 41·0 "
Do. Village of Leone Do.	1	24	56·9	12	36 52·0 "
Upolu, Islets off east end, east from Apia	0	1	25·6	12	34 47·3 "
Do. Islet of Manono, west from Apia	0	1	25·5	12	31 56·2 "
Niua tabu tabu, or Boscawen's Island east from Apia	0	7	40·5	12	25 41·2 "
Fanua lei, Peak west from Apia	0	10	28	12	22 53·7 "
Toku, centre, west from Apia	0	9	38·9	12	23 42·8 "
Norfolk Island, Nepean Island, east from Port Jackson	1	6	14·8	11	11 12·8 "
Balls Pyramid, east from Port Jackson	0	32	23·9	10	37 21·9 "

OBSERVATIONS ON STEAM NAVIGATION TO SPAIN AND PORTUGAL,—with remarks on Major Rennell's Treatise on such "Currents of the Ocean" as affect it.

(Continued from page 691.)

IN proceeding for Cadiz, a steamer of the present day, will generally be off Cape St. Vincent in eleven hours, after being out of the Tagus. It has been said, that S.b.W. will take you *on* this Cape: about four miles however, before you get the length of the Cape, some high land will appear, a good deal higher than the Cape itself; or, the land more to the north as you get abreast of it, terminating at its north end abruptly, and sloping down a little to the south. When at a moderate distance from this land (one mile and a half is near enough,) you will have to steer S.S.W., to pass round the Cape, which in tolerably clear weather, will immediately be seen, with the high rock off it, (night is of course here supposed.) Steering a course further out, in anything like hazy weather, throws you into some doubt as to when you are off the Cape, causes an increase of distance and loss of time, inconsistent with steam navigation. Passed the Cape, (as close as you like,) a S.S.E. course, three miles, takes you round Cape Sagree, which may also be passed very close; and S.E.b.E. 130 miles, direct for Cadiz. But as it has been remarked already, the passage from Cape St. Vincent to

the east, is influenced by currents and tides; the set of which, no one pretends to understand, and therefore, great caution is necessary; the above course, having taken me, both to the north and south of Cadiz, considerably without any apparant cause. In going into Cadiz in the night, great care is necessary, no pilot will be obtained; the north shore being light reddish coloured cliffs, and Cadiz itself shewing quite black, creates a deception of vision; the lead is no guide, and the great chance is, that a stranger when he fancies himself in mid-channel, will be well over on the Cadiz side. Therefore the safe way is to borrow well over to Rota, which town will be readily seen, on any night that a vessel should attempt going in. Bring it in such a position as will enable you to pass it, at from one and a half to two miles, steering E.S.E.; observe when the light bears south, (the light is south a little westerly about five and a half miles from Rota,) right ahead will then be the castle of Catalina; which will be seen, at the termination of the light coloured cliffs. If you are in mid-channel, this castle will be about a point on the larboard bow, the ships head E.S.E.; and you should not be further to the south, than you have it in this last position; which if you are in, continue your course; if more to the north, and it appears right ahead steer S.E.b.E. for about one mile and a half, which will bring the light to bear S.W.b.S., then you will almost certainly see the men-of-war at anchor, and may steer for the outermost, or S.S.E. if you should not see them, which course in about two miles will shut in the light; and the usual anchorage off the town, for small vessels will be S.W. about one mile. This proceeding will, however, take you right over the Diamond; and is therefore only fit for vessels, not drawing twelve feet, and smooth water, the state of tide considered; but it will effectually clear you of the more northerly shoal, the Galera, on which there is much less water. The Diamond may, however, be avoided, by a course a point more south, *if you are sure of your position when the light bears south.* Such a course, will carry you towards the Puercas, which will, however, be seen on a clear night, except during very high tides, and perfectly smooth water, (in which circumstances you may pass over the Diamond.) If obliged to run in during a heavy west gale, steer for the Puercas, immediately you see them, (always supposing you have obtained the right position between Rota and the lighthouse;) the sea in such weather will be seen breaking heavily upon all the dangers in the Bay. The channel between the Puercas and Diamond is more than a mile wide. Perhaps for a perfect stranger to enter during the night, a more safe course is to steer along the north shore, right up to the Castle of Catalina; when the light bears W.S.W. you are clear within all the dangers, and can steer down to the anchorage about S.S.W. In heavy gales from the west, or S.W., no one should go in

during night, if possible to keep out; not even those the best acquainted: for in such weather, even if moonlight, you cannot depend upon it being clear for five minutes.

It is high water in Cadiz Bay, full and change, 2 o'clock. No marks can be made out by a stranger, as given in Tofino, and other books; but for steam navigation they are unnecessary,—avoid Puercas, pass them near, and steer for the outer ships at anchor serves quite well. Coming into Cadiz from the south, keep in view that Cochinos bears from the light N.N.E.  $\frac{1}{2}$  E. one and one-fifth of a mile,—Puercas N.E. easterly one mile and a half; therefore it is evident, that giving the light-house point a birth, (a great one is by no means necessary at daylight,) and steering N.N.E. will avoid these dangers, and take you over to the north shore; when seeing Rota, and the Castle of Catalina, proceed as before stated. Cochinos bears from Puercas W.  $\frac{1}{2}$  N., rather more than half a mile.

Coming out from Cadiz in the night is rendered very easy, by observing when at anchor the bearings of Puercas, which will most probably shew you that a N.N.W. course will clear them. When the light bears about S.W. you will have them in a line with it, immediately after which, if going west, you may shape your course N.W.b.W. for Cape St. Vincent; or if going south, W.b.N., till light bears S.S.W., when you are clear of every thing but the light-house point.\*

Proceeding from Cadiz to Gibraltar, steer south immediately after passing light-house point twenty-six miles;—this course, according to the Admiralty chart, should take you right over a rock laid down off Sancti Petre, with two and a half fathoms upon it, and too near some other dangers in that neighbourhood; but it does not do so, and I conclude this part of the coast is laid down a little too far to the west. Continue course south, till Trafalgar is abeam,—then steer S.E.  $\frac{1}{2}$  S., till you make Tarifa light, and bringing it E.S.E. steer towards it. This proceeding answers very well for the passage either day or night, (in moderate weather however, and day time the course may be altered to S.b.E. when abreast Cape Roche, to pass much nearer to Trafalgar,) but if by night, and blowing a strong Levanter, (east) will not unlikely subject you to considerable difficulty in making Tarifa light, which in such weather is by no means easy to make out. This is a revolving

\* Since this was written, on coming from the usual anchorage of steamers,—dead low water, spring tide,—and steering N.N.W.  $\frac{1}{4}$  N. I touched upon the Friar shoal, drawing twelve feet water. I had been accustomed to disregard this shoal, in a vessel of such draught of water. Tofino stating distinctly that the least water on it is fourteen feet. To make however as I thought sure, (observing the water very far out) I allowed half a point more than I thought necessary, notwithstanding, I grazed heavily upon it, although the water was perfectly smooth.

light,—is a very indifferent one, and like the one at Oporto is too long eclipsed altogether. As the gut opens, and you feel the effects of the sea, you are inevitably set over to the Barbary shore, in despite of the currents, for these winds blow with great violence, and get up a very ugly sea. It is therefore desirable, to keep the weather shore on board, and which it is very difficult to do, and not at the same time run the risk of approaching too near the Cabezas. If it is light enough to see the shore pretty distinctly, you may approach Cape Plata to within a mile and a half, and when past it, just keep so far out as not to shut in the sandy beach, or hill, to the east of the tower of Mecca; this kept in sight, until Tarifa bears E.S.E. clears the Cabezas. A good guide for judging of your progress along this part of the coast, is that from the tower of Mecca, to point de Sara, a long opening will appear in the land, owing to the immediate shore being low,—partly the sandy beach above referred to, and the atmosphere intervening to prevent your seeing the high land somewhat further back, (night is here of course supposed.) Again a little further, another opening appears, which is however much less in extent. This is between some high land about point de Sara, and Cape Camarinal;—again, between Cape Plata, and point Palomas, is a very remarkable sandy hill, (in patches.) By keeping nearer the shore, than the courses recommended above, it is obvious that you would be taken upon the Cabezas, if not within them; but particularly observing these openings in the land, and the sandy hill between Cape Plata, and the point Paloma, which indicating your exact position as you approach these dangers, you may depend pretty well upon being able to make out Tarifa light in time to avoid them; and the risk here run may be estimated by the consideration of, whether the weather is such, that at six miles distance Tarifa light is *sure to be seen*; if so, it avoids a very unpleasant passage, which in violent Levanters you are sure to experience, in getting the gut open and by missing Tarifa light, getting over to the Barbary shore before you find it: adopting these courses, you will however be *almost sure* to see Tarifa light when Cape Plata is abeam. A bearing of Cape Spartel, which is often seen distinctly when you cannot see the land to the east so well, will also serve to assist the judgment, in approaching the situation of these shoals. As long as Cape Spartel bears to the south of S.W.b.W., you are to the west of them;—when bearing W.S.W. you are to the east of a line drawn from them to the Cape, therefore, if to the south of the shoals, (which your distance from the land will readily point out,) you can steer E.S.E., (true east,) to make Tarifa light; if to the north, you are past them, but this latter passage would clearly never be attempted in the night.

If however, you are set over to the Barbary coast, and which will sometimes happen, if the weather is such as to lead to uncertainty of

your position, you cannot help finding out your situation as you get over from the deep opening of Tangier Bay, which will point out the necessary alteration of course, and steering then east, will bring you in sight of the light,—which, when seen, under any circumstances, steer for, if not bearing to the south of E.S.E.; and having passed it within half a mile, (you may pass it within short musket shot,) steer E.b.S. (altering the same to E.  $\frac{1}{2}$  S. and east, as the course draws you off the land,) which pursued for ten miles, will bring the Bay of Gibraltar quite open. A stranger however, in night time will feel some anxiety about making this bay, as Cabrita point shuts in the rock; for three-fourths of this distance, it cannot, however, but be seen, (fog alone excepted,) and as nothing is gained, by hauling in too soon, it is better to give Cabrita point at all events a great berth in the night; you have the advantage of the current by so doing, and are sure to avoid the Pearl Rock, the mark for which, of St. Roque well clear of Cabrita point, cannot be made out in the dark. (Cabrita point bearing N.N.E. you are past it, on the high round hill to the north of the rock, its apparent breadth and half, open of Cabrita point, brings St. Roque well open.) You must, therefore, have *the Bay well open*; bring the north end of the rock to bear N.E., and then steer for it; or for the conical hill, which will appear to the north of the rock, and which is called the Queen of Spain's chair; and which is the high round hill just alluded to, (it appears a round hill at a distance) which will take you right up to the anchorage, off the old mole. The best anchorage however, is not just off the Mole; but far enough to the north, to have the east winds blow steady over the neutral ground, if under the lee of the rock, you are subject to heavy squalls during "Levanters," and cannot keep a clear anchor.

Returning to Cadiz, much distance is saved by passing inside the Pearl; to do which, it is only necessary to pass at about a cable's length from the Island of Palomas. From Tarifa steer W.N.W. until the sand hills come open of Cape Plata, then N.W. till the Trafalgar tower comes on with Bouqueron; N.b.W. then takes you up to Cadiz. The following courses will be very safe during night and thick weather:—steer from the anchorage S.W., six miles and a half takes you about a mile true east of the Pearl rock, and Tarifa light will be seen bearing W.  $\frac{1}{4}$  N.; continue your course till the light bears W.b.N.  $\frac{1}{2}$  N., which it will do one mile further out,\*—steer for it, and when off it, steer one hour and a half W.N.W., brings Cape Plata N.E.b.E.  $\frac{1}{2}$  E.; then steer N.W.  $\frac{1}{2}$  N. one hour and a half, brings Trafalgar E.  $\frac{1}{2}$  N. seven miles; then steer N.N.W. one hour and a half, brings Sancti Petre E.b.N.

\* From subsequent observation, I am of opinion that Tarifa light W.  $\frac{1}{2}$  N. clears the Pearl.



seven miles and a half, and Cadiz light N.N.E. fourteen miles. It is here supposed, that in each one hour and a half, a steamer will go fourteen miles, making the whole distance from the anchorage at Gibraltar to Cadiz light, seventy-three miles. However correct Tofino's directions may be for this part of the coast, they are of no service in the night, and the marks he refers to, even at daylight, being all *for the dangers themselves*, instead of giving those to avoid them, lead to nothing but confusion, and require a *life of practice* to understand them. It is I conceive, only necessary to make out the different headlands as you go along, to enable any one by following these suggestions, to make out this passage with entire confidence, and to be particularly careful, especially to know which is Cape Trafalgar; this Cape, in going either up or down, first appears like a low island, with a tower upon it; in approaching it however, in night time, it does not present this appearance, there being some high land just at the back of it, which continues to the tower of Mecca, between which Tower and the Cape will be seen the white patch, which Tofino alludes to as the Bouqueron; therefore, in altering the course going south, it is essential to recollect, that under the north end of this piece of high land is Cape Trafalgar,—if the other end, (Tower of Mecca) is taken for it, and the south course continued till abreast of it, you are liable to be set off shore in Levanters. This error may also be avoided, by recollecting that immediately to the south-eastward of the Tower of Mecca, the long sandy hill or beach, and wide apparent opening in the land, before alluded to commences, (this high land is highest at the north end, and is there quite flat, descending towards Tower of Mecca.) It is hardly necessary to notice, that no credit whatever is given at the present day to the Thisbe Rock. More has been said of the passage between Cadiz and Gibraltar, than may appear necessary; but it is a passage, during night, and bad weather, which will be found to require great caution and some experience.

The passage back from Cadiz to Lisbon, is the reverse of the courses coming down from Lisbon. When abreast of the Rock light-house, N.N.E.  $\frac{1}{4}$  E. will take you between Peneche and the Burlings, from which position steamers will generally be proceeding north, about afternoon. If intending to call off Oporto Bar the next morning, in shaping a course from abreast Peneche for this purpose, either a good deal of distance is often lost, or some degree of risk run, by going along shore, the nights being in these fine latitudes much more hazy and difficult to navigate in, than most people would suppose. The safe plan is to steer N.E.b.N. which will take you right up to the high land between Vigo and Vianna; and although this does not pass Oporto Bar, more than at about fourteen to fifteen miles, you will be much too far out to see the light; and may thus overrun it; steering a course of half a

point more east will run you up to the bar ; but it carries you so near along the sandy beach, which extends from Cape Mondego, nearly the whole distance to Oporto, that a small error in compass, or bad steering may be fatal ; unless the night is unusually clear. It is true, that there are regular soundings, all along this coast ; but a little practice in steamers will shew the great hazard of running along shore, trusting to the lead ; the fact is, that a steamer goes so quickly, that soundings are not to be depended upon, and going at such a rate, even if they could, it is evident that in such situations, the lead should be kept constantly going ; or you are safe one moment, and in a few minutes fast on shore. To place, therefore, reliance upon the lead, the vessel's way must be checked considerably ; and rather than do this, it is better to increase the distance, adopt a safe course, and run in for the land in the morning. From off Oporto Bar, proceeding for Vigo, a N.b.E. course, *would appear*, to lead you along shore, outside the dangers, which abound as far as Vianna ; but it does not, and it will be found necessary to steer north, until off Vilha de Conde, then N.b.E. This part of the coast, is certainly incorrectly laid down on the Admiralty chart. A course from Vigo to Cape Finisterre will be N.b.W. about twenty-three miles ; then north, and across the Bay of Biscay, for the Lizard N.E., the state of the wind and weather, on entering the Bay, being well considered, I having been set fifty miles to the westward, coming across it with fresh east wind.

Distances and bearings from one place, or point, to another, in the navigation above treated of—not pretended to be given with perfect accuracy, but as approximation in nautical miles.—Bearings in degrees *true*, those in points, by compass :—

	<i>Miles.</i>
From Falmouth to the Lizard, S. 29° W. . . . .	12½
Lizard to Cape Turinana, S. 22 W. . . . .	447
Turinana, to Cape Finisterre, S. 4 E. . . . .	7
Cape Finisterre to entrance of Vigo Bay, S. ¼W. 29 miles and S.S.E. 18. . . . .	47
Up to Vigo Town . . . . .	7¼
From Vigo Town, to sea,—south channel . . . . .	10
From south entrance, (well out) to Oporto Bar, S.b.W. ¼W. . . . .	58
Off Oporto Bar to Peneche, S.W. ¼ S. . . . .	115
Peneche to Rock of Lisbon, S.S.W. ¼ W. . . . .	36
Rock up to Lisbon Town . . . . .	21
	<hr/>
Falmouth to Lisbon,	761
Falmouth to Lisbon, <i>direct</i> , 738½ miles	
From Lisbon Town, (Black Horse Square,) to Belem . . . . .	2¼
Belem to entrance of Tagus . . . . .	5
	<hr/>
	8½

*Carried over* 769½

	<i>Brought forward</i>	769½
Forts to Cape Espechel, S.b.W.	15½	
Espechel to Cape St. Vincent, S.b.W.	83	
St. Vincent to Cape Sagree, S.S.E.	3	
Cape Sagree to Cadiz Bay, S.E.b.E.	130	231¼
	—	—
Falmouth to Cadiz		1001
Anchorage at Cadiz to outside the light	5	
Cadiz Light to Cape Trafalgar, S.	26	
Trafalgar to sight of Tarifa Light, S.E. ½ S.	14	
Up to light E.S.E.	13	
Tarifa to Gibraltar	17	75
	—	—
Falmouth to Gibraltar		1076
From Falmouth to Blackwall,		339

Whole distance of voyage each way.—*Miles* 1415

NAUTICAL RAMBLES.—*The Bermudas.*—No. IV.

(Continued from page 658.)

WE do not know whether St. George's has been declared a free port, open to all nations; it being so, however, would not probably be attended with advantage unless the inhabitants employed their capital in maritime traffic, such as the fisheries, and the striking of whales; and thus constitute their chief town a depôt for salt-fish and oil. This would be an inducement to foreigners to visit them and exchange commodities. It might also be made a depôt for Havana sugar; dye woods and coffee from Hayti; potash from Quebec, &c.; in fact, establishing a carrying trade, and an exchange traffic; the advantages of which would very soon be apparent, although they could never expect to rival the celebrity of the barren rock of St. Eustatia, or pretend to emulate its giant range of storehouses.

The government house at St. George's has a commanding view to the southward; its internal arrangements may be good, but there is nothing externally to distinguish it from the private dwellings. On the same ridge to the eastward the barrack is situated; its position is well chosen with respect to elevation. We know not whether the station be considered an agreeable one by the officers; but to those who are fond of literary pursuits, and are happily possessed of resources in their own minds to make the hours pass pleasantly by, we should conceive that it must be so. To those, however, who may tire of the monotonous round of a quiet and peaceable life, and the unvaried aspect of rural and ro-

matic scenery; and whose professional duties are seldom interrupted by assemblies, routes, and other exciting festivities, or by dramatic entertainments, such a life must entail upon them that terror of the mind which the French term *ennui*, and those who use plain English, the "blue devils!" Occasionally, and seasonally, indeed, the torpor of a mind thus constituted, is aroused by a furious gale, or the transit of one of those awful circular hurricanes which sweep over the Atlantic with impetuous and astounding violence, and which so profitably to the seaman, has engaged the close attention of the present enlightened governor of these islands.

The old dockyard was situated to the eastward of the parade, and occupied a very small space; it was inconveniently placed with reference to the ships lying in Murrays anchorage, as their visits were more frequent in winter when much stormy weather occurs there, than in the summer. This was unavoidable on account of the rigour of the climate of Halifax, in Nova Scotia, the harbour there being sometimes frozen over, and even in October the cold is often severe; the men-of-war generally quit that place in November: December however is a finer month for such a climate. The new dockyard at Ireland is, therefore, decidedly preferable, and as steamers can now be made available for the purpose of towing the ships to sea, the main objection to Grassy Bay as an anchorage becomes obviated.

Perhaps a residence on Ireland island will be appropriated to the naval commander-in-chief; that which the admirals formerly occupied is situated on the bank immediately above the old yard; their presence being required nearer the fitting station, those officers latterly resided at St. John's Hill at the western extreme of Pembroke, in the Great Bermuda.

There are no established inns or taverns (at least there were none during the periods I visited the islands,) at St. Georges; the visitor, if unacquainted, must seek where he can for accommodation. The pilots generally have furnished rooms in their houses for the convenience of those officers who go on shore; and being obliging, good tempered fellows, exert their influence in obtaining food for them, whenever it can be procured; the charges are, however, necessarily high, and it often happens that little or nothing can be met with, the inhabitants of St. George being dependent on St. David island for provisions.

To the left of the government house is the Telegraph hill, on which there is a post for signals. Here men are stationed to look out for vessels approaching the islands; on intimation being given to that effect, the pilots proceed to sea without delay, and are generally in the offing before a vessel draws in with the land.

On the northern side of the island lies Murray's anchorage, which

was so named in compliment to the late most worthy Rear-Admiral George Murray, who first used it as a roadstead for ships of the line. In the year 1795, the Admiral, in the "Resolution," of 74 guns, was conducted into the anchorage by Captain Thomas Hurd, the late Hydrographer-Royal. It is a very disagreeable place to ride in during the stormy weather of the winter season, the gales of which, according to the expression of an Irish officer, being of a perfect ferocious character. Notwithstanding, however, that from the earliest times the "vexed Bermoothers" have been proverbial for furious tempests; at other seasons of the year there is much fine weather.

The men-of-war are supplied with water from two large tanks built on the slope of the northern ridge, aback of St. George town. The water which falls from the clouds, and is received into reservoirs at the foot of the plastered platforms, is clear and cool; it is pumped up from these receptacles to a level with pipes, which convey it down the declivity, into a hollow cylinder of rude construction at the landing place equally primitive in a snug little cove, (inappropriately termed "Tobacco Bay,") at the foot of the hill, and the casks are filled in the boats by means of a hose; when expedition is required, some of the casks are conveyed up the ascent, filled to the tank and rolled down to the boats.

From the recommendation of the late Admiral A. F. Evans, several vessels called "tanks" were constructed at these islands, for the purpose of holding water in bulk, and were conducted to Port Royal, in Jamaica, there to be employed in supplying the ships-of-war with water from Rock Fort more expeditiously than by the boats. The plan fully realized the expectations of that scientific officer, and the relief to the crews of the ships on that station which this new mode for more readily obtaining the necessary element was appreciated, and acknowledged by them in grateful expressions at the time it was put in force; but it is singular, that although at the period we are speaking of, such a plan was equally required at Bermuda, it should not have been adopted there.

In very dry weather, the supply of water for the ships at the tanks fails, when recourse is had to several wells, or pits, situated on the north shore of Pembroke, in the Great Bermuda, between the Flats and St. John Hill; the water obtained here is, however, brackish, and cannot be wholesome. At the entrance of the little Cove above-mentioned, there is a rocky obstruction, which is dangerous to boats when the wind blows fresh from the westward; if this has not been removed, it ought to be so. From the eminence above the tanks, the North Rocks may be seen, they are distant about eight or ten miles, and have the appearance of boats under sail; there is a passage of egress near them for

ships, but it is seldom used, being intricate, and requiring some precautions before it can be attempted, with a fixed leading wind.

About two and three quarter miles to the south-westward from the town, the island of St. George terminates; it is there divided from the main-land by a narrow channel, where there is a ferry-boat for the conveyance of passengers across. The path-way leading to this place is serpentine, and the scenery every where romantic: lagoons, small bays, islets, cays and rocks, are seen to the left; to the right, the land rises to some heights, the northern front of which is composed of rocks, and forms a clifty barrier which screens the interior partially from the effects of the boisterous elements. At the extremity of the island there is a guard house. The channel has depth of water for small vessels.

Having passed across in the ferry-boat, we enter on the Great Bermuda, in Hamilton parish. This northern portion of the island which is peninsulated, is a pile of rocks and sand, and here and there vegetable mould,—among which are some excavations containing *salt water*, from which it may be inferred that they have not been artificially formed, and that they communicate with the sea by fissures. A variety of aromatic shrubs ornament the surface of this wild and singular spot.

Among the curiosities which attracted our notice at this end of the Great Island, the grottos or subterranean cavities, were not the least engaging. One of these, we were informed, extended nearly a quarter of a mile in a horizontal direction, a few fathoms beneath the surface of the land. Having determined to explore it we prepared torches, and procured a guide, and set off early on the excursion, fully resolved to trace it to its termination if possible.

About thirty yards from the sea beach we arrived at a very small aperture in the rocks, through which we entered; the descent was about twenty feet to the floor of the cavern. Here the usual scene of such places appeared before us, the *tout ensemble* of which is very generally of the same character every where; domes, arched-ways, and pillars, some perfect, others in various stages, from the incipient congealing stalactite, dependent from the roof, and the corresponding stalagmite of the floor, to the massive shaft of considerable circumference: it was a picture, still unfinished by the hand of nature herself, embracing architecture of the simplest, yet apparently of the most studied style and sculpture, the forms of which bore some resemblance to the works of art, but surpassing these in interest, as having been fashioned without the aid of tools. The scene was altogether attractive, and it was impossible to view it without delight; the symmetrical regularity of the curve of the arches, and the perfectly correct vertical approaches of the icicle-like shafts from above and below, in their different stages; here the points being some feet asunder,—there approaching within a few inches,

—now meeting with mathematical exactness, and lastly, forming one solid whole,—all and every portion at the same instant irresistibly claiming notice. Such a phenomenon proceeding from the unceasing and unerring process of natural agencies, could not fail to make due impression upon the mind of the most unthinking of the gazers, and which, indeed, was sufficiently manifest by the perfect silence maintained. We passed through several cells divided by natural partitions, and leading from one to the other by arched ways. In some of these we saw deep (apparently profoundly deep) cavities filled with water which was perfectly limpid; we were cautioned, or some of the party might have slipped into them, as they lay close to the track, and from reflecting the rock were undistinguishable without close inspection. We were surprised to find that the fluid in some of the pools was quite salt, whilst in others, distant only a few feet, it was perfectly sweet and fresh; the difference is probably occasioned by the former having communication with the sea, and the latter being without such connexion; the hand when plunged into the water felt extremely cold. The neighbouring residents use that which is fresh for domestic purposes, and are thus relieved from the necessity of forming tanks, with the additional advantage of obtaining a much purer\* fluid than that supplied by such receptacles.

We had passed through several of these vaulted chambers, and were proceeding onwards with the expectation of soon arriving at the termination, when, most provokingly, the guide called out to us to return, as the torches were nearly consumed,—and we were, therefore, reluctantly obliged to retrace our steps.

On emerging from the cavern, we proceeded to the cottage of our guide, and regaled ourselves with a repast which the hostess had promised should be provided for us,—it consisted, (as may be guessed after what we have stated respecting eatables,) not of such fare as an hungered person would desire, but of the simplest articles of rural economy—milk and honey. Neither bread, nor bread kind, such as yams, plantain, or cassava, could be procured. How these good people contrive to exist from year to year, is a matter of surprise; in their small garden we saw only a few cabbages, pumpkins, and potato plants. At the entrance of one of the caves, we stopped to admire a coffee shrub in full bearing, and near it a group of sugar cane, but no where did we observe these in a state of cultivation.

I saw several varieties of the graminæ, which in almost all parts of the world are more numerous than any other class of vegetables; I

\* Wholesome, is perhaps the most proper word; the time may improve the quality; but not its purity.

counted ten or twelve different sorts on a small space of cleared ground, of these I understood, that the long purple stem jointed running grass was the most valuable. Another, which I believe to be peculiar to these islands, is conspicuous on account of its bearing a beautiful purple flower, a singularity I was not prepared for. One with a tuberous root is strongly impregnated with the scent of the cedar; whether this flavour is acquired from its contiguity to the trees of that name, or is natural to it, like that of the lemon grass, I cannot say. The bamboo grass which is ornamental, but troublesome in gardens, was introduced from Martinique. In some of the large ponds of salt-water we noticed many of the large rock fish in a state of domestication. So familiar have they become, that many of them rose up to the surface when a whistle was given, and readily seized from our hand bits of twisted paper, but they seemed evidently to be disappointed, as one and all ejected the unsavoury morsel, and giving a flourish with the tail, placed their body in a vertical position, and descended rapidly into the indistinguishable depth below. It was a curious sight, and we lingered some time at the brink of the pool in hopes of enticing them to re-appear, but in vain; they were not to be deluded a second time, and those which were ascending, to appearance no bigger than sprats, although at least two feet in length, on meeting the descending *scote*, turned round, joined them and soon disappeared. The nature of the communication between the two groups, if there was any, may be inferred;—we leave the speculation to others. We were informed that these fish were private property, and were caught and sold at such times when they would fetch a good price. It is surprising that all the ponds are not thus tenanted; they have a receptacle large enough to contain fish sufficient for all the inhabitants, during the year round,—viz., Harrington Lagoon; and all that it requires to complete it, is a *wear* across the little channel which connects it with the creek.

The path leading from the ferry to Hamilton town, lies along the shore the greater part of the way; the distance is about six miles and a half,—the scenery is wild, and presents the same features every where the eye rests upon,—cedars and white houses. As far as I had an opportunity of observing, very inconsiderable spaces were allotted to cultivation; the good folks here seem determined to keep up their stock of fire-wood to make the pot boil, yet appear to have no notion of the mode to be adopted for procuring the necessary things to be placed therein. Three miles from the ferry we arrived at a small hamlet called the Flats, from a sand and coral bank which stretches out from the western face of this northern part of the island. Although composed of the same unvaried objects which recur again and again, to the view from one end of the group to the other, the disposition of the



features of the land and water; the trees and houses are somewhat differently arranged here, and the whole as it comes unexpectedly upon the sight, is by no means unpicturesque. The dwellings lie at the base of a hill, which is entirely clothed with luxuriant cedars, interspersed with dwarf Palmetto, or Fan Palm. A creek runs in here, which is crossed at the inner extreme by a small bridge; this inlet communicates with Harrington Sound, as it is termed, the enclosed water already mentioned, it is separated from the sea by a narrow isthmus of sand. We here observed the blacks plaiting strips of the Palmetto leaf, for the purpose of converting it into bonnets and hats; they have obtained some celebrity in this handy-craft work, the plait being the finest and neatest perhaps any where to be found, and is much more durable than that which is made from wheaten straw.

A short distance from the Flats, those beautiful corvettes belonging to the public service were constructed. They were unquestionably very superior vessels of their class, particularly as to their sailing quality, and comfortable quarters for the officers and crew; in the former they surpassed the New York pilot boats, although not quite so weatherly. The only vessel that could compete with those latterly built, was the *Belvidera*, a contract fir frigate; their general proportion was 116 feet and a half, by 28 feet. In consequence of the water abreast of the slip being shoally, it became necessary for the builder to contrive some mode for obviating the difficulty of launching so large a ship over such little water. This he ingeniously accomplished by inclining the vessel on her bilge upon a cradle, so that when getting clear off the slip, she fell nearly upon her broadside, passing the short space of shallow water with ease, and righting immediately she reached a depth sufficient to admit of her assuming an upright position. The plan is not, however, an original one of the Bermuda builder, although it is not improbable that the circumstances of the case may have suggested it to his mind; he is at all events entitled to the merit of accomplishing the launch, in a very simple and efficacious manner. The plan has been long known and practised in some parts of the East Indies. Besides corvettes, three-masted schooners, and others of that class of vessels, with a few cutters, were built for the service of the State; several of these were wrecked and foundered, probably in hurricanes.

A singular circumstance is related as having occurred when *H.M.S. Bermuda\** was wrecked on the Little Bahama Bank. She had been cruising some time on the Florida channel, for the purpose of intercepting a ship under Portuguese colours, engaged in illicit trade, of which the captain of the corvette had received intimation. In this

\* This ship was one the finest built at the Islands of Cedar.

dangerous navigation, the ship continued for several weeks without accident, but at last, in a very dark night ran upon the Memory Rock, as many an unfortunate vessel had done before her. At early dawn the following morning, the officers discovered that the corvette was not the only sufferer, as a large ship was observed to be on shore about two miles from her position. A boat was immediately despatched to ascertain who she was,—and extraordinary enough, she proved to be the identical Portuguese vessel they had been so long in quest of! It appeared that the only damage she had sustained, was the loss of her rudder; that of the Bermuda being saved, was fitted to the prize, (for she was taken possession of as such,) and she was without much difficulty hove off from the rocks, and conveyed the crew and stores of the king's vessel to Nassau, in New Providence.

The sailing boats of the Bermudians are perhaps unsurpassed in their good qualities, and are more easily managed than any similar class of vessels we have ever met with. They are rigged with one, and many of them with two shoulder-of-mutton sails, are extremely stiff, work well, and sail remarkably fast; but, like the corvettes they require to be well ballasted. These vessels are very numerous, and are daily employed, when the weather permits, on the fishing grounds near the great barrier reefs which sweep from north to west. It is a very interesting sight to witness the "Musquito" fleet issuing from among the verdant isles at the dawn of day, and stretching across the calm unruffled bosom of the miniature Mediterranean, with just wind enough to fill their white sails, for the fulfillment of their daily task. At such a moment, every thing around conspires to render the scene delightful to a spectator; turn where he will every object that meets his view seems to wear an air of peace, and to have just awakened, as it were, from a state of undisturbed repose. At first all appears before him indistinct and undefined; but, even the grey vapoury haze, like a silvery veil curtaining in the view, gradually withdraws as the ascending sun diffuses his warmth through the surrounding atmosphere, and every feature of the land and sea becomes displayed before his admiring gaze, dressed in the bright effulgence of a southern day. There is not an eye that rests upon those white specks which lie scattered over the blue aqueous plain, but feels an interest in their success, for, upon that mainly depends the gratification of a most important function of the animal economy; and, the disappointment of this expectation can only be known to those who, like the Bermudians, are principally dependant on the bounty of the ocean for a plentiful meal.

The internal water from St. Catherine Head to the reef which runs from the Spanish Point at the extremity of Pembroke, to Ireland's isle, is studded with sub-marine coral patches, having deep-water between

them the whole distance, which is about ten miles. It is through this checquered navigation that ships are obliged to pass and repass from the open ocean to Grassy Bay. The water is extremely clear, and the rocky spots are distinctly visible when the sun shines, but whenever it is obscured, some of the dangers which lie deeper than others, become undistinguishable, and ships are then liable to strike, the pilot being guided solely by eyesight. It is probable that since my last visit the rocky patches which are immediately in the way, have been buoyed. How far land-marks, (obelisks,) may be made available in such a navigation, I am not aware. If the security which this intricacy affords to the main anchorage of the fleet be considered essential to the maintenance of the undisturbed possession of the naval depôt from the deprivations of an enterprising enemy during a war, then by all means let these natural obstacles to a free transit remain in *statu quo*; but if we have no reason to apprehend that our snug corner shall ever be invaded by any mortal foe, as it has been by the agency of the natural elements, the sooner Colonel Pasley's voltaic apparatus is transported to the locality, the better. "Astonish the natives" by showing them that our boast of road levelling can be as effectually accomplished at the bottom of the sea as on the surface of the land! But the *charges* would be costly, perhaps so, yet, that ought not to be the question, but rather, "Is the object worth attaining?" I cannot presume to answer; if, however, it should be, probably the discontinuance of the "ostentatious salute" for a year or two, would cover the estimate, at least, for powder.

The northern point of Pembroke is bounded by craggy rocks, and steep cliffs of shale in horizontal strata. On some of these which project over the base, ladders have been thrust out obliquely, and well secured inwards; upon these hazardous looking pieces of wood, the land-fisher crawls out and lays himself down at full length, face downwards, and drops his loaded line and baited hook into the restless element below. In this uneasy, and by no means enviable position, with a degree of patience only known to a *hungry* man, he will remain for hours, like the celebrated cockney "Pop-joy," dabbling the bait, with the hope expectant of catching—no matter what—a conger—a cat-fish—porjy, or snapper—for any and every variety is of value to him who is everlastingly doomed to "short commons!"

If any success attends their labours here, it would be worth while to improve the plan, which is susceptible by a slight alteration of being made much more convenient and less hazardous; and where wood is super-abundant, the wonder is that it should not have been so. A boarded stage upon the simple principle of the glaziers' plank, with transverse bars, six inches apart, in the centre, would render it safe and

equally effective for the purpose required ; an intelligent child might then superintend the lines, without the fear of being toppled from the giddy heights.

The remark has been frequently made by travellers, of the same contrivances being found among different races of people, whose language, manners, and general customs have been quite dissimilar ; there is, perhaps, more of curiosity than wonder excited in the contemplation of such coincidences ; the natural intelligence of man, and the necessities which press alike on all the genus, would suggest to his mind, whether he were in a rude or a civilized state, contrivances for meeting these necessities in the most ready way ; so that, among the multitudes who inhabit the globe, it would be extraordinary indeed if the same class of beings endowed with the same perceptions, did not under peculiar circumstances light upon the same ideas. Ingenuity of thought and mechanical genius do not belong alone to the civilized or the educated man, the superiority of these over the barbarian or savage is only in degree. We advert to this, as in Norway, and probably in other rocky coast countries, there is a similar contrivance for fishing ; we believe, however, that nets as well as lines are used from them. We shall not start the "knotty" point, of the plan having been introduced into these islands by some Caledonian descended from the Scandinavian race !

From the Wells to St. John's Hill, the land trends to the west ; the road is near and parallel to the sea. There are several substantially built dwellings scattered about this little peninsula, surrounded by cedar groves ; one of these during the war was appropriated to the seamen of the fleet who were sick ; small and inconvenient as it was, it was, we believe, seldom crowded ; it possessed one advantage in its position, which rendered it a desirable site for an hospital ; immediately below it there is a snug little cove where patients could be landed with ease. I recollect to have seen an operation performed on a seaman here, that excited much wonder at the time, and gave rise to serious reflections on the inconsistency, and at the same time the extraordinary resolution of the human mind, when bent upon some favorite object. The patient had been sent from his ship with a severe ulcer in the thick part of his thigh, or rather buttock, which had baffled the sagacity of the surgeon. He remained some weeks under the most approved treatment, and suffering the most excruciating agony, without the slightest amendment. At last the surgeon of the hospital determined to question the man closely as to the origin of the wound, but he stoutly denied any knowledge as to the manner it took place. Nothing at all satisfactory could be elicited from him, "he had met with no accident," he said, "that could have given rise to it." This seemed inexplicable to

the enquirer, who, weighing the amount of the circumstance attending the mysterious case, arrived at the conclusion that whatever might have been the cause of the wound, it had been produced designedly; he, therefore, promptly resolved to probe it effectually, as the only means left to ascertain the fact. This operation was vigorously resisted by the patient. Convinced now that his conjecture was correct, the surgeon forthwith, with the assistance of others, lashed the man down to a chest, and in a few minutes by the aid of his forceps extracted a large *sail needle, several inches in length*, with a piece of twine through the eye! The wound speedily healed, and the cunning, though determined schemer, was sent back to his ship. To the last, the man persisted in denying that he was aware of the cause of his suffering; but it seems almost impossible to give credence to this assertion: the only corroborations, morally considered, that could lead to such a belief were, that the patient was an able seaman of middle age, and a steady sober fellow; yet, physically regarded, it appears beyond belief that accident could have introduced so large an instrument into the man's flesh, without his cognizance of the fact. It is much more reasonable to believe, that the individual came under the denomination of what in military parlance is termed a "maligner," and that he had purposely inflicted this torment upon himself, in order to obtain his discharge from the service.

Several instances of mutilation, and other modes of self-inflicting injuries occurred during the war, which independent of the impatience, of restraint which is to be found in some peculiarly constituted minds may perhaps be generally traced to the undefined period of servitude; close confinement to ship-board, and the use of the ropes'-end, (starting.) *then liberally* exercised throughout the fleet. Without intending to offer any palliation for these offences against reason, common sense, and patriotic duty, we cannot but express surprise, that such endeavours to escape those evils, happily no longer in existence, should have been comparatively few. We are perfectly satisfied,—malgré all that has been said of them since the peace;—that in estimating the character of British seamen, from the patient endurance of the manifold deprivations and discomforts incident to their situation, during those protracted years of intense exertion, and moral and physical probation; we do them but bare justice in saying they stood without equals in these respects, and that no body, or class of men have ever fulfilled the duties imposed on them from station, with more exemplary firmness and devotion, and from which more brilliant results followed. British soldiers as combatants, and for six years of trial, stood upon an equality with them, but of no other countries could a profession be found that did so,—the testimony of events proves this; there is not therefore any vanity in the

assumption. To the combined efforts of the army and navy of old England, Europe stands indebted for the termination of the most extraordinary, ambitious, and sanguinary war, that has ever been recorded in the annals of history, and for the peace which has lasted a quarter of a century.

Whilst examining St. John's Cove, a romantic but tragical tale was related to me by a resident of the hill. It appears that two youths residing in the neighbourhood, became enamoured of a coy nymph, who being undetermined to which of the twain she should give the preference, drove them both to a state of despair. Though rivals, it seems they were friends; the decision therefore, had it been made, would not have completely soothed the excitement of either, so to end the matter, with reference to themselves, they mutually agreed to put a termination to their state of misery by shooting themselves, or jumping into the sea, I do not recollect which; but they effectually completed the resolution, and left the disconsolate fair to mourn and weep alone!

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ÆOLIAN RESEARCHES.—No. VIII.

[Of the seventeenth century.]

By gelid winds, I understand those which are colder than our sensories, or the ambient air. This frigidity may happily proceed from nitrous particles of which they consist, or whatever body else we reckon to be the *primum frigidum*; or, because they have their origine in those caverns under the earth, where the sunbeams never penetrate, and no subterranean warmth is to be found. Monsieur De Cartes avers that all boistrous winds, from whatever point of the compass they blow, are universally cold and dry: and we find that any sort of air violently mov'd by a fanne or bellows, does refrigerate; so that the cold of winds may somewhat depend on their motion, or manner of affecting our senses. And since the Cartesians will allow cold to be no positive quality of itself, but a mere privation of heat: then, either the absence of their subtil matter may cause the frigidity of winds; or else the occasion thereof must be this, that they passe thorough the gelid regions which are never visited by the sun-beams. For as those which come from Æthiopia and other parts of the Torrid Zone, doe imbibe the heat, and sympathise with the nature of the places from whence they come; so questionlesse the other that consist of, or drive before them, the grosse and frigorifique air from Groenland and other northern climates, must needs have considerable allays of the mediums through which they passe. And within the Polar circles, the absence of the solar rays for so many months, do's sufficiently conduce to the production of cold; since the

sun which us'd to correct the rigour and inclemency of the weather, is now banisht from their horizon, and the air become chill and torpid by the long predominance of the cold. So that the winds must of necessity admit of very considerable alterations in their passage: and whether or no they consist of frigorifique particles; yet by their commerce and enterfering with the gelid regions, they may draw, I know not what, contagion from thence. As appear'd in the foremention'd experiment, how much the mixt<sup>re</sup> of snow and ice, only by applying it to the outside of the bellows, did soon infrigidate the transient winds. For I am not sufficiently convinc'd that cold winds, proceed always from nitre, sal armaniac, or other frigorifique corpuscles; but sometimes only appear so to us, by their particular motions on our sensories: As wee see any air ventilated from fanns or bellows, or our own breath darted with a very vehement impulse from the mouth, appears frigid; which if wee exhale gaping, and in another position of the lips, is rather sensibly hot.

Thus if winds may be styl'd cold from a simple privation of heat, and if only the want of some subtil matter, the absence of the sun, or other calorifique corpuscles, will resolve the severall phenomena wee commonly ascribe to cold; this will be sufficient to constitute the refrigerative winds; which may better be explain'd in this manner, then by the positive qualitie of the peripatetiques, or the nitrous, and other frigorifique particles of the atomists, and corpuscularian philosophers. I shall only add one circumstance out of the Honourable Mr. Boyl, concerning the causes of cold winds. I have suspected some winds may be cold only by consisting of, or driving before them, those higher parts of the air, that by reason of the languid reflexion of the sun-beams in the upper region, is for the most part cold.

Yet, as I before declar'd, we often commensurate the qualities of winds, not only from their constituent particles, or their just degrees of frigidity or heat, but sometimes because they are warmer then the ambient air, or the winds that usually blow in such climats; or at leastwise then those membranes or sensorys, by which wee judge them. The winds which blow off from sea, are farre hotter then those which come from land. May not the colluscent salts, which create such a sparkling and coruscation in tempests, or other vehement collision of the waves be able to produce some heat in the air and winds, being either actual flames or at least making those impressions on our sensory's as if they were? Nevertheless, since we find by experience that these kind of salts, with which the sea water is impregnated, doe neither rise up in vapors; nor being mingled with liquids, any way advance their heat; may there not be other calorifick effluvioms (like the hot steams in colepits and mines) that ascend from the bottome of the sea, yet cannot

so easily perspire through the solider superficies of the earth; which renders the maritime regions and winds hotter then the midland? But whatever be the cause, it is most evident that all over Europe, the winters are generally milder in islands then many places in the continent which lye nearer the sun. As in England then France; nay Scotland, though it be situate so farre north, has seldome more keen and piercing frosts then Paris, or some citys of Italy, which are infested with terrestriall winds. So likewise part of Asia, as in China where it runs to the southwards of Spain, the winters are most excessively cold: and in the 42 degree of latitude, they have ice which lasts 3 or 4 months together, by reason of the land winds. For this cause New England, though it lyes not so farre distant from the æquator, is incomparably colder then any parts of Great Britain. And at Virginia, as I have been inform'd, the land winds oftentimes surprise them with such an exceeding sharp air, that one would think it impossible there should be those extreames of heat and cold in the same day. So on the coasts of Carolina and Florida, where they have for the most part midland winds, the colds are intolerable considering their no great distance from the sun. When as the sea-brise in most parts of Europe, is temperate and mild: I have heard, that in the isle of Jersey, the myrtles, will live abroad all winter, being cherisht on every side, with the tepid vapors from the sea; and that little ice they have is soon gone. It's also observable neare the sea side here in England, as in the county of Cornwall, that the snow is generally melted in lesse then a weeks space, and the frosts not so lasting as elsewhere: Shall we say the acrimony of the sea vapors soon dissolves the textures of the ice and snow, or that they choak up and repell those frigorifique corpuscles, which are as the coagulum to cement, and knit together the parts of liquids? So likewise on the coasts of Ireland, the complexion of the air is much hotter then in many other places of the same latitude: and were it not environ'd with the ocean, who would think Island inhabitable, that lyes directly under the Polar circle.

Yet this holds good only in the temperate zones: for in the torrid, the sea-brise is refrigerative, and abating the excesse of heat; And contrariwise on the African continent the land-winds, which travell o're the burning sands, allmost suffocate the miserable inhabitants, which are roasted into skeletons, and sometimes loose their hearing and sight by the immoderate heat: Yet in part of Guiny, where the neighbouring mountains defend them from the easterly winds, and suffer the cool sea-brise, to blow upon their coasts, how wonderfully are their spirits reviv'd with the delightfull gale? But though the Levants are so pernicious, when they come reaking off from the Sandy Wilderness, yet being refrigerated in a long passage o're the Pacificque Ocean, at



the Caribbes, and the American continent, they become the coolest of all winds, and the greatest blessing which Providence could ever bestow on the new world, to allay the otherwise insufferable heats of the Torrid Zone: Only part of Peru, though the soyl be of it selfe fertile, and enrich't with all the bountys of Nature, yet on this side the mountains the land-winds, render it sterill and unfruitfull; when as Brassile enjoys a more temperate heaven, being bedew'd with the refreshing brise from the adjacent ocean.

From these severall instances, it appears, that the land-winds must needs be more intensely heated, between the tropiques, then in these parts of the world, that lye so farre distant from the course of the sun; and the earth, being a dense body, retains the calorifique impressions; when as the volutation of the waves so often changes the superficies of the water, that the same parts of the ocean are not always expos'd to the celestiaall beams: And though it must be acknowledg'd that neare the æquinocetiall, the surface of the earth, and consequently the winds that blow over it, are much warmer then in the neighbourhood of the Poles; yet without dispute the ocean also is proportionably as much hotter then our seas; And though the sea-winds seeme refrigerative with them, which rather betray very great symptoms of heat in these countrys; yet I question whether this, in some measure, may not be understood comparatively to the disposition of our sensories, and that of the ambient air. For, their blood and spirits being farre more agitated then ours, and also accustom'd to a climate excessively hot; they must of necessity have different perceptions from us, who live in the colder regions of the world.

But besides these vulgar or elementary qualities of winds, they have almost infinite variety in their natures, according to the severall subjects they can operate upon; and their properties are various, as the different impressions which they make upon other bodys. For those which are corrosive, in reference to iron, or stone, may prove pestilentiaall to men; and one and the same quality have one denomination, as it relates to beasts, a second to birds, and a third to insects, according to the different capacities of the recipient. Some winds are observed to raise strange disturbances, and (as it were) convulsions in swine. And those who keep silk-worms, are said to shut their windows, and protect them from the south-wind which causes their sickness and death; but readily expose them to the north, which conduces as much to their vigour and health. So that we can never pretend to a perfect knowledge of their qualities, unless we understood their relations to all other bodies in the world.

But among the wonders of winds, we must not pass by the harmetans of Guiny; which, for the time they blow, cause wainscoats and

planks to open and gape, making wide chasms in the most solid and imporous wood. I could insert many testimonies of this nature from credible persons; severall who lived in those countries, and not a few of our seamen, have been witnesses of their strange effects: I shall instance in one relation which was communicated to me by Captain Peechy, who was long employed in the African trade by the royall company.

“The harmetan winds, so called by the natives, come but once a year, constantly in December about Christmas; and bring a very unwholesome vapour.

“Their arrivall is for the most part at the east, and they go no farther then the E.N.E. their continuance is 4 or 5 days, not blowing hard, but with an easy gale: the natives are full of aches and pains in these times, and care not for stirring out of doors.

“The trees that are standing, during their continuance, will open, that you may put in your knife and sheath: so will the boards of the floors, when as before, there was nothing seen, and after they are gone, they close up again to their wonted place.”

This may proceed from their extreme siccity, when they blow off the sands, in that exceeding hot climate; as wee see boards chop and gape, that are kept over dry; and more in chambers or cock-lofts, then lower rooms; and so likewise most sorts of wood, by lying long in the sun, which exhausts their moysture: The known remedy in such cases, is, to soak them thoroughly in water, by which means, they oftentimes swell again into their former dimensions: so possibly may the trees, and planks in Guiny, when the harmetans are gone, and some moyster wind succeeds, which brings with it a more humid and relenting air. Wee have observ'd effects of this nature in some of our very drying March winds; and therefore the workers of musicall instruments commonly chuse to dry their materials at that time of the yeare; which, as they think, renders them more resounding and harmonious.

I have not as yet had sufficient opportunity to satisfy my selfe in one curious enquiry which belongs to the history of winds: only, thus much I have heard, that, when a certain wind blows at Florence, the weavers of the finest silks leave off their work; finding by experience that it quite spoyles the oriency and brightness of their colours; so that they can by no diligence or invention seclude it out of their work-houses, to hinder the ill effects thereof. It is a cold wind, perhaps blowing off from the snowy hills, where it gathers those corrodng salts which alter the texture of the superficial parts; and by causing new modifications of light, change the colours of silks. As the richest and most florid dyes of scarlet are not only soon faded in a showre of rain, but it has been observ'd, that they suffer prejudice, and loose somewhat

of their lustre, if they be worn much in misty weather: and so possibly certain species of air or winds, may be able to make the like kind of impressions on those Florentine silks.

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VOYAGE OF H.M.S. BEAGLE, ON A SURVEY TO THE COAST OF AUSTRALIA.—*By a Naval Officer.*

(Continued from page 712.)

VARIOUS duties detained us at this anchorage until the 3d of April, when, with a moderate breeze from the westward, we passed again through Sunday Strait, and bade adieu, without regret, to so unprofitable a spot as that we had been employed in for the last two months.

Soon after leaving the Strait, through which the tide runs with great rapidity, three to four knots, the wind became light; and to prevent being taken back again, the stream was dropped, and we remained at anchor in thirty-one fathoms during the night, about two leagues to the north-west of Caffarelli Island. The following day we passed Brue Reef, and on Adele Island, east side, came to an anchor at three miles and a half off, in fourteen fathoms water.

Adele Island is nearly three miles in length, surrounded with coral reefs on either side, those to the south-east extend as much as a league, and give it the appearance most to be dreaded by shipping;—black-headed rocks, with the sea lashing furiously on them. There was a slight discrepancy found to exist in the position assigned it by Capt. King, which has now been corrected.

From this anchorage our course was held to the north-east over an uneven bottom of sand and coral, varying from eleven to forty fathoms. The wind was light and variable, compelling us to anchor on every tide, so that it was not until the evening of the 5th, that we were abreast of a bank of sand, about ten feet in height, at its southern extreme; and including the coral rocks that surrounded it, covering a space of upwards of a league. This, like Adele Island, and all the ridges we had passed over, ran in a north-west and south-east direction, connected no doubt with the island near the coast, all of which trended to the same point.

Passing this bank, which was named after the Beagle, the bottom became more even, from thirty to forty fathoms over a mixed bottom of sand and mud, until abreast of Red Island, which we passed about two miles to the northward of, on the morning of the 6th, and at sunset came to anchor off Point Adieu, it being too dark to attempt entering Port George the Fourth, of which little was known.

