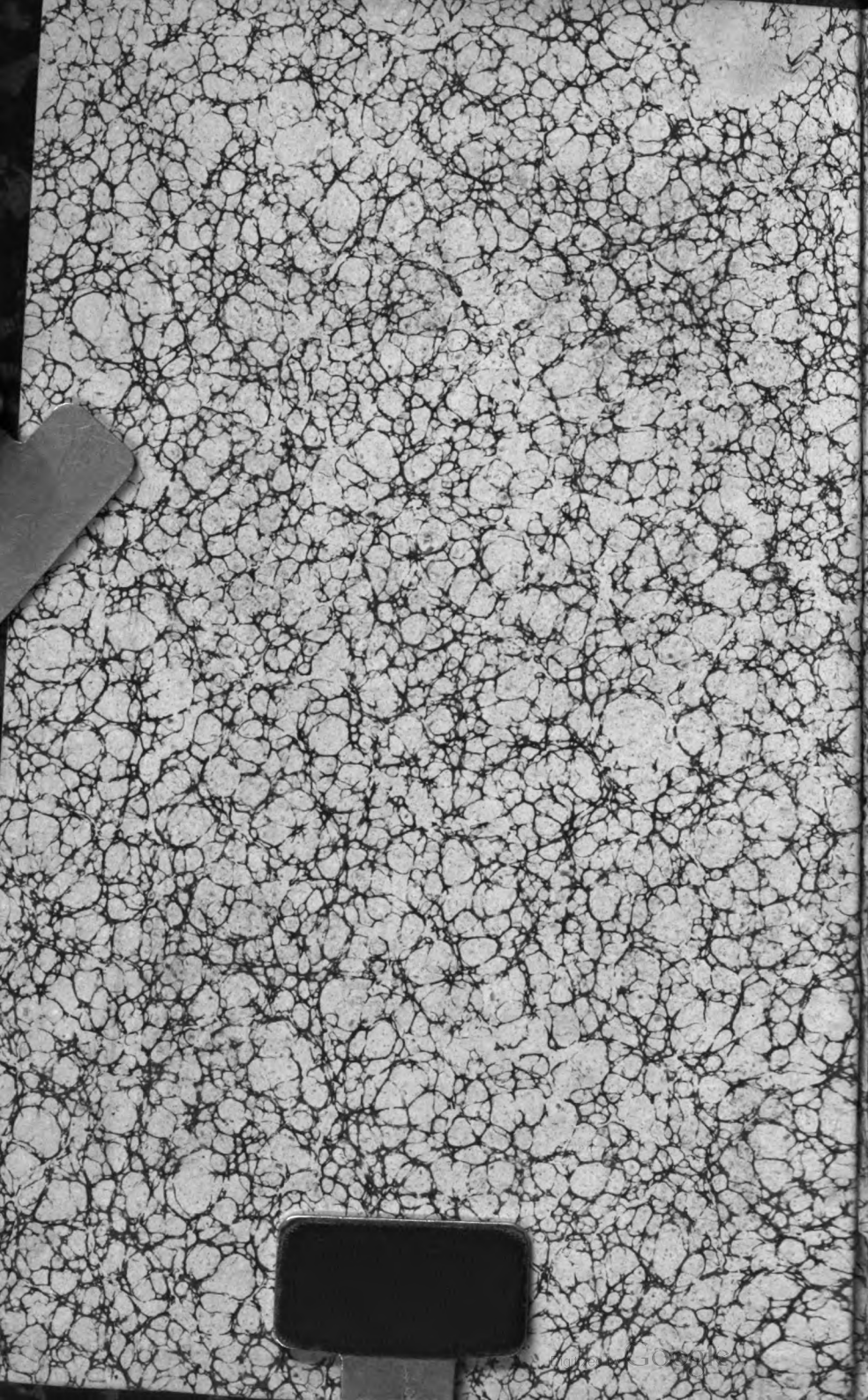

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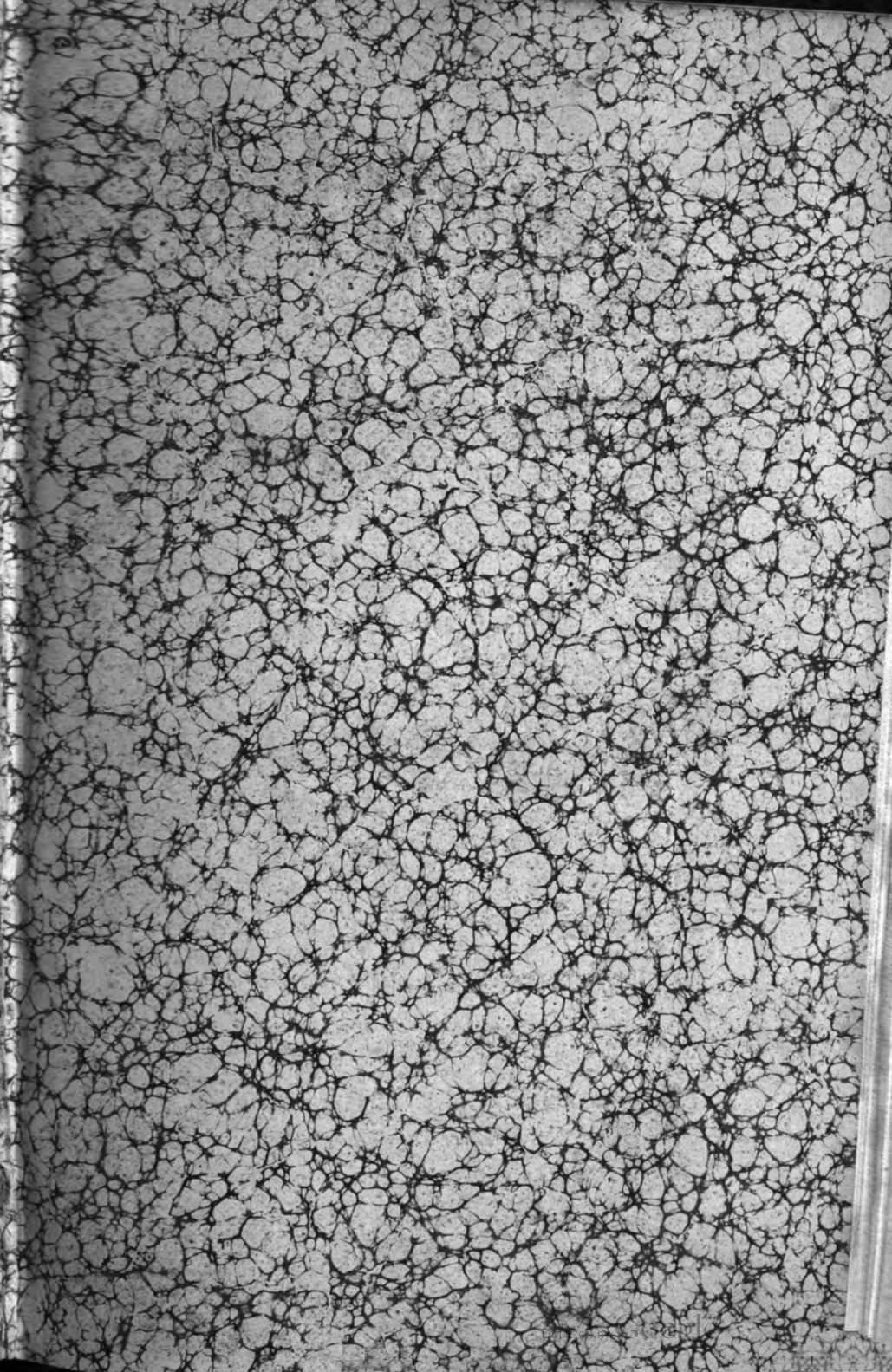
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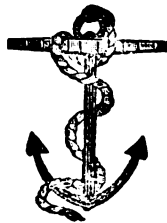
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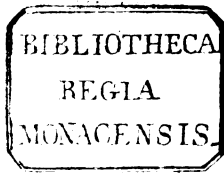
A JOURNAL OF PAPERS

ON SUBJECTS CONNECTED WITH

MARITIME AFFAIRS.



LONDON:
SIMPKIN, MARSHALL, AND CO.,
STATIONERS' HALL COURT.



LONDON:

PRINTED BY R. H. HUNT, 3. NEW CHURCH STREET,
EDGWARE ROAD.

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THE
NAUTICAL MAGAZINE,

AND

Naval Chronicle.

JANUARY 1846.

VOYAGE OF H.M.S. AGINCOURT FROM HONG-KONG TO CHUSAN, *by the Eastern Passage, or that outside of Formosa.*—Remarks of Mr. I. E. Elliott, Master R.N.

THE *Agincourt* left Hong-Kong on the 28th of August, in tow of H.M. steam-vessel *Vixen*; the morning commenced with heavy rain, thunder, and lightning, and a light air from the E.N.E. Towards noon it cleared off, and we passed Pedro Branco, at 4 P.M. This island is laid down too far east; it is a round high rock, steep to; and vessels passing it at night often take it for a ship under sail. During the night of the 28th, the weather became very unsettled, and the wind came to the eastward. 29th at 8 A.M., cast off from the steamer, and made sail, wind north-east; the south-west monsoon having evidently finished, and the north-east set in, it was determined to proceed to the eastward of Formosa.

On the 30th found we had been set thirty-four miles to the eastward during the twenty-four hours; and had been during the night passing through very strong ripples, as if a strong current running over an uneven bottom.

On the 31st, light airs and fine weather, wind north-east; at noon in lat. 21° 55' N, long. 119° 36' E.; observed the high land of Formosa bearing N.E.b.E.

On the 1st of Sept. at 10 A.M. wind north-east, a royal breeze, it suddenly increased, and obliged us to reduce sail to double-reefs, clear weather; towards night the wind increased, (still north-east.) with heavy squalls and rain, which continued during the night, clearing a little at intervals. On the 2nd at 7 A.M. in a clear, observed the island of Bayat ahead; bore up to run through the Bashee channel, but not being able to sight Goat Island, the wind having increased and hauled more to the

eastward, wore and laid the ship's head to the northward and westward ; strong gales with heavy rain and a confused sea, ship under main top-sail, storm staysails, and occasionally fore course ; barometer falling, ship making from 4 to $4\frac{1}{2}$ points lee way.

On the 3rd, soon after daybreak the wind moderated and it began to clear, and at 7h. observed an island bearing N. E. $\frac{1}{2}$ E. ; at 10h. made it out to be Botel Tobago Xima, weather moderating and barometer on the rise ; noon in lat. $22^{\circ} 10' N.$, long. $121^{\circ} 15' E.$, Great Botel Tobago Xima E.b.S. $\frac{1}{2}$ S. 15 miles found we had been set forty-two miles due north against the gale since noon yesterday ; our noon position placed us on the spot where a rock called the "Alceste" is placed in the Index Chart supplied by the Admiralty ; we could see no appearance of broken water, although there was a heavy sea running at the time, neither could we see the land of Formosa, in consequence of the haze hanging over it. Passed between it and Tobago Xima, found we had a strong current running to the northward. Horsburgh's description of Tobago Xima is excellent, and his position agrees with what I make it.

On the 4th at daylight, observed the small rocky island of Samasana, and the land of Formosa, which is very high and rises abruptly from the sea and intersected with deep gulleys, the hills covered with trees. No observations ; light air from north, to east, and south-east, with a swell from the eastward ; shaped a course to pass outside of Harp Island. At daylight on the 5th expected to see it ahead, although the weather was very clear nothing could be seen of the island ; at noon in lat. $24^{\circ} 8' N.$ long. $121^{\circ} 5' E.$, found we had been set north 109 miles during the last 48 hours, having during that period light variable airs and a swell from the north-east ; our longitude (mean of five chronometers) agreeing also with lunars, placed us by the chart only one mile from the land, and we were certainly not nearer than eighteen miles. I therefore suppose the east coast of Formosa from Samasana north, placed too far east about sixteen miles on the charts.

These strong currents render it necessary that a good look out should be kept ; in thick weather it must be very dangerous. I have since heard that a vessel making the same passage in January had a similar current to what we experienced in August, whether in runs in the opposite direction during the south-west monsoon I have not had an opportunity of ascertaining. There is no doubt that during the north-east monsoon this passage is preferable to the one through the Formosa Channel, as in it there is always a lee current, strong breezes with a very heavy confused sea which strains vessels very much. The opium clippers generally make the Channel passage, as they touch at the places along the coast, and as the whole coast of China is fronted by innumerable islands they work up under their lee and take advantage of the tides, anchoring under the lee of the islands when necessary.

6th, observed two islands to the northward of Formosa. I should suppose those placed off Killou are intended for them. I make their positions very different from the chart ; they are small, moderately high and rise abruptly from the sea. The southernmost one has a remarkable nine pin rock off its south-east end, we did not go nearer them than six miles. I place them in the following positions, viz. :

The southernmost lat. $25^{\circ} 32' N.$, long. $121^{\circ} 58' E.$, the northernmost lat. $25^{\circ} 44' N.$, long. $121^{\circ} 55' E.$

The whole of the east coast of Formosa is very high, gradually sloping towards the north end: we tried for soundings at seventeen miles off it, no bottom at 150 fathoms. As we advanced to the northward the current gradually decreased, and on standing in for the coast we found it setting to the southward.

On the 6th wind north, observed Tae Yue Sue Island, but did not go nearer than eighteen miles; from 6h. to 10h. wind continued from north to north-east, moderate, when we made the "Heishans", and stood in shore to the southward, soundings regular, muddy bottom.

On the night of the 10th strong breezes with rain, wind north-east, made nothing during the night. On the 11th passed to the northward of the Heishans, not far from the position where a shoal was reported to have been seen by John Walker, Captain of the Will o'the Wisp. Although a strong breeze and a heavy sea we could see nothing like broken water in the position assigned. Stood close into Cape Montague (8 fathoms) during the night, fresh north-east breezes; continued working to windward, in the morning only fetched the place we left the evening before. On the 12th wind more moderate, passed to the northward of Quesans, and at 9 P.M. anchored off Buffaloes Nose in 7 fathoms.

On the 13th wind north-east, fine weather, wayed and worked through Goughs Passage, the tide carried us so far as Tower Hill, it then turned, and the wind having fallen light, we with difficulty reached an anchorage off Hayes Island. No vessel should attempt to go round Tower Hill Island without a fair wind or certain of tide to carry her through, as there is no anchorage.

14th, worked through Tower Hill Channel and anchored off Stewart Island to await the ebb tide; it having made, worked through St. Helens and anchored at Spithead.

On leaving Chusan went out through the Melville and, south-east channel against the flood with a commanding north-west breeze.

In working into Spithead, the rocky patch will be avoided by keeping the three chimnies on the high land on with the extreme point (south point) of Guard House Island.

A vessel bound into the harbour of Chusan will find the last quarter the best time, if a beating wind in, as at that time the tide runs fair into the harbour; during the first quarter it runs very strong and irregular in its direction.

We annex the daily positions of the Agincourt as follows:—

| | Lat. N. | " | Long. E. | " | | Lat. N. | " | Long. E. | " | | | | |
|----------|---------|----|----------|-----|----|---------|---------|----------|----|---|-----|----|---|
| Aug. 30. | 22 | 15 | 0 | 118 | 5 | 0 | Sept. 5 | 24 | 8 | 0 | 121 | 56 | 0 |
| " 31. | 21 | 55 | 0 | 119 | 36 | 0 | " 6 | 25 | 38 | 0 | 122 | 20 | 0 |
| Sept. 3 | 22 | 10 | 0 | 121 | 15 | 0 | Oct. | 30 | 10 | 0 | 122 | 46 | 0 |
| " 4 | 22 | 12 | 0 | 121 | 20 | 0 | | | | | | | |

A Month's Cruize of H.M.S. Agincourt, off Monte Video Island, one of the Chusan Group.

During the time we were cruising, viz., from 19th of Sept. to 19th of October, the weather was fine; northerly winds prevailed, occasionally a breeze from the south-east. We sounded every two hours, bottom invariably dark sand mixed with mud, and very regular.

Monte Video is high and barren, and cannot be mistaken for any other near it.

Four Sisters and Two Brothers are merely small rocky islets.

The Three Hummocks when seen from south-east look like three islands.

The Barren Islands are composed of rocky rugged islets, there appears to be no danger near them, except the half-tide rock to the southward of eastern island, which always breaks.

No water could be obtained at Potos, or Buffaloes Nose in October, in consequence of the dry weather.

Vessels bound to Chusan from Buffaloes Nose should recollect that the tide does not make in the channels until three hours later than at the Buffalo.

NOTES ON THE SOUTH-WEST COAST OF AFRICA,—*By Lieut. Ruxton.*
Communicated by Col. Jackson, Sec. R.G.S.

THE vicinity of land was now manifest. Myriads of birds surrounded the ship and the water had acquired a muddy red colour. In the evening we passed through a patch of this discoloured water, which extended several miles, and even with a magnifying glass no appearance of spawn or anemalcula could be detected.

14th. Hard gales from S.S.E. with extremely cold weather, thermometer in the cabin 49°.

16th. Made the land a few miles to leeward of the Island of Ichabo, appearing low near the shore, but rising gradually into more elevated sand-hills in the distance. Many fur seals and penguins round the ship.

17th. Anchor off the north-end of the island, and find twenty-two vessels lying at anchor. The island cut down nearly to the waters' edge, and all the guano removed. On landing, which owing to the surf is always difficult, I found the whole surface of the island covered with skins and carcases of seals and penguins, in every stage of decay. At the south-west point, are the graves of thirty or forty seamen and labourers, killed whilst working in the pits, by the fall of guano. The skins and bodies of the seals and penguins had been originally the surface covering of the valuable deposit underneath; and had to be removed in order to reach the guano, to which they served, not only as a protective covering from the damp and spray of the sea, but also, in course of time decomposing themselves, formed new layers of this extraordinary substance. There was still a depth of many feet, in many places, of an inferior guano

but too much impregnated with moisture and sand to be worth removal, though at the same time very valuable as a manure.

The island is of primary formation, exhibiting no traces of a volcanic origin, granite white and red, resting on quartz compose the rocks. Lumps of ammoniacal salt exist in the guano in a comparatively pure state. Notwithstanding that the island had been occupied for nearly two years, during which time, thousands upon thousands of penguins had been wantonly destroyed, on the cessation of work, these birds again flocked to their old haunt, where they had again commenced laying their eggs. The rocks round the island are literally covered with penguins, cormorants, and albatrosses. The former wedged together in a dense phalanx, have no more dread of man than ducks in a poultry yard, although they have met with such persecution on the island; and any number might be taken by the hand without any difficulty.

The sailors eat the livers and hearts which are exceedingly palatable, but the flesh of the body is rank and oily. Hearing that H.M.S. *Thunderbolt* was on the coast, and supposed to be lying in the Bay of Angra Pequena, I determined to proceed overland to that place, distant from Ichabo, by land about fifty miles, as I expected to find letters from the Admiralty with instructions to the officers in command to assist me in reaching Walwich Bay. For two or three days after my arrival on the coast, the sea was too high to allow a boat to land on the main. On the 18th however, I succeeded in landing through a very dangerous surf, at a bay $2\frac{1}{2}$ miles south of the island, accompanied by a volunteer from the ship I arrived in. As I was led to believe that we should find vessels at Angra Pequena, I only carried sufficient water and provisions for two days for myself, desiring my companion to carry a sufficiency for his own use. By some mistake, he neglected to provide himself with any, and the few biscuits I carried were completely spoiled in landing through the surf. Unfortunately I was not aware of our want of provisions until we halted for the night, when it would have been useless to return, as a gale of wind was blowing, which would have prevented our getting off to the ship for a further supply. On landing I kept a course S.S.E. by compass, passing through a valley deep with soft and yielding sand, into which sinking at every step to our ancles, and being laden with heavy packs and ammunition, we found our progress very laborious, particularly as it was the first time I had been on land for upwards of three months.

About four miles south of the island, we passed a valley which had been swept by a tornado. Although the surrounding hills were many feet deep in sand the surface of this valley had been completely swept, as by a broom, and was as hard as a beaten road, with small triangular points or ridges sticking out of the sand sufficiently hard to wound the feet. These all pointed to the north-west or mouth of the valley, so that the tornado which had caused this appearance, must have blown with great violence from the south-east, and probably caused the phenomenon common on this coast of the sand-pillar. The sand was piled up fifty or sixty feet in height at the mouth of the valley, which appeared to me to have once been the bed of a water course or river. The rocks are all of primary formation, with the rare exception here and there of blocks of

limestone further inland. The granite is in some places resting on quartz, and intersected by veins of that rock. The granite in many instances affords curious evidence of the decomposing power of the atmosphere, being much disintegrated, and crumbling between the fingers like sandstone. Pebbles and boulders of quartz strew the vallies and shore, and several specimens of very beautiful pebbles have been found opposite the Island on the main, on some flats called by the sailors "The pebble beds."

The only vegetation is a stunted sand plant which grows on the sand-hills, and affords means of subsistence to a species of hare which is rather plentiful. I also saw several dwarf scrubby looking plants growing in the sand, to which I paid no attention, but afterwards on examining them I found them to be the Myrrh plant. At this season (March) they were destitute of leaves, or any symptoms of life, but gum was freely exuding from them.

As night was approaching, I struck off to the sea shore, along which we proceeded with no little toil. The coast is strewed with fragments of wrecks. Boats, spars, casks, &c. are met with at every step. A large longboat was cast high and dry on some rocks, and near it were many barrels, bamboos, cocoa nuts, &c., from which I inferred she must have belonged to an Indian. Further on a smaller boat lay bottom upwards on the beach, with the melancholy notice chalked on the stern that "Capt. Drake buried a body alongside." The little mound of sand which had been respected by the jackalls and native dogs, testified to this.

Along a distance of thirty or forty miles on this inhospitable coast, I saw parts of wrecks of at least six different vessels, and from the fact of many boats being lost on the shore, in which no doubt the crews have endeavoured to escape, it is much to be feared that many a poor fellow has been cast on these sands, where even if he succeeded in reaching them alive through the dangerous surf, it would only be to perish miserably from starvation.

About ten o'clock at night we halted and set about building up a fire, which a biting wind and intense dew rendered necessary. This we were able to effect with very little difficulty, abundance of firewood being at hand. However, we chose the trunk of a red cedar, which was lying on the beach and which, being dry, soon blazed up. It is curious where this tree could have come from, for not only is there no cedar on this coast, but for the space of 300 or 400 miles north and south, not a tree exists along the shore, nor for a hundred miles inland. It may have been brought down the Orange River from the interior, but I doubt if cedar is found there. Most probably it was drifted by the current from the distant shores of South America.

Here I found, on examining our stock of provisions, that we had but three eatable biscuits and two quarts of water, in which my companion had already made a hole.

The moon was yet high when we resumed our march, leaving the log still burning. The sand on the shore was so soft that we sank to our ancles at every step; I therefore struck in amongst the sand-hills, hoping to find a harder track. As we were floundering through the sand, I perceived a peculiar smell issuing from a dark patch of brush a little distance

before me. Approaching the spot, I found it proceeded from a native hut, or rather den of brush and sand bushes, piled round a frame-work of rib-bones of whales, with which, by the bye, the coast is plentifully strewed. Bones of this fish were also stuck up in the sand, and the ruins of two or three more huts were visible. From the abominable odour which hung around the place, and which exactly resembled the stench proceeding from the den of a wild beast, or the nest of an eagle or vulture, I concluded it had recently been inhabited by natives. Inside the hut were some broken ostrich eggs, and several large, flat, and exceedingly heavy stones, which from the weight I imagined to be iron-stone.

On leaving this primitive retreat, we again floundered over the sand-hills, which were continual stumbling-blocks in our way; for the darkness prevented our perceiving the inequalities of the ground, and we were constantly tumbling over them and into holes. At length, finding it impossible to proceed, I lay down under the lee of a sand-hill, and slept till daylight. An intense dew was falling, and in the morning my clothes were saturated with the damp, and my gun and pistols a mass of rust; our limbs, too, were stiff with the laborious walking and with lying on the damp sand.

We persevered, however, and leaving the sand-hills, again steered for and reached the sea-shore as the sun was rising; and we continued our course to the southward, passing, as the day before, many wrecks lying on the beach, and the same monotonous line of sandy plains and hills on our left. Fourteen miles from Ichabo, we entered a bay where the sand-hills rose perpendicularly from the waters' edge; and it being high-water at the time, we were obliged to walk up to our knees in the water. This bay must be frequently impassable when the tides are high; at any time there is considerable danger of being washed back by the sea. Passing the long circuitous shore, we found some rocks at the southern extremity, on which were some limpets. We found them tolerable eating, but I was seized shortly after with pains in my chest, which I afterwards found out was occasioned by eating these fish—some species of them being poisonous.

Leaving Sandhill Bay, on crossing a point, we entered another of equal extent. Here lay several fragments of the wreck of a vessel, which had, apparently, but recently been broken up. India baskets and some Japan bowls lay in profusion on the sands; and amongst other things, I picked up a bottle of Harvey's sauce, which still contained the greater portion of its original contents, and which, strange enough, were as fresh and well-flavoured as the day it was made. There was no mark or name on any of these fragments; but at a little distance, a broken oar had the name "Heart of Oak," stamped upon it.

At sunset of the 20th we were in sight of Angra Pequena, and, to my great disappointment, but one vessel was to be seen, and she was in the act of getting under way. A dense mist almost hid the coast from my view, and might also have concealed any vessel lying off the land. The vessel in sight was so distant that all attempts to attract her attention would have been futile. We had at least fifty miles before us over the

sand, to reach our vessel, which was to sail on the fifth day after our departure; so that no time was to be lost in our return. Our food and water were also exhausted, which rendered our situation anything but pleasant. A biscuit each had been our only food, with the exception of the few limpets, for three days; and we already felt exhausted with fatigue and hunger. We, therefore, with a very bad grace, turned our backs upon the bay.

On the maps, a river is laid down as running into Angra Pequena, called Fish River. No such river exists. From the Gariep, or Orange River to Walwich Bay, no river runs into the sea, although in some maps of Africa I have seen three or four laid down. Imagining that water was to be procured here in the river, was the cause of my not providing myself with a larger supply; and the consequence was that we nearly perished. Angra Pequena was first discovered more than 360 years ago, by Bartholemew Diaz, on his first voyage of discovery. Whilst lying here, he erected on a rock, which abuts from the south-west point of the bay, a marble cross—both as a memento of his so far prosperous voyage, and also as a testimony to his primary discovery, and as a symbol of his having taken possession of the country in the name of his king. Here it remained upwards of 300 years undisturbed, an honourable memorial of the skill and enterprise of the old Portuguese. For three centuries it had braved the elements, when, a few years ago, it was destroyed by some modern Vandals, and now lies, broken and unheeded, buried in the sand. Of the many ships of war which have put into this bay, not one has ever thought of raising the old cross to its former position. To the view, the whole line of coast presents but one cheerless, inhospitable aspect. Sand-hills rising from the waters' edge, until in the distance they are lost in more elevated hills as miserably sterile as themselves. Not a patch of verdure relieves the eye, but everywhere shining, glassy sand glares in the sun, broken on the ridges of the hills by abrupt masses of rock, which shut out a view, many miles beyond, of a desert equally wretched. A few half-starved jackalls are occasionally seen prowling near the shores, where—worthy denizens of such a waste—some wretched bushmen resort, seeking a subsistence on any offal cast on shore by the sea. Wherever water is to be procured, two or three families reside, living on beetles, the carcasses of seals, which they devour in the last stage of putrefaction, and the few shell-fish they may find on the rocks.

Quitting Angra Pequena about sunset, we proceeded northward for a few miles, and slept under the lee of a sand-hill, in a plain abounding with myrrh plants. Scooping a hole in the sand, I slept until sunrise, when I was so weak and exhausted I could scarcely rise. My companion was in a still worse plight, and it was with great difficulty I could induce him to rouse himself.

The sun was exceedingly powerful, and we were tormented by excessive thirst. A plunge every now and then into the sea, regardless of the sharks which were swarming within the surf, refreshed me for the time, but only increased the thirst. Every few yards we would fall from sheer weakness, when in an instant I would be fast asleep, and it was with great difficulty I could resist the drowsiness which was stealing over me.

The long sand-hill bay took us five hours to pass ; and having to ascend a range of high sand-hills, we abandoned our packs, blankets, ammunition, and what I regretted more—some beautiful skins of the fur-seal which I had shot.

We experienced a temporary relief from this, but in a short time were in as hopeless a state as before. Choked with thirst, and stumbling at every step, at length simultaneously we threw ourselves down ; and I was just giving way to the drowsy stupor which was coming over me, when, looking down the beach, I perceived the figures of several natives, seated round a fire. Knowing that water could not be far distant, I imbibed fresh strength from the anticipation of a draught, and was soon amongst them. The party consisted of six women and as many children, all perfectly naked. On seeing us approach, they all dashed up the sand-bank, squatting like crows on the top. On my making signs, however, one of them came down, and, to my great joy, with two ostrich egg-shells of water, which refreshed us wonderfully, and enabled us to accompany them to their village, which was about half-a-mile from the shore. The village consisted of six or seven huts, formed of bushes raised against rib-bones of whales. The only tenants of these were a few old men and women, who were crouching, enveloped in greasy sheep-skins, over a fire. On our arrival, a boy, who seemed to anticipate our wants, ran to the well, and brought several ostrich egg-shells of water, which, although very brackish, I esteemed the sweetest draught that ever passed my mouth. I found the well to be a hole dug in the sand, about four feet deep, from which about a gallon of water could be procured at a time. Experience afterwards taught me that water is to be procured at almost any spot on this coast, and often in the driest-looking and sandiest parts. We rested in the village for several hours ; but the only food they could give us was a dozen of roasted limpets.

A present of tobacco amply repaid their hospitality ; and when we left them in the evening, old and young were sitting in a circle, and enjoying a regular smoke over the fire. These natives were the wandering bush-men of the coast.

We arrived opposite our ship late at night, and made a large fire to notify our arrival. It was with great difficulty that we were got through the surf the next day, almost famished with hunger. I remained some days at the island before I could get an opportunity of proceeding down the coast, and had many opportunities of observing the changes presented by the weather on this coast. At no time can it be depended upon. The prevailing wind is from the southward. A light northerly breeze occasionally, but rarely, sets in, always causing the barometer to fall ; the southerly winds having the contrary effect. Dense fogs are of frequent occurrence, coming on suddenly at all hours of the day and night. They have the same effect as a smart shower of rain, completely saturating clothes and covering all metals, however well guarded, with a thick coating of rust. Heavy dew falls at night, and in such quantity that water can be collected from it.

Notwithstanding this, the climate is wonderfully salubrious, nor have the night dews and fogs any injurious effect on those exposed to them.

The weather is exceedingly cold, the thermometer standing at 51° in the cabin. The mists rising over the land, cause a very wild and gloomy appearance. Night and morning, the sun, in rising or setting, appears to struggle through the vapours, and tinges the surface of the land with an unnatural, lurid glow. At this time, when the sun is looming like a lantern through the misty twilight, the surf roaring on the reefs, and dashing furiously against the rocks, with myriads of sea-fowl screaming unseen overhead, and the loud bray of the penguins resounding on all sides,—when the vapours rising, disclose landward hills of barren sand rising from the shore, without the relief of the slightest verdure, and seaward nothing but huge rolling waves breaking into clouds of spray,—the whole forms a picture of dismal scenery, perhaps, unequalled in any other part of the globe.

Many vessels have arrived on the coast, seeking an island said to lie a few miles north of Ichabo, and of which a chart had been published. It was reported to be covered with guano, and to be situated in a bay affording good shelter and safe anchorage. More than 300 vessels had arrived, with instructions to take cargo from this island, which was called Gallovidia. No such island exists. I made an unsuccessful search for Gallovidia Island, pulling along shore in a boat to the latitude assigned to it, and closely examined every bay between Ichabo and Hottentot Bay. I also walked overland to the spot laid down in the chart as the locality of this newly-discovered island.

On the 30th March I proceeded down the coast in a vessel in which I had taken a passage for that purpose; running along shore during the day, and closely examining the line of coast.

On approaching Mercury Island, the coast presents a rather bolder appearance; masses of granite rising abruptly from the shore, and of considerable height.

Mercury Island, as well as Ichabo, is of primitive formation. It is merely a mass of rock, lofty and precipitous, in the hollows and interstices of which were the deposits of guano, which have now been entirely removed. The bay is small, and affords little or no shelter from the prevailing winds. A heavy, rolling swell sets in with the strong southerly winds, and breaks with great force on the beach, where boat-landing is very dangerous. It is, however, of easy access, either from the north or south; and in case of a gale, vessels can easily get to sea. The rocks on the north and south ends of the bay rise abruptly and to a great height from the waters' edge, and between them is a lower range of sand-hills, through which the points of quartz rocks shew themselves. From this a curious ridge ascends to the high land, which exactly resembles the backbone of a fish. No vegetation is to be seen, beyond the stunted sand-plant common to the whole coast.

On arriving at Walwich Bay, from whence I had intended proceeding into the country, I found that some traders from the Cape of Good Hope had established themselves, from whom I met the most strenuous opposition to my proceeding into the interior. A short time before my arrival, some missionaries had visited the bay from the interior, accompanied by Jonquer Africana, the chief of the Namaqua nation. Unfortunately they had left shortly before my arrival.

Finding that these traders would neither supply me with oxen, nor render me any assistance, I endeavoured to send into the country for some pack-bullocks, to enable me to reach the missionary station at Jonquer's, where I could procure horses and oxen for my expedition. However, I found that the traders had already got possession of every head of cattle, and none were to be procured but from them. The traders threatened, and I have no doubt that they would carry their threats into execution, —to send to the chiefs through whose country I was to pass, to tell them that I was coming with arms and armed men, to take their country from them, and advise them not to let me proceed. Their object in opposing me is, that they are unwilling that the capabilities of the country should be known, in order that they may enjoy undisturbed the lucrative trade with the interior.

After many fruitless attempts, I at last imagined that all difficulties were overcome, when I heard that a missionary had arrived at the trading post, accompanied by several chiefs, who had waggons and oxen with them.

I had already engaged an interpreter, the Damara slave, who was purchased by Sir J. Alexander in his expedition, and educated in England. Through him I communicated with the chiefs, who at once agreed to supply me with a waggon and oxen, and their own escort to proceed as far as the Kraal of the Head Chief, where I might obtain oxen and horses for my journey to the north-east. On the eve of my departure, I heard to my great astonishment that Mr. Tyndal, the missionary, had used his influence with the chief Amrol to prevent my proceeding, indeed before his arrival, he had heard from a native that I was at Walwich Bay and about to proceed into the interior, when although he did not know that was my object, he advised the chiefs to prevent my proceeding.

I at once saw the Missionary, who acknowledged that he had advised Amrol not to sanction my going, and said that as I was not sent by government, but was a private individual on my own resources, he would advise the chief to that effect. Such is the influence which the missionaries have over this old chief, that he put a stop to my obtaining assistance from the other chiefs, which rendered it impossible that I could proceed. I afterwards ascertained that the missionaries are all directly, or indirectly, connected with these traders, who indeed were established by them as a *dépôt* for provisions to supply the stations in the interior, and also as an outlet for the goods collected from the natives by them, in their double capacity of merchant missionaries.

The opportunity lost was doubly to be regretted, as on the return of these chiefs, Africana was going into the Damara country, to the north-east of the Swatrop to negociate a treaty of peace with the King of that nation, and therefore my entrance into their country would have been under good auspices. Thus my project was thwarted by the very people to whom I confidently looked to for assistance. No offers I made to the chief would induce him to sell me any oxen, and all my efforts to procure any, were of no avail, so that I was most reluctantly compelled to give up all hopes of penetrating from that point, which I am satisfied is the most practicable on the coast, and affords greater facilities for travelling than any other.

I examined the Swatrop, or Somerset River, which is forty miles to the north of the Kusip, which runs into Walwich Bay. The Swatrop was not visited by Sir J. Alexander, although it was by far the best route he could have followed on his return.

When it flows, it must be a considerable river—the mouth being 500 yards wide; and it must *once* have flowed with great force, having worn its way through rocks of granite. Its mouth is blocked by a bar of sandy beach, and covered with reeds and flags. A species of hemlock grows in its bed, which, to twenty miles from its mouth, is dry. Water is, however, easily procured a few inches from the surface. Passing the first twenty miles, there are large pools and abundant pasture for many thousand head of cattle, which increase the further you proceed to the eastward.

It is by the route of the Swatrop that the natives proceed to and from the interior; it being perfectly practicable for oxen and waggons. It runs nearly due east. From its source (which, according to the natives, is in a mountainous country) to its mouth, a distance of 300 miles; it passes through a succession of fertile plains, lofty hills, and sandy deserts. Seventy miles from the sea coast, the desert changes into plains of fine pasture, which increase in fertility the further you advance, until, at the village where Africana resides, the country is rich and fertile, covered with flowers and a luxuriant vegetation. In its course to the sea, it has worn its way through lofty granite rocks, which on its north bank stretch away in a perfect level for many miles.

Although dry to appearance, the water, most certainly, here, as in other rivers on the coast, steals silently along under the sand, and is everywhere procurable at a trifling depth below the surface. The alluvial soil is a black loam, in which are seams of nitrate of potash, in thin leaves, and which also is found in many places as a superficial deposit. At the mouth, rocks extend far out to sea, rendering it impossible that any boat could enter the river, even if there was sufficient water. Neither can a vessel lie with safety nearer than ten miles from it.

I received some information of the country to the north-east from my interpreter, who had been to the source of the Swatrop, and from the chiefs.

The true country of the Damaras extends northward and eastward of the Swatrop, and far surpasses that of the Namaquas. The physical difference between the two people sufficiently proves this: the Namaquas being a poor, under-sized race, whilst the Damaras are the finest negroes I have ever seen. Numerous small rivers run from the northward to eastward; and one great water they describe, where are plenty of canoes, and the inhabitants are very wild, with long hair. This exactly agrees with information I received from a Portuguese, who had been far into the interior from Benguela, on slaving expeditions, who told me he had seen some slaves, who were brought from a large lake or river, who were copper-coloured, with long, straight hair. The Damaras of the north-east also wear ornaments of gold, which I have myself seen. Their country abounds in cattle, ivory, &c. They are ignorant of the use of fire-arms, which have always been kept out of the interior, by the policy of the Portuguese slave-dealers.

This country supplies at least two-thirds of the slaves taken from the coast of Africa. They are constantly at war with each other; their great object being to obtain prisoners, whom they sell to people who trade between the Portuguese settlements and their own country. The Damaras have reported, that amongst a tribe not a very great distance east of the source of the Swatrop, there have been long residing some very aged white people, who were made prisoners many years since, somewhere on the eastern coast.

My intention was to visit the country of the lakes, or rather where they are said to exist, and the sources of the Zambezi, down which river it would have been easy to proceed to the Portuguese settlement of Sofala, in the Mozambique. The natives all speak of a *water country* to the north-east, which must either be the Zambezi, or the lake called Nun-moor.

I induced the master of a vessel which was leaving the coast to proceed down it to the latitude of Nourse's River, which was discovered by the *Espiegle*, in 1823. This river rises in the heart of the unexplored country north of the parallel of the tropic of Capricorn, and would be a most important outlet, if a trade were opened with that region. At St. Helena I received an account of it from Capt. Stenning, of the barque *John Cook*, whom I had requested to examine its mouth. I must here observe, that from the period of its first discovery it has never been revisited; and even whalers and sealers, who constantly visit the coast, are utterly ignorant of its existence, notwithstanding that fresh water is an object of the greatest importance to them, and most difficult to be obtained. Capt. Stenning reported, that being in lat. $17^{\circ} 50'$ south, he was close in shore (April), and had an excellent view of the river, which was *open*, and running with strength. Its entrance was 400 or 500 yards in width, and had sufficient water to allow a *large boat* to pass the bar.

North of the Swatrop I saw the first change in the nature of the rocks. Here are some curious masses of limestone, without any petrifications, and in horizontal strata. It surrounds a plain, covered with quartz boulders and pebbles, and pieces of lava and scoriæ. These volcanic substances are frequently met with, although no part of this coast, nor, indeed, any part between Angra Pequena and Walwich Bay, exhibits any appearance of volcanic agency. Some of the granite rocks have a tendency to stratify, but it is always horizontal. I picked up a large mass of scoriæ on the summit of a very high hill some miles inland; but on the beach it is abundant.

The myrrh plant was the only plant I saw of any value; indeed, it is the only symptom of vegetation in the desert. It is found in a space of about thirty square miles, in the country inland from Ichabo; and is very abundant. I learned from the natives, that it is of a better quality further from the coast. In March the plant was destitute of leaves, but gum was exuding plentifully from it. An ounce might be extracted from each plant. In appearance, it is low and scrubby, growing in the bare (mica) land.

Near Walwich Bay, the few natives who inhabit the valley of the Kuisip subsist entirely on a species of melon, or prickly pear, which they

call naros. It is curious that it is only found in a very circumscribed tract of desert country, frequented by the Namaquas in their visits to the coast. The plant is a spreading, prickly bush, with small leaves and yellow flowers. It bears fruit throughout the year, which may be gathered from the same stem in every stage of growth, from the bud to the ripe fruit.

In the lagoon at the head of the bay are large beds of samfire, which, either dressed, or as salad, affords an excellent anti-scorbutic vegetable. It also grows in the mouth of the Swatrop.

Walwich Bay forms the safest harbour from the Cape to the equator, being sheltered from all winds, and having excellent anchorage. Pelican Point, which forms its south-western extremity, extends about four miles, and forms a breakwater to the winds and swell from the westward; consequently, the water within the bay is at all times smooth as a lake. The rollers here are not of such frequent occurrence as at Ichabo; but occasionally wash over the spit, leaving many sharks and fish on the sands. Its breadth is from a quarter to three-quarters of a mile. Its surface is level, save where the sand has drifted over, and covered the carcasses of whales, which have been washed ashore. The refraction seen here is most extraordinary. Some jaw-bones of whales, which are sticking upright in the sand, marking the spot where some sailors were buried many years ago, who were killed by the natives, appear like masts of ships. The pelicans, standing on the point, in bands of fifteen or twenty, resemble a troop of giants; and the crimson flamingoes running over the sand in large flocks, a battalion of infantry; whilst the surf dashing on the beach, is seen refracted high in air like the flickering light of the aurora borealis.

Immense masses of cormorants take their station along the low, sandy shore, formed invariably with intervals between each mass, which, at a distance, and the birds being greatly magnified by the refraction, gives a perfect idea of an army formed in masses of battalions. In these intervals a pelican is generally stationed, who appears to be generalissimo of the whole body; whilst myriads of sandpipers, plovers, and terns continually skirmish in the front. At the distance of more than a mile, the peculiar musky odour emitted from the skins of the cormorants is too plainly perceptible; and when a flock of half-a-million of these birds is flying over-head, the effluvia is intolerable. The curious phenomenon of the "illusory lake," so common in the desert sands of Northern Africa, is here seen in perfection. At certain times, when the atmosphere is dry, and the refraction great, the whole point appears covered with a sheet of glass-smooth water. No experience can satisfy one of the illusion, so perfect was the counterfeit.

The lagoon at the head of the bay is generally covered with water to the depth of two or three feet, and is the resort of countless myriads of sea-fowl, pelicans, flamingoes, plovers, &c.

Wishing one day to secure some specimens of these birds, I took up my quarters for the night under the lee of a heap of whale-bones, on the verge of the lagoon. When the moon rose, I found myself in the midst of vast flocks of gulls and other birds, which were roosting on the level

sand; a band of pelicans being so close to me that I could have almost touched them as I lay. As the first streak of grey appeared over the eastern sand-hills, I turned out of my lair, where, by the bye, I was disturbed during the night by two scorpions, which I actually killed as they ran up my leg in the trousers. Partly concealed by a small hillock of sand, I had leisure to observe a most extraordinary scene. The tide receding, had left a large space of sandy mud uncovered, which was literally alive with birds. Here, as morning dawned, long lines of flamingoes, pelicans, gulls, cormorants, and other birds continued to pour their countless numbers, until the lagoon was covered with a perfect carpet of birds. Innumerable plovers hovered over the mass, striving to introduce themselves into the interstices, and making the air resound with their shrill piping.

In a pool a few feet from me several hundred enormous pelicans had taken their station. Here, amid the uproar of a million throats, they quietly fed, and when the sun appeared, removed to a hillock, where, lazily stretching their wings, they enjoyed the warm rays.

The flamingoes however, disturbed by the voracious cormorants, who were tilting and jostling against their long legs testified their displeasure by loud croaking, spreading their wings and displaying their beautiful crimson plumage, now rising in a cloud, and again settling amongst the thick phalanx of black cormorants. The poor gulls were sadly knocked about, their short legs and sluggish gait being much out of place among their taller and more active competitors.

I fired a ball from my rifle over the throng, but the report was lost amid the uproar. The pelicans which were close to me raised their heads, and stretched their wings, but quickly resumed their former dignified position, testifying no alarm at my propinquity. Three or four piebald crows were hopping and cawing around me so tame that they readily took peices of biscuit which I placed at my feet. As the tide flowed, gradually narrowing the space occupied by the birds, they became jammed into a compact mass, fighting and screaming in a manner that beggars description. When they appeared inextricably confused, I rose to bring their meal to a conclusion. The scene which ensued was most amusing. I was actually striding amongst the cormorants, before they paid the slightest attention to my appearance.

The flamingoes higher than the rest, were the first to observe the intrusion. I was amongst them when they took the alarm, when first raising their heads and uttering warning cries to the rest, they rose in a cloud of crimson. A shot and a shout disturbed the greedy cormorants, who with deafening clamor rose in confusion, followed by the gulls and plovers. The heavy flying flamingoes were first charged by the mass, throwing them at once into disorder, but when once extricated their distinct clouds of crimson, white, and black, floated slowly away. Last of the rout, the pelicans in a band of at least a thousand brought up the rear, skimming slowly, over the pools and re-settling at a short distance where they allowed me to approach and select a victim.

A curious species of shark is found in Walwich Bay: it is about ten feet in length, resembling in size and shape the common shark, but

covered with numerous light coloured spots of the size of a shilling. Out of each spot grows a sharp triangular spike not unlike a shark's tooth, and exceedingly sharp. The bay swarms with them, and they delight in frequenting the shallows of the beach where they often strand themselves. They are not voracious, for I have frequently bathed amongst them with impunity.

PROCEEDINGS OF THE SQUADRON ON THE COAST OF BORNEO.*

By an Eye-Witness.

THE squadron left Penang so unexpectedly, that many of the officers, even those of superior rank, narrowly missed being left behind. When assembled at Malacca a steamer was despatched to Singapore which shortly rejoined, having on board Mr. Brooke and Captain Bethune, R.N. These gentlemen having remained a day or two in communication with the Commander-in-chief returned to Singapore. It being known that Captain Bethune had been lately with Mr. Brooke at Sarawak, it was inferred that something was in view in that quarter; and this supposition gained ground when, on the 24th of July, the Admiral received them again on board the *Agincourt*, the squadron being then at anchor off the Buffalo rock in Singapore strait. At daylight on the 25th the squadron wayed and proceeded to the east, consisting of *Agincourt*, *Vestal*, *Dædalus*, *Cruizer*, *Osprey*, *Wolverine*, *Vixen*, *Nemesis* and *Pluto*. In the course of the morning the *Osprey* parted company for Singapore and New South Wales.

On the 29th we were off the mouth of the Sarawak, and at daylight the Commander-in-chief with a party went up the river in the *Pluto* to pay a visit to Mr. Brooke's capital. The squadron anchored off Tanjong Po, and he returned the following day. The *Pluto* unfortunately had grounded, and sustained some damage, which rendered it necessary to beach her; we proceeded to the northward, and had a pleasant run along the coast, we found the charts very erroneous. The flag-ship however appeared to view boldly, her master Mr. Ellyet it was said, having already been on the coast in the *Dido*. On the 6th of August we were off the Brune river. While running in, the *Agincourt* touched on a knoll and hung for a short time. She came off without damage, with the exception of running into the *Nemesis*, which was coming to her assistance, and knocking over her funnel. This accident prevented our entering the river, so coming to an anchor, the next morning we dropped out into deep water. A boat conveying Mr. Brooke was despatched to the town, which returned the following day; and shortly after a rajah, apparently of high rank, arrived to compliment the admiral. He was

* Several accounts of these proceedings have appeared in the papers of the time more or less incorrect. The author of the present narrative has confined himself to a simple statement of facts, without any attempt at embellishment.—Ed. N.M.

received with all the honours, and had a long interview. What passed I know not, but the result was, that the next day, the 7th, a party of 150 marines, the band, &c., was embarked on board the *Vixen*, and she, the *Nemesis* and *Pluto*, (which vessels had made good their damages,) accompanied by three or four armed pinnaces, proceeded up the river of Brunei, having the admiral and a large party of officers on board. At the bar just below Pulo Chesmisse there was found too little water for the *Vixen*; the flag and army were, therefore, transferred to the small steamer, which proceeded off the town. The admiral, attended by his suite, paid a visit to the sultan, and active negotiations appeared to be going on.

In the course of the afternoon the *Vixen* made her appearance, Com. Giffard having succeeded in forcing her over the bar in her own draft. Up to this time no visible symptoms had offered, and we began to fear that nothing would take place. During the night there was a slight confusion on board the *Vixen*, where the whole force had re-assembled, owing to some fancy having been entertained that she had been boarded by an enemy. The commander's appearance on deck, however, soon restored order, and on his endeavouring to arrive at the cause of the disorder, a sentry who had been calmly walking his post on the paddle-box, gave it as his opinion that "It was only Mr. — a dreaming."

On the forenoon of the next day, the 10th, it appeared that the Admiral had demanded that a certain chief, Panquera Usof, should be given up, he having behaved ill in the matter of some slaves. Usof apparently disliked the terms, whatever they were, for about noon his house was pointed out as the object to be attacked, and the steamers moved into position. It was admirably situated for a little practice, being quite isolated from the town, and exposed on all sides; the arrangements were very judicious. The *Vixen* was laid opposite the principal front; the *Pluto* with the marines ran up a branch of the river to a point where her fire would cross that of the *Vixen* at right angles, and a place was found for the *Nemesis* midway betwixt the two. Had poor Usof's house been of adamant instead of mats, it must have come down in five minutes.

The arrangements being completed, the *Vixen* fired a 32lb. shot through the roof of the house, just to give warning we were ready; this was replied to by some half dozen guns, the shot passing over the *Vixen*. The three steamers then opened, and in ten minutes the house was riddled. I believe every one ran away on the first discharge, and they acted wisely for the effect of the *Vixen's* grape and cannister was terrific. The firing having ceased the marines advanced, and took possession of the frontier. Twenty-one brass guns were brought off, and a powder magazine (within twenty paces of which a shell had fallen behind) destroyed. The houses were handed over to the sultan, and the party re-embarked. The sultan then gave permission to the populace to plunder it, and they were not slow in availing themselves of the permission.

The admiral returned to the squadron the following day, and ran over to the island of Labuan. When the steamer had completed taking in the wood, which in the mean time had been collected by the *Cruizer* and *Wolverine*, having the carpenter of the squadron on board, we all moved

to the northward; and on the road learned that there was another job in prospect. On the 17th we were assembled in Malluda Bay; in the evening the captains met by signal on board the flag ship, and received the plan of attack on Serif Housman, a notorious pirate, harbouring in one of the rivers at the head of the bay. Pursuant to these orders, on the morning of the 18th all the small-arm men and marines moved to the *Vixen* and other steamers, and they taking the *Cruizer*, *Wolverine*, and the gun-boats in tow, moved up the bay as far as the depth of water would permit. The *Pluto* went on to pick out the channel, but shortly got aground. The admiral, whose flag was in *Vixen*, anxious not to lose time, then directed Capt. Talbot to put what men he could in the boats and proceed. Accordingly about 300 blue jackets and 200 marines embarked in the boats; the details as follows:—To command the whole, Capt. Talbot, *Vestal*, assisted by Commander Fanshawe, *Cruizer*,—to command the landing party, Acting-Commander Lyster, *Agincourt*, assisted by Commander Clifford, *Wolverine*, and Lieut. Paynter, *Agincourt*, as Adjutant,—commanding the Marines, Capt. Hawkins, R.M.

H. M. ship Agincourt, second barge Lieutenant Paynter, Mr. May, mate, Mr. Patrick, Assistant-surgeon.—Launch, Lieutenant Lowther, Mr. Burton, midshipman, Mr. Burnaby, midshipman, Mr. Whipple, Assistant-surgeon.—Pinnace, Mr. Reeve, mate, (in charge of the rocket party).—Second cutter, Mr. Lincoe midshipman.—In *Wolverine*, *Dædalus*, and *Nemesis* cutters, in charge of the first company of small arm men, Lieutenant Reid, Mr. Young, mate, Mr. Hotham, midshipman.

H.M. Ship Vestal, barge, pinnace and cutter, Lieutenant Morritt, Lieut. Pascoe, Mr. Pym, second master, Mr. Durbin mate.

H. M. Ship Dædalus, pinnace, barge and cutter, Lieutenant Randolph, Mr. Nolloth mate, Mr. Wilkinson second master.

H. M. Steam-vessel Vixen, pinnace and cutter, Lieutenant Wilcox, Mr. Dent, mate, Mr. Sainsbury midshipman.

H. M. Sloop Cruizer, pinnace and cutter, Lieutenant Rodney, Mr. ——— midshipman.

H. M. Sloop Wolverine, pinnace and cutter, Lieutenant Hillyar, Mr. Gibbard, mate.

Lieutenant Heard, senior lieutenant of *H. M. ship Samarang* (super-numerary on board *Agincourt*) in the *Pluto's* boats, in charge of the *Agincourt's* field piece. Lieutenants Hambly, Dyer, Kennedy and Mansell, of the Royal Marines distributed with their parties.

Captain Talbot was accompanied by Mr. Brookes, Malay interpreter, Mr. Williams a volunteer, and two Malay pilots from Brune.

The boats started against a strong breeze, the channel was so difficult to discover, that they were obliged to anchor outside the bar, at 7 P.M. At half past 10 P.M., the tide enabled the boats to pass the bar and anchor at the mouth of the river for the night. At 7 A.M. the next day the 19th of August the boats wayed at quarter flood in two divisions and proceeded up the river, carrying two fathoms water the whole way, the gigs leading and sounding. The course of the river trends generally to the S.S.W. with small reaches trending to the southward and eastward, with an average breadth of sixty yards, the banks covered with close jungle, lined with mangrove bushes fringing the edges.

Three miles up the river, Captain Talbot went ahead to reconnoitre, and rejoined two miles higher up, with information that the next bend would place the boats in front of the batteries and stockade; and that a boom of large size was thrown across the river 250 or 300 hundred yards below the fort. The launch and second barge of the *Agincourt*, the barge of the *Vestal*, and launch of the *Dædalus* were then ordered up with directions to form line abreast, to anchor by the stern, when close up to the boom, and to keep up a fire, whilst the three cutters under Lieutenant Reid, Mr. Young and Mr. Gibbard, were directed under cover of the fire of the gun boats to clear away the boom, the *Vixen's* and *Vestal's* pinnaces to close up in the interval, and the remainder of the boats to be the reserve and act as ordered.

Whilst Captain Lyster was preparing to carry out these instructions, a flag of truce made its appearance from the fort. The boats were immediately ordered to anchor in two lines, Captain Talbot demanded an unconditional surrender of Sheriff Housman in half an hour. The flag of truce urged the wish of Housman to have a consultation with him, it was refused and the flag left; in the meanwhile the boats had taken up their positions in the following manner: the *Agincourt's* launch close in on the left bank touching the boom, the *Vixen's* pinnacle next, and the *Dædalus's* launch next;—on the right bank was *Vestal's* barge, then *Agincourt's* second barge, *Pluto's* cutter and the gigs of the commanding officers. The three cutters with the carpenters' under Captain Lyster, employed themselves trying to unshackle the cable and clear the boom of the shore.

In a quarter of an hour another flag of truce came down the river and stated that Sheriff Housman would allow two boats inside the boom during the conference. He was answered that the half hour was nearly up, and that if Sheriff Housman did not surrender, action would commence. The flag of truce instantly returned, shot round a small turn of the river, hauled down the flag, and the batteries commenced firing, which was immediately returned. The 12-pound carronades in the gun boats appeared to make little impression on the forts, but the firing on both sides was well sustained. About twenty minutes from the commencement, Lieutenant Paynter obtained permission to land and try the rockets, and in eight minutes a 24, 12, and 3-pound tube were fired on the right bank, about five yards in the rear of the boom, and the first rocket (a 42-pound) was hailed by a loud cheer from all the gun boats. The well sustained fire of guns and rockets, soon rendered the fire of Sheriff Housman's defences wild, but the perfect workmanship by which the boom was secured, resisted all efforts to force it. The firing having lasted fifty minutes, and the boom being still impassible, the ammunition of the gun boats was ordered to be husbanded, and the guns to be fired with great precision; at this time Mr. Reeve of the rocket party was sent to Captain Talbot with information that the forts could be reached by the right bank, but at this moment one end of the boom gave way. The boats were immediately pushed through, and with a loud cheer, led by Captains Talbot, Lyster, Fanshawe and Clifford, boat after boat passed with the marines under Captain Hawkins to storm the defences. The

enemy retreated from the eight gun battery without making any resistance. The flags were hauled down and the forts immediately taken possession of. A guard was left in the fort, parties of marines and small arm men advanced up both sides of the river, burning and destroying the houses, and everything that could be discovered.

The forts were well situated, and commanded a complete view of the river and boom. A floating battery of three long 18-pounders were erected close to the left bank, and the guns laid for the boom. The 8-gun battery consisting of one 18-pounder, two 12-pounders, three 9-pounders, and two 6-pounders, on the right bank, were laid some for the boom and others above and below it. It was not to be expected that so formidable a position could be taken without a sacrifice of life. Six killed and fifteen wounded, (two mortally,) was the loss on the English side, and the determined manner the Pirates worked their guns for the first half hour, secure in their position, and confident in their boom, renders it fortunate the loss was not greater.

The following is a list of the casualties on the occasion.

H. M. ship, Agincourt. 2nd Barge, 3 killed, 2 wounded, (1 severely); Launch, 1 killed, 2 wounded, (1 severely).

H. M. ship, Vestal. Barge, 1 killed; Pinnace, 2 wounded, (1 severely)

H. M. S. Dædalus. Launch, 1 killed, 2 wounded, (1 mortally, 1 severely).

H. M. S. Vixen. Pinnace, 2 wounded, (1 severely); Cutter, 1 wounded.

H. M. Sloop Wolverine. Cutter, 1 wounded (mortally); Pinnace, 1 wounded (severely).

H. M. Sloop, Cruiser. Pinnace, 2 wounded.

H. C. Steam Vessel Pluto. Cutter, 1 wounded.

Officers, Wounded. Lieut. Heard, Supr. *Agincourt*, (slightly,) Mr. Gibbard, Mate in *Wolverine*, (mortally,) Mr. Pym, Second Master, *Vestal*, (severely).

It is impossible to estimate the loss of the enemy; that it was severe, there can be no doubt; bodies were found in various directions—numbers were thrown into the river by their own people, and the wounded were carried into the jungle as soon as they fell. But the testimony of some Manila men (slaves) who had escaped amounts to this, that, Seriff Housman was dangerously wounded in the neck, that two Chiefs (Arabs) were killed and two severely wounded, that many hundred men were in the forts at the commencement, but after twenty minutes firing, numbers fled, and as the loss on the English side was all in the first twenty minutes, it is highly probable that the latter part of the firing was continued by a few desperate men, but without any effect, and who ran away the moment the boom was passed.

Not wishing to lose the tide the force was re-embarked and returned to the *Vixen*. To prevent all chance of the enemy making head again, the Admiral dispatched a fresh party under Com. Giffard, who after a slight resistance from a few stragglers completed the destruction of the town, and brought away a quantity of brass ordnance. The force having returned to the ship the Squadron moved to the island of Balambangan, and on the

25th sailed for Manila and Hong Kong; the *Cruizer* being detached with Mr. Brooke and Capt. Bethune. Thus under one short campaign at Borneo there can be little doubt that a most salutary effect will be produced by the powerful and effectual measures of our Commander-in-Chief.

MAGNETIC VOYAGE OF THE PAGODA.

(*Extract of a Letter from Lieut. T. L. Moore, R.N.*)

AFTER leaving Simons Bay on the 9th January, we shaped a course to the westward, to guard against the prevailing easterly winds that always blow in these latitudes. On the 25th January, in lat. $53^{\circ} 30'$ S. and lon. $7^{\circ} 30'$ E. we fell in with the first icebergs, which continued in chains and streams of loose ice for many days. We sailed completely over the place where Bouvet Island was laid down, for finding it would be in our road, we determined to look for it, but could not see anything like *land*. Having reached the lat. $60^{\circ} 43'$ S. and lon. about $3^{\circ} 45'$ E. we fell in with a heavy mass of ice and berg ice in the S.W. So heavy that we could not get the ship any further in a W. or S.W. direction. As it was then blowing a heavy gale from the S.W. we bore away for Enderby Land.

In the afternoon of the same day we fell in with a most singular rock, or rock on an iceberg; it appeared to be a mass of rock about 1600 tons, and the top was covered with ice and did not appear to have any visible motion, with a heavy sea beating over it. It had a tide-mark round it. We tried for soundings with 250 fathoms, and the first time we fancied we had struck the ground, but before we could try again we had drifted some distance off. We could not send a boat or beat the ship up against the breeze that was then blowing. We likewise observed the pack-ice in the S.W., and we then bore up for the eastward, and after sailing through a few icebergs, seeing, at times, strong ice-blinks, we crossed the Antarctic Circle in lon. $30^{\circ} 45'$ E. on the 5th February.

On the evening of the 11th, in lat. $67^{\circ} 50'$ S. (being the highest latitude attained) and lon. $39^{\circ} 41'$ E., we fell in with a very heavy pack of ice, extending as far as could be seen from the mast head. We were in hopes that we should have been able to have landed Lieut. Clerk on the ice, but the weather becoming thick, and blowing strong from the eastward, obliged us to work the ship off, being then only seventy miles from Enderby Land. We were in hopes of seeing the S.W. Cape, but finding the constant S.E. gales to continue, we stood to the northward to try for westerly winds to enable us to make the eastern extremity; and after encountering very heavy S.E. gales, with the barometer down to 28.04, we got within fifty or sixty miles of it.

On the 23rd February, it still blowing from the S.E. and not seeing any indications of land, we again stood to the northward in hopes of getting westerly winds. From the 9th January until the 1st March we had no less than thirty easterly winds, but we took our chance of

proceeding on the voyage, having encountered, comparatively, but little ice until the fiftieth degree of east longitude and lat. 64° , when we came up with a very strong ice-blink, with a strong gale from the S.E., with a heavy sea and snow; and on the 6th March we passed a chain of numerous icebergs and loose ice.

The next morning it cleared up a little, we found the ship surrounded by bergs, also a pack-ice extending for about ten miles, behind which appeared a high ridge of ice or LAND, which could only be seen at intervals on the clearing up of the squall, and then only for a short time. It was more like land than anything before seen during the voyage, and there was no doubt about it; but we would not say it was land without having really landed on it. We could not take the ship any nearer on account of the ice.

From that time the ice began to get thicker every day; at times more than 100 bergs were seen in a day, and one berg five and a half miles in length and 150 feet high. On the 20th March we were driven out of the 6th degree of latitude and 98th degree of longitude by the heavy ice, and the appearance of pack-ice in the S.E. direction; and the ship being very unmanageable in wearing and staying, it was requisite, for the safety of the crew, to try to get into less ice; therefore we stood to the N.E. much against our wishes.

On the 14th, in working to the eastward, the main-yard was carried away, the yard being a very bad spar. This was soon remedied, and we stood to it again, but the ice would not allow us to go any more to the S.E., in 55° S. and 110° E.; and finding the ship getting worse in staying and wearing, every day; and knowing, if we once got to the eastward of King George's Sound, we should have to proceed by Torres Straits or round Cape Horn, and seeing that we could not penetrate any more to the S.E., we proceeded to King George's Sound, and arrived there, all well, on the 1st April, *six days sooner* than Sir James Ross's usual time of getting into port.

In this trip we passed more icebergs than in the three former trips, and likewise have run over more degrees of longitude, inside of sixty, than any ship has done before. We have had no sickness, nor have we lost a single man. We remained here four days, when, having taken on board some ballast, we started again for the Cape, on the 21st April, and finding the trade winds being far to the northward, determined to touch at Mauritius. We remained there four days, and started again for the Cape of Good Hope, where we arrived on the 20th June.

THE SHIP'S POSITION BY THE SUN'S ALTITUDE.—*Sumner's Method.*

H.M.S. Iris, Hong Kong, June 27th, 1845.

SIR.—An article in your number for April, 1844, induces me to think that the enclosed table may be of use.

I have applied it in two ways: first, for finding a line upon which the ship must be at the time of the morning sights (as is suggested by Lieut.

Raper); and secondly, for finding the ship's position *immediately*, the true latitude is known as explained in the example. It was for this latter purpose that I originally worked it out; as the time usually expended in working the sights afresh with the observed latitude is frequently of great consequence, when approaching a port.

I am informed that something of the same sort has previously appeared in your pages; but requiring the sun's azimuth, and not pointing out the uses to which it might be applied.

Many useful rules and tables are comparatively lost in the back numbers of the "*Nautical Magazine*;" and I think editors of future editions of navigation books would do good service to the naval world by availing themselves of some of them.

I am, Sir,

To the Editor &c.

L. G. HEATH, Lieut.

Table A to be entered with the latitude worked with at the side, and with the hour angle at the top.

| Lat. | One hour. | | | | | Two hours. | | | | Three hours. | | | Four hours. | |
|------|-----------|------|------|------|------|------------|------|------|------|--------------|------|------|-------------|--------|
| | 10m | 20m | 30m | 40m | 50m | 10m | 20m | 30m | 45m | 15m | 30m | 45m | 30m | 5h. 6h |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | .13 | .11 | .10 | .08 | .07 | .06 | .06 | .05 | .04 | .04 | .04 | .03 | .03 | .02 |
| 4 | .26 | .22 | .19 | .17 | .15 | .13 | .12 | .11 | .10 | .09 | .08 | .07 | .06 | .05 |
| 6 | .39 | .33 | .29 | .25 | .22 | .20 | .18 | .16 | .15 | .13 | .12 | .11 | .09 | .08 |
| 8 | .52 | .45 | .39 | .34 | .30 | .27 | .24 | .22 | .20 | .18 | .16 | .14 | .12 | .11 |
| 10 | .66 | .56 | .48 | .43 | .38 | .34 | .30 | .27 | .25 | .23 | .20 | .18 | .15 | .13 |
| 12 | .79 | .67 | .58 | .51 | .46 | .41 | .37 | .33 | .30 | .28 | .24 | .21 | .18 | .16 |
| 14 | .93 | .79 | .68 | .60 | .53 | .48 | .43 | .39 | .35 | .32 | .28 | .25 | .21 | .19 |
| 16 | 1.07 | .91 | .79 | .69 | .61 | .55 | .49 | .45 | .41 | .37 | .32 | .28 | .25 | .22 |
| 18 | 1.21 | 1.03 | .89 | .78 | .69 | .62 | .56 | .51 | .46 | .42 | .36 | .32 | .28 | .25 |
| 20 | 1.36 | 1.15 | 1.00 | .88 | .78 | .70 | .63 | .57 | .52 | .47 | .41 | .36 | .32 | .28 |
| 22 | 1.51 | 1.28 | 1.11 | .97 | .86 | .78 | .70 | .63 | .58 | .53 | .46 | .40 | .35 | .31 |
| 24 | 1.66 | 1.41 | 1.22 | 1.07 | .95 | .86 | .77 | .70 | .64 | .59 | .51 | .44 | .39 | .34 |
| 26 | 1.82 | 1.55 | 1.34 | 1.18 | 1.05 | .94 | .84 | .77 | .70 | .64 | .56 | .49 | .43 | .37 |
| 28 | 1.98 | 1.69 | 1.46 | 1.28 | 1.14 | 1.02 | .92 | .83 | .76 | .69 | .61 | .53 | .47 | .41 |
| 30 | 2.15 | 1.83 | 1.59 | 1.39 | 1.24 | 1.11 | 1.00 | .90 | .82 | .75 | .66 | .57 | .51 | .44 |
| 32 | 2.33 | 1.98 | 1.72 | 1.51 | 1.34 | 1.20 | 1.08 | .98 | .89 | .81 | .71 | .62 | .55 | .48 |
| 34 | 2.52 | 2.14 | 1.85 | 1.63 | 1.45 | 1.30 | 1.17 | 1.06 | .96 | .88 | .77 | .67 | .59 | .52 |
| 36 | 2.71 | 2.30 | 2.00 | 1.75 | 1.56 | 1.40 | 1.26 | 1.14 | 1.04 | .95 | .83 | .72 | .64 | .56 |
| 38 | 2.91 | 2.48 | 2.15 | 1.89 | 1.68 | 1.50 | 1.35 | 1.23 | 1.12 | 1.02 | .89 | .78 | .69 | .60 |
| 40 | 3.13 | 2.66 | 2.31 | 2.03 | 1.80 | 1.61 | 1.45 | 1.32 | 1.20 | 1.09 | .95 | .84 | .74 | .65 |
| 42 | 3.36 | 2.86 | 2.47 | 2.17 | 1.93 | 1.73 | 1.56 | 1.42 | 1.29 | 1.17 | 1.02 | .90 | .79 | .69 |
| 44 | 3.60 | 3.06 | 2.65 | 2.33 | 2.07 | 1.86 | 1.67 | 1.52 | 1.38 | 1.26 | 1.10 | .97 | .85 | .74 |
| 46 | 3.85 | 3.27 | 2.84 | 2.50 | 2.22 | 1.99 | 1.79 | 1.63 | 1.48 | 1.35 | 1.18 | 1.04 | .91 | .79 |
| 48 | | 3.52 | 3.05 | 2.68 | 2.38 | 2.14 | 1.92 | 1.74 | 1.59 | 1.45 | 1.26 | 1.11 | .97 | .85 |
| 50 | | 3.27 | 2.88 | 2.56 | 2.29 | 2.06 | 1.87 | 1.71 | 1.56 | 1.35 | 1.19 | 1.05 | .91 | .79 |
| 52 | | | 3.09 | 2.74 | 2.46 | 2.22 | 2.01 | 1.83 | 1.67 | 1.46 | 1.28 | 1.12 | .98 | .85 |
| 54 | | | | 3.32 | 2.95 | 2.64 | 2.38 | 2.16 | 1.97 | 1.80 | 1.57 | 1.38 | 1.21 | 1.05 |
| 56 | | | | | 3.58 | 3.18 | 2.84 | 2.56 | 2.33 | 2.12 | 1.94 | 1.69 | 1.49 | 1.30 |
| 58 | | | | | | 3.86 | 3.43 | 3.07 | 2.77 | 2.51 | 2.29 | 2.09 | 1.82 | 1.60 |
| 60 | | | | | | | 4.17 | 3.71 | 3.33 | 3.00 | 2.71 | 2.48 | 2.26 | 1.97 |
| 62 | | | | | | | | 4.03 | 3.61 | 3.26 | 2.95 | 2.69 | 2.45 | 2.14 |
| 64 | | | | | | | | | 3.94 | 3.55 | 3.22 | 2.93 | 2.67 | 2.34 |
| 66 | | | | | | | | | | 3.89 | 3.53 | 3.21 | 2.93 | 2.56 |
| 68 | | | | | | | | | | | 3.86 | 3.53 | 3.23 | 2.92 |

Table B to be entered with the declination worked with at the side, and with the hour angle at the top.

| o.Lat. | One hour. | | | | | Two hours. | | | | | Three hours. | | | | Four hours. | | |
|--------|-----------|------|------|------|-----|------------|-----|-----|-----|-----|--------------|-----|-----|-----|-------------|-----|--|
| | 10m | 20m | 30m | 40m | 50m | 10m | 20m | 30m | 45m | 0 | 15m | 30m | 45m | 30m | 5h. | 6h | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 2 | .13 | .12 | .10 | .09 | .08 | .08 | .07 | .06 | .06 | .06 | .05 | .05 | .05 | .04 | .04 | .04 | |
| 4 | .27 | .23 | .20 | .18 | .16 | .15 | .14 | .13 | .12 | .11 | .11 | .10 | .09 | .08 | .08 | .07 | |
| 6 | .41 | .35 | .31 | .27 | .25 | .23 | .21 | .20 | .18 | .17 | .16 | .15 | .14 | .13 | .12 | .11 | |
| 8 | .54 | .47 | .41 | .37 | .33 | .30 | .28 | .26 | .24 | .23 | .21 | .20 | .19 | .18 | .17 | .15 | |
| 10 | .68 | .59 | .52 | .46 | .42 | .38 | .35 | .33 | .31 | .29 | .27 | .25 | .23 | .22 | .21 | .20 | |
| 12 | .82 | .71 | .62 | .55 | .50 | .46 | .42 | .40 | .37 | .35 | .32 | .30 | .28 | .27 | .26 | .25 | |
| 14 | .96 | .83 | .73 | .65 | .59 | .54 | .50 | .46 | .44 | .41 | .38 | .35 | .33 | .31 | .30 | .29 | |
| 16 | 1.11 | .95 | .84 | .75 | .68 | .62 | .57 | .53 | .50 | .47 | .43 | .41 | .38 | .36 | .34 | .33 | |
| 18 | 1.26 | 1.08 | .95 | .85 | .77 | .70 | .65 | .60 | .57 | .53 | .49 | .46 | .43 | .41 | .39 | .38 | |
| 20 | 1.41 | 1.21 | 1.06 | .95 | .86 | .79 | .73 | .68 | .63 | .60 | .55 | .51 | .48 | .46 | .44 | .42 | |
| 22 | 1.56 | 1.34 | 1.18 | 1.06 | .96 | .87 | .81 | .75 | .70 | .66 | .61 | .57 | .54 | .51 | .49 | .47 | |

When the latitude and declination are of the same name, the correction in table B is to be subtracted from that in table A ; the result is the correction of longitude for each mile of latitude, and is to be called positive or negative according as the part from table A is greater or less than the part from table B.

When the latitude and declination are of different names, the correction in table A is to be added to that in table B, and the result is the correction of longitude for each mile of latitude, and is always to be called positive.

When the correction is positive, an increase of latitude will make the longitude more to the eastward, and a decrease of latitude will make the longitude more to the westward.

When the correction is negative, an increase of latitude will make the longitude more to the westward, and a decrease of latitude will make the longitude more to the eastward.

Example, shewing the manner of using the tables—

Lat. left 34° 16' S.

Lon. left 20° 10' W.

The day's work to be worked up to the time of sights, and also up to noon, which may always be done before seven bells in the forenoon, as the last hour's run may be guessed quite nearly enough.

Day's work up to the time of taking sights.

| Courses. | Dist. | N. | S. | E. | W. |
|--------------|-------|---------------|-----|-----|------------------------|
| N. 3 pts. W. | 12· | 103·1 | ... | ... | 68·9 |
| N. 2 " ½ " | 16· | 14·1 | ... | ... | 7·5 |
| | | 117·2 | | | 76·4 |
| Diff. lat. . | | 1° 57' 12" N. | | | Diff. lon. . 1° 31' W. |
| Lat. left . | | 34 16 0 S. | | | Lon. left . 20 10 " |
| | | 32 18 48 " | | | 21 41 " |

Carried on to Noon.

| | | | | | | | | | |
|----------------------------|--------------|----|------|--|--------------------|--|--------------|--|-----|
| N. 2 pts. $\frac{1}{2}$ W. | 17 | | 15.0 | \| | ... .. | \| | ... .. | \| | 8.0 |
| Diff. lat. . . . | 0° 15' 0" N. | | | | Diff. lon. | | 0° 9' 30" W. | | |
| Lat. at sights . | 32 18 48 S. | | | | Lon. at sights . | | 21 41 0 " | | |
| Lat. D.R. at noon . | 32 3 48 | ,, | | | Lon. D.R. at noon | | 21 50 30 | | " |

The chronometer sights to be worked with the D.R. latitude at time of sights, viz. $32^{\circ} 18' 48''$ S. and we will suppose that the longitude resulting is $21^{\circ} 20' W.$ (at the time of sights) apply to this the long run, as usual, and we get lon. by observation at noon $21^{\circ} 29' 30'' W.$

We then take the corrections from the table, and suppose them to be—

| | | | |
|---------------|-----|---|--|
| Table A . . . | .38 | } | Latitude and declination different names. |
| Table B . . . | .14 | | |

Correction for each mile of latitude $.52 +$

Suppose the lat. observed to be $32^{\circ} 18' S.$ or $14\frac{1}{4}$ greater than by D.R., we have—

| | |
|--------------------------------|-------------------------------|
| .52 | |
| .14 | |
| ----- | |
| 208 | |
| 52 | |
| ----- | |
| 7.28 | |
| 13 | |
| ----- | |
| Correction of longitude | 7.41 = $0^{\circ} 7' 24'' E.$ |
| And longitude by D.R. lat. . . | 21 29 30 W. |
| True longitude . . . | ----- 21 22 6 ,, |

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, with Notes of Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c. by Mr. P. Masters, Master Mariner, of Liverpool, 1844.

Ships bound to the Gulf of Mexico through the Yucatan Channel.—Ships, in proceeding from Jamaica and bound to the Gulf of Mexico, should pass to the southward of the Great Cayman in preference to going between it and the Little Cayman, unless there is a good breeze and the position of the ship can be well ascertained before dark, that is, when near the latitude of the Little Cayman, so that the channel can be run through during the first part of the night without risk, as no dependence can be placed on the current about these islands.

Having got to the westward of the Caymans, the course should be shaped so as to pass about mid-channel between Cape Catouche and Cape Antonio; for if there should be a current running northward

through the channel, it will be found there in its greatest strength. Near the Cuba shore an eddy, or counter-current, often sets round Cape Antonio to the eastward, which will be avoided by keeping as above stated; and it is equally advisable to give the eastern coast of Yucatan a berth, as the soundings are irregular, and can be no guide in ascertaining the ship's position; the coast is also very low, but having got to the westward of Cape Catouche, the soundings are more regular and can be depended on.

Currents between Cape Antonio and Cape Catouche.—The current between Cape Antonio and Cape Catouche, occasionally runs from one and a half to two miles per hour, setting nearly north, or a little to the west of north; in the longitude of Cape Catouche it will be found to make a more westerly course, and about half a degree to the westward of the Cape (on the Campeche Bank) it runs nearly west, but the velocity very much decreased.

Current from Sisal to Laguna and Southern part of the Gulf.—From Point Palmas (near Sisal) to the southward of Campeche, there is but little current, and what there may be is influenced by the wind. From Laguna, along the southern shore of the Gulf, it invariably sets along shore to the westward, its velocity being governed by the strength of the land and sea breezes. (The sea breeze generally commences from the N.E. in this part of the gulf, and gradually hauls round as the sun passes to the westward of the meridian, to the east. The land breeze blows from S. to S.E.)

Current on the Western part of the Gulf.—Along the western coast of the Gulf of Mexico the current is also governed by the wind, and an allowance should be made for its drift, in particular, between the latitudes of 24° and 26° .

Currents on the North Coast of the Gulf and West of the Mississippi.—In most of the charts which have been published, the current is described as setting to the eastward, on the north-west coast of the Gulf, (or soundings,) but it is well known by those who have had experience in navigation in this part, that it is erroneous, and that the current most invariably sets to the westward, from the south-west pass to the Mississippi towards the Bay of Galveston, inasmuch that vessels which have been caught to leeward of it, have lost several days before they had made sufficient easting to get a pilot, although the smoke from the steam-boats in the Mississippi has been distinctly seen all the time.

Current east of the Mississippi to the Tortugas.—To the eastward of the Mississippi, there is generally a current setting along shore to the eastward. During a norther (from abreast the Bay of Espiritu Santo and round the Tortugas,) I have found the current setting from two to two-and-a-half miles per hour, to the S.S.E., and striking across the Cuba coast in that direction.

Current setting out of the Gulf of Mexico.—I have occasionally found a narrow stream setting out of the Gulf of Mexico, which has also been experienced by others from whom I have made enquiry. It commences in about lat. 24° , lon. 95° , running towards the E.N.E. to lat. 25° , lon. 91° , from thence to lat. $25\frac{1}{2}^{\circ}$, lon. 88° , where it takes a more easterly

direction, and gradually inclining to the south of east as it nears the Tortugas.

Current between Vera Cruz and the Campeche Bank during a norther.—I have been informed by officers in the Mexican navy and masters of merchant vessels who have been in the gulf trade, that in the event of a vessel being caught in a norther off or near to Vera Cruz, when it might be dangerous to run into the anchorage, that by standing to the eastward to about lon. 92° or 93° , a strong set will be found running to the northward, that is, a few hours after the breeze has sprung up; and that ships which have laid to in about the above longitude, have found themselves to the northward of where they were the previous day, owing to the strong set of the current from the southern part of the gulf.

Supposed cause of the current taking the direction as stated in the foregoing remark.—It appears that as the waters of the Gulf of Mexico are so much influenced by the wind, that when it blows strong from the northward it is forced to leeward, and having accumulated to a certain extent, a re-action takes place; that in the first part of a norther, the waters are driven to the southward generally, over the whole gulf, but the current being strongest in soundings, and not having any outlet, it prevents a re-action along the coast, but is forced out to the northward, where there is the least resistance, being where the water is deepest, which is between the coast of Vera Cruz and the western edge of the Campeche bank, in the longitude as before mentioned.

The same theory will also hold good with the south-east winds, which are the most prevalent, and set the waters of the gulf towards the Bay of Galveston, and as the stream from the Mississippi, (particularly the south-west pass), prevents the accumulated waters from making a detour to the eastward along the northern shore of the gulf, a re-action takes place towards the middle of the gulf, which causes, most probably, the eastern current setting out as before stated, varying in its strength in proportion to that of the wind, from three-quarters of a mile per hour, when strongest, but generally less.

Campeche Bank and Alacranes.—In running over the northern part of the Campeche bank until the ship is to the westward of the Alacranes, the current will be found in general setting due west, its velocity governed by the wind, both at the time and previous, and also by the strength of the trade wind in the Caribbean and Cuba seas. As at times there is no perceptible current in the Yucatan channel, and consequently but little or none on the Campeche bank.

Alacranes.—The Alacranes are a group of low islands, surrounded by coral reefs, and are very dangerous; on the north side the soundings are no guide to indicate the distance from them. In running to the southward of this group, keep in soundings of not more than eighteen fathoms nor approach the shore so as to shoal the water to less than eight fathoms, which will carry you clear of all danger, except when near the Sisal bank.

Negrillos and Vigias Shoals.—The Negrillos and Vigias shoals, which are laid down in the tracks of vessels bound to Tampico, have been

the cause of ships running unnecessarily a long way to the north. In the directions from the Spanish surveys they are stated as doubtful, and the longitude given varies more than two degrees. It is considered by many that no such shoal exists at the present time. It is quite possible that a submarine volcano may have thrown up a shoal as laid down by the Spanish navigators in the Derrotero, and afterwards been washed away by gales of wind. I have endeavoured to ascertain if there are such shoals, by running down the parallel of latitude in the day time when it could be done without risk, and have not seen the water the least discoloured, and feel convinced that there are no such shoals at the present time, whatever may have been in times past.

Common prudence would keep a person from running on any supposed danger, when it is laid down in the chart, until it is proved to be erroneous. It is certain that a number of vigias, shoals, &c., are laid down in the chart of the Atlantic in particular, and other oceans, which have been placed there on mere supposition alone.

It is very possible that many have been deceived by a wreck floating bottom up, which may have been covered with sea weed and barnacles, and although it may have been struck by a boat-hook or oar, as was done by the Spaniards, as was mentioned in the Derrotero, to what was supposed to be the Negrillos, they may have been deceived, and felt convinced of its being a shoal or reef. Besides, a large body, such as the wreck of a ship, which has been in the water a great length of time and covered with barnacles, &c., would be thoroughly saturated; and if the specific gravity should be but a little less than water, the waves passing with such velocity would scarcely give it a perceptible motion, and in a strong breeze the sea would break over it as if it had been a reef of rocks; and no doubt many such have been reported as reefs, without any further proofs.

With respect to the Negrillos and Vigias, had the Spaniards landed on them and broken off a piece of the rocks, or swept it with a line, or sounded round it, and found the water shoal, it would then have been a convincing proof of its being what they stated; but such it appears was not done.

Isla Bermeja.—The *Isla Bermeja* is also very doubtful. I have made every inquiry about this shoal, and have been informed that neither island nor shoal is now in existence. I have also passed nearly over the position as laid down, and have not perceived the water to alter its colour in the least. It is more than probable that the *Isla de Arenas* has been taken for the *Bermejas*, as they are laid down in the same longitude; and as the current is so much influenced by the wind, it is very likely that either by a norther or a strong S.E. breeze, that they may have been out in their reckoning with respect to the latitude.

Isla de Arenas, Triangles, and Los Arcos.—The *Isla de Arenas*, *Triangles*, and *Los Arcos*, are three different groups of islands and shoals; their position, as laid down in the chart of the Gulf of Mexico, may be correct, but they are bad to deal with either in thick weather or night time. The two last groups are of a moderate height above the water. The reefs run off from them on their northern side for

several miles, on which many vessels have been wrecked. For further particulars see the Book of Directions and Charts last published.

Baxo Nuevo.—The Baxo Nuevo, which is laid down on the charts, to the S.E. of the Isla de Arenas, and in the track to Vera Cruz, has been reported to have been seen about five or six years since, and said to be a very dangerous shoal. I was informed by an American captain that when he was in Vera Cruz, a French brig had arrived, and that he had run down between the Alacranes and the land, with a moderate easterly breeze, and all sail set. He had got so far to the westward that he expected to pass between the Isla de Arenas and the Triangles, at about mid-channel, and considered himself sufficiently to the south of the Baxo Nuevo, by the course he had steered, that should there be such a danger he would avoid it. Having had a good meridian altitude, and ascertained his longitude, by chronometers (which was afterwards found to have been correct,) he considered they were in a fair way for running off the Campeche soundings. Towards evening they saw heavy breakers ahead, running very high, when they immediately shortened sail and hauled the vessel on a wind, by which time they were close up with the shoal. They sounded and found but little water (I am not quite certain, but I think it was twelve fathoms, sandy bottom,) he then stood to the southward, until he had deepened the water, when he again shaped his course for Vera Cruz, and by sights which he took afterwards, he found he had been set a great way to the north,* from which he considered the shoal must have been the Baxo Nuevo, or that the Isla de Arenas was wrongly laid down in the chart.†

Baxo de Obispo.—The Baxo de Obispo may have been seen, but I never heard any one either to confirm or contradict its being in existence. It is best to give it a good berth.

Sisal Bank.—For the directions and the soundings, &c., on and about the Sisal bank, see the last publication of "Directions for the Gulf of Mexico."

Vessels bound to Tampico from the Carribbean Sea.—In all seasons of the year, the most preferable course to take, when bound to Tampico, is, that after having obtained soundings on the eastern edge of the Campeche bank, to run down the latitude of 23° , or in the season of the northers $23^{\circ} 30'$. The soundings will be then upwards of forty fathoms of fine sand and shells, and in general with black specks, and between longitude 87° and 88° with patches of red and white coral.

Having got to the westward of the Negrillos, as laid down in the chart, with the wind from the eastward, the course should be shaped for the bar of Tampico, and when about a day's sail from the coast, to run down in

* The wind had no doubt been blowing from the S.E. which would cause a current setting from that quarter, and would cause the ship to be north of the reckoning.

† The sights of the stars, if not taken both north and south of the zenith for the latitude, and east and west of the meridian for time, and the means of them taken, would be liable to a great error, caused by the false horizon, which is very general in low latitudes in the night time, through the haze which hangs over the sea.

the latitude of the bar. But if the wind should be either to the northward or from the south of east, care should be taken to keep to windward of the port, as the current in shore very often runs strongly, influenced by the wind, and has been the cause of many vessels lying outside in a norther, when had the land been made to windward they might have got a pilot and entered the port.

Ships bound to Vera Cruz.—A vessel bound to Vera Cruz from the Cuba sea having passed through the Yucatan channel and got soundings on the Campeche bank, can run along shore with safety, by keeping in not less than eight fathoms water, and not increasing the depth to more than eighteen fathoms; this will carry her clear of the Alacranes in the offing to the northward, and the sand heads along the coast, but on approaching the meridian of Sisal she should be kept more off shore, so that the soundings should not be less than eleven fathoms, which will carry her clear of the Sisal shoals.

From abreast of Sisal, the best channel is by running between the Baxo Nuevo and the Triangles, care being taken to give the shoals under the lee the widest berth, particularly with the wind from the north when the current will be setting to the southward, but its strength being influenced by the time it has been blowing. As the shoals about the Triangles extend some distance from the islands as has been already stated, and the soundings being such that the position of the vessel cannot be depended on, an allowance for the set of the current should be made.

With a south-east or a southerly wind, the current is not so strong as when the wind is from the north, yet it would be advisable with the wind from this quarter, to give the Baxo Nuevo the widest berth.

Ships bound to Campeche, Laguna, or Tabasco.—Ships from the eastward, bound to either Campeche, Laguna, or Tabasco, by keeping in soundings as before stated, when on the north coast of Yucatan, would be in the general track; but in the season of the northers the land should be given a wider berth, nor shoal the water to less than sixteen fathoms, in case the wind should spring up from that quarter, so that there would be sufficient offing to weather the Sisal shoals; having run the distance of these shoals and deepened the water, the course can be shaped accordingly. If bound so far to the westward as Tabasco, by running inside Los Arcos, that is, to the eastward of them, would be most advantageous, as there is less sea in soundings in a norther than in the middle of the gulf, and with the wind from the south-east or easterly she would be to windward of the port.

It is to be observed, that in the Campeche soundings, the norther seldom or never blows any thing near so strong as it does along the western side of the gulf, or even off soundings, so that the vessel can be kept to windward under easy sail, ready to bear up for the intended port, as soon as it moderates; and in fine weather advantage can be taken of the land and sea breezes.

Sailing from Tampico or Vera Cruz for New Orleans or Europe. In sailing from Tampico or Vera Cruz, bound to New Orleans or out of the Gulf of Mexico in the season of the northers, it is best to run into the latitude of 25° as soon as possible, without much regard to lon-

gitude, that is, to keep the ship a good clean full when the wind will allow her to clear away the land on the starboard tack; having reached this latitude she will be in a good position for a north, and besides, if there is any current setting out of the gulf it is most likely to be fallen in with. (See currents in the Gulf of Mexico, already stated).

Sailing from Laguna or Tabasco out of the Gulf.—From Laguna or Tabasco it is most advisable to keep on the Campeche bank in all seasons of the year, running inside Los Arcos and the Alacranes, and after reaching the longitude of 89°, if the wind should be easterly, to stretch off to the northward, to the latitude of the Tortugas, which will be in a good position for any change of wind.

For making the land about Tampico, see “Coasting Directions from Isla de Lobos to the Bar of Tampico,” published in the *Nautical Magazine*, in January, 1834, which has also a chart of the river Panuco.

Bar of Tampico.—As the bar of Tampico is liable to shift more or less with every gale of wind, there can be no guide laid down for entering the river; but as soon as the bar is passable, the pilots will be off, and should there be sufficient water on the bar, they will probably take you in; and, if not, there is no alternative but to lighten the vessel by discharging part of the cargo, which tends to a heavy expense.

Discharging cargo outside the bar.—If any of the cargo is discharged outside the bar, the vessel (when she gets inside) has to be brought to an anchor, abreast the south pilot establishment, to receive it on board again; but vessels whose draught of water will allow them to go over the bar without discharging outside, as soon as they are in the river, are boarded by the captain of the port, and custom-house boats, who receive the ship's papers and letter-bag, (for which the captain should have a receipt,) the hatches, and all communication with the hold is sealed up, after which she can proceed up to the town; an officer in general goes up with her.

Proceeding up from the bar to the town.—When the vessel is inside the bar, and at the anchorage abreast the pilot establishment, the pilot takes no more charge, and leaves her; but as the water is deep, there is danger to be apprehended in proceeding up, the larboard or southern shore should be kept aboard, as on the opposite shore the water is shallower; and when abreast of Paso de las Piedras (see map of the bar and river in the *Nautical Magazine* for January 1834,) the larboard shore must be approached as near as possible, to avoid the long spit which runs off from the point. When abreast of the entrance to Pueblo Viejo haul gradually over to the custom-house wharf, and come to an anchor as near as possible for the purpose of discharging the cargo.

Fort at the bar.—On the north side of the entrance of the river is a small fort, with a few guns mounted on it. Before vessels are allowed to sail, a clearance must be had from the custom-house, which has to be delivered to the commandante, or the officer in charge. Near the fort is a vigia, or lookout, and a telegraph, from which signals are made to the town, when any sail is in sight, the state of the bar, &c.