The main object of our visit to this part of the coast, being to ascertain the fate of Lieutenant Grey, and his party, who left us at the Cape of Good Hope, and of whom no information had since been obtained, it was probable that while searching for any relic that might remain, sufficient time would be afforded for a partial examination of the coast, between this spot and Colliers Bay; the only remaining part that had not been looked into, and on which our last hopes rested of the long sought for river. Accordingly, at daylight, of the following day, Mr. Stokes although suffering considerably from a bad foot, quitted the ship with two whale boats, provisioned for a week, and with our hearty good wishes for the success which he had worked so hard for, and truly merited, stood to the southward among the islands.

The ship was soon after underway, and with a light breeze from the southward, worked into a snug cove, round the first headland on the east side of Port George the Fourth, and moored in ten fathoms, a quarter of a mile from the nearest shore.

We were all now on the tip-toe of expectation, glasses were turned in every direction, but no signs of the wanderers appeared. In the evening, when all was quiet, and deathlike silence reigned around, guns were fired as signals to any stragglers that might be in the neighbourhood,—the reverberating echo was the only answer.

The next day, Captain Wickham with several other officers left us in the yawl, and proceeded to Hanover Bay, where it was likely the party would have started from, and to our delight brought with him, the master of the Lynher, which was lying there hourly expecting the return of the travellers.

The only information he could give respecting them, may be summed up in these few words. That they were detained for some time at the early part of their labors, in consequence of Lieutenant Grey having received a severe wound in the thigh from a native's spear; at that time they had only penetrated fifteen miles, they had heard nothing of them since, and that he would be compelled ere long to leave the coast, in consequence of the reduced state of the provisions remaining on board. This was far from being satisfactory intelligence, and must no doubt have given Captain Wickham much uneasiness; for the idea of leaving our countrymen and friends to an uncertain fate, and in such a wilderness as this, could not for a moment be borne, but the question was how were we to prevent it? There was barely sufficient provisions at short allowance on board the Beagle, to take us to Swan River, the nearest place we could calculate on getting supplies, and if Timor was visited for that purpose, it was a precarious voyage altogether, and being the sickly season, there might be sad havoc made among our crew.

However, after deliberating for some time, the captain came to the

conclusion of crossing to Timor at all risks, as soon as Lieut. Stokes returned; and in consequence letters to acquaint the land party with our proceedings, were taken round by myself to the master of the schooner, with directions, should he sail before their arrival, to deposit the packet in a spot selected for the purpose, and pointed out by large letters painted on the side of a cliff near it, with the Beagle's name, and the date also affixed.

These arrangements being made, I returned to the ship with a boat load of fish which we had taken with the seine in Hanover Bay, and the return of the boats being hourly expected, the vessel was ready for a start with the first fair slant.

There is an old adage, "that nothing happens, but for the best;" and so it proved with us, for Mr. Stokes had extended his examination more minutely than had been expected, which detained him longer than he intended at starting; and in the interim, to our infinite satisfaction, we had the pleasure of receiving on board our old friend Grey, who had returned the day after I was there, and immediately came to us with two of his party, the advanced guard that travelled with him. It would be needless to say anything of the hearty cheers with which he was welcomed on board, for I am sure there was not a soul whose bosom did not thrill with delight, to again behold a man, who had, during his short sojourn with us, won the esteem and respect of all. Poor Grey, with his pale and emaciated appearance added to the excitement of the meeting, looked more like one on the brink of the grave, than the leader of an expedition exploring the interior of a vast continent like that in which we were. However, a little quiet, and a comfortable meal, made Grey himself again; and he soon related to us all his adventures. The remainder of the party were quite well, and expected the following day. They had met with many crosses and disappointments from the commencement. Grey's wound was their first detention, and after that, meeting with a large and rapid river, (Glenelg), which they could not at any place ford, caused them a vexatious delay. About forty-five miles in a direct line to the S.S.E. was the greatest distance attained, in doing which they had suffered much fatigue; which combined with scanty food had reduced them to the skeleton-like appearance they assumed, when contrasted with our hale and healthy crew: this will scarcely be wondered at, when it is considered that for several weeks previous to our meeting, a small portion of flour made into a cake, called "damper," with some tea, was the only food that passed their lips.

On the 16th, Mr. Stokes returned, having satisfactorily examined the whole of that portion of the coast that was necessary for the continued lines of the survey; and, was fully convinced that no such thing

as a river emptied itself into the sea, between Roebuck Bay, and Port George the Fourth.

The following day Mr. Stokes and myself went round to meet the rest of Grey's party; and see the work they had executed. It was highly gratifying to observe the elaborate manner in which it was done: no height of any note had been omitted on this well-drawn map, and every, the most minute particular was inserted with a degree of neatness highly creditable. Indeed, one could scarcely bring oneself to believe that it had been put together in the bush, after a laborious day's work.

We slept on board the schooner that night, and at early dawn proceeded up the creek marked fresh by Capt. King, at the head of which in a romantic spot on the left bank of a beautiful stream, meandering between high and craggy cliffs, which echoed the sound of the murmuring rill, as it sported playfully among the blocks of stone, that occasionally interrupted its course, lay in striking contrast, the broken and scattered fragments of the old encampment of our travellers; at which we found the remainder of the party had just arrived.

After mutual congratulations and enquiries, and partaking of a frugal meal, we all sat to work, and in a short time embarked whatever was considered worth taking; and leaving the ponies to the liberty they had well earned, bade adieu with little regret, to a country that had proved of such small interest, and where disappointed hopes had been the recompense for months of anxiety, toil, and trouble.

The vessel was soon reached, and as quickly got underway, and by 10 P.M., we came to an anchor within a short distance of the Beagle, to which all those who were known repaired; and the remainder of the evening was spent as pleasantly as time always is, when we meet with old friends, whose feelings are reciprocal.

The object of our trip here being happily concluded, both vessels were underway early on the 19th, and with light and baffling winds, threaded their way among the islands to the open sea; during the evenings the crews amused themselves by singing alternately to each other, which at the short distance of a cable's length, sounded well over the still and moonlit waters.

On the 23rd April we parted company,—each steered for their several destinations; they for the Mauritius, ourselves for the Swan River.

Before quitting the north-west coast entirely, it will be necessary to make a few general remarks on the weather during our sojourn there.

From our first arrival in the middle of January to the 21st of March, (the time of the equinox,) the wind prevailed in the western quarter, varying between north-west and south-west, sometimes hard gales with thunder, lightning, and heavy rains: at others the weather was beautifully fine for an interval of several days; but we were the whole of

that time subject to the annoyance of those violent squalls from the south-east, with one of which we had been welcomed on our first arrival.

No specific rule can be laid down as to what point of the compass the fine or the bad weather came from; one day a west wind would bring a gale, and again from the same point as still and beautiful a day as ever came out of the heavens would shine forth; and this was found invariably the case during the space of time above-mentioned.

The barometer ranged between 29.68 inches, and 30.02, never being much affected; and the maximum temperature in the shade, on board the vessel, was from 95° to 80°. The minimum in the same of the spot from 76° to 90°; the warmest weather being in January, and the coolest, after the heavy rains in February, whilst at Swan Bay.

Immediately after the sun had crossed the equator, the weather became beautifully fine and pleasant, compared with what we had been accustomed to, and the wind was generally in the eastern quarter, a gentle breeze, and we were never after assailed by the much dreaded squalls off the land. During the latter part of our stay the thermometer ranged between 83° and 90°.

Our passage to Swan River was tedious in the extreme, the wind being in the south-eastern quarter with persevering obstinacy, and as we got to the southward became fresh, and brought with it dull, cloudy, disagreeable weather, with frequent squalls. It was not till the 14th of May, that there was any change to the westward, and then only for a few hours. From this we were buffeted about by variable winds, and a current to the northward of eighteen miles a day, on short allowance of provisions, till the 25th of May, when we made Rottenest Island at daylight in the morning. As we were in a good position for completing the south side of that island, the course was shaped accordingly; and passing through the channel formed by it and the rocks called the Stragglers, we rounded the Champion rock, and bore up for the spot in Owen's anchorage, that had been selected during our former visit.

The best passage into this spot from the northward, appears to me to be between the Mewstone and Straggler rocks, although the harbour-master is of a different opinion; however, as I had examined it, the Beagle was taken through that channel, and had not less than three fathoms at any time, and besides there is a good mark for leading through, by bringing a bare topped hill, the east one on Garden Island on with the west end of the inner rock of Carnac Island; this will lead over the shoal running eastward from the high Straggler in three fathoms on toward the Mewstone; after rounding which, an E.b.S.  $\frac{1}{2}$  S. course (being guided by the bank on the left which can be distinctly traced,) will lead to the spot in ten fathoms, where we rode out several hard gales, without inconvenience.

## ATLANTIC STEAM NAVIGATION.

## "Theory v. Practice."

SIR.—In the June number of your work, I made some observations on the above subject, addressed to the Directors of the Royal Mail Steam Packet Company, and I did so to record opinions, which I said I felt confident would sooner or later be acted upon.

A correspondent of yours, who signs himself "A shipwright of 1812," has commented upon my opinions, and has very discourteously charged me with ignorance, and has termed me "Theorist," which is evidently intended to convey contempt, applied as it is by one who prides himself upon being "A practical man." The proper meaning of the term I doubt whether he, or any of his class of practical men at all understand; and it is especially with a view of shewing its real import, that I now make a few remarks on the letter of the "Shipwright of 1812."

It is rather odd that the letter in question should set out with, and in its course repeat, an admission, that in despite of practice, "A proper form of the sea-going steamer has not yet been ascertained. I will tell the writer, that until the application of some good "theory, it is utterly impossible that it ever should be ascertained." The term is, however, hated by the whole class of "practical men," and for this reason, that it implies that the man who uses a theory, understands the *reason* of what he does, and which the mere practical man does not.

I will give a definition of one of these "practical men." I will take a shipwright who rejoices in being no "theorist." *His contempt of theory implies the impossibility of his proposing any improvement whatever!*—improvement being "theory put in practice." A long time must elapse before the most palpable good, if it innovates upon the "wisdom of his forefathers," can justify him in affording it his countenance; a long life must probably be nearly spent in opposing such innovation, and only reluctantly adopted at last. The world forsooth is much indebted to such "practical men."

Although I have described one of the old school of shipwrights, the application may be made pretty general without being likely to commit any great error; but let it be observed, that there are admitted to be most brilliant exceptions; although to be found, I am sorry to be obliged to add, mostly in those whose chief business is the construction of ships for their own use; and I admit also, as exceptions, all those enterprising and able men and engineers engaged in *shaming the old shipwrights*, by building vessels of iron.

Until human nature is changed, how can the ordinary shipwrights be other than the practical man I have described him!—*his own interest demands it.* Let us look at the position of one, having for instance built a large sea-going steamer, admitted to be of defective con-



struction. Why the very defects of this ship are an annuity to him! he would be the veriest dolt were he to suggest that a ship might be built upon a better construction! The blunders, in fact, committed in large steamers are fast becoming the very spirit, the existence, of the repairing shipwright.—(*Vide* shipwright's bills upon some large steamers that for the present shall be nameless.)

Whence then have arisen the great improvements in shipping, that we happily live in an age to see progressing rapidly? Why from "theorists" to be sure! What produces the almost perfection of the royal dockyards! The "theories" of such men as Sir W. Symonds, the late Admiral Hayes, Sir R. Seppings, Sir H. Peake, &c., the present Mr. Laing, and others of this class; who not blinded by interest, are free to exercise their talents. What has made steam power what it is! The "theories" of the immortal Watt! In fact, theory is truth put in practice; if it will not stand this test, it is no theory; but a crude imperfect idea. "Theory" admits of demonstration; what is a theorem in mathematics, but an elucidation of what without it would be a problem not understood!

Now, let the "Shipwright of 1812," call me a "Theorist" as often as he likes. I think I have shewn it is not the term of reproach he imagines, and I have done so to remove the erroneous impression entertained by the vulgar, and who I have said hate the term because they cannot explain the reason of what they do.

Notwithstanding the letter of your correspondent is totally void of argument, and consists in contradictions to my statements, I will crave, Mr. Editor, a little space, to notice a few of its discrepancies.

In referring to the different kind of boats, I have brought as evidence in favor of the sharp bow, *it is clear that the "Shipwright" has never seen them!* except it be the London wherry; and his description of this is a wilful misrepresentation, for which I appeal to the London waterman.

The "Shipwright's" nautical information renders him as able to appreciate the proper form of boat to be forced through a surf, as it does my description of the evil of gripe in a steamer. He does not seem to be aware, that a ship in violent weather cannot be steered with perfect precision; and that the sea will catch her on one bow or the other, continually. It is then that the gripe stops her way by bringing the rudder hard over, to recover her course, to say nothing of the increase of distance caused by the deviation. The notion that the gripe rather facilitates a ship's way, *because it is tapered*, and becomes what is sometimes called "a cut-water," is truly childish; and of somewhat a similar nature is the affectation of not knowing what I mean by "prodigious rake of the stem." If the "Shipwright" could be brought to comprehend the "theory" of the subject, he would find no diffi-

culty in forming a draught that would in this respect satisfy even me.

Your correspondent agrees with me that the forebody should be kept as light as possible, that the knee of the head is a useless incumbrance, that the anchors should not be carried on the bows, &c. Now, I should like to know how it is possible to lighten the forebody, except by cur-tailing the materials, and rendering it so sharp that neither cargo nor ballast be necessary to bring it down in the water.

Although I profess my ignorance of what the following passage means, I introduced it as an example of the very clear head that belongs to my commentator, and as it seems to contain an admission of all I have contended for, that the sea-going steamers cannot be made sufficiently strong in the form at present adopted; "the absolute strain upon certain parts, when fifty feet of the forebody is unsupported by the fluid, approaches very nearly to the entire strength or power of resistance of the materials employed in that part,\* if he (meaning myself,) will calculate the weight of the forebody, and multiply that into the distance between the centre of gravity of that part of the fulcrum or axis, about which it has a tendency to revolve, he will find an amount of tension which sufficiently explains the cause of such excessive straining in large steamers:" ending with "and many of them (meaning shipwrights) are able to demonstrate the nature and amount of this strain, although from the nature of the materials employed, sufficient strength, or power of resistance cannot be obtained." A pretty curious admission!

Really this unintelligible passage, and a good deal more of the same kind, used by the "Shipwright of 1812," *ad nauseam*, almost causes me to think it a waste of time noticing his letter; but the fact is, this sort of affectation in the use of technical terms tends to mislead the mass of mankind, and requires to be exposed.

The attempt to distort my meaning in respect to the passage of water along a ship's side, is a resort to an unworthy subterfuge.—Whether water striking the segment of a circle, flies off in a tangent, (which I believe it however to do,) or rather affects a parabola, is very immaterial, it is sufficient that it will not follow any form curved outwards; and I will repeat, (and refer to vessels for proof,) that the great velocity attained by the very latest steamers, I allude to the iron ones on the Thames, has been owing to the water lines of the forebody, *more and more approaching straight lines*.

On the subject of the use of sails, it is a peculiarly unfortunate selection my commentator has made of what occurred on board H.M.S. Medea: what could make it necessary to set the storm sails and alter

\* Where is the proof that it does not exceed it?

her course! The bad form of forebody. As a steamer she is badly formed, but she was professedly built both for sailing and steaming; she could not be kept head to wind! If the Mail Steam Packets meet with such weather of any considerable continuance, how will they make their passages, supposing their form to be equally fitted for the purpose!

I would advise the "Shipwright" to "lay upon his oars," and see how the Halifax Packets get through their winter's work; and I would refer also to his favourite ship, "The Great Western," and couple with her both the British Queen and President, if the owners of these ships have confidence enough to run them through the winter; but which (qy) have they yet shewn? The "Shipwright" refers to the former, the Great Western, as "having made passages in all seasons without being torn in pieces," and which is notoriously *de trop*; it has happened that about the worst of the winter months have hitherto been spent in port: certain needful alterations, (*query, repairs,*) having been found desirable! The Mail Steam Packets will, however, solve the question, as to form, they must go, through all weathers, *if they can*.

I repeat that it has been found advisable to swim sea-going steamers considerably by the stern, to get some of their bad form of forebody out of the water: let the "Shipwright" enquire about this on board the British Queen. And I also repeat that there has been a great steamer built almost as deep as she is wide, and I could send the "Shipwright" her dimensions; but as the sapient builders of this ship are likely to pay sufficiently dear for their blunders, I will not add thereto, by exposing her name *at present*.

An observation of the "Shipwright's," in respect to our neighbours, the French, is truly worthy of the school from which it emanates, though not very creditable to the age in which we live. He warns us against copying the "theories" of the French in steam navigation; and immediately after he says, "they have, however, produced two very fine specimens of steamers in the Castor and Pollux." Then why not copy them? Perhaps these fine specimens were the *effect of accident*,—the work of some "practical man" independent of the "theories" of any scientific French officer. I should, however, be led to infer, that they are just about as much produced by accident as the admirable frame of the human body is; and which Paley in his Natural Theology, beautifully describes as the most convincing proof of a Deity: the human body being the most elaborate piece of *contrivance*, must have had a *contriver*.

I am, Sir, your obedient servant,

MERCATOR.

To the Editor of the Nautical Magazine.

London, October 1840.

## Nabal Chronicle.

### REPORT OF THE SELECT COMMITTEE ON THE MERCHANT SEAMEN'S FUND.

THE SELECT COMMITTEE appointed, on the act 4 and 5 Wm. IV. c. 52, to consider the state of the funds, and how they can be more effectually maintained and administered for the benefit of Seamen; and to whom several petitions were referred, have considered the matters to them referred, and have agreed to the following report:—

Your Committee, in prosecuting enquiries committed to them, have not thought it necessary to summon many witnesses. There is at every considerable town connected with trade and shipping, an assemblage of seamen from many British ports, and an interchange of opinions and sentiments amongst them upon any subject of common interest, which does not exist amongst those belonging to a more stationary calling. Your Committee, therefore, instead of taking much oral evidence, which would have protracted their inquiry, have confined themselves to the examination of some witnesses who have had opportunities of communicating with the general body of seamen, to a consideration of the petitions which have been referred to them on the subject, and of the answers rendered by the trustees at the outports to various questions, addressed to them on the subject of the Merchant Seamen's Fund.

The objections to the system now pursued as to the Merchant Seamen's Fund are twofold, applying either to the collection and management of the fund, under which it is alleged that the amount made available for the purposes of the institution is less than it ought to be, or to the mode in which that amount is distributed.

Your Committee have arranged the objections under these two classes, and are prepared to state their opinion upon them; but they think that it will be convenient, before doing so, to state concisely the nature and objects of the institution as established by act of parliament, in order that it may be seen whether the evils complained of are attributable to the act itself, or to the administration under it.

There has not been any charter granted to the institution. It originated in an act passed in the year 1747, (20 Geo. II., c. 38,) under which; the members of the institution were incorporated by the name of "The President and Governors for the Relief and Support of sick, maimed, and disabled Seamen, and of the Widows and Children of such as shall be killed, slain, or drowned, in the Merchant Service." As to the general constitution of the body, the provisions of that act are still in force; but the collection and appropriation of the funds are regulated by the 4 and 5 Wm. IV. c. 52, which amended and in part repealed the act of 20 Geo. II.

At the foundation of the society, the names of the members to be incorporated, 116 in number, being chiefly merchants and shipowners in London, were specified in the act; they were empowered at special general courts to fill up vacancies in their body, and it was provided that every donor of not less than 50*l.* should be admitted as a governor by virtue of his benefaction. The president and governors were empowered to appoint twenty-one of their body to be a committee of assistants, to meet weekly, for the administration of the fund, subject to bye-laws to be imposed on them, by the president and governors, who were authorized by the 14th section of the act to make "bye-laws, constitutions, and ordinances," for the government of their officers and committees. The application of the funds, the auditing of the accounts, and generally, for all the affairs of the corporation, so as such bye-laws should not be repugnant to the express regulations of the act.

There were also provisions in the act enabling the owners and masters of vessels at any outport, to appoint annually fifteen persons to be trustees, for the collection and application of the dues arising at that port, with the like power to the outport trustees of making bye-laws as was given to the corporation of London. At present the corporation of the president and governors, consists of 117 gentlemen, of the principal merchants and shipowners of London, whose names are given in the evidence, and there are thirty-eight ports under their immediate management. Trustees have been appointed at seventy-four of the outports. The instrument by which the trustees are annually appointed, is sent from every outport to the corporation in London to be confirmed under their seal, under the 27th clause of 20 Geo. II. c. 38; and the outport trustees are directed by the 22d section of 4 and 5 Wm. IV. c. 52, to transmit annually to the president and governor, within fifty days after the 31st of December, a true and correct account of the receipt and expenditure at the outports during the year, to be laid annually before the House of Commons by the president and governors, together with an account of their own receipts and expenditure. It has not been the practice of the corporation in London to exercise any discretion in confirming the appointment of the individuals returned by the outports as trustees; nor to enter into an examination of the accounts rendered by such trustees; neither does it appear that they have any clear authority to do so under either of the acts to which their proceedings must conform.

The 4 and 5 Wm. IV. c. 52, requires payment of 2s. monthly "from every master of any merchant ship or vessel, and from every owner navigating his own ship," and of 1s. monthly "from every seaman or other person serving or being employed in any merchant ship or private vessel" belonging to British subjects; the money is to be paid to collectors at the ports to which the ships belong, to be retained and administered by the trustees of that port, where trustees have been appointed, and in respect of all other ports to be remitted or accounted for to the corporation in London. The payment is to be collected wherever the vessels unload, and, until payment has been made, a certificate of clearance is not to be granted. Where the vessel does not deliver at the port of registry, the money is to be remitted to the receiver of the London corporation, to be either kept there, or transferred to the trustees of the outport to which the ship may belong, as the case may be. Power is given by the last act for owners of vessels to contract to pay the dues half-yearly at the port of registry, or in the case of coasting vessels, at any port frequented by such vessel.

The entire fund, whether arising from duty-money, legacies, and donations, forfeited wages (as to which forfeitures special provisions are in both acts), or from interest upon accumulated capital, is to be applied in providing hospitals for, or granting pensions to, those seamen who are incapable of service, "either from sickness, wounds, and other accidental misfortunes," or as being "decrepit and worn out," to relieving widows and children of three classes of seamen—of those who have been killed, slain, or drowned in the service; of those who shall die after having contributed twenty-one years, and of those who at the time of their death shall be receiving relief as decrepit and worn-out seamen. Temporary relief is authorized to be given to seamen receiving hurts on duty, or returning home after imprisonment or shipwreck. No person is to be entitled to relief as a worn-out seaman unless he has paid to the fund for five years, and he is to receive his relief from the fund of that port to which he has contributed the most during the last five years of his service at sea; and those who have been the longest in the service, and contributing, are to be the first provided for as worn-out and decrepit. Seamen receiving hurts on service are to be relieved by that port to which the ship wherein they are serving belongs.

The widows and children in the last two of the above-mentioned classes were, for the first time declared admissible to relief by the 4 and 5 Wm. IV., c. 52, and the other important alterations introduced by that act were to extend the system to the Scotch or Irish vessels (the operation of the 20 Geo. II., c. 38, being confined to England), and to raise the seamen's monthly payment from 6d. to 1s., the payment to Greenwich Hospital being abolished by an act passed (c. 39.) in the same session, and 20,000*l.* in lieu being charged on the consoli-

dated fund. The power to create half-yearly contracts for paying the dues, and the obligation on the out-ports to send accounts to the London corporation, were also new provisions.

These being the provisions contained in the text of the act, Your Committee thought it right to inquire how far they had been explained, modified, or extended by the establishment of bye-laws either in London or the outports. The practice in London was stated by Mr. Watson, the secretary of the corporation, in 35 of the 74 outports, where local trustees have been established (and which 35 ports are named in the appendix); it appears that no bye-laws had been made, but that the trustees conformed in their proceedings to the provisions of the act; and occasionally in questions of doubt referred to the London office. From eight ports answers had not been received at the date of this report; 20 ports returned their bye-laws, and 11 ports stated their course of practice; no formal bye-laws having been made. The answers from the 31 ports, which stated either their practice or their bye-laws, are to be found in the Appendix. Your Committee think it satisfactory thus to show the diligence and accuracy with which the several boards of trustees are prepared to discharge their duties, and suggestions may be taken from them to improve the practice at the outports, or for a general code of instructions to be promulgated by the corporation in London.

Your Committee will now proceed to examine, in the order which they have indicated, the several objections advanced against the present system and practice.

First, as to the produce of the fund: it is objected that there is not the amount there ought to be available for the purposes of the act, the dues being imperfectly collected; apprentices being exempt from payment; the money, when collected, not being uniformly placed at interest; and the charges for collection and management being excessive.

Your Committee will consider these objections *seriatim*: as to the *imperfect collection of the due money*, two classes of vessels have been instanced to the Committee in respect of which there are occasional losses—pleasure yachts and vessels paying under half-yearly contracts. It has been seen that vessels are required to pay the duties on discharge of their cargo, and as pleasure yachts have neither cargo to discharge, nor certificates of clearance, there is no certain time or method for settling the duties. Yachts are clearly liable to the payment, as the act extends “to every British merchant ship and *private vessel*;” and it appears from the evidence of Mr. Watson that many of them do pay at Cowes. Your Committee are satisfied that the owners of these vessels will readily concur in any arrangement for the systematic collection of the dues; and they are of opinion, that an arrangement might be made by which every owner, on applying to the Admiralty to hoist the yacht flag, should state when he intended to pay the duties, and that the statement should likewise be given in to the secretary of the London corporation, who should thereupon apprise the collector at the specified port.

As to vessels paying under half-yearly contracts, it appears to Your Committee that losses are occasionally incurred when vessels are wrecked with an arrear of duty; and as oversights in respect to the number of men are more likely to occur under such contracts, than when the account is settled at the close of every voyage, Your Committee recommend that the system of half-yearly contracts should be abolished, and that the collectors should be authorized to require payment whenever a vessel enters their port with arrears due, as was the practice of the collectors of the Greenwich fund. It has been suggested in evidence that the dues might be collected annually from the owners in advance, on an estimate of the number of men to be employed in proportion to the tonnage of the ship during the incoming year, and the number of months of their employment; but Your Committee are of opinion that such an estimate would not be satisfactory, as the hands required for a vessel, and the period of service vary most widely, according to the nature of the employment; and they believe that the dues may be collected with great accuracy under the present system. It is calculated that the loss at the ports managed by the corporation

does not exceed 50*l.* yearly, and it seems that the loss chiefly arises in the case of vessels under half-yearly contracts in the coasting trade, and would be reduced, if applications to the owners, or their agents were made more frequently.

The next objection refers to the exemption of apprentices; by the act as passed, they were all liable to contribute, the payment being imposed upon every seaman, or other person serving or being employed in any British vessel; but by the "Seamen's Registration Act" of the next session (5 and 6 Wm. IV. c. 19), it was provided by the 32d sec. that no apprentice "bound or assigned pursuant to that act, nor any master or owner, in respect of such apprentice, should be liable to the payment of any contribution, towards the support of any hospital or institution. It may be doubted whether the intention of the framers of the act was to extend the exemption to other than parish apprentices, they only being exempted under the preceding acts, both as to the Merchant Seamen's Fund, (20 Geo. II., c. 38, s. 37,) and the Greenwich Hospital, (2 and 3 Anne, c. 6, s. 7,) and there being clauses in the Registration Act, for the binding and assigning of poor children to the sea service, to which the exempting clause may be thought peculiarly to refer. It has been considered, however, in the construction of the act, that the clause is not so limited in operation, and in practice, the exemption is claimed and allowed at some ports on all apprentices, and in others on that number, which it is compulsory on the owner to take in proportion to the tonnage of his vessel, by the 31st section of the "Registration Act." This exemption has been severely felt; the loss at London is calculated at 1,000*l.* a year, and at Newcastle at 1,400*l.* a year. It appearing from the parliamentary return of this session, dated 14th February, 1840, that the number of apprenticed seamen then existing was 24,348, Your Committee recommend that the exemption of apprentices from payment should be abolished, whereby not only would an important addition to the funds be secured, but the establishment also of a claim to relief would be expedited in all those cases where the title depends upon the period of years during which the seaman has been a contributor.

The next complaint as to the management of the fund, and one which was brought prominently forward in the evidence, was, that *the money at the out-ports was not uniformly placed at interest*: this appeared to be the case on the face of the parliamentary returns, and there were tables produced before your committee, showing to which ports the objection applied. Your Committee directed enquiries to be made of the respective trustees of these ports, and they have much satisfaction in stating, that it appears by the answers, which are given in the Appendix, that at all the ports the balance had been invested at interest, and that the absence of any such statement in the return laid before parliament had arisen either from the indistinctness of the tabular form supplied to them, or from inadvertence in filling it up. Your Committee, however, must observe, that the securities are various in which these balances have been invested: in some ports they are placed in the savings' bank, or in the public parliamentary stocks; in others, they are lent on the bonds of corporations, or of public companies, or are lodged in provincial banks; and, although Your Committee willingly believe that the trustees have in the disposal of their funds, sought generally for those investments which seemed, under local circumstances, to promise the most productive return, yet they are of opinion that the balance ought to be invested exclusively in parliamentary securities, as was directed by the 9th section of the original act. The last objection, as to the amount of the fund, was, that the *charges of management were excessive*, and some calculations as to the per centage rate of these charges also appear in evidence. As to this, Your committee have to remark, that although in some ports the per centage appears to be large, yet the absolute sum is not so. The trouble of keeping the accounts is not proportionate to the magnitude of the sums; and while Your Committee think, that in some instances the duty might be performed, for less than the remuneration given, (which is about ten per cent. on the gross receipts, to cover the charge both of collection and disbursement,) they are persuaded that these arrangements may be left to the trustees. In one instance, (Rye)

where the charges for collection appeared unreasonable, it was found that the returns had been incorrectly made up,—the bulk of that which appeared to be expences of management, was invested capital entered in the wrong column. Whilst on this subject, Your Committee would recommend that in future the account should be so framed, as to comprise every particular, respecting the state and disposition of the funds, according to a scheme referred to by one of the witnesses; and they would likewise recommend, that in the returns made annually to parliament, the accounts from the outports, and the account from the London corporation, should embrace the *same period*. At present this is not so, the receipt at the ports under the corporation in any year not being entered to the credit of the fund till the following year; and some of the witnesses who had examined the accounts with much diligence, had, on the supposition that the particulars of the receipts at the outports, and the cash account of the corporation, as given in the printed returns, referred to the same year, produced certain calculations and statements which appeared to impeach seriously the accuracy of the returns. Your Committee inquired carefully into these statements, and in the result they were satisfied, as were also the parties who had prepared the statement on the subject, that the accounts of the London corporation had been faithfully kept, although the form in which they are presented to the house led almost of necessity to an inference against them, until explanation had been given. Your Committee must refer to the evidence for the particulars of these examinations.

The class of objections which Your Committee have next to examine, are those as to the *application of the funds*. It is alleged, that at some ports no pensions are granted; at others, relief is not given to shipwrecked seamen; and that throughout all the ports the rates of pension are unequal,—though the exigency of the case may be the same. It has also been desired in some of the petitions, that schools should be established; that relief should be afforded in every case of sickness, whether contracted on duty or not, and to widows, whose husbands have contributed for five years. It has also been proposed, that some provision should be made to prevent the allowance to a poor seaman, from being taken in case of the poor's-rates.

Your Committee apprehend, that however desirable it may be that relief should be afforded by the trustees in the cases suggested, if their funds were adequate to such additional charge, yet at present it is not so. The total income for the year 1838, was 54,752*l.*, and the total outlay was 42,212*l.*, but of the receipts 47,275*l.* only was the produce of the duty-money, the residue being the produce of capital invested at the several ports; and although there is now a considerable surplus, yet there is to be expected a great yearly increase of pensioners on account, both of the two classes of widows and children who have been newly admitted to claim, as has already been mentioned, and of worn-out seamen at the Scotch and Irish ports, whose claims could not be preferred till this year, when the period of five years (for which term a seaman must have paid, who claims on the ground of decrepitude) has become complete, the act having come into operation as to Scotland and Ireland, in 1835. As to the latter suggestion, Your Committee apprehend, that it does not fall within the limits of the inquiry. It may be desirable that when the poor seaman enters a workhouse, the payment of his pension should cease, so that it will be in the interest of the guardian to assist him in maintaining himself at home.

The remaining objections are, as to the alleged disparity in the practice of the several ports, as to the concession, and the amount of relief. Your Committee have directed inquiry to be made at all the ports *where no pensions appear to have been granted*, and answers have been received from all, save two or three, at the date of their report. It appears, that at the ports to which the objection applied, being chiefly Scotch and Irish ports, the act had only been brought into operation in 1835. No title had accrued on the part of the worn-out seaman; and in the case of those who were disabled by accident, and of widows whose husbands had been killed in service, the parties have been relieved by a gross sum. It is possible that, in some of the ports, the trustees may have considered that, even in the case of accidents, pensions were not



payable until the five years had elapsed. Your Committee conceive this opinion to have been erroneous, but the question is now immaterial, the qualification as to time being complete. The answers of the trustees will be found in the Appendix.

The complaint as to the *refusal* of relief to shipwrecked mariners applies solely to Newcastle; the trustees of that port having issued general directions, not to give relief to their seamen when returning home from shipwreck. It has been stated by the witnesses, that the seamen having remonstrated on the subject, it was explained to them by the trustees, that such was the dilapidation of their funds, by the withdrawal of the payment for apprentices, (the coal trade being the great nursery for seamen, and an unwonted proportion of apprentices receiving their education in it,) that the trustees were compelled to reduce the payment to their pensioners by 25 per cent., and that in order to avert the necessity of still further reduction, they had resolved to discontinue payments in cases of shipwreck. Your Committee, however, doubt the propriety of this decision; it may be a question, whether any shipwrecked seamen are in strictness entitled by this act to relief, unless they are either under bodily injury, or returning home with vagrant passes; but the suffering and necessities of a shipwrecked seaman are oftentimes so severe, even where those conditions do not exist, that it is the opinion of Your Committee that discretion should be given to the trustees at the outports, where the shipwrecked mariner is landed, to administer to his relief, according to the scale adopted at that port, and that it should be *imperative* on the port to which the mariner belongs to reimburse the outlay. Your Committee had it strongly represented to them, that in cases where a vessel has foundered, or been cast away, and nothing saved, the seamen who may have survived the shipwreck, weakened and destitute, have the hardship of their fate aggravated by the application of the principle of maritime law, which deprives the seaman of his right to wages, whenever the voyage is defeated by shipwreck, however faithful and meritorious his conduct may have been, and however extended may have been the period of his services with reference to the entire voyage. Your Committee feel themselves precluded by the limits assigned to their inquiry, from examining the grounds of policy upon which this principle of the law of wages is founded, and confine themselves to this statement of its operation, as being an additional reason for securing the shipwrecked seaman some relief from this fund.

It has been surmised by one of the witnesses, that at the port of Sunderland also relief has been withdrawn in the case of shipwreck. This, however, seems not to be systematically the case, and the main objection which is entertained at this port to the administration of the fund is, that it is employed in the erection of an asylum,—an appropriation of the fund which, although within the scope of the act, Your Committee conceive to be injudicious; as from the expense incurred in these erections, the benefit from the fund must necessarily be enjoyed by a reduced number of claimants; whereas, the relief to be afforded by the fund ought, if practicable, to comprehend all in the same degree of necessity, as all support it by the same rate of payment. The violation of this principle, which is felt the most deeply, is that which is contained in the remaining objection to be noticed, and is the greatest grievance of which the witnesses complain, the *inequality of the rates of pension allowed at the several ports*, although the distress may be the same.

In order to understand how natural it is that the seamen should resent this inequality, it must be remarked, that the actual condition of the fund seems not to be that which was originally contemplated. It had been proposed at the first to erect an hospital, where the seamen should be received as inmates, and which was to be sustained as well by benefactions as by the payments of the duty-money. This object has not been effected. It appears, indeed, that previously to the late act, the corporation of London had distributed towards the purposes of the institution, a sum of 25,000*l.* beyond the receipt from the duty-money, and many of the present governors have been benefactors to the fund; but at present, the support of the institution is derived almost exclusively from the payments of the seamen themselves. Your Committee directed inquiries to be

made at all those ports which appeared to be possessed of accumulated funds to such an amount, as to yield annual interest of more than 50*l.*, as to the source of such funds, whether gifts or savings; and it appeared that, with the exception of 800*l.*, the amount of legacies at Bristol, 1,789*l.* transferred by the Clyde Marine Society, to the Glasgow trustees, and 2,800*l.* presumed at Whitby, to be the result of benefactions, and a portion not particularized, of the funds at Yarmouth, the accumulations have been entirely from savings of duty-money, contributed by the seamen. The total receipts of the corporation and trustees, as has been stated, amount to about 54,000*l.* yearly, and the interest on benefactions is probably not 250*l.*—not a half per cent on the income.

It is evident, therefore, that this society is not to be considered as a charity, where the donors might reasonably specify what particular class of recipients their bounty should relieve; but it is a society of mutual insurance, where, under the regulation of parliament, the seamen contribute equally, during the period of their strength and health, to insure some provision for themselves and their families, on the occurrence of certain specified disabilities; it is the principle of an insurance society, that when the casualty occurs, all who contribute equally should share equally, and it is the confidence which every contributor feels that such is the rule, which reconciles him to continue his payments, although no present benefit be enjoyed from them. But a reference to the tables in evidence, which have been computed from returns laid before parliament, in 1839, will shew how fatally this principle is violated by the present system of distribution. In two ports, at the date of that return, the highest payment to seamen did not exceed 10*s.*; in ten others it did not exceed 2*l.*; in ten others, 3*l.*; in four others, 4*l.*; in six others, 5*l.*; in two others, 6*l.*; in three others, 8*l.*; whilst at Bristol the highest payment is 10*l.*; at Hull, 12*l.* 10*s.*; and at Liverpool, 13*l.* As to the three last-mentioned ports, the rates of payment depends, to some extent, on peculiar circumstances, which are stated in the answers of the trustees; but as to the others, where the inequality is flagrant, it may be shown to result necessarily from the provisions of the statute. It is the usual course of a mariner's life, that in his prime he is found sailing from ports mainly engaged in the foreign trade; as he advances in life he becomes less adventurous; and when he either settles with a family, or finds his strength decline, he fixes himself at some coasting port where the voyages are short, and he is more frequently at home. At these ports, therefore, the number of claimants as worn-out seamen are numerous, and the dividend small, and the old men are excluded from any share in the funds of those ports in the oversea trade to which they have been paying during the most active season of their manhood.

If the funds were all transferred to the London corporation, and administered on one uniform scale of allowance, apportioned with respect to the meritoriousness of the case, not to the particular port which the claimant belongs, these grievous anomalies would be remedied; and there would be the further benefit, that something additional might be gained to the income by interest upon the aggregate of the balances, which, if retained amongst the several ports, are sometimes too inconsiderable for investment; and there would likewise be great facility in establishing claims; whereas parties are now occasionally perplexed and delayed in ascertaining the particular port on which their title to relief attaches.

Your Committee would further remark, that, as it is the principle of mutual insurance that the good fortune of those who are prosperous should enable the society to indemnify those who suffer, the wider the limits of the society, the greater probability is there that the casualties may be brought to a steady average, and the allowance to be afforded to the unfortunate may be computed on sure grounds. It may happen that by a storm on a district of coast, or bearing on the course of a particular voyage, the shipping of a port may in a given year meet with a disproportionate number of casualties, and the duty-money may be inadequate to meet all the claims on the local fund; but if the trade from one port should be subject to unusual disasters, it is probable that the shipping on the opposite coast of this island would be comparatively exempt, and

the paucity of claims arising out of one class of voyages, if all were to be satisfied out of the same fund, would go far to balance the increase of claims from less fortunate ports, and the rate of the relief be sustained at a fixed average.

Against this change of system, Your Committee are aware that objections may be made, but they are sanguine in the hopes that these objections will not be found insuperable. It may be said that it would be impossible to divert for this purpose the benefactions appropriated to the seamen of a particular port; that the change is disparaging to the character of the trustees, and a needless interference with the beneficial administration of the funds; and that, if the relief were to come from a common stock, there would not be the same vigilance, as at present, in scrutinizing the demands upon it.

As to the character of the trustees, Your Committee gladly refer to the testimony of the witnesses that their conduct in their offices is satisfactory to the seamen; the complaints against them at the Scotch ports for not having granted pensions have been explained; and Your Committee feel it incumbent on them to add, that there has been generally shown on the part of the trustees, as will appear by the answers given in the Appendix, a sincere desire to further the object of this inquiry.

It has, indeed, been required in some of the petitions, and suggested by some of the witnesses, that the seamen should have a direct voice in the nomination of the trustees, as they who are contributors to the fund ought to be comptrollers of it, by placing the management in the hands of those in whom they have confidence.

Your Committee assent fully to the principle, that the management should be in the hands of men who have the confidence of the seamen; it is their belief that such, with few exceptions, is now the case. The corporation in London have proved their goodwill to the seamen by the money they have bestowed in aid of the funds, as well as by their time and attention in their gratuitous management; and the Committee have observed in many of the answers to their inquiries from the outports, that the trustees habitually refer to the corporation in London for guidance in any case of difficulty. It is in the election of trustees at the outports that the proposal has been made to place it in the general body of seamen. Your Committee apprehend that much practical difficulty would beset any scheme for this purpose (considering the great numbers, and the migratory habits of the seamen,) and they would suggest that by an alteration in the law, the right of election should be enjoyed by such owners only as themselves navigate their vessels, and should be entrusted to mates as well as to the masters. By thus vesting the right of election in those who contribute to the funds, and who are generally amongst the most experienced and trustworthy of a ship's crew, and by imparting it to none others, Your Committee expect that the feelings and views of those appointed as trustees upon such an election will be identified with the interest of the entire body of the seamen, and satisfactory to them.

Your Committee are of opinion, that the character of trustees so elected will supply an answer to the two other objections which may be advanced to the scheme. Such a body may be safely left in the possession and control of the funds *already invested* at their respective ports, to be applied by them in maintaining the existing rates of pension to all the present pensioners where such rates exceed what would be their share in a general dividend, and in applying them hereafter to any other object beneficial to the seamen, not within the immediate purview of the institution, as the establishment of schools for orphan children, or the relief of those widows who do not come within the conditions prescribed by the act; and as the parties who concur in an election at any port may probably be at some other port when obliged to have recourse to the fund, it is obvious that their interest will be, not in any lax appropriation of the fund at the port where they vote, but in such a just and frugal administration of it as may husband the common stock, and so be beneficial to all; it is to be expected, therefore, that they will place those in office of trustees on whose firmness and discretion they can rely, and that the apprehended loss to the fund by the facility to the trustees in admitting claims upon it will not arise.

On consideration of the entire subject, Your Committee venture to recommend that there should be an alteration in the law; that the duty-money received at the ports should be transmitted to the corporation in London, and invested by them; that the corporation in London should establish various classes, into which the pensioners should be distributed according to the comparative urgency of their case,—(for example, a more ample allowance might be made to seamen and widows who were *entirely disabled*, than to those who were merely infirm, and to orphan children, than to those who had a parent surviving,)—and should prescribe the tests, as by certificate and personal examination, by which the trustees should be guided in ascertaining the class to which each claimant should be assigned. The London corporation, at the close of every year, on a review of the number of admitted claimants during the preceding twelve months, of vacancies, by death, and of receipts from the duty-money, ought to calculate what rate of premium should be allowed to each class for the ensuing year, making a prudent reserve, in order to meet seasons of special disaster, and, as this reserve fund is increased, the scale of pensions ought to be advanced in proportion.

The duty of the outport trustees, acting as at present, gratuitously, in addition to the uncontrolled management and application of their invested funds for the seamen's benefit, would be to examine every case, to assign it to its appropriate class, and to transmit periodically to the London corporation, a list of the amount of pensions, according to the rate promulgated for the year, together with the charges of management, and upon receiving the assent of the London corporation to the correctness of the account, to draw for the amount of it.

The committee are aware that no change of the law will operate beneficially, if it create jealousies between the seamen and their employers, or the gentlemen acting in the local trusts and the corporation of London; they do not therefore recommend the immediate introduction of a bill into parliament, to carry these suggestions into effect; but they entertain a hope, that when the expediency and justice of the measure are maturely considered, and when it is perceived that the suggested alteration has not originated in any distrust of the actual management, but on a conviction of the insufficiency of the existing law, those who are interested in the funds, either as contributors or superintendents, will become concurring parties to the introduction, of a measure in a future year founded on the suggestions of this report.—August 10, 1840.

### THE LEVANT.

THE following extracts from the *Gazette*, and some private letters with which we have been favored, will convey to our readers the particulars of the fall of Beyrout, and the operations of H.M. ships on the adjacent coast, against the forces of Mehemet Ali.

*Admiralty, October 7th, 1840.*

“ Extract of a despatch from Admiral the Hon. Sir Robert Stopford to R. More O’Ferrall, Esq., dated ‘Princess Charlotte, D’journie Bay, near Beyrout, Sept. 20th 1840.

‘ I arrived off Beyrout on the morning of the 9th, where I found Commodore Napier.

‘ The Turkish expedition, under Rear-Admiral Walker, of the Ottoman navy, joined at the same time from Cyprus, consisting of a line-of-battle ship, two frigates, and two corvettes, with twenty-four transports, carrying five thousand three hundred and seventy-three troops, commanded by Selim Pacha.

‘ Commodore Napier, having previously examined the coast and selected a position, accompanied by Lieutenant Aldridge, of the Engineers (for I lament to say Lieut.-Col. Sir Charles Smith has been so extremely ill since his arrival as to incapacitate him for any active duty), I directed the Commodore to complete his plans and arrangements; and the same night the marines were removed to the steamers, and the whole, amounting to about seven thousand

Turks and allies, were in readiness to land in the morning; when after manœuvring some time before Beyrout, lined with Egyptian troops, in order to distract their attention, the Commodore hastened to the point of disembarkation, and succeeded without opposition or accident of any kind.

‘ For a minute detail of this operation I must refer you to the Commodore’s letter of the 16th, a copy of which is herewith enclosed.

‘ Great praise is due to Commodore Napier, whose indefatigable zeal and activity in securing his position were well seconded by the officers and men under his command.

‘ In order to protect the landing, and ensure the safety of the troops exposed to a sudden attack of an overwhelming force, till the requisite defences were completed, I found it necessary to occupy the attention of the Egyptian army which made a formidable appearance in armed masses along the hedges, and under cover of the gardens and broken ground between the town and the sea, and opened a fire upon them from the shipping, taking care to avoid injuring the town, while the Austrian frigate *Guerriera*, commanded by his Royal Highness Prince Charles Frederick, Lipsia corvette, and H.M. brig *Zebra*, took up a commanding position in St. George’s Bay, enfilading the road by the beach, covering the bridge conducting to it, and drove the Egyptians from their encampment on the land side of the town.

‘ On the forenoon of the 11th, a letter was sent by Rear-Admiral Baudiera, and myself, in the name of the Sultan, to Soliman Pacha, the commander of the Egyptian troops, (of which a copy is enclosed, as well as of his answer.) Agreeably to his request, the letter was again sent, in French, with instructions to the officers to wait half an hour for the answer, much time having previously been lost. At the end of that time, a verbal message only was returned, that an answer would be sent the following morning, which being too palpably evasive as circumstances then were, and that he might benefit by a night’s delay, by which his troops might have been upon our quarters, and his powder and provisions removed without danger, or accident from fire, or otherwise profit by the interval. I ordered the fire to be renewed, and to be partially and sparingly kept up for the night, against the fort only, and principally against one having mounted guns, in order to disturb their movements, as well as to sustain the confidence of the people of the country in our protection, and aid in the resumption of their allegiance to the Sultan.

‘ The mountaineers have come in considerable numbers, principally, I understand, Christians. Muskets, with amunition, have been distributed with all possible discrimination and caution, and the demand for them is increasing. On being supplied they generally return to their abodes in the recesses of the mountains; some skirmishing is said to have taken place between them and the Egyptians; and Capt. Martin’s letter of which a copy is enclosed, will show that good service had been done by a party of 250 of them at Batrona.

‘ The line of operations taken up by the squadron, extends from Tripoli to Caffa, beyond Acre, and several points commanding the road along the coast have been taken; but the Egyptian army, said to be 15,000 strong, is concentrated within a few hours’ march, and an advance post of about 400 men is seen on the brow of a hill near our camp.

‘ A new appointment of Puchas has taken place, and Isset Pacha has just arrived to take possession of his province.

‘ We have been now ten days occupied incessantly on very active service, and it is gratifying to me to be enabled to notice to their lordships the fine spirit with which it has been carried on both on shore and on board. Commodore Napier’s letter will speak for the former, and my own observation bears equal testimony to the other; but where the exertions of all are so conspicuous it would be impossible as invidious to particularize individual merit.

‘ From Rear-Admiral Baron de Baudiera I have received the most kind, ready, able, and efficient advice and assistance; and the zeal and active exertions of his H.R. the Archduke Charles Frederick of Austria, have been most prominent upon every occasion. The Austrian squadron has been of the greatest

service on this expedition. Two hundred of their marines are now serving on shore with ours, and the labour and fatigue duties shared in common.

'To the zealous, persevering, and active exertions of Rear-Admiral Walker, in command of the Ottoman squadron, his captain, officers, and men, much credit is due, for the ready co-operation and good understanding kept up between the two services in the indefatigable performance of their arduous duties.

'The steam-vessels have been eminently useful in constantly moving along a great extent of coast with troops and arms, and taking part in the attacks upon the different forts, which service has been executed entirely to my satisfaction.

'I have, &c.

(Signed)

'ROBERT STOFFORD, Admiral.'

'*Off Beyrout, Thursday, 11 a.m.*

'We, the admirals of the British and Austrian squadrons, acting in obedience to the instructions of our respective governments, and in the interests of his Highness the Sultan, consider it our duty to represent to your Excellency our earnest desire to stop the effusion of blood, and to call upon your Excellency to withdraw your troops from Beyrout, and to deliver the town to our united forces, to be retained in the name of the Sultan.

'Your Excellency will have observed from the fire of the ships yesterday a small specimen only of the course we shall be compelled to pursue.

'The fire has not been pressed this morning, that your Excellency may benefit by the pause, and upon reflection come to the decision, in consonance with our benevolent views to spare the innocent inhabitants from the inevitable horrors which a few hours only may inflict upon them.

'We request your Excellency will send an answer as soon as you can, or at the latest by half-past one.

'ROBERT STOFFORD,

'Admiral BAUDIERA.'

'*His Excellency Soliman Pacha, Major-General of the Egyptian Army at Beyrout.*

'*Beyrout, le 11 Septembre, 1840.*

'Le General Soliman Pacha a l'honneur de presenter ses salutats ionsa Messieurs les Amiraux des escadres Anglaise et Autrichienne, et en meme temps, il les previent, que ne sachant pas lire la langue Anglaise, il lui est impossible de repondre a moins que Messieurs les Amiraux ne veuillent bien lui faire traduire en Francais, et en Turque, ou en Arab leur communication.

(Signed)

'EUJNT. Z. SULEIMAN.'

'*A Messieurs les Amiraux Commandant les Escadres Anglaise et Autrichienne Levant, Baurriet.*

'*Beyrout, Saturday, two hours after sunrise.*

'ADMIRALS.—You are acquainted with my orders, and after the refusal which, as was my duty, I returned to the proposals made me in the name of your Governments, to betray my master and benefactor, it was impossible to suppose that I should act in opposition to his wishes.

'As you observe, I was enabled yesterday fully to appreciate all the extent of evil it was in your power to bring down on innocent families, strangers to the present misunderstanding.

'For the sake of killing five of my soldiers, you have ruined and brought families into desolation, you have killed women, a tender infant and its mother, an old man, two unfortunate peasants, and, doubtless, many others whose names have not reached me; and far from slackening the fire of your ships, when my soldiers (who, during that deplorable day, did not once fire,) fell back on the town across the inhabited country of Beyrout, your fire, I say, became more vigorous and destructive for the unfortunate peasants rather than for my soldiers. You appear decided to make yourselves masters of the town, notwithstanding that, in any event, the question will remain as before. If the fortune of war

prove adverse to me, Beyrout shall only fall into your power when reduced to cinders. This town has not ceased being inhabited, and moreover it contains merchandise imported from Europe, the value of which is considerable. Under these circumstances, I have constantly endeavoured to justify, throughout, the grateful thanks which I have received from Europeans. Guards have been posted to secure respect to their habitations, and their magazines. They would find them untouched on their return. It lies not in my power to deliver the town; my orders are for its defence, and I shall defend it come what may. I, therefore, am not the person to address, if you are really desirous of sparing innocent persons from the inevitable horrors of warfare, which in a few hours you have power to bring down on them.

‘Mehemet Ali alone can give you an answer on this question. If then, you attack Beyrout, and if its inhabitants are buried in the ruins, let me not be responsible for the blood that is shed.

‘Yours, &c.

‘General SOLIMAN.’

‘*Princess Charlotte, off Beyrout, Sept. 16th, 1840.*

‘I was sent on shore this afternoon to the town with a flag of truce, and a letter addressed to Soliman Pacha. My orders were to remain half an hour for an answer. On reaching the town, I was received by an officer, who I understood was the captain of the port, to whom I delivered the letter; I was not permitted to remain on shore, but laid off; at the end of half an hour, twenty minutes after five P.M., the same officer returned with another, who I understood to be Soliman Pacha's secretary, who delivered me the following message in French, repeated twice over at my request:—‘That his Highness was then engaged at a Council of War, after which it was his intention to review his troops; but that his answer would be ready next morning.’ I demanded at what hour, when the secretary, after a word or two with the captain of the port, fixed two hours after sunrise.