(To be continued.)

BARS OF RIVERS.

THE construction of harbours of refuge, and also the best methods of improving the state of those already existing, occupying, at the present day, no inconsiderable share of public attention; I trust that I may be excused, in sending a few remarks, on the laws which govern the movements of shingle beaches, in connection with an endeavour, to investigate into the cause of the existence of bars across the entrance of some navigable rivers, when others remain entirely free from such an obstruction.

An on-shore gale propels a shingle beach along a line of coast, in the direction from which it blows, and at the point where this shingle drift crosses the entrance of a harbour we meet with a bar.

But where a river like the Thames discharges its waters into an estuary, which gradually widens towards the sea, the travelling beach will follow the line of coast, forming the sides of the inlet; since where the estuary becomes narrow, the oceanic waves will lose their transporting power; and so from the shingle being deposited along its shores, no bar will be accumulated across the mouth of the river.

It has been urged in opposition to this theory: "that if bars are occasioned by the progressive movement of a shingle drift during an on-shore gale, they would rapidly diminish, or wholly disappear, in calm weather, or when the wind blows from the shore; and that the navigation would be wholly obstructed, by the sudden increase of the bar, in an on-shore gale."

I am ready to admit that such might be the case, if there was not another agency at work which counteracts this tendency. A breeze of wind blowing from the shore causes the shingle beach to accumulate, which prevents the scouring action of the river or tidal waters from diminishing the bar. On the other hand, an on-shore gale, while it imparts a progressive motion to beach, it at the same time returns the shingle in a seaward direction, and effectually checks any tendency which might otherwise exist, of a sudden increase of shingle on the bar.

The cause of these alternate movements of the shingle beach may be thus explained. A breeze of wind, blowing across an expanse of water raises its surface to the leeward. This produces an under current in the opposite direction, by which the equilibrium is restored. In an on-shore gale this under current will be in a seaward direction, and will carry with it the shingle from the beach. In an off-shore wind, this under current will set in towards the shore, and cause the shingle to accumulate again. Sometimes these results may follow a change of wind in the offing, when it does not reach the shore.

If we consider the velocity necessary to give a tidal current a sufficient impetus to set in motion a travelling beach, it must appear self-evident that too much has been ascribed to mere tidal agency by the many who have endeavoured to investigate the cause of this phenomenon, which may be attributed to the circumstance,—that in general, the set of the flood tide being from the open sea, it thus coincides in direction with that of the

gales of wind which raise the heaviest waves, which, consequently, give to the movements of the shingle beach its predominating impulse; but an attentive observer will perceive that an on-shore gale, from an opposite quarter, will cause the beach to move in a direction contrary to that of the flood tide. A rocky coast presents a conformation unfavourable to the accumulation of a shingle beach, from the circumstance that the waves, in their recoil, run back with augmented force through the hollows between the rocks; thereby returning in a seaward direction, any shingle that might otherwise have been accumulated by the impinging billow.

But we have reason to suppose that the 'progressive movement of the beach, is maintained past the ends of the rocks, in a continuous line, in some instances, at a considerable depth below the surface of the water; since, as soon as the configuration of the coast, favours an accumulation in-shore, the beach is again visible, the waves of the sea appear to possess an upheaving power to a considerable depth. The shore in the neighbourhood of some of the northern coal ports, are covered with flint and gravel, which can only have been derived from the ballast thrown out of vessels at sea; which ballast is not allowed to be deposited at a less depth than five fathoms at low water.

If we admit that travelling beaches owe their progressive motion to the impinging force of the oceanic billows, we must expect to find that as the line of coast becomes more sheltered from the violence of the prevailing gales, and as a necessary consequence, the transporting power of the waves decreases, that the movement of the shingle beach will become slower, and the tendency to accumulation greater. The southern shores of England, to the east of the Isle of Wight, and the coast of Suffolk, may be adduced as examples in confirmation of this position, the latter locality being protected by the sand banks lying off the coast.

We now come to the important question as to how far it is probable that the proposed harbours of refuge will be encumbered with accumulations of shingle at their entrances. To begin with Dover:—It is proposed, in the first place, to run out a pier, in order to arrest the onward progress of the shingle, and thereby to protect the present harbour. We will suppose that this is done, and an entrance 700 feet broad, as proposed is made on the south side of the new harbour; and that the south pier does not over-lap the other, to protect the entrance. In this case, the shingle will accumulate behind the first pier, until the angle behind it is filled up; when it will wash into the harbour, and be deposited at the point, where, from the shelter of the breakwater, the waves lose their impinging power. And should no measures be taken in the interim to remove it, this shoal will continue to increase until its surface reaches to the high water mark, and the entrance to the harbour is wholly blocked up, and then the shingle will pass along outside of the pier, until it meets with another obstruction. But if the piers are made to over-lap, so that the shingle may pass from the outside of the one to the outside of the other, it will merely form a bar across the entrance, and in this case the works should be so constructed, as to cause the

shingle drift to pass the mouth of the harbour at as great a depth of water as possible. The first pier should form an obtuse angle with the coast, in order that there may be no corners in which the shingle will accumulate in fine weather; whence in the first on-shore gale it will be returned in a seaward direction, and then by the progressive movement which is then imparted, the entrance of the harbour will be most encumbered with the passing beach, at the very time when a great depth of water is most required. I may also remark, that the more exposed the outside of the breakwater is to the violence of the waves, the greater will be the rapidity of the motion of the beach, and the less will be its tendency to accumulate at the entrance. It is possible, that with good management, a depth of water might be secured equal to that on the Shingles, where the drift crosses the channel, between the Isle of Wight and the Hampshire coast, leaving the noble harbours of Portsmouth and Southampton unencumbered with bars. If the project be to construct a breakwater parallel with the coast at Seaford, at about half a mile distance from the shore, we must not be surprised to see the shingle accumulate behind each terminus, at the point where the waves lose their transporting power, so as to make it necessary, at some future time, to break through the centre of the breakwater, in order to make a fresh entrance to the port of Newhaven.

Yours, &c.,

OBSERVER.

THE ROYAL NAVAL BENEVOLENT SOCIETY.

[Extract from the "Morning Herald," October 21st, 1845.]

THE October general quarterly court of the above institution which was held at the "Thatched House Tavern," was attended by a larger number of officers of high rank and influence than has been seen at the Society's meetings for many years.

Among the numerous officers who were present were—Admiral Sir Charles Ogle, Bart., Commander-in-chief at Portsmouth; Rear Admiral Bowles, C.B., one of the Lords of the Admiralty; Rear Admiral Sir Charles Malcolm; Admiral Robert Dudley Oliver; Rear Admiral Mangin, and Vice Admiral N. Tomlinson; Commodore Sir F. Collier, and Commodore Sharp, C.B.; Captains Sir John Ross, H. P. Warrant, Thomas Dickinson, Andrew Drew, W. G. H. Whish, F. Feade, Charles Irvine Hutchinson, James Huggins, C. H. Jay, B. Bayntun, H. M. Marshall, Tyte, Sherwin, Samuel Ridout; Dr. Nisbet, Deputy Inspector of Hospitals; Surgeons W. Bruce and J. M'Ternan; Lieutenants Dornford, C. M'Kenzie, D. W. Randall, Barker, O'Brien Casey, John Wood Rouse, J. S. Laen, Jewell, Knevet, G. Raymond, G. Brooks; Masters John Davidson, A. Cannon, H. Thompson, Hardis, G. F. Morice; Paymasters and Pursers John March, William Payne, V. A. Haile, Thomas Lean, Thomas Willey, James Giles, J. A. Lethbridge, A. Ellis; Mr. J. M. Case, Navy Agent and Auditor; Mr. G. Folkard, Navy Agent; Mr. Chippendale, Navy Agent and Auditor; and the Rev. J. K. Goldney, Chaplain of the Fleet.

That such an institution as the Royal Naval Benevolent Society was necessary, and that it deserves all the recommendation which a journalist can bestow, will be admitted by every one, when the following statement, which was read to the meeting yesterday, is published:—

“At the close of the protracted French war, in which so many officers had fallen, their daughters, from the additional claims on the Compassionate Fund, were reluctantly removed from the list at the age of 21, while the forfeiture of pensions by widows, who marry officers who have attained their 60th year, or who have not been commissioned officers for the space of ten years (a regulation since the peace), cause many of them to be left wholly unprovided for.

“The poignant circumstances under which naval distress is too frequently embittered, such as fathers and sons perishing together by fire, shipwreck, and foundering; or swept away in the pestilential climates of our colonies; by prolonged imprisonment in war, &c.;—can only be known to seamen.

“British officers also have ever considered it a point of honour to sacrifice, in the hour of peril, their own lives, for the advantage of the crew; thus necessarily subjecting their wives and families to greater hazards of distress than those of any other profession. The number of memorialists who apply annually for relief, average 300; and thousands have received something more than consolation for the loss of those whose lives, by the hard nature of the service, and the faithless element on which they live, separated as it were from eternity by a mere plank, are of necessity of a much less tenure than those who can prolong them safely by their fire-sides. Finally, if to the casualties of a naval life be added the double expense of an establishment incurred by married officers both at sea and on shore, the class whom this charity is designed to assist is one more subject to misfortune and distress than any other in the community.”

A STATEMENT, showing the Number of Donations granted as Relief to Parties in each Class, from the years 1791 to 1844.

| | TOTAL IN EACH CLASS. | £ | s. | d. |
|-------|--|---------|----|----|
| 53 | Flag Officers' Orphan Daughters . . . | 1,325 | 17 | 0 |
| 1,142 | Captains, their Widows, and Orphans . . . | 12,094 | 2 | 6 |
| 3,294 | Lieuts., their Widows, and Orphans . . . | 28,310 | 17 | 6 |
| 1,433 | Masters, their Widows, and Orphans . . . | 10,255 | 14 | 0 |
| 828 | Surgeons, their Widows, and Orphans . . . | 6,540 | 12 | 0 |
| 1,493 | Pursers, their Widows, and Orphans . . . | 11,943 | 9 | 0 |
| 24 | Chaplains, their Widows, and Orphans . . . | 207 | 5 | 0 |
| | Total . . . | £70,677 | 17 | 0 |

The donations of the last quarter having been announced,

The gallant Chairman said he took the opportunity of congratulating the Society that everything was going on in a very pleasing manner, and he was confident that when the merits of the Society were well known, the subscriptions would greatly increase.

The meeting then proceeded to distribute the funds of the Society to the applicants, Sir C. Ogle continuing in the chair, and Admiral Mangin and Sir Charles Malcolm assisting in the appointment. It was the most pleasing and yet the most painful task, for, whilst they were enabled to administer comfort and assistance to the needy, it was not in that liberal proportion which their benevolent inclinations disposed them to bestow, from the num-

ber of distressed applicants and the limited means in their power. In this task all petty jealousies and ill feelings were subdued, and each gallant officer, with the true sympathy of a British sailor, emulated the other, in finding out the most destitute and deserving. There was the case of a widow of an officer with eight children, left with some 40*l.* per annum; then came the soul-harrowing account of a beloved husband, who, with his scanty half-pay, died free from debt, yet without a shilling to bury him. An old lady, 80 years of age, is dependent for the short space of her existence on the compassion of the Society!! An old officer, who has been brought to poverty by false friends, and, though charitable in prosperity, is forsaken in adversity, and dragged to prison for a debt for which he has become responsible for another party, blind and imbecile, has only the Royal Naval Benevolent Society to afford him the slightest relief. A gallant officer of the coast guard lost his life in a desperate effort to save some fellow-creatures expiring before his eyes; the Society gives his widow its largest grant. Another officer, with a large family, dependent on his half-pay of 5*s.* a day, is recovering from a term of long sickness; the Society raises him from his bed, and discharges the demands of his medical attendant. We cannot depict the distressing cases which, with the utmost kindness of heart, were brought so powerfully by the Secretary before the court; nor can we do justice to the spirit with which they were received; but one thing must be stated: in one instance the private purse of Admiral Mangin made up an amount which will more adequately relieve the necessities of a deplorable case; and in another, although the Society could not with justice establish a precedent, the distressed daughter of an Admiral received assistance from the pocket of the good Sir Charles Ogle.

[We commend the foregoing to the attention of our Naval readers, to many of whom, no doubt, the Society is well known. And we trust that our efforts in diffusing a knowledge of the existence of this important institution, will have the effect of drawing fresh contributors to funds devoted to purposes, which appeal so forcibly to their professional as well as their charitable feelings.]

REGATTA OF LIFE-BOATS.

THE following interesting experiments were made in Yarmouth Roads in the course of last summer. We frequently hear of regattas of yachts and such vessels on our coasts, but it is seldom we have an opportunity of recording a regatta of life-boats.

On the evening of Monday, July 28, the busy arrangements in the Yarmouth roads began to create a lively interest in the crowds assembled on the beach and jetty, to witness the preparations for the regatta on the morrow, and this interest was much increased by the arrival in the course of the evening of several of the life boats, which are stationed along the coast of Norfolk and Suffolk, with their hardy, intrepid, and vigorous crews.

On the following morning early, the excitement of the scene was redoubled by the activity of all about to take part in the enlivening amusements of the day. The public attention more particularly was drawn to the active preparations and admirable arrangements made by a committee of naval officers and gentlemen of the two counties, for the interesting and important trial of the life-

boats. These seemed to be the theme of every tongue. At 9 A. M., under the direction of Captains Jerningham and Wyndham, commanding the coast guard districts of Yarmouth and Cromer, the whole of the crews of ten life boats, amounting to about 180 men, assembled at their rendezvous with a degree of order, regularity, punctuality, and attention, which could not have been surpassed by a body of the best disciplined men. It was impossible to look upon these men without feelings which only those who have witnessed their deeds, and the dangers and might with which they have to contend, can imagine. While their proud and athletic forms afford a strong proof of their powers when combined, their countenances indicated that stern but quiet determination which can alone carry them successfully through the brave and venturous attempts, and satisfied the spectator that upon their bravery he might place implicit reliance.

The activity and energy displayed by Captain Jerningham, the devoted interest he evidently felt, and the importance of the project he had in hand, the confidence that seemed to possess him in the certainty of establishing a universal sympathy in favour of the beachmen, and the precision and clearness which accompanied all the details of his arrangements, in which he was so ably assisted, was only equalled by the same energy, the same zeal, the same desire among all his coadjutors, for the success of an object as humane as it is generous, and one in which all the best feelings of our nature are called into play. Let those who have seen the anxiety which the horrors of shipwreck call forth, even in the personally uninterested, and then let them conjure up in their imagination what must be the agony of those whose wives, children, and friends are subject to such dangers, and there is none who will not, with ready generosity, offer their tribute to the aid of the families of those whose stretched-out arm in the hour of danger has preserved one of these dear connexions, or whose children have perhaps become orphans in the attempt.

From this rendezvous the crews repaired to their respective boats, whose launching created great excitement, the crowd around pressing so closely as to render the operation of measuring the cables a matter of some little difficulty; this was ably superintended and managed by Captain King. About 11 o'clock the ten boats had all been launched, their splendid crews in the highest spirits, and the crowds of spectators on the tiploe of expectation. They were formed in line, parallel to the beach, with their heads out, the men resting on their oars; in front of them was the revenue cutter's six-oared galley, with Captain Jerningham on board. Her oars were tossed up, the whole of the crews simultaneously rose and gave three hearty cheers, which were re-echoed by the throngs lining the shore and jetty, in the midst of which the galley shot along with the rapidity of a bird, the line of boats following with precision and regularity to their stations appointed, where they anchored the five sailing boats on the port beam of the Station Vessel, and the remaining five on the starboard beam, each company forming a good line and riding to fifty fathoms of cable. The respective coxswains of the boats were then assembled on board the Station Vessel, where they received instructions, and after clearly comprehending the nature of the contemplated evolutions, returned to their boats.

The sailing boats, consisting of the Yarmouth, Lowestoft, Pakefield, Southwold, and Bacton vessels, had their masts stepped and their outriggers out, but on the coxswains' returning, the masts were got down and their oars laid within the gunwale.

These boats, with the exception of Lowestoft and Bacton, are fitted with air-boxes, and can be filled with water at pleasure by removing plugs. Lowestoft is fitted with empty barrels; Bacton is a flat-bottomed boat, with air-tight deck, the lower half of the vessel forming one large air tank.

At five minutes before twelve, two guns, in quick succession, were fired from the Station Vessel, as the signal for the sailing boats to weigh. At this movement a most intense interest was excited along the shore and jetty, and in the numerous boats and vessels assembled around to witness the start. The hauling up the anchors, coiling cables, stepping masts, and setting sails, occupied the short space of fifty-eight seconds. The first boat under way was the Yarmouth, Lowestoft next, and the other three were nearly together, under a commanding breeze off the land. The boats had scarcely got a good way upon them and the men seated, when abreast of the jetty, affording an excellent view, as if to take them by surprise, one gun, and a ball hoisted at the mast-head of the signal vessel, called their attention. In one minute and fifty seconds the sails were down, masts unstepped, and the boats were on their oars, keeping up the race with all their energies. In this evolution Lowestoft and Yarmouth took the lead, Yarmouth slightly first, with Pakefield and Southwold close upon them, Bacton completing the above time. The boats were then allowed to run some distance in a southerly direction towards the mouth of the haven, when on rounding the southern mark the signal was given to "boat their oars" and "make all sail," which occupied exactly two minutes. Next signal was "down mast and sail, and out oars," occupying two minutes and a quarter. In this trial Yarmouth laboured under a disadvantage, in consequence of a slight accident arising from one of the life boats striking her whilst in-stays, which caused the water to be admitted into her before the signal was made to take out the plugs. The signal for rowing and sailing was varied during these trials, the signal-vessel having to be rounded twice. After passing the jetty the second time three guns in rapid succession were fired, and a black ball hoisted at the mast-head; this was the signal "out plugs." Scarcely had it been made when the sky became overcast, and a heavy squall evidently was approaching, as if even the weather was inclined to test the qualities of the boats during this important part of the trial. The boats now became filled with water; at this juncture the fine qualities of the Pakefield boat were so apparent, that a doubt was entertained in the minds of the judges whether she had removed her plugs. This, however, was satisfactorily proved to have been fairly done; her appearance was that of a yawl, with a light freight on board; the others were more deeply settled in the water, though all seemed to continue their course with the same speed, the only difference being that they seemed to heel rather more under their canvas. The scene became now most animated—the threatened squall, accompanied with a brisk shower, now caught them, the sea overcast, and the appearance of the clouds assuming for a time a good representation of the weather in which these boats are most likely to be required; the four boats in succession, with Pakefield leading, their sails now pressing heavily upon them, the crews immersed in water to their middles, holding on by the life lines, with the water flowing freely through the vessel over her lee-gunwale, amidst the cheers of their crews, which were re-echoed by the multitudes on the beach. These fine boats were then rounded to, close inshore, and brought to anchor, and the crews repaired to change their wet clothing. During the animated trial of these boats, the Sherringham, Cromer, Mundesley, Winterton, and Caistor boats' crews were tested in their skill at weighing anchor, coiling cables, getting on oars, and anchoring with fifty fathoms of cable out. The evolutions of these created considerable interest, but were little more than a repetition of anchoring and rowing, in which they appeared to be exceedingly active and skilful.—The Cromer boat, considering her small number of hands compared with the Sherringham, proved the smartest, though this was a matter of some difficulty for the judges to decide. The speed of these boats was a subject of surprise to all, giving a six-oared galley a good tug to keep up with them. On the con-

clusion of the trial, the boats were beached, and the crews prepared themselves to assemble for the dinner.

During this time, an important trial was made with two boats, to test the qualities of the two classes which that day had assembled. The Yarmouth and Caistor were selected for this purpose; the first trial was made with the Yarmouth boat. The Yarmouth boat had a keel of iron, of considerable weight, the object of its construction being to retain the utmost possible floating properties above, with the centre of gravity below. The possibility of upsetting one of these boats by any fair means by which they might be tested in the seas adjacent, has always been considered as impracticable; but as the confidence of the crews can never be too much strengthened in favour of the boats in which they risk their lives, it was proposed to shew them that if the utmost exertions were made to turn them bottom uppermost, they would not remain in that position; and if the crew were capable of righting her in smooth water, they would still more easily do so when the sea was in a state of agitation. The first attempt was made with the Yarmouth boat, which having been swung athwart the tide astern of the cutter, by means of a slip rope at one end and her painter at the other, a par-buckle was passed under the bottom of the boat, the ends of which were brought over each quarter of the Station Vessel, the other ends having been passed under the bottom of the boat and made fast to her inner gunwale; a powerful purchase was then applied, and the boat was hove up nearly on her beam ends without in the least filling; in consequence, however, of the weight of her iron keel and the extreme buoyancy of her gunwale, combined with the rake of the cutter's stern, the object of capsizing her was prevented. It most satisfactorily proved to the crew the valuable buoyant properties of their boat.

The Caistor boat was next tried on the same principle, but there being no keel whatever to the boat, and by an additional spar being applied, which was used to push away her lower gunwale, she was capsized; and was again righted by means of the remaining part of the par-buckle.

The judges were R. Marsham, Esq., of Stratton Strawless, Chairman of the Norfolk Shipwrecked Mariners' Association; Captain Wyndham, R.N., Inspecting Commander of Yarmouth and Cromer; also Captain King, R.N., late Inspecting Commander of Cromer; and Lieutenant Eaton.

The experiments being completed and the crews having prepared themselves for dinner, they assembled at the rendezvous, each man being decorated with a rosette attached to the left breast, and varying in colour according to his boat, and from thence they proceeded to the marquee.

THE LATE ADMIRAL RAPEE.

ADMIRAL RAPEE was born on April 1st, 1767, and was placed at an early age at Winchester School. He embarked on board the *Berwick* 74, Capt. the Hon. Keith Stewart, March 20th, 1781, and was engaged in the action on the Dogger Bank on Aug. 5th following, where the *Berwick* suffered severely, and he was wounded in the head. The officers and crew of the *Berwick* being turned over to the *Cambridge* 74, he was present in this ship at the action with the combined fleets of France at the relief of Gibraltar, Oct. 20th, 1782. He next joined the *Marquis de Seignelay*, commanded by Capt. John Hunter, an excellent seaman navigator, who succeeded Governor Philip at Botany Bay, where he was wrecked in the *Sirius*. He remained in the same ship, on the Home Station, till 1785, from which time till 1788 he served as midshipman in the *Salisbury* 74, flag-ship of Admiral Eliot, Capt. Erasmus

Gower, on the Newfoundland station. He then joined the *Impregnable*, flag-ship at Plymouth, and in March, 1790, was appointed to the *Queen Charlotte*, Lord Howe's flag-ship, on Channel Service, and was made lieutenant in October of the same year. In April, 1791, he joined the *Vesucius*, Capt. Lord Viscount Garlies, was appointed flag-lieutenant to Lord Howe in Feb. 1793, and was present at the actions with the French fleet on the 28th and 29th of May, and on the 1st of June, 1794. The failure of a signal on that important day, in consequence of its colours not being distinctly visible, led him to devote his efforts to the composition of a system of signals which, when occasion required, could be rendered independent of so precarious a distinction, and which would in consequence prevent the loss of time, so precious under such circumstances, and which is often sacrificed in fruitless endeavours to make out the colours of a signal.

In the following month he was made a commander, and in the autumn of the same year, on account of his professional skill and his thorough knowledge of the French language (the latter a qualification more rare among naval officers in those days than now, and which he had, in an interval of peace, spent some time in France for the purpose of acquiring), was appointed to the *Vasco da Gama*, flag-ship of Admiral De Valle, commanding a Portuguese squadron, acting under the orders of Lord Howe, in order to facilitate the communication between the commanders-in-chief. For this service he was presented by the Queen of Portugal with a sword richly set with diamonds, and it was in contemplation to grant him the rank of vice-admiral in the Portuguese service.

At the close of 1795, Capt. Raper was appointed to the command of the *Raccoon* sloop, and in the ensuing spring, to the *Champion* 24, on the Channel and North Sea Stations. In this ship he was present at the expedition to Ostend, under command of Sir Home Popham, and after having been in command of her for three years, was appointed, in Jan. 1799, to the *Amiable* frigate of 32 guns, on the West India Station. On Dec. 17th Capt. Raper, while in charge of the outward-bound West India under Capt. G. Duff of the *Glenmore* 36-gun frigate, off Porto Santo, discovered three sail, which afterwards turned out to be the *Syrene* French frigate, of 36 guns, and *Bergere* corvette, having on board Victor Hugues and 450 troops, with the *Calcutta* Indiaman, a prize taken the same morning. Capt. Duff made the signal to chase, and soon afterwards, on the *Calcutta* altering course, evidently with the view of diverting attention, hove too, and retook her. Capt. Raper continuing the chase, about 1 p. m. lost sight of the *Glenmore*, which did not follow, and about half-past 2, got near enough to the *Bergere*, the worst sailer of the two enemy's ships, to fire upon her. This was returned, both the French ships hoisting their colours at the same time. Capt. Raper then used all his endeavours to disable the corvette, or to separate her from her consort, but was defeated in his attempts by the *Syrene* wearing round, and placing herself astern of the *Bergere*. Capt. Raper, however, gallantly maintained his position within gunshot on the frigate's weather quarter until dark, when despairing of support from the *Glenmore*, and the *Amiable*, which mounted only twelve-pounders, and was heavily laden with stores, rolling her main-deck guns in the water; while the *Syrene*, from her superior size, was comparatively steady, he considered it correct to give up so unequal a contest, and to return to the convoy, which he rejoined early the next morning. The *Amiable* sustained no damage but in the sails and rigging; and the reason why the enemy did not take advantage of his great superiority of force over the *Amiable* was supposed to be that they mistook a large merchantman, which followed the *Amiable*, for a man-of-war. Had Capt. Raper's example been followed there can be but little doubt that both ships would have been taken.

In Dec. 1810, Capt. Raper took command of the *Mars*, a first-class 74, mounting 24-pounders on the main-deck, in which ship he served in the Baltic and North Sea, and was paid off in 1813. He was promoted to the rank of rear-admiral in 1819, vice-admiral in 1830, and admiral in 1841.

In 1828, Admiral Raper published his "*New System of Signals*," on a peculiar principle. It is usual in naval signals to ascertain the meaning of a signal by reference to the colours only of the flags and pendants composing it, which in some cases represent numbers, and in others letters of the alphabet. In Admiral Raper's system, which is exclusively numeral, the colours denote, as heretofore, the *number* of the signal; but the principle is that the *subject* is pointed out by the *combination* of the flags and pendants exhibited. For example:—a pendant over a flag is a signal to a ship in chase, reconnoitring, or other distant service, and is confined exclusively to such communications: a flag over a pendant, on the other hand, is a signal *from* a ship on such service. This classification of subjects (or, as the author technically calls them, *points of service*), leads directly to a ready and general mode of communication by distant signal, when from distance or other causes, colours are indistinct, which is one of the most important objects effected by this system, and which, if we may judge from the variety of plans which have been proposed, it would be difficult or impossible to attain otherwise. For when colours are not visible the ship addressed, on making out the mere combination or form, and having so far ascertained the meaning of the signal as to know its class or subject, hoists a *ball* (instead of the answering pendant employed with colour signals), and the signal is then hauled down and replaced by its number expressed by numeral distant signals. Other points relating to this plan will be found in the *United Service Journal*, 1834—article, "Maritime Signals."

That a system on a plan so simple and so comprehensive, the superiority of which was recognized at the time of its appearance, and has not been disputed, brought forward by an officer of considerable talent, and who from long continued attention to the subject was particularly well acquainted with the objects to be effected by naval signals, in their application both to the exigencies of single ships and the evolutions of fleets, should have been rejected by the Admiralty, will excite but little surprise when it is recollected that the immediate adoption or rejection of an invention by a public board, is not always a test of its merit. This is afforded by time and the progress of opinion alone.

Admiral Raper married, in April 1798, Maria eldest daughter of James Craig, esq., of Carrickfergus, by whom he had two sons, the elder a lieutenant in the Navy, and a daughter, who survive him.

Errata.—In the foregoing page for "*Amiable*, read *Aimable*," and p. 39, line 8 from the bottom, for "*Seiguelay*," read "*Seignelay*."

NAUTICAL NOTICES.

FLOATING WRECKS.

WATERLOGGED vessels abandoned by their crews, (and those too for the most part British,) are now become so common that it belongs to our province to point out their positions and warn seamen of their locality. These stumbling-blocks of the ocean may possibly not be such formidable dangers to ships, generally speaking, as rocks just shewing themselves on the surface of the sea; but accidentally they might produce quite as much mischief, especially when we remember that the seaworthiness* of merchant vessels

* In the case of the wreck of the *Mary*, in Bass Straits, she is stated by
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does not insure them from fatal consequences to all on board in the event of a collision with one of these dangers. They are, moreover, of an itinerant nature, drifting about wherever the winds and currents of the ocean may choose to carry them, and therefore assume a variety of positions, in sober reality, far more to be depended on than those rocks which are occasionally reported as "appearing in the trough of the sea," "of a dark colour," "about the size of a jolly-boat," and with such other vague-distinguishing features, without a symptom of soundings about them. However, we shall now proceed to state the positions of some of these floating wrecks which we have collected from the columns of that excellent journal, well known to nautical men as the *Shipping and Mercantile Gazette*; and first we shall name the Lancer of Sunderland. On the 2d of August this vessel, being waterlogged, was abandoned by her crew, who were taken off by the Eliza Janet. The following are the positions in which she is reported to have been seen, and the names of the reporting vessels.

Lancer of Sunderland, seen

| | | | | | |
|-------------|-------------|----|-----------|--------|--------------|
| Lat. N. 47° | lon. W. 49° | on | 2d Aug. | by the | Eliza Janet. |
| " 45½ | " 48½ | " | 19th " | " | Cornwall. |
| " 46½ | " 47½ | " | 2d Sept. | " | Kangaroo. |
| " 45 | " 47½ | " | 8th Sept. | " | Exile. |
| " 43 | " 36 | " | 16th Oct. | " | Martha. |

The four first positions in which this vessel was seen are within 150 miles of each other, on the banks of Newfoundland. The last position, on the 16th of Oct., places her about half way between that locality and the Azores, and we hear no more of her until the other day, when she is reported in the *Shipping Gazette*, of a recent date, as having been taken into Liverpool on the 20th of Nov. dismasted. We have not been careful enough to preserve the accounts of the conditions under which she was seen, but have no doubt, from the length of time she was drifting about, that it was very bad. She is, therefore, no longer a bugbear to seamen.

The next we have on record is the Hope of London. This vessel is reported as follows:—

Hope of London seen

| | | | |
|-------------|--------------|----|-----------------------------------|
| Lat. N. 48° | lon. W. 28½° | on | 24th July. |
| " 47 | " 26 | " | 27th July. |
| " 44 | " 19 | " | 16th Oct. by the Llewellyn. |
| " 44½ | " 20½ | " | 20th Oct. " Les deux Freres Unis. |

We have not preserved the names of the two first vessels which saw the Hope,* nor when she was first abandoned, but as she is still drifting about and may be supposed to be somewhere midway between her last position and Cape Finisterre, ships must be on the look-out for her.

The different positions in which the above two vessels were consecutively seen, confirm the received opinion, of the general tendency of the water of the Atlantic to set to the eastward, in conformity with the prevailing westerly and S.W. winds. They have both drifted down to the S.E. in a similar

her commander, to have gone to pieces as soon as she struck. She had been reported seaworthy, but it does not follow because a vessel may be considered seaworthy, that it is to insure her holding together on striking a rock.

* We should be very thankful to any of our readers for a confirmation of this statement, or otherwise, as the case may be in his knowledge.—Ed. *N M.*

manner as the casks of the William Torr, whaler, wrecked in Davis' Strait,* and being also principally beneath the surface, may be considered as following the real movement of the water, while the bottles shewn on the same chart, must doubtless obey more the direction of the wind.

We now come to those of which we have only a single notice, but the dangers of which are no less formidable than those above reported. Indeed, one of them, as will be seen, has already been struck by a vessel since arrived at Gravesend. They are as follows:—

Blake, a barque, of Liverpool.

Lat. $46\frac{1}{2}^{\circ}$ lon. $47\frac{1}{4}$ 25th Nov. by the Ann Rankin, Mc Arthur; mizen-mast standing, decks blown up.

Gregg, of London.

Lat. 47° lon. $32\frac{1}{2}$ Dec. by the Governor Douglas, arr. at Bristol from Quebec.

Unknown, a large ship.

Lat. 46° lon. 47° 25th Nov. by the Sherbrooke, arr. at Cork, 8th Dec. This seems likely to be the Blake, the positions varying so little.

Unknown, about 200 tons, gill figure-head, no spars or bulwarks standing.

Lat. 39° lon. 48° 13th Nov. struck by the Brutus, Harvey, from Nassau, arr. at Gravesend.

Unknown.

24 miles, N. of Scilly, or about lat. $50\frac{1}{4}^{\circ}$ lon. $6\frac{1}{2}^{\circ}$ by the Active from Belfast to Dunkirk; put into Milford 27th Nov

Unknown, large vessel.

260 miles N.W. of Scilly, which may place her in about lat. 51° lon. 12° ————Dec., by the Lord Stanley, arr. at Bristol from Belize, 12th Dec.

These two last, from their positions, being likely to drift in the way of vessels leaving and entering our channels, become more formidable dangers and we, therefore, caution masters of vessels to be especially on their guard against them.

Another wreck of a timber ship described as having painted ports, no masts standing, and about 500 tons, has been reported as seen on the 23rd Nov., 1st Dec., and 5th Dec. off Coruna, by the Madrid and Queen, contract mail vessels. This wreck from being so near the coast, is within the influence of the current which carried the Malabar's bottle, No. 7, and the Dead Whale, No. 8, reported by Lieut. Brooking, down to the southward,† so that if it be not washed on shore we shall expect soon to hear of it again on the coast of Portugal.

We do not pretend to give the above as a list of all the wrecks floating about the Atlantic. They are those which have come under our own recent observation, and which we place at once before our readers with the view of warning them against the consequences of collision with them. We shall not lose sight of this important subject, and as we intend it to form a feature hereafter, in the pages of the *Nautical*, any authentic information from any of our readers will be thankfully acknowledged. The subject is one of

* See the Chart in our Vol. for 1843, and the accompanying paper.

† See the Chart in our Vol. for 1843.

interest, for independent of the notice it affords of the dangers themselves, so that vessels may be on their guard against them, the tracks of these stumbling-blocks drifting about the ocean, and their ultimate disappearance, must concern others besides mariners.

Since concluding the foregoing remarks, the following additional wrecks have been reported as having been passed waterlogged and abandoned at sea:—

A large barque about 600 tons.

Lat. N. $45\frac{1}{2}^{\circ}$ lon. W. $49\frac{3}{4}^{\circ}$ on 11th Nov. by the Glasgow, arr. at St. John's, N.B., from Liverpool.

A vessel about 500 tons.

Lat. N. 58° lon. W. 12° on 14th Nov. by the Reliance, arr. at St. John's, N.B.

A large ship.

Lat. N. 41° lon. W. 29° on 27th Nov. by the Carribbean, arr. in the Downs, 14th Dec.

The names of the above vessels are not stated. The position of the first (the large barque) seen on the 11th Nov., appears to correspond with that of the Blake, of Liverpool, seen on the 25th, and the Unknown, seen on the 28th of the same month.

SHOAL IN THE SOOLOO SEA.—I lose no time in forwarding the following account of a shoal I discovered in the Sooloo Sea, which I beg you will insert in your extensively circulated paper:—

On the 2nd July at 10h. 50m. A.M., steering south, with the Hamburgh barque Flora in company, and with a moderate westerly wind, observed the water suddenly to change colour, and on looking over the side saw rocks under the bottom; hauled immediately close to the wind. The lead-line being all ready stretched along, hove, and got soundings of seven, and ten fathoms. We were on the bank for about five minutes, and immediately deepened to no bottom at fifty fathoms. Steered south again; Flora in company three miles ahead. At 11h. 40m. observed a shoal appearance ahead, and the Flora having tacked suddenly and hoisted her ensign, tacked, and stood to the northward and westward. When we tacked the Cagayanes Islands were just visible half way up the mizen top-mast rigging, bearing S. b. W. $\frac{3}{4}$ W. When in seven fathoms, the bank, seen from aloft, appeared to be about three miles in length and breadth; and close to leeward of us, there appeared to be much less water. We must have passed over the western extreme.

At 1 P.M. lowered a cutter, and sent her away to examine the shoal. Boat steering E.b.S. $\frac{1}{4}$ S., and got the following soundings—no ground 35 fathoms immediately afterwards 11, 7, 5, 4, 3, 3, 3, and one cast of $1\frac{1}{2}$ fathoms. This appeared to be the shoalest part, and seemed to be about three miles in length. After shoal cast of $1\frac{1}{2}$ fathoms still steering E.b.S. had three casts of 3 fathoms; then steered north, and after pulling 160 yards, got the following soundings—3, 4, 5, 7, 10, and no ground at 35 fathoms. This shoal, seen from aloft, appeared to extend many miles to the southward, and may even reach to the Cagayanes Island, *the position of which is wrong on the chart.* Our position at noon, *by both ships*, was lat. $9^{\circ} 57' 43''$ N. and lon. $121^{\circ} 22' 30''$ E. Which places the 7 fathoms patch in lon. $121^{\circ} 23' 36''$ E. and lat. $9^{\circ} 50' 30''$ N., and the position of the boat when in the least water at, $9^{\circ} 58' 45''$ N. and lon. $121^{\circ} 23' 56''$ E. by good chronometers.

Since our arrival at this port we have taken several careful observations of the sun before and after noon, for our chronometers, and find them by the meridian of Batavia observatory, (which is generally considered to be accurately ascertained,) to be very correct. So that every dependence may be placed in the above information.

J. WADGE, *Commander.*

Hong Kong Register, Sept. 9.

Hydrographic Office, Admiralty, Dec. 4th, 1845.

MOEN LIGHT, Baltic.—The Danish government has given notice that a fixed light has been established on the eastern point of Moen Island.

The lighthouse stands in latitude $54^{\circ} 57'$ north, and longitude $12^{\circ} 32' 45'$, east of Greenwich. The light is 82 feet above the level of the sea, and may be seen at the distance of about 3 leagues between the compass bearings of east and south-west $\frac{1}{2}$ -west, in which latter direction it is concealed by the cliffs.

CONSTANT BANK.—On the 6th of December, 1844, Captain Lesport, of the ship *Constant*, of Nantes, on her way from Mauritius to Calcutta, discovered a coral bank, on which he found 11, 20, and 30 fathoms.

This bank, which extends about ten miles from south-west to north-east, is situated within ten miles of the island of Coetivi, and W.N.W. of the village.

Continuing her course towards the north-east, the *Constant* discovered, on the 7th of December, another bank, on which she sounded several times working across it by estimation. A boat which was sent to find the shoalest part of it, had nothing less than 11 fathoms; the bottom being principally coral.

At noon, Captain Lesport returned to the shoal part of the bank, where he determined its position, which he has given as lat. $6^{\circ} 19' 30''$ south, and long. east $53^{\circ} 58'$ and $53^{\circ} 55' 45''$, deduced from two chronometers regulated at Mauritius. This second bank appeared from twelve to fifteen miles from north to south, and from eighteen to twenty miles from east to west. Capt. Stoddart has named it "Constant Bank."

[We take the foregoing from *La Flotte*. The bank in question forms an important addition to the chart.—*Ed. N.M.*]

CAUTION.—CORUNA LIGHT.

The following important notice, on the light of the Tower of Hercules, at Coruna, will apprise seamen not to place too much confidence in this light. We copy from *La Flotte*:—"The defective manner in which the lights of the Tower of Hercules are preserved, is much complained of. The lamps are lighted late, and put out before daybreak. The light is dull, and sometimes scarcely visible, in consequence of the carelessness of the lightkeepers. The revolving apparatus is out of order. The light, which ought to show at ten leagues, is scarcely visible half that distance; and therefore vessels depending on it, run the risk of being wrecked. Representations have been made, on this subject, to the maritime authorities, who have stated the cause of failure to be the machinery. Whatever may be the cause, it is right to warn seamen not to place too much confidence on this light."

Hydrographic Office, Admiralty, Dec. 5th, 1845.

FLORES LIGHT, *River Plata*.—The Revolving Light on Flores Island, in the river Plata, having been plundered of its lamps by the lightkeepers, under the orders of General Oribe, the Government of the Banda Oriental, at the instance of the British and French Admirals, has announced its re-establishment, but under the following change in its character.

The entire revolution of the light, which was formerly completed in seven minutes, is now reduced to three minutes; in the course of which, two intervals of darkness will take place, one of half a minute, and the other of a minute and a half duration.

The light is 478 feet above the sea, and shews all round the compass.

It is stated, in an extract from a letter from an officer on board the Racer, dated 2nd Aug., that the English have replaced this light "but it is not a revolving one, and a merchant vessel has already been lost from that cause."

[The foregoing notice is of a subsequent date.]

COALING AT MADEIRA.

*H. M. Steam Frigate Cyclops,
Rio de Jeneiro, 20th September, 1845.*

SIR,—I have the honor to acquaint you, that I consider it my duty to make known, for their lordships' information, that admirable arrangements have been made by Mr. James Taylor, merchant at Madeira, for the supply of coals to H. M. steam vessels at that place; and also to state, that every facility is given by Mr. Taylor for their being completed in the shortest possible time; the coals being bagged, and the boats launched, on an inclined plane from the beach; and in the case of H. M. steam frigate under my command, the supplies were alongside quicker than they could be received.

I have the honor to be, &c.,

(Signed)

W. F. LAPIDGE, Captain.

To the Secretary of the Admiralty.

PORT OF SHANGHAI.

Foo Chow, 22nd July, 1845.

SIR.—You would hear that we got out of the harbour of Amoy the morning of the 13th. Though we left under royals and studding-sails by 10 A.M., the vessel was under double-reefed topsails; and at 10 P.M. she was hove to, the gale blowing furiously. At daylight the following morning, still blowing hard, we steered in for the land, and soon sighted the northernmost island of the Lam Yets; and at 3 P.M., anchored under the lee of the White Dogs, well protected from the wind and heavy sea, a reef running out from the island, and forming a natural breakwater.

The next morning (the 15th), I went round the island to a village, to find a pilot; and though the surf was so high, we durst not venture within a quarter of a mile of the rocky beach, a fisherman dashed through it, and came off to volunteer his services, about fifty more of the natives preparing to follow him; but we rowed back, and at noon again were under sail, steering, by directions of the pilot, for the entrance of the Min; where the vessel struck about 2 P.M. on the bank, and for three hours was in great danger—striking so heavily that it was impossible to stand on deck, or for the men to go aloft to furl sails; and at length she unshipped her rudder, broke the rudder-case, woodlock, and knocked a hole in her stern, by which our stores were tumbling into the water, and the sea breaking into my cabin—the poop-deck being also torn up.

By this time the wind had increased to a gale, and the sea was making a clear breach over the ship fore and aft; the sailors unable to stand on deck to, get the boat out; and all hope given up; when she floated once more; and the weather having cleared, the captain was able to get bearings, and steered for Ree's Rock. At half-past five, we anchored in 9 fathoms water, with an unmanageable ship; our rudder being disabled. And fortunate it proved that we did get off; as, during the night, it blew such a severe gale that the vessel never could have held together. Had she not been so strong as she is, she would have gone to pieces in the first instance. By the exertions of Capt. Wright and his officers, however, they have brought her safe to within ten miles of the bridge; and she is discharging her cargo, to undergo repair, if she proves worthy of it, on being surveyed. We got up here ourselves on Saturday noon, the 19th, accompanied by the captain, crew, and passengers of the schooner *Sam*, who were not so fortunate as ourselves.

Perhaps you will ere this have heard of the total wreck of her, on Saturday night, the 12th, on a rock supposed to be somewhere near the Three Chimney Islands, where she broke up within an hour of striking; and Capt. Taylor, Mr. Glen, and Mr. Ross, passengers, only saved themselves in their shirts, and after remaining four days upon the islands, escaped in a China boat, and came up to us when at anchor in the Min, just below Minga. The crew, also, all saved. Altogether, an *unfortunate commencement* for the opening of the trade at Foo Chow.

Had we never taken a pilot, we should have been all safe. He was attempting to take us in by a channel that the junks always use, which is unsurveyed as yet. The *Litherland* went in by it. Had we not started with the ebb tide, we should never have got off. As it was, we went on at low water, and came off with flood tide.

Upon our arrival, we had to walk to the consulate, up to our knees in water; but it is now sunny and very hot. Mr. Walker has kindly accommodated us for the present, until we can find quarters; but they are very difficult to be obtained. And I cannot get any place for my goods on shore; so keep them in junks.

The Chinese authorities, immediately on Mr. Alcock's application, ordered junks down to the vessel, and evince a disposition to render every assistance.

I am, &c.,

(Signed)

AUG. CARTER.

To G. T. Lay, Esq., Amoy.

IMPROVEMENT IN STEAM NAVIGATION TO ADEN.—It will be highly satisfactory to our readers to learn, that a new course has been tried for steamers proceeding to Aden during the monsoon, and the trial has been highly successful. Formerly it was usual for the steamers after leaving Bombay, to steer so, that by making a long detour to the southward, they could succeed in passing between Socotra and the African shore, near Cape Guardafui, which has become notorious since the loss of the *Memnon*. The officers in command of the steamers during this monsoon have determined to try the northern course near the Coast of Arabia. The *Acbar*, under the command of Lieut. J. W. Young, which left Bombay on the 20th June, attempted the latter course and reached Aden in fourteen days and three hours, avoiding thereby the risks and dangers of approaching Cape Guardafui. The adverse currents along the African Coast have been estimated at from two to three knots per hour; along the Arabian Coast they are scarcely one knot. The *Acbar* has proved the advantage of this new course, which is also to be tried by the *Semiramis*. The great facility which is thus ensured for communicating with Aden during the monsoon, will not fail to prove beneficial to Bombay as the Post Office port of India.—*Hong Kong Register*, Sept. 16.

WRECK OF THE MARY IN BASS STRAITS.

(*Extract of a Letter from Mr. R. H. Newby, late Commander of the Mary, dated Wyberlena, Flinders Island, Bass Straits, 1st June, 1845.*)

I very much regret that since I last saw you I have suffered one of the most distressing shipwrecks which has happened in this quarter of the globe for some time. It is not possible for me at the present time to enter into a detail of the scenes and events which have arisen from the total loss of the *Mary*, under my command, upon a sunken rock between Kent Group in Bass Straits and Flinders or Great Island. It may be necessary to state to you how the sad catastrophe happened, and why it was that a ship homeward bound from Sydney to London was wrecked at the east end of Bass Straits. To do so I must first state that I was hurried to sea on the morning of Monday 19th, in very wild weather, from Watson Bay; the pump had been drawn out dry at 7 o'clock P.M. before we got under way. When we got outside the heads of Port Jackson we found a very heavy sea setting in from the S.E., and the weather being very wild and squally, wind veering from S.S.W. to S. b. E., I had to keep a heavy press of sail on the ship to drag her out clear of the land lest the wind should fail us. As is always the case, many things are to secure and put to rights when a ship first comes to sea, and among the rest we were obliged to get the anchors in upon the fore-castle to save them. The ship plunged so heavily and the sea washing wholesale over the bows, the chains were put below and the holes from the trunkway secured to prevent the water washing down into the steerage; when we got time to come to the pump there must have been three-and-a-half feet water in the hold, as all hands were set to work and they were rather more than two hours and a half before they got it to suck. During the first twenty-one hours we steered off to the E. b. N. and E., sometimes laying as high as E.S.E., the sea very high and cross from the S.E. Tuesday was rather finer with variable winds. Ship still making water. Wednesday the wind came from the eastward, took our larboard tacks on board, and stood to the southward, the wind at the time inclined to the southward of east.

On Thursday at noon, by an imperfect altitude of the sun's lower limb, I found the ship was off Twofold Bay. Saw Mount Friday on the starboard beam; wind freshening from the eastward and every appearance of an E.N.E. wind; the ship making on an average about six inches per hour. I thought it best to bear away through Bass Straits and try to get to the westward, a fine weather passage, as it was manifest that the ship would not bear with the tempestuous seas experienced in the passage round Cape Horn. On Tuesday night about half past eleven, made the Isles of Hogan Group. Steered to the Southward of them, then hauled up W.S.W. for Monam Isles. At half past three in the morning, Saturday, made those isles and the high land of Wilson promontory, when the wind fell light, and very dark black clouds rose in the W.N.W. At 10 A.M. it came on to blow a gale, the sea got up, the ship strained and made much water, so I resolved to bear away round Cape Horn, and therefore steered away to the southward of Sir Roger Curtis' Isles and Kent Group.

At 6 P.M. blowing strong, thick, and hazy, with rain, the middle of Kent Group north four or five miles. At eight it began to clear, steering E. b. N. to E.N.E. At eight, having been up the two previous nights, went to lie down, as it was the chief mate's watch on deck, giving him strict orders not to make a leeward course but rather to windward, and to call me if any change took place in the weather or anything occurred.

It seems that shortly after I went below, the wind fell light and scant to the northward; at the same time the ship had been under the influence of a

strong current setting to the S.S.W. About eleven, or rather later, the mate called me, saying that there was "*land handy*." I awoke up in a surprise to hear that land was near. When I came on deck there was not dry land near but breakers under the lee not far off, and the ship was fast approaching them. I attempted to stay her, but she had so little way upon her that she would not stay. In a moment more she drove upon the reef and instantly went to pieces, barely giving the passengers time to get upon deck.

As she was breaking up, several of the women and children were put into the larboard quarter boat and would all have been saved had not some one in the hurry and confusion that occurred lowered one of the tackles, which allowed the sea to break into her and all were swept out of her into the breakers. Only Mrs. Newby and a little boy named Arthur Heath were saved. My own three dear girls are all drowned and fourteen other women and children, in all seventeen lost. Our only chance of being saved now was by the long boat, into which we got so many as we could. As the boat was stove on the starboard quarter we put off clear of the wreck till we mended the stove parts as well as we could, and then, after picking up some oars, pulled back to the wreck, on which were several individuals. It was for some time a question with us, whether the boat, in her shattered state, would hold all, but as the water was tolerably smooth we returned to take all in, trusting to the omnipotent hand of Divine Providence for our safety, and never, perhaps, were the mercies of God more strongly manifested than in this instance of our preservation. The top side had parted from the bottom of the vessel, and was now drifted by the current over and off the reef. We pulled away for Craggy Island, and then passed it at about 1. A.M. On Sunday we landed on the N.W. coast of this island and set out in search of the settlement, where I arrived with a part of my crew on Monday afternoon. Nothing can exceed the kindness and humane treatment of Doctor Milligan, the superintendent here; indeed all parties on the settlement have lent their aid in sending provisions overland to the survivors. Capt. Collins has lost two of his little girls and Mrs. Evans has lost six children. Every thing is lost, no one having saved a covering of clothes, ship's papers, and I may say that I have lost my all in the world, only my wife is yet spared to me. I cannot speak too highly of my crew for their cool and intrepid conduct throughout this disastrous event, I wish I could include my officers also in my recommendations. The ship was wrecked upon a sunken rock situated to the N.W. of Wright Rock, and S.E. from Kent Group, not laid down in Flinders Chart.

With kind respects, &c. &c.

Yours most respectfully,

R. H. NEWBY.

THE LOSS OF THE MARY.—We are informed that Mr. Ashmore, the surveyor alluded to in the narrative of the loss of the above ill-fated ship, is not one of the surveyors known as "*Lloyd's Surveyors*," appointed by the Committee for managing Lloyd's Register Book. We further learn that the Mary was surveyed in the year 1835, and classed *Æ 1*, but owing to her not having subsequently undergone the surveys which the rules enjoin, in proof of her continuing in an efficient state of repair, and deserving of the character which had been assigned to her; that character was discontinued in the years 1838-9, and the ship was altogether struck out of the Register Book in 1842-3.—*Shipping Gazette*.

[Query—Will this account for the passage in Mr. Newby's letter, "*she instantly went to pieces*?"]

RODGER'S ANCHORS.

EVERY day, nearly, brings fresh testimony of the great superiority of Lieut. Rodger's anchors over all others that we have heard of, arising, no doubt, from their peculiar form, giving them the extraordinary holding properties they possess, by burying themselves with stubborn pertinacity in the ground. We do no more than justice to Lieut. Rodger, in aiding him all in our power to make his useful invention known to our readers, and, therefore readily give place to the following letters which he has received from the Admiralty, accompanied by that patronage which they so richly deserve.

Admiralty, 18th December, 1845.

SIR.—In pursuance of the directions of the Lords Commissioners of the Admiralty, I herewith transmit a copy of a letter of the 25th October last, from Captain Hope, of H.M.S. *Thalia*, to Admiral Sir Charles Ogle, Commander-in-Chief at Portsmouth, respecting the merits of the anchors on your plan on board that ship.

I am, &c.,

To Lieut. Rodger, R.N.,

Shawfield Street, King's Road, Chelsea.

JAMES MEEK,

For Storekeeper General.

H.M.S. Thalia, 25th October, 1845.

Lat. 23° 52' North. Lon. 37° 15' West.

SIR.—Although I have already made two official reports to the Lords' Commissioners of the Admiralty upon Lieut. Rodger's Small Palmed anchors, I cannot think of paying the *Thalia* off without writing a few more lines in their favour, as the more I see of them, and I have *always* used them constantly, the more I am convinced of their excellence.

I should say that the palm of the Bower anchor in the *Thalia* is sufficiently large.

It is now nearly four years since I left England in H.M.S. under my command, and during the whole of that time, and at all the many places the *Thalia* has visited in her circuit round the world, and in every variety of ground, I have used Lieut. Rodger's Bower as the *working* anchor, and have invariably found it to answer most admirably.

Both his Stream and Kedge anchors are invaluable, and I have used them both repeatedly, particularly the latter.

As I entered so fully into the merits of all Lieut. Rodger's anchors upon former occasions, I shall not now take up more of their lordships' time, and shall, therefore, content myself with referring them to my former lengthened reports of the 27th April, 1842, and the 15th March, 1844.

Although I shall not give their lordships any further remarks of my own, I cannot refrain from giving them two strong and striking instances of their superiority over the common Bower anchors as related to me by Mr. Henry Paul, now master of the *Thalia*.

In September, 1843, Mr. Paul was master of the *Wolf*, in China, when she experienced that awful typhoon on the 1st of that month, off Sing Ramoon, in the island of Chusan.

It appears, from Mr. Paul's statement, that the *Wolf* drove, when the wind was N.E., with a common Bower anchor; it then shifted suddenly to the S.W., and though it blew fully as furiously from that quarter as it had done from the other, the *Wolf* then rode the typhoon out with Lieut. Rodger's Bower anchor, and did not drive a fathom, though she had *less scope* of cable out on it than she had had on the other anchor when she drove. During the same typhoon at Chusan, Mr. Paul says, "The English merchant bark *Ina* was driven on a

rock off Macclesfield Island, and knocked a hole in her counter, to get at which she was hauled on a mud bank on the north side of Trumball Island, with one of her common Bower anchors taken over an embankment into a paddy field, but when the tide receded she slipped off the bank, bringing the anchor home. This occurred twice. One of Lieut Rodger's patent anchors, considerably smaller than the one used before, was then procured from a ship in the harbour, placed nearly in the same position in the paddy field, and as soon as a strain came upon it, it became so embedded that it held on, which enabled the necessary repairs to be made."

I shall only now add that I have to request you will be pleased to forward this letter to the Lords Commissioners of the Admiralty.

I have the honour to be, &c.,

To Admiral Sir Charles Ogle, Bart.

CHAS. HOPE, Captain.

H.M.S. *St. Vincent*,

Portsmouth, November 3rd., 1845.

SIR.—I regret I cannot find the report that was officially made to the Admiralty, respecting your Small Palmed anchors, but it was decidedly in favour of your anchor over the present established anchors in the navy, which, I believe, are called the Admiralty anchors.

I can only repeat what was said in that report, that your anchor always brought the other anchor home, and also, that on one occasion when both anchors started, your anchor caught fresh hold whilst the other continued to come home.

I remain, &c.,

R. F. ROWLEY.

To Lieut. Rodger, R.N.

NOTE.—The above refers to a series of experiments made at Spithead, in July, 1844, with anchors of 38 cwt., under the superintendance of Captain Rowley and other officers.—W. R.

H.M.S. *Athol*,

Woolwich, November 16th., 1845.

MY DEAR SIR.—I feel great pleasure in making you acquainted with the particulars of a severe trial of your Small Palmed anchor at Spithead, in September last.

On the 16th, in a strong gale from W.S.W., I let go your Small Palmed anchor as a second anchor, and veered to thirty-five fathoms on it, and to one hundred on the other. The gale continued from this quarter until 3 A.M. on the 19th., when it shifted to W.N.W., and moderated a little, but still blew a moderate gale. This shift of wind of course brought all the strain upon the short cable and your anchor, and I rode in this manner until 11 A.M., in 7 fathoms water. I then hove in to 10 fathoms, and pawled the capstan for a few minutes, to try if it would break out of the ground at a short stay. It still, however, held on, and did not break out until it was quite up and down, when the pitching of the ship broke it out. When the anchor was catted, it was impossible to say which had been the under fluke, for both arms were full of mud, and it was evident that it had been buried in the mud, stock and flukes.

I am very glad I had the opportunity of giving your anchor that trial, as it quite removed a doubt I had of its holding qualities, with a short scope of chain. I have used your anchor generally as a working anchor, and am much pleased with it, but have had no severe trial with it since I left Spithead. I rode out a gale by it, under Inch Keith, in the Frith of Forth, when it held well; but I do not consider it as a trial worth remarking on.

I am, &c.,

To Lieut. Rodger, R.N.

E. I. P. PEARSON, Master, R.N.

Commanding H.M.K. *Athol*.

H.M.K. Sparrow,
Portsmouth, December 15th, 1845.

DEAR SIR.—Having had several of your anchors now in use for nearly two years, I cannot, in justice, do less than let you know the result.

The Bowers have been worked in every depth of water, and in every kind of ground, and have been found equally good in all.

On one occasion, the *Sparrow* rode out a heavy gale of wind in Aberdeen Bay, when every other vessel was driven from her anchors; and I have had frequent opportunities of witnessing their great holding power whilst riding at a short stay, a point on which I had previously made up my mind that they must be defective. The pickaxe Stream was put in frequent requisition for anchoring in deep water (30 and 40 fathoms) in the Murray Frith, and other exposed positions in the North Sea; and though the shank has bent, the anchor has always held well.

I remain, &c.,

To Lieut. Rodger, R.N.

HENRY C. OTTER,
Commander, R.N.

QUALIFIED MASTERS AND MATES OF THE MERCHANT SERVICE.

We have received the following from the Secretary to Lloyd's Register of British and Foreign Shipping. In recording this first result of a salutary measure in the pages of the *Nautical*, we cannot help expressing our satisfaction in doing so, arising from a conviction that it is only the first appearance of a new state of things in the *executive* of our Mercantile Marine. And we may congratulate the commanders of our merchant vessels, on the good results which will ensue therefrom, as being themselves the regenerators of their own profession. For while the test of qualification for similar official trust under Government, is made not only severe but compulsory, the commanders of our Mercantile Marine will always possess the advantage of having rendered theirs voluntary.

2, *White Lion Court, Cornhill, Dec. 24, 1845.*

MY DEAR SIR.—A step having been taken towards proving the qualification of masters and mates in the Merchant Service, both professionally and as regards their moral character, thus has commenced a system of voluntary examination, which, I trust, in the end, will prove a vast improvement in the Mercantile Marine.

If anything were wanting to shew how a voluntary system, under a judicious management, is sure to work its way, the Institution for carrying out that important work, Lloyd's Register of British and Foreign Shipping, now of nearly eleven years standing, may be fearlessly adduced. Without any unnecessary effort, in the exercise of any arbitrary or overruling measures, the determination to give good characters to good ships, and thus to give the greatest possible encouragement to the improved construction of ships and their substantial repair, has produced a beneficial effect, the advantage of which is now universally admitted. The moral force of such a system has actually operated as its chief agent.

The owners of bad ships, without their being shewn up, have had to pay in insurance, what the owners of good ships, in keeping up their efficiency, have saved, and more wisely laid out in maintaining their ships in substantial repair.

I feel, therefore, that those masters and mates who have subjected themselves to the examination prescribed by the Board of Trade, and who have

boldly challenged an inquiry into their professional attainments and moral character, and obtained satisfactory certificates, deserve to be placed as prominently before the public as possible, not doubting that their example will have a most salutary effect.

I, therefore, send you a list of the masters and mates examined up to the 16th of this month.

Mr. Lefevre, in sending me the MS. list, by order of the Lords of the Committee of Privy Council for Trade, expresses their Lordships' hope that the Committee for Lloyd's Register will, "in conformity with their intention of co-operating in the measure, take the necessary steps for inserting in their widely extended work, the names of the Masters and Mates who have thus obtained Certificates."

This we have already done, and it occurs to us that it might be satisfactory to the readers of your periodical, as well as advance the object in view, were you to insert the list in your next monthly, if in time—together with such of the foregoing hastily written observations as you may approve.

Your's faithfully,

CHARLES GRAHAM.

To the Editor of the N.M.

A LIST of Masters and Mates in the Merchant Service who have voluntarily passed an examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Name of Examining Board. |
|------------|---|-----------------------|--------------------------|
| 1845. | | | |
| Nov. 10th. | Pixley, T. W. | First... | Trinity House, London. |
| " 14th | Pigott, William | " | Trinity House, London. |
| " 17th | Gray, William | " | Trinity House, Dundee. |
| " 24th | Probart, W. R. | " | Trinity House, London. |
| " 24th | Paterson, John | " | Trinity House, London. |
| " 25th | Napier, Josiah | " | Trinity House, London. |
| " 28th | Smith, J. Harrison | " | Trinity House, London. |
| " 28th | Dent, Edwin G. | " | Trinity House, London. |
| Dec. 1st | M'Leod, W. Lithgow..... | " | Trinity House, London. |
| " 2nd | Davidson, Andrew | Third... | Trinity House, Dundee. |
| " 8th | Jeffery, G. Scott | First... | Trinity House, London. |
| " 8th | Alcock, Alexander..... | Second.. | Trinity House, London. |
| " 8th | Jones, John..... | Second.. | Trinity House, London. |
| " 11th | Smith, John | First... | Trinity House, Dundee. |
| " 12th | M'Pherson, George | " | Trinity House, London. |

MATES.

| | | | |
|-----------|--------------------|----------|------------------------|
| Dec. 1st. | Gray, John..... | Second.. | Trinity House, London. |
| " 10th | Allan, Robert..... | First... | Trinity House, Dundee. |

Lloyd's Register Office, London, Dec. 18th, 1845.

MONTHLY RECORD OF NAVAL MOVEMENTS.

MALTA, DEC. 2.—The *Acheron*, 2, steam-sloop, Lieut.-Com. Aplin, left on 28th ult. for Marseilles. *Amazon*, 26, Capt. Stopford, at Barcelona. *Beacon*, 6, Capt. Graves, at Zea. *Bloodhound*, steamer, Lieut.-Com. R. Phillips, at Athens. *Bonetta*, 3, Com. Brock, on surveying operations in the

Archipelago. *Ceylon*, 6, receiving flag-ship, in Malta Harbour (bearing the flag of Rear-Adm. Sir L. Curtis), second in command, and superintendent of Malta Dockyard. *Fantome*, brig, Com. Sir F. Nicholson, at Gibraltar. *Flamer*, steam-vessel, Lieut.-Com. Postle, at Gibraltar. *Geyser*, war steam-sloop, Com. Carpenter, *en route* to England. *Hecla*, 1, steam-sloop, Com. Duffill, at Constantinople. *Hibernia*, 104, Capt. Richards, C.B., bearing the flag of Vice-Adm. Sir W. Parker, Com.-in-Chief in Malta Harbour. *Inconstant*, 36, Capt. Freemantle, at Smyrna. *Jackal*, steamer, Lieut.-Com. Pasco, at Corfu. *Locust*, steam-vessel, Lieut. Eden, in Malta Harbour. *Meteor*, steamer, Lieut.-Com. Buttler, in Malta Harbour. *Orestes*, 18, Com. Cannon, at Corfu. *Sydenham*, steam-vessel, Lieut.-Com. Mapleton, arrived only on 29th ult. from Corfu; in consequence of the bad weather she encountered was obliged to put into Zante and Patras. *Syren*, 16, Com. Edgell, *en route* to Athens. *Tyne*, 26, Capt. W. N. Glascock, at the Piræus of Athens. *Virago*, 6, Com. Otway, at the Piræus of Athens. *Warspite*, 50, Capt. Wallis, at Beyrout. *Wee Pet*, steam-tug, Mr. Duncan, in Malta Harbour. *Spitfire* leaves to day with the mails for the Ionian Islands and Patras; and *Polyphemus* for Algiers, Gibraltar, and England. *Volcano* arrived yesterday from Marsilles with the London overland mail of the 25th ult.

MONTE VIDEO, SEPT. 6.—Adm. Inglefield has gone on to Martin Garcia. *Vernon*, 50, arrived 25th Aug., after the usual passage for the time of year—two months. She touched at Madeira on 10th July, and left there the next day. She had rather a long passage to the line, owing to calms and variable winds. *Vernon* will take the flag from the *Eagle*, 50, Capt. G. B. Martin, C.B., which is here with *Melampus*, 42, and *Curacoa*, 18. The *Comus*, 18, is at Maldonado, about sixty miles from Monte Video. *Satellite*, 18, is at Buenos Ayres. *Philomel*, 6, brig, is at Colonia. *Spy*, 3, brought the mails from Rio, and has been ordered up the river to Buenos Ayres. *Dolphin*, 3, is at Buenos Ayres. The *Spider*, 6, packet, is running between Monte Video and Rio. She leaves here for Rio with the mail this day. *Firebrand*, is at Colonia.

RIO JANEIRO, OCT. 12.—*Grecian*, 16, left on 6th, for St. Catherine's, Rio Grande, with the Brazilian frigate, *Constitucao*. *Cyclops*, steam-frigate, *Swift*, 6, and *Crescent*, receiving ship, are lying here.

Eurydice, 26, and the *Persian*, 16, were at Vera Cruz on the 11th Oct.

WEST INDIES.—Movements of her Majesty's ships. Oct. 3.—Left at Jamaica, *Imaum*, *Hermes*, and *Pickle*. At Havannah, Oct. 7, only the receiving ship, *Romney*. Oct. 18, Vera Cruz, *Eurydice* and *Persian*. On our return on 28th *Eurydice* was just leaving for Havannah; found also *Hermes*, which had come down with stores, and left following day for Havannah. Left at Vera Cruz, *Persian*. Nov. 7.—At Havannah, found *Eurydice*; the latter and *Hermes* left for Jamaica on 9th, and *Eurydice* was to leave for Bermuda on 14th. Bermuda, Nov. 17.—*Vesuvius* and *Rose*, both from Halifax. On their way down they experienced a heavy gale from S.W., and were much damaged. The *Vesuvius* had her entire starboard paddle-box stove in and pitched away her bowsprit. The *Rose* sprung her main masthead. They parted company in the gale with H.M.S. *Vindictive*, Vice-Adm. Sir F. Austen, who arrived at Bermuda on 18th Nov. with no damage done.

PORTSMOUTH.—Ships in Port.—*Rodney* and *Superb*, at Spithead. In Harbour.—*St. Vincent*, *Victory*, *Excellent*, *Victoria* and *Albert*, yacht, *Carysfort*, *Scourge*, *Rattler*, *Fairy*, *Lizard*, *Daring*, and *Sparrow*.

PLYMOUTH.—In Harbour.—*Caledonia*, *Nimrod*, *Confiance*, *Diligence*, transport. In the Sound.—*Queen*, *Albion*, *Canopus*, *Vanguard*, *Endymion*.

SHEEPSHEAD.—In Harbour.—*Trafalgar*, *Ocean*, *Race*, *Bittern*, *African*.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

CAPTAINS—Hon. W. B. Devereux.—H. Lyster—E. G. Fanshawe.

COMMANDERS—C. J. Postle—H. C. Harston—G. Morrit.

LIEUTENANTS—F. O'Reilly—D. Aird—F. K. Hawkins—M. Lowther—P. W. May—C. Nolloth—W. G. Herbert—W. C. Forsyth—R. H. Moubray—H. H. M. R. Page—O. Borland—E. Hempstead—W. Caahman—C. T. Leckie—H. Bayley—W. E. Fisher—J. C. Clark—A. D. Gordon—C. O. Wood—C. M. Aynsley—G. A. Brine—J. C. W. N. Taylor—F. G. Simpkinson—T. L. Gaussen.

DEPUTY INSPECTOR OF HOSPITALS—J. W. Reid.

SURGEONS—F. Heath—W. Wood, M.D.—J. S. Peddie—R. Bernard.

PAYMASTERS AND PURSERS—A. Gilbert—R. Kelland—W. G. Parminter.

APPOINTMENTS.

CAPTAINS—G. H. Seymour (1844) to command *Carysfort*—J. Robb (1841), to command *Gladiator*—H. J. Worth (1840), to *Calypso*—W. Ramsay, (1838) to *Terrible*—G. R. Lambert, (1825) to *Endymion*.

COMMANDERS—C. F. Schomberg, (1844), to *Queen*—Sir W. Hoste, (1843), to *Ringdove*.

LIEUTENANTS—W. Shaw, (1845), to *Endymion*—Hon. G. D. Keane (1840), and J. C. W. N. Taylor, (1845) to *Scourge*—A. F. Webster (1843), and H. S. Hawker (1838), to *Sampson*—C. Forsyth, and H. Bayley, to *Hibernia*. W. Cashman, to *Vindictive*—E. Hempsted, to *Collingwood*—H. B. Everest (1844), and T. L. Gaussen (on promotion), to *Calypso*—A. S. Austen (1841), and G. A. Brine (on promotion), to *Carysfoot*—G. F. Day (1845), to *Bittern*—R. Jesse (1841), and F. Hawkins (1845), to *Gladiator*—F. E. Johnston (1838), A. C. Murray (1841), and H. Need (1841), to *Terrible*—E. E. Gray (1827), to *Viper*—W. H. Stewart (1842), to *Grampus*—J. Rawstorne (1815), to *Trafalgar*—J. J. Palmer (1843), to *Hibernia*—W. G. Herbert to *Bittern*—O. Borland to *Nimrod*—W. Crawford (1841), to *Scourge*—H. H. M. R. Page to *Grampus*—C. O. Wood to *Vernon*—W. E. Fisher to *Penelope*—J. C. Clark to *Vernon*—P. W.

May to *Alarm*—Bedford to *Superb*—J. W. Tarleton (1835), to *Endymion*—R. M. Floud (1840), to *Nimrod*—C. M. Ainsley to *Terrible*—W. Crawford (1841) to *Scourge*,

MASTERS—P. Wellington to *Alligator*—G. Wilson to *Sampson*—W. R. C. Allen, and J. Chegwyn to *Terrible*—J. Simpson to *Vernon*—C. H. Young to *Agincourt*—W. R. Rolland to *Alarm*—H. Brehant to *Carysfort*—R. Knox to *Calypso*—G. Wilson to *Gladiator*—W. J. Olive to *Nimrod*—G. Collier to *Scourge*.

MATES—E. Scott, and P. Hudson to *St. Vincent*—W. F. G. Fead to *Trafalgar*—G. T. Colvill, A. Sugden, and T. L. Cotton to *Excellent*—G. J. Loch to *Bittern*.

SECOND MASTERS—H. A. Martin to *Calypso*—J. Cuttajar to *Sampson*—C. Turner to *Gladiator*.

MASTERS'-ASSISTANT—W. Haydon to *Trafalgar*.

MIDSHIPMEN—H. H. Sainsbury to *Rodney*—F. G. Meekham to *St. Vincent*—J. W. H. Thompson to *Amazon*—W. B. Elphinstone to *Grampus*.

NAVAL CADETS—H. M. Knox to *Endymion*—A. P. Willis to *Trafalgar*.

SURGEONS—C. Carter, M.D. to *Terrible*—C. H. Fuller to *Grampus*—C. H. White to *Gladiator*.

ASSISTANT-SURGEONS—W. T. Alexander, D. Davidson, and R. D. Pritchard to *Alligator*—C. S. Lester to Haslar Hospital—D. H. Wright, M.D. to *Gladiator*—G. H. Sidley to *Viper*.

PAYMASTERS AND PURSERS—W. Drury to *Sampson*—W. G. Parmeter to *Terrible*—D. G. Charles to *Carysfort*—C. Dealy to *Calypso*—J. Milner to *Gladiator*.

NAVAL INSTRUCTORS—M. P. Sampbell to *St. Vincent*—T. Eastman to *Excellent*—H. M. Lefroy to *Endymion*.

CHAPLAINS—Rev. J. Thompson to *Alligator*—Rev. J. H. Laing to *Grampus*—Rev. J. B. Bunce, B.A. to *Endymion*.

CLERK—W. H. Turner to *Viper*.

ASSISTANT-CLERKS—J. F. Harris to *Alarm*—T. D. Concor to *Tartarus*.

COAST GUARD.

Removals—Lieut. J. G. S. M. Moore to Lome Cobb, Lieut. C. F. Collett to Port Muck.

Births.

Dec. 7, at Bathaston, the lady of Capt. Dacres, R.N., of a son.

son, R.N. to Ann, daughter of the late J. Shersby, Esq.

Marriages.

Dec. 2, at South Petherwin, Cornwall, Henry, son of the late Capt. Bradshaw, R.N., to Mary Wilmot, daughter of W. Arundel, Esq.

Dec. 1, at Stonehouse, Capt. T. Wolridge, R.N.

Nov. 22, at Peckham, Mr. C. Potter, R.N., aged 74.

Dec. 9, at Eling, near Southampton, Lieut. G. Forder, R.N., aged 56.

Dec. 2, at Woolwich, Lieut. Robert-

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory. From the 21st of December, to the 20th. of January, 1845.

| Month Day. | Week Day. | Barometer. | | Fahrenheit Thermometer, In the Shade. | | | | Wind. | | | | Weather. | |
|------------|-----------|--------------|--------------|---------------------------------------|-----|-----|-----|----------|------|----------|------|-----------|-----------|
| | | 9 A.M. | 3 P.M. | 9AM | 3PM | 4PM | Max | Quarter. | | Strength | | A.M. | P.M. |
| | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | F. | In Dec 29.50 | In Dec 29.46 | 45 | 45 | 39 | 47 | SW | S | 2 | 2 | bc | or (3)(4) |
| 22 | S. | 29.55 | 29.61 | 35 | 43 | 34 | 46 | W | W | 1 | 1 | bcm | bcm |
| 23 | Su. | 29.86 | 29.90 | 31 | 38 | 29 | 40 | NW | NW | 1 | 1 | bbm | bcm |
| 24 | M. | 29.99 | 30.06 | 37 | 38 | 31 | 39 | N | N | 2 | 2 | bc | bc |
| 25 | Tu. | 30.00 | 29.90 | 40 | 46 | 31 | 47 | SW | SW | 3 | 3 | or (2) | ber (3) |
| 26 | W. | 29.81 | 29.79 | 50 | 53 | 40 | 54 | SW | SW | 6 | 6 | go | go |
| 27 | Th. | 29.97 | 29.95 | 61 | 53 | 48 | 54 | SW | SW | 5 | 4 | o | bc |
| 28 | F. | 29.65 | 29.58 | 48 | 51 | 47 | 52 | S | S | 1 | 3 | o | o |
| 29 | S. | 29.74 | 29.70 | 47 | 50 | 44 | 51 | S | SW | 1 | 3 | o | or (3)(4) |
| 30 | Su. | 29.96 | 30.95 | 38 | 44 | 37 | 45 | SW | W | 1 | 1 | b | b |
| 1 | M. | 29.78 | 29.88 | 47 | 46 | 40 | 48 | SW | W | 5 | 3 | gop (2) | bc |
| 2 | Tu. | 29.94 | 29.90 | 42 | 48 | 40 | 50 | SW | SW | 4 | 2 | b | ber (4) |
| 3 | W. | 29.43 | 29.38 | 37 | 39 | 36 | 40 | SW | SW | 3 | 2 | bc | ber (4) |
| 4 | Th. | 29.78 | 29.71 | 35 | 41 | 32 | 44 | SW | SW | 1 | 3 | b | ber (4) |
| 5 | F. | 29.46 | 29.50 | 44 | 46 | 43 | 50 | W | SW | 2 | 5 | b | qbc |
| 6 | S. | 29.45 | 29.43 | 38 | 44 | 36 | 46 | SW | SW | 3 | 3 | b | b |
| 7 | Su. | 29.64 | 29.76 | 37 | 41 | 35 | 43 | NW | NW | 2 | 2 | bcm | bcm |
| 8 | M. | 30.14 | 30.10 | 30 | 42 | 28 | 48 | S | SW | 2 | 4 | b | or (3)(4) |
| 9 | T. | 30.06 | 30.10 | 44 | 46 | 43 | 47 | NW | W | 1 | 2 | bcm | bc |
| 10 | W. | 30.29 | 30.33 | 38 | 42 | 33 | 43 | NW | NW | 2 | 2 | bc | bc |
| 11 | Th. | 30.91 | 29.87 | 48 | 45 | 36 | 49 | W | NW | 4 | 6 | o | qbc |
| 12 | F. | 30.23 | 30.20 | 39 | 41 | 37 | 42 | N | N | 3 | 3 | bcm | bc |
| 13 | S. | 30.42 | 30.40 | 31 | 33 | 28 | 34 | W | W | 1 | 1 | of | bm |
| 14 | Su. | 30.38 | 30.21 | 23 | 41 | 29 | 47 | SE | SW | 1 | 3 | o | o |
| 15 | M. | 29.76 | 29.83 | 49 | 47 | 47 | 49 | W | NW | 4 | 4 | od (2) | bc |
| 16 | Tu. | 29.78 | 29.80 | 46 | 47 | 42 | 48 | NW | NW | 3 | 2 | bc | bc |
| 17 | W. | 29.83 | 29.73 | 44 | 44 | 48 | 45 | W | SE | 1 | 1 | og | or (3) |
| 18 | Th. | 29.30 | 29.24 | 45 | 47 | 43 | 49 | S | SW | 1 | 2 | or (1)(2) | or (3)(4) |
| 19 | F. | 29.30 | 28.94 | 37 | 47 | 37 | 48 | SW | W | 4 | 6 | or (1)(2) | qbcp (3) |
| 20 | S. | 28.76 | 28.78 | 38 | 41 | 37 | 43 | SW | NW | 5 | 5 | qbc | qbcp (3) |

NOVEMBER 1845.—Mean height of the Barometer= 29.702 inches; Mean temperature=44.9 degrees; depth of Ralu fallen= 2.58 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We are much obliged to S. for the African Journal. The subject he will find at length in our last year's volume. He will further oblige by sending it occasionally.

No room in this number for Commander Smith's letter, we will look into the subject, but nothing appears of it in our journal for 1837, although we very well remember it.

Always happy to hear from J. W., at Sunderland, on that or any other subject as briefly as he pleases.

The Sketches not "Gossip" are good, and will be better adapted when kept Nautical. We will begin with one.

Hunt, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE,

AND

Naval Chronicle.

FEBRUARY 1846.

THE NORTH-WEST COAST OF BORNEO.—*From the Notes of Mr. R. C. Allan, late Master of H.M.S. Vixen, 1843.*

WE left Hong Kong at 5h. 20m. P.M. of 12th of Aug. for the river Sarawak, in Borneo, and passing to the westward of the Paracels, proceeded to the southward on the meridian of 110° E. Saw Cape Varela at sunset of the 16th bearing $W. \frac{1}{4} N.$ distant eighteen leagues. On the 19th, at 6 P.M. in lat. $3^{\circ} 32' N.$, lon. $109^{\circ} 59' E.$, sounded in thirty-seven fathoms, fine sand. From this spot the soundings decreased gradually, steering in for Santabong, the nature of the bottom varying occasionally.

On the 20th, at daylight, made the high land of Santabong bearing S.E. $\frac{1}{2} E.$, and stood on for the Sarawak. When bound for the Sarawak river by the Maratabas entrance, which is the best, ships making for Santabong, will readily recognize it. It is high and very remarkable, its north end, or that towards the sea, having two singularly shaped peaks called the Santabong horns. Having approached it to the distance of two miles, which may safely be done, in seven fathoms, bearing in mind the rock which lies $N. \frac{1}{2} W.$ three and a half miles from T. Sapang, steer E.S.E. ten miles for Tanjong Po, which is of moderate height and covered with trees, with a flat rock a little above water lying off it. This rock may be rounded at from half a mile to two miles distant, when, if it is desirable, anchor from one to two miles S.E. of Tanjong Po. The rise and fall is fifteen or eighteen feet, and it is high water here at full and change about 2h. 30m. P.M.

The entrance of the Maratabas may be known by the land on the eastern bank being low and even, while on the western it is moderately high and hilly, the trees reaching to the waters' edge on either side.

This will serve to avoid mistaking a small cove or bight to the westward of the entrance, for the river itself.

To enter the river.—Having rounded Tanjong Po, steer in about S.S.E., or from the above anchorage about south, observing to keep the flat rock open of that point until the river comes well open; then steer in about S.W. for the eastern bank, the nearest part of which, if kept on that bearing, will lead in, in not less than four fathoms at low water.

A ship of a light draught, taking the first of the tide, may work in, as the sand or mud banks which form the channel may be approached by the lead.

These remarks for entering the river were hastily made, and are, therefore, only to be considered better than none, as well as the following for proceeding up.

To proceed up the river.—Keep the eastern bank of the river pretty close on board until the horizon is shut in, by which precaution, a rock with eleven feet on it, will be avoided; then keep mid-channel, passing the first branch on the left side. The first branch on the right hand must be taken, but here it is recommended to wait until a pilot be got from the town of Kuching, which is nine miles higher.

Having entered the first branch on the right hand side, keep close on the right hand shore until near the junction of the two rivers Maratabas and Sarawak. Here it will be necessary to stop if it is low water, according to the draught of the vessel, for right across there are but from fourteen to nine feet. The turning on the left is the Sarawak. Having entered it, keep *close* to the left hand side, by which the horse-shoe shoal, which is dry at low water, and the rocks near the middle of the river, on which H.M.S. *Samarang* grounded, may be avoided.

When off the town, anchor in the middle of the river, where there is room for a ship to swing moored with a short scope.

The town or village of Kuching is on the right bank of the river, about eighteen miles from the Maratabas entrance. It has a few thatched houses inhabited by Malays and Chinese; the Dyak or aboriginal tribes, residing in the mountains and in the interior. The rajah of the Sarawak lives here.

The country produces antimony, gold, iron and tin, and would doubtless yield abundantly in vegetable productions to the planter. At present no supplies can be obtained for ships, a very small quantity of pork being the only refreshment procurable. Firewood in abundance may be either purchased or cut. Logs of timber and plank, both of pine and of a kind of cedar, fit for the common uses of a ship, may be got at a very cheap rate from the industrious Chinese, and when the place rises in importance, timber for ship-building, and fine spars of all sizes, will be brought to market.

Ships off Kuching may water from alongside when the tide is out, but not lower down. There is said to be a good watering place in the rainy season, near the white rocky patch just within Maratabas point, which is the western point of the entrance, the rock being a good mark for it; off which also there is good anchorage.

The meridian distance between Hong Kong (five-gun battery) and

the entrance of the Maratabas river (Maratabas point extreme) is Oh. 14m. 45s.0.

General description of the Coast of Borneo, from the Maratabas to Borneo Proper.

The coast comprised between the above limits, which is nearly 360 miles in extent, appears to be quite free from hidden dangers. The soundings decrease gradually from the sea to the shore, so that by keeping outside ten fathoms, a vessel may proceed along the land day or night, with perfect security. In many parts the shore may be approached almost to the ship's draught, so regular are the soundings. The general height of the land is such that it may be seen in clear weather about twelve miles, when the eye is elevated fifteen feet. The country is beautifully wooded, the trees in most places extending to the waters' edge; and if any opinion may be formed from the few boats seen about the coast, it is but thinly populated.

Towards Borneo Proper, however, the coast has a different aspect; it rises higher, becomes hilly, with red cliffs here and there, and is in some places cleared of trees. And perhaps the shore here had better not be approached within fifteen fathoms by night, until it has been surveyed, standing off to twenty-five or thirty fathoms.

The few hills along the coast will be mentioned hereafter.

Horsburgh's chart is very incorrect. By laying off the principal points as given in the following detail, and dotting in the intervening spaces, an useful approximation to the true line of coast will be obtained. The observations on which the positions of these points depend, were made on board, either at anchor or while running along the land, the courses and distances between the said observations having been carefully noted.

Geographical outline of the foregoing portion of Sea-coast.

From the eastern entrance of the Sarawak the coast runs to the eastward as far as the meridian of 111° E.; it then turns up a little to the eastward of north. In lat. $2^{\circ} 26'$ N. and lon. $111^{\circ} 18'$ E. is the entrance of a river off which we anchored. It appeared rather large having some shoal banks which are steep. From hence the coast line continues in the same direction to lat. $2^{\circ} 40'$ N. and lon. $111^{\circ} 14'$ E., when it bends away to about E.N.E.

Next day anchored off some low land lying about E.b.N. and W.b.S., a point of land westward of anchorage (Tanj. Sirak) is in lat. $2^{\circ} 53'$ N. and lon. $111^{\circ} 37'$ E. From hence the coast appeared to lie nearly east and west as far as $112^{\circ} 30'$ E., when it turns to the N.E.; the soundings in the offing being regular, the ship running along all night in twelve and eleven fathoms.

On the 26th (Aug.) anchored about two miles off a small bar river, which is probably that marked "Saints" in Horsburgh's chart. Its entrance is in lat. $3^{\circ} 12'$ N. and lon. $113^{\circ} 2'$ E., and the point to the northward of it will answer to Domelans, is in lat. $3^{\circ} 20'$ N. and lon. $113^{\circ} 4'$ E. At this river a few inhabitants were seen, who from their

demeanour were evidently unaccustomed to visits from Europeans. From this anchorage some high land was seen, bearing S.b.W. $\frac{1}{4}$ W., the first since leaving the Saráwak; it was roughly estimated to be in lat. $2^{\circ} 56' N.$ and lon. $112^{\circ} 54' E.$ From Domelans the coast trends nearly north, with a slight indentation to Tanj. Sisor, which is in lat. $3^{\circ} 48' N.$ and lon. $113^{\circ} 21' E.$ The greater part of this indentation is lined with rocks from two to three miles off shore, the sea breaking over them; they may be approached, however, to eight fathoms. The whole of the coast thus far, that is, from the Saráwak, has a great sameness, possessing no remarkable object by which one part may be distinguished from another. Burning Island was not seen.

Between Domelans and Tanj. Sisor there is some high land in lat. $3^{\circ} 30' N.$ and lon. $113^{\circ} 26' E.$

From Tanj. Sisor the coast continues, with a slight indentation, nearly N.E. to Tanj. Barram, crossing the parallel of four degrees in lon. $113^{\circ} 45' E.$ Some red cliffs are in lat. $4^{\circ} 6' N.$ and lon. $113^{\circ} 51' E.$

A remarkable hill with some sharp peaks, about seven or eight miles inland, is in lat. $4^{\circ} 13' N.$ and lon. $114^{\circ} 4' E.,$ and another hill to the southward, in lat. $3^{\circ} 56' N.$ and lon. $113^{\circ} 51' E.$

Tanj. Barram is in lat. $4^{\circ} 37' N.$ and lon. $114^{\circ} 1' E.$ While steaming past it after sunset, shoaled the water from "no bottom with twelve fathoms," to "seven fathoms," in two casts, and deepened again immediately on hauling off. It is a low point terminating with trees to the waters' edge or nearly so.

From Tanj. Barram the coast extends about east some thirty-five or forty miles, and then N.E. to the entrance of the Borneo river.

On the 28th, at 8 P.M., anchored in sixteen and a half fathoms, seven or eight miles E.S.E. of the Great Roosocan, which is the southernmost islet off Pulo Liboan. In running in for this anchorage from the westward, found the bottom very uneven, shoaling the water to four fathoms. In standing in for this anchorage, therefore, do not bring the Great Roosocan to the eastward of N.E. when within the distance of four miles of it, while to the westward of its meridian, and keep the lead going.

The centre of Pulo Liboan is in lat. $5^{\circ} 22' N.$ and about lon. $115^{\circ} 10' E.,$ and the S.E. point of Mooarro Island, at the entrance of the Borneo river, is in lat. $4^{\circ} 59' 9'' N.$ and lon. $115^{\circ} 8'.$

Entrance of Borneo River.

Ships bound into the River Borneo may, after clearing the Great Roosocan as above directed, proceed in by the directions given in the small plan of the river by W. Kirton, which says that, "the Island of Mooarro should not be approached nearer than four miles, until the S.E. point bears S.W.b.W. or W.S.W., when steer directly for it." Mooarro point terminates in trees, which are lower and more detached than those in the body of the island. The banks forming the channel seem to have altered in some degree since the survey of W. Kirton, and a bar of four fathoms to have got up.

The anchorage under Mooarro is good, with muddy bottom. During

our stay here (four days in Aug. and Sept.) violent squalls, of short duration, occurred between N.W. and S.W., once during each of the twenty-four hours. Twenty cutter-loads of wood were got in three days, for the furnaces, by a party of thirty men, two-thirds of it having been found ready felled, or washed up on the beach. Fresh beef could not be obtained, but a few ducks, goats, and fowls, were purchased at an average price, which were brought down from the town in Malay-built boats. Mooarro is not inhabited. Some pigs were seen running wild about it, but none of the sportsmen could get near them.

The country produces coal, probably in large quantities. The specimens procured, which were from the surface, promised well. By working down a few feet a good vein would perhaps be found.

Small spars for studsail and flying booms, and boats' masts might be cut by a ship's crew having time to select them.

The latitude of the S.E. point of Mooarro is $4^{\circ} 59' 9''$ N. and the meridian distance between it and Maratabas Point (eastern entrance of the Saráwak) is $4^{\circ} 40' 1'' = 0h. 18m. 40.4s.$

NAUTICAL SKETCHES.—No. I.

Monsieur le Capitaine Thurot.—The injustice of the querimonious remark of the first Pitt, in one of his speeches in parliament—that he did not scruple to declare that, though the king would readily embrace any rational measure for the honour of his crown, he doubted whether a man could be found, who might safely be trusted with the execution of any enterprise of danger or difficulty—has long since been acknowledged. Immediate enterprises proved it wrong, and it is scarcely questionable that if the officers who were entrusted with expeditions had not been fettered by their orders, and paralyzed by councils of war, there would have been little of failure, at least, as far as the Navy was concerned.

This “flourish” was made at the time (1758) when we had 156 ships of the line, and seventy-five thousand seamen and marines! And when we find upon the list such men as Hawke, Saunders, Rodney, &c. With respect to the *eclát* attending some of the French naval enterprises, their privateers'-men seem to have gained it to the prejudice of the regular *Officier de la Marine Royal*—such were the Jean Barts, and the Thurots, and a host of others in the West Indies. The naval annals inform us that Thurot, from being captain of a merchant vessel, had successively become the commander of a private armed ship, and ultimately a commodore in the Royal Navy of France.

In the year 1759, he commanded a squadron of frigates in the notorious privateering port of Dunkerque which it was believed was designed against Scotland. To watch the movements of Thurot, the English commodore, Boyce, with a squadron, was stationed off the above-named place. Whilst the weather permitted, he effectually prevented the Frenchman from moving; but, as the autumn was drawing in the length of the daylight, and the storms of winter, fogs, and dark nights,

would make the task more difficult, and the object probably impracticable, the wily Frenchman abided his time patiently. The opportunity soon came—on the 12th of October a violent gale commenced, and increased to the violence of a hurricane, and the English squadron was blown off from the coast. The watchful Thurot instantly availing himself of this seasonable event, slipped his cables and put to sea; but the direction of the wind was against his project, and he found himself necessitated to seek a shelter in Gottenburg, on the coast of Sweden, where he was constrained to remain for nearly three weeks.

We have now a new motive-power, that was not dreamed of, for the purpose to which it has been applied at sea, in those days. Will blockades be maintained by the aid of this power in spite of “wind and weather”? It will probably be found on trial that, the ships of the line will stand buffeting better than steamers, and show their superiority in a storm; but violent on-shore winds are not to be trifled with by either the one or the other, within seeing distance of a coast. In that respect it seems doubtful if we shall gain anything by them.

Insignificant as was the force under Thurot, it is wonderful to reflect on the general alarm which pervaded the kingdom on his account. He had five frigates only, under his command, on board of which, independent of the crews, there were near 1300 soldiers, many of whom were Irish.