(Signed)

‘ALEXANDER MURRAY, Lieutenant.’”

“Extract of a letter from Commodore Napier, of her Majesty's ship *Powerful*, to Admiral the Honourable Sir Robert Stopford, G.C.B., dated d'Journie, Head-Quarters of the army of Lebanon, 16th Sept., 1840.

‘In execution of your order of the 9th inst., I removed the whole of the Turkish troops from the transports, and the marines of the squadron into the steamers. The *Dido* and *Wasp* took up an anchorage well up to Beyrout point, in order to draw Soliman Pacha's attention from the position I intended to disembark at. Soon after daylight, the squadron and steamers you had put under my orders weighed; the Turkish squadron under Admiral Walker, weighed also; and the whole, with the exception of the *Zebra*, who flanked the Egyptian camp, worked up to Beyrout point, where a considerable force of the enemy was in position.

‘When the breezes freshened, the whole bore up for D'Journie. *Castor* and *Hydra* anchored close to Dog River, landed the Turkish troops, and completely blocked up the pass leading to D'Journie.

‘The *Powerful* and *Pique*, *Gorgon*, *Cyclops*, and *Phœnix*, followed by the Turkish squadron, ran into the Bay of D'Journie, and landed the troops in an incredible short time, owing to the excellent arrangement of Captain Reynolds, who took charge of the landing. Admiral Walker put his troops on shore at the same moment with great celerity and order; a position was then taken up, and the artillery landed. The few Albanians stationed here retired without firing a shot. The *Carysfort* and *Dido* went off D'Jebel, about three leagues to the northward, to act against a strong tower, garrisoned by Albanian troops.

‘D'Journie is a good-sized bay, with a promontory projecting considerably into the sea. A road from Beyrout lies along the shore, and is practicable for infantry, artillery, and cavalry; this road the *Revenge* covered. The road from Tripoli leads also along shore, and the *Wasp* and *Phœnix* covered a gorge

over which it would be necessary to pass. Two roads lead from Balbec by Antura, where an excellent position was taken up by two battalions of Turks, supported by five companies of marines. The left of this is protected by an impassable gorge; the right rests on the sea; Dog River separating it from high ground in front.

'The first day the inhabitants who had been driven into the mountains came slowly for arms, but these few took them with great avidity, and hastened to the mountains to drive away the Emir Bechir's troops, and open the mountain passes. This done, the mountaineers have flocked in in great numbers, with the sheiks, who have crowded to the standard of the Sultan.

'I beg to enclose Capt. Martin's reports of the occupation of D'Jebel and Patrons, in which he speaks highly of Capt. Austin, of the Cyclops, and of the officers employed.

'I regret the loss he met with; it was not to be avoided. Many Albanians have suffered by their temerity. The inhabitants of this city are most warlike and determined.

'Ibrahim Pacha reconnoitered our positions the day before yesterday.

'I have sent a battalion of Turks in advance of Gazer, to open the country and give due notice, should he endeavour to turn our left by that road, which he will have some difficulty in doing, as the country is covered by the broadsides of the ships.

'I have much reason to be satisfied with the zeal of the whole of the officers and seamen employed; their exertions in completing our lines, under Mr. Aldridge, of the engineers, are beyond all praise.

'Permit me, sir, to congratulate you on the first success of the army of Lebanon. You, yesterday, were witness of the arrival of his Highness the Emir Abdallah, the governor of the district of Kisroonan, and of the enthusiasm of the mountaineers; and, if this continues, I have every reason to think that the Egyptian army will be obliged to retire from the sea coast and the mountains of Lebanon.

'I have, &c.

(Signed)

'CHARLES NAPIER, Commodore.'

"Extract of a dispatch from Captain Martin of H.M.S. Carysfort, to Admiral the Hon. Robert Stopford, dated Gabail, 15th Sept. 1840.

'I have received information that 500 Albanian troops occupy the town of Batroun, about ten miles to the north of Gebail; and the mountaineers who gave me the intelligence say they are willing to attack the place, if supported by the fire of some ships.

'I am therefore about to proceed there, towed by the Cyclops, who takes up about 250 of the mountaineers, to be landed in the neighbourhood.

'Large bodies of men whom we have armed, have returned to the mountains, as they say, for the purpose of blockading an emir who has shut himself up in a convent with several hundred men. I hope, under any circumstances, to be able to return to Gebail to-night.'

"Extract of a despatch from Captain Martin, of H.M.S. Carysfort, to Admiral the Hon. Sir Robert Stopford, dated Batroun, 15th Sept., 1840.

'I have the honor to inform you, that at 3h. 30m. p.m., I anchored within musket shot of Batroun, having been towed from Gebail by her Majesty's steam-vessel Cyclops. By this time the 250 mountaineers who were embarked on board the Cyclops, had been armed and organized under the zealous and able direction of Capt. Austin. On approaching Batroun, we observed bodies of Albanians in different parts of the town, apparently preparing for defence, and the positions of the Carysfort and Cyclops were taken up with a view to forcing them from their strong holds. The Carysfort and Cyclops commenced firing with great effect, whilst the Cyclops' shells were searching the spots where the Albanians from time to time halted. The 250 mountaineers whom we had armed, were landed by the Carysfort's boats under Lieut. Stephens, the



Hastings' boats under Lieut. Thompson, and the Hastings' boats under Mr. Glynne, mate.

'The greater part of these immediately followed on the track of the Albanians, whilst another party took possession of Batroun. I have reason to believe that the Albanians suffered severely from the effects of the shot and shells; whilst I am happy to say that our only casualty has been one mountaineer severely wounded.

'I am sorry to say, that the head of an Albanian was brought to me as a trophy, immediately after I landed, but I have endeavoured to discourage this brutal mode of warfare, by offering a reward of ten piastres and a musket, for every prisoner the mountaineers will bring me.

'Yours, &c.

(Signed)

'H. B. MARTIN, Captain.

'P.S. I enclose two letters, which reached me to-day, and I trust that when you have read them you will be of my opinion, that I have not acted injudiciously in pushing the outposts of the fleet and camp to this point.

'H. B. MARTIN, Captain.'

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"Extract of a letter from Capt. Martin, of her Majesty's ship Carysfort, to Commodore Napier, of her Majesty's ship Powerful, dated Gebail, Sept. 14th, 1840.

'I have the honor to inform you, that the arms which reached me by the Cyclops last midnight, have been distributed to the mountaineers, and that there are so many unarmed that I think I can dispose of more. As far as circumstances will permit, the greatest precaution has been taken to place these arms in trustworthy hands.

'The distribution took place under my own eye, but was more immediately and minutely superintended by Capt. Austin, of her Majesty's steam-vessel Cyclops, to whose zeal in the performance of this duty, I have been greatly indebted.

'I have detained the Hastings' boats, under the impression that, if the enemy should advance from the northward, in the absence of a steamer, my only means of annoying them will be by the boats' carronades.

'It is impossible to state the exact number of mountaineers that have come down to us, but I should estimate them at from 3 to 4,000, and, as far as appearances go, enthusiastic in their hospitality to the Egyptians.

'The flocks and herds are again feeding in the neighbourhood of Gebail. A few shops have been re-opened, and confidence amongst the people seems to be growing.

'I am, &c.

(Signed)

'H. B. MARTIN, Captain.'

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*H.M.S. Bellerophon at anchor off Camp, near Beyrout, 18th Sept. 1840.*

We commenced hostilities by cannonading the town in a very vigorous and destructive manner about eight days ago, but we have not taken possession of Beyrout as the force (land) at the admiral's command is insufficient to hazard advance into the country, and unequal to the retention of the place if attacked by such overwhelming numbers as Ibrahim could bring against us. The commodore previous to the Admiral's arrival from Alexandria in the Bellerophon had concocted a plan for the taking possession of a strong position in a bay opposite to Beyrout, and seven miles distant from it, with 5,300 Turkish troops, from Cyprus, 1,500 marines, and 100 royal artillery and engineers, by the Pique. The evening before we reached Beyrout, we observed a crowd of vessels of all sorts and sizes, and soon after the Phœnix came down from them to inform us that they were craft from Cyprus, containing the troops alluded to above, convoyed by Admiral Walker in a seventy-four, accompanied by two frigates and one corvette; also H.M.S. Hastings and Carysfort.

The next day early we anchored, and a few hours afterwards the convoy were

seen coming round the point. The sight of them hurried a host of the Egyptian forces, two or three thousand I should suppose, towards ground which they imagined might be the intended spot for the disembarkation of the troops: they were deluded poor fellows, and received two shells, or one shot and one shell, from the Cyclops, by way of warning.

During the night all the Turkish soldiers and marines, were put on board the four steamers, Cyclops, Gorgon, Hydra, and Phœnix. At daylight the Powerful, Revenge, Pique, Castor, Dido, Wasp, and steamers weighed and stood towards the point west of the town, (a clever feint of Com. Napier,) which had the effect of drawing the enemy thither to amuse them with a few shells from the shipping. Directly Com. Napier discovered them collecting in great numbers he bore up, and stood towards his destination, disembarked troops there, (a fine position indeed, well adapted by nature for the defence of a small force against a very superior one,) took possession of all eminences, including a sweep of three miles, got field pieces planted, and made all necessary preparations as far as time would allow for the reception of Ibrahim and his countless host. The next day all hands were employed in erecting batteries with sand bags, clearing ground, and strengthening the position in every possible way. Now then, for an outline of what we have already accomplished, and what we may reasonably expect to perform.

We have laid the batteries of Beyrout low, and riddled nearly every house in the town: we occupy an advantageous position opposite Beyrout; our force consisting of the before-mentioned troops, but we cannot learn, with any certainty, what Ibrahim's army in this quarter amounts to, we have strong reason to expect, from sundry accounts received that he has 13,000 men with him, encamped in a north-west direction seven hours march from us, and that Soliman Bey commands four or five thousand men in the vicinity of Beyrout. We have a few hundred in sight daily upon a hill above our camp; when our troops first landed we had reason to suppose that Ibrahim would attack without delay, but now an opinion prevails that he is determined to rest quietly where he is, and intercept all communication between the mountaineers and ourselves; with all his powers he will fail to do effectually for they continue to come down to us; and we have already distributed more than 7,000 muskets; but they have not been embodied with our force or incorporated as a separate body, but sent back to the hills to protect their own homes, and offer obstacles to Ibrahim's progress in every possible way. This mode of proceeding will probably forward our own interests best.

What else have we done? We have taken a fortress, Ghibiel, alias Gibelletta, which was considered impregnable; but the loss we sustained in storming it might be considered large for the numbers employed in the service, 250 marines, 5 killed, 14 severely wounded, 2 slightly; two officers wounded; one Giffard's brother, in Cyclops, with whom, I am sorry to say, I am not yet acquainted, having had no opportunity of exchanging nautical civilities. Giffard's brother's wound is on the wrist, but will not I hear disable him much; the other officer wounded is Lieut. Adair, R.M. I presume that your neighbour Giffard will be able to tell you all about our proceedings, for he will doubtless receive a left-handed epistle from his heroic brother. I hear he behaved like a trump, but who would fail to shew metal on such an occasion.

Pique, Castor, and Turkish frigates are gone to Sidon, Tyre, and further south to create a division in our favor in that quarter, where dissatisfaction is universal. Great hopes of success there are entertained by us.

The Benbow, Carysfort, and Phœnix are gone to Tripoli, about thirty miles from hence, where the Egyptians are rather strong, and require a wholesome shower of round shot and shell.

One thousand more Turks have joined us to-day from Cyprus, they came over in two Austrian steamers, and brought us the new Pacha for Syria and Acre. I think with Com. Napier, who says, that Lord Palmerston had better send out 10,000 troops to take Acre, which is garrisoned by 30,000 men, before the Sultan is advised to bestow his Pachaics on his obsequious adherents.

Now then, what are we likely to do? Nothing until 15, or 20,000 Austrians

or English are sent; then the march through Syria into Egypt may be commenced, and continued without much difficulty. In two months time the fleet will be obliged to quit all anchorages on these shores, and may be compelled to keep away altogether. If no army arrives before then I suppose the Turks will be embarked, and sent to Cyprus, and the English fleet proceed to some snug winter quarters as near it as possible.

*Phœnix at anchor off the Camp of Jouna,  
September 18th 1840.*

We arrived off Alexandria on the 6th instant, and fell in with the Admiral, Bellerophon, Zebra, and the Austrian Admiral and frigate that had weighed anchor that morning, on their way to Beyrout, after having left their despatches. We were sent to communicate with the Asia, Implacable, and Daphne, at anchor off Alexandria. The Cyclops was in the harbour. Having delivered everything for these ships, we were despatched to Beyrout, leaving the last-named three ships at their anchorage, where they still remain. We arrived off Beyrout on the morning of the 8th, and the following ships cruising, viz.—The Thunderer, Castor, Dido, and Wasp. Having spoken these, we proceeded into Beyrout, where we found Commodore Napier in the Powerful, with the Ganges, Edinburgh, Benbow, Revenge, Pique, and Gorgon, an American corvette, (the Cyane), an Austrian corvette, a French corvette and brig, and an Egyptian storeship and cutter, detained by the Gorgon, having ammunition on board. As yet everything has been tranquil, but the ships were sprung ready to open their broadsides. Soliman Pacha had shifted his camp from near the Lazaretto to the heights beyond. His force amounts to about 15,000 men. Shortly after our arrival we were ordered to take 300 bags of biscuit on board, for the Turkish expedition then at Cyprus, on its way to Beyrout, and we started early in the afternoon. About 5 o'clock we fell in with the Turkish squadron, consisting of the following vessels, under the command of Rear-Admiral Walker:—viz. 1 Turkish line-of battle ship, 2 frigates, 2 corvettes, and 24 sail of transports, having on board 5,400 troops. The same evening the Princess Charlotte, the Bellerophon, and the Zebra, made their appearance, and the next morning at daybreak we anchored at Beyrout, when preparations were commenced for disembarkation. In the evening two Austrian frigates arrived, and the Cyclops and Hydra steamers. A body of Egyptian troops were observed on the heights, and the Cyclops threw a few shells at them by signal from the Admiral. Shortly after sunset a portion of the Turkish troops were transported in the Cyclops, Hydra, and Phœnix, in the following proportions:—viz. Cyclops, 1,500; Hydra, 900; Phœnix, 1,200; while all the marines of the squadron, amounting to 1,500, were sent on board the Gorgon. The residue of the Turkish troops were on board their own men-of-war. At daylight on the 9th the steamers and Turkish squadron weighed anchor, the Cyclops towing the Turkish Admiral, and made a feint of landing on the point about a mile to the south of the town, which had the effect of drawing out the Egyptian troops on the heights above, when the Benbow commenced firing shells on them. From the precision with which they were thrown the enemy must have sustained considerable loss. About 10 o'clock the Powerful weighed anchor, having been prevented from doing so before from the want of water and a heavy swell. The Dido and Wasp also weighed from inshore, where they had been anchored for the purpose of covering the pretended disembarkation. At about 10h. 30m. the whole squadron bore up together for a small bay about 15 miles northward of Beyrout, and at 1 o'clock anchored and commenced the disembarkation, which was happily effected without the least casualty, and without any opposition, so well had Commodore Napier arranged his plans. The Princess Charlotte, Ganges, Benbow, Edinburgh, and the Revenge were left at Beyrout, which they commenced bombarding on the same afternoon, while the Zebra was anchored off the river Beyrout, to prevent the advance of the army; she was supported by an Austrian frigate, and both fired on the Egyptian camp, compelling them to evacuate it.

The whole night of the 29th was busily employed in getting the troops into

position, and disembarking field-pieces, &c. The *Hydra* and *Castor* were anchored off the Dog River, where the former disembarked her portion of Turks forming the vanguard. Several Turkish vessels were anchored along the Bay so as to prevent the advance of the enemy along the coast road. The *Wasp* and *Phoenix* protected a pass in the position. *Jouna*, the place of disembarkation, is a village just above a small promontory which forms the bay, and which is at present occupied by the main body of the allies.

Detachments being thrown out on the heights of Lebanon, by occupying the present position, a communication was immediately opened with the mountaineers, who have been flocking in in considerable numbers. Having received information that a body of Egyptian troops were in occupation of a small town called *Gibail*, about 10 miles to the north of this, and were preventing the mountaineers from joining us, the *Carysfort*, *Dido*, and *Cyclops*, after having embarked a detachment of Turks and Druses, with about 200 marines, were despatched to take possession of the same. In the afternoon of the 12th, having previously bombarded the place for a considerable time, without any signs of an army being visible, the troops were disembarked under the command of Capt. **Austin**, of the *Cyclops* on a beach just outside the town, and after forming, advanced to take possession of the castle, apparently a work of no considerable strength, erected on the ruins of an old Roman town. It was, however, found to be surrounded by a fosse and loopholes on the basement, for on the approach of the marines a destructive fire of musketry was opened on them, by which 4 were soon killed and 20 wounded, without the possibility, from the secure position of the enemy, of returning it or even of seeing more than the muzzles of the muskets through the loopholes. Under these circumstances they were obliged to retreat to the beach, and the ships recommenced bombarding the castle, but apparently without success, owing to the solidity of the old Roman masonry. After a lapse of two hours it was determined to re-embark, which was accordingly done. The next morning it was discovered that during the night the place had been evacuated, and that, through the supineness of the mountaineers, the garrison, consisting of about 200 Albanians had effected a safe retreat to the next small town, called *Baroun*. Among the wounded were Lieut. **Giffard**, R. N., 2d of *Cyclops*, severely in the wrist, and Lieut. **Adair**, R. M. very slightly. The marines were under the command of Captains **Robinson** and **Searle**. On the 14th the *Princess Charlotte*, *Ganges*, *Thunderer*, and *Benbow* came down from *Beirut*, which devoted place had been daily cannonaded. On the 15th the *Carysfort* and *Cyclops*, the latter having on board a party of Druses, bombarded *Baroun*, the small town already spoken of, and compelled the enemy to decamp, on which the Druses were landed, and took possession. On the road leading to *Tripoli* were 5 dead and 15 wounded, who were put to death, and I regret to say by the Druses. The capture of these two small towns having opened the passes, the mountaineers have been flocking down to get arms, and up to yesterday evening, 7,000 stand of arms, with the proper portion of ammunition, had been issued. During these proceedings the camp have been busily employed strengthening their position, which may now defy *Soliman Pacha* and all his forces. The two Austrian frigates have landed their marines, amounting to about 250. On the 15th the *Pique* and *Castor* were detached against *Sidon*, having re-embarked their marines for that purpose, but up to this moment we have received no account of their proceedings. On the 17th the *Benbow* and *Zebra* were ordered to proceed to *Tripoli*, at which place, from the contents of an intercepted letter, we are led to believe that the Egyptian troops are dissaffected, but we have as yet heard nothing from them. Several Egyptian deserters, who have from time to time swam off to the ships in *Beirut*, say that many more would follow their example were they certain of a kind reception. Invalids that were in the lazaretto, to the number of 35, have joined the Turks. The *Prometheus* arrived this morning, as also two Austrian steamers with a reinforcement of 600 Turks, and a Pacha with many tails, who I believe was the late Pacha of the district: he was saluted by all the admirals. Yesterday *Soliman Pacha* sent in a flag of truce, with some India letters, which he had

intercepted; the Admiral in return for his politeness, sent him some wine, &c. which he had found on board one of the detained vessels belonging to him. The enemy have thrown forward a force of about 2000 men on the heights above the left bank of the Dog river; but they take good care to keep out of the range of our shells. One day last week a party were observed reconnoitering, on whom the Thunderer opened her fire, and soon made them scamper. The extraordinary precision with which the ships have fired shells has elicited admiration and wonder.

The camp begins now to present quite a gay appearance, and the marines are now nearly all under canvass. Commodore Napier has taken up his residence on shore, and his broad pendant forms a conspicuous object. A breast-work encloses the camp, and there are from 12 to 14 pieces of field ordnance in position. The work, considering the heat of the weather, has been very arduous; but, happily, the health of all is very good.

### MERCHANT SEAMEN'S ACT.

*London, 14th September, 1810.*

SIR,—The beauties of a certain little work, called the “Merchant Seamen’s Act,” having been so frequently and abundantly developed in your excellent Magazine, it may seem like supererogation to furnish your readers with another “elegant extract,” from the same “Book of Beauty.” But pray bear with me for a few seconds only, dear Mr. Editor, and I promise not to trespass unreasonably upon your time and patience.

The case I am about to relate happened some few months back, but having only just now returned to England there has been no convenient opportunity to make an earlier report of it. In the month of January last, the ship I was in ran for shelter into one of the ports of the Channel, after encountering dreadful weather between the Coast of Ireland, and the chops of the Channel, for many days and nights of toil and trouble,—bodily and mental,—the atmosphere thick as melted butter, and the rocks of Scilly under our lee adding not a little to our anxiety and danger. The weather was comparatively moderate when we anchored, but it came on to blow furiously again in the night, and the hands were turned up to give the ship chain and to let go a second anchor. Three of our men preferring the comforts of a snug hammock, to the miseries of a wet and stormy night, refused to turn out, declaring point blank that “they were sick and tired of hard work and bad weather; that they had made up their minds to enter on board a man-of-war, and were determined not to do any more work in the ship.” They were perfectly sober at the time, and they gave a practical proof that they meant to stick to their determination, for on the following morning they again refused to return to their duty.

Now, if you had commanded the ship, Mr. Editor, may I be permitted to ask, if it be not derogating from the dignity of your high office, and too great a condescension to notice the perplexities of an humble Master Mariner:—may I be permitted to ask, what would you have done under similar circumstances? It appeared to me at the time that I had no alternative, that I had only one course to pursue, and that was to claim the protection of the civil power, for I had not the power to compel these men to work.

Well, Sir, pray do me now the favour to accompany me on shore, with the Articles of Agreement in my hand, together with the ship’s

Log-book, wherein were recorded the facts already mentioned. After stating to their Honours, calmly and dispassionately, that these three men had endangered the lives and property committed to my charge, by their unmanly conduct in skulking down below in their hammocks, and refusing to do their duty at a time of great danger, I begged that they might be taken out of the ship and punished as such delinquency deserved. I can scarcely believe the evidence of my own senses now, when I call to mind the decision of the bench,—gravely pronounced, “that they have not the power to take the men out of the ship, and bring them before them; if I could get them on shore in any way, without their intervention, they could then act with safety; but such was the imperfect state of the law as at present existing, with regard to the government of British Seamen in the Merchant Service, that magistrates as well as ship-masters were tied neck and heels.”

Some months have passed away since these things happened, but they made such a lasting impression that I am quite sure of the above being substantially correct, if not literally the very words made use of. In vain, did I urge that these men had committed an offence the most atrocious, for I have no hesitation in saying, that if their example had been followed by the rest of the crew, the ship must have been wrecked inevitably,—and a frightful wreck it might have been, for we had near 200 souls on board, men, women, and children, to say nothing of the ship and cargo, both of which were of great value.

Without knowing much about logic, Mr. Editor, a man of plain common sense would say, if it be lawful for three sailors to lie still in bed, and they can do so with impunity, when all hands are required in the middle of a stormy night to reef top-sails at sea, or to give the ship cable and let go another anchor in a roadstead, by the same mode of reasoning, it must be lawful for six men to do the same; and if six, why not all hands? for an argument can be worth very little if it will not bear this sort of analysis, that is if it wont bear following out.

I fear Sir, that notwithstanding the promise I made, not to trespass at an unreasonable length upon your time and patience, I am in a fair way of doing so, for somehow or other I cannot get hold of that happy knack of saying *multum in parvo*.

I am one of the younger sons of a very numerous family,—the family of Prossers; but when you look to my signature, I am sure you will make all due allowances. Now, to return from this circumbendibus digression, let me finish my tale about the sailors. To cut a long story short, I did succeed finally in getting them brought before the magistrates, and the result was their commitment to the house of correction; not for their disgraceful dereliction of duty, although that was clearly proved, and not even denied by themselves,—nothing even offered in explanation; still their honours decided that they possessed not authority to furnish that, but when the question was put to each of them from the bench, “Do you refuse to go to sea in the ship?” and they answered, “We wont go to sea in the ship!” then, and not till then, were they sent to the house of correction.

Can it be possible, Sir, that such is the law of the land! and can it be possible that Sir James Graham could lend his honoured name to such a mischievous abortion! the very *ne plus ultra* of absurdity! I admire the manly character of the worthy Baronet, too highly to con-

nect his name with such a piece of legislation; I have therefore avoided throughout this long rigmarole, calling it Sir James Graham's act.—*Verbum sat*, Mr. Editor.

I remain, Yours, &c.

PETER PROSER.

THE ARCHIMEDIAN.—It appears that the correctness of the paragraph, which we copied from the *Mechanics Magazine*, in p. 671, respecting this vessel is stated to be “at variance with the truth.” This we must regret; having given through the medium of our pages a tolerably wide circulation of it to the four quarters of the globe. But as we have received an authenticated statement of the trial alluded to in that paragraph from Mr. Smith himself, we take the earliest opportunity of giving it publicity through the same channel.

*Experiment 1.*—The Gunston made fast to the Archimedes, and towed her ahead whilst the engines and screw of the latter were *perfectly still*, consequently the propeller was being *dragged through* the water without revolving. The log was hove several times during each experiment, and in this case the rate was exactly six knots.

*Ex. 2.*—The screw was disconnected from the engine, and allowed to revolve by the action of the water—the engine remaining still, when the rate was found to be seven knots, which afterwards increased to seven and a quarter knots

*Ex. 3.*—The two vessels were then lashed side by side, with their heads in contrary directions, when the Gunston towed the Archimedes astern, exactly seven knots:—the screw revolving, but the engines *still at rest*.

*Ex. 4.*—Both vessels made fast stern to stern with a space of about 60 feet between them, when both put on their power, and it was found that the Gunston had slightly the advantage, towing her opponent astern at a rate scarcely perceptible; say a quarter of a mile per hour.

*Ex. 5.*—Both vessels cast off, and tried their comparative speed for about two miles, by which time the Gunston headed the Archimedes about three lengths.

N.B.—Experiment 4 being called for rather unexpectedly, and the steam having been dispensed with the whole day up to this time, the trial was made much to the disadvantage of the Archimedes, in consequence of her fires not being sufficiently ignited as to produce the necessary supply of steam, and had the trial continued a quarter of an hour, I have no hesitation in saying the result would have been different. It will be also seen the utmost speed the Gunston obtained with the Archimedes in tow was seven and a quarter knots; and that the engines of the Archimedes were not in action at all except in Experiments 4 and 5.

The dimensions of the cylinders of the Archimedes are 37 inches diameter, with a stroke of three feet, the engines are worked by steam at a pressure of rather less than 6lbs. per inch, and the utmost number of revolutions obtained by them is 26 per minute. During the trial of strength in experiment 4, they made but 18 revolutions per minute.

The Gunston is worked by two engines, the cylinders of which are 27 inches diameter, and a stroke of 42 inches; and I have been in-

formed from undoubted authority, that although 10lbs. per inch is her usual working pressure, it is frequently increased to 15lbs. as occasion may require.

The foregoing experiments were particularly noted not only by myself, but no less than five or six scientific gentlemen, who were on board the Archimedes the whole time for that purpose.

F. P. SMITH.

October 14th, 1840.

#### ROYAL NAVAL FEMALE SCHOOL.

THIS Institution\* was formally opened at Richmond on Friday the 2nd of October, in presence of the founder, Admiral Sir Thomas Williams, G.C.B., and such of the lady Vice-Patronesses, members of the committee, and friends of the Institution, as were in the vicinity of London.

The Rev. J. B. Morewood, Curate of St. Johns, addressed the teachers and pupils, and most impressively pointed out to them the value of such an education as was proposed to be given.

As many of our readers may not have seen a prospectus, we beg to observe, that the "Royal Naval Female School" has been established for the purpose of bestowing upon the daughters of necessitous Naval and Marine Officers, "a good, virtuous, and religious education, in accordance with the principles of the Church of England."

The Institution owes its origin to the beneficence of the venerable founder who has contributed most munificently to its support, and its success hitherto, is (under God,) to be mainly attributed to the devoted exertions of the Gentlemen composing the managing Committee, who have been enabled in the short space of a few months, to establish the school, and commence active operations.

The present state of the funds have not warranted the Committee to receive more than thirty pupils, on the reduced scale of £12 per annum; this number were elected in August, and we observe amongst them,—three orphans,—eight fatherless, and many whose parents though living, are altogether unable to give their daughters an education suited to their station in society.

The Governess and Teachers have been selected with the greatest care, and with reference to their personal piety, as well as their capacity, to give instruction.

We beg leave to express a hope, that this Institution will meet with such support from all classes of the community, that the Committee may be soon enabled to extend its benefits to an increased number of the daughters of our brave defenders, and thereby in some degree repay our debt, due from the nation at large to the British Navy, for its heroic services during a long and perilous war.—*Herald*.

#### NOTICE TO MARINERS.

*Hydrographic-Office, Admiralty, Aug. 12th, 1840.*

BALTIC SEA.—NEW LIGHT OF LEGSKAR.—The Inspector of the Gulf of Finland has given notice that the Beacon tower on the Island of Legskar, off the Island of Aland, in lat. 59° 50' 30" N., and long. 19° 55' 19" E. of Greenwich, and about 16 miles to the eastward of the new Swedish Light of Soederam is converted into a Lighthouse where a Fixed Light with parabolic lenses will soon be shewn. A further notice will give the details of its height and the different bearings on which it will be visible.

\* See page 798 of our volume for 1839.



[Communicated by the French Government.]

*Hydrographic-Office, Admiralty, Sept. 17th, 1840.*

NOTICE is hereby given, that the six following new lights will be shewn from the 1st of November next:—

**LIGHT ON ILE DE ST. MARCOUF**, a fixed light on the Fort of Ile St. Marcouf, in lat.  $49^{\circ} 29' 55''$  N., long.  $1^{\circ} 8' 38''$  W. This light is 56 English feet above the level of the sea, and may be seen in fine weather at the distance of 3 leagues.

**PORT NAVALLO LIGHTHOUSE**, a fixed light on the point of Port Navalo, east side of the entrance of Morbihan. This light is 72 English feet above the level of the sea, and may be seen in fine weather at the distance of 3 leagues.

**ARCACHON BASIN LIGHTHOUSE**, a fixed light on Cape Ferret, 3281 yards from the entrance of Arcachon Basin, in lat.  $44^{\circ} 38' 43''$  N., long.  $1^{\circ} 14' 53''$  W. This light is 167 English feet above the level of the sea, and may be seen in fine weather at the distance of 6 leagues.

**LA CAMARGUE LIGHTHOUSE**, a fixed light on the tower recently built 60 yards N.  $37^{\circ}$  W. of the old Lighthouse. This light is 118 English feet above the level of the sea, and may be seen in fine weather 6 leagues. The small light established in 1830 on the east bank of the river (in lat.  $43^{\circ} 20' 30''$  N., and long.  $4^{\circ} 40' 52''$  E., will be discontinued when the above light is shewn.

**PORT DU CASSIS LIGHT**, a fixed light on the west side of the entrance of the port, 137 yards N.  $29^{\circ}$  W. from the Mole Head to the east of the same entrance, and in lat.  $43^{\circ} 12' 30''$  N., and long.  $5^{\circ} 32' 2''$  E. This light will be 92 feet above the level of the sea, and will be seen at the distance of 3 leagues.

**PORT DE LA CIOTAT LIGHT**, a fixed light on the little tower erected on the New Mole Head on the east side of the entrance of the port 120 yards to the S.E. of fort Berouard Lighthouse, which is in lat.  $43^{\circ} 10' 36''$  N., and long.  $5^{\circ} 36' 50''$  E. The Mole Light, although less elevated than that on the fort, will be seen nearly the same distance, in fine weather, that is 3 leagues.

This second light of Ciotat will prevent the probability of any confusion which might be apprehended from the establishment of the fixed light at Port du Cassis.

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#### RAPSON AND ROBERTSON'S PATENT SLIDE TILLER.

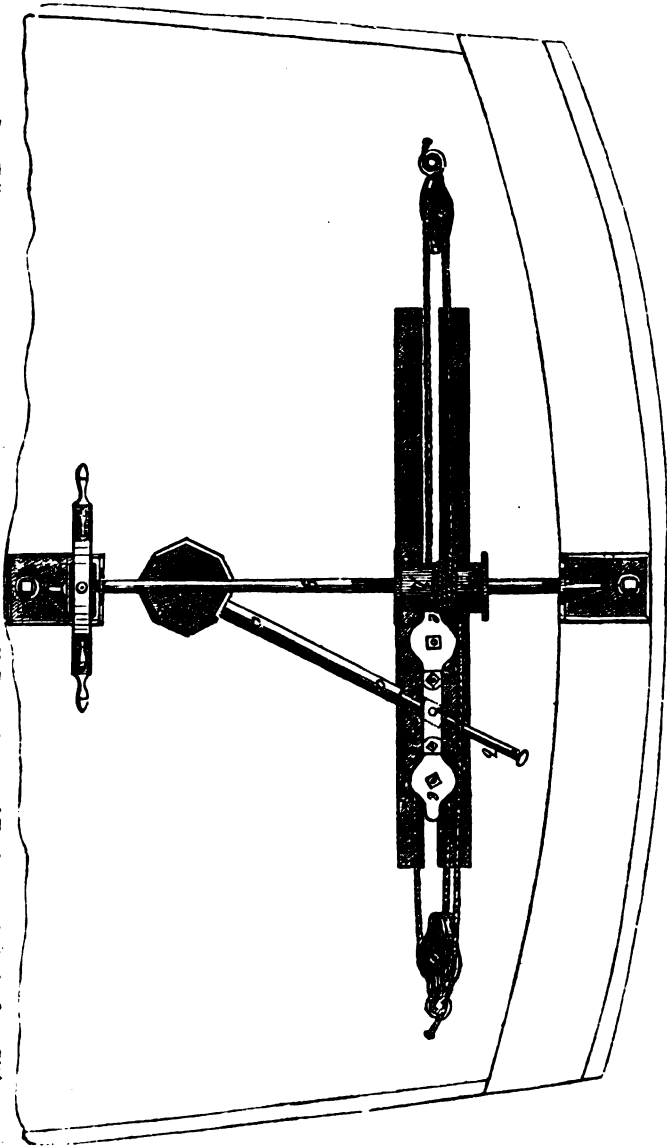
We noticed briefly in our last number this useful and ingenious appendage to the tiller, by which, considerably more command over the rudder is gained, than with the usual means; and a closer inspection of it has confirmed the opinion we then gave.—The principle of it is not only simple, but most effectual, and one that can be easily applied to any tiller now in use.

The following are the principal advantages derived from it. 1. the impossibility of any slackness in the chain or tiller ropes, whereby all danger of riding or fouling is prevented.—2. An increase of power as the helm is put over either way, the power over the tiller increasing with the angle from amidships.—3. The least movement of the wheel acts on the rudder, consequently the helmsman has always the vessel under command, an advantage of immense importance while scudding in a heavy sea, in an intricate navigation or amongst a fleet of vessels.—4. One man has more power with this improved mode of steering, than two men with the common means, while he is effectually secured from being thrown over the wheel. The annexed sketch is a representation of it.

The following vessels have been already fitted, with entire satisfaction; viz. The large Steam Ship *President*, belonging to the British and American Company;—Her Majesty's Steam ship, *Lizard*; Captain Beechey employed in the survey of St. George's Channel;—The Trinity Corporation Steam Buoy Yacht, *Argus*; the Pacific Company's large Steamers, *Chili* and *Peru*; the East Indiaman, *Argent*, and the large steamer *India* running to the East Indies via the Cape. Steam Companies, Ship Builders, or Owners, may have Licences to fit their own Vessels on the following terms, viz:—For vessels under 200 tons, 5*l.*; 300, 6*l.*; 400, 8*l.*; 500, 10*l.*; 600, 12*l.*; 700, 13*l.*; 1000, 15*l.* and above 1000, 20*l.*, or they may have them done by the proprietor, JOHN ROBERTSON, Rope-maker, Limehouse Hole, London.

a Iron Tiller.  
 b Round end of ditto which slides in the collar c.  
 d Iron guide slide carrying the tiller blocks ee.

ff Grooved piece of Timber in which the Iron Slide  
 d traverses.  
 g Steering Wheel Spindle with the barrel h.



**THE STAG ROCK, HOLYHEAD.**—This dangerous rock which has so long eluded the vigilance not only of those persons best acquainted with Holyhead, but also of our Naval Surveyors, has at length been discovered by the indefatigable perseverance of Capt. Beechey employed surveying St. George's Channel. In his report to the hydrographer,

Capt. Beechey says "I am happy to say we have at length found the Stag Rock, and a dangerous one it is. \* \* The rock is about two boats' lengths in diameter, rising to a point so sharp the lead cannot be made to rest upon the highest part. There is eleven feet water upon it, and twenty-three feet all round it. It is 1,500 feet from the lighthouse. I have found some other dangerous rocks in this Bay on the east side, and indeed one near this harbour between the Stag and the Nimrod. There may be others. I should not have found this without sweeping with two boats and a whale line, for my soundings had been carried on all sides of it with the greatest precision by means of flags erected in a line with distant objects. \* \* Besides the Stag Rock you will find two other dangerous rocks to the eastward not in any chart. There are probably others, and all the S.E. part of this bay must be considered dangerous from the possibility of their existence."

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### NEW BOOKS.

THE PRACTICE OF NAVIGATION AND NAUTICAL ASTRONOMY,—By *H. Raper, Lieut. R.N., Secretary to the Royal Astronomical Society.*—London: Bate, 21, Poultry.

We had just taken up the work before us, when the following letter was put into our hands.

Mr. Editor,—You are aware that in some books on navigation, the authors, in the rules for working double altitudes, recommend the application of a correction on account of longitude to the elapsed time, in the case of a change of station occurring between taking the two altitudes. And other authors, on the same subject, not only omit this correction, but assert that it is improper to use it.

Again, it is said that in high latitudes, and when the change of the moon's declination is very considerable, her meridian altitude will not always be the greatest altitude.

Would it be too much trouble for yourself, or some of your astronomical correspondents, to have the goodness to decide the question respecting the double altitudes, and to state what is the maximum of the difference between the meridian altitude of the moon, and that to which it attains when not on the meridian, under the conditions mentioned above, and whether this affects, and to what degree, the latitude deduced from a meridian altitude of this object.—Begging your excuse for the trouble I occasion, and requesting your favourable attention, I am, &c.

OLD JOHN HAMILTON MOORE.

P.S. The double altitudes meant above are those of the old sort, not those that relate to the reduction to the meridian, or to the method by trial and error

Now, we considered that we should not only oblige our correspondent, "Old John Hamilton Moore," but also be adopting the most effectual way of answering his questions, by referring them at once to the talented author of the work before us. The reply of Lieut. Raper is at once concise and convincing.

"The answer to the first query, whether in the observation of double altitudes allowance should be made for the change of the longitude of the ship, will be apparent from the following considerations.

"Suppose at a place A, at 10 A.M. the sun's altitude is  $13^{\circ} 18'$ , and at 3h. 40m. afterwards a second altitude is obtained. These two altitudes, with the interval 3h. 40m., afford the latitude of A.

"Again, suppose at a place B, an observer had obtained at 10 A.M. the sun's altitude, and at 3h. 40m. afterwards he finds the second altitude  $14^{\circ} 15'$ . These two altitudes, with the interval 3h. 40m., afford the latitude of B.

"Now, suppose that at 10 A.M. the ship had left the place A, having obtained the altitude  $13^{\circ} 18'$ , and at the end of the 3h. 40m. she arrives at B, when she obtains her second altitude  $14^{\circ} 15'$ , then she has the given interval 3h. 40m., with the second altitude  $14^{\circ} 15'$ , and it is therefore clear that by reducing the first altitude observed at A, or  $13^{\circ} 18'$ , to what it would have been if observed at B, that is, in other words, correcting the first altitude for the mere *change of place*, she will have precisely the elements for deducing the latitude of B, as is required to be done.

"The example from which this illustration is composed, is given in the American Practical Navigator of Bowditch, who cautions the inexperienced computer against falling into 'the error of applying a correction to the elapsed time,' as directed by Dr. Mackay, in the complete Navigator. No correction of the kind is made by Dr. Inman, or Mr. Riddle, or others who have treated the subject properly.\* If indeed the case were such that the elapsed time, instead of being measured directly by a chronometer, were deduced from the time at each place, then the correction for longitude would be necessary.

"In regard to the second query, namely, what is the difference between the moon's meridian altitude and her maximum altitude, the point does not admit of an unqualified answer, because, this difference increases with the latitude, until at the pole, the distinction of the meridian altitude is lost. This point is briefly noticed in page 168, of my 'Practice of Navigation'".

H.R.

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**NEW CHARTS.**

(Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.)

**THE STRAITS OF SINGAPORE, DURIAN AND RHIO.**

We perceive by the title that the former Strait is from the several surveys of Capt. Daniel Ross, in 1827; that Durian Strait and Philipps Channel is by Lieutenants Collinson and Moresby in 1822; Pisang and Cocob Islands, by Lieut. F. A. Cudlip in 1821; and Batoo Hadji Strait, or the Strait of the Pilgrims Rock, an entirely new feature, by Mr. L. C. Bailey, master, R.N. For Rhio Strait there is no good authority. The limits of the chart comprehend a vast deal of internal and important navigation, being the high road from India to the China Sea.

**SINGAPORE HARBOURS AND ROADS, with the adjacent Channels.**

The surveys of Capt. Daniel Ross, of the Bombay marine, have formed the data for these harbours, and their approaches are laid down as far as known. It will prove a most useful chart to vessels visiting that important station Singapore.

**PORT ESSINGTON.—Australia surveyed by Mr. C. J. Tyers, of H.M.S. Alligator. 1839.**

We commenced our January number with directions for Port Essington, by Mr. Jackson, the master of the Alligator, certified to be excellent by Capt. Sir Gordon Bremer, with which, and the very neat chart before us, any vessel may readily enough find her way up to Victoria anchorage.

"\* I have subjoined a proof of this point on which the above is founded, as though necessarily of a somewhat abstruse cast, it may interest your mathematical readers from its simplicity.

"Let the altitude observed at the expiration of a time  $t$ , at the place A be  $\alpha$ , and that observed at another place B, whether in the same or a different longitude, be  $\beta$ . After the expiration of the time  $t'$  let the altitudes be respectively denoted by  $\alpha'$   $\beta'$ . The latitude of A is denoted by  $f(t-t, \alpha, \alpha')$ ; that of B, by  $f(t'-t, \beta, \beta')$ , in which  $f$  signifies a function of the data by which the latitude is deduced, whether by a rigorous or approximate process. Now, if a ship moves from A to B in the same interval, she has the altitudes  $\alpha$ , and  $\beta'$ ; and the same function of these quantities, namely  $f(t'-t, \alpha, \beta')$  is made identical with the second, or that for B, by merely changing  $\alpha$  into  $\beta$ ."

TABLE LXII.

*For reducing Sardinian Palms to English Feet, and English Feet to Sardinian Palms.*

1 Sardinian Palm = 0·6646217557 English Feet.

1 English Foot = 1·5046152062 Sardinian Palms.

Sard. palms of Eng. feet.	English feet and Dec. parts.	Sardinian palms and Dec. parts.	Sard. palms of Eng. feet.	English feet and Dec. parts.	Sardinian palms and Dec. parts.	Sard. palms of Eng. feet.	English feet and Dec. parts.	Sardinian palms and Dec. parts.
1	0·665	1·505	40	26·585	60·185	79	52·505	118·865
2	1·329	3·009	41	27·249	61·689	80	53·170	120·369
3	1·994	4·514	42	27·914	63·194	81	53·834	121·874
4	2·658	6·018	43	28·579	64·698	82	54·499	123·378
5	3·323	7·523	44	29·243	66·203	83	55·164	124·883
6	3·988	9·028	45	29·908	67·708	84	55·828	126·388
7	4·652	10·523	46	30·573	69·212	85	56·493	127·892
8	5·317	12·037	47	31·237	70·717	86	57·157	129·397
9	5·982	13·542	48	31·902	72·222	87	57·822	130·902
10	6·646	15·046	49	32·566	73·726	88	58·487	132·406
11	7·311	16·551	50	33·231	75·231	89	59·151	133·911
12	7·975	18·055	51	33·896	76·735	90	59·816	135·415
13	8·640	19·560	52	34·560	78·240	91	60·481	136·920
14	9·305	21·065	53	35·225	79·745	92	61·145	138·425
15	9·969	22·569	54	35·890	81·249	93	61·810	139·929
16	10·634	24·074	55	36·554	82·754	94	62·474	141·434
17	11·299	25·578	56	37·219	84·258	95	63·139	142·938
18	11·963	27·083	57	37·883	85·763	96	63·804	144·443
19	12·628	28·588	58	38·548	87·268	97	64·468	145·948
20	13·292	30·092	59	39·213	88·772	98	65·133	147·452
21	13·957	31·597	60	39·877	90·277	99	65·797	148·957
22	14·622	33·102	61	40·542	91·782	100	66·462	150·462
23	15·286	34·606	62	41·207	93·286	150	99·693	225·692
24	15·951	36·111	63	41·871	94·791	200	132·924	300·923
25	16·616	37·615	64	42·536	96·295	250	166·155	376·154
26	17·280	39·120	65	43·200	97·800	300	199·387	451·385
27	17·945	40·625	66	43·865	99·305	350	232·618	526·615
28	18·609	42·129	67	44·530	100·809	400	265·849	601·846
29	19·274	43·634	68	45·194	102·314	450	299·080	677·077
30	19·939	45·138	69	45·859	103·818	500	332·311	752·308
31	20·603	46·643	70	46·524	105·323	550	365·542	827·538
32	21·268	48·148	71	47·188	106·828	600	398·773	902·769
33	21·933	49·652	72	47·853	108·332	650	431·004	978·000
34	22·597	51·157	73	48·517	109·837	700	464·235	1053·231
35	23·262	52·662	74	49·182	111·342	750	498·466	1128·461
36	23·926	54·166	75	49·847	112·846	800	531·697	1203·692
37	24·591	55·671	76	50·511	114·351	850	564·928	1278·923
38	25·255	57·175	77	51·176	115·855	900	598·160	1354·154
39	25·920	58·680	78	51·840	117·360	1000	631·622	1504·615

\* This measure is that used in Cagliari, while that of Table LV. is used in the Island generally.—*Baron de Prony*

ADMIRALTY ORDERS.

Admiralty, 12th August, 1840.

Erratum in the Order respecting the rank, pay, and half-pay of Mates, as established by Her Majesty's Order in Council, of the 10th August, 1840.

The half-pay of mates is to be at the rate of two shillings and six-pence a day, after three years actual service at sea as mates, and when unable to obtain employment in Her Majesty's service, provided their conduct during service shall have been satisfactory, and provided they do not decline or avoid service when called upon.

By command of their Lordships,

R. MORE O'FERRALL.

Admiralty, 14th Feb., 1840.

It is the intention of My Lords Commissioners of the Admiralty that all Assistant-Surgeons on entering the service, either in sea-going ships or otherwise, shall hereafter be appointed only by an Acting Order, which will be confirmed at the expiration of one year from the date of the original entry, in case of the Assistant-Surgeon producing a favorable testimonial from the Captain and Surgeon under whom he has served, (and if he has served at an hospital from the Superintendent and Medical Officers of the establishment,) of his moral character and attention to his duty, according to the accompanying form, and the certifying officers are hereby required to pay the strictest attention to the characters and conduct of the Assistant-Surgeons, and to see that they perform their duty in a proper manner; and not to grant certificates unless they are merited.

By command of their Lordships,

R. MORE O'FERRALL.

To all Commanders-in-Chief, Captains, and Surgeons of H.M. ships.

Admiralty, 17th Feb., 1840.

The Lords Commissioners of the Admiralty have had under consideration the regulations contained in Art. 10, sec. 4, c. 6, of the General Printed Instructions for the ex-

penditure of Ammunition for exercise and practice of the crew of Her Majesty's ships in the use of their guns, and have observed that an excess in the said expenditure frequently occurs in consequence of H. M. ships being prevented from exercising their guns with powder within the periods limited by the said regulations, by circumstances over which they have no control; and my Lords are, therefore, pleased to give notice, that it will hereafter be considered sufficient if the established allowance of powder is not exceeded within the period of the gunner closing his annual accounts.

By command of their Lordships,

R. MORE O'FERRALL.

To all Flag-Officers, Captains and Commanding-Officers of H.M. Ships and Vessels.

Admiralty, 26th Sept. 1840.

As it will frequently occur, in consequence of the increase to the Shore-Pay of Captains of Royal Marines, which is received by them monthly in advance, that over payments will take place when they are embarked before the expiration of the period for which they may have received Shore-Pay, their Lordships are pleased to direct, that in order to enable the Accountant-General to recover the amount of such over payments, the Captain or Commanding Officer of any of Her Majesty's ships or vessels in which a Captain of Marines may embark, shall furnish the said Captain, on embarkation, with a Certificate of the date when he commenced Victualling, and on his disembarkation, with a Certificate of the date when he ceased Victualling, which Certificates the Captain of Marines is to transmit immediately to the Accountant-General, to enable him to regulate his pay.

By command of their Lordships,

R. MORE O'FERRALL.

To all Captains and Commanding officers of H.M. ships and vessels.

Admiralty, 14th Oct. 1840.

The new form of Seaman's certificate issued herewith is forthwith to be brought into use in lieu of the present form, and the attention of the Captains and Commanding officers of Her Majesty's Ships is particularly directed to the Note in Red Ink on the upper corner at the right hand, which is to be cut off in all cases in which the men's character shall not have been good, in order to prevent fraud by erasure.

By command of their Lordships,

R. MORE O'FERRALL.

CERTIFICATE.

Description of the person, &c. of

On his first entry in the Service.	On his discharge at the age of 30 or 35	After the age of 35.
Where born { Parish _____ Town _____ County _____		
Usual place of residence _____		
Age _____ years and _____ months		
Stature _____ feet and _____ inches		
Complexion _____		
Eyes _____		
Hair _____		
Marks on person _____		
Wounds or scars _____		
Invalided: When _____	For what complaint _____	From what station _____
Ditto _____		

Note.—If a man who volunteers for a ship should have lost his CERTIFICATE OF SERVICE, the Captain of such ship is on no account to supply him with another, but he is to apply for one to the Accountant General.

[On the reverse side of the above.]

Certificate of the Service of

Certificate of the Service of _____									In the event of a man having borne a bad character on board any ship, the Captain of such ship is to cut off this corner.—This is in red ink in the original.
Ships' Names.	No.	Rating.	Entry	Discharge	Y	M	D	Conduct	

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

CAPTAIN RETIRED—Lord Middleton.

COMMANDERS—E. Ommaney.

LIEUTENANT—J. H. Crang.

APPOINTMENTS.

Rear-Admiral Sir John A. Ommaney, K.C.B. second in command in the Medi-

terranean, has hoisted his flag on board the *Britannia*.

CAPTAINS—J. W. Montague to *Queen*, J. Drake to *Britannia*, Sir H. L. Baker, Bart. to *Camperdown*, Sir W. O. Pell to *Howe*, J. Hindmarsh, Lieut-Governor of Island of Heligoland.

COMMANDERS—G. W. C. Lydiard to *Britannia*.

**LIEUTENANTS**—F. P. Egerton to *Calcutta*, J. Dick to *Britannia*, G. Bury agent for steam vessels, W. S. Thomas to command *Ferret*, J. M. Waugh to command *Lightning*, H. S. J. Georges to *Belleisle*, B. Sharpe to *Hove*, H. Byng to *Salamander*, F. C. Syer to *Comet*, H. C. Binstead, W. Tringham, N. F. Edwards to *Queen*, P. Duttry, J. M. Langtry, F. Cannon, G. Bott, E. Little, J. A. Gordon (b) to *Britannia*, R. D. Pritchard to *Aron*, J. Slaughter agent for steam vessels to *Alexandria*, R. L. Atkinson to *Calcutta*, W. C. Simmonds, R. Jefferies to *Coast Guard*, J. Strane to *Blazer*, J. Lunn to *Locust*, J. H. Gennys to *Belleisle*, W. G. Hensworth be agent of *Somersetshire (tran.)*, J. M. Langley to flag of Sir J. Ommaney, J. J. Caldwell to *Britannia*, W. E. Triscott to *Caledonia*, R. N. Kelly, H. D. Foster to *Coast Guard* as chief-officers, J. Lester to *Laying*, C. J. Haswell to *Fox*, C. H. Baker to *Stork*, J. Drew to *Dove*, R. Conner to *Skylark*.

**MASTERS**—R. Yule to *Queen*, J. Underwood to *Britannia*, R. Studwell to *Blossom*, R. Moorman to *Calcutta*, F. B. Steerman to *Impregnable*, W. Forster (act) to *Wilberforce*.

**MATES**—H. Barnard, W. H. J. Lovie, J. H. Crang, W. J. G. Cunningham, G. Y. Paterson, E. T. Hinde, R. C. Tutnall, C. J. Perkins, H. J. Hankey to *Britannia*, C. Nott, N. Vansittart, J. Palmer, M'Leod, B. Cockraft, W. F. Robinson to *Queen*, B. Proctor to *Hove*, G. F. Leigh to *Madea*, W. F. Parkinson to *Savage*, F. P. B. Seymour, G. G. Napier to *Britannia*, G. Herbert, G. H. Hodgson, J. M. Jackson, J. C. Rowles, J. C. W. N. Taylor to *Excellent*, J. J. Dornford, R. A. Buchanan, J. Freeling, N. Bainbridge, C. Hearnstead to *Hove*, G. L. Palmer to *Stag*, L. E. Cockraft to *Albert* steamer, E. Hearnstead to *Britannia*.