I am enabled to pursue this subject with a little divinity, and enter rather more into detail than the naval annals, from a source, which in a short time will be entirely lost and forgotten—I mean the newspapers of the day. In the *London Chronicle* of the 4th Dec. 1759, is the following interesting letter from Captain Rimmer, of the ship *Gorrell*, of Liverpool, dated the 3rd Nov. After mentioning that he had written on the 27th Oct. to apprise his owners that he was “blocked up” by Mons. Thurot, with five frigates and a cutter, he says:—

“We lay in the same road with them three days, during which time they rowed round and round our ship, and took particular notice of us; I also took all the notice I could of them. Two frigates lay a-head of us, two a-stern; and one a little within the rocks, to watch the ships, &c.

“So far as I can learn and observe, Thurot’s fleet are in want of many things, such as anchors and cables; for, by all accounts, they slipped them when they left Dunkerque. They have also employed all the bakers in Gottenburg, and have bought up all the beef they can meet with. Another cutter is arrived here; so that now there are two, one of eight guns, and the other of ten; one of which they are now heaving down and cleaning. One of the frigates has got her topmast down, occasioned, I suppose, by something being amiss with it.

“It is most certainly true that they have a great many land forces with them, for they appear on board like bees about a hive; the number is said here to be 2200 land soldiers, and several Scotch and Irish regiments! One of my sailors spoke with some of them in Irish, and was answered in the same language; they have many gentlemen on board, and when on shore make a fine appearance, being full of money.

"It is whispered about here, that they are designed either for the Highlands of Scotland, or the north of Ireland, and that they will be ready to sail from here in seven or eight days. They behaved with great complaisance to us when we lay among them, but as I did not like my company, we took the first opportunity of leaving them, and are now lying above the castle; they have taken two brigs and brought them into the harbour, one of which they ransomed: her ransom-bill is No. 6, which makes us believe that they have taken six sail.

"They are all rigged in the same manner as our men-of-war, with red vanes, long heads to their top-gallant-masts, and the top-gallant-masts strike abaft* the topmasts; with spritsail and topsails rigged; and the cutters are rigged the same as our English cutters, and upon the whole they appear very like English ships of war.

"The wind is coming strong again from the westward, which I hope will bring an English fleet to our relief; four of our men-of-war, I am sure would be sufficient to keep them in here, and they might lie very safe at anchor in the road."

There were seventeen English merchant ships at Gottenburg at this time. The captain of one of the captured vessels, when Thurot approached, hoisted Swedish colors, with the hope of deceiving him; the *ruse*, did not, however, succeed; but it appears that his vessel, which was worth £4000, he was permitted to ransom for £400. Two Dutch seamen that were on board, Thurot impressed, but he was generous enough to pay their wages, amounting to forty guineas, to the captain. He was short of seamen.

This ransoming of the enemy's ships we should not have expected from an old privateers'-man, but it was certainly more reasonable than to have destroyed them. One is often amazed at civilized refined policy—the "burn, sink, and destroy" system of insensate warfare, is about as stupid and as wanton an infliction as the savageness of man could have devised: if you utterly destroy the principal, you have no chance of interest. The Frenchman went upon the Italian's "*buono mano*" system—"give and go;—we may meet again." Now, is this plan not more sensible and humane than sinking, or setting fire to a valuable vessel because you cannot secure her, or spare hands to send her into port? I am speaking of merchant vessels not of national ships. It would be better for both parties, and rob war of one of its most objectionable points, if all mercantile property were redeemed by compromise. The owners are always to be reckoned as among the majority which deprecate war, although, it is true, from their occupations, they furnish principally the sinews. What a noble achievement it would be, by mutual compact, for the heads of states to settle their disputes by single combat! After a long repose, the elements of strife are now abroad, the veriest trifles stirring up the rancour of past times! Will man never grow wiser? Britain is disposed to peace; she has reaped her laurels, and would rest content with her acquired celebrity; her

* Not customary in Her Majesty's Service, but which was a favourite method of Admiral Sir Edward Owen. No doubt it has great advantages, but appearance is against it.

sincerity cannot be questioned, and she has the power to chastise, but the magnanimity to forbear until forbearance would become criminal.

“England, with all thy faults, I love thee still—
My country! and, while yet a nook is left,
Where English minds and manners may be found,
Shall be constrained to love thee.

* * * * *
To shake thy senate, and from heights sublime
Of patriot eloquence to flash down fire
Upon thy foes, was never meant my task :
But I can feel thy fortunes, and partake
Thy joys and sorrows, with as true a heart
As any thund’rer there.”

The old fire kindles in the heart!—but, return we to our theme.

At the period we have been speaking of, the French Government was bent on the invasion of England, and for this purpose built a great number of flat-bottom boats, which were to rendezvous at Havre, but the project, if really intended, was defeated by Rear Admiral Rodney, the same gallant officer who figured so gloriously in the succeeding reign, in the West Indies. It appears, too, by my authority, that the war-vessels called *Prames*, were first constructed at this period; they were built principally at Bordeaux and Nantes; they drew little water, being flat-floored and round-sterned, carrying twenty guns, 24s’ and 18s’. These vessels were revived in Napoleon’s time, for the purpose, it is probable, of amusing John Bull; there was one only I believe captured during the war: the *Ville de Lions*, if I recollect right, by the *Naiad*, Capt. Carteret.

The deep apprehension of French invasion at the former period, was more felt than the good people were willing openly to express. A general thanksgiving took place in December for the successes of the year. The account sums up in these words: “Britain, as has long since been observed, is divided from all the world by a deep and very wide ditch, defended by numerous *wooden* forts; and, for her better security, we see, with great satisfaction, her coasts now guarded by her sons, armed, and expert in the use of them. Abroad our ships and our troops secure our colonies. At home unanimity is our impregnable fortress. Then what have we to fear? Why nothing but our sins, and the displeasure of the Almighty.” This reminds one of Dr. Johnson’s remark about ghosts:—“Those who deny the fact with words, confess it by their fears.”

It appears that the Danes, having an eye to business, supplied Thurot’s squadron with a large quantity of salted meat, lard, and butter; these articles were sent to Gottenburg in small vessels from Copenhagen.

The accounts from Stockholm stated that Thurot, on his arrival at Gottenburg, was well received by the governor, and all the persons of condition in that town; and that even the king sent orders for the French commodore to be well used; but, as he began to raise men for his ships privately, and the British minister required that he should be sent out of the port, his Majesty, by the advice of his Council, transmitted instructions to the governor, to signify to M. Thurot that he

must put to sea in twenty-four hours. It was said that the Queen instigated his Majesty to this step.

The squadron under Commodore Boyce had been driven to the northward, as far as Peterhead; most of the ships had lost their topmasts in the hurricane which released Thurot from Dunkerque, and two of them put into Cromarty to repair their damages. On the 4th Dec. our ships were cruising off Buchanness with the expectation of meeting with Thurot. It is probable that his orders confined him to the coast of Scotland, otherwise it seems strange, that as the French commodore's "whereabouts" was well known, our ships had not been off Gottenburg.

I am enabled to continue the detail of Thurot's movements, through the information of the observant seaman I have before named—Capt. Rimmer, of the good ship Gorrell. He arrived safely at Liverpool in December, and stated that—"M. Thurot, with his squadron of five privateer-frigates and two cutters, left Gottenburg on the 14th Nov.

"Thurot's frigate, the *Maréchal de Belleisle*, mounts forty-four guns, viz. thirty nine-pounders upon one deck, four eighteen-pounders below, and the rest only quarter-deck and fore-castle guns; she has a black lion head, appears very ill hogged in the midships, and is painted black and red.

"No. 2, is a frigate of thirty-eight guns, viz. twenty-eight nine-pounders on one deck, the rest are quarter-deck and fore-castle guns; has a yellow lion head, standing remarkably high, and is painted yellow and black.

"No. 3, is a frigate of the same number of guns, painted black, with a large figure-head.

"No. 4, is a frigate of thirty guns, viz. twenty-four on the main deck, and the rest quarter-deck and fore-castle guns; she has a figure-head painted white and yellow, and her sides black and yellow.

"No. 5, is a frigate of twenty guns on one deck, is painted black and yellow, with a figure-head, and short quarter-deck.

"The two cutters have long top-gallant masts; one of them is pierced for ten and the other for eight guns, exactly in the English form.

"The frigates, when they came into Gottenburg, were very foul, as if come off from a long voyage, and were destitute of many necessaries; had very few seamen on board, but full of land forces, commanded by a major or general; most of the soldiers were in blue, faced with white, and others all white.

"Whilst they remained at Gottenburg* (nineteen days) they were fully employed in cleaning their ships, getting new topmasts, new-rigging their vessels, victualling and watering. The demand for bread and other eatables was so great that they raised the prices considerably in the market; and the Swedes assisted them all in their power, lending them their East India ships' boats to water with, and procuring them cables in lieu of those they had ordered to be made, which would have detained them before finished. During their stay the land and sea officers quarrelled; the former not being acquainted with the place of their destination.

* Properly Gotheburgh.

“ On Nov. 6th, whilst the French frigates lay in Calf Sound, the *Penzance* man-of-war appeared at the mouth of the harbour, in company with four or five neutral ships, as she was going up to Elsinour, and fired a gun to take all ready under her convoy, which so affrighted the Frenchmen that they slipped their cables and ran up above the castle for security.

“ When they sailed, the commodore, and second vessel, carried white *whifflers*, or pendants, forward; the rest all had red vanes, and they had their steering-sails and small sails all ready bent, in the shrouds to run away with.”

Capt. Rimmer seeing the coast clear, started off two days after.

Referring back to the remark that the French vessels were very foul, we may observe that very few men-of-war were coppered at this time. On this head an author has observed, that “ Sheathing with lead was in use until the reign of Charles the Second, but was discontinued on account of its wearing away irregularly, and so soon washing bare in places, as to let in the worms; and sheathing with wood was adopted in its place. In 1708 (fifty years before Thurot’s scrubbing-brushes were employed) a proposal was made to the Navy Board to sheath ships with copper, which was rejected without a trial! About sixty years after, it obtained a trial, and was favourably reported on; yet, so very difficult is the introduction of anything new, that, ten years after this experiment (1778), in Admiral Keppel’s fleet, there was but one line-of-battle ship that was coppered!”

Whether Commodore Boyce’s delay, in not returning to look after Thurot, was occasioned by the disabled state of his squadron from the hurricane it had encountered, or purposely designed to draw the Frenchman out, and whilst guarding our own coast, to be ready to receive him there, is doubtful. Be that as it may, Campbell, the Naval historian, is wrong in stating that Thurot was laid up at Gottenburg, by the severity of the weather, until after Christmas; we have shown that he quitted that port on the 14th Nov., and in fact was detained there only nineteen days. Capt. Rimmer’s conjecture was correct—he was of opinion, from the direction of the winds during his voyage, that Thurot would not be able to reach the coast of Scotland, but would be obliged to proceed towards Norway. On the 1st Dec. the French squadron was seen on that coast. Thurot experienced such severe weather off that rocky shore, that one of his ships, the *Begon*, was so shattered as to be compelled to return to Dunkerque, and the rest of the squadron ran into a port three leagues from Bergen, for shelter, having made one capture, a small vessel.

Although the subject is recorded in the “Naval Annals,” it may not be altogether out of place here to refresh the memory, by relating what became of this enterprising Frenchman and his ships. He appears to have quitted Norway about the 5th Dec., still intent upon his original project.

The season, indeed, was one of tempests; the days short, and the nights long, cold, and gloomy, but he seems to have chosen it on these very accounts, and with a fearless disregard of personal discomforts that

marked his character for daring adventure—thus approaching those qualities for which the enemy of his country stood so conspicuous. If the infusion of such persevering spirit had been general among the French marine—without detracting, in the least, from its general merit for gallantry—the enterprises it contemplated or engaged in, in that day, would have been attended with more stubborn results than they were; but, disdaining a vaunting tone, it must be acknowledged that there is a *something* in the nature of the seamen of both nations that, all the practice, all the desire for rivalry and pre-eminence, which each shall try heart and soul to gain, must always leave the palm in the hands of the British tars, let the young Gallic Cock—the Royal Admiral—strive, and produce as many *brochures* as he may! M. Voltaire was wonderfully puzzled to find out in what this extraordinary difference consisted, the—*fortune de la guerre*—will not account for it.

For many a dreary week Thurot continued standing off and on among the western islands of Scotland, buffeted by the stormy winds so prevalent there in winter. It is not easy to account for this apparently voluntary delay. The inconvenience of having ships crowded with landsmen, especially during tempestuous weather and severe cold, must have been severely felt; and, even without confirmation, we may readily believe that they suffered very great hardships. But, although the men were sinking under the weight of their sufferings from want of a due supply of food, as from disease, the determined commander still persevered; and it is a singular trait (which we are happy to notice) in his character (as an old privateer's man) that, when he had occasion to visit the inhabitants in order to obtain eatables, his conduct was marked by unusual courtesy and civility, paying handsomely for whatever he obtained. The gude huswives, no doubt, thought these visits somewhat grewsome, but being canny withal, probably put the best face they could on the unwelcome intrusion of the strangers, and set before them “baith ale and meat, wi' mony a well-waled word.”

One of his ships is stated to have been lost, and with the other three he ran in and anchored off the isle of Ilay. What was Commodore Boyce about? He was at Leith attending to the conveying of the merchant ships to the southward—no doubt according to orders.

Having at length got through the winter, with a perseverance and endurance remarkable, on an enemy's coast, and with impunity; as the spring began to dawn, Thurot put in force (on the 21st Feb.) his original intention of making a descent in the north of Ireland (Carrickfergus), where, no doubt, he calculated on meeting with many adherents. The ostensible design of the French minister it is probable was, to create a diversion—to draw attention from other enterprises of more moment, then on hand. Six hundred men were landed, and took the town and castle of the above named place, after a vigorous defence by Colonel Jennings, “with such means as he possessed.” As the magistrates refused to supply Thurot with provisions, which no doubt he stood greatly in need of, the town was subjected to a contribution, which, however, is said to have been moderate. Having in manner fulfilled his instructions, the commodore bethought him of the best route to run the

gauntlet homewards. Just at this moment the unwelcome news reached him of the defeat of Conflan's fleet by that of Admiral Sir Edward Hawke; besides which he also gained the intelligence that a body of regular troops was on its march to oppose him. To sea, therefore, he put, with the intention of making the shortest voyage homewards by the way of St. George's Channel. Fortune, which had hitherto favoured him, now abandoned him to his fate; and it was not many hours after quitting the scene of his partial success, ere it was sealed.

Off the Isle of Man, three English frigates were hovering in quest of our hero: these were the *Æolus*, 36, Capt. Elliot, the *Pallas*, 32, Capt. Clements, and the *Brilliant*, 32, Capt. Logie. On the morning of the 28th of Feb., the *Æolus* ran alongside of the *Maréchal de Belliesle*, Thurot's ship, whilst the *Pallas* and *Brilliant* engaged the other two frigates. The action was warmly contested for an hour and a half, when a lieutenant of the *Æolus* boarded the French ship and hauled down her colours—Thurot having been killed. The other two ships were also captured, and carried into Ramsay Bay, in the Isle of Man.

There were 300 French killed and wounded; and forty on our side. Thus ended Thurot's career.

I have not been able to find his name in a small French work which I have by me, entitled, "*Les Marins Français*," although a good deal is said of his predecessor of the seventeenth century—the noted Dunkerque hero, Jean Bart. The motto of this little bagatelle is very modestly expressed—

"*Vainqueurs ou vaincus, nos marins l'importerent toujours par la valeur.*"

EXAMINATION OF THE MASTERS AND MATES OF MERCHANT VESSELS.

IN a few brief observations in our last Number, we referred to a letter which we had received from the Secretary for Lloyd's Register Book of British and Foreign Shipping, on the subject of the voluntary examination of Masters and Mates in the Merchant Service. Perhaps there are few more competent than himself to form a sound opinion upon such a subject. We know that in the early part of his life, from his position as the confidential attaché of the Comptroller of the Navy, who at that time had the patronage of the appointment of masters to ships of war, he had the best possible opportunities of forming a correct judgment of the advantages which could not fail to result from the examination (compulsory as we have already stated) to which they were, and still are, subjected, to enable them not only to obtain warrants as masters, but to rise in their profession, as the progressive improvement in their attainments and good conduct justly entitled them to do. It is not, therefore, matter of much wonder that he should, evidently enthusiastically, enlist himself, as it were, under the banner of the Board of Trade, as a volunteer, willing and ready to carry out the system which has just been brought into operation.

The objections which have been raised to it are really the most untenable imaginable; such as,—that the masters are, generally speaking, good men,—that shipowners being generally satisfied with them, and always alive to their own interest, may be relied upon for making a good selection;—that many excellent sailors would shrink from the examination required, although possessing all the elements necessary for undergoing it—and such like. Now, the absurdity of these imaginary difficulties must strike every one who deeply reflects on the subject. Shipowners cannot be worse off than they were, by having the opportunity of selecting officers who have shewn that they possess qualifications which render them peculiarly fit either for particular trades or employment all over the world! On this ground the examination might, with great propriety have been made compulsory, but inasmuch as the force of prejudice was brought to bear strongly against every measure attempted to be introduced into Parliament, the Government gave way and sanctioned the voluntary examination of masters and mates. We have the best reason, however, for believing that they did so only under a conviction that as soon as the machinery was set in motion, it would ere long be found “to work without friction,” and ultimately to achieve the important object for which it was established.

We know that an individual who has very extensive duties to perform on the Clyde, and who has consequently had great experience of the characters of masters of merchant ships, has long been of opinion that the prescribed examination was loudly called for. The expression of that opinion, unfortunately for him, occasioned his being assailed in terms of vituperation as severe as it was possible to select. In a very little time, however, it will be seen whether or not he has acted upon a sound judgment. Suppose, for example, that as the Government see the success of their plan (and see it they certainly will), it should be their pleasure in hiring transports, emigrant ships, &c., to give preference to ships which have officers who have undergone the examination prescribed by their own regulations, as is already done with the contract mail vessels. Can anything be more reasonable or more to be apprehended by good officers, and is it not an event which is extremely probable? As a proof that we do not hazard this as a mere conjecture, we would adduce the well known fact (at least to shipowners and their brokers) that since Lloyd's Register Office, established in 1834, has effected so great an improvement in the mercantile shipping of the United Kingdom, as is now universally admitted, the Government will not hire ships which have not been surveyed and classed by the Register Committee!

Such is the case, and if, therefore, we feel it our duty strongly to urge upon the masters in the Mercantile Marine, among whom there are a great many excellent and exemplary characters, to look a-head in time, and to establish their claims as soon as possible to the certificates of qualification to which they may prove entitled, we trust that we may fairly put forth our pretensions to be considered as their best friends. It is entirely in that spirit that we have applied ourselves to the consideration of the subject; and we shall, we hope, best prove our estimate of its importance, by watching the progress of the plan, and offering

such remarks thereon, from time to time, as the same may seem to call for.

The list of Masters and Mates which we gave in our last Number, is sadly deficient upon many essential points. There is nothing whatever shewn to identify the officer who has been examined. At least his age, his length of service, and the ship in which he last served, or may be serving, should have been given. Thus there would have been something like a direct clue to the particular individual examined; and it is only due in justice to those officers who have obtained certificates, that their real claims should be made as manifest as possible. These deficiencies, we have reason to believe, have not escaped notice in the proper quarter, and the next list is likely, therefore, to be in a great degree complete.

But it may not be amiss here to go a little further into the subject of examination of the Masters and Mates of the Merchant Service, a measure which we have always strenuously advocated. The following, from a Plymouth paper, contains a brief history of the subject, and is concluded with remarks, in the substance of which we entirely agree:—

“ It will be remembered by our readers, that Captain Fitzroy, the present Governor of New Zealand, when a Member of Parliament, and an Elder Brother of the Trinity House, introduced a bill into Parliament for ensuring qualification in the Masters and Mates of Merchant ships. This measure appeared absolutely necessary, evidence having been obtained by the Committees of the House on shipwrecks, abundantly proving that a great number of our merchant vessels were lost through the ignorance or misconduct of the officers.

“ The Bill introduced by Captain Fitzroy was not passed through Parliament, *first*,—because a good many influential shipowners considered that any compulsory regulations likely to interfere with their patronage and appointment of the officers of their ships, would be prejudicial to their own interests: *Secondly*,—The system of marine insurance might be damaged; that is to say, societies formed for insuring ships and their cargoes opposed the measure, evidently because any regulation likely to augment the intelligence and skill of our navigators would necessarily diminish the risks at sea, and consequently lessen the number and profits of such societies. But the strongest reasons for abandoning the Bill brought in by Captain Fitzroy was, an assurance from the Government that a *voluntary measure* should be introduced under the authority of the Board of Trade, whereby Boards of Examination should be established at the principal ports, where the Captains and Mates might be examined, and receive certificates or diplomas of qualification, on offering themselves for examination.

“ The Lords of the Committee of Privy Council for Trade have accordingly appointed Boards of Examiners, and have issued rules and regulations for their examination, and the granting of certificates, as well as to shew the kind of knowledge that may be required of the candidates offering themselves for examination.

“ The following are the conditions and subjects of examination:—

“ 1. No person is to be examined as a Master under twenty-one years

of age, nor as a Mate under nineteen years, nor who has not previously served at sea for not less than six years, as regards an examination for Master, and for not less than four years as regards that for Mate.

" 2. All candidates for examination must produce sufficient evidence of their ages, and certificates of service and sobriety, general good character and conduct ; and particular care is to be taken by the Examiners to satisfy themselves as to the habitual sobriety of the party, previous to granting him certificates of fitness to take charge and command of, or serve as Master or Mate on board any vessel.

" 3. They must be able to write a legible hand, and must understand the five first rules of arithmetic.

" 4. They will be examined as to their knowledge of seamanship, of rigging vessels, stowing holds, &c., in addition to which those to be admitted into the lowest class, or class 3rd, must be able to correct the courses steered by compass for variation, leeway, &c., to work what is termed a day's work, to prick off the vessel's place on a chart, either by the calculated latitude and longitude, or by the bearings of the land by compass.

" 5. They must show that they understand the use of the quadrant or sextant, and can observe the sun's meridian altitude, and therefrom determine the latitude, and are able to work the tides by the age of the moon, from the known time of high water at the full and change.

" 6. To be entitled to 2nd class certificates, candidates must, in addition to all the foregoing qualifications, be able to ascertain the latitude by double altitudes of the sun, and by meridian altitudes of the moon, or of those bright planets or stars, the places of which are given in the *Nautical Almanac*. They must understand the care and management of chronometers, and the mode of working out and ascertaining the longitude therefrom, and they must be able to ascertain the variation of the compass by the azimuth of the sun, as well as by the amplitude.

" 7. To be entitled to a 1st class certificate, candidates will, in addition to all the foregoing qualifications, undergo a more strict examination as to their proficiency in navigation, and also in seamanship, under the many difficult circumstances and trying situations to which vessels may be exposed ; such as, having to erect and to rig juremasts, when suddenly requisite, or to form rafts in case of being stranded, &c., and in such other cases as call for a higher order of resources. They must have a competent acquaintance with plane trigonometry, a general knowledge of nautical astronomy, including the determination of the latitude by reduction to the meridian, and of the longitude by lunar observations.

" 8. They must be acquainted with the mode of ascertaining and applying the deviation of the compass, produced by the local attraction, which is of so much importance in all vessels, and particularly in those built of iron, or having iron on board in any quantity. They must be practically acquainted with the mode of comparing two or more chronometers, and of rating them by equal altitudes.

" 9. They must understand the construction of Mercator charts, so as to be able to correct any errors they may detect in those they possess, as well as to insert with precision any new shoals or islands they

may discover, and must be well versed in the mode of laying down the required course on the chart.

“ 10. They must also possess a knowledge of mercantile book-keeping, at least by single entry.

“ 11. In the event of any candidate proving himself to have higher attainments than the foregoing, such as being well versed in great circle sailing, spherical trigonometry, marine surveying, and a more extensive knowledge of astronomy, it is to be noted in his certificate, and is to entitle him to have ‘ Class 1, extra,’ thereon.

“ Having thus briefly introduced the subject, we beg to offer a few remarks as to the probable consequences of the regulations.

“ In the first place, there will be several classes of persons averse to any examination at all, viz. Masters and Mates who are deficient in the amount of knowledge required, or who cannot procure testimonials of good character.

“ Persons who live and prosper by disasters among our ships, and all those who expect to get the command of a merchant ship by taking a small share in her, without taking the time and trouble of becoming either a seaman or navigator.

“ On the other hand the public at large are sure to gain by any regulation that will ultimately diminish the number of shipwrecks or disasters at sea. The shipowners who look forward for employment of their ships by the Government, as transports for troops, convicts, or store, as a *preference will be given to ships having properly qualified persons to manage them.* The regulations are evidently intended to give encouragement to active, intelligent, and deserving seamen to get a-head in their profession, independent of money or *interest*; in fact, to raise the intellectual and moral character of the commanders and officers in our mercantile marine, and to place them upon a somewhat higher and respectable footing. The possession of a parchment testimonial of qualification by a master or mate will place the individual at once above mediocrity or suspicion, and will command a degree of respect and attention not due to equivocal character. The names of those who pass will appear as properly qualified officers in the *London Gazette*, in *Lloyd's Register*, and in the *Register of Shipping* at Liverpool; and it will be an honour to the captain and an advantage to the owner, when the ship is advertised as being commanded by a properly qualified commander. But it is to the rising and intelligent young man that the Regulations will be a boon. If he has been four years at sea, and is nineteen years of age, with a good character for sobriety, and can prove himself a seaman and navigator, the board of examiners cannot withhold a certificate of his fitness as a mate of the first, second, or third class, according to his attainments.

“ If a clever, steady young fellow has attained the age of twenty-one years, and has been at least six years at sea, he may offer himself for examination as a candidate for a master, and if he shews himself to be a proficient in seamanship in all its details, and a good navigator as far as lunars, the management of chronometers, and can show he understands the advantages derivable from great circle sailing, &c., he would be en-

titled to the highest and most honourable certificate that the Board can grant, even although he had never been a mate or a master. We need not insist on the advantages which are now open to young seamen of talents and honourable ambition. Such men may get on if they only take the trouble to qualify themselves.

“ We will now say a word or two of those gentlemen who, at present, command or direct our merchant ships. We have no doubt that the Boards will duly appreciate their past services and merits, and will deal fairly and softly with them in the examinations. Our schoolmasters were not quite so clever as those of the present generation; they could only teach one thing at a time; whereas modern teachers communicate more knowledge to their pupils in a month than our ancient pedagogues could get through in a year.

“ We consider the measure in question as one calculated to increase the advantages and respectability of the masters and mates of merchant ships, and to improve the condition of the seamen and apprentices; and, we trust, the experience which the old captains have acquired, will be received as a set-off, whenever they apply to the Board for their certificates, which cannot fail of being an advantage to themselves as well as to their owners.

“ The Board of Examiners for the Plymouth Branch are—Mr. Geo. Jones, Collector of Her Majesty's Customs; Mr. William Walker, Queen's Harbour Master; Mr. William B. Cuming, Lloyd's Surveyor; Lieut. Smith, R.N., Assistant Examiner; and Mr. Robert White Stevens, Clerk, of whom full particulars may be obtained.

“ The office for examination is at the Commercial Wharf, Plymouth, and all communications should be addressed to the Clerk.”

THE SEAMAN'S REGISTER TICKET.

SIR,—I am sorry that I am constrained to trespass on your patience and to disturb the inverted image which your facetious correspondent has seen through the mirage of his imagination.*

However strange it may appear to him, I must disavow having made the slightest objection to the provision of the act which declares the captain to be the keeper of the Seaman's Register Ticket. It is entirely a misconception on the part of your correspondent. I merely stated the fact, and pointed out the necessity of adopting some means by which the ill effect, which I concluded would arise from it, might be obviated. It appeared to me as one of the abstract principles in legislation, which though apparently admirable in theory, can never practically be exercised with profit. It is unnecessary for me to go over the ground again—time will decide whether I am right or wrong.

It appears that the leviathan steamer, the Great Britain, lost, by desertion, nearly the whole of her crew, at New York. If the cause

* See p. 572, former volume.

was a desire in the men to change their vessel, the clause recommended would have met it. This circumstance, whatever may have been the cause, shows that the Registered Ticket will not prevent seamen from deserting their ships—and thus far confirms my opinion. Those men will probably be lost to the service (if not to the country); for although they may return in some foreign vessel to England, as the law now stands, they cannot again ship in a British vessel, having forfeited their Tickets.

I have heard, that on the coast of Africa, a seaman was permitted to transfer his service from the vessel he shipped in, to another—thus the law is already evaded; and, no doubt, the necessity will often arise for its being so. Why not then at once allow the exchange, rather than permit the law to be disregarded?

The mutiny on board of the barque Champlain, bears me out in the assertion I made of the recklessness of seamen when once they get a crotchet into their heads. The disgraceful display does not, however, bear directly upon the question I discussed. Nevertheless the punishment awaiting the actors will not, I apprehend, effectually check the irregular practices of the "genus." A great deal more may be gained by encouragement for good behaviour, than severity for bad conduct, as an example,* for a Jack is ever ready to call out—in his own proper vernacular—with the French demoiselle's starling—" *Qui me néglige me perd.*" A sort of significant warning which shipowners seem not to understand, until they have to pay double wages to get their vessels brought home.

But while the merchants (generally) care not a rush about the comfort of the seamen they employ, the Government is using every exertion to ensure that to the man-of-war's man—and this is not only humane but politic—for, if "*Tridens Neptuni sceptum,*" be a true proverb—then, the hands which hold it up must be supported.

I beg, Sir, to compliment your worthy correspondent on the display of the moral courage he has evinced in his strictures on the Merchant Service, and admiring his humanity, I hope he may live to see kindness exercised to the full, and good order established in the Mercantile Marine in accordance with his desire, and that of every well wisher to the service.

I have the honour, &c. &c.

THE DIARYST.

P.S.—Not to let my paper be altogether profitless, (although as to that I have no certainty, as you may be in possession of similar medals,) I have the pleasure to enclose wax impressions of two medals which appear to have been struck in honour of our famous old choleric Admiral, Vernon; and which I have been obligingly permitted to take from the coins in the cabinet of a young Lassie. The metal appears to be mixed, less yellow in colour than common brass, perhaps from having more of copper than zinc in its composition. The larger one represents the

* At present, punishments for transgressions are ever ready: but we hear nothing of rewards and encouragement for good conduct—it is very different in the Queen's service.

gallant admiral holding a gold-headed cane in his left hand. He is dressed in the old uniform; straight-breasted coat, single row of buttons, no collar, and a slashed sleeve.—Legend: "Admiral Vernon took Porto Bello."

Reverse—The harbour, fortifications, and town, with six ships.—Legend: "With six ships only, Nov. 22, 1739."

The size of this medal is one inch and a half.

The other is about the size of a penny-piece. It represents two figures, one (the admiral) in an erect posture, the other (the Genius of Spain) kneeling, with cap doffed, and presenting a sword to the former, who is in the act of patting the humbled on the pate. There is a ship in the distance.—The legend: "The pride of Spain humbled by Admiral Vernon."

The reverse represents the town and castles of Carthage, with a boom or chain across the harbour's mouth. Two ships under sail are standing in. An object in the centre of the port appears to be either a galleon or insular fort, with the words, "Don Blass;" the latter word is rather indistinct.—Legend: "He took Carthage, April 1741."

The Carthage affair was a failure; but the admiral had created such enthusiasm in England, by his capture of Porto Bello, that we do not wonder at a second medal being struck, especially as the blame seemed to rest on the general.

LA FLOTTE ON THE PROJECTED CHANNEL HARBOURS.

[Our attention has been attracted by a well-written article in a French paper, called *La Flotte*; and which appearing to shew so fully the importance attached to the subject of refuge harbours in the Channel, if not by ourselves at least by our neighbours, we have ventured to transfer it entire to our pages. In doing this we had intended to have curtailed it here and there, considering much of the discussion as more adapted to French than to English readers; but on attempting this we have preferred giving it as it is, a decision we have not regretted, as it will put naval men in possession of, perhaps, some useful facts, which are penned with much spirit and downright patriotic feeling. Such discussions are at least useful; they convey information, and at the present moment, when the construction of harbours is in contemplation, which are to serve both the purposes of refuge in bad weather and stations for steam vessels at all times, it may be profitable to cast a glance at our opposite neighbours, and observe the attention which they are devoting to these matters. We shall perceive there, not only the most lively sense of this important subject in its different bearing on the interests of commerce and the defence of the coast, which, perhaps, a consideration of the projected works on our side of the Channel may, in some degree, have increased; but we shall see this followed up, on the part of Government, by an allotment of a great sum of money, the appropriation of which, to its intended purpose, is watched and scrutinized with almost unexampled severity. We shall see, in fact, a realization of that paternal care, in the improvement, the construction, and defence of harbours, which becomes a government that is alive to the truth that commercial activity, in its most extended sense, is the

main-spring of the wealth of a nation—and the greater that commercial activity, the greater the importance of providing harbours, sheltered from the effects of war as well as those of weather, for its protection and introduction to those various channels through which it is destined to flow. Happily for England these matters are seen in their real light in this country, as well as in France, as the various commissions alluded to in the following paper sufficiently testify, and no doubt we shall before long see the effect of their measures. We have now, therefore, only to commit to the attention of our readers the article of *La Flotte*.]

It belonged to the learned author of the *Memoire sur la Marine et les pontes et chaussées de France et d'Angleterre*, presented to the Academy of Sciences in 1828, by his scrupulous inquiries and patriotism, to direct again the attention of the public to the present condition of the ports and roadsteads of France. The learned academician has effected this by describing in his luminous style, the works of defence and offence in which our neighbours are engaged. The Baron Dupin in his "Memoire* on the Harbours of Refuge proposed to be made on the Coast of England adjacent to France," has rendered an important service to his country; if our Government will but open its eyes to the result, which will shortly be attained by England, in the prompt completion of the admirable works which her provident foresight has conceived.

It is well known that the British Government, with a lively impression of the necessity of protecting her southern frontier from foreign aggression, in the most vulnerable places, appointed, in the year 1840, a commission to examine the coast and select those places which would afford the double advantage of being harbours of refuge in bad weather and stations at all times for war-steamers. It is also well known that in 1843, another commission, composed of persons distinguished for science, experience, and acknowledged talent, selected from among naval officers, hydrographers, architects, and experienced seamen, assisted by officers of engineers and artillery, and the chief civil engineers, was appointed to complete the work begun by the former commission.

This commission has closed its deliberations definitively, on the works it proposes to be constructed immediately in an extent of 150 leagues, from Falmouth to Harwich.

The concluding part of the report of this commission, made to the House of Commons on the 6th March last, leaves no doubt about the immediate execution of a project, which according to the terms of the report, as it concerns life, the national safety and the property of its subjects, no consideration of expense should be permitted to stand in the way of its execution. We cannot do better than quote the passage here from the report, of which the foregoing is the spirit. M. Dupin says, "It is remarkable how the centres of defence and attack multiply, and I may say accumulate, in proportion as the coast of England approaches that of France. From Portsmouth to Harwich, an extent of about seventy † leagues of coast only, it is proposed to construct works on the coast for which the estimates amount to ninety-six millions. There will

* A translation of this appeared recently in the *Times*, viz. 25th Nov.

† We have adopted geographical distance in place of metres.

be five grand centres of defence capable of receiving each a naval armament, and serving as so many points of departure for powerful steam-boat expeditions, of which the most distant may reach the coast of France in seven hours, and the nearest in an hour and a half. This accumulation of works will exercise its influence (not to say its command) over 150 leagues of our coast from Dunkirk to the bay of St. Malo." We may also add that in this extent of open coast, France has but one grand centre of defence which is Cherbourg, the works of which begun half a century ago, suspended, recommenced, and again carried on with a systematic sluggishness, will not be completed when the opposite coast will be provided with extensive means of attack and defence.

Under such circumstances what will the French Government do? Hitherto in the face of these projects, which the clear-sighted solicitude of the British Admiralty has conceived, it is content with a rapid military survey of the means of defence of the coast, a survey which has produced no apparent result whatever. There is no question that these ports are intended always as harbours of refuge, and in case of war to become naval stations for the purposes of attack and defence.

One does not hesitate at the idea of making this survey, to design these projects, to assemble men of talent, experienced officers of the navy, the most skilful in hydrography, expert pilots, and naval architects, but one continues to see the management of all the ports, harbours and roads, excepting those of the five military establishments left to the department of public works; which, dispensing with the intervention of the naval department and the experience of seamen, has singly, without control or responsibility, the management and the execution of works which it entrusts to its own agents. Thus the marine continues ignorant of what is meditating and doing for it, and the result is, that expensive errors are committed in nearly all the ports, errors which are not remedied but by a waste of public money. Thus, as was explained in a recent number of *La Flotte*, the expenditure of 165,469,000 francs (about £6,618,000) was accounted for in the mercantile ports from 1831 to 1845 inclusive, and notwithstanding, this sum had not been applied to more than fifty-three ports, out of a list of 400 to which the paper of 2nd May, 1839, made the number of the ports of France in both seas. In contemplating this prodigious sum, one is terrified at the thought of that which must be added to it, to achieve what remains to be done, and to repair errors which, like those at St. Maloes and many other places, have trebled the amount of the original estimate.

At the appearance of such results, what may not be expected from the unfortunate system adopted in these maritime works? It is not the administration which has committed the great mistake of omitting the opinion of the naval department, which is able to design and present a general plan of defence and offence to oppose that which has been produced by the extraordinary commission of the British Government. Confined by the principle of its constitution in the specification of details, it does not belong to the province of the department of public works to undertake so great a task as has been accomplished by the English commission, formed of persons from all stations, and possessing

those qualifications, the combination of which only can produce the desired result.

It becomes inevitably necessary to imitate our neighbours in this important matter, or else to resign ourselves to witness a continual wasteful expenditure in costly works for the most part useless, without having on our whole coast either accessible ports of refuge, or stations for our war-steamers.

That we may not be accused of going too far in our assertions, we have indisputable testimony to offer in support of them. One may judge from the fact which we have pointed out, that it is not sufficient for the department of public works to monopolize, jealously, all the maritime works, but, when it chooses, it can counteract the laws which it even prescribes to itself.

The Government, considering that, of all the ports of the Channel from Cherbourg to Dunkerque, that of Dieppe is the only one which has always sufficient water for the largest steamers, (and this depth of water, at high-water mean spring tides, is 6·2 feet more than that of Havre, and at neap tides 4·2 feet,) thought it proper to construct at this port (situated in the middle of the coast of the Channel and seven hours from the coast of England) a basin specially destined for steam vessels. This being determined on the sum of 2,500,000 francs was, on the 9th Aug. 1839, assigned for its construction. "The bottom of the new lock," said the *exposé* of the motives of the bill* presented to the Chamber of Deputies, 28th May, 1839, "shall be established at 26·2 feet below the level of equinoctial springs, the same as that of the basin already constructed. It shall be formed so as to allow of the passage of steam-boats of the largest dimensions, and this breadth will be of advantage not only to merchant vessels, but also to vessels of war, so that war-steamers may use the new basin as a place of refuge."

Such are the considerations and the motives clearly and briefly expressed. According to the law it was destined to afford a refuge to steam-boats of the largest dimensions. The breadth of the gates of the lock had been determined on after much scrutiny and consideration, both on the spot and at the general council *des ponts et chaussées*, and were fixed at fifty-nine feet, a breadth scarcely equal to that of the gates of the basin at Cherbourg, which is 58·6 feet. Thus our steam-boat fleet would have had for its largest vessels, a station in the middle of the coast of the Channel—an advantage which England does not possess between the mouth of the Thames and Portsmouth, but which she feels the urgency of obtaining at any cost. How was it then that in 1845, in spite of the specific terms of the law, that the entrance of the lock and the passage to the basin was suddenly reduced to 54·1 feet, and that thus vessels above 220 horse power were unable to enter it? Nevertheless the same is at this moment taking place, and thus the basin at Dieppe, for the construction of which 2,500,000 francs were allotted, with the view of obtaining for

* *Projet de loi*, often called, as it literally is, "the project of a law," agreeing, however, with our more business-like word "a bill."

steam-boats the only station which could be found for them in the Channel, between Cherbourg and Dunkerque, is closed to every vessel above 220 horse power, that is to say, to frigates and even the greater part of corvettes of war and transatlantic steamers.

We point out this extraordinary fact to public attention, and we ask for a categorical explanation of the motives which induced the administration to violate the obligations imposed on it by law. From the information which has reached us, we learn that in a conference with the Chamber of Dieppe, the engineer had remarked that fifty-nine feet were not sufficient for the transatlantic steamers, and that the navigation of Europe employed vessels not greater than 52·5 feet in breadth, and consequently 50·8 feet were sufficient, and should be adopted in consequence of the greater facility of managing the gates.

If these particulars are correct, the departure from the terms of the law of the 8th Aug. 1839, rests on the opinion of the Chamber of Commerce at Dieppe, approved by the engineer. But is it proper that this opinion should violate a formal injunction without which the sum of 2,500,000 francs would not have been allotted by the Chambers? Why, in fact, was a new basin granted to the port of Dieppe, when that which it already possessed was amply sufficient for its wants, if it had not been intended thus to establish a station for the largest steam-vessels? The Chamber of Commerce having nothing to attend to but the interests of commerce, and having nothing to do with steam-boats of war, answered as became it to do. It might, however, with the interest of its port at heart, make the hazardous assertion that transatlantic vessels could not pass an opening of fifty-nine feet. It is certain that this breadth between the sides suffices for steamers of 320 horse power, and that in high tides, those of 450 horse power, adopting some simple precautions, may enter as they do the basin of Cherbourg, the opening of which, as we have already said, is not more than 58·6 feet. It is true that on this occasion as on all others, the department of the *Marine* has not been considered, and that if the opinion of that department were called for on the contraction of the entrance of the basin, tending to paralyze its utility, it would have protested strongly against the fatal measure at this moment going forward at the port of Dieppe. We do not think ourselves mistaken in saying that the *Ministre de la Marine*, himself, is absolutely ignorant of this innovation.

Such a fact ought to be sufficient to shew the absurdity of a system which excludes the naval department from all interference in the works and even in the police of our ports. It is time to put an end to such a state of things so contrary to practice elsewhere, unless it is wished to reduce France to that condition which some would place her in, by having an expensive and useless marine. The first step to a return to the dictates of common sense and to principles established by the experience of two centuries should be, we repeat, to allow that the naval department possesses those qualities which it really does, and to establish, as our neighbours have done, a commission composed of distinguished men, combining thus that varied knowledge which each has obtained by a lifetime of experience.

It is only thus that France will know the essentials of maritime establishments, that she will know those which really should be preserved, where to extend, to develop, and to create; then will she be free from the absorbing influence of local considerations, in which parliamentary patronage has such an expensive influence, by incurring, every year, a pure loss of enormous sums on places of no importance. Not until then, and by the same means which the English commission has secured, shall we have a true account of the roads, harbours, and ports of France. The projects and designs for improvement will then assume no fictitious character, but one of reality, which is not to be found in that voluminous production of 2nd May, 1839, wherein it is stated that the completion of all the works of which it gives the outline, will not exceed in ten years a sum of ninety to one hundred millions of francs more than already absorbed by fifty-three ports only. In fact, we shall then have a standard Board which will not have to be altered by every administration, to change its decision, or rather that of the numerous engineers, who, succeeding each other in the direction of a work never completed by one, makes his own opinion, his own project, and his own system the principal. The Board of Admiralty which may doubtless be invested with an authority with which the Board of *Ponts et Chaussées* has been invested, should be the deciding judge in its own cause, and the sacred conservator of this fundamental work. It is on these conditions only, we know well, that the maritime interests will be extricated from the anarchy by which they are now overwhelmed.

The operations and the report of the British Commission on the coast opposite to France, indicate what she should do on her own coast.

It would be easy, confining ourselves now to a consideration of that part of the coast of the Channel between Dunkerque and Cherbourg, to shew that the French coast affords powerful means of offence and defence against those at this moment preparing by England on her side of the channel. We have not the temerity to give our views as projects; we do not even offer them as from ourselves; they are grounded on positive facts confirmed by experience. We quote the sources from whence they are obtained, the authors of our information.

The desire which England at all times has shewn to dispute with France the possession of Dunkerque; the enormous expense incurred in the reign of Louis *le Grand* to make that place one of the bulwarks of France, and to convert its port into a centre of protection as well as action for our naval power, bear ample witness to the importance which has been long attributed to it. Situated at the extremity of the Strait of Dover, at the entrance of the North Sea, fronting the Downs and the mouth of the Thames, with a roadstead, which the English themselves term one of the best of Europe ("The road of Dunkirk is reckoned one of the best and securest of Europe."—*Channel Pilot*.), Dunkerque offers for attack and defence all the advantages which the British Commission set forth in their projected pier harbour of Dover. The plans of Vauban will also be the best authorities for the commission, which, doubtless, will have the honour, by re-establishing the works of this port, of removing the disgrace of their destruction in the preceding age.

From Dunkerque to Dieppe the coast of France recently, and not without reason, called "Iron-bound," affords, independently of the ports of Calais and Boulogne, improved lately by some useful works, various places, the advantages of which would be seen and appreciated as those are of Dungeness and Seaford which, until now, have remained unnoticed.

The depth of water in the port of Boulogne is, at high water of spring tides, 26 to 29 feet, which, for steamers, may be reduced to about 23, and in neap tides to 13 feet. With this data the importance which should be attached to Boulogne may be estimated, if the road were protected by a breakwater, and its approach by powerful batteries within the range of which that immense flotilla anchored, which the intrepidity of Nelson brought against it. Nothing prevents the port of Boulogne from being made what the views of Napoleon intended and partly realized, that is, a permanent entrenched camp protecting the coast nearest to Great Britain, and holding in check our eternal rivals. All that the English Government is preparing at Dover, shews what foresight of the future should establish at Dunkerque and Boulogne.

Napoleon, while planning his invasion, did not forget where William the Conqueror collected his forces, and where he departed from to land in England. Thus the attention of this great man was directed to the extensive basin of the Somme, and from the first glance at it, he ordered skilful engineers to make the coast accessible to frigates, by forming a passage between the tortuous banks which lie off it, to a safe refuge harbour for a light squadron. This squadron he intended should move unperceived and in a few hours anchor on the opposite coast; and the harbour at all times would serve as a refuge for vessels in distress, which for want of such a harbour are annually lost on the coast. No doubt an attentive consideration of the bay of the Somme would repair the numerous errors which the department of public works has committed and continues to multiply there, notwithstanding the incessant warnings of the most experienced of the Marine and the population of the country. It is most desirable to preserve this bay from the imminent destruction which threatens it from the sand which has already covered half its extent.