**SECOND MASTERS**—J. Whiting to *Calcutta*, J. E. Looney to *Albert*, H. Jackson to *Queen*, A. J. Samwell to *Rolla*, J. King to *Redwing*, W. C. Pettigrew to *Ætna*, J. W. Lawson to *Blazer*, W. C. Triphook to *Locust*.

**MIDSHIPMEN**—W. Lapidge to *Queen*, J. A. Dunbar, C. F. Coventry, E. A. Porcher to *Britannia*, J. Hawkins, P. Okenham to *Hove*.

**VOLUNTEERS, 1st Class**—C. Kent, T. Andrews, D. Spain, A. E. Oldfield to *Britannia*, J. Montgomerie, T. P. C. Owen, G. Stratton to *Hove*, G. Lock to *Britannia*.

**MASTERS-ASSISTANT**—J. T. Loutid to *Victory*.

**SURGEONS**—T. Miller, to *Queen*. J. Tarn, to *Britannia*. A. Yeoman, M.D. to *Pearl*. C. McArthur, to *Hove*.

**ASSISTANT-SURGEONS**—W. T. Carter, to *Queen*. J. Campbell, M.D. W. H. Brent, R. T. Scott, and T. Miller, to *Britannia*. A. Lillie, to *Southampton*. R. Clarke, M.D. and A. Woodcock, to *Winchester*. G. Nichols, M.D. to *Hove*. R. W. Clarke, to *Blazer*.

**PURSERS**—G. Nichols, to *Queen*.

**CHAPELAINS**—J. Falls, to *Queen*. J. A. Crimble, to *Britannia*.

**NAVAL INSTRUCTOR**—F. C. Halstead, to *Britannia*.

**CLERKS**—E. D. Atkins, J. M. Hobbs, to *Queen*. W. Miller, J. Barrett, J. Moorman, to *Britannia*. H. J. Beaston, to *Pearl*. J. Haddock, (in charge) to *Ferret*. J. Brickwood, (in charge) to *Raven*. J. W. Hopkins, (in charge) to *Blazer*. B. W. Tribe, J. D. Parminster, to *Hove*. R. Crespin, to *Locust*, (in charge.)

**ROYAL MARINES**—Capt. J. Fynnemore to *Queen*.

**FIRST-LIEUTENANTS**—R. Wright, T. Payne to *Queen*.

**ENGINEER, First**—J. Johnson, **Second** J. Collings, **Third** J. Davis to *Blazer*.—**Third** G. Baker to *Salamander*.

Mr. T. Hoseason is appointed registrar of Vice-Admiralty Court at Sierra Leone.

*For the Niger Expedition.*

Captain H. D. Trotter, Lieutenant E. G. Fishborne, Mr. G. B. Harvey, Acting-Master, Dr. J. O. McWilliam, Surgeon; W. Bowden, Purser; H. C. Hurston, Mate; Mr. Bush, Clerk; and W. Mirrimen, Acting-Gunner to the *Albert* steamer:—Commander Bird Allen; J. Bilem, Acting-Master; and N. Waters, Clerk in charge to the *Soudan* steamer.

The following are nominated for the steamer *Wilberforce*, when launched.—Commander William Allen, Lieut. J. N. Strange, Mr. Cyrus Wakeham, Purser.

The following Mates are nominated for the expedition, but not appointed to the ships:—Messrs J. Hamilton (b), A. P. Green, W. Willie, R. C. Toby, and C. W. Fairholme.

The following Mates qualified for Lieutenant, at the Royal Naval College, on Tuesday:—Messrs Oswald Borland, and Wm. Guy Bryan, *Belleisle*. McLeod Baynes Cockraft, *Queen*. George Herbert Harris Grathhead, late *Snake*. James Charles Clark, late *Fair Rosamund*. Robert Cooper Tatnall, *Britannia*.

Mr. Alfred Burton, son of the late Major Burton, was found duly qualified for a Marine Officer, on Tuesday last, at the Royal Naval College.

## MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

## AT HOME

**ÆTNA**, 6th Lieut.-Com. J. Wilson, 2d Oct. off Deal, 5th arrived at Plymouth, and sailed for Liverpool to remain.

**AVON**, (s.v.) Lieut.-Com. R. Pritchard 16th Oct. left Woolwich for Plymouth.

**BRITANNIA**, 120, Capt. J. Drake, 12th Oct. towed out of Portsmouth harbour, remains at Spithead.

**CALCUTTA**, 84, Capt. Sir T. Roberts, c.B. 13th October towed into Plymouth Sound, ready for sea.

**CYGNET**, 10, Lieut. E. Wilson, 24th September left Plymouth for Africa, having sailed 17th and put back.

**DONEGAL**, 78, Capt. J. Drake, 15th September arr. at Plymouth and sailed for Portsmouth, arrived 15th, crew paid, 21st turned over to Britannia.

**FEARLESS**, (st. v.) Com. 28th September arrived at Cork, 29th sailed.

**FERRET**, 10, Lieut. W. S. Thomas, at Devonport fitting.

**HECATE**, (s.v.) Com. J. Ward, at Chatham fitting.

**HOWE**, 120, Capt. Sir W. O. Pell, 6th October left Sheerness for Portsmouth, 9th arrived, remains at Spithead.

**INCONSTANT**, 36, Capt. D. Pring, 7th October arr. at Plymouth from Lisbon.

**MEDEA**, (st. v.) Com. F. Warden, 29th September left Portsmouth for Mediterranean, 30th touched at Plymouth, 2nd October sailed.

**NAUTILUS**, 10, Lieut.-Com. G. Beaufoy, 15th July left Sheerness for Portsmouth.

**NORTH STAR**, 26, Capt. Hon. Lord J. Hay, 17th September moved into harbour, 2nd October put out of commission, crew turned over to flag ship.

**RHADAMANTHUS**, (st. v.) Com. A. Wakefield, 17th October arr. at Portsmouth from Mediterranean.

**RODNEY**, 92, Capt. A. Parker, 17th September sailed for Mediterranean.

**SALAMANDER**, (st. v.) Com. H. R. Henry, 8th October arrived at Spithead, 15th sailed for Malta.

**SAVAGE**, 10, Lieut.-Com. Hon. E. Plunkett, 15th September arrived at Plymouth from North Coast of Spain, 10th October towed into Sound.

**SHEARWATER**, (st. v.) Lieut. Steane, 5th October paid off at Woolwich.

**SNAKE**, 16, Com. J. B. P. Hay, 16th September arrived at Sheerness, 20th uncommissioned

**SOUTHAMPTON**, Captain W. Hillyer, 4th October left Plymouth for South America.

**SPARROWHAWK**, 16, Com. J. Shep-

herd, 3rd October moved into Portsmouth, 10th uncommissioned.

**SPITFIRE**, (s. v.) Lieut.-Com.

28th September arrived at Cork, 29th sailed.

**VANGUARD**, 80, Capt. Sir David Dunn, 13th sailed for Mediterranean from Cork.

**VESUVIUS**, (st. v.) Lieut.-Com. W. Blount, 30th September off Deal, on way to Mediterranean, 1st October arr. at Portsmouth.

AT PORTSMOUTH, Spithead—*Britannia* and *Howe*.—*In Harbour*—*Queen*, *Victory*, *Excellent*, *Royal George*, *Emerald*.

AT PLYMOUTH—*In the Sound*—*Calcutta*, *Inconstant*.—*In Hamoaze*—*San Josef*, *Impregnable*, *Belleisle*, *Ferret*, *Carron*.

AT WOOLWICH—*In Harbour*—*Firebrand*, *William and Mary*, *Lightning*, *Fearless*, *Monkey*, *African*, *Messenger*. *In Basin*—*Locust*, *Lucifer*, *Beaver*, *Meteor*, *Shearwater*.

## ABROAD.

**ACORN**, 16, Com. J. Adams, 30th of June in Algoa Bay.

**ACTÆON**, 26, Capt. R. Russell, 8th August arrived at Rio from Monte Video, 11th returned.

**ALLIGATOR**, 26, Capt. Sir J. J. G. Bremer, 4th of May left Singapore for China.

**ANDROMACHE**, 26, Capt. R. L. Baynes, 30th June, at Table Bay, 9th sailed for Mauritius.

**ASIA**, 84, Capt. W. Fisher, 29th Aug. left Basikia Bay, 6th Sept. left Malta for Beyrout.

**BASILISK**, 6, Lieut.-Com. J. Russell, 21st June left Valparaiso for Cobija, 11th July at Cobija.

**BEACON**, (sur. v.) Lieut. T. Graves, 27th Sept. at Basikia Bay.

**BELLEROPHON**, 80, Capt. C. J. Austen, 6th Sept. left Malta for Beyrout.

**BLENHEIM**, 72, Capt. Sir H. Senhouse, 1st July passed Singapore on her way to China.

**BLONDE**, 42, Capt. T. Bouchier, 16th June, arrived at Singapore, 18th sailed for China.

**BRITOMART**, 10, Com. O. Stanley, 20th May, at Sydney refitting.

**CALLIOPE**, 26, Capt. T. Herbert, 1st July left Valparaiso for China.

**CAMBRIDGE**, Capt. E. Barnard, 20th Sept. arrived at Malta from Genoa.

**CROCODILE**, 26, Capt. A. Milne, 31st August arrived at Quebec.

**CLEOPATRA**, 26, Capt. S. Lushington, 11th Sept. arrived at Quebec.

Quebec, Sept. 28th.—The sentence of



the Naval Court-Martial on Robert Collins, for murder, was put into execution on board Her Majesty's ship *Cleopatra* this morning, at eight o'clock, by hanging him at the yard-arm at the foremast of the vessel. We believe this is the first instance of a similar execution in this port.—*Gazette*.—(See p. 744 of our last number.)

**CLIO**, 16, Com. J. G. Freemantle, 12th August left Rio for River Plate, 22d in River Plate.

**COLUMBINE**, 16, Com. G. Elliott, 8th July passed Singapore on way to China.

**CONWAY**, 26, Capt. A. Milne, 31st August arrived at Quebec.

**CURACOA**, 24, Capt. J. Jones, 14th of July left Rio for Monte Video, 22d Aug. at Buenos Ayres.

**CYCLOPS**, (st. v.) Capt. H. T. Austen, 6th Sept. left Malta for Beyrout.

**DIDO**, 18, Capt. L. Davis, c.b., 6th of Sept. left Malta for Beyrout.

**ELECTRA**, 18, Com. E. R. P. Mainwaring, 11th July at Valparaiso with flag of Admiral Ross.

**ESPOIR**, 10, Lieut.-Com. J. T. Paulson, 21st September in the Tagus.

**FAWN**, Lieut.-Com. J. Foote, 13th July sailed from Rio.

**GRECIAN**, 16, Com. W. Smyth, 18th August left Rio on a cruise.

**GRIFFON**, 3, Lieut.-Com. J. G. D'Urban, 21st July arrived at Barbados.

**HASTINGS**, 72, Capt. J. Lawrence, 29th August had sailed from Basikia Bay.

**HYDRA**, (st. v.) Com. R. Stopford, 31st August arrived at Constantinople, 3rd September returned to Alexandria.

**IMPLACABLE**, 74, Capt. E. Harvey, 29th August had sailed from Basikia Bay, 6th June left Malta for Beyrout.

**INCONSTANT**, 36, Capt. D. Pring, 13th September arrived at Gibraltar, 24th arrived at Lisbon.

**LARNE**, 18, Com. J. P. Blake, 13th June left Singapore for China.

**LILY**, 16, Com. C. Deare, 21st June arrived at Mauritius from Mozambique with a slave prize.

**MELVILLE**, 72, Capt. Hon. R. A. Dundas, 16th June arrived at Singapore, 18th sailed for China.

**NIMROD**, 20, Com. C. A. Barlow, 13th July arrived at Singapore.

**ORESTES**, 18, Com. P. S. Hambly, 11th July at Callao.

**PARTRIDGE**, 10, Lieut.-Com. W. Morris, 23rd July arrived at Pernambuco, from Bahia.

**PEARL**, 18, Com. C. C. Frankland, 16th August arrived at Pernambuco from Bahia.

**PILOT**, 18, Com. G. Ramsay, 29th September at Quebec.

**PHOENIX**, (st. v.) Com. R. S. Robinson, 27th September arrived at Constantinople.

**PRINCESS CHARLOTTE**, 104, Capt. A. Fanshawe, 6th September left Malta for Beyrout.

**PYLADES**, 18, Com. T. V. Anson, 16th June arrived at Singapore, 18th sailed for China.

**RACEHORSE**, 18, Com. Hon. E. A. Harris, 22nd July arrived at Trinidad.

**RACER**, 16, Com. G. Byng, 3rd August arrived at Vera Cruz from Tampico, 15th sailed.

**RINGDOVE**, 16, Com. Hon. K. Stewart, 15th Sept. at Prince Edwards Island from Gulf.

**RODNEY**, 92, Capt. H. Parker, c.b., 26th Sept. arrived at Gibraltar, 28th sailed for Mediterranean.

**ROSE**, 16, Com. P. Christie, 15th July arr. at Buenos Ayres from Monte Video.

**SAMARANG**, 26, Capt. W. Broughton, 2d July, arrived at Valparaiso from San Blas.

**SAPPHIRE**, Mr. G. W. Nembhard, 23d Sept. arrived at Quebec.

**SAPPHO**, 16, Com. F. Frazer, 10th of August arrived at Jamaica.

**SATELLITE**, 18, Com. J. Robb, 3rd September, arrived at St. John from the Bay of Fundy.

**STARLING**, (s.v.) Lieut. Com. H. Kellert, 8th April, at Otaheite to sail in a week for Manila.

**STROMBOLI**, (s.v.) Lieut. 12th Sept. arrived at Gibraltar, 13th sailed for Malta, 23rd arrived on Coast of Syria.

**SULPHUR**, (sur. v.) Com. E. Belcher, 5th April at Otaheite to sail in a week for Manila.

**TALBOT**, 26, Capt. H. J. Codrington, 21st August arrived at Constantinople.

**TRINCULO**, 16, Com. H. E. Coffin, 20th September left Lisbon for Cadiz, 23rd arrived.

**VANGUARD**, 80, Capt. Sir David Dunn, 4th October arrived at Malta.

**VICTOR**, Com. W. Dawson, 30th September arrived at Halifax.

**WATERWITCH**, 10, Lieut.-Com. H. J. Matson, 1st August left St. Helena for Ascension.

**WELLESLEY**, 72, Capt. S. Maitland, on way to China from Singapore with broad pendant of Sir George Bremer.

**WINCHESTER**, 50, Capt. J. Parker, 31st August arrived at Quebec.

**WIZARD**, 10, J. F. Birch, 12th August left Rio on a cruise.

AT MALTA, 5th October, Ceylon, Vanguard, Alecto, Volcano.

AT RIO JANIERO, August 21st, Stag, Crescent, Fawn, Sparrow, Arrow.

## SHAKINGS.

**BEACON ON THE GOODWIN.**—The following are bearings from the Beacon left standing on the outer part of the middle of the Goodwin Sands having been used by Capt. Bullock during his survey of those dangers. South Foreland High Light, W.S.W.½W.; Walmer Castle, W.; Deal Castle, W.b.N.; Sandown Castle, W.N.W. nearly; Ramsgate Light, N.N.W.; St. Peter's Church, N.b.W.; North Foreland Light, N.½W.

**THE TALAVERA AND IMOGENE** have been destroyed by fire in Plymouth dock-yard, and various opinions have been entertained whether the fire was the result of accident or the work of an incendiary, the former predominating. A similar catastrophe had nearly occurred at Sheerness, by which the **CAMPERDOWN** would have been destroyed, but which happily in time was prevented. We understand the carpenter of the ship, Mr. Henty, is now on his trial before a Court-Martial on charges connected with this affair.

## BIRTHS, MARRIAGES, AND DEATHS.

## Births.

At Newbold Comyn, Warwickshire, the lady of the Hon. Capt. Somerville, *M.N.* of a son.

At Selskar, Wexford, 16th September, the lady of Commander Kellett, *R.N.*, of a daughter.

## Marriages.

The Right Hon. Lord Seaford to Lady Hardy, widow of the late Admiral Sir Thomas Hardy, *G.C.B.*—Her Ladyship is verging on her 50th year, and his Lordship is in his 69th year.

On the 23rd September, Adam Freer Smith, *esq.* of Calcutta, and of the Priory, Kew, to Clara Jane, youngest daughter of Capt. Dennoan, *R.N.* Plymouth.

At St. Pancras New Church, on the 1st October, Capt. Sidney Colpoys Dacres, *R.N.* son of late Vice-Admiral Sir Richard Dacres, *G.C.H.* to Emma, daughter of John Lambert, *esq.* of Tavistock-square.

At St. George's, Hanover-square, on the 6th Oct. George Worth, *esq.* of the Admiralty, to Julia Mary, second daughter of the late C. Bedford, *esq.* of Montague-street, Portman-square.

At Paxton House, near Berwick, the Hon. Charles St. Clair, *R.N.* second son of Lord Sinclair, to Isabella, daughter of W. F. Home, *esq.* of Paxton, Berwickshire.

On the 17th September at Stoke, J. Hackblack, *esq.* of Clapton, Middlesex, to Matilda, daughter of Rear-Admiral Curry, *C.B.* of Belmont, Stoke, near Plymouth.

At Alverstoke Church, Mr. Brickwood, *R.N.* to Mary, daughter of Lieut. Parker, of Haslar Hospital.

At Blagdon, on the 7th Sept. Lieut. S. P. C. Wylde, *R.N.* only son of the late

Capt. Sydenham Wylde, to Elizabeth, eldest daughter of G. Hall, *esq.*, of Rickford House, Blagdon, Somerset.

## Deaths.

On the 30th Sept. at his residence, 80, Harley-street, Admiral Sir Ross Donnelly, *K.C.B.* in the 77th year of his age.

On the 11th of Sept. at Stonehouse, Devon, after a long and severe illness, Capt. John Codd, *R.N.*

At Macao, on the 2d June, of dysentery, Lord John Churchill. His lordship was in command of the *Druid* frigate.

On the 16th of August, on board the *Acadia* contract steam packet, on his passage to Halifax, John Pyke, *esq.* *R.N.*

At Whiddon Park, Chagford, Devon, on the 13th Oct. at an advanced age, Capt. Seymour Baily, *R.N.*

On the 3d Oct. at his residence, Blackheath Capt. W. Limbrey, *R.N.* in his 89th year.

At Plymouth, Archibald Murray, *esq.* Purser *R.N.* (1794.)

Lately, at Naval Hospital, Malta, Mrs. Martin, the wife of W. Martin, *esq.* surgeon of that establishment.

On the 7th Oct. at Greenwich, aged 59, James Fuller, *esq.* *R.N.*

At Catisfield, on the 30th September, at an advanced age, Anne, relict of the late Capt. J. N. Newman, who was lost when in command of *H.M.S. Hero*, on the Haak Sands, in 1811.

At Chudleigh, on the 1st Oct. in the 59th year of her age, Eliza, the wife of Capt. W. J. Scott, *R.N.* of that place.

At her residence in Orchard-place, St. Dunstan's, Canterbury, Mrs. E. Renick, widow of Lieut. Renick, *R.N.*

At Peterhead, Capt. D. Horrie, *R.N.* aged 65.

At Canterbury, Capt. Norwood, *R.N.* late of Ramsgate, aged 83.

## METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of September to the 20th of October, 1840.

Month Day	Week Day.	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.	
		9 A.M.	3 P.M.	9 AM	3 PM	Min.	Max	Quarter.		Stren.		A. M.	P. M.
								AM.	PM.	AM	PM		
21	M.	In Dec. 29·97	In Dec. 29·92	o	o	o	o	SW	SW	2	4	bc	o
22	Tu.	29·47	29·47	51	47	47	54	S	W	7	3	qor (2)	ogr (3)
23	W.	29·34	29·46	48	56	40	58	SW	SW	5	4	bcp (1)	bcp (3)
24	Th.	29·49	29·51	50	55	44	56	SW	SW	3	3	bcp (2)	bc
25	F.	29·75	29·89	49	51	48	54	N	N	4	5	od (2)	qop (3)
26	S.	30·02	29·94	49	56	41	57	SW	SW	2	1	bc	or 3) (4)
27	Su.	29·96	29·96	51	61	47	63	W	SW	3	4	bc	bc
28	M.	29·78	29·63	55	57	50	58	S	SW	1	5	o	qor (3)
29	Tu.	29·60	29·74	51	56	49	57	SW	SW	2	4	b	bc
30	W.	29·95	29·96	49	54	43	56	SW	SW	1	2	b	bc
1	Th.	30·00	30·02	53	55	51	57	SW	SW	1	1	o	o
2	F.	30·12	30·13	52	54	50	56	W	W	1	2	bc	o
3	S.	30·14	30·12	45	51	39	53	N	N	1	4	bc	bc
4	Su.	30·06	30·06	51	53	44	54	NE	NE	5	4	bc	bcp (3)
5	M.	30·07	30·07	50	50	42	54	NE	NE	1	2	o	bcp (3)
6	Tu.	30·11	30·10	42	50	36	51	SW	NW	1	1	bm	bcm
7	W.	30·06	30·06	40	50	33	51	W	NW	1	1	bef	o
8	Th.	30·24	30·23	40	48	32	50	W	W	2	1	bf	bm
9	F.	30·29	30·26	39	50	31	51	E	NE	1	1	bf	b
10	S.	30·29	30·28	40	52	32	53	NE	NE	1	2	b	b
11	Su.	30·35	30·38	48	55	38	56	NE	NE	1	1	bc	bc
12	M.	30·56	30·56	48	55	39	56	NE	NE	4	3	bc	b
13	Tu.	30·56	30·53	42	53	33	54	NE	NE	1	2	bmf	bm
14	W.	30·38	30·30	42	56	32	56	SW	SW	3	3	bf	bm
15	Th.	30·22	30·15	40	51	36	52	W	NW	1	2	bmf	bcm
16	F.	29·90	29·82	46	52	41	54	SW	W	4	2	bc	o
17	S	29·78	29·85	52	50	50	55	NW	NE	4	3	o	or 3)
18	Su.	30·00	29·92	48	51	45	52	SW	SW	2	3	o	o
19	M.	29·95	29·70	51	54	49	55	NW	NW	6	8	qbc	qbc
20	Tu.	30·05	30·07	47	51	44	52	N	NW	4	3	bc	bc

SEPTEMBER—mean height of the barometer = 29·769 inches : mean temperature = 53·7 degrees : Depth of Rain fallen = 2·65 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The dispatches from the CAPE have reached us:—our best thanks to the HARBOUR-MASTER for his attention.

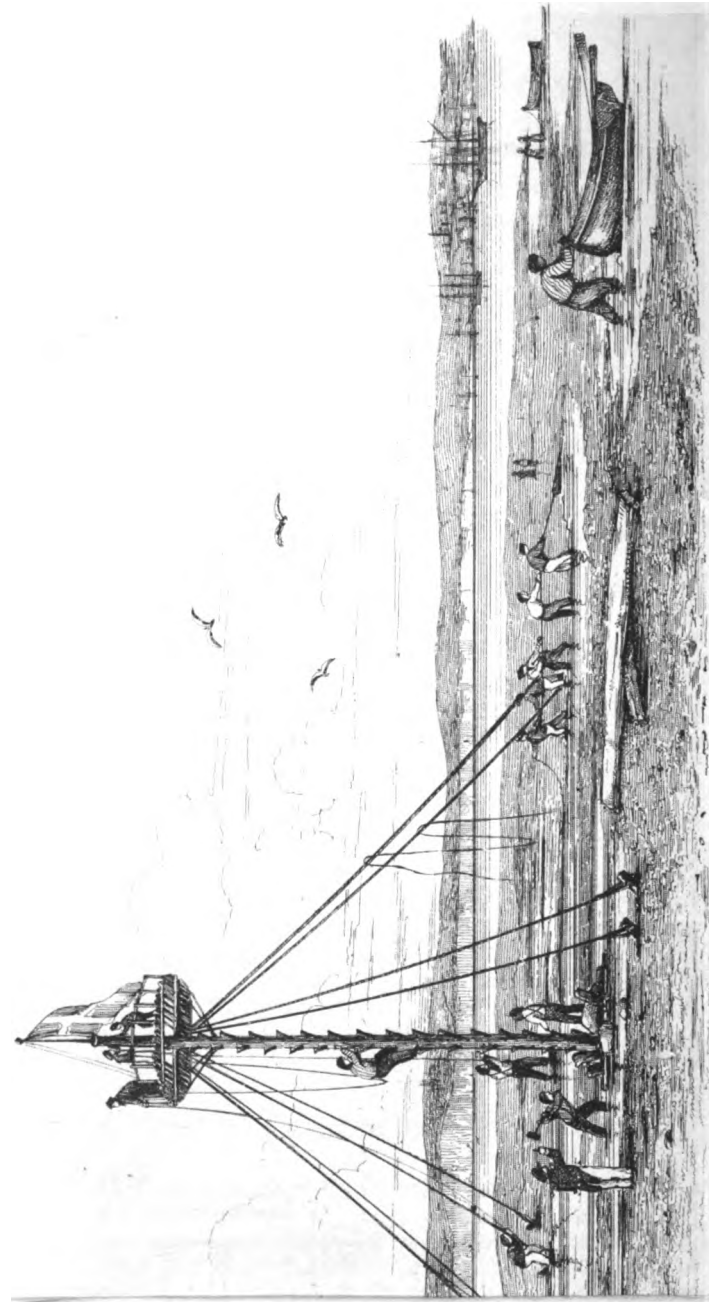
LIEUT. HOLLAND's communication has been received, with its outside passenger! The former most welcome, the latter (by weight) too costly to be so.

Our old correspondent and friend E. received: shall be duly attended to.

We could not possibly find room for Mr. BAKER's letter. It will appear in our next.

MR. JAMES SMITH's letter under consideration: MR. HEDGECOCK's received.





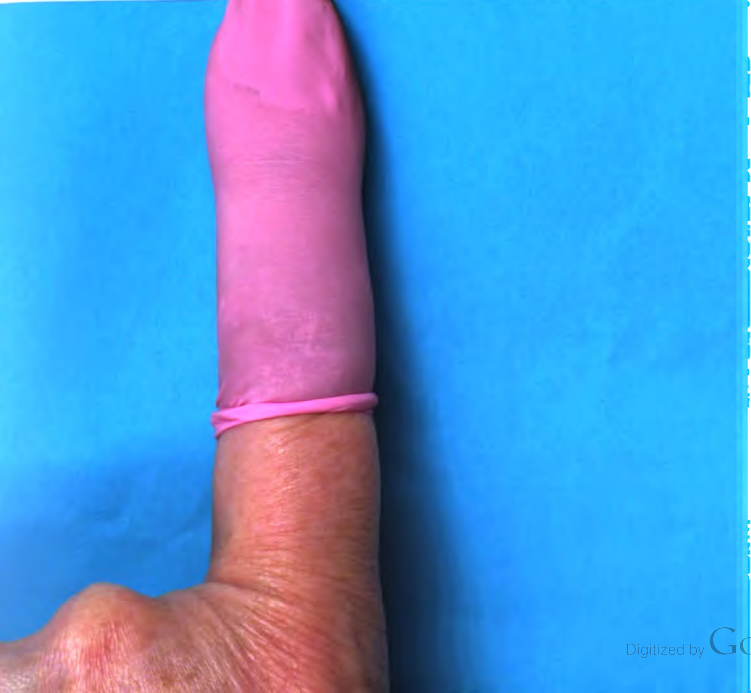
Capt<sup>n</sup> Bullocks Safety Beacon erected on Goodwin Sands, Sep<sup>r</sup> 10<sup>th</sup> 1840.

( FOR THE PROPRIETOR OF THE NAUTICAL MAGAZINE )

Cape's Bullock's Safety Beacon - inserted on Combs's Station. Sep. 16th 1840.

TO OUR SUBSCRIBERS.

The Index of the volume for 1840, will be given gratuitously with  
No. 1, (January 1841.)



ORIGINAL PAPERS.

DECEMBER, 1840.

THE OUTER ROCK OFF CAPE DE GATTE.

It is a fortunate circumstance for navigation, that hidden dangers now and then in the course of a century, "let themselves be seen" just long enough to give a friendly warning to the mariner to keep clear of them. Such unexpected interviews, happily rouse him from that fancied security, in which, while the danger lies concealed, he is too apt to indulge; and he has the gratification perhaps, without losing his ship upon one of them, of discovering that such a danger does really exist. There is one of this kind most undoubtedly off Cape de Gatte, which although it has appeared in the charts above a hundred years ago, has been swept off them,—but happily for seamen, was re-discovered by H.M.S. Belleisle, Capt. J. T. Nicholas, on her way home from the Mediterranean, in September last. In our October number, will be found Capt. Nicholas's statement, to which we may especially direct the attention of our readers, and we annex herewith an extract from a letter which we have been favored with by Capt. W. H. Smyth, on the same subject, whose knowledge of Mediterranean Hydrography is entitled to respect.

*"Cardiff, 27th September, 1840.*

"There are, in all the old Portulani, before Tofino's time, notices of a shoal outside Cape de Gata's well known rock,—but Tofino and his assistants knocked it out of the charts.

"Though the whole corps of Spanish surveyors took it for a fact, that the two shoals were *one* and the same, I will give you an earlier authority for *two*, than that which you have sent me, as it may interest you. It is from the "Nautica Mediterranea" of old Bartholomew Crescentio, from whom Sebastian Gorgoglione derived most of his materials. My edition is of 1607, and at page 8, of the Portulano, are these words.

"Dritto al capo largo mezzo miglio in mare, vi é una piena di basso-fondo, che bisogna schivar con nave, et galee, per essere pericolosa. Piu fuori due miglia si trova un'altra pericolosa per navi."

These ancient authorities amply confirm Capt. Nicholas's report so as to place the actual existence of this danger beyond a doubt. The search



for it has already commenced it would appear, from the following letter of the master of H.M.S. *Jaseur*, which as might be expected has not resulted in the discovery of the actual position of the rock, thereby shewing the great difficulty to be overcome in these matters.

“ *Gibraltar, Oct. 22d, 1840.*”

“ In August last H.M.S. *Belleisle* arrived at Gibraltar, and reported that they had seen a sunken rock off Cape de Gatte. H.M. sloop *Jaseur* proceeded a day or two afterwards off the Cape, in order to examine the sunken rock laid down by Tofino S. 4° E., rather more than half a mile from the castle of Corralete, and to look for the one said to have been seen by the *Belleisle*.

“ Having hoisted out the cutter, and lowered two boats, we proceeded to examine the known rock laid down by Tofino, as above. One boat was anchored on the rock, and the same distance to the eastward. The distance between these boats was found by the ship's masthead angle, and the subtended angles between it and the boats, &c. As many angles as requisite were taken from each boat to the different points, placing the rock rather more than half a mile from the castle, and about 400 fathoms from the nearest shore. The least water we found on it was about nine feet, the length and breadth of it, as near as we could measure with a lead line, from twelve to fifteen fathoms.

“ When we first anchored on the rock, the current was running over it to the eastward, about one mile per hour, and it suddenly increased to about two and a half or three miles. There are eight and nine fathoms along side of it to the northward, eastward, and southward; and four and a half and five fathoms to the westward. The discoloured water was so conspicuous that it was plainly seen. The angles were taken in a hurry, but allowing any little error to have occurred, they will sufficiently prove that the rock cannot be much, if anything out of the position assigned it by Tofino.

“ The brig cruised for some time off the Cape, from one to two and a half miles distant, but no other rock was seen either by the brig or boats.

“ I have myself been employed on the Gibraltar station in H.M. sloop *Orestes*, for a period of twelve months, during which, and the time I have served in this vessel, I have passed the Cape very often, in every direction, both in light winds and blowing fresh, beating and sailing large, I have been close in shore to some distance off; but never saw anything of the rock in question. As it is likely that I shall pass and re-pass the Cape often 'ere I leave the Gibraltar station, I shall not fail to keep a look out for it.

“ JAMES PENN, *Act.-Mas. H.M.S. Jaseur.*”

The above is sufficiently satisfactory respecting the inner rock, and the tide over it, a knowledge of which may be of service in seeking the outer one. We shall, therefore, hope Mr. Penn may succeed in his endeavours to find it, and would recommend the use of the deep-sea lead now and then, or taking a line of soundings on its bearing from the Cape across the deep water, as he may thereby strike the bank on which it stands, and so discover its actual position.

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### CHANNEL NAVIGATION OF STEAMERS.

It is of considerable importance, that courses should be pursued by steamers up and down Channel, to avoid as much as possible, the general track of sailing vessels, especially those in the foreign trade; the conducting of which vessels, not being generally attended to with necessary care in running during the night, and when all possible precaution is taken, it requires an experienced eye, only to be found in those used to navigate amongst shipping in the dark, to make out readily what a ship is about, how standing, &c. &c., when suddenly coming upon her. Confusion in these cases is the usual consequence; therefore steamers should keep a track only used by coasters, and themselves, if possible.

As pilots are employed by sea-going vessels bound to the southward, I shall only take up their courses from the Downs, and offer such suggestions as I consider may be useful for their safe navigation, from thence to Falmouth and back.

Leaving a position off the South Foreland, both lights in one, if passing pretty close under them, and then hauling in a little to pass near Dover, a W.S.W. course twenty-one miles, will carry you to Dungeness, just within the track of all large ships running up. The light passed tolerably near a course of W.  $\frac{3}{4}$  S. is as near as is prudent for Beachy Head, twenty-nine miles. This course, although *without* what sailing directions recommend, yet takes a steamer into a situation on approaching Beachy Head, of some uncertainty as to the Royal Sovereign shoals, especially if blowing hard from the southward, over which, as Capt. Martin White, says, "there is sometimes not more than nine feet water." More care should be taken to avoid them, than has usually been considered necessary.

The light is very badly placed for steam navigation, and coming from the east it remains shut in so long, that it is impossible for a navigator wishing to keep in shore, to know when it should be opened.

It is doubtless a *safe* guide to avoid these shoals, and coming *up* channel, it is easy to keep it in sight until you have run seven miles, though at the sacrifice of a great increase of distance. Capt. White's

directions are evidently wrong, in stating that to pass outside the Royal Sovereign shoals half a mile, it is necessary to keep the light in sight. To do this, according to his own statement of the position of the shoals, a vessel must pass *two miles* outside of them when the light is seen. But the difficulty in going the other way is, to know when you are at that distance from Beachy Head, as to render it necessary to open the lights, thus creating a doubt, in a steamer navigating upon a line from Dungeness towards it, within that adopted by sailing vessels. It would I think, have been a great improvement, had this light been placed upon the headland itself for seamen, and to have depended upon its bearing and soundings, for keeping at the necessary offing on approaching the shoals. You could estimate a distance from the light, but nobody can form Beachy Head, which is proverbial for its dark and dismal aspect, on its approach from the east especially.

This headland, should however be passed as near as convenient, and when about true north, a course W.b.N. will carry you clear of St. Catherines Point,—the light about to be erected upon which will be invaluable. During day, or in clear nights, a quarter of a point more to the north of this course will save distance, and be more out of the way of ships coming up. Either of these courses will pass the Owers light at a fair distance, the former seven or eight miles; but as the tide both ebb and flood, has a tendency to set towards these shoals, care should be taken, (if in spring tides especially, and fresh south breeze, you find the vessel nearer to the light, than the course steered should take you,) to keep out a little, to give the Isle of Wight a fair berth. The distance at which you pass the Nab light also, if seen, which it will be if too far in, being a further guide for St. Catherines Point, which on a dark night ought not to be approached without great caution. From abreast of St. Catherines Point, the direct course to the Start will be W.b.N.  $\frac{1}{2}$  N., ninety miles,—but if night time, as soon as Portland lights are seen, it will be better to edge a little in towards them, and when abreast of them, to make a corresponding allowance on the course for the Start (W.  $\frac{1}{2}$  N.) thus continuing the plan of keeping well within the line of large ships coming up Channel.

From the Start W.N.W. 53 miles, will take you to Falmouth, passing just outside the Eddystone; twenty-four miles from which, the entrance of Falmouth is twenty-nine miles. Here again is a badly placed light. It is of no use whatever to vessels coming from the east; it is shut in under St. Anthony point, until you are close to it; it is a beautiful rapidly revolving light; but is most assuredly of less use, than it would have been, had it been placed upon the brow of the cliff, so as to have been seen from the east. This point, on which stands the light-house, may be passed very close. Pilots pass it alarmingly close.

Capt. Martin White however says, "it should have a good berth;" and from off it, steer N.b.W., with steamers of any draught of water fit to go into the inner harbour of Falmouth, which takes you just to the west of the ships at the packet anchorage, called "The Roads." To find the deepest water into the harbour during either day or night, is a difficult matter. At very low tides, eleven feet cannot be depended upon, but except at such times, *from the packet anchorage in the Roads; a straight course to pass to the north of the ships anchored in the harbour,* will carry any vessel safely in that is capable of laying afloat there at all times. It is rather singular that Capt. Martin White, who is the latest Admiralty authority, in giving directions for this harbour, after stating that the course in is N.  $\frac{1}{2}$  E. (which is quite correct, entering in mid-channel, and going to Carrick Roads;) refers to *buoys*, as guides for entering, which buoys have been taken away many years! The Admiralty chart is also very defective, in the depths of the harbour, omitting all reference to the old excavations marked, in Mr. Price's survey; one off Kiln Quay, a considerable one, where the packet moorings are laid down; a small one between the two, and two others, further out; in all which, there will be found some feet more water, than the chart (Admiralty) has marked upon it, this giving no greater depth than two fathoms, in any part of the harbour. I have been laying in the hole off Kiln Quay, and when cable was veered; to bring us pretty near the shore there was thirteen feet under the stern at low spring tides, exactly where the Admiralty chart marks one and a quarter fathom. I cannot help here also remarking upon the want of description which exists in Capt. White's publication; of the marks for different harbours. How, for instance at Falmouth, is any body to know which is "Feock House?" Which is "Killiganoon House?" What he alludes to by the "Summer House?" &c. &c.

The courses and distances before stated, for a steamer navigating down Channel, may be given here in one view.

South Foreland to Dungeness keeping first well in towards	
Dover, W.S.W.	21 miles.
From Dungeness to Beachy Head, W. $\frac{3}{4}$ S.	29 "
Beachy Head to St. Catherines point, W.b.N. on clear night	
or daylight, $\frac{1}{4}$ point more N.	60 "
St. Catherines point to Start, W.b.N. $\frac{1}{4}$ N.	90 "
Start to Falmouth W.N.W.	53 "
	<hr/>
Total	253 "

No reference is made either to winds, tides, or soundings in this navigation—the fact is, that with a powerful steamer, in ordinary weather, any thing not amounting to a gale, is not necessary to be taken much

account of, though if favorable, or the contrary, it is of course upon her distance. What is here meant, is, its not causing deviation from the course steered. In respect to tides, as Capt. Martin White has tended in his late publication, to throw every thing into confusion in regard to them, we must be content to trust to chance, in which direction they may set us; but notwithstanding the tides are, by this authority, described as setting all round the compass, (which fact, however, I do not pretend to deny,) I believe, we may pretty confidently rely, there is a flood, in effect, setting so many hours in favor of a ship going up Channel, and so many hours of ebb retarding her, and that for all practical purposes, these streams may be considered, pretty nearly in her direct course, except in the vicinity of the Owers, where it has already been stated, both flood and ebb, is known to set strong towards these dangers, which looking at their position in the chart, may readily be conceived would be the case, especially with south and west gales.

A further exception is between Durlstone Head and the Needles, when in certain states of the tide and wind there is a strong indraught. The material question, as regards the tides for channel navigation, remains to this day, in an unaccountably unsettled state,—that is to say, in respect to the times the streams run to the east and west, after its high and low water, by the ground at different distances from the land. No books or charts give any intelligible information on this essential point,—and practical men, and even pilots, give the most contradictory opinions on the subject,—the time of the stream running to the east, after high water, increases so considerably as you proceed up Channel, and this again is so seriously prolonged by the west gales, that it requires the utmost consideration in thick weather, the neglect of which, has no doubt brought many a ship upon the Goodwin, when it was thought she was far from it.

All reference to soundings is also omitted for the reason given already in these suggestions; namely, the difficulty of getting them, when going fast, and rapidity being the very essence of steam navigation, which may be carried on by such direct courses, from one light to another, that no soundings are necessary, in weather that the lights can be seen. However, when this cannot be well made out, the usual precautions must of course be taken; and need not be repeated here, only one remark appearing necessary in regard to soundings, and which is not made sufficiently prominent in books of directions, namely the *holes* about the Isle of Wight; and which may lead to fatal error. Having passed the Owers, and approaching St. Catharine point, twenty-two fathoms may be considered a safe cast, and constant attention to the lead, giving about that depth, proves you are going right, but should the *frequency* of soundings be neglected, you may get twenty-

five to thirty fathoms, in situations off the Isle of Wight, which would lead to the supposition of being well out, instead of perhaps being actually in very close neighbourhood of the shore, and this may occur in approaching the island both ways.

The foregoing suggestions as to courses for navigating a steamer down Channel, reversed; *will not serve*, for going up. In giving courses for sailing vessels, it is very well to say, that a Channel course down is W.b.N., and up its opposite E.b.S.; but steamers must be differently navigated, and in giving the courses I have done, they are meant as *safe courses*. This is generally from near off one point, to a moderate offing from the next, such as can safely be ordered to be steered, on a dark thick night, it is evident, that *reversing* this order, would take a ship from one point, on shore upon the next, the courses therefore for a steamer coming up, should be

From Falmouth to off the Start, E.S.E. $\frac{1}{2}$ S., or E.S.E. in fine weather	53 miles.
Start true N. to Portland the same, E.b.S.	46 "
Portland Lights true N. to Beachy Head, E.b.S. $\frac{1}{2}$ S.	105 "
Beachy Head Light, nearly close off it, E.S.E., or at $1\frac{1}{2}$ mile offing E.b.S. $\frac{1}{2}$ S. for about 7 miles, then E. about 22 to Dungeness	29 "
Dungeness to South Foreland, E.N.E.	21 "
	254

The estimated distances given by pilots from the South Foreland to the river, is as follows:—

South to North Foreland	15
Off North Foreland to east buoy of Margate Sands	5
East buoy of Margate Sands to the Nore	28
Nore to Blackwall	37 — 85 "
	Total 339

North Foreland from east buoy of Margate Sand	3 $\frac{1}{2}$ miles.
East buoy of Margate Sand to White buoy off Pan Sand	9 "
Pan Sand Beacon to White's buoy	0 $\frac{1}{2}$ "

Coming from Portsmouth to the eastward from Nab light, in flood tide steer S.E.b.S., in ebb S.E.—Owers light to be brought east by south before course is altered.

MERCATOR.

FRENCH STEAMERS IN THE MEDITERRANEAN.—*A voyage from Marseilles to Alexandria.*

WHILE out of sight of land I have occupied myself in looking at the engines and machinery of the French steamers, and getting some little information about them. All the engines I have seen have been

made in England; and on the Rhone the engineers are mostly, if not all, Englishmen; but in the Government steamers they are obliged by regulation to be Frenchmen. The greater part of the coal used is also English, which is much superior to the French, but by Government order the latter is obliged to be used in the proportion of about one-fourth, certainly a most ridiculous piece of policy, while the latter can be had so cheap. The Mediterranean steamers are provided with about 160-horse, generally two 80-horse engines, which is hardly sufficient power, and consume about 14 or 15 tons of coal per day. That at least was the quantity which the engineer of the "Tancrede" told me, but as I know that English steam vessels having two 80-horse engines commonly consume considerably more, I think he must have underrated the amount.

The French Government steamers are all built much on the same plan; they are about 170 feet long, 25 feet in the beam, and may perhaps measure 600 to 700 tons burden. They carry two heavy guns (about 30 pounders) on the deck, and several small swivels at the head and stern, the crew is not less than 30 to 40 men. The passengers are divided into three classes; the accommodation provided for the first class is excellent, the large cabin or saloon being fitted up with great elegance, and the berths though rather confined, are as comfortable as could be expected. The fare is also very good, and pretty reasonable, 6 francs per diem being charged for a plentiful "dejeuner a la fourchette," and an excellent dinner consisting of about half a dozen courses, and with which any one, not prepossessed against French cookery, will be very well contented. The hour of breakfast is half past nine, that of dinner half past four or five; if tea is required, or anything taken between meals, it must be paid for as an extra.

I took up the book of regulations and during a leisure half an hour glanced through it, the number and precision was most amusing—will it be credited that in the French Government steamers, there are no less than fifty-eight articles considered necessary for the due regulation of affairs? This, however, is merely a characteristic national absurdity, and shows how fond foreigners are of reducing to rule, that which the good sense of the English occasions a due observance of without any such formality. In travelling by the 'Schnellpost,' or Government mail in Germany, the same frivolity presented itself, and I recollect being somewhat surprised at having a paper placed in my hands containing the regulations of the vehicle, eighteen in number. In all these regulations there is little or nothing objectionable, or in fact more than would be obtained in England, but it is there all an understood thing, a matter of tacit acquiescence, and a person would be considered out of his senses who should set down to reduce such forms to writing,

and to stringent rules, or place them before the public in a printed form.

At sunrise, on the morning of the 30th, the Greek coast presented itself to our eyes, and strongly riveted my interest, no less from its classical associations than from its bold and mountainous configuration. The first point we saw was Cape Matapan, near which the truly "untoward" battle of Navarino was fought. This bold headland forms, I believe, the most southern point of the continent of Europe. It projects boldly into the sea, and is backed by high mountains, which mingled with the clouds, and presented when I viewed them that beautiful mist and colouring which Turner in his best pictures so happily portrays. As we kept pretty close in shore, I could see a number of villages scattered here and there, the white houses glittering in the morning sun, and dotting the dark sides of the mountains. The inhabitants of this part of Greece are however, I understand little better than brigands; in fact, a wild and lawless race by no means scrupulous about the means by which they obtain a livelihood, and over whom the feeble government of King Otho exercises a very inefficient control.

After passing Cape Matapan, the coast recedes inland for many miles, and the next prominent point is Cape Malio, close under which we passed. This is indeed a magnificent headland, rising precipitously I should think to a height of at least 1,500 feet above the sea. We passed close under the promontory, and saw two buildings close to the shore, a chapel and a hermitage; a large town was also visible, but at some distance to the north-east. The rocks themselves were of a reddish colour, and probably consist of granite or porphyry, which has burst through the strata seen around the coast, forming the bold and lofty precipices which constitute its principal characteristic.

Beyond Cape Matapan and Malio, the Greek shores are visible for a considerable distance, rising into high mountains of graceful and varied outline, but a new scene of interest presents itself as the coast disappears, the Grecian Archipelago at the same time rising into view. These islands are extremely beautiful; they stud the seas in great numbers, and rise boldly from the deep in every possible variety of size, of height, and of configuration. One might indeed fancy that the earth and ocean had here of old struggled for mastery, and that they had finally divided the region between them, leaving it almost doubtful which of the two was victor.—Towards sunset, (which was a glorious one,) we had still the Greek coast in sight, but Milos, Anti-Milos, and Hydra, were standing out of the ocean close before us, their bold masses gilded by the last beams of day, and presenting the richest hues of colour the imagination can conceive.—The scene was a beautiful though a momentary one, the deep blue of the Mediterranean was around us, the moun-



tains of Greece in the distance, the islands of the Archipelago in the foreground, the deep blue sky fringed with golden clouds was over us, and the sun just above the waters was giving a parting smile as it were to the lovely scene, which he illumined but for a minute, for as he rapidly sunk below the horizon, it vanished like a fairy dream.

After sunset the wind suddenly got up, and we were rocked about a good deal for the night, but at seven the next morning anchored in the harbour of Syra. The climate of the Mediterranean had hitherto been that of our English May, the seas almost unruffled, the sun brilliant and warm, justifying indeed the eulogium of Byron,—“Fair clime where every season smiles.” We were now, however, (on the last day of the year,) to see the reverse of the picture, for the weather became wet and cold, and the wind high,—altogether in fact as comfortless as could be.

I was not a little anxious to see the appearance of a Greek town, and that of Syra as we lay anchored within about a quarter of a mile of the shore pleased me much;—a fine amphitheatre of hills rises around the harbour, one side of which is covered to a considerable height by the buildings rising above each other, and terminating upon a conical hill, on the top of which is a church. It will readily be conceived, that a cluster of buildings thus situated, mostly two stories high, and flat roofed, and all perfectly white, standing out in relief against the side of the dark coloured hills, and with a fine bay and a group of shipping in front, presented a novel and interesting appearance; and I believe that all travellers will feel pleased with the view of Syra from the sea, however the town itself may on closer inspection disappoint them.

We had scarcely anchored, when a couple of boats came alongside, laden with the fruits of the country, oranges, figs, dates, &c., spread out in tempting display, and each rowed by a couple of Greeks, in their truly picturesque national costume, the red cap, the rough shaggy capote, the sash and short loose trowsers. The harbour of Syra is good, and contained perhaps twenty or twenty-five vessels, when we were lying there; while there were ten or a dozen merchant craft building in the town, thus showing strong indications of rising prosperity. On visiting the town, I was much struck with the picturesque costume of the inhabitants, and by seeing for the first time the ancient Greek characters in common use over the shops and houses. The fine physiognomy of the ancient Greek is discernible in the modern, and I particularly remarked the classical and correct outline of the features of two or three females, whom we happened to catch sight of at the windows of some of the better houses, for in the streets there were but few visible, and those evidently of the lowest class.

The town itself was straggling and irregular, the houses appeared to have fallen into their places from accident more than design, and presented rather a series of crooked narrow passages, than any thing deserving the name of streets. The fruit shops were the only ones which presented a pleasing appearance, and they certainly looked most enticing, from their rich display of the produce of the Mediterranean. The little intercourse we had with the inhabitants of Syra, was sufficient to show us that the modern Greek, like the modern Jew, has a most decided propensity for cheating, to which no doubt our difficulty of understanding them proved an additional stimulant.

The geology of Syra must be most interesting; the town itself is built upon a white crystalline limestone or marble, intermixed with which, I observed upon the shore vast masses of green coloured trappean rocks, a class which appeared abundant throughout the whole Archipelago.

On the 1st of January 1840, we took our departure from Syra, being transferred from the "*Scsostris*," to the "*Lycurgus*" steamer, for the remainder of the passage to Alexandria. The day was cold, and the mountains of Syra and all the adjacent islands were completely covered with snow; in fact it seemed that after having up to this time successfully eluded the pursuit of winter, it had at length overtaken us in earnest. From Syra our course was taken between Paros and Naxos, one of the most difficult passages in these seas, and a rather stormy voyage during the night, brought us the next morning between Candia and the small island called Casos, which here form the most southern islands of the Archipelago.

I could not but regret leaving the shores of Greece without visiting Athens, Corinth, and other celebrated localities of antiquity, yet still the limited view I had taken was not without its interest, and awakened a thousand classical and poetic associations in my mind. This was the land which, although not sunk low in the scale of nations, had three thousand years ago produced a Homer, a Plato, an Aristotle, a Socrates, and a Solon—whose poets, whose orators, whose historians, have formed the model of all succeeding generations, whose architects and sculptors have never yet been equalled, whose warriors and legislators are now familiar to us "as household words," whose very errors have been blindly followed almost to our own times. Truly, ancient Greece was a most wonderful country, and inhabited by a race of men who in a barbarous age held almost the rank of demigods among mankind, and even now there is scarcely a spot of the land which they inhabited, which is not hallowed as the scene of some glorious deed, or marked with some beautiful and unsurpassed specimen of ancient art.

How many rich associations are connected with every part of ancient

Greece, and the beautiful islands around its shores, which now lift their bold and graceful forms before me out of the deep blue bosom of the earliest seas which mankind learned how to navigate. Who can forget "the blind old man of Scio's rocky isle," or the still more sacred rock of Patmos in which that wonderful, that magnificent 'Revelation' was made to St. John, which has for ever sealed and concluded "the ways of God to man," as revealed by supernatural agency. "'Tis Greece, but living Greece no more:" the grand mountain forms which now meet my eye, the beautiful variety of sea and land, and all the features of nature are the same, but in the mighty revolutions of empire the actors in these great events, the superior minds which have given such lasting celebrity to this corner of Europe—they have all passed away, and are now no more. The godlike Greek of antiquity has degenerated into the "craven crouchen slave" of the haughty Turk, and now owns the sway of king Otho.

These were some of the reflections which passed through my mind during the three or four days that we were upon the Greek coast, and among the islands of the Greek Archipelago, scenes of the highest interest to every cultivated and reflecting mind.

On the following day no land was in sight, the wind was fair, and we were making favorable progress, with every prospect of reaching Alexandria next morning. The only amusement I could find therefore, was in observing with closer attention than previously, some of the steerage passengers, who formed rather a motley group, consisting of Turks, Greeks, and English. The most prominent of these was a huge Turk, with an immense black beard, and a large patch of dark leather occupying the portion of his visage, which was I presume heretofore ornamented by a nose. This disfigurement added to naturally unprepossessing features, rendered this man one of the most villainous specimens of humanity I ever set eyes upon: he was, nevertheless, doubtless, a good musselman, since he rejoiced in a green turban,—a token that he had made a pious pilgrimage to Mecca, which constitutes one of the principal observances of the followers of the prophet. There were also three Englishmen on board, who were going out to Bombay, I believe to take charge of the machinery of the Company's new steam-vessels, now on their passage, the "Cleopatra," "Sesostris," and "British Queen," they all seemed respectable and intelligent men of their class, but too confirmed in English prejudices to reconcile themselves very readily to foreign habits. They complained much of having but two meals a day allowed on board the steamer, declaring that the four they had been used to in England, were indispensable to the existence of labouring men like themselves. It seems to me that it would be much better to send out such persons in our vessels round the Cape, where they

would meet with their accustomed fare, and be able to associate more with their countrymen during the voyage, thus avoiding that premature feeling of dislike to their new mode of life, which I could see very plainly was already springing up among them.

A MORE recent traveller speaks thus of the French steamers:—

We have just made another tedious step in our journey to the Levant, having taken three days and four hours to come hither, with a fair wind from Malta, in the French steamer *Eurotas*, although they have got one of Maudslays and Field's engines to aid them. The further we go in these boats the worse we find them. The English passengers ventured to sleep on shore at Malta, where they were to change vessels for Syra, and found on their return that their luggage had not been quite as secure as they had hoped and trusted it would be under the protection of the royal flag of France. One gentleman found his locks forced, and his keys useless; another had his watch stolen; others do not yet know their losses, but patiently wait till their luggage is dragged to light in the ensuing change of steamers hence to Athens, Smyrna, or Alexandria. Passengers to the latter port have been taken about 130 miles out of their way in coming to this island, and must be content to make a similar detour in getting back into the Levant, to pursue their course to Egypt. We thought ourselves uncomfortable enough in the *Minos*, during the six days' passage from Marseilles to Malta, cheated by the captain of our sights on shore at Pisa and Pompeii; fleabitten on board, and given execrable tea without milk, although plenty could be had at every port we turned into; but we have lived to "go farther and fare worse" since our change of packets at Malta. The water we are compelled to drink on board has grown stale, tepid, and discoloured, from mere laziness to take in a fresh supply of the beautiful spring water at Malta, which is brought with such care by the aqueduct from *Emtaklyp*, a distance of sixteen miles, to the port. None of our beds have been made up since we turned in at Malta! The filthy, idle, insolent waiters attend at table in their bare feet, and seem to think that their only duty. Mr. — was ill all day, but they would not go nigh him, and an English servant of — was at last obliged to officiate. The odour of the berths is intolerable. Mine had evidently not been washed out since its last unhappy occupation in quarantine, and I endeavoured in vain to obtain the performance of that good office. The decks are more fortunate, being in sight. They and the passengers are flooded each morning till 9 or 10 o'clock, so as to render it impossible to walk, through the continuous deluge. Meantime we are left below to be bitten by the bugs, (which we did not see or feel in the *Minos*,) overlooked

by the lieutenant of the washing watch, who keeps a good look-out through the skylight, that none of the party attempt to shave out of the miserably dark and close berths, in which they have been shut up all night, "two in each cell." Seeing that there is only one table in the cabin, for breakfast, dinner, and all, and that there is not a table-cloth although we are under a pendant, the result is, that those who cannot shave in the dark, wear their beards, lest they should cut off their noses in the attempt. After dinner we are favoured by hearing the officers chatting among themselves, abusing the English. I am not at all surprised at the strength of the representations which Dr. Bowring found it necessary to make to the French Minister of Marine, after he had travelled in these packets, and the consequent dismissal of the captains then in command. They say they have reformed all the evils existing in his time, and that the present is a "perfect system." If so, there is only one remedy—to sweep it away altogether, and supersede it by English arrangements; for it is impossible that our countrymen and women can ever rest contented under the inflictions and annoyances they suffer at the hands of foreigners, who appear to think that they do them too great honour, after all, in tolerating them and their baggage on board a King's ship.

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A CRUIZE IN THE LEVANT.—*From Alexandria to the Coast of Syria.*

[Extract from the remarks of H.M.S. Alfred, Capt. R. Maunsell.—W. H. Hall, Master.]

We left Alexandria on the 24th of June, 1832, and steered during the night N.E.b.E. with a moderate breeze from the northward. At daylight having run thirty miles from abreast of Nelson's Island, and no land in sight, hauled in for it to the east, and sounded in twenty-four to twenty-two fathoms. After running seven miles on the latter course, we saw land (sand hills) on the lee bow, distant four or five leagues. It was then noon, and we were in latitude  $31^{\circ} 44'$  N., and longitude by chronometer  $30^{\circ} 30'$  east. From noon we steered E.S.E. fourteen miles, till 5 .m., and gradually shoaled our water from twenty-two to thirteen fathoms, at which time we were distant from the shore about five miles. A large building like a castle, and a Minaret to the eastward of it, bore S.S.W.  $\frac{1}{2}$  W. seven or eight miles, and over the low land we could see boats' masts, which must have been at anchor in the river Nile.

The land to the westward of the large building and Minaret, as far as could be seen, was very low, with a great number of palm trees; and the land to the westward very hilly and sandy. We then steered to the eastward with a light breeze from the northward, and had regular soundings from thirteen to eighteen fathoms for twenty-five miles. At

midnight taken aback with the land wind, (south-east,) hauled out north-east; and soon deepened our water to twenty-two fathoms, which soundings continued regularly for nine miles. After running twenty-one miles farther E.N.E. we tried for soundings, but no bottom with ninety fathoms of line. When the water deepened so suddenly, we must have been, by our reckoning, due south of Damietta, and on the meridian of the eastern mouth of the Nile, and about thirty miles off it.

Towards noon on the 25th the south-east or land wind died away, and the sea breeze set in N.N.W.; tried for soundings again, no bottom with ninety fathoms of line. Latitude observed  $31^{\circ} 58' N.$ , longitude by chronometer  $32^{\circ} 18' E.$ ; found we had been set to the eastward by the current fifteen miles, in twenty-four hours: the sea breeze became light after sunset, and at midnight shifted to south-east, which lasted till 8 A.M., and then returned to the old quarter N.N.W.

On the 26th at noon we were in latitude  $32^{\circ} 1' N.$ , current easterly, five miles in twenty-four hours. About 3h. 30m. P.M. we made the land about Jaffa, which is high, and appears to lower gradually towards the south. From our reckoning, and the distance we ran afterwards towards the shore, we must have been forty miles off, and did not raise the land near the sea coast till within seven leagues of it. The latter is moderately high, and rather hilly, some of which are sandy. On the side, and highest part of one, stands the town of Jaffa, which we saw before dark, bearing E.  $\frac{3}{4}$  N. about six and a half leagues; tried for soundings with 100 fathoms of line, no bottom, but when about four leagues off, got soundings in forty-two fathoms, fine dark sand and mud, stood in another league and shoaled gradually to twenty-five fathoms.

When we tacked off (then dark,) I think we must have been distant from the shore about three leagues; we stood off N.N.W. six miles, and then tried for soundings—no bottom with 100 fathoms, so it appears that abreast of Jaffa, soundings extend only five or six leagues from the shore.

At daylight on the 27th, Jaffa bore S.E.b.E. five or six leagues; tried for soundings again, but no bottom with 100 fathoms. At 8 it bore S.E.b.S. about the same distance; we then shaped a course along shore north-east for Mount Carmel, (N.N.E.  $\frac{1}{2}$  E. would have been better,) and after running eight miles we sounded in fifty fathoms.

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RAE WILSON in his journey to the Holy Land thus alludes to Joppa:—

The town of Joppa is frequently mentioned in the inspired volume, and its vicinity to Jerusalem has rendered it of importance to all, whether pilgrims, warriors, or others. At one time the port was de-

stroyed, and the city set on fire, the blaze of which was seen from that capital. It was long the theatre of great military enterprises;—and Richard Cœur de Lion here astonished the Saracens by his acts of valour, attacking them with the fury of a lion, and chasing them to Ramah, about twelve miles distant. In revenge for this repulse, in 1193 the Saracens stormed Joppa, and put 20,000 of the inhabitants to the sword. St. Louis rebuilt the walls at a vast expense, and erected towers in the year 1250. These were afterwards demolished by the Sultan, and the town itself reduced nearly to a mass of ruins. It revived, however, by degrees. In 1771, it suffered severely by a siege from Ali Bey; and from Mohamed Abuduhai in 1776; and was ultimately taken by the French on the 6th of March, 1799. Great improvements were made in the fortifications by Sir Sidney Smith. This place has always been a favourite resort of pilgrims, by whom it was anciently said that it “began the pardons of the Holy Land.” It is situated north-west of Jerusalem, and south of Cæsarea.

In surveying the harbour I was forcibly reminded that it was anciently the principal one in Judea. From hence the disobedient prophet embarked, in the view of escaping from the Lord, although he had been solemnly commissioned to preach to the great city of Ninevah. Recollecting also, as I formerly mentioned when off the coast of Egypt, that I observed great fishes fully capable, from their size, for the miracle performed in his case, I could not but feel compassion on the folly of those unhappy individuals, who hold in ridicule and contempt the authenticity of Revelation, and dare, even for a moment, to measure the powers of an Almighty being by their own ignorance.

According to tradition, it was here that Mary Magadalen, Martha, and their brother Lazarus, were put on board a shattered bark by the Jews, and committed to the mercy of the winds and waves. In this place also, the vision was perceived by St. Peter, of a vessel as it had been a great sheet full of all kinds of animals let down from heaven, which were forbidden to be called unclean. Moreover, it was also at the port of Joppa that fleets arrived, laden with materials, which were afterwards landed and conveyed to Jerusalem, to build that splendid temple which has immortalised the name of the royal founder.

This city is also celebrated as the place of Noah's having entered into the ark. Hither, Cornelius, the centurion of the Italian band, in obedience to the command of an angel, sent his servant to desire Peter to repair to Cæsarea, as a witness to his having eat and drank with Jesus after he had risen from the dead. On the destruction of the metropolis, many of the Jews retired here to defend themselves against the power of the Romans, but in vain, for the place was besieged, taken, and 12,000 Hebrews were sacrificed. In 1107, a British fleet with

7,000 men of different nations, arrived here to pay their vows to the Lord at the foot of the Holy Sepulchre at Jerusalem.

In 1248, in the reign of Henry the Third, the Earl of Salisbury, accompanied by the Bishop of Worcester, and other distinguished Englishmen, fought here most courageously. And it was here that the stores of the crusaders arrived, and all those machines and engines to be employed in the siege of that city.

Gath, one of the principal towns of the lordship of the Philistines, and memorable as the birth-place of the Goliath of gigantic stature, lies fourteen miles from Joppa. The population is estimated at upwards of 4,000 souls. All the gardens in the neighbourhood abound with both orange and lemon trees, which may be considered as the Graces of the vegetable world, uniting in themselves a multiplicity of charms. There are also various other fruit trees. They were loaded at the time I was there, and the oranges, in particular, were sold for a mere trifle. The locusts often occasion great destruction. On the invasion by the French, among other acts of violence, they laid waste almost every garden. The harbour is rocky and very dangerous, and has been in that state from the earliest period. The streets, which are crooked, and some of them steep, present the usual slovenly meanness which is to be found in every town throughout the Turkish empire, though externally the houses, which are of a white colour, have rather an imposing appearance. The architecture is similar to what I formerly had occasion to observe in the Egyptian cities. On discovering their flat roofs I was peculiarly struck with the circumstance of the inspired writer having made such places his oratory, when he resided at Joppa.

This place is about three miles from Ramah, where St. Peter preached and performed miracles. During the period of the crusades it was a most important spot, and may be considered as head quarters.

“Millions of tongues record thee, and anew  
Their children's lips shall echo them and say  
‘Here, where the sword united nations drew,  
Our countrymen were warring on that day.’”

The ashes of St. George, the tutelary saint of England repose in a tomb erected here.

WE ALSO meet with the following account of Jaffa in the *Pictorial Bible*, which will be interesting, as a condensed historical record of that place.

This place occurs under the name of Japho, in Josh. xix, 46, and which is still preserved in the present name of Jaffa or Yaffa. It is



situated about forty miles west of Jerusalem, on the shore of the Mediterranean. Its fame, as a sea-port, ascends to the remotest times in history, sacred and profane. In the former, we find it the principal port of Palestine, and the peculiar port of Jerusalem, being in fact, the only port of Judea. Hence we find that the materials obtained from Tyre, for the building of Solomon's Temple, were brought to this port, to be conveyed thence by land to Jerusalem. But although Joppa was long the port of Judea, as its distance afforded an easy communication with the capital, while its geographical position opened an extensive trade to all the coasts and islands of the Mediterranean, it was never a safe or commodious harbour; and those travellers are mistaken who attribute its present condition to the neglect of ages. Josephus repeatedly explains its natural unfitness for a good haven, in nearly the same terms which are employed by modern travellers in describing its present condition. (*Anti. x. 9, 6; De Bello Jud. 3rd, 9, 3.*) This similarity is noticed by Mr. Buckingham, who himself says, "The port is formed by a ledge of rocks, running north and south before the promontory, having a confined and narrow space between the rocks, and cargoes or narrow wharfs, running along before the magazines. When the wind blows strong from the northward, they are obliged to warp out, and seek shelter in the small bay to the north-east of the town, as the sea breaks in here with great violence, and there is not more than three fathoms of water in the deepest part of the harbour; so accurately do the local features of the place correspond with those given of it by Josephus." Clarke also describes the harbour as one of the worst in the Mediterranean; so that ships generally anchor about a mile from the town, to avoid the rocks and shoals of the place. From this account it will appear that Joppa appeared the *only* port, though a bad one, for the important district behind it, inland. The bad state of the ancient roads, or rather perhaps the absence of any roads, made a near harbour, however incommodious, of more immediate consequence than a good one at any greater distance.

The coast of Joppa is low, but the town itself is seated on a conical promontory, jutting out into the sea, and rising to the height of about 150 feet above its level; having a desert coast to the north and south, the Mediterranean on the west, and fertile plains and gardens behind it on the east.

The base of the hill is surrounded by a wall which begins and ends at the sea, and is fourteen or fifteen feet high, and two or three feet thick, with towers at certain distances, alternately round and square: being of stone, it was of sufficient strength to oblige the French army, under Buonaparte to break ground and erect batteries against it, before a breach could be made. At present it is in a bad condition, many parts

having given way from the violent rains of about seven years since; so that, if Ibrahim Pacha had been obliged to besiege it, he would have found the walls ready breached to his hands. On the land side the town is approached through extensive and richly productive gardens, by which it is surrounded; the light sandy soil being very favorable to the production of various kinds of fruit. These gardens are fenced with hedges of the prickly pear, and are abundantly stocked with orange lemon, pomegranate, and fig trees, and with water-melons. The oranges and lemons grow to a prodigious size; the pomegranates have also a great reputation; and the water-melons are celebrated over all the Levant for their delicious flavour. The town itself is thus noticed by Buckingham:—

“The town, seated on a promontory, and facing chiefly to the northward, looks like a heap of buildings, crowded as closely as possible into a given space: and, from the steepness of its site, these buildings appear in some places to stand one on the other. The prominent features of the architecture from without, were the flattened domes, by which most of the buildings were crowned, and the appearance of arched vaults. There are no light and elegant edifices, no towering minarets, no imposing fortifications, but all is mean and gloomy aspect . . . . The walls and fortifications have a weak and contemptible appearance, compared even with those of Accho (Acre), and as at that place the entrance is prepossessing, but its interior disappoints the expectations. After passing a gate crowned with three small cupolas, there is seen on the right a gaudy fountain faced with marble slabs, and decorated with painted devices, and Arabic sentences in characters of gold. Passing within, however, the town has all the appearances of a poor village, and every part of it that we saw was of corresponding meanness.” Many of the streets are connected by flights of steps. The Musselman part of the town is very much dilapidated, but the street by the sea wall is clean and regular.

Besides the citadel on the top of the hill there is a small fort, near the sea, on the west, another on the north, and a third near the eastern gate of entrance, mounting in all, from fifty to sixty pieces of cannon. The religious structures are three mosques, and the Latin, Greek, and Armenian convents. The population may be from 4,000 to 5,000, mostly Turks and Arabs; the Christians not being estimated at more than 500. Joppa still enjoys a traffic, which, considering the state of the country, may be called considerable, with the neighbouring coasts. In the way of manufacture it is chiefly noted for its soap, which is an article of export to Damascus and Cairo, and is used in all the baths of the principal cities. The delicious fruits of the vicinity are also largely exported, particularly the melons. There are no antiquities at Joppa, nor can any be expected in a town which has been so often sacked and

destroyed; five times by the Assyrians and Egyptians in their wars with the Jews; three times by the Romans; and twice by the Saracens in their wars of the Crusades.

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#### THE VERNON OF HALIFAX.

“ WELL, then, messmates, here’s a yarn for you, and it makes my blood run cold to think of what I am going to tell you, for I went through it all myself. Yes, through the whole business, and there be only one half the crew left to tell the number of their mess, as got into that scrape. But we were saved from them pirates by the blessing of Providence, and the behaviour of a Spaniard—a noble chap; and if he is not rewarded in this world, he will be in the next. But you shall hear, lads, how it was. I was in the merchant service then, and ’twill be long afore I trust myself in such a craft again.

“ Well, d’ye see, I belonged to the Vernon; she was a brig forward, and a fore and aft rig abaft, about ninety tons. James Cunningham was our skipper’s name, poor fellow; and as I likes to be particular, d’ye see, our crew was five besides the captain—there was George McCoy, John McLeod, Edward Norton, Jem Tyler (the cook) and myself. So on the the 25th of April we sailed from Falmouth, on the north side of Jamaica, for Halifax, (for we belonged to Halifax, you know). There was eighty-five puncheons of rum, and one box, and a tin canister of merchandize on board. We got on all well till the 1st of May, and then Cape Antonio of Cuba bore N.b.E. three leagues;—aye, there it was that all our misfortunes began. There was a light breeze of wind d’ye see, and we were making some way through the water, when all on a sudden we spies a small boat, within musket shot from the brig, and she must needs begin to fire at us. Now we never dreamed of these things, for we were on the peace establishment d’ye see, and there was not so much as a musket, or a bit of ammunition on board,—so what could we do, and the boat was nearing us as fast as she could pull,—so we took ourselves below, Captain and all, to get out of the way of the musket balls they were popping at us. Well lads, as soon as the boat came alongside, seven ruffian looking chaps jumped on board, all dressed in shirts and trowsers, two of them with hats on, and the rest with handkerchiefs tied round their heads. They each had two knives stuck in a girdle, three of them had muskets, and one fellow who was the Captain, had pistols in his belt ready for work.

“ Well lads, the first thing they does, was to call up the mate, and one of our crew, and soon after they told the Captain and the rest of us to come on deck:—then one of them said in broken English, ‘ Give us your papers,’ and the fellow said at the same time ‘ we had nothing to fear,

for there was a man-of-war lying just inshore, which had sent them to us.' We wished ourselves alongside the man-of-war, though we knew better than what he said. A man-of-war indeed to send such fellows as them for our papers! But what was to be done, we could not help ourselves and they knew it too. So the papers were given up to them, and the next thing they did was to make us hoist the colours and steer for the land, to get a pass from the man-of-war. Then we hauled in as they ordered us, and anchored in the little bay on the north side of Cape Antonio about sunset, and furled sails. By way of making sure of us, the pirates ordered us down below, and closed the hatch on us. There was a fisherman's canoe not far from us just before, so the pirates turned to and fired at her, which brought her on board, and two fishermen joined them. There was another fisherman's boat came alongside too, and one of her crew remained in the vessel, so that in the evening of that day, besides the seven pirates who had taken possession of the brig there were these three spare hands.

"Soon after this d'ye see, they called our people to come on deck again and gave us supper. The pirates with the fishermen passed the night abaft, whilst we remained for'ard you know as before, expecting every moment to be massacred. What a night that was for us. In the morning we were free and happy; masters of our own selves, and contented in our own barkey, and at night there we were in limbo, our craft in the hands of pirates, and we prisoners expecting every moment to be our last. Well, next morning at daylight we were ordered on deck to heave the anchor up, and loose sails, and we beat the brig up along the coast till sunset, when we came to anchor at the mouth of a river, but the name of it I don't know, and the next night was passed in the same way as before. Next morning the pirates told us they were going to land the cargo, and send the brig home in ballast. Precious bad news to us, but that was nothing to what was coming, so we turned to and began heaving the rum puncheons overboard to drift on shore, but the distance from the river you see, was too great to float the cargo to it quickly enough for the pirates, and we had to get the anchor up again, and go five or six miles nearer in shore, till at last the mangrove bushes brought us up hard and fast, and we set to work again discharging puncheons, lowering them down into the water, and staking them in a creek close by. This work took up the whole day, and another night was passed the same way as before; the unloading of the rum was completed in the afternoon of the next day, so that of the whole cargo, the only part remaining then was the box and canister of merchandise, which the pirates opened and then closed again.

Another dreadful night was passed in suspense, for we didn't know what was to become of us. The next morning at daylight, the pirates

ordered us to get our boat out, and told us they wanted her to fetch ballast. They ordered our Captain, Jem Tyler, (the cook,) Norton, and myself to get in, which we all did, and five of the pirates got in with us, each of them armed with his long knife, and we shoved off, leaving John McLeod, and George McCoy on board the schooner. I'll tell you what it is shipmates, when I think on what was done then, I can hardly believe myself that I, Ben. Peach should be here to tell you of it. Well, you shall hear all about it.

"We shoved off from the craft to go and get ballast as they said, and after we had pulled about a musket shot from her, we were told to lay on our oars. No sooner said than done, and as sure as my name is Ben, if one of the bloody pirates in the stern sheets didn't strike at poor Jem Tyler, and stabbed him with his knife! This was the beginning of the bloody work, and as my turn with the rest was to come in due course, overboard I jumped, to swim for the shore if I could, for what could I do against their knives. So I looks round in the water to see if my shipmates had done the same, or if the boat was following me, and I sees poor Jem Tyler thrown overboard, and heard soon after the cries of the Captain, and Norton, which convinced me that the pirates were doing their murderous work on them.

"After swimming about half an hour I got on shore, which was all covered, you see, with those mangrove bushes which grow out of the water almost, but they were so thick that I hid myself entirely among them, and remained quiet for about two hours. Then I scrambled along as well as I could through the bushes till nearly midnight: at last I came to some water, and it seemed to be a sort of island that I had got on; so I swam over to what appeared to be the main land, and again got into the mangrove bushes. Then I walked on, and rested as well as I was able with my head on the branches of trees, and my body in a swamp.

"I went on this way for three days and nights, and never in the whole time tasted a drop of fresh water, because it was all salt d'ye see that I found, and I had nothing to eat till the last day, when I managed to knock down a pigeon, and the blood of that poor bird was a Godsend to keep me from starving to death. But I'll tell you what it is, lads, when matters have got such lengths with a man, and he is nigh starved, it comes to be a sort of choice what death he will have, for death is then staring a poor fellow in the face, he will have him one way or another; and the knives of them pirates were not so bad after all, as starving in the bush. But there might be some chance for a fellow on the coast again I thought, so as I didn't care much what came next, I made my way as well as I could, d'ye see, out of the bush, and got down to the beach, and that was some relief to me.

“ Well, I had not been there long before I saw a schooner, though she was too far off to hail, and they couldn't see me, how could they? But the sight of a sail was a comfort to me, and I thought I felt stronger; but I was very weak, and sore all over.—I watched the sun a setting, and lost sight of the schooner as night came on, and then I lay down on the beach till the morning.

“ When daylight came, there was the schooner, but she was too far away to make her see me any way. She was at anchor, which I was glad of, for I thought there might be some place near where she might be trading to, so I took courage and walked as well as I could along the coast.

“ I had been walking a good bit when all on a sudden I see a boat coming ashore from the schooner, and I pulled foot for her as well as I could, but bless your heart I was worn down so that I didn't seem to mind if they were the pirates again if I could only get to them, for as I said before, I was driven desperate, famishing from hunger and thirst, and sore all over, and I didn't care then if I died by the knife. So I got to the boat and walked forward, and gave myself up to the commander of her as soon as he put his foot ashore. Well, lads, I'm blessed if he did not look at me as if he had never seen such a sight before. To be sure I was all but dead, besides I was almost naked, for the brushes had torn half my clothes off, and then torn my flesh too, and the mosquitos, and the sun, and the swamps had all done their worst, and I suppose that I looked more like a walking skeleton escaped from the doctor's, than a living human being, and it didn't matter much to me then were I went. But bless your heart, the Spaniard soon made up his mind the right way about me, He couldn't speak English no more than I could speak Spanish; but after all, people can speak with their eyes to each other, if they can't do so with their tongues, and he soon made me understand he was no pirate howsoever, for he took me to a fisherman's hut just by us, and gave me something to drink, and then d'ye see, he put me on board the schooner that I had been looking at all that day, and the day before, and they all treated me like good fellows as they were, for they saved my life if ever a poor fellow's life was saved yet, and I rested myself, and somewhat recovered myself. So now we'll try back a bit, and I'll tell you what them poor fellows was a doing as we left on board the brig; but stop, I must tell you the Spaniard's name was Antonio, for he was captain of the schooner, I was got on board, and she was called the Toro.

“ When we shoved off that morning from the brig, with the five pirates, we left John McLeod, and George McCoy on board with the two other pirates and the two fishermen, and nothing particular happened for about half an hour. Then the boat returned with the five

pirates who went on board the brig. Well, McLeod and McCoy seeing nothing of their shipmates, but more than a bucket full of blood in the boat, were well certain of what had been going on, and thought in course, that their turn was come. Soon after the captain of the pirates took a large stone of about fifty pounds weight, and some line into the boat, and with his pistols and knife, as usual, went away along with two of the pirates, and were followed by another boat with one of them under sail for the purpose, as they thought, of sinking the bodies of their shipmates. In a quarter of an hour they returned, and the boat was quite clean, without any marks of blood about her. But, you see, them poor fellows half dead already, and thinking every moment of being murdered too, were kept close at work stripping the brig while all this was going on, and had no time allowed them to look about.

“ As soon as the boats got on board all the pirates set to, and began to tear the cabin to pieces, broke the captain’s chests and quadrant, tore up his charts, and broke every thing they found, except some crockery ware. They ransacked every place, and as they broke up the things they threw them into the hold. They then stove in the head of the puncheon of rum which had been kept, and scattered it all about the hold. Then they took a sail and filled it with tar, and launched that down the hold too, and loaded the boats with the other sails, rigging, blocks, and chains, and other valuable things, and then they set fire to the brig in the after hatch. After this they and the three fishermen got into the boats and ordered McLeod and McCoy to follow them and shoved off. As soon as they got to a little distance from her they lay on their oars to see her burning, laughing and glorying at the sight, while my two shipmates were miserable at seeing their poor craft burning, and expecting afore long to be murdered.

“ When the pirates had satisfied themselves that the brig was well burnt up, they got sail on their boat, and about noon got to a fisherman’s hut on the coast, and all the afternoon they were at work unloading the boat, and getting her hauled up. The pirates gave our poor fellows some food to keep them from starving, and when night came they walked about the beach, and sat down on a little jetty built out into the sea, or got into the boat to sleep, if they could. Next day they were set to work to make spars and sails, and the day after they went with the pirates to fetch water from a place about ten miles off. Well, the day after they were making a mast for the boat, and while they were caulking her the next day, they see a boat coming for the shore. The pirates see her too, and loaded their muskets ready, but when the boat got near enough for them to see who was in her, they seemed satisfied there was no danger in the crew coming on shore, so they allowed them to land. Well, d’ye see, this boat had gone from

the schooner that I was taken to, and Don Antonio, the captain was in her. He had laid his plan, d'ye see, and knowing what the pirates were at, he spoke with them about me who had swam away from them, and he and his men, and all the pirates breakfasted together in a friendly way. He gave them three muskets besides, and they gave him a bottle of pepper, spirits and some turtle; but seeing them understand each other so well, McCoy and McLeod thought Don Antonio and his men were pirates also. Howsomever, poor fellows, they altered their opinion when Don Antonio gave each of them a cigar, for while he was doing so, he looked at them in a way more of pity than if he intended to help to murder them in cold blood as their shipmates had been. 'A dying man you know will catch at a straw,' they say, and as he was going away in his boat they were glad he had seen them.

"Well, next morning early the pirates loaded their guns, stuck their big knives in their belts, and five of them took their boat to the schooner, leaving two with the fishermen, and McCoy and McLeod on shore. Among the pirates in the boat was the one that I had seen kill Jem Tyler, I knew him well as soon as I see him come on board. Don Antonio, you see, had invited them to come and breakfast with him, and they expected more plunder, d'ye see, for another schooner had run down the day before, and he had lashed her alongside the Toro, his own schooner, as a decoy; and they thought they'd have some more of their bloody work, besides getting me, but they made too sure of their game, as you shall see. So alongside they came, and first one came up the side. No sooner was he on board than he was seized and pinioned, and his mouth stopped; and all five of them were served in the same way, one after the other. Now, all this was done, d'ye see, without any noise or confusion, all as quiet as possible, so as soon as they were all five stowed away safe, Don Antonio set about completing his job. The pirates' boat was then manned with four hands armed, and Don Antonio; and some of his own crew besides myself got into her, but he took care that the spare hands should lay down in the boat, and only he and I, besides the men pulling, could be seen, so that it might seem to the pirates on shore, that their comrades who had gone off were returning with me as their prisoner. So we pulled straight ashore, and as soon as we touched the beach we all sprang out, and seized the two remaining pirates, and clapped them in the boat, and shoved off directly with them, and my two shipmates for the schooner; and there we had the pirates all quietly enough, prisoners side by side. Now all this was the manœuvre of Don Antonio, and right well he laid his plan, and acted upon it afterwards, for, d'ye see, he got possession of these seven pirates in the



quietest way in the world, them, and their knives, and pistols, and all.

“ Well, in the afternoon, as soon as his new cargo was well secured, we cast off the other schooner, she was called the Evaristo, you see, and then we got the anchor up, and made sail along the coast, running all night, and till late next morning, when we anchored off a small river. There the pirates were landed, and were sent on foot with me and my shipmates, about nine miles till the afternoon was well on, when we arrived at a place called Mantua. There the pirates were put in the stocks, and we all staid there for four days. Don Antonio came with us, and took good care to see his prisoners well secured, and me and my shipmates well lodged. So at the end of four days the Spanish lawyers took down on paper all we told them about it, and then we all set out on the way to the Havana. There the pirates were all tried by their countrymen, and shot as they richly deserved; and the pilot and six fishermen were sentenced to hard labour at sea, some for three years. Well, now lads, them Spaniards ashore were very kind to us, and treated us well as we went through their towns to the Havana; and as for Don Antonio, I hope every Englishman that meets him will never forget that his good conduct not only saved the lives of three of their countrymen; but that he is an honor to his own country, because he was the means of bringing to justice so many rascals of pirates.”

The foregoing narrative of Benjamin Peach, our readers may take for fact, happening as nearly as possible as related by him. Those of our readers who have visited the Havana, since the month of June, are no doubt well aware that the execution of the pirates took place; and that the rum was partly recovered and shipped for Halifax, and the rest of the stores belonging to the unfortunate Vernon, were sold at that place. Don Antonio, whose noble behaviour is most praiseworthy, has been rewarded by the British Government with the sum of three hundred pounds, but, doubtless, he has made enemies of that portion of the people of Cuba, who are fain to turn pirates as the fishermen did in the present instance, and whose vengeance he may some day fall under. We trust that our own naval officers will bear this in mind, having no doubt that if they meet with him they will not fail to honor his noble spirit. There is also a feature of the narrative which affords matter for congratulation. It will be seen that this attempt to renew the scenes of 1822, has been crushed at once by the Spanish Government itself; the naval tribunal of that country having then, for the first time, pursued the case with vigour, and decided it with an impartiality becoming a Government anxious to give proof of their hostility

to such characters. The place chosen by the pirates was the most favorable to such schemes as theirs, being the high road from the West India Islands to the northward. The place to which the Vernon was taken being also inside the Colorados reef was well adapted by its distance from the usual track of vessels outside the reef, for the execution of their diabolical practices. It is well known that the Isle of Pines is the favorite resort of pirates, but the bight of the coast east of Cape Antonio, and inside the Colorados seems to be no less favorable to the perpetration of their wicked deeds, and where they remain undiscovered unless they are brought to light by such Providential means as led the Captain of the *Toro*, in this instance, to the rescue of their victims. The reason why these pirates were sentenced to so honourable a death as being shot, is their having been, as is understood, deserters from the Spanish marine service.—Ed.

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VOYAGE OF H.M.S. BEAGLE, ON A SURVEY OF THE COAST OF AUSTRALIA.—*By a Naval Officer. (Continued from page 788.)*

I HAD almost forgotten to mention that no indication of either the Tryal Rocks, or Pennant Rock, was seen by us; and, I have no hesitation in saying, that the former never did exist in their assigned position, except in name.

We found the settlement much the same as when we left in January: the *Pelorus* was the only vessel that had touched there, consequently the supplies necessary to enable us to carry on the survey could not be obtained; and it was determined on going direct to Sydney. But as the crew required a little relaxation, and the vessel a slight refit, she was snugly moored in anticipation of the coming gales, which were to test the security of Owen's anchorage. This was looked to with no small interest on the part of the settlers; for the accustomed berth for shipping during the winter months was under Garden Island, at a distance of seven miles from the town of Freemantle, much to the inconvenience and detention of all parties, and if the spot selected by us proved a good one, it would, from its more speedy communication be of infinite advantage to the colony.

They were not kept long in suspense. From the time of our arrival until the 30th of May, the weather was tolerably fine, with moderate breezes varying round the compass; but on the evening of that day the clouds began to lower, and heavy rain fell; and it was quite evident that a gale was coming on.

Accordingly on the following morning it commenced at N.b.W., and soon freshened up to a hard gale with heavy squalls; by noon of the 1st of June, it had drawn gradually round to W.N.W. from which

point it blew hardest; and obliged us to let go the sheet anchor; the remains of the two that had been broken.

From this time its strength seemed expended, and it drew quickly round to the southward of west, and began to clear up, and by the morning it was sufficiently moderate from W.S.W., to enable us to communicate with the town.

Many and anxious were the enquiries as to how we had rode out the gale, and the pleasure was no less than the surprise, to find that not only did the vessel roll no more than a couple of streaks, but that the cutter moored astern, and the yawl a short distance off, had both remained in perfect safety.

The barometer fell during the gale to 29.4, but began to rise immediately the wind got to the southward of west.

The weather remained unsettled till the 11th, during which time we experienced another severe gale, which acted in a similar manner to that described; the barometer this time stood as low as 29.3.

From that date, to the time of our sailing on the 20th there was a continuation of fine and pleasant weather, fresh land winds during the night, and faint sea breezes in the afternoon, the barometer ranging at about 30.3. The pleasure of our visit this time was considerably heightened by partaking of the amusements of the kind and polite settlers; in return for which an "United Service ball" was given, much to the gratification of our friends.

On the 21st we bid adieu to Swan River, and with the wind at south-east passed through the channel formed by the Seal Rock, and the flat running off the Fish Rocks:—this was the passage recommended by the Harbour-Master, in preference to the one we had entered at; but for some time we were in two and a half fathoms, which, had it not been perfectly smooth would have been scarcely sufficient; and besides which, there is no leading mark.

Passing round the north side of Rottenest Island, in order to complete its examination, we took a moderate breeze from the south-west in the afternoon, and stood on a wind on the port tack. The following morning, at the time of the moon changing it fell calm, and a breeze soon springing up from the north-east, our course was shaped to S.W.b.S.

The wind increased to a brisk gale with rain, and gradually drew round to the northward, till we passed Cape Leuwen at midnight on the 23rd, when it shifted suddenly to W.b.S. with thick rainy weather, and soon caused a high cross sea, reminding us forcibly that we were near the parallel, where the annoyance was so great on the passage from the Cape to Swan River.

In the afternoon of the following day it cleared up, and we made sail with a topmast-studding sail. From this time to the 27th, the wind con-

tinued between north and north-west, alternately fresh with passing showers of rain,—and light with fine clear weather. On the noon of that day it changed to south-west, and blew a fresh treble reefed topsail breeze, accompanied with rain until sunset, when it cleared up, and the night was moderate with fine clear weather.

Towards noon it freshened up again, and by midnight had become a strong gale. At 3 A.M. a sea struck the ship, and carried away the starboard waist hammock netting, straightened the iron crank on which the boom boats rested, besides other minor damages. At 4 we hove to, and so high a sea was running, that it was not deemed prudent to put her before it again until noon, when it moderated, and sail was made to treble reefed topsails;—by the morning it was nearly calm.

We had now a good opportunity of proving the accuracy of the Australian Directory, in its description of the indication of a south-east wind, for on the 30th, the barometer stood at 30.8, with a light air from the southward, and drizzling rain which drew to the south-east, accompanied with passing squalls.

By the morning of the 4th, it had got round by the east to N.b.W. a fresh double reefed topsail breeze, with cloudy weather, which increased during the night to a brisk gale. At daylight of the 6th Cape Otway was seen bearing N.b.E., and it was our intention to pass through Bass Strait; but it blew too hard to admit of weathering King Island, we therefore at 10 A.M. bore up for Hobart Town.

By 8 P.M. we had run about half way along Van Diemens Land, when the wind veered round to the westward, and placed us in a critical situation, with a heavy gale blowing, and high sea running on the land.

The night was dismal in the extreme, a succession of violent and heavy squalls with incessant rain throughout; and at times the main and main-topsail-yards buckled to that degree, that fears were entertained of the next squall carrying them away. It blew with this violence until late the next day, and it was to our great relief, that we could set the close reefed fore-topsail before night came on to draw her along the land.

During the night the wind came round to the north-west, bringing with it clear weather; and the next morning by seven the south-west Cape was in sight, and at ten we passed it at the distance of two leagues.

This is a remarkable headland, about one thousand feet high, resembling a hay-cock or sugar-loaf, and when seen from the north-west appears to be detached from the surrounding land, which is considerably higher, and has a rugged sterile appearance, and much cut up by the heavy sea that is continually rolling in upon it.

With a fresh westerly wind, by noon we passed about a mile to the northward of a high lump of rock called the Mewstone, and at sunset had the pleasure of viewing the advanced state of the Colony, in the splendid lighthouse established on the south-west end of Bruney Island. Its admirable situation not only for guiding vessels past the shoals, at the entrance of D'Entrecasteux Channel, but as a mark for clearing (of a dark night,) the rocks extending off Tartomans Head, shews the judgment displayed in erecting it in its present position.

As we opened Storm Bay it blew fresh from north-west with frequent squalls, so that it was not till the next morning that we passed the Iron Pot lighthouse, at the entrance of the river Derwent: with a double reefed topsail breeze we continued working up towards the town, and although the frequent tacking was tedious, yet we were amply repaid by the scenery that on all sides met our view, which, after the barren country we had for many months been accustomed to, had charms which those only who have been similarly situated can fully appreciate. The luxuriant freshness of the foliage interspersed with neat cottages, and in the distance the snow-capped mountains, had the effect of exhilarating our spirits more than I can possibly describe; and all felt, that the north-east wind which had prevented us entering Bass Strait, had nevertheless been propitious in sending us to so delightful a spot.

During our stay at Hobart Town the time was spent in the most agreeable manner. We were much indebted to the polite attention of Sir John and Lady Franklin; likewise the officers of the 21st regiment, and many of the principal inhabitants of the place, at whose houses we found a hearty welcome, with every wish to make our short sojourn as pleasant as circumstances would permit.

The weather unfortunately was too bad to allow of our visiting the country; heavy snow squalls prevailed the whole time, so that we were deprived of many pleasant excursions: some of our party joined a Kangaroo hunt, at which they were much amused.

We sailed from hence after rating the chronometers, and with a fresh north-west wind cleared Cape Pillar by midnight, soon after rounding this headland the wind shifted in a squall to south-west, and blew strong until within a day's sail of Sydney, when it died away, and we were tantalized with a baffling wind from the northward for twenty-four hours; and with it came a current that set us forty miles to the south-east in that time, this ultimately proved beneficial, as it enabled us when the breeze freshened, to lay the course for Sydney, where we arrived on the 25th.

I cannot without injustice pass over the merit of the excellent light established at the entrance to Port Jackson, although this splendid harbour is so well known that there is no need of my mentioning it

here, yet the light struck me so forcibly that I shall endeavour to describe it briefly:—It is situated near the edge of the highest cliff in the South Head, which is about 200 feet in height, is built of sandstone, quite white, and 100 feet from the ground, making in all 300 feet above the level of the sea. The morning we anchored, the ship at 4h. 30m. A.M., was twelve leagues off,—and at fifty feet above the deck I saw it very distinctly; the weather was certainly fine, and very clear; but still it must shew the excellent quality of, and good condition this lighthouse is kept in.

It was highly gratifying on anchoring in the cove, to be greeted by our old friend and messmate Lieut. Stewart, of the *Alligator*, which, with the *Britomart*, we found had lately arrived from England, for the purpose of forming a settlement at Port Essington, on the North Coast, and as he brought letters, &c. from our friends at home, it will readily be believed he was a most welcome visitor.

Captain Wickham having signified his intention of remaining here until the work was completed (of the north-west coast,) ready for sending to the Admiralty, and also of clearing the ship out, Mr. Stokes and myself took lodgings on shore, and proceeded with the former, whilst the duty of the ship was going on, under the superintendence of the proper officers.

I pass over the happy and agreeable time spent in Sydney, through the hospitality and kindness of some disinterested persons, whose friendship will long be remembered by myself, and others of the *Beagle's* officers, and come at once to the 11th of November, when being in readiness for our next trip, we bid adieu to Sydney for a season, and made our way toward Bass Strait.

Until noon of the following day, the wind was light and baffling from east to south-west,—it then settled in the eastern quarter, and blew fresh with thick rainy weather till we entered the Strait, between Kent Group and Flinders Island; about six P.M. on the 5th day, it then became lighter and cleared up, but continued in the same direction until our arrival at Port Philip on the 18th.

From the directions accompanying the charts now extant, it would appear that the currents run strong in the vicinity of Cape Howe, and at the entrance of the Strait we had no observation for three days, but by allowing a set of half, to three quarters of a mile an hour due south, our position on making the land was within three miles.

For a ship passing through the Strait to the westward, the soundings are of great benefit, the water decreasing gradually over a fine sandy bottom in the fair way, from about half way between Cape Howe and the entrance.

From the Kent Group which are high, and on the south side terminate

in steep bluffs, the depth increases, and is not so regular until Rondono Island is passed; then again, as the northern shore is approached, soundings are useful in thick weather, but after passing the entrance to Western Port, it would be as well not to get into less than twenty fathoms, for the land then becomes higher as far as Cape Schanck, and is quite steep to.

From this Cape, which is the termination of a high range sloping gradually to the south (from its summit, called Arthur's Seat), and has a sunken rock about a cable off its extreme, the land falls abruptly; and as far as Point Nepean consists of small hillocks of good soil covered with verdure, (chiefly a stunted gum tree,) with a rocky outline much cut up, by the heavy sea that beats on it during the south-west gales.

Point Nepean when seen from the south-east, appears like a small island, being joined to the main by a low neck of land, which on nearer approach is readily perceived; and from its having this appearance is a good guide for the entrance to Port Philip, which lies between it and the Lower Point to the westward, called Point Londsdale. A reef of rocks extends off each of these points narrowing the channel very considerably, and with the strength of tide, (sometimes six knots) running against a fresh southerly wind, causes a heavy and dangerous ripple, that shipping should not attempt to pass through. I would recommend waiting (if blowing fresh,) until the tide had made in, when with common caution no danger need be apprehended. Our first entrance was under favorable circumstances, and we felt half inclined to discredit the account that had been given us, but we always after found that it had been exaggerated.

The best mark for going in, is to bring a dark patch of bushes, dividing as it were the beach on Swan Point land, just open of Shortland Bluff, (which cannot be mistaken,) bearing N.E.b.N. Run with these marks on till a flat topped hill about seven miles to the westward is just clear of Point Londsdale, when you may haul up along the south shore, where the anchorage is good: or steer up towards the banks off Point Swan, if bound for Melbourne. No doubt ere long a beacon will be erected on that point, for the patch of bushes cannot always be distinguished at first sight, except by a practised eye.

The object of our visit here being to establish a starting point for the survey, an anchorage between Observatory Point (of Flinders), and Point King was taken up, about half a mile off shore, and the necessary observations proceeded with. A plan of the entrance was also commenced.

The soil was found to be exceedingly good, both on Point Londsdale as well as the Nepean side: the former had the appearance of a park,

kept in good condition. No water was found this time, but on a subsequent visit a small well of tolerable water was discovered at the commencement of the cliffs westward of Observatory Point, conveniently situated within a few yards of the beach. Abundance of Kangaroos were seen, but as we had no dogs, and they had been so much harrassed by the natives, a sight of them was all that fell to our share. The wind prevailed from the westward while at this anchorage, and for the last three days blew a stiff gale with heavy squalls.

(To be continued.)

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EXCURSION TO THE LAKE OF NICARAGUA\* UP THE RIVER SAN JUAN.—By Mr. George Lawrance, Assistant-Surveyor of H.M.S. Thunder, Com. E. Barnett, in March, 1840.

On the 8th of March, at 4 P.M., we left H.M.S. Thunder, at St. Johns, in a canoe, manned with five stout Indians of the Rama tribe, who are considered the best boatmen on this coast, and an intelligent Columbian Padrone, or pilot.

After touching at the town we proceeded on our voyage up the river San Juan, having been supplied with provision for seven days.

\* Mr. Bailey having ascertained the possibility of constructing a railroad from the head of the Lake of Nicaragua, across the isthmus to the Pacific, the Government voted him 2,000 dollars, to undertake the examination of the river St. John, with a view to ascertain the practicability of constructing a canal, which would avoid the rapids; to obtain the difference of level between the Lake and the Atlantic, and how far the river could be made available to steam navigation. To assist him, were appointed his Son, a Captain of Engineers, and from twenty to thirty native pioneers; however, so arduous was the undertaking, that it appears the only thing done was, the survey of the river, on an extensive scale; at the conclusion of which, the party was nearly all disabled by sickness, their funds expended, and consequently their expedition at an end, and from the wretched state of affairs, there is no prospect of Mr. Bailey receiving any further encouragement from his Government.

With respect to the mode of navigating this river, Mr. Higgins, the American traveller, and several others, who have frequently made the voyage of it and the Lake, say, that nothing can be more correct than the description given by Roberts, in *Constable's Miscellany*. As to the possibility of cutting a canal, although several report favorably, it is merely because they are interested in the success of such an undertaking, their opinions being given from what they have seen in passing to and fro, as fast as the rapids would permit, and the impenetrable woods which line the banks would allow them to see.

As to navigating it by steam-vessels at the present moment, it is out of the question.

From some cause or other, the force of the stream appears to have taken the direction of the Colorados branch, where it sweeps everything before it. The consequence is that the shallows are growing in the other, and so rapidly that the Bongoes, (trading canoes,) are now frequently left aground for several days, and it was with some difficulty that we could find a passage over the bar for our yawl to water.



For the first few miles up the river we found the stream apparently flowing at the rate of one knot per hour: the banks low, swampy, and difficult of access, thickly clad with a high coarse grass, called by the natives Gamalooti,\* and lined with trees. At sunset we were about a mile above the lower mouth of the Juanillo, where the width varies from a half to three-fourths of a cable. At 7h. 30m. P.M. we landed on a dry sand-spit to give the Indians their supper, and then resumed our paddles, keeping up a rate of two miles and a half per hour through the water, but probably not more than one and a half over the ground. The river was here exceedingly shallow, as our canoe, which only drew a foot and a half, and steered by the Padrone, who appeared to be well acquainted with the navigation, grounded several times on the soft muddy bottom.

Several small islands composed of alluvium were passed, overgrown with grass and trees, the former ten or twelve feet in height, the banks about eight feet, consisting of the same material.

The moon favouring us, we continued our course till 10h. 30m. P.M., when we hauled the canoe up for the night on a dry sand-spit, near

There is a rapid deposit taking place at the entrance point of the harbour, which clearly shews that if the whole force of the stream is not soon turned in this direction, not only will the river become unnavigable, but the harbour filled in.

The damming up of the Colorados could no doubt be effected, although at a considerable cost and immense labour; yet it should be borne in mind that the country is subject to severe earthquakes. On the 22nd of May, two shocks were felt at the village, the last of which so alarmed the inhabitants, that they were on the point of quitting their huts; we were at sea, about thirty miles north of the harbour, and felt one of them distinctly.

From Mr. Higgins's account Mr. Bailey has also examined a part of the southern shore of the lake between Granada and Nicaragua; and if he could be furnished with a small decked boat of light draught, he would still carry on the work; the rude Bongo and Canoe employed by the natives being perfectly unadapted for such a service. This could be easily sent to him in frame, or indeed already constructed, either by the river, or across the narrow isthmus which separates the part of St. John in the Gulf of Papagayo from the Nicaragua, only a distance of fifteen miles on a cart road; so that it would appear access to the lake is more easily attainable from the Pacific than the Atlantic.

Mr. Bailey is said to have been employed by a company of American speculators: this, however, is not the fact; although the merchants concerned in the South Sea fishery are extremely anxious to effect a communication, but nothing will be undertaken by them unless they are convinced it can be accomplished by the way pointed out in Mr. Bailey's mission, which by affording the means of rapid transport of the cargoes and supplies, would enable the whalers to remain entirely in the Pacific. Of course the spur which would be also given to the commerce of central America is not lost sight of, but the anarchy, confusion, and distrust which now so ruinously degrades this disrupted republic, throws the prospect of such desirable results to an immeasurable distance.—*Com. E. Barnett.*

\* Spelt as pronounced.

the Islade Canon, where the banks of the river, though densely clad with grass, afford an indifferent footing. The river appeared to have subsided recently, by the sand which was still wet at some distance from the margin, this, the Padrone ascribed to the sudden fall of the Serapequi River, which had lately been swollen by the rains. The numerous low flat sand banks of the different points and islands, on which landing at present can easily be effected, are said to be completely overflowed in the rainy season.

*Monday 9th.*—At 5h. A.M. we launched our canoe, and commenced paddling against a stream of two knots in the centre of the river, the shallows obliging us frequently to alter our course, the width varying from a 100 to 200 yards. Off Vanilla Point, or (Juanillo,) I got the bearing of Juanillo Hill, which we subsequently ascertained by trigonometrical measurement to be 1,249 feet above the level of the sea. Here the grassy islets have a very imposing appearance. At 9h. 15m. we landed to breakfast on the island of Colorado, distant from Point Arenas at the mouth of the river nineteen miles. Below the Colorado branch, the bed of the river is most encumbered with islets and sandbanks, which in the rainy season are partially overflowed, but in dry weather are formidable obstacles to navigation, and would ultimately block up the river altogether, but for the occasional freshes which keep the channels clear.

The average height of the trees on the island of Colorado is about eighty feet; on which we saw a few monkeys and macaws. The banks of this part of the river are more defined, and apparently composed of rich alluvial matter.

The river Colorado at its junction with the San Juan, appeared wider, deeper, and freer from obstructions than the latter, the stream running at the same rate about two knots per hour.

Abreast of the Isla de Concepcion, the northern banks of the river are a little steeper than those of the south, being nearly fifteen feet in height, at the base of which, as well as in the centre of the river, we observed for the first time, in detached masses, boulders of trappean rock, shewing themselves above the surface of the water: they have evidently been washed down in the rainy season, when the stream is so violent that the native boats or bongos, manned by a dozen able hands, find it impossible to get up thus far, and are often obliged to return to Boca de San Juan, not being able to make headway. Above Concepcion the river attains a breadth of about a quarter of a mile or more, but in many places we found it still very shallow. About a mile above it, two or three rivulets empty themselves into the northern side of the river. This morning we caught a glimpse of the Manati, and saw some alligators and guanas.

At noon we were midway between the Culebras and Gigante Islands, and soon afterwards passed the upper mouth of the Juanillo, which appeared to be small and nearly blocked up.

Since we passed the Colorado we have found the banks gradually more prominent, and still composed of the same material, in some places partially stratified, and more indurated; the trees had also attained a greater magnitude; those on the small Island of Gigante, being not less than 100 feet high. The only human habitations we had hitherto seen since entering the Boca, were two or three huts, the temporary residences of sarsparilla gatherers, situated on the banks between Isla Gigante, and the place from which we started this morning.

The sea breeze had been blowing fresh all day at north-east, and would have enabled us to carry sail, but to avoid the current which was now running rather strong, we were obliged to keep close under the banks, where the overhanging branches would not allow us to step our masts.

We here found the depth of the river to vary from eight to ten, and fifteen feet, the stream going at the rate of two knots, or a knot faster than below the Colorado branch.

At 5 P.M. we landed on a small dry sand bank about three-quarters of a mile below the mouth of the river Serapequi, which is twenty-nine miles distant from Point Arenas. The mean height of the banks between the Colorado and the Serapequi is about ten feet, and that of the trees including the bank between 100 and 150 feet, the largest of which are the eboo and cotton trees. Suspended from the branches of the latter we observed in great numbers the curiously constructed nest of a bird, which the natives call "yellow tail," a species of hangnest or *cassicus* of Swainson.

The width of the Serapequi at its entrance is about 150 yards, at present very low, but not entirely dried up.