The importance of the port of Dieppe, as we have shewn, has been appreciated by the Chambers; its central position between Boulogne and Havre, nearly in the meridian of Seaford, where a harbour is to be formed by a breakwater of 300 acres in superficies, indicates its importance as a station for our vessels of war, and particularly for our steam vessels. Dieppe will thus become with respect to Seaford what Dunkerque and Boulogne will be with reference to Dover. To render the similitude more complete, besides the basin destined for the reception of the largest steamers, a part of the road, as at Seaford, might be protected by a breakwater, which would afford an excellent anchorage, a place which, according to the character of it in the "Channel Pilot," is so good that anchors, however violent the wind, never come home; —perfect security! If, as is likely to be the case, the road be only

protected by a floating breakwater, it might be flanked by floating batteries, which would protect the town from bombardment, which in every war since 1694, the English have attempted. Dieppe, by its position and by the intrepidity of its seamen, is destined to be of great importance in a war. This place, during the time of Napoleon, was the port of armament and supplies for most of the privateers which did so much mischief to the enemy's commerce.

The ports of St. Vallery and Fecamp are not capable of any other improvements than those which are directed specially to them, but in their neighbourhood there is a maritime position which should receive the most marked attention from a commission. We cannot better describe it than in the terms of the celebrated engineer Lamblardie, who first pointed out its importance. He says—

“To the northward of Cape Antifer the coast affords a place of embarkation which vessels of war might make use of.

“This place is Etretat, a little fishing port at the termination of a valley at the sea about 550 yards wide. The beach at which boats might land, is about twice that in length, forming a bay sheltered from winds from W. round by S. to N.E.

“The ground of this valley, for about 750 yards in length, is several feet below the level of the sea at high water. The whole village of Etretat, in this part of the valley, is only preserved from the sea by a natural dyke, composed of stones thrown up by the surf, and supplied by the two salient points which terminate either side the bay.

“This contains a superficial extent of more than 85,000 yards which never dries. We have ascertained by soundings taken by ourselves in the month of December, 1780, that at 20 fathoms from the shore, a vessel may anchor in three and four fathoms of water. This depth increases with the distance from the shore, so that at two cables' length from it there is eight fathoms at low water. The soundings are inserted on the plan we give of the coast, on which we have inserted the sketch of a project which would fulfil the above conditions with reference to vessels of the state.

“If we were to describe here the whole project, it would be to shew the possibility and prove that in this solitary part of the coast, between the mouth of the Seine and that of the Somme, an establishment might be formed which would contain many ships of the line. By the projecting position of Cape d'Antifer, no wind would be unfavourable for entering the port, and the coast on either side of the Cape trends so as to facilitate its access and egress in either direction.

The importance, especially in war time, of a place like this, should be seen, as it affects the trade of the Channel, and especially that of Havre. We may even say that this project is linked with that of Cherbourg, in considering Etretat, as an advanced post of naval armament, and that which we propose, or any other which might be better, deserves, in many points of view, the attention of commerce and the favour of Government.”

We shall add nothing to statements so remarkable and so clearly set forth by a man of genius, and one whose works are so justly celebrated.

All that we shall say is, that if the coasts of Kent and Sussex afforded a place of so much advantage, it would, long ago, have received the attention of the British Government. We should hope that the project of Lamblardie will not escape the commission which we call for, as it appears to have been completely unknown to the compilers of the *Statistiques des Ports*, of the 2nd May, 1809, who, notwithstanding, piqued themselves on investing with an important notoriety so many miserable creeks of no kind of value.

M. de la Milliere, *Intendant General des Ponts et Chaussées*, in his memoir on his department, presented to the House of Assembly in July 1790, says, that at that time more than twenty different projects for the port of Havre had been successively presented as well by military officers of engineers, as by the engineers of *Ponts et Chaussées*, and by the citizens of the town of Havre. Commissioners of the Academy of Sciences and officers of the *marine*, had been consulted and sent to the place in 1787. The result of all this was a project, which should have been definite, but which is believed to have been singularly modified since then in nearly all its parts. In fact, in 1845, a definite plan is far from being agreed on, and the meeting of several commissions formed of *savans*, seamen, military and civil engineers, has served only to mystify this important question, which, from the hands of the *marine*, where it should have been principally dealt with, is passed to the special management of the military, who will treat it exclusively as a question of fortification, without any regard to the interests of either seamen or commerce. The grounds on which our opinion is formed of this learned corps, are obtained simply, we may even say with candour, from the bill presented by the *Ministre de la Guerre*, on the 13th April, 1844, which we here quote without changing a word:—"If the enemy, unchecked by any kind of reverse, should penetrate into the centre of France, and should find himself in a position to besiege the capital, it would be to his interest to make himself master of Havre, with the view of availing himself of the Seine for the transport of his munitions of war and necessaries of all kinds; and consequently he will not be prevented by any difficulty or loss, from effecting a considerable landing, in order to bring afterwards against Havre, all the necessary apparatus of a regular siege."

We shall leave the reader to appreciate such considerations. It would seem, in truth, that we were living in the ninth century, when the Norman serfs ascended the Seine to the walls of Paris, or at least in the fifteenth century, when Havre did not exist, but when Harfleur was the key of France towards England, when this place was so vigorously attacked, taken in 1415, retaken in 1433, conquered again in 1440, and occupied thirty years by the enemy. But times are altered. Havre is not and never will be the key of France. In reverting to the fatal but much abused hypothesis of an invasion, it would not be by the Seine that the munitions of war, &c., would be conveyed;—it is no longer a desert country covered by forests with a scattered population, but a rich province, highly cultivated, intersected by magnificent roads and railways, peopled by a warlike race, who would have to be conquered

and passed through ; and can it be believed that Havre would be captured for the purpose of travelling over the bodies of a million of Frenchmen ? Science, always too confident in its own resources, does not always respect the principle, that the real strength of a state consists in the courage of its defenders ; and that, as Montesquieu has said, " France never was so weak as when her towns were surrounded by walls."

We have attempted in this essay to shew, that in leaving as has been done and as is yet being done, the works for improving the port of Havre in the hands of the military, is to risk, if not to compromise, the interests of the marine, which are inseparable from those of commerce ! Let us not forget that Havre, now become the port of Paris, from which it is but three or four hours distant, might, and ought, if not to equal, at least to make a near approach in importance, to Liverpool, and that its capabilities must not be checked by a chain of fortifications against improbable and chimerical events. We must remember that Liverpool has nothing more for its defence, for the entrance of the Mersey and for 15,000 ships in its docks, than a simple battery ; and that neither the British Government, nor the corporation of that large metropolis of the commerce of the world, thinks of surrounding their inestimable treasure by walls and cannon to defend them from the landing of an enemy !

Let this commission, instituted and formed like that of the English, invested with the same power and authority to judge, in fact, to decide under the control of the Admiralty, with the sanction of the legislature, on all plans for improvement of defence, which would place Havre in the position it should occupy. In fact, let this important place be extricated from that prolonged state of uncertainty, so dangerous to the great interests of the country. The enclosing of the little roadstead looked for above a century, and proposed incessantly, will indeed give to vessels of war a refuge, and secure anchorage for even the largest draught of water. The piers founded on the bank de l'Eclat* and other banks of the roadstead will become the bases of forts, which will defy the enemy and preserve the place from the reach of his projectiles. Thus France will secure for herself the same object in which England is engaged, the protection of her commerce, her navigation, the increase of her military power, and security from the possibility of bombardment to a place of inestimable importance. Then the projected lines of fortification on the land side may be abandoned, as indeed useless, and as having no other effect than preventing an extension of the place in that direction but with inconvenience, as would now have been proved at Liverpool had such works separated it from Birkenhead, which at this moment is doubling its docks, its naval yards, and buildings. Gravelle and l'Heure are to Havre what Birkenhead was to Liverpool.

Doubtless the necessity is most urgent to provide for the defence of so important a place as Havre : nothing should be in the way of placing this important place beyond the reach of an enemy ; but it is not on the hypothesis of an impossible descent on the coast between Cape Le Heve and Etretat, being surrounded with difficulty and danger, that we should be guarded against ; it is, we do not cease to repeat, to Havre that at all

* An outlying bank forming the little roadstead.

times, every one, both of the military and the marine, with one accord, have agreed we should attend. To complete this work, there is no sacrifice too great, especially when it effects the conversion of this little road into a vast enclosure of two kilometres in extent, thus becoming an annexation of relief to Cherbourg, for the refuge of the fleet. This would be the realization, the completion of the patriotic and royal sentiment which conceived the military establishment, that would most command the respect due to the maritime power of France.

BAY WHALING AND PROGRESS OF MARITIME DISCOVERY.

IMPORTANT new whale fisheries have lately been discovered on the southern coast of Australia, we copy the following from the *Adelaide Observer* :—

Capt. G. G. Irving, of the schooner *Sister*, of Hobart Town, arrived at Port Adelaide, on July 22, from the new fisheries in the western bays of the Province of South Australia, and he has since favoured us with the following report :—

Capt. Shepherd's party of twenty-five men and three boats, had captured, at *Streaky Bay*, three whales, one of which produced sixteen tons of oil ; the three making together an aggregate of forty tons. The *Streaky Bay* party had "sighted" twenty-five whales, but owing to the long prevalence of extremely boisterous weather, they were only able to capture three.

At *Trial Bay*, Mr. Hagen's party had killed three fish, producing twenty-five tons of oil. At this station the provisions had fallen so short, that some of the whalers were subsisting on shell-fish. Capt. Irving describes the entrance into *Trial Bay* (twenty-five miles S.E. of *Streaky Bay*) as accessible enough, although heavy breakers are seen on either hand ; the bay itself affording good anchorage, in which vessels of 200 tons may ride secure from all winds.

During his trip to the westward Capt. Irving made an interesting geographical discovery—that of an island which does not appear in the chart of Flinders, and seems to have escaped the observation of that intrepid navigator.

The newly found island has been named *Sister Island*, by the discoverer, who, during a strong gale from the N.W., took the most accurate bearings and observations possible under the circumstances. *Sister Island* is described as about three miles long, and presenting the appearance of three hummocks. In taking cross bearings for the purpose of ascertaining its relative position, the three hummocks bore N.N.E. Greenly Islands N.N.W., and the *Sister* W.b.S. ; according to which bearings, the position assigned to the new island is seventeen miles south of Greenly Islands.

Judging from subsequent observations, *Sister Island* is visible at a distance of thirty miles, but it is evident, from the chart of Flinders,

that the great navigator took his sights inside Greenly Islands, and then stood in-shore, when the approach of night or foul weather would have prevented his getting a glimpse of the Sister.

It is with the most lively interest we notice the gradual extension of bay whaling, by the capitalists and other experienced persons of South Australia and the Western Colony. A better knowledge of the numerous island groups, as well as the intervening coast-line may, ere long, become conducive to objects of national utility; although they have hitherto been esteemed of little importance to Britain or her southern dependencies.

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes of Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c. by Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Continued from page 31.)

City of Santana.—The city of Tampico or Santana de Tamaulipas (as it is now called) is built on a rising slope of ground, between the river Panuco and the Laguna del Carpintero, and is about five miles by land, and seven by water from the bar. The streets are wide, and laid out at right angles to each other. Although it has been so recently built it has a respectable appearance; in the principal streets there are some very fine houses, built both of brick and stone; many of them in the old Spanish style, with flat roofs, but most of the houses, which have been built within the last few years, or since 1825, are in general roofed with slate or shingle; as the rains are very heavy in the wet season, it is found to keep them much drier, and is less expensive than the flat roofs. There is a small church near the middle of the town of rather a mean appearance; but, another has been in progress of building, close to it, for several years past, and most likely will be several more before it is finished. By the side of the new church is a tower, built in commemoration of the defeat of the Spanish invasion in 1828. In the same square which is near the Mole, (Plaza del Aduana), is a monument erecting in honour of the President Santa Anna. The custom-house is on the north side of the same square.

There are two hospitals here situated at the western part of the town, (one is for the military). To the civil hospital all ships which arrive here have to pay, and any of the crew which may fall sick are received there, but the chief support of it is by the town.

The foreigners have a burying ground just outside the town, walled in; near to which is another for the natives and foreigners who may have been Catholics.

To the east of the town there is a canal which enters the Laguna de Carpintero from the river; the town is much more healthy than it was previous to its being cut, the water, in the dry season, very often nearly all evaporated, and what remained became quite stagnant, the effluvia

from which caused a great deal of sickness, particularly bilious fevers. The canal is crossed by a stone bridge, and on the side opposite the town, a Paseo, or public walk, has been formed, and although but recently built, it is going to decay, and the trees which were planted are nearly destroyed for want of care.

The market, which is near the custom-house wharf, has been for the last few years very well supplied. Beef, of a middling quality, is always to be had. Mutton is rather scarce. The pork is none of the best. Deer is sometimes to be had, and in the winter season wild ducks are very cheap, besides snipes of a large size, and other game. Although a great number of wild geese are to be seen feeding in the lagoons, they are seldom shot, being so very shy. Fowls and turkeys are almost always to be had at a reasonable price, as well as fruits peculiar to the tropics: the oranges are of an excellent flavour. The market is generally well supplied with fish, chiefly mullet and prawns, but the fish which are caught outside the bar are of an excellent quality, but very scarce. Oysters are mostly brought from a lake a few leagues north of the bar; there are plenty in the lake of Pueblo Viejo but they are not good. In the summer season turtle are plentiful about the bar and along the coast, and often come into the river, generally of a large size; I have bought them at a dollar each, weighing from four to five hundred pounds. Tortoises are in immense numbers in the lagoons and also in the river above the town.

Those who are fond of shooting may have plenty of sport by starting early in the morning, along the bank of the river and in the small lagoons, but the best time is immediately after a norther; but in these excursions care should be taken not to catch cold, as it is generally succeeded by a fever.

The population of Santana de Tamaulipas is about 7000.

Pueblo Viejo de Tampico.—Pueblo Viejo (or the Old Town) has fallen off very much, since the privilege of vessels discharging from a foreign port has been discontinued, it being now only a port of entry for the coasting trade. The town is in the state of Vera Cruz, on the borders of the Laguna de Tampico, which is very shallow; the channel from the river is narrow and not of sufficient depth for vessels to enter the lake. The merchandize which has to be landed at Pueblo Viejo, has to be discharged into canoes (from the vessel) of a light draught of water; at low water spring tides, these even cannot get near the town. The greatest number of the houses are built of adobas (bricks dried in the sun), in a straggling manner, forming a kind of street; the few shops in the town are but indifferently stocked, as Santana de Tamaulipas, monopolizes nearly all the trade. The Lake of Tampico is celebrated for its prawns, which are very large, immense quantities of them are caught, and besides supplying the inhabitants, a large quantity is salted and dried, and sent to the interior for sale. The population of Pueblo Viejo is about 1500.

Tampico El Alto.—About five miles to the S.E. of Pueblo Viejo, is the village of Tampico El Alto: it is built over the ridge of hills towards the sea, from which it can be seen; the population is about 100. There

is a feast held here annually, in celebration of an image of Christ (of wood), which is placed over the altar of the church. The following story has been told me respecting the image.

The figure, which is Christ on the Cross, is most abominably ill-carved, and badly turned out of hand, many more respectable figures could be seen (and may now at times) on a Dutch galliot's rudder-head. It is ornamented with a great quantity of tinsel, and the usual accompaniments of red paint to represent blood, with sundry decorations. After it was made it remained at Vera Cruz to be shipped for Tampico by the first vessel. It unfortunately happened that a vessel was on the point of sailing, when the captain was applied to, to take the image on board, but as he had all his cargo shipped, and the ship was fully laden, he was obliged to decline taking it, and not liking to give it a deck passage, it was left behind. The vessel sailed and had a long passage, and when opposite the church of Tampico El Alto (the place of destination of his saintship), a tremendous gale came on, and drove the vessel on shore on the beach, close under the village, and the ship, crew, and cargo, were entirely lost. Another vessel shortly after sailed from Vera Cruz, but the captain having more the fear of the church before his eyes, took the image on board with all becoming respect; he then got his vessel underweigh, when a fair wind sprung up, and in twenty-four hours he arrived safely at Tampico. The image was landed with due ceremony, taken to Tampico El Alto, and installed in due form over the altar. But the most remarkable thing connected with it is, that on the anniversary of the loss of the vessel, the ship and crew make their appearance in the surf where the wreck took place, with the people calling loudly for help. This is still believed in by a number of people.

Panuco.—The town of Panuco is situated on the right bank of the Montezuma, and is about eighty-five miles above Santana de Tamaulipas, by the river. A few years since, a number of vessels loaded here with fustic, but as this branch of commerce has fallen off, and vessels not being at present allowed to go up the river above the place of discharge, Tamaulipas, it has greatly declined in prosperity. Panuco is much more healthy than the city, and nothing near so infested with mosquitos. The population in 1835 was from seven to eight hundred.

River Montezuma.—The river Montezuma, or Tampico as it is sometimes called, between Tamaulipas and Panuco has some very good ranchos along the banks, which produce chiefly maize and sugar cane. There are also a few cattle ranchos, which are well stocked. About fifteen miles above the city the scenery greatly improves, and at Popila, near which are the ruins of an ancient city, it is very interesting. Above Tamaulipas, about seventeen miles, is an establishment for making bricks, carried on by some Americans, which more than supplies the wants of the town.

Vessels drawing more than nine-and-a-half feet water will find much difficulty in navigating this river, as in places it is very shallow, for which see chart of the river in the *Nautical Magazine*, as before mentioned. Very few vessels have proceeded above Panuco, and then only a few leagues. The produce of the country through which it flows is brought

down in canoes. A branch of this river runs through a district where there is an immense bed of coal, but which contains a large quantity of bitumen ; it ignites easily, and when used with a small quantity of wood, throws out a great heat ; it is now made use of by the blacksmiths of Tampico, and no doubt would answer well for steam boats, but the great drawback is that the freight in bringing it down to the city is heavy, as only craft of light draught of water could pass the rapids and shallows which are in this branch of the river. - As the coals lay at and near the surface, the expense of digging it would be trifling, as labour about there is cheap. This bed of coal was discovered by Don Pedro Bartram, on his own Hacienda. Several barrels of it were brought to England to be analyzed, but I am not aware of the result.

River Tamesi.—The Tamesi branches off to the N.W. from the Montezuma or Panuco, immediately above the city of Tamaulipas, its great drawback is the bar which extends across its entrance. The ranchos on this river are said to be better cultivated, and of greater extent than those on the Montezuma below Panuco.

Trade of Tampico.—There is not the least doubt but Tampico would be a flourishing port if there was a fixed government, and more energy in the native inhabitants, who are jealous of any innovations to their established customs, and look upon the proposers with suspicion. There is an immense number of cattle raised, both in the States of Tamaulipas and Vera Cruz, at no great distance from the port. The exports of hides, tallow, bones, jerked beef, and also cattle, could be great. The sugar cane grows to great perfection, and would be cultivated to a great extent. There are several kinds of timber of beautiful grain for furniture, also medicinal plants and dye woods, which are now entirely neglected (with the exception of the fustic), and most probably will remain so until the country is in a more settled state, and industry more protected from indirect imposts.

The Laguna de Tamiagua is divided from the Laguna de Tampico by a neck of land, over which is the main road from Pueblo Viejo to the city of Mexico. From Tampico El Alto the road takes a descent towards S.E., and at about a league from it are a few houses. This is the place of embarkation on the north shore of the lake of Tamiague, which is a beautiful sheet of water, and of great extent. The eastern side of the lake is divided from the Gulf of Mexico by a narrow strip of sand hills covered mostly with low brush wood, and in many places with lofty trees : its breadth across varies from half a mile to a league, from this side of the lake for a great distance. The land on the western side of the lake cannot be seen, being below the horizon. Near the town of Tamiague the lake contracts in its width, and the western shore begins to show itself. The water is quite fresh and clear, abounding in fish and alligators, and in the season of the norths an immense number of geese, ducks, snipe, and other game ; as we passed along shore we saw a number of deer. The Ramivex, which lays about half way along the lake, and about two leagues from the eastern shore, had a beautiful appearance as the day broke, the lofty trees with which it is covered were reflected on the lake, which appeared like a sheet of glass, the centre of

the island being the highest part, added to the effect. My canoe-men informed me that there are a great quantity of deer on it, and also on the other islands which are farther to the westward, and that they have often seen them swimming to and from the main land. The wind raises the sea very quickly, and canoes are often lost in crossing the lake if caught in a norther or a strong sea breeze, both of which we experienced before we were out of it.

The vessel I commanded lay at Tampico, but as there was a cargo ready for us at Tuspan, it was deemed advisable to ascertain what water there was on the bar before taking the vessel there, as she might not be able to cross it. For this purpose I left Tampico in the evening, and about midnight had engaged a canoe with two men, at the head of the lake of Tamaiaque, to take me to Tuspan. We started with a light land breeze, and towards morning it died away to a calm. At about seven o'clock in the morning we stopped at a rancho, being the only one between our place of embarkation and the bar of Tamquijo, where we procured a supply of milk, *tasajo*, and Tortillas, as we were short of supplies when we started. The person who was the owner of this rancho is also proprietor of the greatest part of the land on the eastern borders of the lake; he cultivates a small piece of ground which may raise sufficient maize, &c. for the use of his family and a few fowls; it is nearly a cattle rancho, he has a great number on it. This large tract of land, I was informed only cost him 1,500 dollars.

(To be continued.)

SCHOOLS OF HYDROGRAPHY IN FRANCE.

By an order dated 8th December, professors of the fourth class in Hydrography were appointed:—

M. M. Dardigne to Sables d'Olonne; Chevreaux to Quimper; Dr. Grainville to Martiques; Vincendon Dumoulin to Saint Valery sur Somme; Darras to Belle Isle; Berroit to Ajaccio.

The chief organs of the press have already entertained their readers with the account of the open meeting of the last month for the nomination to six vacancies for professors of hydrography. On this subject, it has been with regret that we have observed how ill-informed our principal journals are on maritime affairs. Thus, in the present number, the *Constitutionnel* bitterly criticises the minister of marine for submitting to the royal signature the nomination of these professors, as an innovation, while a royal ordinance dated in 1836, imperatively exacts, as a guarantee of the efficiency of the professors, that henceforth they should be appointed by the royal decision. *La Semaine*, No. 14, goes further, considering, like the *Constitutionnel*, the royal order as a vexatious innovation, and casts its reproaches on M. de Salvandy. Lastly, the article of *La Semaine* in which the name of the minister of public instruction is clumsily brought in, notices more strongly than all, that we could say the strange anomaly, that in a country like France, which stands second in the rank of maritime powers among the higher branches of learning, there is no chair of the professor of navigation. At the College of France, at Sorbonne, are to be found professors of every language, every science, excepting navigation, as if the study of Malay or Javanese, for instance, was

more important for a maritime people than that of astronomy, applied to navigation.

The minister of marine possesses a scientific establishment in his office of charts and plans, containing his instruments as well as charts, his nautical instructions, all his accounts of voyages published, often with useless luxuriance, and in all cases superfluous for the purposes to which they should be devoted.

We have already alluded to the present ill-condition of this useful establishment. We may simply state that the *Depot de la Marine* has no observatory for affording practice in the instruments, or even for the trial of those sold by the makers. Moreover, there is no professor there, nor place where instruction can be given to the young pupils which the Polytechnic School sends to make hydrographical engineers.

Would a course of navigation, to serve as a model for those of the schools of hydrography at our ports, by one of the engineers of the *Depot de la Marine* be so expensive, when it is so necessary, and for our young hydrographical surveyors, and for our officers who are always numerous and temporarily attached to that establishment, and in fact, to scatter among us a little of the science fit for the navy, by imparting a taste for it; this, indeed, would be the way to obtain a caste of naval officers, which would raise our maritime force to the position which it ought to occupy. There should subsist between the general *Depot de la Marine* and the schools of hydrography indispensable fundamental bonds for the good of the service, and for the general unity of administration. An infusion of the corps of hydrographical engineers among the professors of hydrography is not only possible but necessary, the very nature of the profession demands it by the similarity of their labours, in fact, for the interest of the two corps destined to render important services to the state. The corps of hydrographical engineers is established, its mode of preserving its complement is excellent, and it wants nothing more than a school for practice, which, if its principals knew the real interests of the students, they would have established long ago, instead of remaining as they are with a culpable apathy. Our hydrographical schools require to be entirely remodelled. Our system of admitting professors is bad. The law by which they are regulated is made with the view of a shameful speculation, and for the profit of the persons placed at their head. Are the examinations required to be undergone by these youths, to qualify them for the rank of captain sufficiently severe? No! And what is the result? It is that our royal navy is deprived every year of a number of youths, who, admitted to the rank of officers in the commercial navy, renounce the service, because they cannot or will not serve as seamen, and can get no command. In fact, the system is destructive, and we call the attention of the minister to the numerous abuses which it introduces.—*La Flotte.*

BOTTLE PAPERS.

Terebratula Cove, No. 4640 fms. crl. Bank tail.

MR. EDITOR,—Having been somewhat alarmed by a jingling noise, something between copper and glass, I came to the surface for a blow, when I stumbled on one of your volumes about Bottle Charts. What a precious fuss about nothing. One man asserts that he used copper cylinders—he never told you how they were constructed—he said nothing about *any other* metal. Another party, to shew how much he knows of the matter, asserts that owing to the galvanic action between *two* metals that they could not exist. Let me have a finger in the pie.

1st. For the credit of the intellects of the Royal Society, who doubtless furnished these identical cylinders, let it be imagined that they were "wide awake," and did know what they were about.

2nd. Supposing they did not, they might have taken the advice of any plumber who uses gun-re balls for salt-water pipes, and he would inform them that these "wind-and-water balls" last for years. Why? Because they are properly constructed. Or even taking the question at a disadvantage, ask Mr. Massey how many years his cylinders to his patent logs, have been known to stand rapid *revolutions*? Again, ask the French *çavans* how they constructed theirs.

But if all these should fail, let me, as a tinker, tell you, that it is very easy to make entire air-tight copper cylinders *without solder*; and as those alluded to by Sir J. Ross were not intended to descend and resist the pressure where I live ($\frac{1}{100}$), and where his opponents have allotted them to go, (*thanks*, if they had not been the baser metal), they were well adapted to the service intended.

You fancy that I have done, do you? you are rather mistaken.

I would have you to know that we have a very *Blue Nautical* in our place, and that we take in the *Periodicals* that come down *unsoldered*.

In our debating society Professor Bottlenose lays it down, "that some of you above, seem to have but a smattering of Natural Philosophy." He thinks, "that in order to produce the galvanic action, some of you talk about, that you had better come to *Davy's* locker, and learn;" that before the power can be produced, *two* metals must be brought into contact, one of which, viz., the most oxidizable must suffer for being in contact with a bad character, or one who can annihilate him.

Now, suppose Mr. Copper should find an obliging friend in the shape of Spelter, to amalgamate with him; which is the most oxidizable metal? I must not divulge some of the secrets we know about protecting iron with zinc—that, we keep *boiled*—but all I would advise those who are so desperately forward in finding fault with what Sir J. Ross advances, is this—Recollect that all the (copper) measures you condemn were well weighed and considered by the Davys, Davies, Gilberts, Brandes, and other great men of that day, and they were not shallow pretenders in philosophy.

Let me now, Mr. Editor, give you my humble advice; I have had my Bottle day too.

If you want unobjectionable cylinders have them cast and turned, the bottoms *cast* in them. Let the top screw on, and be of a sufficient weight to cant it "*muzzle downwards*," and cause it to float vertically—thus preventing the egress of air. Let the cap have a *lanyard* three or four feet in length, to prevent its being driven by the breeze, and your cylinder will do its duty, whoever may sneer at the galvanic action.

If you use bottles, prepare them, by clothing them in canvas, paint them white, with black letters outside, and they will not easily break, give them a lanyard of six feet and a musket-ball. *You know* this has answered.

Further, if your skeleton papers are printed, remind your friends that ink is soon obliterated, and good strong pencil marks will last, should such bottles, by cracking, admit water. If you have a surgeon on board, roll your papers in adhesive plaster, or dip them in resin. If you attend to these matters, my youngers (bottle imps?) will look out for your bottles. Tell your antagonist writers to bottle off their spleen (or steam) and let us go on peaceably.

Yours,

Jusqu' au fond de banc,

PHYSETER BOTTLENOSE.

P.S.—If any of them answer this, send me a *line* to reach me in 1856, to my direction, 4640—crl.

NAUTICAL NOTICES.

NEW LIGHT AT TRINCOMALEE.—Notice is hereby given that a new light was exhibited at the Flag-Staff Point, Trincomalee, on the night of the 1st Oct. 1845, and will be continued every night from sunset until daylight.

The lantern having a fixed light with two powerful reflectors, when hoisted is 206 feet above the level of the sea. The light can be seen fifteen miles off from any bearing between Pigeon Island and Foul Point, comprehending an angle of 140 degrees. The following remarks are published for general information :—

| | |
|---|---------------|
| Latitude of the Light | 8° 35' 38" N. |
| Longitude East of Madras Flag-Staff | 0 58 22 E. |
| Longitude from Greenwich | 81 14 52 E. |
| Variation of the Compass | 0 59 37 E. |

Foul Point bears from the light S. 55° E., distant five miles and a half, and the extreme of the reef off that point S. 60° E. nearly five miles.

Ships coming from the S.E. with a fair wind at night, and having made the light, should on no account, in passing Foul Point, bring the light to bear to the northward of W.N.W., that bearing will take a ship more than half a mile to the northward of the reef, and in not less than fourteen fathoms water.

If it is intended to anchor in Back Bay (which ships may safely do between the middle of March and the 25th Oct.), and having brought the light to bear W.N.W., they may steer directly for it, rounding Flag-Staff Point close (the point being steep to), and anchor in ten fathoms water, with the light bearing S.b.E. Small vessels may anchor in six or seven fathoms water, with the light bearing S.E.b.E.

From the light the outside visible rock off Pigeon Island, distant about nine miles, is in a direct line with Elizabeth Point, bearing N. 15° W.

Ships coming from the northward and wishing to anchor in Back Bay should be cautious not to bring the light to bear to the westward of south, that bearing will lead two miles to the eastward of Pigeon Island, and nearly a mile to the eastward of the Lively Rocks. These rocks lie half a mile to the eastward of Elizabeth Point, having four fathoms water close to.

When quite sure of being to the southward of the Lively Rocks, ships may bring the light to bear S.b.E. and anchor as before directed.

After the 25th Oct. the anchorage in Back Bay is not safe until the middle of March, as there is frequently towards the end of October, before the N.E. monsoon sets in, a heavy swell with light variable winds.

Ships should not attempt the inner harbour during the night, except under the most favourable circumstances, such as good moonlight, and having a person on board possessing a local knowledge of the harbour and the entrance to it.

In such a case, and being abreast of Flag-Staff Point the light kept N.N.W. & W. will lead clear of the Chapel Rocks. The extreme rock, which is under water, bears from the light S. 10° E. distant two miles.

(Signed) JOSEPH HIGGS,
Master Attendant.

Master Attendant's Office,
Trincomalee, 10th Oct. 1845.

STRAIT OF SINGAPORE.—*South Channel.*—*Another Shoal.*—The following magnetic bearings give the position of a shoal of two-and-three-quarters fathoms, about two miles from the shore of Bintang Island, on the South

Channel of the Strait of Singapore. We find them published in the *Canton Register* of the 21st Oct., by request of Rear Admiral Sir Thomas Cochrane:—

| | |
|--|-----------|
| N.E. extreme of Bintang Island | S. 89° E. |
| Little Bintang Hill | S. 13 E. |
| Barburit Hill | N. 55 W. |
| Pedra Branca | N. 16 W. |

Soundings two-and-three-quarters fathoms at low water spring tides.

This shoal has been recently discovered, and is in the direct route of ships passing through the South Channel.

ENTRANCE OF THE TAGUS.—A communication dated 12th Dec. has been received at the Admiralty, from Lisbon, announcing the intention of the Portuguese Government to buoy the channel across the bar of the Tagus, and to station life-boats at Paço dos Arcos and Teafaria, completed with the necessary gear and manned with hardy fishermen. These measures were to be adopted as soon as the weather would permit; the buoys had been obtained from this country, and two vessels were to be purposely built for this service, of the size and description of those in use at Oporto.

DANGERS OFF THE TINGY ISLANDS.

The following may be of use to vessels which may find themselves in the vicinity of the Tingy Islands on the eastern shore of the Malay Peninsula. But they must be cautious how they approach a group of islands of which the best chart gives but a sorry account.

The following remarks by Capt. Ross of the E. I. Company's steam vessel *Phlegethon*, are published for the information of masters of vessels and others:—

The Hon. E. I. C. steam vessel *Phlegethon* anchored off the S.W. part of Pulo Tingy on the 14th Aug. 1845, found both the watering-places had dried up. On the following day anchored off the west side of the High Island bearing N.N.W. from Pulo Tingy and distant about five miles and a half, landed and found three springs of clear fresh water, the principal one being on the N.W. point of the island, and to the southward of a small patch of mangrove jungle. The following bearings were taken from the *Phlegethon*, at anchor, by azimuth compass—

| | |
|-----------------------------------|----------------------|
| Extremes of the island | N.½E. to S.E.b.S.½S. |
| The best watering-place | N.N.E.½E. |
| Two smaller ditto | N.E.b.E. and E.N.E. |

I found regular good soundings between this island and the mainland, there being eight and a half fathoms (mud) in mid-channel, decreasing gradually to the eastward and westward into five fathoms sandy bottom.

There are two dangers which I have not seen marked in any of the charts in general use. One is a rock above water with small detached rocks round it. It bears from the High Island, where I found the fresh water above described, E.½S., distant about two miles.

The other is a reef of rocks off the north part of Pulo Tingy distant about one mile and having deep water between it and the Coral that lines the beach. This reef is visible only at low water spring tides in fine weather, but has heavy breakers on it in the N.E. monsoon.

R. S. ROSS, *Commander.*

(True Copy) T. CHURCH, *Resident Councillor.*

Singapore, 1st Sept., 1845.

COALING AT MADEIRA.—*Extract of a Letter from Com. Denham, Avon, Funchal Roads, dated Nov. 24, 1845.*—The berth which we have taken up, and which has given the Coal Contractor, Mr. Taylor, as much satisfaction and facility as we could wish, may be thus expressed:—

“The Loo Rock and western land locking bearing W.b.N. $\frac{1}{2}$ N. mag., and the Old Pillar on the beach in one with the square Church Tower, bearing N.b.E. $\frac{1}{2}$ E. mag.”

[The foregoing, it will be seen, has reference to the letter in page 600, of our last volume.—Ed.]

Trinity House, London, 24th December, 1845.

MAPLIN SPIT.—Notice is hereby given, that the Maplin Spit having grown up, a black buoy has been placed thereon, in 2 $\frac{1}{2}$ fathoms at low water spring tides, and rather more than one cable's length from the light house, with the following mark and compass bearings, viz.—

The Swin Middle Light Vessel, open to the S.E. of
the Maplin Light House, the breadth of the piles
of that Light House, bearing . . .

Maplin Buoy N.E. $\frac{1}{2}$ E

West Barrow Buoy W. $\frac{1}{2}$ S.

Mouse Light Vessel S.W. $\frac{1}{2}$ S.

. S.W.b.W. $\frac{1}{2}$ W.

N.B.—Masters of vessels, pilots, and others, are hereby cautioned against attempting to pass between the buoy and the light house.

By Order,

J. HERBERT, *Secretary.*

LIGHT AT SAN JUAN, PORTO RICO.—*Extract of a Letter from the Admiralty Agent, dated, Contract Steam-Vessel, Dee, at Sea, 18th Jan. 1846.*—A light-house has been erected on the Morro of St. Juan, Porto Rico, which will commence shewing a revolving light from the 1st inst. The Spanish brig, Havana, put to sea on the 23rd ult. for the purpose of ascertaining its effect, and the commander of that vessel reports that he could see it distinctly at the distance of twenty-one miles.

I have, &c.

W. D. MILLER, Lieut. R.N.,
Admiralty Agent.

SHIP VISITING AT SEA.

We quote the following from the *Shipping Gazette*, with the view of assisting the writer in exposing such proceedings and preventing them hereafter. We trust that the Passing Certificate will put an end to this kind of work if justice does not reach the perpetrators of it.

Colombo, Nov. 19, 1845.

SIR.—As a passenger on board the *Arabia*, from London to Ceylon, I should consider myself guilty of neglect of duty were I to omit noticing, in some public manner, a circumstance which occurred during the passage, and which may be placed in a different point of view by the parties concerned—a circumstance tending to throw a little light on the value some men set on human life at sea; and as your valuable paper is always open for the noticing and rectifying of abuses connected with the shipping interest and seafaring population, I consider it the proper channel through which to make my communication. On the 7th of October last, in lat. 39° 56' S., lon. 35° 40' E., we came up with the ship *Good Hope*, of London, Mr. Carphin, from London for Bombay. After mutual salutations, and questions asked and answered, through the speaking trumpet, by the two commanders, regarding the weather

each had had, &c., Mr. Carphin invited our master on board the Good Hope, which invitation Mr. Johnson accepted, taking with him, in his own boat, four of the passengers. Two of these returned with our master at a quarter past 10, and the other two with Mr. Carphin, in the Good Hope's boat, at half-past 10 P.M. I stop not here to inquire how far Mr. Johnston was justified in leaving his ship just as it was getting dark, and remaining so long on board the other vessel, when he wanted nothing; and had as much wind as he could carry, and while, moreover, he was required to shorten sail in order to keep the other company. But if this was excusable in him, on the plea of so few chances presenting themselves of intercourse at sea, it was certainly, to say the least, highly culpable in the master of the Good Hope to return the visit at such an unseasonable hour, and on such a dark night, and with a breeze freshening into a gale; and the fault was increased tenfold by his remaining on board till past midnight, without the least apparent concern for his own ship or his boat's crew, two of whom he left towing at the Arabia's stern, in a boat which it would have been highly dangerous to step heavily into: nor was he even induced to come on deck till the cry had for some time been ringing in his ears "that his boat was sinking, and a man overboard," which he denied with oaths and curses. It was about a quarter past twelve when the boat was first discovered to be in a perilous state, or rather when the alarm was given she was so. About this time two voices were heard calling out, "Back your mainyard, lay your mainyard to the-mast," &c. But for some time the cries were thought to proceed from the other ship, and our chief mate, the officer then on the watch, kept bawling out through a speaking trumpet, to know what they wanted, till the cries were heard getting louder, and were now, "For God's sake back your mainyard, or we shall be drowned! The boat is sinking," &c. The true state of the case now became apparent to those on board, and one of the men belonging to the Good Hope's boat, without waiting for orders, where all was confusion, let go the braces, and allowed the mainyard to swing to the mast. The boat, or what remained of it, was then hauled on board, and the remaining man brought on board in a state of almost total insensibility, and with one of his fingers broken, which was accidentally done while being dragged up the ship's side. The other poor fellow was carried away by the waves, and was seen no more. The account given me afterwards by the man who was saved, runs thus:—The bow of the boat, slender and rotten, offered but a feeble resistance to the dashing waves, augmented in force by the speed which the ship was making at the time—notwithstanding her shortened sail, from eight to nine knots per hour—certainly not a very enviable berth for men in the *best boat* towing at her stern. Nevertheless, they did not "sing out," till they found a hole was knocked in her bows. The man saved then seized hold of the bow rope, but had not presence of mind immediately to desire his companion to come and do the same. Now the water rushed through her, and the boat was towed under to a depth of, as he supposes, six feet. As he was being drawn down, he thought he heard his shipmate give a scream, and when he came up he looked round, but could not see him. What followed is already stated. It is proper to pass a remark here on the conduct of Mr. Carphin at this critical juncture. When first told by the steward of the Arabia, who went down to the cabin for the express purpose, that his boat was filling with water, he fiercely replied, "Let her fill then, and be —;" and when told, as the survivor was hoisted over the side, that one of his men was overboard, "No," said he, "there's not a man overboard—there is not half a man overboard." "There is a boy, then," said our carpenter. "No," again replied the brutal master, "there is not half a boy overboard;" accompanied with sundry curses, and other such polite expressions as d—d coward, d—d soldier, d—d son of a sea-b—h, &c., being the choicest selections from his vocabulary with which

he generally honoured his men. The lad was an excellent swimmer, and it is believed had made towards the Good Hope, as the men reported next morning that they heard him call to them to throw him a rope, which they say they did, but having missed it, he soon drifted past, and they had no boat which they could launch to save him. Their only other pinnace was so bad, that when they last had her out, two men were kept constantly baling, and they required no plug-hole to let the water run out; to do this they had only to hoist her up, and it escaped through the seams. The wreck of the broken boat, when examined next day on board our ship, was found to be a perfect rag in thickness, and thoroughly rotten withal; such a craft, in fact, as I would be unwilling to venture across a loch in. What an agreeable reflection must the owner of this vessel have, for sending a ship to sea with such unseaworthy boats, and what ingenuity must he exert to absolve himself entirely from all share in the blame! Nor can I exculpate altogether our chief mate, as, had he launched the boat at the time, as some of the most experienced sailors proposed, and which could have been easily done, there would have been a chance, at least, of saving the life. True, the ship's head was put about, and lights were kept burning; but what chance did that afford? How hard was the case—how long and laborious must have been his struggles—and what the poor fellow's feelings, to think he must drown while two ships were so near! The Arabia was laid to till morning, when Mr. Carphin, *a little sobered by a few hours sleep, was sent on board his own ship.* The whole seems to have been a mismanaged and unfortunate affair, and the end of it shows how little value is placed on a man's life at sea. A few regrets by his comrades, a few momentary ejaculations, a few sighs; poor fellow, he's gone; his virtues extolled, his vices forgotten, and all is over. He is heard of no more, and all move on as was their wont.

The lad who was drowned was named Edward Parr, aged eighteen, and belonged to Liverpool. The man saved was Augustus Wambey, belonged to Worcester; the two others of the boat's crew were Philip Hawkins and Richard Carbey. These, I believe, will be ready, if required, together with the other passengers, to vouch for the accuracy of the above statements. More might be added touching this affair, but for the present I forbear, leaving the above remarks for you and your intelligent readers to draw your own conclusions from.

I am, &c.,

OBSERVER.

*To the Editor of the Shipping
and Mercantile Gazette.*

UNIVERSAL CODE OF SIGNALS ON THE COAST FOR THE GUIDANCE OF VESSELS IN DISTRESS.

A resident at Boscastle has addressed a letter to Lloyd's upon the subject of the want of a uniform code of signals on the coast of England for the guidance of vessels in distress, and refers to the loss of the William and Ann, of North Shields, at Mullock, in Bude-bay, on the 20th ult., as one instance out of many that had come under his notice, where the want of a recognized system had misled the vessel to destruction and to severe loss of life. Mr. Langford, the writer referred to, inquires "whether some uniform signal could not be devised whereby vessels in distress and disabled on a lee shore might understand whether the place where such signal is exhibited, is a place where lives could be saved, or a place to be avoided." In the instance of the William and Ann she was running for Crackington Haven, but, upon a fire being lighted on the beach, she hauled her wind; another fire was made

a few miles to the eastward with the same result, the crew considering the fires a signal to keep off, and she, in consequence, went ashore soon after; master and six of the crew drowned, two only saved. The mate stated that in the north of England, a fire is understood as a beacon to keep off, but a flag or colour of some sort, as a place to run for. The loss of this vessel, therefore, is ascribable to the misinterpretation of the signals used on the occasion, and the directly opposite meaning of the same signals upon two parts of the English coast. It is remarkable, however, that a fire should have been lighted in the day-time, when the vessel was in a direct course for a safe harbour.

The want of an efficient and uniform code of signals in cases of a similar kind has long been felt, and the danger attending the present variety of plans calls for reform.

The Committee of Lloyd's, so far back as 1821, had the subject under their notice, so far as respects vessels, and they recommended by public notice that all vessels should be supplied with rockets and blue-lights, and in case of distress to fire a rocket in the first instance, and then burn blue-lights until relieved. The Committee of the Shipowners' Society, in concurrence with Lloyd's, issued a notice recommending, in the strongest manner, that vessels should be provided with a dozen rockets and three blue lights, to be used in the manner before noticed.

The establishment of a universal code of distress signals for the coast appears to rest with the Coast Guard Service.

[The sooner this question is set at rest the better. A uniformity of signals, with their real meaning, should be at once decided on and published through every available channel. We should have interpreted the fire as a signal to approach, but we might have been wrong in so doing.—*Ed. N. M.*]

THE CAPE VERD ISLANDS.—CAUTION.

Portuguese Consulate General, 5, Jeffery's Square, Jan. 19.

SIR,—I beg to acquaint you, for the information and guidance of merchants and captains, &c., in general, that I have this day received a communication from Her Most Faithful Majesty's Government, dated Lisbon, the 9th inst., advising me that a malignant and contagious disorder had made its appearance at "Boa Vista," and "St. Nicholas," two of the Cape Verd Islands, and that the most efficacious measures and precautions were being taken to prevent the spreading of the contagion, of a typhoid nature, and supposed to be the yellow fever. And that the whole of the ports of Portugal, together with the Azores, or Western, and Madeira Islands, were closed against all vessels arriving from, or having in any way communication with, the Cape Verd Islands, with the exception of the port of Lisbon, as the only place with an appropriate lazaretto, and where such vessels were to be sent and admitted to perform quarantine.

I have the honour to be, Sir, your most obedient servant,

F. J. VANZELLE, *Consul-General of Portugal.*

To W. Dobson, Esq., Secretary, Lloyd's.

RODGER'S ANCHORS.

IN our last number we observed that nearly every day brings fresh proof of the high merits of Rodger's Anchors, confirming our own opinion of them, long since repeatedly expressed. We have now to add another

to the testimonials we have recorded of them, and which coming from so high an authority as that of Captain Lockyer, in command of one of Her Majesty's ships of ninety guns, is an assurance of their value to the largest, as well as to other ships, that must be gratifying to the inventor. We have also added to the letter of Captain Lockyer, two others from Mr. Northcote, Master of the *Albion*, who is well known to many of our readers.

H.M.S. Albion,
Plymouth Sound, 15th Jan. 1846.

SIR,—I am in justice bound to state that, I have found your anchor supplied to this ship, has proved itself to be much superior to any other I have met with; it takes hold of the ground very quick, and with a shorter scope of cable than anchors generally.

I have also found on heaving the anchor up, that both flukes had been buried in the mud, whereas the Admiralty anchor has not been so in the same ground; and in weighing your anchor, it breaks out of the ground easy when up and down.