At 6 P.M. we started, and continued paddling against a stream of two knots, till 10 P.M., when we came to another dry sand shoal, and remained for the night, about one-quarter of a mile above the Islade San Francisco, thirty-seven miles distant from Point Arenas. Our reason for always landing on such bare insulated spots, in preference to the banks of the river was, that the latter are so completely overgrown with grass, and infested with noxious reptiles and insects: we, however, always slept in the canoe, while the Indians divested of any clothing they might have worn during the day, and collected in a heap, preferred a sandy couch in spite of sandflies, or any other annoyance: the jaguars howling dismally and dew falling heavy.

*Tuesday, 10th.*—At 5 A.M. the Indians rose without being called, and commenced their paddling labours with the greatest alacrity and good-

will: the morning exceedingly fine and tranquil, and the river looking beautiful.

About a quarter of a mile above the spot of last night's bivouac, there are three remarkable cliffs on the south side of the river, composed of red ochreous earth, about fifty or sixty feet in height: the contiguous parts of the bank are about twenty feet high, prominent and well defined, lined with trees of large growth, and clothed with vegetation the most luxuriant.

About half a mile above the Isla de San Francisco, we passed a point round which the stream sometimes rushes with great violence forming a kind of whirlpool, and hence called Ramillino, where there is a small island of the same name. This phenomenon when passed was scarcely perceptible. At 9 A.M. we arrived at the Island Careinja where we hauled up the canoe, (always taking the precaution to have the chronometers carefully deposited in some shady place.) After breakfast we proceeded, paddling along the banks, which now in many places rise to forty and fifty feet, consisting of the same material: the Gamalooti grass growing on the lower parts of the bank contrasted beautifully with the darker tints of the forest—sky overcast—weather sultry.—Thermometer in the shade 82°: river water 85°.

The river when most swollen in the rainy season, which generally happens in October, is according to the Padrone's account, at least six or seven feet deeper than at present, and in the dry season next month, (April) it is so shallow below the Colorado branch, that for miles the bongos are obliged to be dragged over by main force through temporary channels.

Our Ramas were willing hard working fellows, but we found it necessary to give them extra rations, and with so much exertion I think they required it.

About half an hour past noon we passed the Rio Machado, where we first saw the San Carlos Hill, which is certainly the most remarkable one we had yet seen, its base terminating on the southern bank, its summit and contour not to be mistaken, affording an excellent landmark to distinguish the river of that name, beyond which it is situated about two miles: its estimated height is about 2,000 feet. The general features of the river, as far as the San Carlos, were not different from what we had observed since yesterday. At 2 P.M. we landed to dine on the island of San Carlos, situated opposite the mouth of the river of that name, distant from Point Arenas forty-six miles; its mode of formation and materials are the same as those we had hitherto seen. The width of the San Carlos river is here about two hundred yards, and its rate of stream equal to that of the main river, in fact is (the Padrone says,) the chief cause of its increased velocity, as the river San Juan

above this conflux becomes at once slack. After getting sights for longitude, we again took to our canoe, at 3h. 30m. P.M., when the heat was excessive, and breeze light, paddling along at a greater rate over the ground than we had hitherto done.

Beyond the San Carlos the river is more picturesque and beautiful, its waters gently gliding along at the rate of less than a knot, deeper, darker, and more in accordance with rivers of magnitude; its sluggish motion I am rather inclined to attribute more to the suddenly increased depth of its bed, than as the Padrone supposes to its being above the junction of the San Carlos. Here the banks are bold, precipitous, (ten, thirty, and forty feet high,) and less encumbered with decayed vegetable matter; the hills in the distance rising to three and four hundred feet, and densely overgrown to their summits with trees of most majestic appearance. The breadth of the river is here about a hundred and fifty yards.

At sunset we were about a mile below Chorero Creek, and saw the hills of that name rising about 1,500 feet on the north side of the river. We remained for the night on a small dry sand shoal, situated above the Isla Campana, at the foot of the first rapid.

*Wednesday 11th.*—At 6 A.M. we attempted the first rapid, called the Machuca, sixty-two miles distant from Point Arenas, by poling and paddling along the northern bank; its velocity does not at any part exceed five knots, so that we had not much difficulty to overcome. The bed of the river is formed of small rocks, and at present very shallow; but in the rainy season these are covered.

At 6h. 40m. we were again in still water, where the stream was running at the rate of two and a half, or two and three-quarter knots, the banks gradually rising as we approached the Balas Rapid, from six and eight, to twenty and thirty feet on the southern bank. At 8h. 20m. A.M. we arrived at the foot of the Rapid de los Balos, where the Indians laid in their paddles and commenced poling, by which means we ascended with equal facility, and almost immediately came to another, the Rapid del Mico, which does not require a distinct name, as they are evidently only continuations of each other, and as the maximum velocity of these, so called Rapids, does not exceed five and a half knots, and the bed of the river is pretty clear of rocks. I may further add that the phrase "*acceleration of stream,*" would convey a better idea of this part of the river, than the word "*rapid,*" which although synonymous, has, as a conventional term too strong a meaning, at least in the present state of the river.

By this time, the morning mist which barely enabled us to see across the river had dispersed, and we ascended the Mico Rapid as easily as the two preceding ones, and by the same means. At 9h. 30m. A.M. we

reached the Rio Bartolo, and stopped to breakfast, the Indians so voracious after their morning's exertions, that we found it again necessary to give them a further additional allowance. There is no perceptible stream in this river. We cut a few light spars for the canoe, preparatory to entering the Lake, and then resumed our progress up the river, having beautiful weather and little wind till nearly noon, when the sea breeze set in at S.S.E. At noon, we were about one mile and a half below the Rapid del Castello Viejo. Temperature of the air 82°,—of the river nearly the same.

Above the river Bartolo, the strength of the stream appeared to be from one to one and a half knot, the banks much the same, beyond which at a short distance inland, hummocks of fifty and one hundred feet may be seen, covered with trees of moderate size.

It was nearly one in the afternoon when we saw the point on which the old fort San Carlos once stood, and soon afterwards passed the island Juana, where a temporary hospital was established for the sick in Nelson's memorable expedition against the Spaniards. Here we met a large bongo, which had left Granada seven days previous, and overtook another which had started from the town of San Juan about the same time: mutual greetings were exchanged by the Padrones. At 1h. 15m. P.M. we commenced to ascend the rapid of the old Castle, and in the course of fifteen minutes, had got beyond it by means of tracking along the south side of the river. This rapid has a mean fall of nearly five feet, runs at the rate of eight knots, and extends across the whole breadth of the river, which is here about two hundred yards. By holding the chronometers, (which I may here mention were placed in a painted canvas covered box, and packed in saw-dust,) suspended in our hands, while the canoe was tracked up the side of the river, they sustained less jerking motion than if we had carried them along the banks. The bongos in ascending this rapid, are obliged to be lightened of part of their cargo.

The site of the fort is visible at the distance of one and a half, or one and three-quarters of a mile, but soon it is shut in by a point, and by keeping on the northern bank of the river will not open again till abreast of that point, when you will be within a cable's length of the castle, now so entirely overgrown with jungle, that we could not discover any portion of its walls. This being the scene of our gallant countryman's early career made it to us peculiarly interesting.

As soon as we had fairly got beyond this most formidable of all the rapids, which in my opinion well deserves the name, we resumed our paddles with good effect, the stream now running not more than one knot in the middle of the river, and on the margin scarcely perceptible; the banks are again low, and lined so thickly with the same grass

growing to the waters' edge, as to render landing almost impossible: the heights of the trees were now between 70 and 130 feet.

At 2h. 50m. P.M. landed on the north bank, at a place called Santa Cruz Chica, about two miles above the Castillo Viejo, where we stopped to dine, under a delightfully shady tree. Here we found a fire already burning, which had probably been left by the bongo we met this morning: the heights of the banks are here about eight feet. At 3h. 50m. P.M. we resumed our paddles, Indians working admirably: the banks very low as far as the Toro rapid, in some places nearly on a level with the water, lined with the same grass, and a species of palm; the larger trees fifty or sixty feet high. The stream still running at the rate of a knot in the middle of the river; but not at all near the banks. At 5h. 30m. P.M. found ourselves beyond the Toro rapid, seventy-seven miles from Point Arenas, which is, I think, the smallest and least violent of them all; the acceleration of stream in the centre being not more than four knots, and few rocks presenting themselves above water. The width of the river at the head of this rapid is about a cable's length from bank to bank.

Beyond the Toro rapid the banks of the river are still lower, and in many places the trees are growing out of the water; and lined by palms on each side in such close and compact order as to form an almost impenetrable barrier, conveying not a bad idea of a well set hedge: the highest trees do not exceed 40 feet. The stream is here very slack.

At sunset we were about one and a half mile above this rapid, where owing to the swampy nature of the banks, we found the musquitos very troublesome.

I may here remark that from the river Machuca, as far up as the river Savalos which we had just passed, the bed of the Rio San Juan is studded with fragments of rock, while all below is chiefly composed of sand and mud.

At 8h. 30m. we passed the Isla Chica, and at 9 the Isla Grande, where there are hills of 800 feet altitude adjacent to the northern bank of the river. Being very anxious to get to San Carlos in time for morning observations, we gave the Indians an extra allowance of grog by way of encouraging them to paddle till midnight, when we found ourselves nearly abreast of the river Melchorezto, and anchored in the middle of the stream, there being no landing, and the musquitos very troublesome.

*To be continued.*

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## Nabal Chronicle.

### AGULHAS LIGHT.

The following is the address delivered by the Chairman, the Honorable William Porter, at the public meeting of the inhabitants of Cape Town, held at the Commercial Exchange, on Saturday, the 11th of July, on the subject of the proposed light on Cape Agulhas:—

“Gentlemen,—The requisition addressed to the Governor, and his Excellency’s authority for holding our assembly, having now been read, it becomes my duty to make a few remarks. I begin by thanking you for the honor which you have done me, by calling upon me to preside over this meeting. It is one collected to promote no object of a sordid or a selfish character; it is collected in the spirit of perfect charity and good will, free from the ‘barbarous dissonance’ of party-spirit, bitterness, and strife; it is collected solely in order that a good work, too long delayed, may now at length be done. To preside over such a meeting, I feel to be indeed an honor.

“Gentlemen,—I have no sooner thanked you for one favor, than I find it necessary to ask you for another. I have to entreat your kind indulgence towards all deficiencies upon this occasion. Believe me this is no idle affectation. The affectation would be in doing otherwise. I had intended to have mastered and matured, as well as I was able, the subject which we are assembled to consider, and I was anxious, shall I say ambitious? to have made, if I could, such a statement as might do some service to the cause. The pressure of other avocations has destroyed this hope, and I am, therefore, compelled to throw myself on your forbearance. I do so with unhesitating confidence. And yet, if it be true that to be yourself deeply interested, is the great art of interesting others; if it be true that out of the abundance of the heart the mouth speaketh, I feel that I ought not to be quite incompetent to address you upon this question.

“Gentlemen,—It is now 350 years ago, or thereabouts, since Bartholomew Diaz first doubled the Cape, and found himself in Algoa Bay. The narrative of his disastrous return

“With darkness and with dangers compassed round,”

is familiar to every schoolboy, and we may well conceive, I think, how, amidst all the horrors which beset his path, when death in a thousand ghastly shapes still menaced him on every side, a beaming light upon Cape Agulhas would have imparted confidence and comfort. It is obvious, notwithstanding, that however much old Diaz might have wished for such a thing, he could not, in that day, have wondered at its absence. But if he could have foreseen the consequences to which his great exploit was finally to lead; if he could have foreseen the multitudes who were, from age to age, to pass along the coast he had discovered; if all the commerce, with its thousand and ten thousand sails, which was to be afterwards wafted round the promontory he was leaving, could have been presented to his view, and if he could, at the same time, have been told at the end of three centuries and a half that promontory would stand just as it stood on the day of the creation;—that a work of necessity and mercy in which both the east and the west,—the old world with which he was himself acquainted, and the new world which his great cotemporary Columbus, was about to call into existence,—were alike interested, should still remain to be accomplished;—that prodigal of property and life, we allowed ship after ship to perish on that fatal spot for want of an Argand Lamp or two, and some reflectors,—if such a state of things as this had been prophesied to him, then, indeed, the daring navigator might well have been astonished!

“Our case is shortly stated. A glance at any map will show that along the Southern coast of Africa, one point of land projects beyond the rest. That



point is Cape Agulhas. On the outward voyage vessels, generally speaking, stand considerably to the southward, in order to catch the western breezes, while, on the contrary, it is the interest of all ships homeward bound, to keep as close as possible to the coast, so as to be sheltered from the strong winds and heavy seas which, particularly in the winter season, they would otherwise be necessitated to encounter. It so happens that the shore at Agulhas, and the whole country for a considerable distance inland is deceitfully depressed, and that mistakes are made at sea, with respect to the true distance and character of the mountains of Swellendam and Caledon. The results have been terrific; and to put a period, if possible, to the many and melancholy losses at that ocean Golgotha, Cape Agulhas, is the purpose for which we are this day met.

"I am not quite a twelvemonth in your Colony, and yet, since my arrival, there have been no fewer than three shipwrecks at this destructive point. I cannot say that I am in possession of sufficient data from which to calculate, with accuracy, the amount of the property lost upon these several occasions. But it must have been immense. I am persuaded that I am guilty of no exaggeration,—that on the contrary, I keep far below the mark, when I assert that the cargo of one vessel alone, the '*Northumberland*,' would itself have amply sufficed to erect a Lighthouse upon every headland which requires one, round the entire coast, from Oliphant's river, on the west, to the Keiskamma, on the east. It would have built, aye, and maintained for ages, a Lighthouse on Agulhas ten times over, and far, far more. Are we to proceed then in this miserable penny wise but pound foolish course, permitting vast properties to be totally destroyed, which might, by so cheap and simple an expedient be preserved in safety?

"This speaks to the pocket, in language to be understood. Even on the mere question of property and its preservation, economy cries aloud. But another sound is heard, before which all meaner sounds are hushed—for Humanity uplifts her mighty voice. Property perishes, and there let it perish,—if so its owners will, but the piteous waste of human life,—how can we reconcile ourselves to that? Upon this subject it is difficult to dilate, without, upon the one hand, dealing in cold common-place, or upon the other, resorting to wild and passionate declamation. I shall not attempt to do it justice. The silent eloquence of facts which are familiar to every man who hears me, will be the most effective advocacy. Give you an understanding to that, to which I can give no tongue. The number of human beings who have, within the last few years, perished at this fatal Cape, is a spectacle at which, if there be tears in Heaven, the angels weep. Take one solitary ship—the '*Arniston*,' or even the '*Dowcaster*,' and if that be true which is vouched by high authority, that, none of us liveth to himself, and no man dieth to himself,—think, I beseech you, of the melancholy chasm which must have been made in many a home and many a heart, by the violent and untimely death of all the sufferers, who then sank to rise no more! In the view of such calamities our common nature seems to realize the pathetic image of Jewish desolation—'*Rachael weeping for her children!*'

"Gentlemen, I turn from the dismal sight. I do so to ask, in the name of humanity and in the name of God, if such things must last for ever? Will men stand tamely by as lookers on whilst so many of their fellow-men are drowning? Poetry has imagined a supernatural Being as tenanted that fatal shore,—'the Spirit of the Cape.' Savage tribes upon the coast of Africa are, we know, in the habit of devoting human victims to such supposed intelligencies. We shudder when we hear or read of barbarity like this. We feel grateful that our lines are cast in happier places. But if we may be fairly said to cause every evil which we neglect to prevent, it may well be doubted when we consider the extent of the destruction which periodically takes place at Cape Agulhas, whether we have much ground for self-complacency. Our fellow creatures die in both instances, and die in both instances a miserable death, and, in my opinion, the cruel superstition of savages and heathens is to the full as excusable as the more destructive indifference of civilized and Christian men.

"Gentlemen, to proclaim that the continuance of such calamities shall not, at least, be chargeable to us, is the object for which we are now present. It may be that we shall not succeed. It may be that for the want of a little, and but a little money, this noble project must be given up. It may be that the world will still look coldly on, and see ship after ship, and cargo after cargo, and crew after crew, perish before their eyes. All this is possible. But I do in my conscience believe that, if we take our measures properly, the result will be altogether different, I cannot, and I will not doubt it. You have on your side reason, religion, humanity, and conscience, the calculations of enlightened selfishness, and the dictates of the universal heart of man. With such a cause,—these supporters, and God's blessing, believe me, you can never fail.

"Gentlemen, in the course of yesterday I endeavoured to ascertain on what grounds, if any, the object of this meeting could possibly be opposed. For my own part, I can safely say that I could not imagine what those grounds could be. I should just as soon have expected to hear that it was wrong to keep the commandments, or to clothe the naked, or to feed the hungry; as that it was wrong to raise a Light upon Point Agulhas, to warn the mariner from danger and from death. I have, however, been able to hear of three objections, and but three, to each of which I shall, with your permission, give a brief consideration.

"It has been said, then in the first place, that a Lighthouse is unnecessary. The captains of the present day it seems do not require such assistance. Lighthouses it is conceived, are vulgar, old-fashioned affairs,—the clumsy, but convenient mode of other times for counteracting ignorance, and fit enough, perhaps even now, to show small craft the way of creeping round a coast, but objects of derision to the superior seamanship which, in the present day, conducts the Eastern trade. Gentlemen, I trust that I am very far from undervaluing the mercantile navy of either Europe or America. That the commanders in that navy are, at the present moment, a credit to their respective flags, I entertain no doubt whatever. But that those commanders are now, or are likely to be hereafter, so skillful as to be beyond the benefit of a Beacon Light upon Cape Agulhas,—or that such skill is in point of fact attainable, considering the mode in which two great commingling oceans affect the currents in that quarter, I respectfully deny. And even were we to admit that there is a class of ships which may be independent of the humble aid we would afford,—ships with infallible chronometers, and in which the sextant itself has been discarded for instruments of still greater accuracy, would it therefore follow that there are not other vessels, aye, and many of them which would hail with joy the useful light? But in truth the objection is absurd in principle, and is refuted by the state of facts. I say the objection is absurd in principle, and I say so for this reason. It is not denied,—and I believe it cannot be denied,—that Cape Agulhas, upon every consideration applicable to such a subject, requires a Lighthouse as much as any other point or spot with which we are acquainted. Now, if you tell me that a beacon on Agulhas is unnecessary, then I say, 'put out the Channel Lights,—why waste the precious oil?—if seamen should require no aids of that description,—darken every Lighthouse in existence,—you may do so with safety.' Few persons however, will, I think be bold enough to advocate this sweeping proposition. I say, moreover, that the objection is refuted by the state of facts. We hear of seamanship indeed, but we see the shipwrecks. Driven by no tempest and shattered by no storm, still bark after bark is betrayed by that deceptive shore, and I hold it to be preposterous to talk about a speculative perfection, while the work of destruction is going practically on.

"The second objection to our meeting differs altogether from the first. It freely admits that a Lighthouse would be useful. It even strongly contends that a Lighthouse should be built. But it says in substance, this,—'this question is an important question, but it is not a colonial question. It belongs to those who own the ships to make arrangements for protecting them. If British and Foreign shipowners are content that their property should be continually perilled, and the lives of their passengers stand in jeopardy every hour

this Colony may well be content also. Why should we meddle or make with what concerns other people, and what does not concern us?'

"Gentlemen, it is true that the Colony of the Cape has, apparently, but a small interest in the accomplishment of the work in view. The vessels that are wrecked are not the property of our shipowners. The merchandize which is lost is not consigned to our merchants. The lives which are sacrificed for the most part, make desolate other homes and hearths than those belonging to this Colony. The loss of one vessel has been felt in England,—India has mourned, it may be for a second,—a third perhaps, has raised a universal wail throughout the whole of the Mauritius,—other quarters may be reached in turn,—but from such visitations, owing to circumstances, this Colony is exempt. All this is true. But while I admit that all this is true, I still contend that it is our interest as well as our duty to stand forward. Surely it needs no argument to prove that everything which conduces to the security and prosperity of the great Eastern trade must be advantageous to the Cape. We have an interest,—if we must consider the matter in this way,—that our Indian visitors should not fear a voyage to the Cape, more than a voyage to Australia. But if I am asked the true reason why you should come forward in such numbers as I see to day, I would answer that you so come forward because, enforced by strong necessity, you cannot help it. The disastrous spot is in our territory. The harrowing scenes which it presents are forced upon our notice. The dreadful nuisance which we would abate lies at our very doors. Our own eyes, so to speak, behold the wretched sufferers,—the men and the women, and alas! the little children too,—struggling for life and sinking in the wave. Our own ears are pierced with the appalling cries which nature prompts in that awful hour of nature's agony. Our own hands perform the sickening task of collecting upon the sea-beach the bodies of the dead. Have we no interest I ask, in terminating if we can, such miserable doings? Interest, indeed!—why, what interest had Woltemade—(let me do honor to a brave man's memory, and thank the gentleman opposite, Mr. Silberbauer, for having brought a most noble action to my notice), what interest had Woltemade, which prompted him to peril and to lose his life in the manner which the historian has recorded? I thought I had in my pocket the paper which transcribes the incident, but I find I have forgotten it. The story however, is soon told. On the first of June, 1773, an Indiaman, of which I do not know the name, was wrecked somewhere off your coast. When the crew and passengers were in the last extremity, Woltemade arrived on horseback at the spot, and determining to save as many as he could, he swam his horse seven times through the breakers, and succeeded upon each occasion in bringing off two men. Worn out with anxiety and toil, Woltemade was inclined to pause, but still the cry for help came upon him from the wreck, and unable to endure that cry, exhausted as he was,—he sprang once more into the saddle, and spurred his tired horse again into the surf. He reached the vessel, though with difficulty, but there alas! too great a number in the selfishness of suffering fastened themselves upon their deliverer, and all perished! That was a great deed, gentlemen, a deed of deathless glory. I am disposed to think that the doer of it took a different view respecting what should interest him, than some amongst us seem inclined to entertain. He had not sixpence worth of property on board that ship, nor was there a single person on her dying deck of whom he had ever seen the face. But he acted upon other principles. He knew nothing I presume of the Roman Drama, nor, in all probability, did he ever hear the hacknied line of which the fine philanthropy excited the enthusiasm even of a heathen audience; but, though ignorant of classic lore, he was well acquainted, doubtless, with a better learning, and he had pondered perhaps upon the question, 'who is my neighbour?'—and he had laid up in his heart the simple beauty of the parable which gives the memorable answer. God had given him a generous and heroic spirit, and he obeyed its dictates even to the death. None of us, gentlemen, is likely to be placed in such extremity as was this gallant colonist. None of us is ever likely to be called upon to do such services or to make such sacrifices. But still in an humble and inferior measure, we may feel something of the spirit by which he was imbued. If every one now

within hearing of my voice, and every one of, perhaps, the greater number who may chance to see hereafter some account of what I say, would only hear an inward voice proclaiming 'go thou and do likewise,'—why, gentlemen, in two years your Lighthouse would be built and burning!

"Gentlemen, the only objection which now remains to be disposed of, is certainly a fatal one, if valid. Our hopes it is said are doomed to be shipwrecked on Agulhas. I have been asked to name the sum which will probably be required for effecting the purpose now in view. In answer, I have named a sum considerably more than we can need. I have named, in round numbers, £10,000 as the sum which will suffice to build a Lighthouse fit to last for ever, and also to defray all charges as long as it shall last. The reply to this announcement has been the usual shrugging of the shoulders, and the usual shaking of the head, and the usual prophecy, "you will never raise the money." Gentlemen, I venture to prophecy that this is false.

"I am not indeed absurd enough to think that £10,000, or any thing like it, can be collected in this Colony. We are neither numerous enough nor rich enough for such an undertaking. To expect that the Cape of Good Hope should build this Lighthouse, would not be just, if it were practicable, and would not be practicable, if it were just. But I will not be persuaded until we have tried, and fairly tried, and after all have failed, that if we come forward with unanimity,—with earnestness,—and according to our means, with liberality, we shall not be powerfully supported from abroad. For just consider how the matter stands. Examine the map of the world from North to South, from East to West, and you will find that there is not a spot upon the face of God's earth, where it is for the interest of so many different nations, that a Lighthouse should be built as upon the very spot in question, Cape Agulhas. I hold this to be indisputable, and see the cheering results to which it almost necessarily leads. Why, £10,000 might easily, if you had only the fit machinery to work with, be raised in half a dozen towns which might be mentioned, while instead of towns, there are far more than that number of great nations to whom, through their consuls here (who all take a lively interest in the subject,) we may confidently appeal. What we have to contend against, and all which we have to contend against, is the diminishing effect of distance. Our task must be to counteract this tendency as much as possible,—to bring the distant near, to secure if we can the services of some zealous spirits, who will not like to let their fellow creatures perish, even so far off as Agulhas. Such spirits I believe may still be found. Details, however, will be for your Committee, and with them I shall not meddle. But it is amazing to think, how differently we are affected by a matter which takes place beside us, and one which chances to occur five or six thousand miles away. A wherry upset upon the Thames, by which a single waterman is drowned, will cause as great a sensation throughout wide London's bounds, as the destruction at Cape Agulhas, of a vessel of 1,000 tons, with all her passengers and crew. Tell the people abroad, tell for instance the people of England, to make the case their own. Transfer the dangers and disasters of Cape Agulhas to some headland on the British coast. Will any man tell me that that headland would be left unprotected by a light? Why, knowing as I do, and honouring as I do the majestic charity,—the sublime benevolence of London, I have no more doubt than I have of my own existence, that within forty-eight hours after the tidings that the *Arniaton* was lost with the 400 souls that freighted her, had reached that Royal City, not £10,000,—but if necessary, £50,000 would have been subscribed to raise a Lighthouse at the scene of death. What is true of London will equally apply elsewhere. Let us lay the case before them,—it is a case emphatically of life and death,—let us call on them to help us, or I should rather say to help themselves,—and leave the rest to God and their own consciences.

"Gentlemen, from the Colonial Government, under the circumstances in which it is placed, it would be unreasonable for us to expect assistance. Whether or not the Government at home will aid us it is not for me to judge. Perhaps it may be thought that the substance of a recent despatch, in relation to a somewhat kindred subject, does not augur favourably. It appears that

some time ago, Admiral Elliot was strongly impressed with the importance of having a minute survey made of our south-eastern coast, and Sir George Napier, taking as he does, a warm and anxious interest in all such matters, wrote earnestly home upon the subject. By the reply which has been received, it appears that the Admiralty were of opinion, after considering the subject, that there were but two places between Simons Bay and Port Natal, in which small craft could ride,—and they came to the conclusion that the proposed undertaking would be useless. From this of course, it by no means follows that the Home Government will not enter into our views about Agulhas. For my own part I hope and believe they will. But on a great question of this kind, I 'put not my trust in Princes,' nor yet in Prime Ministers,—but in the universal People. If our Governors should want the will to aid this work, which is impossible,—or if, having the will, they should want the power,—which may turn out to be the case, why then, we have nothing for it, but to do the work without them. But while I feel myself justified in saying this, I must at the same time say, that I look with confidence for better things.

"Gentlemen, one word as to the work itself. You all know the ease and cheapness with which it can be carried on. My honourable friend near me, (Mr. Breda) the proprietor of the property, gives you the ground as a free gift. Major Mitchel, the Surveyor-General, has made a plan and estimate, and he had proposed to add to these his gratuitous services as architect, services of which owing to other arrangements, we shall not in all probability be able to enjoy the benefit. I need not dwell upon the claim which the gentlemen I have mentioned possess upon the public gratitude. But it is not by man alone that we are assisted, for the very nature of the plan appears to afford us its co-operation. Stone for building purposes is plenty on the spot, and there is an elevation of solid limestone ready to receive the edifice which we propose to raise.

"Gentlemen, I have detained you long. I have now done. There is but one thing more which I would say to you. Do not yield to little difficulties and discouragements. You will meet these things, and meeting them you must overcome them. Do not expect that in every quarter you will at once arouse indifference,—or look for it that men will be able everywhere to trample selfishness beneath their feet. Lighthouses are not things which rise like exhalations. I have myself looked from ship-board upon the Eddystone at night. I would fain derive a moral from what has occurred upon the site of that celebrated structure. To surmount all the difficulties which nature there presented in such numbers, and found a Lighthouse in the very waves, might well have seemed a vain and visionary notion. But still the noble thought was not abandoned. Winstanley strove to realize it, but the savage sea lashed into fury, as if by the attempt to deprive it of its prey, sprang on its victim like a thing of life, and in a night laid prostrate the workman and his work. But still the noble thought was not abandoned. Rudyerd next essayed his skill, and then, as if the two great destructive elements of nature had made a compact and alliance,—fire came to succour and avenge the baffled Ocean, and the finished building was consumed. But still the noble thought was not abandoned. Smeaton finally rose, and he triumphed gloriously, and there his mighty labour stands, firm as the rock into which it is inserted; destined for many an age to smile superior to every storm, and defy the surges of a thousand years. Your obstacles are of a widely different description; but such as they are, encounter them with the same determination, and they too will be overcome. Send far and wide over the deep your philanthropic summons. There is, it seems, in the neighbourhood of Cape Agulhas, a certain spot termed the Tower of Babel. The Tower which bore that name of old was begun with one people who spoke one speech, but idle if not impious in its object, the building failed, in consequence of disunion, for the language of the builders was confounded. Let us hope to lay the first stone of a Tower to be commenced under other auspices, and for other objects, a Tower for the erection of which many different tongues and nations shall combine in fellowship and concord; a Tower to be raised by those who are of one heart, if not one dialect; a Tower to which the mariner

can look in his extremity, and by which, long after we ourselves have passed away, the blessing of those who were ready to perish may be gratefully called forth."—*South African Commercial Advertiser*.

The following resolutions were agreed upon :—

1st.—Moved by the Honourable M. Van Breda, seconded by Captain Van Renen,—

That the great and painful loss of life and destruction of property, by shipwreck, upon our coast, near Cape Agulhas, forcibly calls attention to the adoption of some measure which may operate as a safeguard to vessels passing in its neighbourhood, and render less frequent such melancholy disasters, as the loss of the *Arniston*, *Doncaster*, *Northumberland*, *Venerable*, and *La Lise*.

2d.—Moved by T. Ansdell, Esq., seconded by the Baron Von Ludwig,—

That in the opinion of this Meeting, and from the evidence of many nautical men, the erection of a Lighthouse at Cape Agulhas would be highly beneficial, greatly contributing to the safety of the voyage round the Cape, no less with respect to pointing out the coast with greater certainty, than in obviating the present necessity of keeping far from the land, and thus becoming subject to the intense severity in the winter months of the North West gales.

3d.—Moved by Henry Sherman, Esq., seconded by W. G. Anderson, Esq.—

That in order to create a fund for the erection of a Lighthouse, and to defray the annual expenses, a general subscription be entered into in this Colony, and in the neighbouring Islands of Mauritius and Bourbon, as well as in England, India, France, United States, Holland, the Hanse Towns, and all maritime places trading to the Eastward, and as the object is one of equal interest to the shipping of all nations, that the several Consuls resident among us, and other gentlemen connected with those places, be solicited to co-operate in furtherance of this desirable object.

4th.—Moved by the Baron Von Ludwig, seconded by T. Ansdell, Esq.,—

That a Committee now be appointed for the purpose of assisting to carry into operation the design of the present Meeting in obtaining subscribers, corresponding with influential persons connected with the shipping interest, drawing up regulations, and arranging the nature of the trust, and for general purposes, and that the Hon. W. Porter, and M. Breda, Esq., Major Mitchell, the Port and Deputy Port Captains, Messrs. Ansdell, Silberbauer, Stein, Venn, Pillans, and Fairbairn, be now appointed as the present Committee.

5th.—Moved by S. Merrington, Esq., seconded by J. Borradaile, Esq.,—

The Consuls resident amongst us shall become associated ex-officio with the Committee.

6th.—Moved by Capt. Van Renen, seconded by G. W. Silberbauer, Esq.,—

That the Regulations to be drawn up by the Committee, as soon as completed, shall be submitted for adoption at a General Meeting of the Subscribers, of which meeting the Committee shall give due notice.

Thanks were voted to the Chairman, by G. W. Silberbauer, Esq., seconded by J. Stein, Esq.

## CAPE OF GOOD HOPE.

*Cape Town, 21st July, 1840.*

SIR.—In the number for January of your useful publication, Lieut. Barrow has impugned the correctness of a statement contained in my letter to the Editor of the *South African Commercial Advertiser*, viz. that in the year 1838, 465 vessels entered Table Bay, and 60 entered Simons Bay, (exclusive of ships of war,) and he has substituted the numbers 432 and 96 respectively. My statement was an extract from the Port Office Books, and comprehended the interval between the 1st of January 1838, and the 1st of January 1839; and it is perfectly cor-

rect, as the enclosed abstract from the Collector of Customs official returns will shew; the annual returns from the Customs are made from the 5th of January to the 5th of January following; hence arises the difference of five vessels more, (in the abstract) having entered Table Bay than appears in my statement.

As your pages are dedicated to the information and welfare of the naval profession, and not to idle controversy, I shall decline further notice of the remarks contained in Mr. Barrow's letter, foreign as they are to the subject, and will only observe that the loss of the "Protecé," and "Cockburn," upon Muizenberg beach, confirms my opinions (as given in the letter before alluded to,) that "most of the wrecks in False Bay have occurred from mistaking Muizenberg for Simons Bay; and a light upon the Roman Rock, or Noahs Ark, to show the entrance of *Simons Bay*, would be of more essential use than a light upon Cape Point;" and such is the general, if not, universal opinion.

I take leave to forward herewith the *Commercial Advertiser*, and the last number of the *Shipping List*, wherein you will find that measures have been taken with every prospect of success, for the erection of a lighthouse upon Cape Agulhas by a general subscription; and it is probable about 1,000*l.* will be raised in this Colony, to commence so desirable a work. Your influential aid towards the completion of it is earnestly solicited by the Committee.

I regret to say that the "Howard," a small barque of 197 tons, parted one cable and slipped another in a northerly gale, which occurred upon Thursday last, the 16th current, and in all likelihood she will become a wreck. A considerable part of her cargo (consisting principally of coffee,) has been landed in good condition; the remainder will be saved, more or less damaged by salt water.

I fully agree with you, Sir, that a list of all wrecks should be published, and "that no feelings of delicacy should conceal the truth in such matters;" but how is the truth to be got at unless the circumstances are properly investigated? I should say the parties interested in the property, either the owners or underwriters are the proper persons to cause an investigation into such matters; for any *ex parte* statement, reflecting on the conduct of the captain or crew, would be, in my opinion, not only a want of delicacy, but a positive act of injustice.

With reference to a remark in Lieut. Barrow's letter, and to your note at the bottom of it, I beg leave to state that I disclaim having had the slightest intention, in my letter to the Editor of the *Advertiser*, of saying "anything injurious to the unoffending," or to any other individual. I shall always be ready to verify any statement I may have made, or may hereafter make. My opinions are founded upon observation, and to the best of my judgment. So far from being dogmatical, or having "self-satisfied conclusions upon the advantages of Table Bay," or any other subject, I am glad to hear the opinions of others upon any matter which may be mooted, considering it the safest and best mode of arriving at just conclusions.

I have the honor, to be, Sir,

Your obedient servant,

J. BANCE.

To the Editor of the *Nautical Magazine*.

*" Custom House, Cape Town, 22nd May, 1840.*

" A Return of ships entered during the year 1838, in the ports as under :—

Cape Town, 469 vessels,	150,243 tons.
Simons Town, 60 "	22,258 "

Cape Town 469 vessels, exclusive of men-of-war.

Simons Town 60 vessels, exclusive of men-of-war.

*" SAM. WOODS, Collector."*

Lieut. Barrow has denied this statement and substituted an erroneous one, stigmatizing the true one by the term "not faithful;" and asserts that 432 vessels arrived in Table Bay, and 96 in Simons Bay during the year 1838.—J. B.

We gladly lay before our readers the foregoing letter of Lieut. Bance, with the minutes of the proceedings on the important subject of a Light on the Cape, Agulhas, because we see a becoming spirit animating the residents of the Cape, from which, with the feeling that exists in this country, there is good reason to hope that the light will be established eventually, although it may be that certain official formalities may delay it. In various parts of this work our correspondents have referred to the subject, and we have some degree of satisfaction in knowing that we have published their sentiments, and thereby agitated this very important subject; and Lieut. Bance, as well as Lieut. Barrow, although they may differ as to the comparative merits of Simons and Table Bays, may still feel satisfaction when the Light is established, that they have promoted it by their discussion. As to the objections against it there are arguments enough adduced by Mr. Porter to meet them, but we may particularly refer our readers to p. 518 of this volume for the conclusive opinions of the Hydrographer to the Admiralty, and we sincerely trust that no obstacle whatever will be allowed to stand in the way of this great and important safeguard to the Cape navigation.

#### THE LEVANT.

*(Continued from page 810.)*

#### CAPTURE OF GEBAIL.

*Admiralty, October 10th, 1840.*

DESPATCHES, of which the following are copies, have been this day received at this office, addressed to Richard More O'Ferrall, Esq., by Admiral the Honourable Sir Robert Stopford, Commander-in-chief of her Majesty's ships and vessels in the Mediterranean.

*" Princess Charlotte, Bay of Antoura, September 15th, 1840.*

" SIR,—I have the honor to transmit for their lordships' information, copies of a letter from Captain Martin, of the Carysfort, with its enclosures, detailing an attack made upon the castle of Gebail, by a party of marines under Captain Robinson, R.M., of the Hastings, which, though repulsed at the time with a loss which I deeply regret, was yet successful in its results, the castle having been evacuated next morning. The possession of that stronghold is of the most material importance, as it commands the main road by which the enemy might advance upon our position from the northward, and secures a safe point for the



mountaineers concentrating and receiving arms, which they have already done in great numbers, and press forward for more, with every disposition apparently, to make good use of them.

"Fully coinciding in the encomiums bestowed by Captain Martin and Captain Austin, on the merits of the officers and men employed on this service, such as must always be conspicuous where danger calls them forth, I beg to recommend them to their lordships' favourable consideration.—I have the honor to be, &c.,  
(Signed) "ROBERT STOPFORD, Admiral."

—  
"H.M.S. Carysfort, Gebail, September 13th, 1840.

"SIR,—I have the honour to inform you that, pursuant to your directions, I anchored off Gebail.

"The enemy have evacuated the town; the mountaineers are coming in fast for arms; and, as far as I can judge from their words and professions, the most enthusiastic feeling prevails among them.

"I trust that these results will, in some degree, excuse the loss we have sustained.

"I shall now proceed to detail the circumstances of the attack.

"At noon I anchored, with springs, within musket-shot of Gebail. The *Dido* took a good position ahead of the *Carysfort*, and the *Cyclops* astern. Groups of mountaineers immediately came down to the beach, and many were brought off by the boats.

"Having given sufficient time for the marines to prepare for landing, and for their commanding officer to reconnoitre the place of disembarkation, at one p.m. the ships opened their fire upon the castle, and upon the points which the mountaineers designated to us as those occupied by the Albanians. This was returned by occasional musket-shots. When the fire had been continued with great precision, and apparently with some effect, for about half an hour, the marines, accompanied by a large party of armed mountaineers, pushed off from the *Cyclops*, and to cover their landing the ships re-opened upon the castle.

"About half-past three p.m., observing the detachment formed upon the beach, to the south of the town, and believing all the effect likely to be produced by our shot was already done, and that the gardens had been swept by the launches' carronades, I made the signal to push on.

"The marines advanced briskly to the assault, but the cliff soon obstructed my view of their progress through the gardens in front of the castle. They reached within thirty yards of the tower, when a destructive fire was opened upon them from a crenelled outwork, having a deep ditch in front, which was completely masked from the fire of the ships.

"Finding his men were falling fast, that the wall of the castle was impracticable, that there was no gate accessible, and nothing but the muzzles of the enemy's muskets visible through the loopholes, Captain Robinson very judiciously drew his men off. The marines retired to the beach steadily and in good order.

"Captain Austin, who superintended the landing, and accompanied the marines, having sent to me to say that nothing could be done unless the tower was levelled, the ships again commenced firing upon it.

"Finding, however, that the immense solidity of the building prevented our making a sufficient impression upon it, at half-past five I ordered the marines to be re-embarked, and the firing to cease.

"An English flag, which had been planted on the garden wall as a signal to the ships, was accidentally left there by the pilot of the *Cyclops*, after the marines had retired. Lieut. Grenfell, and — Macdonald, a seaman of the *Cyclops*, volunteered to recover it, and brought it off most gallantly, amidst the cheers of the ship.

"At night a party of the mountaineers, whom we had armed, were established in the town; and at daylight this morning I found that the Albanians had evacuated the castle during the night, leaving three behind, (one of them badly wounded, and since dead.)

"The conduct of a Turkish soldier, who was sent up in the Cyclops, has been admirable in organizing and keeping together parties of the mountaineers.

"Having distributed all the arms, I now send the Cyclops for a fresh supply.

"I think we may dispose of more, and I take the liberty of suggesting that they should be sent immediately before the present enthusiasm has time to subside.

"The painful part of my duty is to enclose the list of killed and wounded in the attack on Gebail. I deeply lament that it has been so severe.

"I have the honour to transmit detailed reports of their proceedings from Capt. H. Austin, of her Majesty's steam-ship Cyclops, and from Capt. Robinson, commanding the detachment of royal marines; and I beg to add, that I most fully concur in the encomiums that they pass upon the officers and men under their respective orders.

"I have the honor, &c.

(Signed)

"H. B. MARTIN, Captain."

"Commodore Charles Napier, C.B., H.M.S. Powerful."

"H.M.S. Cyclops, off the town of Gebail,  
September 12th, 1840.

"SIR,—In accordance with your directions, I have the honour to report, that in conjunction with Captain Robinson, in command of the detachment of royal marines, (specially embarked on board her Majesty's ship under my command,) I first reconnoitered a position for disembarkation; after which the detachment, consisting of 200 rank and file, and 200 armed Syrians, were put into the boats of her Majesty's ships Princess Charlotte, Bellerophon, and Hastings, under the command of Lieutenants Johnson, Hallett, and Thompson, of those ships, and then landed under the cover of the fire of her Majesty's ships Carysfort, Dido, and Cyclops, about a quarter of a mile to the southward of the town of Gebail. The troops being formed, the gardens in front were scoured by the launches' guns, the boats at this moment remaining fully armed and afloat, in perfect readiness for the re-embarkation of the force should it prove necessary.

"Taking to my assistance the second lieutenant, (George Giffard,) Mr. Butler (mate,) and Mr. J. B. Caffari, (Maltese pilot,) as an interpreter, with two gigs' crews, we advanced most cautiously, and so soon as we were within musket-shot a party was detached to wave our ensign, for the purpose of showing our position, in order that the cannonading might cease.

"This having been accomplished, and while moving steadily forward, a most sharp and destructive fire was opened from the castle, and at this moment only was the cap of one man seen.

"The firing appeared to proceed principally from a line below the ground upon which we were; from this effective resistance, I immediately saw the doubt that existed as to our success, but having advanced thus far, a volunteer party immediately proceeded to advance to the right, for the purpose of determining if there was a chance of forcing an entrance. However, the fire increasing, in conjunction with Captain Robinson, the whole force was drawn off by retiring steadily, under cover of the walls, conveying all the wounded that could be removed. At this moment a small boat was despatched to you, that we were out of the line of the ships' fire, for the purpose of awaiting the result of a further cannonade; having waited for which, on the beach, during a period of two hours and a half, and seeing the little effect that was produced upon the base of the castle, and numerous persons, some of whom were armed, coming in from all directions, I considered it my duty to re-embark the marine forces, first offering to the natives whom I had landed, either to remove them or wait afloat for their protection, while they took up an elevated position of safety; and by a little persuasion they chose the latter. I then embarked in the spare boats all the unarmed persons who ran to this boat, and in the act of returning I had the satisfaction of meeting you. For the detail of the operations, in a military point, I beg to refer you to the enclosed report of Capt. Robinson, in command of the

detachment of the royal marines, whom it is our duty especially to notice, and who commanded and directed the operations of his men in a most able, courageous, and praiseworthy manner; and I beg to observe, that the conduct of the officers and men under his command was in accordance with that ever displayed by the royal marines when under fire. It is with much pain and regret that I have to lament so severe a loss, without at this moment having succeeded in gaining possession of the castle:

"I have to notice the able assistance rendered by Lieut. Giffard and Mr. Butler (mate), both of this ship, who accompanied me in the attack; the former, with my coxswain, George Martin, I regret to say, were severely wounded.

"I should not be doing justice to the division of boats before mentioned, if I did not express my satisfaction and full approbation of the ready co-operation afforded by them in the landing and re-embarkation of the troops, and their state of readiness to receive and cover them if necessary—Lieut. Thompson, the senior lieutenant of the Hastings, being in command.

"A Turkish soldier sent on board to superintend the distribution of arms, behaved exceedingly well, first in organizing the Syrians when on board, and afterwards in keeping them together on shore, and leading them on to the attack, and again in posting them so advantageously as would have enabled them to be of considerable use, had the force within advanced.

"I beg leave to inclose a return of the killed and wounded on board H.M. steam ship under my command.

"I have the honor, &c.

(Signed)

"HORATIO T. AUSTIN, Captain.

"Capt. H. B. Martin, senior officer off *Gibella*, H.M.S. *Carysfort*."

—  
"H.M.S. *Cyclops*, Sept. 12th, 1840."

"SIR.—I beg to acquaint you, for the information of Captain Martin, senior officer, with the proceedings of the detachment under my command, consisting of about two hundred rank and file of the royal marines, divided into four companies, under the command of Capt. Searle, and of Lieutenants Searle, Harrison, and Adair. Having had the pleasure to agree with you so perfectly as to the selection of the place for landing, it is only necessary for me to say, that the cannonading and shelling of the position and castle of Gebail, having been executed apparently with the most perfect and complete success by H.M.S. *Carysfort*, *Dido*, and *Cyclops*; and the gardens, fences, &c., thoroughly scoured and swept by the fire of the launches, the detachment was landed and formed in column, extended to the right, and then advanced directly upon the building, covered by the fences on the ascent as far as the summit, which being gained without the slightest intimation of the presence of an enemy—and you, as well as myself considered it impossible, after the effectual battering the building had undergone, that any one could remain in it, the companies were advanced in front of the last wall, and in the act of extending to advance, when a very heavy fire of musketry was suddenly opened from the loop holes of the castle, but principally, as it since appears, from the loop holes of the castle a few inches above the ground from excavation passages; the fire was returned by the detachments, and after one or two rounds I withdrew the men under the last wall, and pushed forward a sergeant and four or five men, to ascertain whether there was any possibility of getting access into the building, either by the doors, or the vacancies caused by the bombardment. The enemy's fire, however, became so warm, that as you were present in person during the whole affair, you must be aware it was quite hopeless to persevere with any prospect of success, and, therefore, I withdrew the detachments to the point of disembarkation, and from thence, in about an hour afterwards, the whole were once more embarked in the *Cyclops*. The painful part of my duty is to report the extent of our loss, which, as you will perceive, amounts (by the return annexed,) to one corporal and two privates killed, and one corporal and one private since dead from their wounds; and one second lieutenant, one lance sergeant, and fourteen privates wounded, nearly all severely.

"The pleasing part of my duty now remains, which is, to state that nothing could exceed the zeal, courage, and alacrity of the non-commissioned officers, drummers, and privates, who fully sustained the honorable character of the corps.

"My warmest gratitude is due to Capt. Searle, (the next senior officer,) and also to Lieutenants Adair, Searle, and Harrison, commanding companies, for the gallant and most efficient support I received from them; and also to Lieut. Spalding, acting adjutant to the detachment, for the active performance of every part of his duty, and more particularly for his gallantry in exerting himself in bringing off the wounded.

"I have the honour to be, &c.

(Signed) "CHARLES ROBINSON.  
"Captain Royal Marines, commanding Detachments."

"Return of officers and men belonging to her Majesty's ships and vessels, killed and wounded in the assault upon the fortified position of Gebail, September the 12th, 1840.

"Benbow.—Killed, two royal marines; wounded, four royal marines, severely.

"Hastings.—Killed, two royal marines; wounded, second Lieut. Charles W. Adair, R.M., slightly; seven royal marines, severely; three royal marines, slightly.

"Castor.—Wounded, one royal marine, severely.

"Zebra.—Killed one royal marine.

"Cyclops.—Wounded, Lieutenant George G. Giffard, severely; one seaman, severely.

"Total killed, 5; total wounded, 18."

"On the attack of Gebail, where our sailors and marines were repulsed, on arriving at the beach to re-embark for their respective ships, Lieut. Grenfell, first of the Cyclops steam-frigate, was observed to run back accompanied by a seaman, having missed an English Jack; arriving at the scene of action, under a heavy fire from the Egyptians, he carried away the flag, while the shot was flying in all directions about him and his bold companion; and getting down to the boats, they were received with three hearty cheers."

#### CAPTURE OF SIDON AND TYRE.

"Sidon, September 27th.

"Sidon, with its garrison of nearly 3,000 men, its immense stores of arms, ammunition, provisions,—of material of every description,—are all in the hands of the Sultan's troops.

"After the reconnaissance of the 20th, it was determined to send a force to attempt the reduction of the town. Accordingly, on the evening of the 24th, the Thunderer, 84, Capt. Berkeley, with the Wasp brig, an Austrian frigate, and a Turkish corvette, got under weigh from D'jouni for Sidon. On the evening of the 25th, the Gorgon steam frigate took on board from four to six hundred marines, while the Cyclops steam-frigate received about 1,500 Turkish troops, under the command of a Prussian officer, Col. Lane. Early on the morning of the 26th, the steamers got underway, and in a few hours joined the other ships, about three miles to the northward of Sidon. The force was here increased by the very seasonable arrival of the steamer Stromboli, having on board from 3 to 400 marines from England, having touched at Gibraltar and Malta; of the Hydra from Tyre.

"The steamers having towed the other ships into position, they all anchored, forming a crescent, which completely commanded the town from one extremity to the other. The Stromboli anchored to the extreme south; next to her the Wasp, the Austrian frigate, and the Turkish corvette. In the centre, commanding with her broadside the fort and causeway communicating with the

barrack, lay the Thunderer, having the Cyclops and Gorgon steamers to the southward. The latter hoisted the broad blue pennant, Commodore Napier being on board. About half-past eight a flag of truce was sent on shore, and the town summoned. In the meantime some of the inhabitants took advantage of the offer of the French steamer Castor, (which has been recently giving us some curious illustrations of French neutrality,) and went on board. In about two hours the ships opened fire, and it was only after they had been thundering away for an hour or so that we could form some estimate of the strength of the place. Shot and shell fell on it as thick as hailstones, without either making any very visible impression upon the walls, or enabling us to catch a glimpse of the red fez of a single soldier. At about one o'clock, however, a breach was made in the sea wall of the fort, while at nearly the same time one of the terrific broadsides of the Thunderer swept in the whole side of the outer barrack square. Between the smoke of the guns, and the dust of tumbling walls, it was impossible to see whether soldiers were retreating from the barrack or not. At all events, a signal was made to land the Turkish troops, and Capt. Austin, of Cyclops, was directed to attempt the breach. The launches, pinnaces, and boats of the different ships, with about 1,400 of the Turks, immediately put off under the protection of a continuous fire.

"When the boats reached the shore, the ships necessarily ceased firing; and before a single soldier could set his foot on land, a heavy fire of musketry was opened upon them from the barracks and buildings in the neighbourhood. The fire was returned from the guns of the launches, while all the boats pulled steadily in upon the shore, although the shot passed through some of them, severely injuring some of the soldiers and the crew. It is due to the Turks to say, that although two of them were shot dead in the boats, not a man of the whole body flinched from the landing. Had I not seen, (although at a safe distance) the cool courage of the English blue-jackets, I could not have believed that a union of personal bravery, and perfect discipline could have brought men to perform such duties with such steadiness and determination. While they were engaged in their perilous task of landing the troops, Commodore Napier, in one of the Gorgon's boats, had got under the breach. When my attention was first called to this point, he was nearly up to his arm-pits in water, making a scaling ladder of the shoulders of his boat's crew. He succeeded in mounting, but had scarcely time to look in, before a discharge of musketry from an opposite building obliged him to abandon the attempt. The troops from the boats, however, through a small aperture, were entering one by one from the opposite side, the guns from the launches and the sailors still keeping up a protecting fire. A scaling ladder was also thrown up the breach, by which a considerable number of the troops effected an entrance at that point. Within half an hour the fort was in the possession of the Sultan's troops. Col. Lane, and Lieut. Wemyss, (of the Cyclops's marines,) immediately turned one of the guns of the fort upon the opposite building, and thus checking the fire of musketry considerably facilitated the landing of the remainder of the troops.