I have had several good trials of holding in gales of wind with your anchor, and it has never once started, though the greatest quantity of cable out on these occasions, has been seventy-two fathoms.

Further, I shall have no objection to your making this note public.

I am, Sir,

Your obedient servant,

To Lieut. Rodger, R.N.

NICH^s. LOCKYER.

H.M.S. Albion,
Plymouth Sound, 21st Jan. 1846.

MY DEAR SIR,—I am obliged by your sending my note of the 7th for perusal; I see nothing in it that I can object to being made public, and therefore return it to you without any alteration. I hope you may get favourable reports of your anchor from the *Superb*. I feel satisfied that no anchor will bite so quick, hold so well, and break out of the ground so easy as yours.

Believe me,

Yours, faithfully,

To Lieut. Rodger, R.N.

S. G. J. NORTHCOTE.

H.M.S. Albion,
Plymouth Sound, 7th Jan. 1846.

MY DEAR SIR,—I have much pleasure in complying with your request respecting the behaviour of your anchor, which we have now had twelve months trial of; and I must say I never met with an anchor that was so easily worked, and held on so well with a short scope of cable.

We have rode out all the hard gales during the last month by it, with only seventy fathoms of cable, and I am sure it has not started an inch.

In our yearly report to the Admiralty, we have stated "that it answers better than any other." This we are fully satisfied of, and I earnestly wish you may succeed in getting orders to make for the larger ships.

Believe me, my dear Sir,

Yours truly,

To Lieut. Rodger, R.N.

S. G. J. NORTHCOTE,

ROYAL NAVAL BENEVOLENT SOCIETY.

THE following statement shows the amount of relief voted in sums from £5 to £25, at the Thatched House, St. James's Street, on Monday the 19th January, last:—

| | | |
|----|--|-----|
| 1 | Flag Officers—their Orphans | £5 |
| 9 | { Captains } their Widows and Orphans, &c. | 79 |
| | { Commanders } | |
| 26 | Lieutenants ditto ditto | 186 |
| 9 | Masters ditto ditto | 55 |
| 4 | Surgeons ditto ditto | 23 |
| 13 | Paymasters and Pursers ditto | 92 |

Total 62

£440

COMMANDER W. H. DICKSON, *Secretary.*

ANNUAL SUBSCRIPTIONS.

Flag Officers, 1, 2, and 3 *Guineas.*Captains, &c., *Half a Guinea.*Ward-room Officers, *Five Shillings.*

LIFE SUBSCRIPTIONS.

Flag Officers, *Twenty Pounds.*Captains, &c., *Ten Pounds.*Ward-room Officers, *Five Pounds.*OFFICE, 18, *Adam Street, Adelphi.*

WRECKS OF BRITISH SHIPPING.

(cs crew saved. ed crew drowned.)

| Vessels' Names, | Belong to. | Masters. | From. | To. | Where. | When. |
|-----------------|-----------------|-----------|---------------|-------------|--------------|--------------|
| Abeona | New Ross | supposed | wreck washe | d on shore | Hartland P. | Nov. 24. |
| Active | Belfast | | Whitehaven | Belfast | off Donaghd | Nov. 29 cs |
| Admiral Nelson | iron schooner | Cole | London | Newcastle | North Sea | Dec. 1. |
| Ann Kennedy | | | Buenos Ayrs | | Recolita | Sept. 26. |
| Ann | 5 Dundee | | seen sinking | off | Lindesaes | Oct. 21. |
| Ann | | Hall | | | Domesness | Nov. 28. |
| Ann | | Crossman | Quebec | Plymouth | R. Ouelle | Nov. 5. cs |
| Blake | Liverpool | passed | waterlogged | abandoned | 46°N. 49°W. | Nov. 15. |
| Breakwater | | Huddert | | Marryport | Caselthorn | Nov. 23. cd |
| Britons' Queen | 10 Newcastle | Smith | Liverpool | | Flat I. | Sept. 23. cs |
| British Queen | | Griffiths | Halfax | | C. Ardrosan | Nov. |
| Cambridge | | Brown | Honduras | London | | Oct. 28. |
| Concordia | Teignmouth | Perryman | Teignmouth | run foul of | off Dudgeon | Oct. 30. cs |
| Dynamene | Liverpool | | | | Cess R. | Sept. 13. cs |
| Ellen | 15 Whitby | | Stockton | London | Sizewell B. | Nov. 7. cs |
| Ellen | | Ross | Liverpool | Madeira | Victoria Bar | Dec. 2. cs |
| Eliza Ann | | Clark | Quebec | Cork | C. Chat | Oct. 30. cs |
| Force | | Samson | Nantes | Cette | Portugal | Oct. 24. |
| Gaspe Packet | | Brulet | Richebuto | Quebec | Red I. reef | Nov. |
| Harrison | 20 London | Smyson | seen abando | ned in | 46°N. 45°W. | Oct. 31. cs |
| Hero | | Patrick | Riga | Dundee | Frazerburg | Nov. 6. cs |
| J. Eldale | Newcastle | Jackson | Quebec | London | Gilstone R. | Dec. 1. cs |
| John Frederick | Whitby | Ord | run foul of & | sunb by | Elizabeth | Nov. 30. cs |
| John and Fred, | Sunderland | | | abandoned | off Aldboro' | Oct. 30. |
| Lara | 25 | Rodrick | Newcastle | Galway | Mutton I. | Nov. 20. |
| Lord Wenlock | Hull | Wilburn | London | Petersburg | Stonescar | Oct. 25. cs |
| Lowland Lass | Newcastle | | Newcastle | Honfleur | run foul | Nov. 25. cs |
| Margery | Dundee | Simpson | Shields | Dundee | F. ImmaulH | Dec. 7. |
| Mary | | Howell | London | St. Andrews | C. America | Nov. 5. |
| Mayflower | 30 | McCabe | | Ardglass | C. Ireland | Oct. 19. cs |
| Olive Branch | | | | | Porthcawl | |
| Pride | Perth | Pryde | London | Westport | Erris coast | Nov. 29. |
| Stanley | | Wiggin | Savanille | Liverpool | Dedar Cays | Oct. |
| Symmetry | Sunderland | Chudleigh | Peterburg | Hull | Salto reef | Nov. 13. |
| Virgin Lass | 35 St. Johns N. | | Sydney | Boston | | Nov. 31. cs |
| Vulcan | | | | | Flinders I. | June 23. |
| Williams | Newcastle | | | Arbroath | Tay | Nov. 28. cd |

4—Run on shore in a sinking state, supposed to have struck on her anchor.

3—Abandoned on her beam ends, crew picked up by George & Elizabeth of Sunderland.

12—After being capsized in a hurricane and three of the crew and three passengers drowned.

16—Part of materials washed on shore between Formby and Southport December 4.

27—In contact with the brig William Welsh, of Kincardine, the former foundered.

| Vessels' Names. | Belong to. | Masters. | From. | To. | Where. | When. |
|-----------------|---------------|-----------|------------|--------------|---------------|--------------|
| Agenoria | 38 S. Shields | | | | Scarboro | Dec. 12, cs |
| Albion | Brixham | | | | Off Bideford | Dec. 23, cd |
| Amity | 40 | | | | Flinders I. | June 17, |
| Ann | Sunderland | Phillips | Sunderland | Rouen | abandoned | Dec. 6, cs |
| Bellona | Jersey | | | | C. Norway | Dec. 12, |
| Belle | | Thompson | Drogheda | Preston | Ribble R. | Dec. 16, cs |
| Calypso | | Allen | | | Gr. Manan | Nov. 23, cs |
| Cambell | 45 | | | | Off Redcar | Dec. 7, cs |
| Commerce | Stockton | Lister | Jersey | Rio | 42° N. 16° W | Dec. 21, cd |
| Countess Wilton | | Bowles | Tees | Dundee | Off Redcar | Dec. 21, cd |
| Dorothea | | | | | Tahiti | July 23, |
| Eliz. Atkinson | Atkinson | Meldrum | Quebec | Hull | Manicougan | Nov. 1, cs |
| Elizabeth | 50 | Fray | Newcastle | Stettin | Baugart | Dec. 3, cs |
| European | Glasgow | McBride | Quebec | Glasgow | St. Lawrence | Nov. 4, 3d |
| Franklin | | Friend | Bahia | Liverpool | Anglesea | Dec. 18, cs |
| Hiram | | Flockhart | Wallace | Cork | P. Edward I. | Dec. 9, |
| Idea | Limerick | | | | Hasboro S. | Dec. 28, |
| Isabella | 55 | Riches | L. Crean | Sunderland | Dunnet S. | Dec. 20, cs |
| Jane | N. Shields | | | | Robin Hood | Dec. 24, |
| Jane | | Shears | Halifax | St. George B | Scatarie | Nov. 4, cd |
| J. Bentley | | Disbrow | Bristol | St. John NB | B. Fandy | Dec. 2, cs |
| Kate | 60 | | W. Indies | | Farris Coast | Dec. 22, cd |
| Letitia | | Nickelby | | | Cargados G. | Sept. 13, cs |
| Letitia | Llanely | Malcolm | Caernarvon | Caerthryn | Jack S. | Dec. 15, cs |
| Margaret | P. Ed. Islds | Davis | | | Green I. | Nov. 5, cd |
| Mary Ann | | | Liverpool | Jamaica | St. Anna B. | Nov. 16, |
| Mercury | 65 | Edwards | | | Berwick | Dec. 11, 3d |
| Pandora | | | Glasgow | St. John | Gr. Manan | Dec. 8, cs |
| Resper | | Seaman | Quebec | Poole | St. Lawrence | Nov. 4, cs |
| Rose | | McDonald | Halifax | C. Breton | Whitehead | Dec. 6, 2d |
| Samuel | Selby | Gooch | London | | Sunk S. | Dec. 11, cs |
| Sarah | St. Ives | | | | Swansea | Dec. 30, cs |
| Swift | | Ross | Shields | Leith | Off Bideford | Dec. 30, cs |
| Telumah | 70 | | Liverpool | | Sunderland | Dec. 21, cs |
| Tyro | | Greenwood | Halifax | St. Johns | Florida C. | Nov. 21, cs |
| Union | | passed | abandoned | by N. Briton | Nova Scotia | Nov. 23, cs |
| Universe | 75 | | | | 53° N. 45° E. | Dec. 23, |
| Welcome | Cork | | Liverpool | | Brandy Pots | Dec. 1, cs |
| William & Anne | 76 | | Swansea | London | Sm. Saltar I. | Dec. 21, cs |
| | | | | | Off Bude | Dec. 20, 7d |

60—Part of crew (2 Lascars) picked up on a raft in lat. 15° S., long. 54° E., on 9th of October, 10 others having died.

73—Crew were taken off by the Shepherd, and landed at Sunderland.

CAUTION TO SEAMEN.—*New Shoal on the N.E. Coast of Banca.*—Ship struck. Gaspar Island, E.b.S. Tree Island S.E.b.E. Further particulars in our next.

THE WIDOW OF MUCKLE HARBOUR.

"The island of Rona is a small and rocky spot of land, lying between the isle of Skye and the main land of Applecross, and is well known to mariners for the rugged and dangerous nature of its coast. There is a famous place of refuge at its north-western extremity, called Muckle Harbour, of very difficult access, which, however, strange to say, is easier entered at night than during the day.

"At the extremity of this hyperborean solitude is the residence of a poor old widow, whose lonely cottage is called the "lighthouse," from the fact that she uniformly keeps a lamp burning in her window all night. By keeping the light and the entrance of the harbour open, a strange vessel may enter with the greatest safety.

“ During the silent watches of the night, the widow may be seen, like Norna of the Fitful Head, trimming her little lamp with oil, fearful that some frail bark may perish through her neglect, and for this she receives no manner of remuneration—it is pure and unmingled philanthropy.

“ The poor woman’s kindness does not rest even here, for she is unhappy until the numbbed and shivering mariner comes ashore to share her little board, and recruit himself at her glowing and cheerful fire, and she can seldom be prevailed upon to accept any recompence.

“ She has saved more lives than Davy’s belt, and thousands of pounds to the underwriters. The poor creature, in her younger days, witnessed her husband struggling with the waves, and swallowed up by the remorseless billows—

“ ‘ In sight of home and friends that thronged to save.’

“ This circumstance seems to have prompted her present devoted and solitary life, in which her only enjoyment is that of doing good.”—*Inverness Courier*.

There is one great omission in this gratifying statement—the name of the worthy old dame is wanting. The incident shows the true nobility of the heart.

FORCE OF WAVES.

SIR,—At a time when the subject of constructing harbours of refuge, where needed, and of improving all the tidal harbours along our coast occupies so much of the public attention, it may interest the readers of the *Nautical Magazine* to see some account of experiments on the force of waves made by Mr. Thomas Stevenson, of the family of Messrs. Stevenson, (the well known,) Civil Engineers, of Edinburgh.

It is abridged from a paper recently published in the “ Transactions of the Royal Society of Edinburgh.”

It should be borne in mind, that the author is speaking of the blows received from waves of translation, or after they have broken upon the shore, not of deep sea waves, which it is presumed have no onward motion or percussive force.

I am, &c.,

JOHN WASHINGTON, *Captain, R.N.*

To the Editor, &c.

During Mr. Stevenson’s experience in the construction of marine works, he has found, like other engineers, a great difficulty to arise from a want of any precise knowledge of the force of waves; so that it is impossible to calculate accurately what strength may be required in buildings exposed to the action of the ocean. With a view of supplying this deficiency, Mr. Stevenson has invented an instrument which he calls a Marine Dynamometer. It is difficult to explain the construction of this instrument properly, without the aid of a section; but it may be simply described as an iron cylinder, which is firmly bolted to a rock exposed to the action of the ocean waves. Projecting from the cylinder are four rods, at the end of which is a circular plate of iron, which receives the force of the waves, and thereby presses the rods into the interior of the cylinder, where, by means of a powerful spring, the force exerted is counteracted and ascertained, sliding rings of leather on the rods acting as indices.

“ In the graduation of the instrument, the power of the spring is ascertained by carefully loading the disc with weights, so that when the quantity that the spring has yielded by the action of the sea is known, the pressure due to the area of the disc exposed is known also. The discs employed

were from three to nine inches diameter, but generally six inches, and the powers of the springs varied from about ten to about fifty pounds for every $\frac{1}{8}$ inch of elongation. Their respective effects were afterwards reduced to a value per square foot. The instrument was generally placed so as to be immersed at about three-fourths tide, and in such situations as would afford a considerable depth of water. It is not desirable to have the instrument placed at a much lower level, as it has not unfrequently happened during a gale, that for days together no one could approach it to read off the result and re-adjust the indices to zero. It must, however, at the same time be remarked, that it is in most situations almost impossible to receive the force unimpaired, as the waves are more or less broken by hidden rocks or shoal ground before they reach the instrument."

The first observations with this instrument were made at the Little Ross, mouth of the Dee, where Mr. Stevenson was stationed for some time, when the lighthouse there was in the course of erection. Twelve observations were made there in the summer of 1842, but the weather was unusually fine during that period. The greatest force was on the 24th June, when the instrument showed that a force equal to 840lbs. to a square foot had been exerted. On the 25th of April the force was as low as 15lbs.

The other experiments were made at the Skerryvore and Bell Rock lighthouses. Of these Mr. S. says:—

"In the *Atlantic Ocean*, according to the observations made at the Skerryvore rocks, the average results for five of the *summer* months during the years 1843 and 1844, is 611lbs. per square foot. The average results for six of the *winter* months (1843 and 1844), is 2086lbs. per square foot, or thrice as great as in the summer months.

"The *greatest result* yet obtained at Skerryvore was during the heavy westerly gale of 29th March, 1845, when a pressure of 6083lbs. per square foot was registered. The next highest is 5323lbs.

"In the *German Ocean*, according to the observations made at the Bell Rock, the greatest result yet obtained is 3013lbs. per square foot.

"It thus appears, that the greatest effect of the sea, which has been observed, is that of the Atlantic at Skerryvore, which is nearly equal to three tons per square foot.

"These experiments amounting to 267 in number, and on the Atlantic alone extending over twenty-three months continuously, are not intended to prove anything farther than the simple fact that the sea has been known to exert a force equivalent to a pressure of three tons per square foot, however much more. Now, when we consider that the hydrostatic pressure due to a wave of twenty feet high, is no more than about half a ton on a square foot, we see how much of their force the waves owe to their velocity. There can be no doubt, however, that results higher than this will be obtained. Were a train of observations made at various points of the coast, the results would not only be highly useful in practice, as they would by reference to existing marine works show what sizes of stones and proportions of piers were able to resist seas of a given force; but they would form an interesting collection of information with regard to the relative forces of the waves in our contracted bays and estuaries, as compared with those observed in the ocean; and would thus supply the want which, as already stated, all engineers labour under, to a greater or less degree, in designing marine works."

He also gives some interesting facts, proving the tremendous power exerted by waves during a storm. We extract the following:—

"In the Frith of Forth, at the Granton Pier works, on the 19th Dec. 1836, after a gale from the north-east, one stone was moved measuring fifteen cubic feet, or about one ton in weight, and thrown on the beach, after having been built into the wall; and a stone containing eighteen cubic feet

was moved thirty feet from its place; while the *pierres perdues* or mound-stones were washed down to a slope of about four to one.

"The following instance, which occurred at the landing slip of the Calf Point, Isle of Man, affords a proof of the great force of the waves even in the Irish Sea. During a gale from the north west, a block was lifted from its place in the wall and thrown landwards, which measured $123\frac{1}{2}$ cubic feet, equal to about ten tons weight.

"In the German Ocean, we can refer to the Bell Rock lighthouse, which, though 112 feet in height, is literally buried in foam and spray to the very top, during ground swells, when there is no wind. It is, therefore, a very important station for making such experiments, because the rise of the spray may be regarded as a scale by which the results of the Marine Dynamometer can be checked or compared.

"In the published account of this work there occurs the following statement:—'On the 24th Oct 1819, the spray rose to the height of 105 feet above the rock. It may, perhaps, therefore, (says the author,) be concluded that the maximum force of the sea at the Bell Rock, is to raise the sprays to the height of about 105 feet above the surface of the rock; and deducting sixteen feet, which is the height that the tide rises upon the tower, there is left eighty-nine feet, as the height to which the water is raised. This is equivalent to a hydrostatic pressure of about two-and-a-half tons on the square foot. Since that time, however, there have been still greater proofs of the force of elevation. On the 20th Nov. 1827, the spray rose 117 feet above the foundations or low water mark; and the tide on that day rose eleven feet upon the tower, leaving 106 feet as the height of elevation (exclusive of the trough of the sea, being equivalent to a pressure of very nearly three tons per square foot.

"At the island called Barrahead, one of the Hebrides, a remarkable example occurred during a storm in Jan. 1836, in the movement of a block of stone, which, from measurements taken on the spot, is 9 feet \times 8 feet \times 7 feet = 504 cubic feet, which, allowing twelve feet of this gneiss rock to the ton, will be about forty-two tons weight. This great mass was gradually moved five feet from the place where it lay, having been rocked to and fro by the waves till a piece broke off, which, rolling down, and jamming itself between the moving mass and the shelving rock on which it rested, immediately stopped the oscillatory motion, and thus prevented the farther advance of the stone."

It will be easily seen from these quotations, how valuable an extensive series of observations on this subject would prove. The Government of this country will probably expend annually large sums in the construction of harbours for many years to come; and private enterprise will also be largely called into play for the same purpose, particularly in the connection of low water harbours with railways. By knowing what he had to contend with, an engineer would be able to construct his works, neither unnecessarily strong and expensive, nor too slight and cheap, in the latter case generally causing great extra expenditure in alterations and repairs. This subject seems well worthy of being taken up, either by the Government or the British Scientific Association.

THE PRESIDENT STEAMER.—The following news has gone the round of the newspapers, and if an invention, as seems too probable, we cannot but say it is one of the most cruel and heartless ever perpetrated, to revive and lacerate the feelings of the suffering relatives and friends of those who were so darkly lost. The *Madrid Gazette* of the 13th inst. states that the minister of the interior had received a communication from the political chief of Guipuzcoa, announcing that a bottle had been found

floating in the water near Motrico, containing a paper, of the contents of which the following words only could be deciphered:—"Ship President.—We are blocked in ice, and we can't live much time . . . kind friend will acquaint our . . . We are dying of hunger . . . I am fainting . . . If, if, . . ." The bottle was found by some fishermen, and handed to the alcalde of Motrico, a few leagues from San Sebastian. A copy of the paper has been communicated to the British Minister. The probability is, that the unfortunate vessel went down nearly where she was last seen, and owing to the weight of her machinery, is floating now, unbroken, and without fragments sent to the surface, at a sad mid-depth of ocean, as the strong currents of these seas waft her bulk to and fro. At some future time, when the perishing wood is separated from the heavy iron, and the latter sinks, the last vestiges of the President may be met with on the Atlantic wave. This opinion is much strengthened by the following notice from the opposite Pacific Ocean. "On the 30th of December, a part of the hulk of the Haheo or Cleopatra barge, wrecked some fifteen or twenty years, started up from its watery bed, and washed upon the shore. Many of the oak timbers are in quite a sound state, except so far as perforated by the teredo or ship-worm."—*Literary Gazette*.

ARCTIC EXPEDITION.—Commander Fitzjames, whose promotion to the rank of Captain we have the gratification of recording, is now serving in the Arctic expedition, (wintering, we have no doubt, safely,) under the command of Sir John Franklin. His commission is dated 31st December, 1845. Captain Fitzjames entered the service in 1825, was employed under Colonel Chesney on the Euphrates expedition, served in Syria and China, commanded the Rocket-brigade in the attack on the heights of Segooan, was present at the capture of Chapoo and Woosung, and was dangerously wounded at the capture of Chin-Kiang-Foo.

LOSS OF THE SHIP LETITIA.—We deeply regret to learn the loss of the English ship *Letitia*, from Mauritius, and with sad loss of life. The French barque *Atalanta*, from Bourbon, reports that on the 9th Oct., about noon, in lat. 15° 24' S. and lon. 54° 14' E., she fell in with a raft on which were three lascars, one of whom was dead. A letter, written on the leaf of a book was delivered to the captain of the *Atalanta*, by one of the lascars, but the French captain not being acquainted with the English language, carried the lascars to Calcutta. The letter was to the following effect:—

"29th Sept. 1845.

"Dear Sir,—Allow me to recommend to you the ship *Letitia*, Capt. R. Malcolm, on the 15th Sept., on an island bearing N.E. from the Mauritius. Capt. Malcolm, I am sorry to say, lost his life in attempting to swim ashore, the ship was a total wreck in less than twenty-four hours, and the surf running so high that our boats were all smashed to pieces before we had time to get them out, in consequence of which we were not able to save any provisions, and are now obliged to live like so many savages. The island affords us a few birds' eggs and a plant that is eatable; the birds are now getting scarce, so that we must certainly starve if we have to remain here much longer. We are fifty-one men in number.

"Do, for heaven's sake, come to our assistance as soon as your vessel's speed will allow. Trusting to your kindness, we are

"Your obedient servants,

"HENRY SWAN, *Chief Officer.*"

"W. RUTHERFORD, *Second Officer.*"

It would seem that this unfortunate vessel was lost on the Cargados Gargajos. There is yet hope for the crew, as it is most probable they were on

the North Isle, on which Horsburgh says there are "some shrubs, wild salad, and plenty of good water. A variety of fine fish may be caught in abundance at the edge of the reef, and there used to be a few Europeans, and thirty or forty negroes, on the isle." It is supposed the lascars on the raft had put to sea in the hope of falling in with some vessel to relieve their comrades, It is much to be regretted that no one on board the French barque was able to read the letter, otherwise immediate assistance might have been rendered to this unfortunate crew.—(See No. 60 of *Wreck Table*.)

On the night of the 3rd October, a fine new vessel of 650 tons, named the *Gustave Edouard*, M. Nigrat, Commander, from Havre to Bourbon, struck on reefs off La Roche Noire, in the Flacq district, Mauritius, and went to pieces almost immediately; the circumstances of the wreck were of a most distressing nature.

NEW BOOKS.

THE DISPATCHES AND LETTERS of Vice-Admiral Lord Viscount Nelson, with Notes by Sir Nicholas Harris Nicolas, G.C.M.G. Vol. 4th—September, 1799, to December, 1801. Vol. 5th—January, 1802, to April, 1804. Colburn, London.

The first of these volumes relate principally to proceedings in the Mediterranean, and the latter part of it to the battle of Copenhagen and the armed flotilla off Boulogne; the second to further proceedings in the Mediterranean. Two more volumes we are informed will complete the work.

MEMOIR OF THE NAVAL LIFE AND SERVICES OF ADMIRAL SIR PHILIP C. H. C. DURHAM, G.C.B., by his Nephew, Capt. A. Murray, R. I. Fusileers. Murray, London.

There are many events in the public life of Lord Durham that rendered a memoir of his services most desirable for the young naval officer.

THE FIRST PRINCIPLES OF ALGEBRA.—THE ELEMENTS OF GEOMETRY. Symbolically arranged. Part I.

The above are the titles of two little unpretending volumes, published by command of the Lords Commissioners of the Admiralty, for the use of the boys of the Royal Hospital Schools at Greenwich, having been compiled by the Rev. George Fisher. They are remarkable for their conciseness.

ROYAL NAVY.

Ships Commissioned in 1845.

Line-of-Battle Ships.—The *Hibernia*, 120, Capt. P. Richards, C.B., for flag of Vice-adm. Sir W. Parker, G.C.B., Commander-in-Chief in the Mediterranean; *Trafalgar*, 120, Capt. W. F. Martin, for flag of Vice-Adm. Sir J. C. White, K.C.B. (succeeded by Vice-Adm. Sir E. D. King, K.C.H.), Commander-in-Chief at the Nore (Flag-Capt. J. B. Nott); *Caledonia*, 120, Capt. M. H. Dixon, for flag of Rear-Adm. Superintendent Sir S. Pym, K.C.B., of Devonport Dockyard; *St. Vincent*, 120, Capt. Sir R. Grant, for flag of

Adm. Sir C. Ogle, Bart., Commander-in-Chief at Portsmouth; *Queen*, 110, Capt. Sir B. W. Walker, K.C.B., for flag of Adm. Sir J. West, K.C.B., Commander-in-Chief at Devonport; *Rodney*, 92, Capt. E. Collier, C.B., for trial cruises; *Canopus*, 84, Capt. F. Moresby, C.B., for trial cruises; and *Vanguard*, 80, Capt. G. W. Willes, for trial cruises. Total, 8 sail.

Frigates.—*Vernon*, 50, Capt. J. C. Fitzgerald, for flag of Rear-Adm. S. H. Ingfield, C.B., Commander-in-Chief at Brazils; *President*, 50, Capt. W. C. Stanley, for flag of Rear-Adm. Dacres, Commander-in-Chief at Cape; *Grampus*, 50, Capt. H. B. Martin, C.B.; *Endymion*, 44, Capt. G. R. Lambert; *Melampus*, 42, Capt. J. N. Campbell, C.B.; *Calliope*, 26, Capt. E. Stanley; *Juno*, 26, Capt. P. Blake; *Alarm*, 26, Capt. C. C. Frankland; *Carysfort*, 26, Capt. G. H. Seymour; *Crocodile*, 26, Capt. J. B. Maxwell, for flag of Rear-Adm. Sir H. Pigot, particular service. Total, 10 frigates.

Corvettes and Sloops.—*Nimrod*, 20, Capt. J. R. Dacres; *Calypso*, 20, Capt. H. J. Worth; *Grecian*, 16, Com. A. L. Montgomery; *Syren*, 16, Com. H. E. Edgell; *Bittern*, 16, Com. T. Hope; *Ringdove*, 16, Com. Sir W. Hoste, Bart.; *Kingfisher*, 12, Com. C. F. Brown; *Rapid*, 10, Com. H. J. W. S. P. Gallwey; *Herons*, 6, Com. C. Edmunds. Total, 9.

Schooners, Cutters, &c.—*Seaflower*, 6, Com. J. P. Roepel; *Seagull*, 6, Lieut.-Com. H. P. Dicken; *Viper*, 6, Lieut.-Com. E. E. Gray; *Spy*, 3, Lieut.-Com. S. O. Woodriddle; *Speedy*, 3, Lieut.-Com. G. Spong; *Cerus*, tender, Sec. Master-Com. T. Fogden. Total, 6.

Discovery and Surveying Vessels.—*Erebus*, Capt. Sir J. Franklin, and *Terror*, Capt. Crozier; *Herald*, 26, Capt. H. Kellett, C.B., and her tender, *Pandora*, 6, Lieut.-Com. Wood; *Pagoda*, hired vessel, at the Cape, Lieut.-Com. Moore; *Sylvia*, Lieut.-Com. H. Warren. Total, 6.

Troop-Ships.—*Athol*, frigate, 2, Master-Com. Pearn; *Apollo*, frigate, 8, Com. Radcliffe. Total, 2.

Hospital-Ship.—*Alligator*, 26, at Hong Kong, Master-Com. Wellington.

Steam-Yachts.—*Victoria and Albert*, Capt. Lord A. Fitzclarence, G.C.B.;

Fairy, tender, Master-Com. Thain. Total, 2.

Steam-Frigates.—*Terrible*, Capt. W. Ramsay; *Retribution*, Capt. S. Lushington; *Gladiator*, Capt. Robb; *Samson*, Capt. T. Henderson; *Vulture*, Capt. M'Dougall. Total, 5.

Sloops.—*Styx*, Com. W. W. Hornby; *Vesuvius*, Com. G. W. D. O'Callaghan; *Scourge*, Com. Caffin; *Alecto*, Com. F. W. Austen; *Phanix*, Com. J. S. A. Dennis. Total, 5.

Steam Surveying Vessels, Gun-Vessels, Packets, Transports, &c.—*Avon*, Com. Denham; *Dasher*, Com. Sherringham; *Jackal*, Lieut.-Com. W. M. J. G. Pascoe; *Spitfire*, Lieut.-Com. J. A. M'Donald; *Bloodhound*, Lieut.-Com. R. Phillips; *Meteor*, Lieut.-Com. G. Butler; *Lizard*, Lieut.-Com. H. M. Tylden; *Harpy*, Lieut.-Com. E. B. Proctor; *Myrmidon*, Lieut.-Com. C. Jenkins; *Cuckoo*, Lieut.-Com. A. Parks; *Rhadamanthus*, Master-Com. T. H. Laen; and *Dee*, Master-Com. Driver; *Gleaner* and *Wee Pet*, steam-tenders; *Wildfire*, Master-Com. G. Brockman, and *Fearless*, port-vessels. Total, 16.

Summary.—8 sail of the line, 10 frigates, 9 corvettes and sloops, 6 schooners, 6 surveying vessels, 2 troop-ships, and 1 hospital-ship; 42 sailing vessels. *Steamers*—2 yachts, 5 frigates, 5 sloops, 16 surveying, gun-packets, transports, &c.; 28. Total, 70.

Ships Paid off in 1845.

Line-of-Battle Ships.—*Caledonia*, 120, Capt. A. Milne, flag-ship of late Adm. Sir D. Milne, G.C.B., Commander-in-Chief at Devonport; *Sf. Vincent*, 120, Capt. R. F. Rowley, flag-ship of Adm. Sir C. Rowley, G.C.B., G.C.H.,

late Commander-in-Chief at Portsmouth; *San Josef*, 110, Capt. F. W. Burgoyne, ordinary guard-ship at Devonport, and flag-ship of Rear-Adm. Superintendent Sir S. Pym, K.C.B.; *Formidable*, 84, Capt. G. F. Rich, flag-ship of Vice-Adm. Sir F. W. C. R. Owen, K.C.B., G.C.H., late Commander-in-Chief in the Mediterranean; *Illustrious*, 72, Capt. J. E. Erskine, flag-ship of Vice-Adm. Sir C. Adam, K.C.B., late Commander-in-Chief in the West Indies. Total, 5 sail.

Frigates.—*Dublin*, 50, Capt. J. J. Tucker, flag-ship of Rear-Adm. R. Thomas, late Commander-in-Chief in the Pacific; *Alfred*, 50, Commodore J. B. Purvis, late senior officer at the Brazils; *Isis*, 44, Capt. Sir J. Marshall, C.B., K.C.H., from Cape station; *Thalia*, 42, Capt. C. Hope, from Pacific; *Belvidera*, 38, Capt. the Hon. G. Grey, from Mediterranean; *Cambrian*, 36, Commodore H. D. Chads, C.B., late second in command on the East India and China station; *Volage*, 26, Capt. Sir. W. Dickson, Bart., flag-ship of Rear-Adm. Bowles, C.B., late Commander-in-Chief of the Irish station; *Carysfort*, Capt. Lord G. Paulet, from Pacific; *Spartan*, 26, Capt. the Hon. C. J. B. Elliot, from West Indies. Total, 9.

Corvettes and Sloops.—*Aigle*, 24, Capt. Lord C. E. Paget, from Mediterranean; *Dido*, 20, Capt. the Hon. H. Keppel, from East Indies; *Electra*, 18, Com. A. Darley, from West Indies; *Scout*, 18, Com. the Hon. J. R. Drummond, from the Mediterranean; *Harlequin*, 16, Com. (now Capt.) the Hon. G. Hastings, from East Indies; *Pelican*, 16, Com. P. Justice, from East Indies; *Bittern*, 16, Com. E. Peel, from Cape; *Snake*, 16, Com. (now Capt.) the Hon. W. B. Devereux, from Mediterranean; *Scylla*, Com. R. Sharpe, K.H., from West Indies; *Ringdove*, 16, Com. the late Sir W. Daniel, Kt., from the Coast of Africa; *Ferret*, 10, Com. J. Oake, from coast of Africa; *Rapid*, 10, the late Com. Earl, by Lieut. Wilson. Total, 12.

Brigs, Schooners, &c.—*Heroine*, 6, Lieut. (now Com.) H. Foot, from the coast of Africa; *Viper*, 6, Lieut.-Com. J. Carter, from South America; *Cockatrice*, 6, Lieut.-Com. J. Oxenham, from South America; *Linnet*, 6, packet brig, Lieut.-Com. H. P. Dicken, from Brazil; *Speedy*, 3, Lieut.-Com. G. Beaufoy, from Sheerness station; *Seaflower*, 6, Lieut. (now Com.) N. Robilliard, from Jersey station; *Lynx*, 3, brigantine, Lieut.-Com. J. T. Nott, from the Irish station; *Sylvia*, 3, Lieut.-Com. E. Turner, from Jersey station; *Snipe*, 3, Lieut.-Com. G. Raymond, from the coast of Ireland; *Basilisk*, 6, ketch, Lieut. (now Com.) Hunt, broken up in the Pacific. Total, 10.

Hospital and Troop-Ships.—*Minden*, line-of-battle ship, 20, Master-Com. Wellington; *Apollo*, troop-ship, Com. M^lLean; *Alligator*, troop-ship, Master-Com. J. N. King, at China. Total, 3.

Steam-Sloops, &c.—*Styx*, Capt. A. T. E. Vidal, from surveying the Azores; *Alecto*, Lieut. W. Hoseason, from Mediterranean; *Vesuvius*, Com. E. Ommanney, from Mediterranean; *Devastation*, Com. W. Kitchen, from East Indies; *Medea*, Com. (now Capt.) Warden, from Mediterranean; *Fearless*, Com. W. L. Sherringham, from surveying service; *Grouler*, Com. (now Capt.) C. M. Buckle, from coast of Africa; *Geyser*, Com. E. J. Carpenter, from Mediterranean; *Ardent*, Com. (now Capt.) J. Russell, from coast of Africa; *Meteor*, Lieut.-Com. G. Butler, from Irish Station; *Eclair*, Com. W. G. B. Estcourt, deceased, by Lieut. (now Com.) H. C. Harston, from coast of Africa; *Dwarf*, steam-tender, Lieut.-Com. H. B. Proctor, from Sheerness station; *Polyphemus*, Lieut.-Com. T. Spark, from Mediterranean; *Rhadamanthus* and *Dee*, troop-ships; *Wildfire*, steam-packet, Lieut.-Com. Darby, and *Cuckoo*, steam-packet, Lieut.-Com. A. Parks. Total, 17.

Summary.—5 sail of the line, 9 frigates, 12 corvettes and sloops, 10 brigs, schooners, &c., 3 hospital and troop-ships; 39 sailing vessels. Steam-sloops, transports, &c., 17. Total, 56.

In 1844, 47 ships were commissioned, and 34 ships paid off.

MONTHLY RECORD OF NAVAL MOVEMENTS.

Amazon, 50, Capt. J. Stopford, arr. Valencia from Barcelona, Nov. 26. *Actæon*, 26, arr. St. Helena from Ascension, Nov. 26. *Apollo*, left Rio for Monte Video, Nov. 25. *Arco*, arr. Madeira, on way to coast of Africa, Nov. 23.

Basilisk, sold out of the service in the Pacific.

Conway, left Mauritius for Rodriguez, Oct. 6. *Canopus*, 84, left Plymouth for Cork, Jan. 7. *Cyclops*, arr. at Rio, Dec. 7. *Cruizer*, 16, left Trincomalee for Moulmein, Nov. 19. *Cormorant*, st. v. at Callao, Nov. 1:—A letter says, "One of our boats capsized on the 20th Oct. and Dr. Thompson, the assistant-surgeon, and three seamen (Benjamin Serjeant, George Emery, and John Batten) were drowned."

Endymion, 44, left Plymouth for North America and West Indies, Dec. 25. *Espiegle*, 10, left Hong Kong for Foochowfoo, Oct. 30:—On the 9th, 10th, and 11th, she experienced very bad weather, and on the latter day, whilst under double-reefed main-trysail and fore-staysail, she was caught by a tremendous squall, which sprung the mainmast, compelling her to return to this anchorage for a new spar. *Eurydice*, 26, arr. at Bermuda, Nov. 24.

Fying Fish, 12, at Arguin, Sept. 1. *Fox*, 42, left Bombay for Persian Gulf, Nov. 14. *Fisguard*, 42, at Valparaiso, Sept. 19. *Firebrand*, st. v. arr. at Buenos Ayres, Oct. 14. *Frolic*, 16, at San Blas, from Sandwich Islands, Nov. 16.

Hydra, st. v. at Ascension, Nov. 25.

Iris, 26, left Hong Kong for Singapore, Oct. 12.

Juno, 26, arr. at Madeira from Portsmouth, Nov. 23.

Kingfisher, 12, arr. at Tenerife on way to Ascension, Nov. 22.

Pickle, 6, left Jamaica, Nov. 12. *Pilot*, 16, left Bombay, Nov. 14. *Pique*, at St. Vincent's, Nov. 27. *President*, 50, flag of Rear-Adm. Dacres, arr. at Madeira from Plymouth, on way to Cape, Dec. 20. *Persian*, 16, at Sacrificios, Dec. 5.

Racehorse, 18, Com. Hay, arr. at Swan River, Aug. 12, and sailed 16th.

Resistance, 42, arr. at Plymouth from Pacific, Dec. 20.

Sappho, 16, left Simons Bay for Mozambique, Oct. 29.

Thunderbolt, st. v. arr. at Simons Bay Cape, Oct. 29. *Talbot*, 26, left Sandwich Islands for Valparaiso, Aug. 24.

Vindictive, with flag of Vice-Adm. Austin, arr. at Bermuda from Halifax, Nov. 19. *Vanguard*, 80, left Plymouth for Cork, as flag-ship of Rear-Adm. Sir H. Pigot, Dec. 22. *Vulture*, st. v. arr. at Cape on way to China, Oct. 24; and arr. at Trincomalee from Spithead, Nov. 22.

Wolverine, left Hong Kong for Amoy, Oct. 17.

The following were in Victoria Harbour, Manilla, Oct. 18:—*Agincourt*, 72, Capt. Lyster, flag of Rear-Adm. Sir T. Cochrane, Commander-in-Chief. *Samarang*, 26, Capt. Sir E. Belcher. *Vestal*, 26, Capt. Talbot. *Dædalus*, 20, Capt. M'Quhae. *Minden*, 20, Master-Com. Wellington. *Royalist*, 10, Com. G. Ogle. *Alligator*, troop-ship, Master-Com. King. *Vixen*, steam-sloop, Com. Giffard; and the Hon. Company's steamers, *Medusa* and *Pluto*.

The following ships were lying at anchor at Monte Video, Oct. 30:—*Vernon*, 50, Capt. J. C. Fitzgerald, bearing the flag of Rear-Adm. Ingfield, C.B., Commander-in-Chief of the Brazils and south eastern coast of America. *Eagle*, 50, Capt. G. B. Martin, C.B.; and *Melampus*, 42; Capt. J. N. Campbell, C.B.

Curacoa, 26, Acting Capt. J. S. Thompson, is at anchor off Colonia, and keeping the blockade there, six miles from the town. *Satellite*, 18, Com. Rowley, is up the River Plate, beyond Buenos Ayres. *Comus*, 18, Acting Com. Inglefield, sailed Oct. 30, from Monte Video for higher up the River Parana. *Racer*, 16, Com. Reed, is at Maldonado. *Acorn*, 16, Com. Bingham, and *Dolphin*, 3, brigantine, Lieut.-Com. Levinge, are up the Plate, beyond Buenos Ayres. *Grecian*, 16, Com. Montgomery, is at Rio Janeiro. *Spider*, 6, schooner, Lieut.-Com. Pym, arrived at Monte Video, Oct. 21, bringing the mails from Rio and England. In consequence of strong S. and S.W. winds she had a long passage. *Spy*, 3, brigantine, Lieut.-Com. Woolridge, sailed Sept. 17, for the Pacific. *Firebrand*, steam-frigate, Capt. Hope, sailed Oct. 27, for the River Parana. *Gorgon*, steam-frigate, Capt. Hotham, is in the Parana River. *Cyclops*, steam-frigate, Capt. Lapidge, was at Rio when the *Spider* left.

PORTSMOUTH.—In Harbour.—*Victory*, *St. Vincent*, *Excellent*, *Victoria* and *Albert* Royal Yacht, *Carysfort*, *Sparrow*, *General Palmer*, and *Dasher*; *Ristribution*, *Fairy*, and *Echo*, steam-vessels. In Dock.—*Prince Regent*, *Amphitrite*, *Wanderer*, *Childers*, *Leander*, *Rodney*, *Rifleman*. In Basin.—*Nelson*, *Harlequin*, *Edinburgh*, *Scourge*, steam-vessel. At Spithead.—*Superb*, and *Barretti Junior*, transport.

PLYMOUTH.—In Harbour.—*Queen*, *Caledonia*, *Nimrod*, *Ringdove*, *Rapid*, and *Confiance*. In the Sound.—*Albion*, *Resistance*.

SHEERNESS.—In Harbour.—*Trafalgar*, and *Ocean*. In Basin.—*Havannah*, *Brilliant*, *Electra*, *Snake*, *Viper*, brigantine; *Samson*, *Fury*, and *Wildfire*, steam-vessels. In Dock.—*Horatio*, *Dido*, *Ferret*, *Griffin*, and *Turtarus*, steamer.

CHATHAM.—In Harbour.—*Poitiers*, *Calypso*, *Meander*, *Scout*, and *Fearless*, steamer. In Dock.—*Raleigh*, *Eurotas*, *Cumberland*.

COMMISSIONED.—*Nimrod*, 20, *Terrible*, steam-vessel, *Calypso*, 20, *Ringdove*, 16, Dec. 22, at Plymouth, *Rapid*, 10, Jan. 2, at Devonport, *Scout*, 18, at Chatham.

PAY OF CLERKS.—The following circular has just been issued for the information of Captains and Commanding Officers of Her Majesty's ships and vessels:—The pay of Clerks previous to the 1st of the present month was 4*l.* 6*s.* 4*d.* per lunar month in line-of-battle ships, and 4*l.* in all other ships.

“ *Admiralty*, Dec. 26th, 1845.

“ *Memorandum.*—Her Majesty has been graciously pleased by her Order in Council of the 23rd inst., to direct that all Captains' Clerks who may have passed, or who may hereafter pass, the necessary examination to qualify them for the rank of Paymaster and Purser, shall be paid at the rate of 5*l.* per lunar month, commencing on the 1st of next month.

“ By command of their Lordships,

“ H. COBBY.

“ *To all Captains and Commanding Officers of Her Majesty's ships and vessels.*”

NAVAL UNIFORM.—It has been decided that the Masters and Surgeons of the Royal Navy shall be permitted to wear two epaulettes instead of one, as hitherto.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

CAPTAINS—T. Baillie—H. Bagot—G. N. Broke—G. Giffard—J. Fitzjames—J. Pearse.

COMMANDERS—F. A. Ellis—A. Grant—Hon. M. Kerr—T. G. Drake—C. E. Rowley—W. Crooke—A. Miles—G. H. Wood—A. P. Ryder

COMMANDER OF THE RETIRED LIST OF 1830—P. S. Lawrence.

LIEUTENANTS—T. Brandreth—W. K. Jolliffe—H. B. Hardman—A. Wilms-hurst—J. H. Furneaux—H. F. W. In-gram—H. G. Williams—A. D. W. Fletcher—Hon. F. Walpole—A. R. B. Carter—C. P. Coles—W. C. Geary—J. B. Field—E. Burstall—A. W. A. Hood—T. D. Sullivan—C. Douglas—C. Bas-ker-ville—W. H. Connolly—C. Atkins—A. Luckraft—G. J. Loch—E. G. Hore—W. T. F. Jackson—V. G. Hickley—F. Meynell—C. B. Hore—D. C. Camp-bell—Hon. F. A. C. Foley.

MASTERS—J. F. Loney—J. W. M'J. Hall—W. Weatherley.

SURGEONS—J. J. L. Donnet—T. Som-merville.

PAYMASTERS AND PURSERS—H. S. Dyer—W. H. Wiseman—C. W. Eccles.

APPOINTMENTS.

CAPTAIN—W. Broughton (1841), to *Curacoa*.

COMMANDERS—W. Maclean (1841), to *Cruiser*—T. U. Watkins (1837), to *Modeste*—H. J. W. S. P. Gallwey (1841), to *Rapid*—J. S. A. Dennis (1840), to *Phoenix*—A. Boyle (1842), to *Thunder-bolt*—R. S. Hewlett (1845), to *Excellent*—W. Loring (1841), to *Scout*—W. H. Hall (1840), to *Electra*—T. B. Brown (1841), to *Snake*.