"While the Turkish soldiers were thus occupied in taking possession of the fort, the ships continued their fire upon the barracks, and upon the fortress which commands the whole town. The fort, thus occupied, may be said to be the centre, as nearly as possible of the attack; and, while it was making, the marines were landed at both extremes from the Gorgon on the right, and from the Stromboli and the Austrian frigate on the left. Those from the Gorgon immediately formed on the beach, and having sent skirmishers into the wood by which it is bordered, marched upon the barrack; Commodore Napier accompanying them. It was arranged that the attack upon the barracks and the neighbouring buildings, occupied by the Egyptians should be made simultaneously by the marines from the right, and the troops from the fort. This fort is connected with the barracks by a narrow causeway or bridge, which was fully exposed to the fire of the enemy. It was a trying service for any body of men to attempt to cross it. One of the mates of the Cyclops, Mr. Cumming, volunteered to lead the Turks, and he fully succeeded in inspiring them with a portion of his own intrepid spirit. They undauntedly followed their young and dashing

leader—some of them over the bodies of their fallen comrades. The whole forces directed by Captain Austin, Col. Lane, and Walker Bey, moved quickly after them. They were immediately accompanied by the marines, led by Capt. Morisson; and after a brief, but severe struggle, the barrack was evacuated, the main body of the Egyptians retreating up a narrow arched street. From a large house opposite to the barrack the firing was still continued. The leader of the Egyptian force, Hassan Bey, headed a sortie from this house; and having three different times fired upon the marines, he himself fell, having received three musket balls through the body. No man could have served a cause with more desperate fidelity. From one of the prisoners it was subsequently ascertained that this leader had cut down one of his own followers, who, at the last moment, attempted to hoist a white flag. Seeing the soldiers and marines in possession of the fort, the barracks, and the principal street, the Egyptians at this point offered no further resistance, and 1,800 of them at once laid down their arms. They were immediately marched across the causeway into the fort.

“In the meantime the attack upon the extreme left was made by the marines of the Stromboli, and of the Austrian frigate. The landing here was more difficult and more severely contested than on the right. About 280 marines, English and Austrian, were embarked in the boats of the different ships, and after a heavy cannonading had, apparently, cleared the way for them, pulled for the shore. This part of the attack was under Lieut. Russell, of the Stromboli, who was accompanied by Mr. Chamberlayne, Mr. Warren, and Mr. Hunt, and about twenty of his ship's crew. The marines were led by Capt. Whylock and Lieut. Hocking. There was some little difficulty in landing, owing to the surf. During the time the men were leaving the boats, they were exposed to a heavy fire of musketry, by which some of them were severely wounded. As soon as they formed, they rushed up a steep sand declivity, leading to the breach through which they were to enter the town. Poor Hocking, while cheering on the marines, a few yards in advance of them, received a mortal wound. The men continued, vying with each other to reach the walls first. An Austrian marine had the unfortunate glory, and was shot dead in the breach, which was immediately carried. The object of this division was to gain the fortress, which commands the whole town from an eminence almost in the centre. The attacking party fought their way gallantly through the streets, firing up into the houses upon their assailants, and in less than an hour their flag was floating from the fortress. The rigging of the ships was immediately manned, and three inspiring cheers announced the complete success of the attack.

“There was one incident worthy of remark connected with the attack upon the left of the town. Two midshipmen—Mr. Hunt of the Stromboli, and one of the Austrian frigate—were entrusted with the ensigns upon landing. They contested the honor of first planting each his own ensign—endeavouring to outrun each other under the very heaviest of the fire. The union jack was first hoisted. The Austrian Archduke wrote that evening to the Admiral to ask Mr. Hunt's promotion; but as he had not yet passed, he is rewarded with an Austrian order. I believe a similar reward will be bestowed on his brave young competitor.

“Lieut. Hocking is the only English officer who fell. Six or eight marines and blue-jackets are, I believe all our loss in killed. A considerable number, however, have been wounded, some severely. The Turks suffered in about the same proportion. It is said that about 300 Egyptians were killed, 2,470, including some sick, have been taken and sent to D'jounti.

“Although the officers of marines, and of the ships, made every exertion to prevent pillage, yet, taken as the town was by assault, it was impossible altogether to restrain the victorious soldiers. A new house, just finished, and splendidly furnished by Soliman Pacha, was completely gutted, and the valuable furniture destroyed. Even to Egyptian prisoners, however, I did not hear of a single act of personal violence.”

## MERCHANT SEAMEN'S DUES.

SIR.—In your Magazine for March, 1839, you published a petition presented to Parliament by Admiral, Sir Edward Codrington from myself, praying “That Parliament would take such measures as they in their wisdom may deem meet, to cause the large sums contributed by Merchant Seamen, and at present vested in the hands of the Merchant Seamen’s Corporation in London, and Trustees at the outports, to be appropriated for their benefit; if not by erecting Asylums, in granting an increase to their Pensions.” Several petitions to a similar purport were subsequently presented, but particularly one prepared by Mr. Gray, (one of the witnesses examined before the Select Committee of the House of Commons,) to which were affixed 1,800 signatures; consisting of sea-going owners, masters, mates, and seamen, in the port of London, collected in the short space of eight days, and presented to the House of Commons by Capt. Sir Thomas Troubridge, Bart., R.N. in February last.

This petition was read at a public meeting, at which Admiral Sir E. Codrington, G.C.B. &c. presided, consisting of shipowners, masters, mates, and seamen, held at the London Tavern, the 17th of January last, with a view to bring this matter under the consideration of Parliament, for the better securing those advantages which were contemplated by the formation of the said fund, and procuring a change in the law, which regulates its present distribution.

It will be satisfactory for the petitioners to know that their complaints have not passed unheeded,—that a select Committee of the House of Commons commenced taking evidence on the 18th of May, and that on the 24th ultimo their report, together with the evidence, were made public.

The main grievances alleged have been fully established, namely, inequality of the pensions, which at many ports are not regulated with regard to justice,—length of service, or peculiar circumstance of the applicant not being considered, but *all* receiving a like sum.

For instance, I know the case of a ship-carpenter, who is totally blind from the blow of a capstan bar; he had been in the merchant service twenty-five years, and receives two shillings a month from the Port of Sunderland.

The very inaccurate and imperfect state of the returns to Parliament from the Merchant Seamen’s Corporation in London, notwithstanding that Corporation consists of 117 gentlemen, of the principal merchants and shipowners in London, from which twenty-two are selected for a Committee of Management, and from that Committee seven are chosen to form a Committee of Accounts!!!

The surplus or accumulated funds, have not in all cases been placed in Parliamentary securities, as directed by the 9th section of the original act, but are lent on the bonds of Corporations, or of public companies, or are lodged in Provincial Banks. 2d.—In the event of a Provincial Bank failing, who is to make good the loss to the worn-out mariner, the widow, and the orphan?

The absolute independency of the trustees of the out-ports of any control, and the very important admission that, (with the exception of a comparatively trifling sum yielding not half per cent. on the income,)

the accumulated funds arise from savings of duty-money contributed by the seamen; although an opinion prevailed that those large balances arose principally from legacies and donations; and finally the recommendation of the Committee that there should be an alteration in the law, though they do not recommend the immediate introduction of a Bill into Parliament to carry their suggestions into effect.

Having taken some little trouble in this business in conjunction with Admiral, Sir Edward Codrington, G.C.B., &c., I cannot but congratulate the seamen who so numerously signed the petitions, that the exertions of the gallant admiral, both in and out of Parliament, in obtaining the Committee, by pressing the matter on the notice of Her Majesty's Government has been crowned with success. It is but right that the mercantile marine should know that it is to him they are indebted for the appointment of the Select Committee, to inquire how those sums contributed in youth and manhood to support them in age and infirmity, can be most effectually maintained and administered.

Now that a state of the funds, and the present mode of administering relief, also the disposal of the accumulated stock, is fairly laid open for the consideration of the seamen, the question is, what step is next to be taken?

The Committee of the House of Commons do not recommend an immediate introduction of a Bill into Parliament to carry their suggestions into effect; yet the defects of the existing laws, are so self-evident that they recommend there should be an alteration; surely the sooner a bad law is altered the better, particularly where the interest of the worn-out mariner, the widow and the orphan are concerned.

Should you deem this worthy of a place in your valuable Magazine, I shall ere long trouble you with a few more remarks on this subject.

I remain, Sir, your obedient servant,

SAMUEL BAKER,

London, 14th October, 1840.

Hon.-Sec., &c.

#### ROCKS NEAR THE AZORES.

WE understand that Her Majesty the Queen of Portugal having seen the official communication of the Major-General of the Fleet, under date of the 8th instant, transmitting the report addressed to him by Manvel Marriano Ferreira, captain and chief pilot of the Brazilian brig, *Constante*, respecting two sunken rocks which he saw and approached closely, on his recent voyage from Paraiba to Lisbon; and it being most important to ascertain the position of the said two rocks, neither of them being found marked in any of the charts, orders that the said Major-General shall cause the first vessel-of-war destined for those seas, to take a survey of the said rocks, in order that their position and other circumstances being ascertained, this notice may be afterwards ratified.

The following is the report referred to in the above:—

I, Manvel Marriano Ferreira, Pilot, while navigating from Paraiba to Lisbon, on board the Brazilian brig "*Constante*," as master and chief pilot thereof, and being to the westward of the Azores, near the parallel,



and not very distant from the meridian of some sunken rocks, marked in Norie's chart as doubtful: at 10 A.M. on the 26th of August, 1840, sailing in a northerly direction with light winds from the E.S.E., saw breakers to windward at the distance of one to two miles. Shortly after it fell calm, and my vessel remained in the same position for six hours, and in sight of the said breakers, so that I got the boats out to keep her head away and tow her out of danger. At noon it being then high water at that place, the surf had nearly disappeared; at 2 P.M. it again became perceptible, and at 6 P.M. a group of rocks was clearly visible above the water. By the latitude I had observed at noon, and the longitude given by a good chronometer, and the rocks being about a mile and a half distant from me, I compute their situation to be in north latitude  $37^{\circ} 56' 20''$ , and west longitude  $33^{\circ} 4' 8''$  from Greenwich. As the wind freshened, at 6 P.M. I made sail again, and having arrived in three days in sight of the island of Flores, I found that my chronometer was perfectly correct. The wind being east, I tacked to the southward, and on the 31st of August, I passed near another sunken rock, which is marked in the said chart, as having been seen by Capt. Robson, to the westward of Fayal. At 8 A.M. I saw some rocks above water, over which the sea broke, and which I passed to leeward, at the distance of one to two miles. By observation, and the chronometer, I calculate this second danger to be situated in latitude  $38^{\circ} 26' 44''$ , and longitude, west of Greenwich  $30^{\circ} 25' 10''$ , all which, I certify without any doubt.—*Lisbon, 6th October, 1840.*

#### HYDROGRAPHY.

SIR.—I have often thought of calling your attention to the very inefficient manner in which this great nautical country is supplied with charts and books of navigation; and when I consider the number of able officers, who in time of peace, have so much leisure for devoting to that very essential branch of their possession, (surveying), I cannot but imagine that some restrictive regulations, or some want of encouragement from head-quarters, must prevent their abilities being exercised for the mutual benefit of themselves, their families, their profession, and their country's best interests.

Of the Admiralty regulations on this subject I am ignorant, but I think I have heard, there is a Board of Navigation, or something similar. I know that some of our charts are termed Admiralty charts, and they generally bear some officer's name; but although they may be our best, they are not always perfect—for instance, take one of our principal commercial ports, Liverpool, and let any man attempt to take his vessel in through the New Cut, and if he follows the chart he must inevitably run his vessel on the banks.\*

Then, as a specimen of our Pilot Books: when I last left the river I thought I would try the merits of "Reid's Assistant and Seamen's New Guide," and intending to pass through the Five Fathom Channel, I

\* Is our correspondent aware that the survey of Commander Denham is the authority for this chart. But he must surely see that the incessant changes going forward at the entrance of the Mersey, render it difficult to keep any one particular chart perfect, where there are a thousand to be looked after.—Ed.

turned to page 16, when I found, "In running down to the Nore, steer S.E.b.E., about three miles and a half." Well, on I went, and had the satisfaction of sounding with six inches under my bottom, when an old fisherman I had on board said, "You will soon be ashore, Sir, if you keep this course." On turning to the chart I see the course is there given S.E.  $\frac{1}{4}$  S., and here the chart is correct; but after all what is the use of telling us to steer any particular course in crossing a tide way? What we want to know is the correct bearing from one buoy, or mark, to another.

Having got out of the river, I went away to the North Sea, and here let me digress for a moment, to recommend to all navigators that admirable invention Capt. Ericsson's Sounding Lead; for let them once experience in waters like these, where the soundings are so important, the comfort of being able to keep your lead going, while running six or seven knots through the water, and they will never willingly go to sea without it again.

On visiting Dantzig, in the Baltic, I met with great civility from the professor at the Observatory, who gave me the following longitudes, as the result of many observations. I will also set down by their side those given in Norie's tables and the charts, to exemplify how correct we are.

	<i>Long. E.</i>			<i>Norie.</i>			<i>Charts.</i>		
Observatory at Dantzig,	18°	41'	15''	18°	38'	5''	18°	35'	
Hert Light,	18	49	14	18	48	22	18	47	
Bezerhoot,	18	20	39	18	18	30	18	24	
Pillau,	19	54	6	19	53	59	19	56	
Arkona,	13	36	18	13	27	53	13	36	

Possibly Norie's longitude of Arkona is a mis-print, but it is not less mischievous on that account.

Now, sir, it may be said in defence, where are there better charts than our own? for many of our countrymen are apt to think our superiority over other nations is alike in every thing. I will anticipate the question, and answer,—in France,—just run across the Channel, and look at those able productions put forth by authority, under the direction of M. Beautemps Beupré. I have good reason to know their merits, having taken my vessel when unable to get a pilot, between Ushant and the Main, up to Brest, and verified as I proceeded, the correct position of the different dangers;—look at our charts of Ushant,—had some ink been sprinkled at hazard on the paper, the rocks would be as well represented.

I suspect, sir, there is much room for improvement in this department, and I would merely suggest to those in authority, whether officers might not be beneficially employed in procuring information, and others of great experience in forming a board, for the examination of such works as were produced. Whether an Admiralty stamp might not be used for such works of unquestionable merit, as individuals might submit to their examination;—it might even be made a source of revenue, while at the same time it would add to the value of that individual's work.

It is not, however, my business or intention to point out the remedy, I merely wish to expose the grievance, and that it is one, will, I believe be acknowledged by all practical men.—I am, Sir, &c.

SCRUTATOR.

## BAY OF CAERMARTHEN,—SAUNDERSFOOT HARBOUR.

THE following has been addressed to the Editor of the *Shipping Gazette*.

SIR.—The professed object of the conductors of the *Shipping Gazette*, being to give publicity to matters interesting to the shipowner and merchant, I flatter myself they will afford space in the columns of that journal, to an account of some improvements undertaken by the proprietors of Saundersfoot harbour, and which I consider it desirable should be made public, for the information of masters of vessels loading in the Bay of Caermarthen, and occasionally shipping at Saundersfoot.

Since the completion of this harbour in 1832, several additions have from time to time been made to the harbour; but the additions recently made consist of an extension of the piers, by which the entrance has been much reduced, and the greatest security given to vessels in the harbour. New jetties and quays have been erected, and the accommodation for loading vessels very considerably increased.

I beg to avail myself of this opportunity to state, that Saundersfoot harbour is situated on the west side of Caermarthen Bay, there being neither sandbank nor bar in approaching it from the Bristol Channel, to prevent vessels entering in all weathers. The bearing, with sailing directions, is from Caldy Island light, N.N.E., to Monkstone three miles and a half; from Monkstone to Saundersfoot pier, N.b.W. a mile and a half; and from the Worms-Head to Saundersfoot, N.N.W., sixteen miles.

The order, by the Lords of the Treasury, that in future all vessels arriving in Saundersfoot harbour from foreign ports, should be reported to and cleared by their principal officer in Saundersfoot, instead of the master having to report, and be cleared by the chief officer in Milford, will be the means of giving greater facility for shipments to foreign ports; and with the well arranged jetties, quays, and moorings, the most complete means are afforded for dispatch of business, in loading vessels with the valuable anthracite coal and culm of this district.

I am, &c.

JOHN LONGBOURNE.

*Saundersfoot, Bay of Caermarthen, July 13.*

## FALMOUTH.

THE following has been addressed to the Editor of the *Shipping Gazette* :—

SIR.—The protection and shelter that Falmouth bay and the outer roads offer to vessels when outward-bound, and caught with strong westerly gales off the Lizard, have never yet been properly pointed out in the British Channel Pilot Books.

Falmouth bay and the outer roads can be entered at all times, now a lighthouse is erected on St. Anthony's Point, and are in many respects preferable to Torbay or any other in the channel. Steam vessels, and also others with a leading wind, can enter the harbour at night in perfect safety, by attending to the following directions. Ships when off the Lizard at night, and wishing to bear up for Falmouth harbour, the bay or the outer roads, should steer E.N.E., keeping the Lizards lights

in sight until Falmouth harbour light bears N.N.E.; then steer directly for it, and run in until you are within one and a half, or not more than two cables length from the light; then steer N.b.W., this will take you to the eastward of the Black Rock up to the Three Fathom, or Falmouth Bank; but should you wish to anchor in Carrick Roads, steer N.b.W. until you fall into sixteen fathoms; you will then be in the fair way, and may steer N.  $\frac{1}{2}$  E. When St. Mawes Castle bears E.S.E., or the centre of Falmouth town lights bear W.N.W., you will have entered Carrick Roads, and may anchor. Ships wishing to anchor in the outer roads should proceed as before until within about two miles of Falmouth light; then bring it to bear N.E. by E.  $\frac{1}{2}$  E., and keep it on that bearing until you are about three-fourths of a mile from it; the high land of Pendennis will then bear N.b.W., and you may anchor in ten fathoms. This is a safe roadstead, as you will have the harbour open, and can, on the wind getting round to the eastward, either proceed to sea, or run into the harbour.

W. YEAMES, *Master R.N.*

#### LIGHTHOUSE ON THE SEVEN STONES.

A HIGHLY respectable meeting has been held at the office of E. Hull, Esq., collector of customs of this port, to consider the propriety of petitioning the Trinity Board for a lighthouse, or night beacon, on the Seven Stones—a dangerous reef of rocks, situated seven miles N.N.E. of Scilly Islands. Whilst the document as a resolution of the sense of the meeting was in preparation, a very interesting desultory conversation took place, from which we learnt, from the testimony of some merchant captains, who were present, that the value and efficiency of the light contemplated were beyond a question. Coasting vessels generally made their voyages by hugging the land; but if a vessel could not make the Longships light for a certainty, it was considered a bold step to venture on a thick night down the channel between that light and the Seven Stones; and the course regularly adopted in such a case was to bear to the westward of Scilly, making, on the average, at least thirty-six hours difference in the voyage. For vessels from Ireland, it would be an incalculable benefit. It was the opinion of these masters, that a large number of vessels had struck on the Seven Stones, and, with their crews, must have been lost. The utility of such a light, and its assistance to the mariner, were also mentioned, in connexion with the fact of a vessel's having nine hours' tide up, and but three hours down, the channel. The tax would be for such a lighthouse, or light-ship, one farthing per ton on discharging.

Robert Were Fox, Esq., was called to the chair, when Edward Hull, Esq., the collector of the customs, laid before the meeting the letter of Mr. Herbert, secretary to the corporation of the Trinity Board, London, dated Feb. 15th, relative to the establishment of a floating light on the rocks called the Seven Stones; when the attention of the meeting was directed by him to the position of the said reef, on a chart exhibited, on a large scale, of the Start to Tintagel Head, including Scilly Islands. After which it was resolved unanimously—"That this meeting are of opinion, that the establishment of a floating light, or efficient night beacon, upon the Seven Stones would be very advantageous to the navi-

gation of that part of the channel, and tend to the safety of both lives and property; and that this meeting will individually contribute to such moderate toll as the Trinity Board may think requisite, for enabling them to carry into effect the desired object."

The resolution was signed by all present, and will be forwarded by the collector to the Board.

**ROBERTSON'S SLIDE TILLER.**—Mr. Robertson's Tiller appears to me a very good invention, but it requires to be looked after constantly, to see that nothing gets into the slide, which may clog the travelling of it.

The tiller-ropes are always taut, and the tiller in consequence steady and free from the jerking motion which the old plan admitted, especially when at anchor.

The steerage of the ship is also easier, in consequence of the tiller immediately obeying the motion of the wheel; and upon the whole I consider it a very good contrivance; but it must be examined and kept well oiled or greased, and have the old grease cleaned away, when fresh is put on; it should also be covered over to keep the rain off. If these precautions are omitted the slide and travelling cylinder will clog, and the tiller become immovable.

I am, &c.

F. W. BEECHY.

*Lizard, 16th October, 1840.*

**BUOYS AT THE MOUTHS OF THE INDUS.**—We understand that the schooner *Mahe* starts in a few days for the Indus, for the purpose of laying down buoys at the mouths of the river, from which circumstance it may be easily inferred, the government intends to start the troops destined for service in Scinde, as soon as practicable. The heavy rains, which have prevailed incessantly throughout the provinces will prevent any immediate movement, but we are told that the first fair day will find troops everywhere in motion.—*Bombay United Service Gazette, Aug. 4.*

**THE HELLAS.**—On the 22nd of May, the *Hellas*, Capt. Jauncey, was becalmed not far from the Brothers, to the northward of Namo, in company with eight junks and three large pulling boats, to all appearance trading vessels, and no particular notice was taken of them on board, until their moving nearer to the *Hellas* roused the suspicions of the commander, who gave orders to clear for action. Before every thing could be got in perfect readiness, the junks had approached the vessel right astern, and immediately opened a smart fire of musketry upon her, which the *Hellas* could only answer with a similar fire, the calm preventing her from bringing her guns to bear; besides which she had got entangled between the fishing stakes, which rendered motion without the aid of wind altogether impossible. The fire from the *Hellas* proved ineffective, the junks being well defended with mattresses and mats, from behind which their crews fired with great steadiness, taking such good aim that they generally wounded whoever for a moment exposed himself to their fire. The Chinese besides made use of hand-grenades, by means of which the vessel was fired several times, but the flames were fortunately extinguished before they could communicate to the rigging or sails. At length a breeze sprung up, which enabled the

Hellas to make use of her guns, and after having done considerable damage to the junks, and killed, it is supposed, a great number of pirates, these, after a fight of four hours, sheered off. Of a crew of fifty the Hellas had all the Europeans, fifteen in number, and ten lascars, more or less severely wounded, and we are sorry to report that Capt. Jauncey was of all most badly wounded, having, besides several flesh wounds in his legs, and other parts of the body, been struck by a ball on the chin, which broke his jawbone, and also received a severe wound in the eye; the wounds are not, however, considered dangerous, and we are happy to hear he is doing well. From all accounts, the officers and crew of the Hellas have behaved most gallantly, and an act of bravery by the First Tindal, a Malay, deserves particular mention, who, when one of the junks had got foul of the Hellas, jumped on board the junk, and cleft the head of a fellow whom he saw just taking aim with his matchlock, and then returned unhurt again to the vessel. Had the pirates had cannon it is more than probable that in spite of the most gallant defence the Hellas would have been overpowered. After the guns of the vessel had been brought to bear she again got foul of a junk, when Mr. M'Minnis, the first officer, followed by two sailors, jumped on board, on which all the crew on deck leaped into the water, but one of the pirates fired his matchlock from the hold, and badly wounded a sailor on the head. On trying to regain their junk many were shot, and it is supposed their loss must have been very severe.

#### THE NELSON MEMORIAL.

On the afternoon of the 30th Sept., the foundation stone of this national tribute to the memory of one of the greatest naval heroes that this or any other country ever gave birth to, was laid on the site in Trafalgar-square, presented to the Committee by Her Majesty's Government, for the purpose of Commemorating the many brilliant achievements of that gallant and victorious commander of the British fleets—the immortal Nelson. The proceedings were conducted in a private manner, owing to the noblemen and gentlemen comprising the committee being absent from town, and this was done in order that the work might not be delayed. C. D. Scott, Esq., the honorary secretary of the Committee, officiated on the occasion.

At half-past four o'clock, after the arrangement of the numerous preliminaries, a massive block of Dartmoor stone, weighing fourteen tons, was raised, and Mr. Scott then placed in the bottle, which he hermetically sealed, the various coins of the realm, from a sovereign to a silver penny, which have been struck during the reign of Her Majesty the Queen, a list of the distinguished members of the Committee and Trustees, together with a statement of their proceedings, in connection with the commencement of the work, and also the following inscription engrossed on vellum:—

“MEMORIAL OF THE ACHIEVEMENTS OF THE LATE ADMIRAL LORD VISCOUNT NELSON.”

“At a general meeting, held at the Thatched House, St. James's Street, on Thursday, February the 22nd, 1838.—

“Resolved,—That this meeting, impressed with the deepest veneration for

the memory of Lord Nelson, propose that a general subscription be raised for the purpose of erecting a national monument in a conspicuous part of this metropolis, in commemoration of his glorious achievements.

“Resolved,—That the following noblemen and gentlemen, with power to add to their number, be the committee to carry this object into effect.”

[Here follow the names of the noblemen and gentlemen.]

INSCRIPTION.

“The foundation stone of this column, the tribute of the British people to the memory of Admiral Lord Viscount Nelson, was laid on the thirtieth day of September, in the year of our Lord one thousand eight hundred and forty, and the fourth year of the reign of her Majesty Victoria, Queen of Great Britain and Ireland, by Charles Davison Scott, Esq., son of John Scott, Esq., secretary to the departed hero, who fell with his Lordship on board the Victory, in the ever-memorable battle of Trafalgar, on the twenty-first day of October, in the year one thousand eight hundred and five, when Divine Providence blessed the fleet under his command, with the most signal and decisive victory over the combined fleets of France and Spain.

“HIS MEMORY SHALL ENDURE WHEN THIS COLUMN SHALL HAVE PERISHED.

“The column was erected by Messrs. Grissell and Peto, from the designs and under the immediate superintendence of William Railton, Esq.”

The bottle containing the coins and inscriptions was here inserted, by Mr. Scott, in a cavity in the foundation under the stone, where, in all human probability, it will remain undisturbed for very many centuries; and the block was then lowered to its resting-place amidst the cheers of those present.

The usual forms connected with proceedings of this nature were then gone through by Mr. Scott.

The following particulars relative to this monument were incidentally collected on the ground:—

The pedestal, having on its four sides *bassi relievi* of Nelson’s four principal engagements,—viz. St. Vincent, Copenhagen, Nile, and Trafalgar, is raised on a flight of twelve steps, at the angles of which latter are lions in a recumbent position.

The order of the column is Corinthian.

The capital is taken from the bold and simple example of Mars Ultor at Rome; and on each side of it is introduced a figure of Victory. On the capital is a circular pedestal, ornamented with a wreath of laurel and lions’ heads, and surmounted by a statue of Nelson, seventeen feet in height.

The shaft of the column is fluted. Its base is richly ornamented. The lower part with a cable, and the upper with oak leaves.

The total height of the column is 120 feet, and the diameter 11 feet 6 inches.

The whole of the column is of solid granite from the Fogginton quarries at Dartmoor. The average weight of each block is nine tons.

**THE VANGUARD.**—Extract of a letter from an officer of H.M.S. Vanguard, dated Malta, Oct. 8th:—“On Sunday the 13th of September, we sailed from Cork with the head-quarters of the 19th regiment on board; our usual good luck attended us in the shape of a beautiful breeze from north-west, which gradually increased to a stiff gale, with a tolerably heavy sea. The Vanguard certainly deserves her high cha-

racter for speed; several times the log was hove, twice, nay thrice, before we could persuade ourselves she was going so fast. One serious drawback to our comfort was her violent motion. I fear she has sustained a severe straining, and that too in a sea, that did not at all warrant such an effect. The general supposition among the officers and men who sailed in her before is, that the enormous extra weight with which we are burthened is the cause. A few of the items may be interesting:

	<i>Imprimis.</i>	<i>Tons.</i>
280 Soldiers of the 19th regt., with women, children, and baggage		60
Spare muskets		18
Six 68-pounder guns		19½
Two spars for sheers		10
Shells		12½
Powder		2¼
Geer		1
Gun Carriages		3¼
Six hundred barrels musket-ball cartridges		15
	Total	143

It must be remembered that all this is over and above our full complement of every thing. Can it, therefore, be wondered at that a ship, immersed between eighteen and twenty iaches more than her proper draught of water, should labour and strain herself violently? This, together with the consequent stretching of the new lower rigging, makes it a matter, almost of miracle, that we were not disabled by the loss of our masts. Our passage, although short, to Gibraltar (being only six days) might have been shorter, had we been able to carry sail.—*Hants. Telegraph.*

**VANGUARD.**—Some disparaging accounts of the Vanguard have been circulated, stating that she strained violently in a gale when crossing the Bay of Biscay. The letters we have seen assert the contrary, and that no ship could behave better, notwithstanding that she was deep loaded with stores for the fleet, besides 300 troops. She made the passage from Cork to Gibraltar in six days, and has now joined Sir Robert Stopford, as has also the Rodney.—*Naval and Military Gazette.*

**SYRIA.**—The operations of Her Majesty's Ships on the coast of Syria have been attended with the most complete success, the whole coast from Latakia to St. Jean D'Acre being in the hands of the Allies.

**CHINA.**—The accounts from China state that the first vessel of the expedition arrived there on the 9th of June, and the greatest part of the remainder on the 21st. The next day Sir J. J. G. Bremer issued a notice declaring the river and harbour of Canton in a state of blockade after the 28th. Capt. Elliott had kept several ships at the mouth of the river, to carry the blockade into effect, and ordered the rest to proceed to the north, and seize on the island of Chusan, which is situate near the mouth of the great river Yang Taen.

Admiral Elliott arrived off Macao on the 28th of June, and having taken Capt. Elliott on board, followed the expedition. The latter had issued proclamations to the people along the coast, promising that their



persons and property should be respected; and Governor Lin, had on his side, offered rewards for the capture and destruction of the British shipping.

The Chinese had made another unsuccessful attempt to burn the fleet by means of fire rafts.

**THE NAVY.**—The following vessels are on the stocks or launched, and nearly ready for sea:—

<i>Vessels.</i>	<i>Guns.</i>	<i>Building at</i>	<i>Vessels.</i>	<i>Guns.</i>	<i>[Building at</i>
Trafalgar	120	Woolwich.	Active	26	Chatham.
St. George	120	Plymouth.	Amethyst	26	Plymouth.
Victoria	110	Pembroke.	Creole	26	Plymouth.
Algiers	110	Pembroke.	Juno	26	Pembroke.
Royal Frederick	110	Portsmouth.	Iris	26	Pembroke.
London	92	Chatham.	Niobe	26	Plymouth.
Prince Albert	90	Portsmouth.	Spartan	26	Plymouth.
Albion	90	Plymouth.	Coquette	20	Chatham.
Aboukir	90	Plymouth.	Calypso	20	Chatham.
Exmouth	90	Plymouth.	Syren	16	Woolwich.
Hannibal	90	Woolwich.	Squirrel	16	Pembroke.
Centurion	80	Pembroke.	Elk	16	Chatham.
Collingwood	80	Pembroke.	Helena	16	Pembroke.
Lion	80	Pembroke.	Heron	16	Chatham.
Colossus	80	Pembroke.	Liberty	16	Pembroke.
Mars	80	Chatham.	Albatross	16	Portsmouth.
Majestic	80	Chatham.	Arab	16	Chatham.
Superb	80	Pembroke.	Daring	10	Sheerness.
Goliath	80	Chatham.	Hound	10	Woolwich.
Hindustan	78	Plymouth.	Dove	10	Chatham.
Boscawen	70	Woolwich.	Despatch	10	Chatham.
Cumberland	70	Chatham.	Heroine	10	Woolwich.
Chichester	50	Woolwich.	Mariner	10	Pembroke.
Flora	36	Plymouth.	Martin	10	Pembroke.
Sibylle	36	Pembroke.	Sealark	10	Portsmouth.
Constance	36	Portsmouth.	Irresistible	8	Chatham.
Chesapeake	36	Chatham.	Spy	3	Sheerness.
Cambrian	36	Pembroke.	Dart	3	Sheerness.
Amphion	36	Woolwich.	Philomel, brig		Plymouth.

And the Styx, Ardent, Devastation, Driver, Geyser, and Growler armed steam vessels.

The 90-gun ships building are intended to have a complete tier of 68-pounders upon their lower decks, which will give them a broadside weight of metal superior to the largest ships in the British navy, or in the world.

Instead of the shot-cants now in use, around the hatchways, for stowing shots, an iron bar will in future be substituted for this purpose; a great improvement, already adopted in fitting the Vanguard.

#### COLLISION OF STEAMERS.

SIR.—I was much grieved at seeing an account of the collision of the Britannia and Phoenix steamers, off Dungeness. People will of course be more timid, and doubtful of their safety in taking their passages in steam vessels; as there does not appear to be any general understood

rule,\* on which side they are to pass each other when going in opposite directions. In page 844 of your December Number for last year, I gave a hint on the subject, for the purpose of calling the attention of parties concerned in steam navigation, to the necessity of coming to some general rule, not in this country only, but in all others, where steam vessels are employed, to pass on the Starboard side, as I feel assured every seaman will agree with me, and say, it would contribute much to their safety, which is my sole object; and this order I should suggest to be made public to the whole of the crews, and particularly to the man at the wheel. If this method were adopted, and universally known, sailing vessels might and would also benefit by it in many points of sailing.

But in daylight, and clear weather, a good look out is sufficient to ensure safety: how many accidents are avoided on turnpike roads by the drivers knowing on which side they are to pass, and why should it not be so with steam vessels.

I find that steam vessels carry two lights, one on the foremast, and the other on the mainmast. The one on the foremast is the lowest, which in my humble opinion is a most excellent arrangement, and is quite sufficient to point out the position of any vessel bearing them. *Query*.—Are such lights hoisted at sea? Or, did the *Britannia* or *Phoenix* show such lights? It appears from the account, the *Phoenix* was off Dungeness, had just altered her course to S.W. for Cape le Heve, when she saw the *Britannia*. But the account does not say in what position as to bearing. The *Phoenix* it appears immediately put her helm a starboard and when she was struck by the *Britannia* her head was S.b.E., and had altered the position of her head five points. Now had the *Phoenix* been seen by the *Britannia*, even at the same time, and had had-a-starboard the helm, in all probability they would have cleared each other. How was the *Britannia*'s head when she struck the *Phoenix*? If the *Britannia* had backed her engines as reported, the collision could not have been so violent as to cut the *Phoenix* to the waters'-edge. The look out ought not to be trusted to one person after dark.

An inquiry, of course, will take place, and these queries ascertained.

I also have seen an account of the Steam vessel Commodore from the Clyde to Liverpool; when about eight miles off Douglas, Isle of Man. At 10 P.M., they saw a light ahead, they immediately put their helm a starboard, (as, the account says, *was the usual custom on such occasions,*) which I am extremely glad to hear; but the other vessel, a sloop, unfortunately put her helm a port, the consequence was the steamer ran over her; and two men only were saved out of four that were on board the sloop. If passing on the starboard side had been generally known this loss in all probability would have not happened. The above method, I think, must and will be ultimately adopted, and the sooner the better.

I am, Sir, &c.

AN OLD NORTH-SEA CRUISER.

P.S.—The brig *Bure* referred to in p. 43, of your January Number, was in the Port of Ipswich, to which *she belongs*, in the latter part of October last.

\* Our correspondent will observe the recent general recommendation of the Trinity-House on this subject, supported by its adoption, by order of the Admiralty, in the men-of-war steamers.—ED.

## CHINA.

Her Majesty's ships and transports in the Chinese waters on the 23rd of June, forming part of the expedition to China : Druid, 44, Capt. Smith ; Volage, Capt. Warren ; and Hyacinth.

Arrived, 9th June.—H.M. ship Alligator, 28, Capt. Kuper ; 16th—Hon. Company's armed steamer Madagascar, Capt. Dicey ; 21st—H.M.S. Wellesey, 74, Capt. T. Maitland, bearing the broad pennant of Commodore Sir J. J. G. Bremer ; Cruiser, 16, H. W. Giffard, Commander ; Algerine, 10, T. H. Mason, Commander ; and Rattlesnake troop-ship, W. Brodie, Acting-Commander ; H.E.I. Company's steamer Queen, Capt. Warden ; Atalanta, Capt. Rogers, and with the transports Blundell, Trail ; David Malcolm, Malcolm ; Defiance, Evatt ; Eagle ; Edmonstone, Macdougall ; Ernaad, Hill ; Indian Oak, Rayne ; Isabella, Robertson, Cole ; John Adams, Eales ; Medusa, Purdie ; Mermaid, Sedgwick ; Rahomany, Landers ; Rustomjee Cowasjee, Gallie ; Stalkart, Dixon ; Sulimany, Macfarlane ; Victoria, Potter ; William Wilson, Hawkins, from Singapore, 22d ; H.M.S. Conway, 28, C. R. D. Bethune, Capt. ; Larne, 20, Capt. P. J. Blake, with transports ; Elizabeth Ainslie, Lyster ; Futtaeh Salem, Gillet ; Mahomed Schah, Ovenstone from Singapore, 11th inst.

The first arrival of this armament was H.M.S. Alligator, on the 28th, Capt. Kuper, between two and three o'clock a.m., on 9th instant, in the Capsingmoon, at the very moment that the Chinese officers had sent in about eighteen fire-rafts, constructed of old outside fishing-boats, and some cargo-boats, chained together two-and-two, and filled with combustible matter of all descriptions, to burn the British shipping. The fleet did not suffer any damage from these rafts, set adrift before the wind and tide, and they were speedily towed on shore by the boats of the squadron. Thus, at the very instant of his arrival, Capt. Kuper found his countrymen and the Chinese engaged in hostilities.

Previous to this third attempt to burn the English fleet, the Chinese Government had sent a boat-load of poisoned tea, packed in small parcels, to be sold to the sailors. This nefarious attempt, it is reported, was thus discovered. The boat was captured by pirates, who sold her cargo to their fellow-countrymen. Many deaths followed the use of the poisoned tea ; and thus

" Even-handed justice  
Commends the ingredients of the poison'd chalice  
To their own lips."

The Alligator brought the overland mail of 4th of March, and was followed by the Hon. East India Company's armed steamers Madagascar, Capt. Dicey, which vessel arrived on the 16th inst. On the 15th and 20th H.M.S. Alligator, and the Hon. East India Company's steamer, Madagascar, respectively anchored in the roads, and saluted the city of Macao with nineteen guns, which on both occasions was immediately returned by the Franciscan Fort.

H.M.S. Wellesey, bearing the broad pennant of Commodore Sir J. J. G. Bremer, Commander-in-chief on the India station, arrived on the 20th with H.M.S. Cruiser, Algerine, Rattlesnake, (troop-ship,) the East India Company's armed steamers the Queen, and Atalanta, and eighteen sail of transports in company, having on board her Majesty's 49th, 26th (Cameronians,) 18th (R.I. Irish,) the Sepoy volunteers from Calcutta, and a detachment of Sappers and Miners from Madras. The troops arrived in the highest condition of health and spirits, under the command of Col. Burrell.

On Monday evening two of the squadron, with some of the transports, proceeded to the northward ; and this morning H.M.S. Wellesey, with the rest of the squadron, except those hereafter mentioned, stood to the southward to join the transports said to be outside, after which junction the whole squadron and transports will proceed to the northward.

H.M.S. Druid, Volage, Hyacinth, Larne, and the Hon. Company's armed steamer Madagascar, remain to enforce the blockade of the river and port of Canton, by all its entrances, which blockade is to be established under the

strictest form on Sunday next, the 28th instant. Two transports, with troops, are also left under the command of the senior officer, probably with a view of protecting this settlement, or to ulterior operations in this province, on the arrival of Admiral Elliott—*Canton Register*, June 25th.

**ATTEMPT TO BURN THE BRITISH FLEET.**—The first alarm was given about 2 A.M. on Tuesday. A noise was heard from amongst the small Chinese boats inshore. It appeared on subsequent inquiry that some mandarin boats had got in amongst them for the purpose of making captures. They attacked the cutter *Devil*, and wounded the *Lascars* on board. Immediately after, distant lights appeared in the direction of the passage of the *Capsingmoon*, called the *Flood-gates*; and the Commanding Officer of the Danish King fired a gun and hoisted the signal, previously ordered by the senior officer of her Majesty's ships for fire-rafts; and instantly almost the fire burst forth from at least fifteen fire-boats; the appearance was very beautiful. The wind and tide were then favourable for their course. As they approached, they blew up like some beautiful works, which in English pyrotechnical science would be called a flower-pot. The beauties of the sight, however, did not dissipate the alarm felt by those on board the ships, who were also fearful there might be other crafty schemes in progress, and that they might be attacked from other quarters; consequently, most of the ships slipped their cables, and moved out of danger, each more anxious than his neighbour to get into the rear. The scene and danger caused great excitement; the night was very dark, the wind slackened, and so many vessels being underweigh at once in a small space caused great confusion; and many consequently came in contact, but we have not heard of any serious damage. The boats of the squadron were actively employed towing the rafts clear of the shipping, and anchoring others. The junks were first turned adrift chained together two-and-two. Nine of these rafts were counted, which gives eighteen boats. But it was ascertained that some had not ignited, and some had exploded, the wrecks being seen floating about the bay the next morning.

On examination, the fire-rafts were found to be constructed of what had been very old outside fishing-boats; what remains of them will supply the fleet with firewood for a month. They were full of dross, the remains of the combustible matter.

An anecdote of the gallantry and humanity of one of the officers of the *Mavis* deserves record. The mandarins had seized two Chinese, who were in the habit of attending the shipping, and were conveying them over the hills, no doubt for punishment, probably death. The officer of the *Mavis*, with a party of Malay sailors, landed and pursued them; their muskets missed fire, but they charged the Chinese barrel in hand, beat them back right and left with the butt-ends, and put them to flight, released the two prisoners, and brought them safely down to the beach. The interest of the scene was greatly heightened by their arrival of *H.M.S. Alligator*; the light of the flaming rafts guided her to the anchorage. This *apropos* arrival will rather damp the future enterprises of the subordinate Chinese naval officers.

**OFF MACAO, June 23rd**—We arrived here yesterday; *Wellesley*, Cruiser, *Algerine*, and transports, with 26th Queen's Regiment. head-quarters and part of the 18th Regiment Royal Irish, (the remainder being at Singapore may be expected in a few days,) the Native Volunteers, and Madras Artillery. It is expected the following will leave to-morrow for Chusan:—*Wellesley*, *Conway*, *Volage*, *Larne*, Cruiser, *Alligator*, *Algerine*, her Majesty's schooner *Hebe*, and the Hon. Company's steam-vessels *Queen*, *Atalanta*, and *Madagascar*, transports and troops. The Enterprise steamer may be looked for in a few days from Singapore, with Mr. Maddocks, Company's Agent, on board. It is stated nothing will be done at the Bogue until the arrival of Admiral Elliott, and squadron from England, &c. A depot is to be formed at Chusan, probably preparatory to an attack upon *Pekin*. The *Larne* brought on the March overland mail from the Enterprise, at Singapore. The transports are kept outside and amongst the islands, not to disturb the nerves of our old friend 'Lin.' The squadron and troops are in good health, generally speaking, and most anxious for some amusements on shore.

We hear that the new Chinese man-of-war *Chesapeake*, late *Cambridge*, has been stationed at the first bar, as likewise a number of junks laden with granite ready for sinking to stop up the passage. It has also been said, though we do not believe it, that the *Chesapeake* has been ordered to the Bogue to act against her Majesty's ships, should they attempt entering. We know not what her armament may be, but with a view probably of giving her an imposing appearance, she has been painted blood-red all over, whilst the two cutters (of twenty-five tons each,) lately built for the Imperial Navy, challenge respect by a coating of imperial yellow. We understand that the vessels now at Whampoa, (there were on the 12th instant, only five American, and seven Spaniards,) will probably remove to the second bar, so as not to be inconvenienced by the blocking up of the river, should this be deemed necessary; at least a petition to that effect has, we are told, been presented to the Canton authorities.—*Bombay Courier*.

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### NEW LIGHTHOUSES.

**LIGHTHOUSE PROPOSED AT BARBADOS.**—We understand that the repeated instances of wreck occurring on the island of Barbados, and now amounting to thirteen within the last few years, have pressed the subject of a lighthouse, on the house of assembly of that island, which met in September last. Capt. Which has proposed that a harbour light be adopted at Carlisle Bay, in addition to a lighthouse on the eastern side of the island, proposed sometime ago by Sir Geo. Cockburn.

Colonel Graydon we perceive in advocating the establishment of such a light, alludes to the necessity for it, arising from the increased amount of local attraction, by the introduction of more iron into vessels.

**OSTEND LIGHT.**—Notice is hereby given to mariners, that from the first of November, 1840, a bell recently placed near the tide light, upon the battery of the East Pierhead of the harbour of Ostend, will signalize in foggy weather the approach of the entrance of this port, as follows:—

As soon as there are four metres, forty centimetres, (sixteen feet of Ostend,) water on the bar at the entrance of the harbour, the bell will be rung every quarter of an hour, during five minutes, until the water has fallen to four metres forty centimetres, (sixteen feet of Ostend.)

**LIGHTHOUSE ON LITTLE ROSS.**—The erection of a lighthouse on the *Little Ross* has at last commenced. Mr. Stevenson, engineer to the Commissioners of the Northern Lighthouses, accompanied by his son, arrived at Kircudbright on Tuesday week, and next day proceeded to the island; and after a patient and minute search for a proper foundation, which was at last satisfactorily found, the site of the lighthouse, and other necessary buildings, was marked according to the directions of Mr. Stevenson.—*Cumberland Pacquet*.

**LIGHTHOUSE IN BERMUDA.**—The House of Assembly passed a resolution on the 30th of August agreeing to support a Lighthouse on these islands according to the proposition of the Home Government. Plans and specifications of the intended Lighthouse have been prepared by the Royal Engineer Department, and we understand that the erection of the same will be commenced as soon as the plans, &c. have been approved of at home.

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### SHAKINGS.

**THE PHOENIX.**—The *Phoenix*, Capt. E. Lefort, from London to Havre, was run down on Sunday evening the 25th Oct. at a quarter-past nine o'clock, off Dungeness Point, by the *Britannia* steamer, from Havre to London, and sunk in deep water; crew and passengers saved.

**NORFOLK ISLAND.**—The Sydney papers received reach to the 28th of June. The conduct of Capt. M. Konochie, R.N., the superintendent of Norfolk Island, in his administration of the convict laws is much praised, not only for his humanity, but for the general beneficial results he has produced.

**REWARD.**—In February 1838, as our readers may remember, the *Bellerophon* was accidentally placed in a situation of considerable danger off Gibraltar, and the *Phare*, French government steamer, commanded by Lieut. Dupare, hastened to tow the ship into a place of safety. The Admiralty, in acknowledgment of the friendly assistance of that officer, has sent him a handsome sword, on the blade of which are engraved the name of the vessel, and the date of the occurrence, with the words, "The Admiralty to Lieut. Leon Dupare."

**REWARD.**—His Majesty the King of France has directed that a gold medal of honour be presented to Capt. Darby, superintendant of Sable Island, as a reward for his great exertions in saving the crew and passengers of the French ship *Maria*, wrecked on that island on the 15th of September, 1839, and also that fifty-six dollars be paid to an English seaman, who was injured in assisting Capt. Darby.

**NAPOLEON.**—The French frigate *Artemise* under the command of the Prince de Joinville, has arrived at St. Helena, in forty-six days' passage from Cherbourg, for the purpose of receiving the ashes of Napoleon.

**ROYAL GEORGE.**—Four of the brass guns brought up from the *Royal George* are now again in service on board the *Howe*.

**THAMES STEAMERS.**—There are never less than fifty steamers afloat during the summer months on the Thames. The iron steamers between London-bridge and Chelsea, have carried 100,000 persons during the last month.

**CAUTION TO MERCHANT CAPTAINS.**—We extract the following from the *Montreal Herald* of September 5:—"Thomas Foster, master of the brig *True Briton*, was fined 50*l.* and costs, in the police court, for knowingly harbouring a mariner and seaman of and deserter from H.M.S. *Winchester*."

**MORE STEAM.**—The *Halifax Journal* says, that a Joint-Stock Company has been formed by the enterprising merchants and people of St. Johns, Newfoundland, for the establishment of steam communication between that island and Halifax, touching at Sydney and Arichat.

**WEATHER.**—A severe gale visited our shores on the 13th, producing a higher tide at Portsmouth than has been known for 38 years. St. George's Square, the Parade, and the whole of Point, were completely covered with water; carts and boats plied in the Square, and removed people from Point to High Street.

**WHALERS.**—The Davis Straits fishery has been completely unsuccessful this season.

**SHIPWRECK.**—The *Hydrographe*, French frigate, was lost off Point Del Rey coast of Chili, in June last,—the crew and passengers saved.

**COURT MARTIAL.**—Mr. John Henty, alluded to in our last number, page 823, has been adjudged to be reprimanded and admonished for making a false report to his superior officer, of the extent of the fire on board the *Camperdown*, and established his character for skill, zeal, carefulness, humanity, and general good conduct, as a carpenter of her Majesty's Navy.

The Court Martial on Captain Drew, at Quebec, has terminated in his full acquittal.

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#### NEW BOOKS.

**THE PRACTICE OF NAVIGATION AND NAUTICAL ASTRONOMY.**—By *H. Raper*, Lieut. R.N., Secretary to the Royal Astronomical Society.—Bate, London. 1840.

A work on practical navigation, produced by a naval officer, who is at once a man of experience and of science,—a work too, composed and digested as an original performance, and in all points conducted by a knowledge of first principles, is a matter of deep interest to seamen in general, and demands a special and early notice in the pages of this journal. If the work itself possessed far

less inherent merit than it really does, we should respect the industry of the writer, and rejoice to find a naval officer in time of peace so employed with the loftier pursuits of his profession. It would be difficult to estimate the benefits conferred on mankind at large, by a sound practical treatise on nautical science, and no less difficult to calculate all the results of such a work. In truth, strange as it may appear, this has long been a desideratum in our own country.

The treatises on navigation hitherto published, fall under one of two objections; on the one hand, writers well versed in mathematical and astronomical science, have been deficient of that professional experience, which can alone supply a knowledge of what the practical navigator requires, in conducting his vessel to different parts of the globe. On this account, scientific writers on navigation of considerable eminence have fallen into mistakes, or left portions of the subject in a defective state, and that to an extent which can be estimated only by those who have had recourse to their works for practical purposes. On the other hand, authors on navigation, with sufficient practical experience, and with all the qualifications necessary for judging of what a seaman requires, have undertaken to compose treatises, without that degree of acquaintance with abstract science which is requisite for a clear and accurate adjustment of practical rules and directions. Their works necessarily partake of the disadvantages of *compilation*,—there is a want of unity of plan,—there is no regular connection between the principles on which the different parts are constructed. Now, we will briefly notice some of the peculiarities of these two classes of writers, because we shall then be better enabled to point out the particular advantages, which Lieut. Raper's work appears to us to possess over all others which have preceded it.

We shall commence our strictures on the first class, by observing, that the greater number of these writers appear to think that they are called on to teach the learner a sufficiency of mathematics, to enable him to understand the *principles* from which the different rules are deduced. But to those already acquainted with analytical mathematics this is useless, and merely so much space occupied with what ought to have been better employed; whilst to those who are ignorant of that branch of knowledge it is worse than useless, for not only do they find it totally impossible to learn anything from the few pages of mathematics, that are usually found in nautical treatises, but a natural disgust arises in their minds to all theory, from their utter incapacity of understanding what the author can possibly mean by his various symbols. It is utterly hopeless to attempt in this way to communicate a competent knowledge of abstract science. It would have been far better, had such authors confined themselves to giving properly the simple rules. Generally speaking, the curiosity of the intelligent navigator would thus be excited, and there being no cause of disgust in his mind, he would acquire from legitimate sources a knowledge of the principles from which the rules he daily practised were derived. Another error which prevades this class, is a straining after superfluous accuracy; calculating even sometimes to seconds, when the nearest minute is all that is requisite; but, as if to compensate for this minuteness, there are few of these authors who do not occasionally fail in rendering plain, easy, and practical, what are really some of the most important problems of nautical astronomy. But in truth, it is a work of supererogation to point out minor faults, when these writers are so entirely mistaken, that they have produced not so much system of navigation as solutions of certain problems. These no doubt are useful at sea, but being solved by what these authors considered for each case the easiest method, there has been too often a total want of unity and harmony of design in their works; in short, no general principle prevades any one of these books, and if there be any similitude by which two different problems are solved, it is purely accidental. The learner by mastering one rule, has not advanced one single step towards obtaining a knowledge of that which is to follow. The tables being necessarily constructed to solve the problems by *all* the methods which are introduced are greatly multiplied, increasing the size of the book without any just cause, and rendering it quite impossible, that any memory can retain the various forms in which the logarithms and natural numbers are applied.

It is but common justice to state, that in the tables of the late Professor Lax, of Cambridge, intended as an accompaniment to the Nautical Almanack, one principle runs through the whole. But as this work is not upon general navigation, and besides, from causes which it is not here necessary to dwell upon will never be much used, we only allude to it, to prevent any one entertaining the idea that we were ignorant of this very meritorious attempt, to solve the problems of nautical astronomy by one uniform system. It is also a gratification to allude to Dr. Inman's treatise on navigation,—an original work carefully divided into sections, according to the plan now generally adopted by writers on scientific subjects. It has the rare merit of being always correct. Indeed, if the learned and talented Professor, to whom nautical science has been much indebted, had been more fully aware of what the seaman actually requires, and had directed more of his attention to the working of his problems by the aid of fewer and shorter tables, we hardly think that any attempt, (at least for some time,) would have been successful in surpassing his very able treatise. Although we only mention these two eminent mathematicians, let it not however be supposed that we are either unmindful or ungrateful to those astronomers, who have during the last century devoted their minds to the improvement of navigation. They have all rendered good service to the cause;—to Dr. Maskelyne, so many years Astronomer-Royal, we owe the establishment of the Nautical Almanac,\* the determining of the longitude by lunar observations; the learned Dr. Young has given us some highly useful investigations, and many others, some of whom are still living, have contributed to the advancement of our art.

Let us now refer to those writers on navigation whom we have placed in the second class. These authors, as we have already stated, had acquired by experience, a competent knowledge of what the seaman generally requires. They therefore proceeded upon this plan, to borrow all that they considered available from the different treatises, with which they were acquainted; and by that means to form a book which might be found useful. Of course any thing like systematic arrangement is hardly attempted; every new method of solving problems in nautical astronomy; any new tables, which appeared to shorten a process being adopted, as new editions were demanded. The well known work of the late John Hamilton Moore, was, we believe, the first successful treatise on navigation on this plan, and his general outline has been pretty closely followed by those who have succeeded him; no doubt introducing many excellent rules, but doing little towards the extension of any real knowledge of the science to which they refer. Amongst the minor follies which these writers sometimes exhibit, is the multiplying *ad libitum*, the different methods by which a problem may be worked, without assigning any reason that may be a guide to the mariner, in determining the method which may be the best for him to adopt, and we actually find, in one of these books, thirteen different ways given, by which the lunar distance may be cleared from the effects of parallax and refraction. We need hardly add, that when anything not directly copied is attempted, either various errors are made, or what was before plain and easy, is rendered difficult if not unintelligible. In the latter editions of Norie's navigation, a work which in spite of its imperfections has been useful to mariners, in attempting to notice the Sun's mean right ascension in the new Nautical Almanac, the author has confused it with the Sun's right ascension at mean noon!

It is hardly necessary to do more than to allude to the ingenious attempts that have been lately made by those who have confined themselves to the easy solving of one particular problem. All the books which contain these isolated methods, appear to us failures; certainly by the artifices which are used, very few logarithms are necessary; but on examination, there is so much of proportioning, that the rules commonly given are not only more exact, but more easily worked,

\* This work was projected by Dr. Maskelyne, then Astronomer-Royal, and first appeared in 1767. The employment of lunar distances in finding the longitude, of the efficacy of which method Maskelyne had satisfied himself, in a voyage to St. Helena, required new tables which should give the distance of the moon from the sun, and principal fixed stars, for intervals of a few hours at most. By the zeal of Dr. Maskelyne, aided by the Government, the project was carried into effect, and it continued under his superintendance for 43 years.



Now, if the seaman had a right systematic treatise, he would be spared the necessity of burthening his mind with much, which would in fact then be only a matter of curiosity. Those who are entirely ignorant of navigation, can never learn anything from works, which are intended to solve only one or two cases in nautical astronomy.

Bearing in mind then, the disadvantages and defects of the treatises on navigation hitherto published, we are the better able to form an opinion of the new work, the title of which is at the head of these remarks, and to judge how far the writer has supplied the defects, or corrected the mistakes of those who have preceded him.—And this we can affirm, that Lieut. Raper has effected in no ordinary degree. His acquirements, previous habits, and varied information, eminently qualified him for the task which he has undertaken, and which, if we may judge from the valuable papers he has furnished to this and other journals, has engaged his attention for some years. His mathematical science, joined to professional experience, has enabled him to produce a system of practical navigation, possessing those very qualifications in which we have shown other authors have been deficient. In fact, the deficiencies to which we allude, never appeared to us of so much importance, until we had examined the work which is now before us, and of which it is now our duty to give some account.

First, the avowed object that has been attempted in this work, is to enable all who are acquainted with the first four rules of arithmetic, to make themselves completely master of the practice of navigation, and in order to accomplish that design mathematical disquisitions and proofs are omitted. This arrangement, although different from that which has been generally adopted, we not only highly approve, but paradoxical as it may appear, we consider the only *scientific* manner of treating navigation; that is to say, the mathematical reasoning from which the practical rules are derived, ought to be studied in works written expressly for that purpose, because it really does appear to us very strange, that in navigation alone it should be thought necessary to combine altogether in a manner that no learner can possibly understand, the reason why a thing is done, and (what is entirely distinct,) how a thing is done. Undoubtedly, neither of these important points ought to be neglected, and whether the former or the latter be first entered on, is not perhaps of much importance. At any rate, this involves a discussion, foreign to our present business; what we object to is simply this,—namely, the mere introduction of so much theory, as may puzzle without enlightening the practical and scientific seaman.

At the same time we are anxious not to be misunderstood in this matter;—we are far from discouraging, nay, we earnestly recommend mathematical attainments, as necessary to form the complete seaman and navigator;—but we would have that science learnt in such a way that the subject can be fully treated and made perfectly clear to the beginner. Following up this principle, Lieut. Raper has excluded every thing which does not bear upon the practice of navigation, and by thus rejecting every thing extraneous, he has given himself space for much matter, which although most valuable, has sometimes, owing to ignorance, and sometimes from not being aware of the real wants of the seaman, been frequently omitted by other authors. So completely has he succeeded, that not only has every question which may occur been examined, but a definite and decided opinion given upon it. To this it may be added, that every remark or observation which is made, is always turned to some practical use, thereby avoiding a very common error, that of loading books intended for practical purposes with disquisitions upon doubtful theories.

We would now call attention to the *arrangement* that has been adopted, which appears to us highly systematic, both in the navigation and the tables. By this arrangement, the learner is led on insensibly, and finds his path gradually smoothed as he advances. To effect this more completely, an uniform mode of working runs through all the problems of nautical astronomy; and amongst other methods used to obtain this unity, natural numbers and their logarithms, natural sines, versed sines, &c. have been entirely discarded, by which such an uniformity is obtained through the whole, that the student after thoroughly understanding one proposition, will not only quickly make himself master of the

subject, but will also be enabled to work his questions with a celerity and precision at which he himself will be surprised. From preserving this close connexion between the different parts, and from the methodical manner in which the rules are laid down, we do think that the general reasoning powers of the student will be called strongly into play; and if at any future time other studies are reverted to, the mind will be in some degree prepared for scientific investigation. In considering further the many minor advantages gained by this accurate arrangement, we must not overlook the great care by which every rule and table may be referred to, and although a copious index is given, which is of course a great convenience, yet in no work upon navigation could it have been so well dispensed with. These observations will have already shown that a simplicity and clearness have been attained, which will be found of the greatest importance to the learner, and to those who possess ordinary abilities, combined with due perseverance, will almost supersede the necessity of a teacher.

An original work, such as that now before us, may naturally be expected to contain many new methods of solution as well as many new tables, some of which will no doubt, as novelties, attract much attention. Yet the old rules and tables have been so far from being neglected, that wherever they have been adopted, improvements have taken place in them, and in some instances a mine of knowledge and utility has been opened from them, of which mariners have previously been little aware. By these investigations, the author besides giving the rigorous rules for the different astronomical problems, has been enabled to furnish short and easy ones, which are sufficiently correct for common sea work. The exact number of places of figures, to which it is necessary to take out the logarithms is always laid down, which will be found of considerable utility, as there are many problems which are at present sometimes worked to six places, when four, or even three places, would give the answers with equal accuracy. We must likewise notice, and with approbation, that there are always laid down simple, short, and easy rules, for determining what degree of reliance may be placed upon the different observations which may have been taken, in order to fix the position of the ship. No doubt the mathematical scholar from his own resources, is generally enabled to effect this important point; but this is we believe the first attempt that has been made to enable the generality of seamen to judge of the possible amount of the error that he may have incurred. It would be quite useless to dilate upon the advantages of this acquirement. All practical navigators must be aware, that the safety of the ship often depends on being able to ascertain, how far the latitude obtained by doubtful observations may be trusted: besides which, those who practice these rules, will gradually and insensibly acquire the power of judging at once, how much they are probably out in their calculations, to ascertain the place of the ship, thus giving them a well grounded confidence and decision in their navigation, which can only be gained by this great practical knowledge.

It would not be a difficult task to extend this part of our notice, by enumerating many more of the general principles which have guided the author, but we shall content ourselves by expressing our firm conviction, that in this treatise, Navigation, (using the term in its most extended sense) has been fully and properly treated in all its various branches; and we further give it our opinion, that Lieut. Raper, of all his competitors, has alone possessed the requisite practical knowledge to enter fully and fairly into the subject. He has effected that, which was most difficult in the science of which he treats; for it should be remembered, that it is comparatively easy to frame new methods for solving astronomical problems, in comparison with teaching the seaman how best to navigate his vessel, in every possible situation wherein he can be placed. Having premised thus much, we shall reserve ourselves for a deliberate examination of the contents of this volume in our next.

WE understand that Captain Marryat is busy with a new edition of his *Signals*, which will be improved by an introduction of matter relating to steam-vessels, and other new features of the present day, with regard to navigation. Mr.

**Cow**, of Woolwich Dockyard, is also engaged with a new edition of his valuable little work on boats, for transporting anchors, troops, &c., which appeared some time since.

**DIBDIN'S SONGS.**—We have great pleasure in announcing that a collection of the most popular songs of the late celebrated Charles Dibdin, is about to be published by his son, Mr. Thomas Dibdin, with a memoir of the author, and illustrated by the highly-gifted George Cruikshank and Alfred Crowquill. This revival of the author of "Poor Jack" and "Tom Bowling" will be, as it ought to be, under the sanction and patronage of the Lords of the Admiralty, and will be dedicated, by express permission, to the Earl of Minto. As this work is for the benefit of his son, Mr. Thomas Dibdin, whose position is but too well known, it is to be hoped that the patronage of the public will fully respond to that of the Admiralty.

We take the foregoing from the *Shipping Gazette*, and have the satisfaction of adding to it, that the Admiralty have ordered 500 copies, for distribution in the fleet.

### NEW CHARTS.

(Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.)

**OLD PROVIDENCE ISLAND AND CORAL BANK.**—Surveyed in *H.M.S. Thunder*,—*Com. R. Owen*,—By Messrs. J. Cannon, C. B. Laurance, and F. W. Sydney. 1835.

An excellent plan giving on a scale of about an inch and a half to the mile, the whole island with its extensive reef to the northward. An enlarged plan appears on the same sheet of the harbour of Catalina, with views of leading marks, which are amply sufficient for the guidance of any vessel going there.

**THE HARBOUR OF WAITEMATA, New Zealand.**—By *Lieut. P. Fisher*, and *Mr. P. C. Bean*, master of *H.M.S. Herald*.

Anything new of New Zealand is acceptable in the dearth of our Hydrographic knowledge of that country. The plan before us is sufficient to pilot a ship by to her anchorage, and is one of those useful results of the employment of time, left to officers from other duties which always reflect peculiar credit on their authors.

### ADMIRALTY ORDERS.

Admiralty, 21st Oct. 1840.

The Lords Commissioners of the Admiralty having had under their consideration the regulation which suspends the Pensions of Out-Pensioners of Greenwich Hospital, during such time as they may be serving in the Royal Navy, are pleased to permit in future, a relaxation of the above rule in favor of Pensioners who are rated, and are actually doing the duty of Master at Arms, and Ship's Corporals in rated Ships.

By command of their Lordships,  
R. MOIR O'FERRALL.

Admiralty, 14th October.

The Lords Commissioners of the Admiralty having reason to believe that in several instances young gentlemen, have been received into the service with the rating of Clerks' Assistants, although in many cases they have never performed the duties of the class into which they were ostensibly admitted and paid, thereby defeating the object of training up young men for the service as Clerks, and for which rating as Clerks' Assistants was established; their Lordships, therefore, call the attention of the Captains and Commanding Officers of Her Majesty's ships and vessels to the seventh article of the printed instructions, and are pleased to direct that henceforth no portion of the time served as Clerks' Assistants shall be allowed towards the qualifications of servitude for the rating of Midshipmen or Masters' Assistants.

Admiralty, 14th October.

Their Lordships having received information that it is the custom in some ships to employ the Masters' Assistants entirely in the charge of the deck and hold, thereby depriving them of the opportunity of acquiring that knowledge of practical seamanship, and acquaintance with the coasts and harbours on the different stations, so essentially necessary to qualify them for the important duties of Masters in Her Majesty's Navy, for which they are intended; it is their Lordships' direction that this very objectionable practice be immediately discontinued, and that every facility be afforded both to Second Masters and Masters' Assistants, to enable them to improve themselves as

much as possible in the several branches of seamanship, navigation, and pilotage.

Admiralty, 26th August.

It having come to the knowledge of their Lordships, that an extravagant mode of living has been adopted in the messes of the quarter-deck petty officers, in some of Her Majesty's ships which may lead to much inconvenience to the discipline of the service, and must be very hard upon those individuals who have only their pay to support them, my Lords, therefore, desire it to be intimated to the respective Captains and Commanding Officers that their Lordships disapprove of such extravagance being allowed in those messes, and direct that means may be taken to prevent this occurrence happening for the future.

Admiralty, 19th October.

#### GUNNERY DIRECTIONS.

Are now issued to all ships commissioned, and Quarter deck Petty Officers are informed that great importance is attached to the acquisition of all the information contained in them. The directions for the exercise and service of great guns on board Her Majesty's ships will form a part of the examination of Midshipmen for the rank of Mate or Lieutenants, and certificates are to be given to such only as can answer and understand the several parts. It is expected that in six months they will know them. No candidate is to present himself at the College until he produces a certificate from the Captain of the Excellent of his being previously examined in those questions.

Admiralty, 2nd October.

The Quarter-Masters of the respective Divisions of Royal Marines have been ordered to keep a supply of Royal Breeches and cutters for issue when required; their Lordships having directed that all detachments of Marines embarked on board Her Majesty's ships may be supplied with them.

**NAVAL TACTICS.**—We noticed in a recent number, the narrative by Colonel Bethune, of the battle of St. Vincent, which has been got up without regard to expense, and with great pains by the gallant Colonel, for the worthy object of promoting the funds of the Nelson column now erecting in Trafalgar-square. This is a sufficient claim of the Colonel's to the patronage of our naval friends for his work, but those who are curious in naval tactics, will be enabled to trace by the numerous plates which it contains, the positions of the British and combined fleets during the whole progress of the battle.

**STEAM VESSELS.**—The following rule has been published by the Trinity House, and ordered by the Admiralty to be observed by her Majesty's vessels when passing each other.

“When steam-vessels on different courses must unavoidably or necessarily cross so near, that by continuing their respective courses there would be a risk of coming in collision, each vessel shall put her helm to port, so as always to pass on the larboard side of the other.”

We presume this applies under all circumstances.

### THE BOUNTY'S CHRONOMETER.

*5, Common Hard, Portsea, 21st Nov. 1840.*

SIR.—Every body must feel an interest in whatever relates to the ill-fated *Bounty*; but, as I consider, no one more so than the author of the “*History of the Mutiny*,” I have taken the liberty to make to you the following communication.

May 18th, 1840, Mr. Mouat, Chronometer-maker, &c., at Valparaiso, received from Captain Herbert, of H.M.S. *Calliope*, the Chronometer,

LARCUM KENDALL,

LONDON.

A.D. 1771.

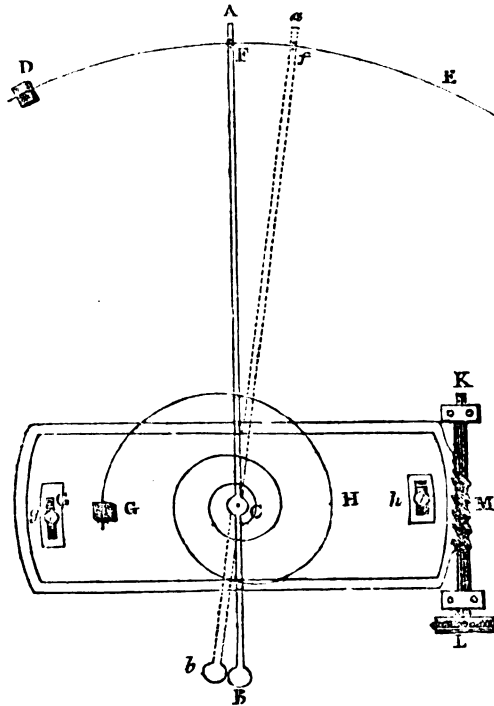
This chronometer was in H.M. late ship the *Bounty*, at the time of the mutiny, and has been in Chili since the time of the arrival of the American ship that first touched at Pitcairns Island, after the mutineers settled themselves there. It was stolen from the American captain on the ship's passage from Juan Fernandez to Valparaiso; and next made its appearance at Concepcion, where it was purchased for three doubloons by an old Spaniard of the name of Castillo, who kept it in his possession till his death, which happened lately at Santiago; when his family sent it to Capt. Herbert, to be conveyed to the British Museum. Capt. Herbert sent it to Mr. Mouat to be put in order, and from his relation I am enabled to give these particulars.

On the chronometer being taken to pieces it was found to be in a complete state of preservation, without the least mark of wear in any part; except that the lower palate on the verge, which, though a ruby, had a deep notch worn into it; and the endless screw for adjusting the compensation, had been overstrained by some unskilful hand.

The chronometer is not one of Kendall's copies of Harrison's, the train being similar to that now employed; and the escapement that of the old or vertical kind, with a steel balance-wheel, and the balance itself a plain steel wheel. The escapement palates are rubies fixed to

the verge of the balance, by screw collets. Mr. Moutat speaks in high terms of the beauty of the workmanship.

FIGURE ILLUSTRATIVE OF THE MODE OF COMPENSATION FOR CHANGE OF TEMPERATURE IN THE BOUNTY'S CHRONOMETER.



The mode of compensation for change of temperature may be thus explained :—

- DE represents a portion of the balance-spring, having its fixed end at D.  
 AB “ a lever, moveable, horizontally on the centre C, and having at B a counterpoise to the longer arm AC.  
 GH “ a spiral, composed of laminae of brass and steel, the convex side being of brass, and the concave side of steel, one end of which is fixed at G, and the other attached to the lever AB at C.  
 F “ two pins in the lever AB, between which the balance spring passes.

From this arrangement it is plain, that an increase of temperature, which relaxes the balance-spring, and consequently weakens its effort, will cause the spiral to coil itself up (because of the greater expansibility of its convex brass side above that of its concave steel side,) and as one end of it is fixed at G, its whole effect in coiling up will be to turn the lever AB on its centre C, in the direction of from D towards E. Sup-

posing, then, that this effect moves it from A to *a*; this will shorten the action of the balance-spring by the quantity  $Ff$ ; and this, of course, will mechanically augment its effort on the balance in the same way that the increase of temperature has physically diminished that effort. And the contrary motion of the lever will produce the contrary effect with a decrease of temperature.

The adjustment of this apparatus is accomplished by turning the plate GH—to which it is attached—on C as an axis by means of the endless screw KL, acting in a few teeth at M; and, I think, there was also a contrivance for varying the distance CF. It was the screw KL that Mr. Mouat found to have been overstrained.

This mode of compensation, I am aware, must be well known to those familiar with the history of chronometers, as it was in general use before the discovery of the superior advantages of adopting the expansion-curve to the balance itself; though this is the only instance that I myself have ever seen it applied by means of the spiral.

The chronometer is six inches in diameter, with three dials on its face—one for hours, one for minutes, and one for seconds; with an outer silver case, made as the outer cases of pocket watches were sixty or seventy years ago: so that its appearance is that of a gigantic watch. In winding it up it was usual to pass the left arm through the opening for the face in the upper valve of the outer case, in the manner of placing the outer case of a pocket watch on the left thumb when winding. A Chilian gentleman coming in one day, and seeing the case thus suspended, exclaimed "*Que cosa para freir huevos.*"

After it had been cleaned and put together again, its rate for the first twenty-fours was sixty-eight seconds losing. It was then regulated by relaxing the screws *gh*, (the endless crew KL being rendered useless as before-mentioned,) and turning the plate GH by hand; it was then found to have diminished its rate to thirty seconds losing. The plate was again turned as before, which reduced its rate to 5.5 seconds gaining; and which it kept for two successive days. After several other attempts to reduce it to a lesser rate still, between the 23d of May and the 5th of June, it finally settled into a steady rate of losing 4.5 seconds daily. Its subsequent rate while in Mr. Mouat's hands, as I extracted it from his rate-book, was as follows:—

June 5	losing daily		4.6	seconds of m. t.	} 6) 23.5 sum 3.916 average
" 9	"	mean	4.6	"	
" 13	"	"	3.3	"	
" 17	"	"	4.2	"	
" 22	"	"	3.2	"	
" 23	"	"	3.5	"	

On this day (23rd of June,) it was delivered to Capt. Herbert, being then fast on Greenwich mean time 0h. 0m. 26.5s., and losing daily 3.5 seconds; this was less than its average mean daily rate of losing by 0.4 of a second; because it was thought that it would accelerate its rate by that quantity when on board the Calliope.

The Calliope sailed from Valparaiso for China, on the 1st of July, 1840; and thus will this, now very interesting instrument, in all probability, return to the place of its construction, after an absence of so many years: and, too, without having circumnavigated the earth by

only the very small quantity of longitude between the most western meridian reached by the *Bounty* in endeavouring to double Cape Horn, and that of Santiago the most eastern meridian the chronometer reached in Chili.

Perhaps you have already been informed of the recovery of this interesting relic; if so, this communication will interest less than it would otherwise have done. But as the chronometer is still legally the property of Her Majesty, I am uncertain whether it would be right to make it known to the public before the *Calliope* returns to England; and that is a principal reason of my making this communication first to you.

I had another motive in addressing this to you, which was that I thought you would feel more interest in it than any one else; and moreover as a small return for the gratification I have received in perusing some of your works; particularly the eventful history of the mutiny of the *Bounty*; for though unknown personally to you, I have been for twenty-eight years acquainted with you as a public character.

With many apologies for occupying so much of your valuable time in intruding this upon you, perfect stranger as I am, I have the honour to remain, with very great respect,

Sir, your most obedient humble servant,

R. A. NEWMAN, *Master R.N.*

*To Sir John Barrow, Bart., &c.*

*Late of H.M. Sloop Sparrowhawk.*

P.S.—I was at Pictairns Island in the *Sparrowhawk*, this time last year, and, perhaps, that has contributed to the interest which I feel in this affair. I have some tappa, or native cloth, manufactured by the hands of Polly Adams herself.

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#### SAFETY BEACON ON THE GOODWIN SANDS.

*Trinity House, London, 21st October, 1840.*

NOTICE is hereby given, that a beacon has been experimentally placed on the south-eastern part of the Goodwin Sands, with the object of affording means of safety to persons, who may unfortunately suffer shipwreck upon parts of these dangerous sands, from which, this beacon is accessible at low water: and mariners are hereby cautioned, that being situate a considerable distance within the south-eastern edge of the sand, this beacon is not on any account to be regarded as a beacon of direction; and they will observe that from it

The south sand head light vessel bears S.W.b.W.  $\frac{1}{4}$  W. six miles and three-quarters.

The south Foreland lighthouse W.S.W.  $\frac{1}{4}$  W.

The Gull light vessel N.W.  $\frac{3}{4}$  N. three miles three-quarters.

The Goodwin light vessel N.W.b.N. five miles and a half.

The shaft or mast is a spar of twelve inches diameter fitted with a topmast, on which a blue flag is to be hoisted when assistance is required, for which directions are given in eight different languages.

The topmast is kept struck to give the beacon an appearance of a wreck, and will give warning to those who are unacquainted with its position and character.

The gallery is an octagon, of nine feet diameter, is five feet from the

top of the mast, and is capable of containing at least forty persons: it is seventeen feet six inches above high-water spring tides, and thirty feet from the dry sand, the rise of ordinary spring tides being sixteen feet, and the neaps twelve feet.

The mast is sunk five feet into the sand, and secured at its base by a strong oaken frame, which is weighed by three tons of iron ballast. The stays, (four pairs, iron chain equal to five-inch rope,) are secured to iron piles driven fifteen feet into the sand, and backed by four iron plates two feet six inches square, like mushroom anchors, to prevent the iron piles coming home. The frame is also secured by an iron pile at each point of the cross driven twelve feet into the sand. There are also thirty tons of chalk and shingle heaped up round the mast.

**WARNING BEACON.**—Notice is also given, that a beacon for direction is now preparing, and will be placed with all practicable expedition upon the eastern spit of the Goodwin Sands, which forms the south point of the Swathway leading into Trinity Bay from the eastward; farther particulars respecting which will be duly notified.

By order,

*See Sketch.*

J. HERBERT, Sec.

#### LIFE ASSURANCE IN THE MERCANTILE MARINE.

**MR. EDITOR.**—I request space in your Miscellany, to direct the attention of the Mercantile Marine to a subject, upon which in that employment, there prevails remarkable apathy. It is well-known, that among the new features in the aspect of social life, as contrasted with its state thirty years ago, no one is more prominent, than the almost general introduction of the practice of Life Assurance, under various modifications. That such change in the medium of provident forethought, has been attended with corresponding advantage, may be inferred by the still increasing number of Societies established for that object. Of late years, some of these have taken designations, and assumed forms, severally suited to some of the artificial divisions in society,—a mode of action, which has proved very conducive to the main object aimed at by each institution. This apparent separation of a particular interest from the general one, may be beneficial, for although the corporate spirit is mostly selfish, yet it may be rendered useful in certain cases, to the entire community. 1. The separation admits of tables being constructed to meet a particular value of life, in each of the artificial divisions requiring them. 2. Reference being had to the custom of paying salaries or wages, the rules may be specially adapted to the convenience of assurers, in their payment of premiums. 3. The zeal and *esprit de corps* of sections in society, are found to be very active in advancing the interest of a particular section.

An individual who might decline to join an institution receiving every description of persons, to whom he might be a stranger, would freely enrol himself in one admitting only members of his own calling, with many of whom he is in constant intercourse and friendship. An illustration of this opinion, may be seen in the Naval Annuitant Society: it is scarcely probable that half its supporters would have had recourse to any kind of life assurance, if most judiciously it had not been offered for their acceptance, in a form most agreeable to their feelings, and



associations; and imperfectly as its advantages are at present developed, many families have reason to bless the day it was established. The persons to whom this letter is addressed, also fall within the above remark, as their peculiar positions admit a very limited choice of associates. Now, as provident habits commonly engender self-respect, and therefore, moral good, any honest incitement to assure, promotes the general welfare. The Institution named, is only of seventeen years' standing; yet subsequently most of the following ones have started into existence, viz. the Clerical and Medical, the Law, the Navy, Army, and East India Company, the Clerical, the University, and the Dissenters' Life Assurance, or Annuity Societies.

In this economical science, it is a maxim that, the more precarious the duration of human life, or of the sources of income, the more incumbent is the obligation to assure, on the persons most exposed to the chances. Such conditions are very obvious in the Mercantile Marine, wherein life, is more uncertain than elsewhere, excepting the Navy and Army in time of war, and income is more precarious than in those professions, and as much so as in other callings. It follows, that the maxim claims most deference from masters and mates, (mariners,) by whom there is reason to apprehend it is most disregarded, and chiefly because their attention has never been earnestly drawn to its value. Among mercantile bred officers of the highest class, namely, those of the East India Company's late maritime service, a Society has long existed, called the Jerusalem Club, but its operations are confined to granting pensions to its actual members in ill-health, or retirement from sea-service.

In the coal and coasting trades, many masters and mates, as well as seamen, belong to the common and admirable benefit clubs. It is believed however, that the very numerous and respectable masters and mates, navigating most part of our foreign commercial marine, are generally destitute of any resource of the kind alluded to, either for themselves, their widows, or children. Yet the men, presumably, labouring under this serious deficiency, are in receipt of good and tolerably regular wages, besides the occasionally large, though less certain returns derived from private adventures. Thus situated, would they not do wisely to found a Life Assurance, or Annuity Society, or both, expressly for their own use and benefit? Trifling deductions from wages, would afford sufficient capital for such a purpose, upon the largest scale; some prejudices would have to be encountered, but in a few years these would be dispelled by observation of solid advantages accruing to the families of early supporters. No scheme ought to be entertained, having the least colour of a speculation to yield profit to others than the persons above described. It is, however, imagined that, from various causes, among which want of ability may not be placed, that those persons are not best calculated to take the preliminary steps towards the undertaking; although when it shall be fairly started; thenceforward, it should be conducted entirely by them.

The best originators, will be retired ship-masters, who having early been successful in that pursuit, became ship-owners and merchants; such men abound in the metropolis, where some of them possessing the requisite talents and information, also enjoy opulence, leisure, and commercial consideration. From kindred feelings, and acquaintances with

their habits, they also possess the confidence of, and exercise great influence over the persons to be acted upon—those by whose sole pecuniary support, and for whose sole benefit the institution should be made to work.

The design of these observations is, to awaken the attention of both the classes noticed to the subject; it would, therefore, be premature to offer any detailed plan to their consideration, until a decided intention shall have been manifested to entertain the main proposal; the winter season, being the most propitious in which to “break ground.” Should this be done, you may again hear from

Your humble servant,

TIPHYS.

*Colchester, Nov., 1840.*

### SHIPWRECK OF MERCHANTMEN.

SIR.—Conceiving as I do, in common with many others, that the frequent wrecks of our merchant vessels are in many cases attributable to a short complement of men, and the consequent exhaustion of the crew, I am induced to request you will do me the favor to insert the following remarks and suggestions, in the humble hope that the subject may meet with the consideration of competent judges, and tend to the most beneficial results in rescuing by means of proper regulations numbers belonging to a very useful and deserving class of persons (I mean seamen) from so destructive and desolating a calamity as shipwreck.

Presuming that the proportion of hands to tonnage of Ipswich vessels may serve as a sample of the system generally prevalent throughout the country, I proceed to a statement of the loss of shipping belonging to this port in the year 1838, which it will be recollected was a very tempestuous season.

In 1838, the Ipswich shipping consisted of one hundred trading vessels, mostly sloops and schooners of the aggregate tonnage of 8,740 tons. Of this number the following five became total wrecks:—

Active	Leggett, schooner,	102 tons,	5 hands,	all saved
Constant Trader,	Lord,	115	5	all lost
Gainsborough,	Jeffries,	122	6	four lost
Maria,	Sewell, sloop	42	5	all lost
Providence,	Blake	69	5	all lost.

Looking at this account, I think no one conversant with the matter, will hesitate to say that the three schooners, at least, were too weak in hands, setting aside dangers from other causes, to afford any fair assurance of safety; for the above numbers included all the persons on board, men and boys. Considering it a serious evil, that owners are suffered to send vessels to sea so ill-manned, and frequently ill-found, I submit to the consideration of my superiors in knowledge and station the subjoined scale of apportionment of men to tonnage, being firmly persuaded, without pretending to determine the exact number, that if something of the kind were adopted, and steadily enforced, it would be the means of saving many a brave fellow from a watery grave.

## Proportion of men and boys to tonnage:—

	Tons.	Men.	per cent.
From 40 to 50		5	10
Above 50 " 75		6	8
" 75 " 100		7	7
" 100 " 125		8	
" 125 " 150		9	6
" 150 " 175		10	
" 175 " 200		11	5½
" 200 " 225		12	
" 225 " 250		13	
" 250 " 275		14	
" 275 " 300		15	5

Ships above 300 tons to carry 5 men for every 100 tons.

Many are the causes, and frequently combined causes of shipwreck, to go into which on the present occasion, I fear, would exceed my limits, but whatever they may be, whether deficiency or defects of ground tackle, spars, &c., springing a leak, bad construction of the hull, want of caulking and other repairs, neglect of the three L's, neglect of log, shifting of cargo, teetotality (of owners) &c. I say, under whatever circumstances, or from whatever cause a perilous casualty may arise, it generally becomes fatal in consequence of the hands being too few to manage the vessel properly in stress of weather.

Allow me to add a few concluding observations on a subject which in my opinion calls loudly for legislative interference, involving as it does, not only the lives and welfare of the crews, but also the property of the ships and cargoes. If some efficient measures were to be the means of saving a few ships annually, it would be so much gain to the owners and merchants, and consequently to the community; and it might have the further effect of reducing the premiums on assurances. But, it may be said, these casual benefits will not repay the additional expense of labour. This argument is adapted to the legislature of a slave state, which has for its exclusive object the property of the capitalist and proprietor; but it ill accords with the spirit of our enviable constitution which has regard to the protection of persons, as well as property, and proclaims an equality of civil rights to all. Sir, this is a great and free empire, as well as a prosperous commercial nation; and as merchant sailors contribute in no small degree to this maritime greatness and prosperity, they, surely, have a fair claim to, as they have the utmost need of, the safeguard of the law.

AN OLD TAR.

*Ipswich, November, 1840.*

#### BIRTH OF THE PRINCESS ROYAL.

It is our gratifying duty to record an event, which has been hailed with feelings of joy throughout the land. On Saturday the 21st of November, after twelve hours of favorable labour, our beloved Queen was safely delivered at ten minutes before two of a daughter. The progress of her Majesty towards recovery, we are happy to add, has been most rapid; and the infant Princess has continued in perfect health since her birth. It is expected, that the christening will take place within a month, when the whole nation will add rejoicings to their thanksgivings for this happy event.

## PROMOTIONS AND APPOINTMENTS.

## PROMOTIONS.

**Admiralty, Nov. 12.**—This day, in pursuance of Her Majesty's pleasure, the un-  
 dermentioned Retired Rear-Admirals have been transferred to the Active List of  
 Flag-officers of Her Majesty's Fleet:—

*To be Admirals of the White.*—Sir R. Barlow, K.C.B., taking rank next after Ad-  
 miral Sir L. W. Halsted, &c. &c.

*To be Admirals of the Blue.*—W. Shield, Esq., taking rank next after Admiral P.  
 Stephens; F. Watkins, Esq. taking rank next after Admiral Sir G. Parker, K.C.B.

*To be Vice-Admirals of the Red.*—D'Arcy Preston, Esq., taking rank next after  
 Vice-Admiral R. D. Oliver; J. Bullen, Esq., taking rank next after Vice-Admiral  
 Sir J. West, K.C.B.

*To be Vice-Admirals of the White.*—H. Evans, Esq. taking rank next after Vice-  
 Admiral Sir T. Baker, K.C.B.; The Hon. Sir C. Boyle, K.C.H., taking rank next  
 after Vice-Admiral H. Evans; G. R. Shirley, Esq., taking rank next after Vice-  
 Admiral Sir E. W. C. R. Owen, K.C.B., &c. &c.; J. K. Shepard, Esq., taking rank  
 next after Vice-Admiral Sir T. Dundas, K.C.B.

*To be Vice-Admirals of the Blue.*—Sir R. L. FitzGerald, K.C.H., taking rank next  
 after Vice-Admiral R. Honyman; G. Barker, Esq., taking rank next after Vice-  
 Admiral J. Mackellar; H. Garrett, Esq., taking rank next after Vice-Admiral J.  
 C. White.

**CAPTAINS**—W. Tucker, J. Shepperd,  
 (b), W. Shephard, Hon. D. W. A. Pel-  
 ham.

**COMMANDERS**—W. Toby, C. Fitzgo-  
 rald, Hon. G. Hope.

**LIEUTENANTS**—O. P. Knott, R. Jen-  
 ner, H. C. Harston, F. L. Barnard, J.  
 Elliott, Lord F. Kerr *vice* Penney de-  
 ceased.

*Lucifer*, G. G. Randolph, T. Baillie to  
*Vernon*, J. Lunn to command *Locust*.

**MASTERS**—H. Strutt to *Indus*, R.  
 Steedwell to *Tweed*, W. H. Thompson  
 to *Impregnable*, D. Gosman to *Caledo-  
 nia*, J. Jackson to *Endymion*.

**MATES**—J. M. Jackson, A. H. Doug-  
 las to *Indus*, W. Morris to *Coast Guard*,  
 C. J. Brickdale, N. L. Lockyer, B. G.  
 Rowles to *Excellent*, H. Lloyd, C. Dyke  
 to *Hecate*, E. R. J. Balfour, J. Hancock  
 to *Queen*, R. J. McDonald, W. Rattray,  
 F. Freeling, H. Bainbridge, E. Hemp-  
 stead, W. C. Geary to *Howe*, E. B.  
 Price to *Cyclops*, A. P. Green to *Sala-  
 mander*, L. J. Cockraft to *Albert*, G. P.  
 Mends, J. R. M. Quea to *Locust*.

**SECOND-MASTERS**—J. D. Taylor to  
*Ferret*, S. Johns, W. H. Balliston to  
*Britannia*, J. Whiting to *Impregnable*,  
 E. Moore, M. Burney, B. Fittock to  
 Caledonia.

**SURGEONS**—Sir Richard Dobson to  
 be surgeon to *Greenwich Hospital* with  
 the rank of Inspector, J. Domville to be  
 First-assistant Surgeon of *Greenwich  
 Hospital*, with rank of Deputy Inspector,  
 J. Wilson (b) M.D. to be Second-assistant  
 Surgeon of *Greenwich Hospital*, S. Irvine  
 M.D. to *Caledonia*, W. Leyson to *Impreg-  
 nable*, D. Findlay to *Indus*.

**ASSISTANT-SURGEONS**—G. Procter to  
*Hospital at Stonehouse*, A. G. G. Tucker,  
 J. King, J. A. Corbet, J. Walsh, J.  
 Fisher to *Caledonia*, T. Deurer, W. Par-  
 sons, C. Mosley to *Impregnable*.

**PURBERS**—J. Bailey to *Monarch*, J.  
 Palmer to *Vernon*, S. Giles to *Indus*, D.  
 Clow to *Impregnable*, E. B. Robins to  
*Racer*, G. Gurdon to *Camperdown*, J.

## APPOINTMENTS.

**CAPTAINS**—H. Eden to *Caledonia*, J.  
 Chambers to *Monarch*, Sir J. Stirling to  
*Indus*, W. Walpole to *Vernon*, Hon. F.  
 W. Grey to *Endymion*, H. Nurse to *Iris*,  
 T. Forrest to *Impregnable*.

**COMMANDERS**—W. L. Castle to *Indus*,  
 A. Forbes to *Impregnable*, H. D. C.  
 Douglas to *Tweed*, C. Napier to *Pelican*,  
 W. Hutchinson to Ordinary at Ports-  
 mouth, R. Burrage to *Belleisle*, R. Bar-  
 ton to *Monarch*, A. C. Duncan, C. Mad-  
 den to *Coast Guard*.

**LIEUTENANTS**—T. Brown, J. G. Mc  
 Kenzie, W. G. Maude, R. Robertson to  
*Indus*, G. C. Randolph, T. Baillie, W.  
 Houston, W. Tawse, W. Worsfold to  
*Caledonia*, W. Harvey to *Tweed*, F. L.  
 Barnard and W. Austin to *Excellent*,  
 W. Rule, E. Hennah, W. Armitage to  
*Monarch*, J. Millett to *Coast Guard*, J.  
 Elliott to *Winchester*, O. P. Knott to  
*Southampton*, J. Hay (c) to *Howe*, C. T.  
 Dench, T. W. Purday to *Calcutta*, R.  
 Tryon to *Royal George Yacht*, M. M.  
 Wright, C. J. F. Campbell, C. Hada-  
 way, G. K. Ogilvy, J. Stoddard, T. Ethe-  
 ridge to *Impregnable*, H. G. Morris, F.  
 W. Horton to *Endymion*, T. Ponsonby to

France to *Tweed*, S. Little to *Caledonia*.

CHAPLAINS—A. Watson to *Caledonia*, J. H. Thead to *Howe*, J. Cooper to *Camperdown*, J. Marshall to *Victory*.

MIDSHIPMEN—W. Lapidge to *Howe*.

VOLUNTEERS of *First Class*—P. Johnson, A. Stirling to *Indus*, A. B. Oldfield to *Howe*, T. McDonald to *Queen*, S. G. Greville to *Benbow*.

NAVAL INSTRUCTORS—J. Addison, W. Witmarsh to *Excellent* to quality.

CLERKS IN CHARGE—F. Mundy to *Ferret*, F. W. Cole to *Nightingale*.

ROYAL MARINES—Capt. J. Garmston to *Indus*.

SECOND LIEUTENANT—H. Simpson to *Indus*.

### MOVEMENTS OF HER MAJESTY'S SHIPS IN COMMISSION.

[ To 15th of November. ]

#### AT HOME

AVON, (s.v.) Lieut.-Com. R. Pritchard 16th Oct. left Woolwich for Plymouth, 29th at Bristol, 30th left with volunteers (108) for navy.

CALCUTTA, 84, Capt. Sir T. Roberts, c.b. 21st October left Plymouth, called at Cork for troops, 29th sailed for Malta.

CALEDONIA, 120, Capt. H. Eden, 27th October commissioned at Plymouth.

CAMPERDOWN, 104, Capt. Sir H. L. Baker, Bart., 22nd at Sheerness fitting.

COMET, (s.v.) Lieut. G. T. Gordon, 26th October arrived at Portsmouth.

ENDYMION, 38, Capt. Hon. F. W. Grey, Nov. commissioned at Plymouth.

HECATE, (s.v.) Com. H. Ward, 20th Oct. passed Sheerness from Chatham on way to Portsmouth, 26th at Portsmouth, 2d Nov. sailed for Malta.

INCONSTANT, 36, Capt. D. Pring, 7th October arr. at Plymouth from Lisbon, 20th sailed for Cork, 8th arr. at Cork.

INDUS, 84, Capt. Sir J. Stirling, Nov. commissioned at Portsmouth.

IRIS, 28, Capt. H. Nurse, Nov. commissioned at Portsmouth.

LOCUST, (s.v.) Lieut.-Com. J. Lunn, Woolwich, fitting.

MONARCH, 84, Capt. S. Chambers, commissioned at Sheerness, 3d Nov.

PELICAN, 16, Commander C. G. E. Napier, Nov. commissioned at Chatham.

RHADAMANTHUS, (st. v.) Com. A. Wakefield, 21st October arr. at Woolwich, 31st at Devonport.

SALAMANDER, (st. v.) Com. H. R. Henry, 26th October sailed for eastward from Portsmouth, 9th Nov. at Portsmouth.

SAPPHIRE, (tr. s.) Master-Com. G. W. Nembhard, 30th Oct. arr. at Portsmouth  
SAVAGE, 10, Lieut.-Com. Hon. E. Plunkett, 9th Nov. at Bristol.

TWEED, 20, Com. H. D. C. Douglas, Nov. commissioned at Portsmouth.

VERNON, 50, Capt. W. Walpole, commissioned at Sheerness, 3rd Nov.

AT PORTSMOUTH, *Spithead*—*Britannia* and *Howe*.—*In Harbour*—*Queen*, *Vic-*

*tory*, *Excellent*, *Royal George*, *Indus*, *Salamander*, *Tweed*, *Sapphire*.

AT PLYMOUTH—*In the Sound*—*Cornwall transport*—*In Harbour*—*Caledonia*, *San Josef*, *Impregnable*, *Belleisle*, *Endymion*, *Pandora*, *Carron*.—*In Barnpool*—*Ferret*.

#### ABROAD.

ANDROMACHE, 26, Capt. R. L. Baynes, c.b. 14th July, at Algoa Bay, 17th sailed for Mauritius, 3rd Aug. arrived.

BEACON, (sur. v.) Lieut. T. Graves, 16th arrived at Port Leone.

CELOPATRA, 26, Capt. S. Lushington, 8th Oct. arr. at St. Johns, NB. from Quebec.

COMUS, 18, Com. E. Nepean, 28th of Aug. at Jamaica.

CROCODILE, 26, Com. A. Milne, 7th Oct. arrived at St. Johns, NB. from Quebec.

ESPOIR, 10, Lieut.-Com. J. T. Paulson, 21st Oct. arrived at Cadiz from Lisbon.

GLENER, (s.v.) 17th Sept. arr. at Demerara from Barbados.

JUPITER, (tr. s.) Master-Com. R. Fulton, 14th Aug. arrived at Cape on way to China, 24th sailed.

MEDEA, (s.v.) Com. F. Warden, 9th Oct. arrived at Paraiba.

PICKLE, 5, Lieut.-Com. F. Holland, 27th August at Havana.

PILOT, 18, Com. G. Ramsay, 31st Aug. arrived at Montreal from Quebec, 14th Oct. arrived at Halifax from Quebec, 18th sailed for Jamaica.

RACEHORSE, 18, Com. Hon. E. A. Harris, 15th Aug. arrived at Trinidad from Tobago, 27th sailed for Grenada.

RINGDOVE, 16, Com. Hon. K. Stewart, 4th Oct. arr. at Pictou from Prince Edwards Island.

RODNEY, 92, Capt. H. Parker, c.b., 18th October arrived at Malta.

ROVER, 18, T. W. C. Symonds, 28th August arrived at Port Royal.

SAPPHO, 16, Com. F. Frazer, 27th of August sailed from Jamaica for Honduras.

SERPENT, 16, Com. Hon. R. Gore, 19th Sept. arrived at Port Royal from Bermuda.

**SKIPJACK**, 5, Lieut.-Com. H. Wright, 16th September arrived at Port Royal, 26th sailed for Carthagea.

**SOUTHAMPTON**, Capt. Sir W. Hillyar, 14th Oct. arr. at Madeira.

**SPARROW**, 10, Lieut.-Com. R. Lowney, 22nd Aug. left Rio for Monte Video.

**VANGUARD**, 80, Capt. Sir David Dunn, 13th October left Malta for Levant.

**VESTAL**, 26, Capt. T. W. Carter, 9th Oct. arrived at Halifax from Quebec.

**VESUVIUS**, (s.v.) Lt.-Com. W. Blount, 10th October arrived at Gibraltar, 14th proceeded for Malta.

**VOLCANO**, (s.v.) Lieut.-Com. J. West, 22d Oct. arrived at Malta.

**WANDERER**, Com. H. J. Denman, 15th March at Ascension had captured six prizes; Lieut. King passenger to Ascension for the benefit of his health had died four days after his arrival.

**WINCHESTER**, 50, Capt. J. Parker, 10th Oct. arrived at Halifax from Quebec, 16th sailed for West Indies.

**WIZARD**, 10, Lieut.-Com. J. F. Birch, 12th August left Rio on a cruize.

## BIRTHS, MARRIAGES, AND DEATHS.

### Births.

At Quebec, 18th Oct. the lady of Capt. Bayfield, RN. of a son.

### Marriages.

At Sholden the Rev. G. Rainer to Sarah daughter of Vice-admiral Sir T. Harvey.

At Bath, Edmund W. Reilly to Sophia Charlotte, youngest daughter of the late Capt. G. Stiles, RN. of Wootton, Isle of Wight.

On 29th Oct. at Wolborough, Devon, Horatio Compigne, Esq., of Gosport to Blanche, youngest daughter of Capt. D. Mapleton, RN. of Newton Abbott.

At Isleworth, on 9th Nov. Henry, son of Rear-admiral Lord G. Stuart, to Cecilia, daughter of C. Hammersley, Esq.

On the 22d at Glasgow, Lieut. Lord, RN. to Fairlina Euphemia, only daughter of Lieut. T. Anderson, of Stromness.

### Deaths.

On 6th Nov. at Leamington, where he had gone for the benefit of his health, Admiral the Hon. Charles Elphinstone Fleeming, Governor of Greenwich Hospital, the second son of John, eleventh Baron Elphinstone.

At Barnstaple, on the 10th Nov. suddenly while conversing with his sister, John Day Jones, Esq. purser RN. (1808) aged 62.

On the coast of Africa, on board the *Wanderer*, on her passage to Ascension, for the benefit of his health, Lieut. King of HMS. *Persian*.

On 14th Oct. at Devonport, after a lingering illness, Mr. J. Purver, purser RN. (1799), aged 64.

Lately, on board the *Edinburgh*, off the Syrian Coast, J. Boyle, Esq., purser of that ship.

On the 27th Oct. at his residence, in

West Exe, Tiverton, Com. H. Carew, RN. aged 82 years, son of the late Sir John Carew, Bart.

At Malta, the wife of Lieut. Goldsmith, RN. commanding the *Megara*.

At Plymouth, 4th Nov. Mary, the wife of Lieut. R. Holman, RN. superintendent of police of that borough.

On the 28th Oct. at Bath, aged 52, Betty, wife of Lieut. W. Russell, RN.

On the 13th Oct. at West Loo, Capt. H. Jane, RN.

On 2d Nov. at Oxford, Stewart Town, eldest son of Com. T. L. Robins, RN. aged 12 years and 4 months.

At Lembock, East Indies, William Wade, eldest son of Thomas Blake, Esq. Inspecting Commander of the Coast Guard, Banff, aged 18.

On 3d Nov. in the Royal Hospital, Mr. J. Cooke, aged 27, master's-assistant upwards of four years in *Rodney*, nearly 13 years in the service.

At Bath, Mary Ann, wife of Capt. T. F. Mainwaring, RN.

On the 13th at Whiddon-park, Chagford, Devon, Capt. E. S. Baily, RN. aged 79 years.

On the 7th Nov. at Edinburgh, Thos. Hunter, Esq. surgeon, RN.

On the 4th Nov. at Elerig, Argyle-shire, John Sinclair, MD. surgeon RN.

On the 9th Nov. at the advanced age of 83 years, Peter Welsford, Esq. purser RN.

Lately, on board the *Gorgon* steam frigate, off Beyrout, Lieut. Penny, RN. of that ship.

In Haslar hospital, on the 12th Nov. John Langdon, master RN. late of the hydrographical-office at the Admiralty.

On the 30th Oct. in Essex, Ann Elizabeth, relict of the late Lieut. C. Mason, RN.

On the 12th Nov. at the Royal Naval hospital, Stonehouse, Mr. Edward Weale hospital matè.

## METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of October to the 20th of November, 1840.

Month	Day	BAROMETER.		FAHR. THER. In the Shade.				WIND.				WEATHER.	
		9 A.M.	3 P.M.	9 AM	3 PM	Min.	Max	Quarter.		Stren.		A. M.	P. M.
								AM.	PM.	AM	PM		
21	W.	In Dec. 30·12	In Dec. 30·10	o	o	o	o	NW	NW	1	1	b	b
22	Th.	29·90	29·85	46	49	41	50	SW	NW	2	4	od (2)	or (3)
23	F.	29·91	29·85	43	49	37	51	W	W	2	3	bc	qor(3)(4)
24	S.	29·52	29·54	41	46	37	47	NW	NW	3	6	bc	bc
25	Su.	29·75	29·77	39	46	35	47	NW	NW	3	3	b	b
26	M.	29·86	29·80	36	45	30	46	W	NW	3	2	bc	or 4)
27	Tu.	29·20	29·16	49	46	41	52	SW	NW	5	3	qor(1)(2)	bc
28	W.	29·12	29·20	40	46	36	47	S	S	4	4	bep 1)	bc
29	Th.	29·32	29·32	43	46	38	47	E	NE	2	3	or (2)	or (3) (4)
30	F.	29·49	29·53	45	50	35	50	SE	SE	3	2	bc	bc
31	S.	29·54	29·54	44	51	37	52	E	SE	2	2	o	b
1	Su.	29·61	29·50	45	49	40	53	E	SE	1	5	bem	qo
2	M.	29·50	29·55	50	54	46	55	SW	S	5	3	qbc	b
3	Tu.	29·44	29·41	50	55	43	56	E	E	3	3	bc	bc
4	W.	29·27	29·26	50	53	46	54	S	SW	2	5	qr 1)	bc
5	Th.	29·21	29·26	49	50	46	52	SW	SW	6	6	qor (2)	qbcp (3)
6	F.	29·07	28·97	47	47	41	51	SE	SW	6	6	or (1) (2)	qbcp (3)
7	S.	29·11	29·15	48	48	47	50	SW	S	4	4	bep (1)	qbcp (3)
8	Su.	29·30	29·36	44	50	41	51	SW	SW	2	5	b	bcp (4)
9	M.	29·11	29·13	47	50	43	51	SW	SW	7	6	qbcp 1)	bcp (3)
10	Tu.	29·05	29·14	43	46	41	48	SW	NW	2	3	ber 1)	bc
11	W.	29·31	29·15	42	45	39	47	SW	SE	3	2	bc	or (3) (4)
12	Th.	29·50	29·51	39	45	36	47	W	SW	3	2	b	bc
13	F.	28·82	28·63	50	51	41	53	SE	SW	6	10	ber (1)	qbcp(3)(4)
14	S.	29·02	29·11	44	48	43	49	SW	W	6	6	bc	qbc
15	Su.	29·45	29·53	37	44	33	45	SW	W	2	2	b	bc
16	M.	29·07	29·11	57	58	41	61	SW	SW	6	6	qor (1)	bc
17	Tu.	29·56	29·36	46	48	43	55	SW	S	3	4	bc	or (3) (4)
18	W.	29·78	29·71	40	37	35	41	E	E	2	4	o	ors (3)(4)
19	Th.	29·76	29·81	38	41	37	42	NE	NE	3	3	or (1) (2)	bc
20	F.	30·05	30·04	32	39	29	40	NW	NW	2	3	b	bc

OCTOBER—Mean height of the barometer = 29·947 inches : mean temperature = 45·3 degrees : Depth of Rain fallen = 1·50 inches.

## TO OUR FRIENDS AND CORRESPONDENTS.

The arrangements attending the last number of our volume for this year, obliging us to go to press earlier than usual, prevents our information reaching to the latest date.

We are glad to hear again from our old friend at Ramsgate.—His "OBSERVATIONS ON SHINGLE" in our next.

AN OLD TAR is very welcome with the subject he treats on. We shall be glad to hear further from him.

The jury rudder from the MATE OF THE MASTIFF in our next.

The PLAN OF COCHIN has reached us. Our best thanks to its donor.

The sad effects of the LATE GALES in our next.

The subject of the Glasgow Constitutional shall not be lost sight of.

Capt. Smith's (R.N.) communication came too late for our present number,—but shall appear in our next.

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