LIEUTENANTS—C. J. Brickdale (1842), to *Vernon*—C. M. Shipley (1845), and R. B. E. Macleod (1841), to *Calypso*—J. Elwin (1814), and J. Inglis (1826), to Contract Packet Service—J. H. Norcock (1837), to *Canopus*—G. Western (1837), to *Gladiator*—R. D. Stupart (1840), to *Bittern*—R. W. H. Alcock (1844) and J. J. Domford (1842), to *Scout*—R. A. Buchanan (1845), to *Styx*—A. W. D. Fletcher, to *Resistance*—E. Burstall, to *Porcupine*—J. B. R. Field, C. Douglas, and F. Meynell, to *Penelope*—W. A. Hood, W. H. Connolly, and G. C. Camp-bell, to *President*—A. D. Willms-hurst, and T. D. Sullivan, to *Excellent*—R. B.

Creyke, (1843), to *Shearwater*—C. Atkins and W. T. F. Jackson, to *Hibernia*—A. Luckraft, to *Collingwood*—E. G. Hore (1842) and G. Hickley, to *Vindictive*.

MASTERS—J. Rundle, to *Phoenix*—W. H. Balliston, to *Rapid*—J. W. M'J. Hall, to *Cygnets*—W. Weatherly, to *Ranger*—J. Matthews, to *Scout*.

MATES—A. R. B. Carter, to *Queen*—A. Sugden, to *Eagle*—W. F. G. Fead, to *Nimrod*.

SECOND MASTERS—C. Grieg, to *Carys-fort*—W. Byford, to *Myrmidon*—G. Ri-chards, to *Seaflower*—J. H. T. Norris, to Plymouth buoy-boat—A. Messum, to *Viper*—G. R. Mooreson, to *Alban*.

MASTERS-ASSISTANT—W. H. Parker, to *Alban*.

MIDSHIPMEN—A. R. Fox, to *Carys-fort*—F. S. Grey, to *Scourge*—E. W. Shaw, and C. J. Lawson, to *Rodney*—C. Dixon and W. Babington, to *Ex-cel-lent*.

NAVAL CADETS—H. W. Fox, to *Superb*—R. Bennett, to *Rodney*—Hon. A. Drummond, to *Carysfort*

SURGEONS—E. Heath, to *Rapid*—W. Wood, M.D., to *Scout*—C. P. Blake, M.D., to *Phoenix*—T. Somerville, to *Cleopatra*.

ASSISTANT-SURGEONS—R. Wallace, M.D., to *Victory*—J. Campbell, M.D., to *Caledonia*—W. Hobbs, to *Resistance*—R. Galvin, to *Phoenix*—J. Gordon, to *Scout*.

PAYMASTERS AND PURSERS—E. A. Smith, to *Bittern*—H. S. Dyer, to *He-cate*—W. H. Wiseman, to *Sydenham*—C. Niblett, to *Phoenix*—G. J. Starr, to *Rapid*.

CHAPLAINS—Rev. J. Moore, M.A., to *Trafalgar*—Rev. J. H. Bastard, to *Ter-rible*—Rev. W. Onslow, to *Carysfort*—W. R. Payne, to the Naval Hospital, Plymouth.

CLERKS—A. W. Chimmo, to *Scourge*—T. W. W. Spear, to *Wildfire*—W. H. Richards, to *Gladiator*—J. Butter, to *Sydenham*—W. J. Jenkins, to *Myrmidon*

COAST GUARD.

Promotions—Capt. C. Walcott—Coms. S. Hodge, J. Stuart (a), and H. Ran-dall—Lieut. W. H. Walters.

Removals—Com. W. N. Taylor, to Plymouth—Com. Blair, to Penzance—Com. R. G. Welch, to Lynton—Lieut. C. Shaw, to Elie—Lieut. E. J. Voules, R.N., to Pagham.

Births.

Dec. 22, at Oriel Cottage, Wolverhampton, Mrs. Fredrick Farwell, R.N. of a son.

Deaths.

Dec. 23, at Ballintemple, Cork, J. W. Moffatt, Esq., Assistant Surgeon R.N., late of the Hermes Steamer.

Marriages.

Dec. 18, at Stoke Devonport, Com, J. Foote, R.N., to Isabella Fanny Ollive.

Jan. 5, at Monkkrigg, near Haddington, the Hon. W. Keith, Capt. R.N., aged 46.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory. From the 21st of December, to the 20th of January, 1846.

| Month | Day | Week Day. | Barometer. | | Fahrenheit Thermometer, In the Shade. | | | Wind. | | | | Weather. | | |
|-------|-----|-----------|------------|--------|---------------------------------------|--------|-----|-------|----------|------|-----------|----------|-------------|------------|
| | | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | Su. | In Dec | 29.36 | 29.64 | 37 | 36 | 35 | 29 | N | N | 6 | 4 | qops 2) | qbc |
| 22 | M. | In Dec | 29.58 | 29.18 | 33 | 43 | 29 | 44 | SW | W | 6 | 4 | qos 2) | or 3) (4) |
| 23 | Tu. | In Dec | 29.06 | 29.34 | 30 | 43 | 36 | 44 | NW | NW | 8 | 8 | qbcprh (2) | qbc |
| 24 | W. | In Dec | 30.06 | 30.16 | 35 | 39 | 34 | 40 | N | N | 2 | 1 | b | b |
| 25 | Th. | In Dec | 30.20 | 30.20 | 38 | 43 | 31 | 44 | SW | SW | 2 | 1 | o | o |
| 26 | F. | In Dec | 30.10 | 29.90 | 47 | 48 | 38 | 49 | SW | SW | 5 | 5 | qo | qop 4) |
| 27 | S. | In Dec | 30.08 | 30.10 | 39 | 44 | 38 | 45 | SW | W | 5 | 5 | qo | qbc 4) |
| 28 | Su. | In Dec | 29.52 | 29.40 | 50 | 51 | 45 | 52 | SW | W | 5 | 4 | qor (1) (2) | or (4) |
| 29 | M. | In Dec | 30.00 | 29.90 | 32 | 41 | 30 | 50 | SW | SW | 2 | 4 | bc | od (4) |
| 30 | Tu. | In Dec | 29.70 | 29.66 | 52 | 54 | 49 | 55 | SW | SW | 5 | 5 | qc | qbc |
| 31 | W. | In Dec | 30.19 | 29.90 | 38 | 44 | 34 | 50 | SW | SW | 1 | 4 | bc | or 3) (4) |
| 1 | Th. | In Jan | 29.72 | 29.87 | 42 | 43 | 41 | 44 | NW | NW | 5 | 4 | qbc | bc |
| 2 | F. | In Jan | 30.15 | 30.28 | 34 | 38 | 32 | 39 | NW | N | 2 | 2 | bcm | bc |
| 3 | S. | In Jan | 30.44 | 30.38 | 31 | 39 | 29 | 41 | S | S | 1 | 1 | bc | bc |
| 4 | Su. | In Jan | 30.09 | 29.94 | 40 | 39 | 37 | 41 | SW | W | 1 | 2 | or 2) | bc |
| 5 | M. | In Jan | 30.10 | 30.10 | 31 | 33 | 29 | 35 | W | W | 1 | 1 | bcm | bm |
| 6 | T. | In Jan | 30.05 | 30.01 | 39 | 44 | 28 | 46 | SW | SW | 1 | 1 | o | od (3) (4) |
| 7 | W. | In Jan | 30.23 | 30.23 | 45 | 46 | 44 | 47 | SW | SW | 1 | 1 | o | o |
| 8 | Th. | In Jan | 30.50 | 30.54 | 46 | 47 | 44 | 48 | SW | W | 1 | 1 | o | o |
| 9 | F. | In Jan | 30.65 | 30.03 | 42 | 42 | 41 | 43 | SW | SW | 1 | 1 | o | od 4) |
| 10 | S. | In Jan | 30.48 | 30.40 | 37 | 38 | 37 | 39 | W | W | 1 | 1 | o | o |
| 11 | Su. | In Jan | 30.34 | 30.30 | 39 | 42 | 37 | 43 | SW | S | 1 | 1 | o | o |
| 12 | M. | In Jan | 30.10 | 29.94 | 34 | 44 | 33 | 35 | S | SE. | 2 | 2 | o | o |
| 13 | Tu. | In Jan | 29.65 | 29.55 | 37 | 43 | 32 | 44 | S | SE. | 1 | 1 | bcm | bcm |
| 14 | W. | In Jan | 29.45 | 29.45 | 38 | 44 | 37 | 45 | SE | SE. | 1 | 1 | bc | bc |
| 15 | Th. | In Jan | 29.75 | 29.85 | 45 | 49 | 38 | 50 | S | SW | 1 | 1 | bcm | bc |
| 16 | F. | In Jan | 29.84 | 29.78 | 41 | 47 | 40 | 48 | SE | SE | 1 | 1 | of | bc 4) |
| 17 | S. | In Jan | 22.67 | 29.67 | 43 | 48 | 42 | 49 | SE | SW | 1 | 1 | od 1) 2) | bc |
| 18 | Su. | In Jan | 29.74 | 29.70 | 37 | 43 | 36 | 44 | W | S | 1 | 1 | of | bc |
| 19 | M. | In Jan | 29.17 | 29.13 | 44 | 51 | 39 | 52 | SW | SW | 4 | 8 | or (2) | qor 4) |
| 20 | T. | In Jan | 29.34 | 29.42 | 42 | 46 | 42 | 46 | SW | SW | 2 | 4 | qbc 1) | b |

DECEMBER 1845.—Mean height of the Barometer— 29.773 inches; Mean temperature—41.4 degrees; depth of Rain fallen— 2.85 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have received Mr. MATHER's important pamphlet on Ships and Railways. It shall have due attention in our next. Also Mr. Wood's report on the proceedings of the Tidal Harbour Commissioners at the Port of Hull.

We understand that Sir John BARROW's work on North Polar Voyages is on the eve of publication.

We have this moment received Mr. WAKEM's letter, and will attend to his wishes.

ERRATA.

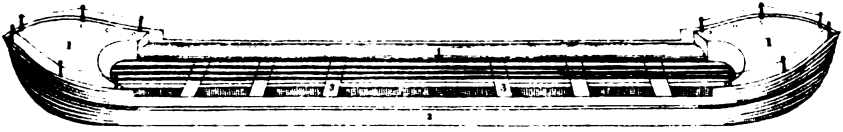
Page 16, line 13 from foot, for *view* read *run*.

17, line 7, for *Chesnaise* read *Chermin*; line 14, for *visible* read *warlike*; line 9, from foot for *frontier* read *premises*; line 8, from foot, for *behind* read *blind*; line 3, from foot, for *steamer* read *steamers*; bottom line for *carpenter* read *carpenters*.

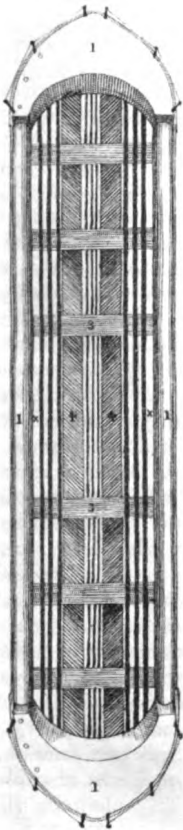
Page 18, line 22, for *Lincoc* read *Simcoe*.

Munt, Printer, 3, New Church Street, Edgware Road.

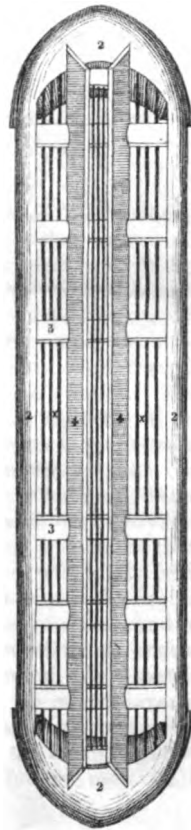
ORTON'S LIFE BOAT.



SIDE VIEW



INSIDE VIEW



BOTTOM VIEW



THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

MARCH 1846.

REMARKS ON ALGOA BAY AND PORT ELIZABETH.—*By Captain
Sir John Marshall, R.N., C.B.*

THE only plan extant of Algoa bay is that of Lieut. Rice, R.N., who surveyed it in 1797, which plan serves rather than otherwise to discourage ships from entering the bay, as it gives merely a curved indentation instead of a bay, which is only open six points of the compass to seaward.

The anchorage ground is good—a black sand; and it is understood that vessels never drag their anchors, and the winds prevail more than three-fourths of the year off the land, with fine weather. The unfavourable season for shipping in Algoa bay is from the 20th of September to the 20th November, only two months; but black south-easters do occasionally occur earlier. One caused much mischief on the 26th of Aug., 1843, which was as violent a gale as any ever known. When the gale commenced there were twelve merchant vessels in the bay, four of which were wrecked, and eight rode out the gale; and those that were lost parted their chain cables. These gales have wrongfully been described as irresistible; but here we have an account of one of extreme force; and yet eight merchant vessels out of twelve rode in safety; and had the four that were lost been furnished with good ground tackle, and been equally well managed, there can be no doubt but that all would have been equally safe. This cannot, perhaps, be proved, as no official investigation ever takes place relative to the cause of shipwreck in the Merchant Service; but the inference may fairly be drawn, and the fact of eight of the vessels having ridden in safety proves that the anchorage must be better than is generally allowed.

NO. 3.—VOL. XV.

Q

Com. W. Lloyd, R.N., resident magistrate at Port Elizabeth, has suggested that moorings should be laid down. The details of his plan shew his thorough knowledge of the subject, and leave me nothing to add, except to bear my testimony to its practicability, and its usefulness, which I cannot too strongly advocate.

The first step towards rendering justice to the advantages of Algoa bay, or rather Port Elizabeth, as an anchorage, must be a survey in which the hidden dangers as well as those which are visible will be pointed out.

The length of the passage, to and from the Mauritius, naturally makes the price of live stock high; but the fancied danger of the anchorage, and the bay, by raising the insurance makes it still higher, which is a serious consideration, whilst the Mauritius has no nearer market than Port Elizabeth, its own dependencies, the Seychelles and Rodrigues islands, being comparatively unproductive.

Nor can I overlook the value of Port Elizabeth, as a harbour of refuge to those of our mercantile shipping, which when making their passage from India, China, and Australia, are frequently crippled whilst struggling against the violence of the westerly gales off the Cape, and which from the limited information about Port Elizabeth run either for the Mauritius or St. Augustine bay in Madagascar.

Were justice done to the advantages of the roadstead at Port Elizabeth, vessels would find it not only a convenient, but a safe place of shelter, where they might refit. Few ships in their passage home make the coast further south than Cape Recife, and frequently as far north as Cape Natal, where a strong southerly current will be found. They can easily work down against southerly winds as far as Cape Recife, and if the weather be moderate, the Lagulhas stream will carry them round the Cape; but should they meet with continued westerly gales, the westerly surface current sometimes loses its power, and the violence of the wind frequently occasions an adverse or easterly current, whilst a vast volume of water is undoubtedly still following its course below the surface to the westward. It would be far more advisable for vessels so situated to bear up at once for Port Elizabeth, and there await moderate weather than to persist in struggling ineffectually to round the Cape, danaging both ship and cargo.

The abundance and cheapness of supplies at Port Elizabeth is another inducement for vessels to put in there.

On laying down the magnetic bearings taken from H.M.S. *Isis*, by the Admiralty azimuth compass, Lieut. Rice's plan, I find the land intervening between the *Isis* and Cape Recife, which is not the fact, the same with the reef. Lieut. Rice states the distance from the anchorage to Cape Recife to be about four miles and a half, whereas it is known to be about eight miles; and very few of the bearings that were taken accord with his plan. I have annexed a table of bearings and distances from the various authorities, and their disagreements to a copy of Lieut. Rice's plan, thus affording ample reason for a re-survey. Compass bearings cannot be so accurate as angles measured by a sextant, and are only an approximation to the truth, and the two principal dangers yet known

to exist in the bay, are laid down from compass bearings in the plan, since it was made. Our knowledge of the errors to which compasses were incident in those days, particularly when used in an open boat where a considerable swell always exists, compels me to observe that but little reliance can be placed on the accuracy of the positions of those dangers as connected with the plan. The existence of the Redwing rock is doubted by nautical men at Port Elizabeth. This rock was discovered by Capt. Hunn in 1819, whose numerous compass bearings from it, must make it hazardous to question his accuracy, although being only compass bearings, the rock may not have been met with since.

Horsburgh says "Algoa bay is one in which a distressed ship could find shelter from violent north-west gales, which, independent of other considerations renders an accurate survey of the bay imperative; until some such survey is made, much caution should be used in entering the bay, on account of the conflicting report of its dangers." He also alludes to the discrepancies in the bearings and distances—see Horsburgh's, vol. I. p. 244. In page 245 there is a misprint,—it says, "To the S.W. of the Grande Isle of St. Croix, ships may anchor," when it should have been "to the N.W.;" and another misprint occurs in p. 237, where in quoting Capt. Owen's latitude of Grande St. Croix Island, Horsburgh states it to be $25^{\circ} 46\frac{1}{2}'$ south, whereas Captain Owen places it in latitude $25^{\circ} 41' 5''$; Horsburgh's longitudes of the Bird Islands, as quoted from Capt. Owen, are also incorrect.

Capt. Moresby, R.N., of H.M.S. *Menai*, in 1820, states that ships have rode out the whole year off Port Elizabeth, and that some of H.M. ships have there rode out the heaviest south-east gales that have been known.

If a vessel should be caught here in a south-east gale, inadequately found in ground tackle, she might slip, and run under the lee of the Grande St. Croix, where shelter and good anchorage may be found, at a quarter of a mile from the island, on its north-west side, in from fifteen to eighteen fathoms, good bottom.

Having given sufficient details of the bay to warrant the expense of the re-survey, I may observe that the Cape government might be urged to carry out their contemplated measure of erecting a light-house on Cape Recife, a point replete with danger, and requiring a light as much as any in the world. It projects from low land, and lies in the fair way, not only to the Cape coasters, but of our shipping from India, who can never safely approach this coast at night, without a lighthouse. Proper buoys should also be placed on the Dispatch and Redwing rocks, a plan for which I submitted to the Port Elizabeth authorities, at their request, and for which a subscription was proposed. These, and a dozen pair of moorings for ships of from 1000 to 200 tons would make the roadstead completely safe against every contingency, and moderate charges, to defray the outlay, would, no doubt be cheerfully submitted to.

The jetty at Port Elizabeth was completed at an expense of many thousand pounds, to the length of 352 feet, and it was to have been carried out 150 feet further, but unfortunately, just as its usefulness for general accommodation began to be felt, the gale of August 26th, 1843,

occasioned the destruction of the greater part of it, in consequence of three of the four of the wrecked vessel having run foul of it, two of them making their way through it, about a cable's length from the outer end. There were $4\frac{1}{2}$ fathoms of water, sandy bottom, gradually shoaling to the anchorage, where $6\frac{1}{2}$ fathoms were found, and this depth of water at the outer end proves the jetty to have been equal to resisting the violence of the sea, when even at its greatest force. This disaster was a serious thing to a recently formed port, and it has not yet been remedied, but recent advices mention that a reef of rocks lying off Baken's river, and extending considerably out, has been sounded and found to be admirably calculated for the site of a new jetty, there being a sufficient depth of water to the westward of it to afford shelter to many vessels, and it is to be hoped that nothing will prevent this plan from being carried into effect, as it would be most advantageous to Port Elizabeth, and to the eastern division of the colony in general.

I may conclude by shewing the increasing importance of Port Elizabeth, from the imports and exports in the years preceding that in which I visited it.

| | | |
|------------------|-----------|----------|
| Value of Imports | 1841..... | £ 89,879 |
| Ditto ditto | 1842..... | £160,588 |
| Ditto of Exports | 1841..... | £ 60,050 |
| Ditto ditto | 1842..... | £ 95,698 |

JNO. MARSHALL, *Captain R.N.*

*Gillingham, near Chatham,
January 1st. 1846.*

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes on Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c. By Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Continued from page 90.)

HAVING laid in a sufficient supply of eatables, including the game we had shot as we came along the borders of the lake, we proceeded on our voyage. Towards noon a strong sea breeze sprung up, which not only made it tedious to get along, as it was nearly direct against us, but in rounding some of the points of land there was a great chance of being swamped, although in general it was the weather shore. At last we were obliged to haul the canoe on the beach, in a small sandy bay, in company with two other canoes, which were also bound to Tuspan. As the wind had hauled so far to the southward, and blowing so very strong, we made sure of having a norther very soon, but were in hopes of getting through the lake before it came on. Towards evening the sea breeze died away, and the next morning, shortly after daybreak, we arrived at the town of Tamiagua, where we stopped to rest about an hour.

The town, or rather village of Tamiagua, is situated on the western bank of the lake, at which place the channel is about a mile across,

discharging its waters partly over the bar of Tanquijo, which is to the N.E. of Tamiaqua, and has scarcely sufficient water on it for boats. The largest body of water runs further south, a part of which enters the river Tuspan, about a league below the town. Tamiaqua was some years since celebrated for the fishery carried on here, the fish being salted and sent to the interior, but it has greatly declined in its prosperity; the town being on low land, merely a marsh, causes it to be very unhealthy, of which there was every appearance in the inhabitants, who have a most squalid wretched appearance. In the rainy season the town must be half under water, the houses are built of Adobes (large bricks dried in the sun), and in a straggling manner close to the lake; the few shops here are badly stocked, even for a Mexican village, and are mostly for the sale of spirits, with a few eatables. The number of inhabitants in 1830 could not be more than two hundred.

We had scarcely left Tamiaqua when the norther, with which we had been threatened, came on; fortunately it was a dry one, but excessively cold, which we felt the more, as the previous day and night had been so sultry and hot. We ran for some time with the wind nearly right aft, under our sail reduced to its smallest size, which was the corner of a raw hide lashed up against a pole in midships. The lake soon contracted to a narrow channel, not above a quarter of a mile across, and as the channel made a few small bends, it sheltered us from the sea, which we should have otherwise felt severely. The general direction of this part of the channel is about S.S.E. After about an hour's run we left the main channel, and struck off more to the eastward into a narrow passage, where there was not more than sufficient room for two canoes to pass each other, and in one part, for a short distance, barely width enough for ourselves; here the trees in most places hung quite over the channel, and completely sheltered us from the wind, but overhead, in the upper branches of the trees, the norther whistled furiously. Having proceeded through this channel about two leagues, we came out on the north side of a small laguna about a league across, in which the sea was breaking, and not considering it safe, we made fast under the lee of the forest, expecting the wind to moderate towards evening. We had not laid here much more than an hour when we saw a canoe push off from the weather shore, not far from us, and make for the channel, which was on the opposite side of the laguna; we watched her motions, and expected to see her swamped; however, she got safe across, although she was a larger canoe than ours. We proposed to make the same attempt, and having secured everything from getting wet as far as we could, we set our sail, (the hide doubled up to the size of a pocket handkerchief,) and shoved off, and away we went at a great rate, with the wind right aft. The little canoe completely danced on the waves, our Patron managing her beautifully, so that we scarcely shipped any water. We had to keep a sharp look out for logs of driftwood and shoals, of which there were several in the lake; we were not long in crossing and getting again into smooth water. The canoe-men informed me that the water in this lake was not above a couple of fathoms deep, but in most places much less. The channel we had now entered into took us but little time in passing

through, when we again entered another lake, but much smaller than the last one, and as the norther had moderated, there was but little sea. Having run through this lake and a short channel, which took us half an hour, we entered the Tuspan river, near the bar, and the same evening arrived at the town of Tuspan, where I was comfortably housed.

Tuspan.—The bar of Tuspan is in lat. $21^{\circ} 2'$ north, lon. $97^{\circ} 16'$ west, and is very shallow. Vessels which draw more than from five to six feet water cannot get inside, but in the river the water is much deeper. The town is situated on the north bank of the river, about five miles above the bar, and is built between some hills close to the river, in a straggling manner; it has rather a pretty appearance when first seen, but on landing the effect in a great measure is done away. The trade of Tuspan is inconsiderable; a branch of it is carried on by canoes with Tampico, through the Laguna de Tamiaqua, but the chief trade by sea is with Campeche, in small craft. Vessels occasionally also come here from other parts of the republic.

The fustic which is produced here is of a superior quality, and equal in appearance to that of Cuba. Catchouc is collected in the neighbourhood, but not in very large quantities; it is said to be of a very good quality. The sugar cane, as in the river Montezuma, grows to a great height, but its cultivation is not carried on to any extent.

The scenery about Tuspan is very fine; the land of both sides of the river is undulating, and in general well cultivated, and from the top of the hills, which rise from the town, the country has the appearance of a garden. The river is about a third of a mile wide. The great drawback to the residents is the bilious and intermittent fevers, which are said to be more prevalent here than in Tampico.

As far as I could judge from the size of the town, the number of inhabitants could not exceed a thousand, and the greatest part of these appeared not to have much energy. Almost in every house, the Campeche hammock is hanging up for a lounge, and in the most of them more than one. A few of the houses are built of stone, and have a lime ash floor, but the greatest part of the town is built of adobes, and mud for the floor.

Poultry, pigs, fruit, and Indian corn (maize) are reasonable, and the river is well supplied with fish.

Vera Cruz.—The harbour of Vera Cruz is so well described in the Book of Directions, and other works, that it would be superfluous to mention much about it here, with the exception of confirming the statement of the current not being regular, and that the haze, which at times hangs over the town and castle of San Juan de Ulloa is such that ships have passed without seeing either, but at the same time have been seen from the town and castle, when guns have been fired from the castle, to indicate its position to those on board.

On my last voyage to Vera Cruz, I had sailed from Tampico, and had a good run to the southward, with the wind from E.N.E. to E.S.E. In the afternoon, we made the land near Vera Cruz, and at sunset saw the castle of San Juan de Ulloa, having stood in shore with the last of the

sea breeze. As soon as it died away to a calm, and being in about twenty fathoms water, rocky bottom, we dropped the stream anchor to keep the vessel in a position ready for the land breeze when it should spring up; the current was setting to the northward, but very weak. At nine P.M. we heard the report of the evening gun from the castle, saw the flash, and took the bearings, so that we could not be deceived with regard to the position of the vessel. Towards daylight the land breeze sprung up, we then weighed our stream, and made all sail on the star-board tack, looking well up for the castle; when the morning gun was fired, we took the bearings, and found we had not altered above a point, we were then going with the sails clean full, and laying up for the Anegada a Dentro, giving the shoal, which lies off from the land, inside the castle, a good berth, and expecting to be in a good position for the sea breeze when it came. At nine A.M. we tacked to the south-west, the wind having headed us off, and by the courses and distance we had ran, we considered ourselves from five to six miles from the castle, and laying nearly up for it. At noon, having ran in to what we considered the distance of the castle, and not seeing either it or the land, we hauled up more to the southward, expecting that the current must have set us to the northward, and had increased since we had got under way. All hands were upon the look out, with a hand at the mast-head, and as the day appeared quite clear, without a cloud, we could not account for our not making the land. About one P.M. the look-out from the mast-head called out that there were breakers right a-head, and shortly after we discovered that they were the shoals of Anton Lisardo, at about the distance of half a league from us. We then bore up, and shortly after made the Isla Verda; the haze clearing up, we also saw the castle and city of Vera Cruz. We ran in between the reefs, steering by a look-out from the mast-head, and about five P.M. were in the anchorage of Vera Cruz, when we were boarded by a pilot. Although he had seen us nearly all the morning he did not think it worth his while to come off to us, which was not until we had shortened sail, and our anchor a-cockbill, ready to come to. The negligence of the pilots in coming off was at that time greatly complained of, how they perform their duty now, I am not aware.

Another instance of the effects of the current came under my own observation. In 1825 the brig Harriet from Falmouth, bound to Vera Cruz, having on board passengers and machinery for the Real del Monte mines, in approaching the land, the captain had good sights, and expected, towards morning to make the light of San Juan de Ulloa. At about four A.M. there was a cry of being near some breakers, which caused a deal of confusion on board, particularly amongst the miners; the vessel had been standing to the westward, under easy sail, with quite a light breeze, and by the time the ship's head could be got to the northward, the sails trimmed, and the boats got out to assist by towing, we were close in with the reefs; a few minutes more standing on her former course we should have been on the outer shoal of Anton Lisardo. This also tends to prove, as in the former instance, that the position of the ship cannot be depended on when near the land about Vera Cruz, and that a

good look out should be kept. The wind had been, during the previous day, and also in the night, from the eastward.

Island of Sacraficios.—Sacraficios is a small sand island, situated a few miles to the southward of Vera Cruz; it has a reef of rocks running off from its north end, which extends round its eastern side; the anchorage is excellent for a few vessels, and well sheltered from the sea, even in a norther, by keeping within a cable's length of the reef, and the centre of the island bearing about S.E.b.E. The north point of the shoal makes a small curve to the westward, forming a bight between it and the island, and although it is covered at high water, it breaks the sea off this part of the anchorage.

Vessels anchoring nearer the shore, between the island and the main will feel much sea, and also a strong current setting to the southward during a norther, besides, the anchorage is not so good for holding; vessels have been driven to sea from having anchored too far from the island. There is water to be had at Sacraficios by digging a well, but it is rather brackish; much better can be had from the beach of Mocambo, opposite the island, by sinking a cask near or between the sand hills; the water from the river Medillen is superior to either; it is two or three miles to the southward of Mocambo.

Anton Lisardo.—The anchorage at Anton Lisardo, is not so good as at Sacraficios for holding, but there is good shelter from the sea by taking up a berth sufficiently to the eastward, in the bight formed by the reefs. We anchored here in 1825, and rode out a norther in smooth water. As the castle of San Juan de Ulloa was then in the hands of the Spaniards, we remained here a few days, until it could be ascertained where we could land our cargo, which was machinery, &c., for the Real del Monte mines, and which we ultimately did at Mocambo beach, the ship lying near Sacraficios.

There was a commandant and a few soldiers stationed at a place called a fort opposite the shoals on the main, but the guns were all dismantled; there were a few huts built near the beach, and from the well which the people had dug we got a supply of water, which we were getting rather short of.

Vessels bound to Tabasco, and not having sufficient daylight to run the distance so as to get a pilot and proceed over the bar, should be kept to the eastward, about the longitude of the river San Pedro, as there is a current more or less always setting along shore, to the westward, and at times so strong that a dull sailing vessel cannot beat up to windward against it; as the prevailing winds are from the east, (the sea breeze commencing generally about north-east), which would be a fair wind for running down to the bar in the morning, in sufficient time to take the sea breeze for entering the river. Should it be calm during the night, which is in general the case, it would be advisable to come to an anchor, to secure a position to the eastward; but if there is a working breeze, it is better to stand off and on under easy sail than to heave to, taking care not to shoal the water to less than six fathoms, and stand off to about twelve ready for the morning.

(To be continued.)

LEAKY SHIPS.—THE PROVIDENCE FROM BRISTOL TO CALCUTTA.

The decision of the magistrates in this case has given general satisfaction. A charge of mutiny was brought against nineteen of the crew for refusing to get the ship under weigh a second time. It appears that she left Bristol on the 2nd of November, proceeded as far as Lundy Island, and then put back to Kingroad. On the 7th December, the captain determined to proceed to sea again, but the seamen declined to heave the anchor up, as the ship was leaky, and unsafe for so long a voyage. An attempt was made before the magistrates to prove that this was untrue.

Cook, one of the seamen, when called upon for his defence, denied that he was the ringleader of a conspiracy, which had been said of him. He had never refused to do his duty, till ordered to go to sea the second time, and he would not do that because the ship was not sea-worthy—she was not safe. While lying in Kingroad she made four inches of water an hour. When she got below Coombe, it was blowing fresh, and the leak increased, and went on increasing, till she made twelve and eighteen inches of water, and the men at the pumps. The captain knew this very well, he sounded the pumps himself, and he had it entered in the log.

Mr. Newman, Magistrate.—Do you allow this to be true, captain ?

Captain Paize.—O dear, no.

Defendant (Cook).—The mate told me that it is entered in the log book.

Mr. Newman.—Do you allow this? because, if so, I will ask Captain Price, who is present, if that would be an ordinary or extraordinary leak.

Captain Price.—An extraordinary one.

Captain Paize.—There may be an entry in the log of the ship making a little water.

Mr. Howell, Magistrate.—But eighteen inches an hour !

Captain Paize.—O dear no ! I do not think there is.

Mr. Howell.—Have you got the log ?

Captain Paize.—No, it is not here.

Mr. Howell.—We ought to see it.

Mr. Inspector Bell.—I will not allow the captain to state what is not correct. I saw him bring the log book with him.

Captain Paize.—I said it was not here. I can get it in a few minutes.

The Magistrates said the conduct of the captain in trying to evade the question, was far from being creditable, and desired him to fetch the log.

Defendant (Cook).—It can be proved that during her last voyage the ship made so much water that both pumps were kept at work, and she had never been in dock since.

The owner of the vessel here stepped forward, and said she had been repaired by Mr. Green of this port, at an expense of £200.

Defendant.—But she has never been in dock.

This was not denied. On the captain returning with the log, it was found to bear out the defendant's statements : she made eight, eleven, and eighteen inches an hour. This was tried to be accounted for from

the fore hatch not being battened down, but unsuccessfully. The defendant said that the salt, part of the cargo, was quite dry at the top, so that the water did not get in from above.

Mr. Brittan, Attorney to the captain.—The question is, are the men to dictate to, and overawe the captain, or is he, with his superior knowledge, (not required in a plain case like this,) to govern them?

Captain Paize.—I am not afraid to risk my life in her.

Mr. Wood, magistrate.—That may be; but the rashness of the captain has lost many a ship.

The captain might have added the old cry, "I cannot give up my bread,—sink or swim."

The magistrate agreed that there were, from the log, quite sufficient grounds to alarm the minds of the men as to the safety of the vessel, and dismissed the case.

Mr. Brittan wished to know if the men were to return to their duty and go to sea.

Mr. Brice, magistrate's legal adviser, said, the decision did not discharge the articles. If the ship was made thoroughly seaworthy, it would be their duty to go in her. At present, the magistrates could only deal with the case before them. The men were discharged, and on getting outside gave three hearty cheers.

THE SEQUEL.—"The seamen of the ship Providence, whose case was heard a few days since, attended to make a complaint to the magistrates. They said, upon going on board to resume their work, as directed, they found new officers on board, who refused to receive them or to give them any food. On going on shore again, they saw the captain, who said he had nothing to do with the vessel or them. Mr. Burgess, magistrate's legal adviser, said the men were in this situation, they had no food, were refused to be received on board their own ship, and could not, their articles not being discharged, engage themselves on board of another. The magistrates directed a constable to go and require the attendance of the captain, but that individual, in terms more peremptory than courteous, refused to attend."—*Bristol Paper*.

In the instance of the bark Champlain, as to leakage, a similar case, the seamen, who revolted, were severely punished; yet it was proved that the vessel made "twenty-three inches of water in an hour-and-a-half." Was that a fit state for a ship to be in to make a voyage across the north Atlantic?

The conduct of her men was bad, but shipowners should not be permitted to send their vessels to sea in a leaky condition; and we repeat, that it is desirable that the Government remedy this defect in our marine laws, humanity and policy demand it. It would put a stop to a vast deal of contention, remove excuse for refractory conduct among seamen, and save many a valuable life to the country. That there would be nothing but what is just, proper, and reasonable in such a law, none will, perhaps, be hardy enough to deny. Would the shipowner trust himself and family in a voyage to the East Indies on board of a ship like the Providence, that leaked *one foot-and-a-half* of water an hour, a few hours after leaving port? And if not, why should seamen?

The origin of such negligence lies in *insurance*, and though you do not choose to fetter that machine, let it not be a means of drowning our invaluable seamen, but rather put a "martingale" on the cupidity of the reckless shipowner; then we should hear less frequently of that disgraceful circumstance of British ships floating about the Atlantic without a soul on board.

The captain of the Providence seems to have been placed in that uncomfortable position, in which the masters of ships often find themselves, and in which the difficulty often lies whilst endeavouring to act an honest part, to steer clear of giving offence to the owner, a point, however, scarcely attainable in the majority of cases, without falsehood.

It seems highly probable that the captain was induced to return to port on account of the leak, rather than from stress of weather; and the examination gives a clear illustration of the struggle of "self-interest *versus* truth." The case is one of those which has so often been denounced, but which remain unremedied. How is this ship lettered and marked at Lloyds?

We find that before getting clear of the land, this vessel made *one foot-and-a-half* of water an hour, and having a fourteen or sixteen weeks' voyage before her, through parts of the ocean proverbially stormy, How would she have acquitted herself in a hurricane? Would any owner risk his property, under such circumstances, *uninsured*? But the lives of seamen cannot be insured, and because they have sense enough not to risk them in such a vessel, they are arraigned before a bench for mutiny.

There was another case of the seamen refusing to go to sea after having received their notes, alleging the ship was undermanned; they were punished. The ship is 389 tons: the crew comprised five able seamen, two ordinary seamen, two apprentices, a steward, a carpenter, and a cook, in all twelve, with the first and second mates and the captain. The men ought to have ascertained the number of hands the ship was intended to carry before they entered. I leave your nautical readers to decide whether twelve men before the mast were sufficient to navigate a vessel of 389 tons. It is a point, however, that I think would be advantageously interfered in by legislative enactment, as it is a notorious fact, that our merchant ships are generally short handed.

OBSERVER.

OCEAN WAVES.

Bovisand, 28th January, 1846.

OCEANIC waves, from whatever source they may arise, have always been regarded as objects of interest to command our attention, yet very little is known of the laws whereby they are raised, augmented, or transferred. Landsmen, when actually embarked in stormy weather, are generally so deranged by sea-sickness and the ship's motion, as to be rendered unfit for observation or philosophical research. On the other hand, practical

seamen, accustomed to the sea from an early age, although not altogether disqualified, become so familiar with all kinds of waves, that the subject is a matter of indifference to them.

It is, however, very certain that erroneous notions are entertained about waves, for we read in works of acknowledged merit, that the height of waves above the mean sea level, seldom exceeds six or eight feet, yet the language of poetry and metaphor raises them into aqueous mountains. It appears that the author of the 107th psalm had his eye on *landsmen* embarked, when he says, "They mount up to the heaven, they go down again to the depths, their soul is melted because of trouble. They reel to and fro, and stagger like a drunken man, and are at their wit's end." How then can men in this condition be expected to give very correct information on waves?

Poets and philosophers have sometimes happily blended fact with fiction. The *sea* is an instrument from which the poets extract pleasing sounds. Old Ossian, the bard of my native mountains, never at loss for similes, in giving force to his descriptions, sometimes introduces a sea-piece. He compares the conflict "to troubled seas, when some dark ghost, in wrath, heaves the billow over an isle," or "like the storm of the ocean, when two spirits meet and contend for the rolling of waves." The poet Thompson, in his *Seasons*, and describing blowing weather, says,

"Meantime, the *mountain billows* to the clouds
In dreadful tumult swelled, surge above surge
Burst into chaos with tremendous roar,
And anchored navies from their stations drive."

Dean Swift, in his *Gulliver's Travels*, says something about a storm at sea. "It was a very fierce storm, the sea brake *strange and dangerous*. We hauled off upon the lanyard of the whipstaff, and helped the man at the helm." These quotations may amuse but cannot instruct; we want something tangible about waves, and waves *bona fide* maritime; not the rippings of the horse pond, or the undulations in a tank or washing tray. Some sense, and a good deal of nonsense about waves, was published by a section of the British Association for the advancement of Science. Being smitten with the mania of making *observations* on waves, and leaving Daddy Neptune to make the actual *experiments*, I seriously set to work at my official residence, which is within thirty feet of the Atlantic, and 3,800 miles from the nearest land on the north-east coast of South America; the waves, therefore, coming from the south-west have "a pretty considerable fetch." I had, perhaps, the best opportunity, and much inclination to collect as many facts as possible about the waves, that are almost constantly commanding my attention. Some ten or eleven years ago I made some observations on waves at Ascension, which were embodied and published in your magazine.* I now send those I made at Plymouth, believing they may be useful; as nothing of the kind has ever been published, they afford data for mathematical research. The observations are arranged in a tabular form, with very brief remarks of my own, extracted from a paper of mine, where the subject is more fully discussed.

* See "Oceanic Undulations" p. 513, in vol. for 1836.—ED.

OBSERVATIONS MADE ON WAVES REACHING BOVISAND, EAST
END OF PLYMOUTH BREAKWATER.

| Number of Observation. | Date of Observations. | Depth of Sea. | Distance traversed by Wave. | Time of transit. | Distance from Wave to Wave. | Course of Wave. | Direction, &c. of Wind. | Barometer. | Velocity in miles per hour. | Velocity per second. | No. of waves on space at one time. | Height of waves. |
|------------------------|-----------------------|---------------|-----------------------------|------------------|-----------------------------|-----------------|-------------------------|------------|-----------------------------|----------------------|------------------------------------|------------------|
| | 1841 | feet. | feet. | sec. | feet. | | | | | sec. | No. | feet. |
| 1 | Aug. 11. | 46 | 2265 | 61 | 320 | E.N.E. | N.N.W. st. | 29.65 | 21.9 | 37.6 | 7½ | 3 |
| 2 | Sept. 5. | 48 | 2265 | 66 | 175 | N.E. | N.E. light | 72.20 | 2.2 | 34.3 | 13 | 2½ |
| 3 | " 7. | 46 | 2760 | 136 | 110½ | NEbN | E. fresh | 71.20 | | 20.2 | 25 | 2¾ |
| 4 | " 13. | 48½ | 2760 | 64 | 345 | N.E. | S.E. | 72.54 | | 41.5 | 8 | 4 |
| 5 | " 14. | 49 | 2760 | 75 | 345 | N.E. | S.E. strong | 72.34 | | 37.8 | 8 | 4½ |
| 6 | " 28. | 42 | 2760 | 61¾ | 450 | NEbN | S.b.W. | 36.26 | 5 | 44.5 | 8½ | |
| 7 | " 28. | 50 | 2760 | 60 | 460 | NEbN | S.W. str. | 15.27 | 1 | 46.0 | 6 | mid. |
| 8 | " *29. | 45 | 2760 | 66 | 442 | N.E. | N.N.W. m. | 23.24 | 7 | 41.8 | 6½ | 27 |
| 9 | " 30. | 40 | 2760 | 67 | 408 | N.E. | S.W. | 21.24 | 2 | 41.2 | 6¾ | mod. |
| 10 | Oct. 1. | 47 | 2760 | 60 | 345 | N.E. | N.E. light | 57.27 | 1 | 46.0 | 8 | low |
| 11 | " 2. | 45 | 2760 | 75 | 306 | N.E. | calm | 7.21 | 7 | 36.8 | 9 | long |
| | 1842. | | | | | | | | | | | low |
| 12 | Jan. 14. | 40 | 2760 | 72 | 394 | NEbN | N.W. | 6.22 | 6 | 38.3 | 7 | " |
| 13 | March 1. | 49 | 2760 | 75 | 306 | NEbN | N.W. | 2.21 | 3 | 36.5 | 9 | " |
| 14 | April 29. | 48 | 2760 | 65 | 460 | N.E. | E.b.N | 28.28 | 25.2 | 42.5 | 6 | " |

REMARKS ON THE OBSERVATIONS.

No. 1.—San Carlos to Bovisand Rocks.

2.—This evening only ten waves over space.

3.—Distance traversed from San Carlos Buoy to Pier.

4.—Waves become crowded near the Pier.

5.—The east wind has probably diminished the velocity of the waves.

6.

7.—Cranes being washed down on the breakwater.

8.—Tide ebbing, barometer rising, and sea breaking in five fathoms.

9.—Small waves have run into large ones.

10.—High water.

11.—Swell subsiding.

12.—These waves raised by the south-west wind of yesterday.

13 and 14.—These waves indicate an approaching south-west wind as they subside.

These results were noted with the greatest care, and may be taken as pretty correct. Without going into a discussion of the very many results that may be obtained by analyzing the table, I may state two or three facts, viz :—

1st.—The velocity of waves is retarded as they advance into shoaler water. I have actually seen a wave overtaken and emerge into another, No. 1.

2nd.—The velocity of waves is not dependent on their height, No. 8 and No. 10.

3rd.—These experiments on a large scale appear to prove a result

* On this day, the height of the waves, unbroken, was measured by means of many observations. The mean level of smooth water on the tide gauge was noted, and the eye of the observer being 32 feet above the sea level, his visible horizon was 39,520 feet. The buoy on the Tinker Shoal was distant 6,180 feet, and as the waves reached this buoy and raised it, the summit of the wave was in a line with the observer's eye and his visible horizon. Since the distance of the visible horizon and height of the eye are given, and the distance of the Tinker Buoy also given, the height of the waves at the buoy may be found, because, 39,520 : 52 feet :: 39,520—6,180 : 27 feet, the height of the wave above the mean level, and as the sea was breaking in a depth of five fathoms, the depressions were equal to the elevations. . . the height between the two extremities, or rather hollow, would be 54 feet.

obtained by Mr. Scott Russell on a *small* scale, viz., that when the depth of the water equals the height of a wave, it breaks, and becomes a wave of translation. (See No. 8, *remarks*.)

4th.—Deep water facilitates the undulations of waves, (September 28th, No. 6 and 7), the tide rose eight feet, and the increase in velocity of the waves was one-and-a-half feet per second.

Leaving your readers to make comparisons or draw conclusions, I may briefly assert that the hydrostatic and hydrodynamic force that water exerts is far from being so well understood as it should be by those who assume the duties or appellation of “civil engineer.” The man who contrived the huge iron tank, which burst the other day at Liverpool, when only two-thirds full, destroying much property, and drowning several persons, knew nothing of the *pressure* that his tank would have to sustain when filled with water. The hydrostatic pressure at any depth, is as the square of the depth = the sum of all the pressures above it. In computing the force that a wave is capable of exerting upon a solid immersed in the sea, we have to take into consideration the rate at which the water moves or impinges against the solid, in addition to the hydrostatic pressure upon it. There are many gentlemen who add C.E. to their name, and who believe that the impulse of a volume of water in motion upon a solid structure opposing it, will be as the volume into the velocity, as is the case when one solid impinges upon another, as a mass of ice upon a stone. But a little reflection will convince us that the force which a volume of water moving exerts upon a solid obstacle, is not proportional to the velocity of water, but to the *square* of its velocity. The velocity with which a wave is thrown forward is equal to the velocity with which the *undulation* was previously moving, and although a very high wave is always dangerous, it is not always the very highest waves that are the most destructive.

If reference be made to the table of observations, it will be seen that No. 7 had waves moving at the rate of forty-six feet per second; these waves were far apart, and of middling height. They were, however, washing the huge blocks of marble about on the breakwater, and knocking down the cranes upon it, whilst much higher and more crowded waves, moving at the rate of 41·8 feet per second, were less destructive to the works, (*see* No. 8.)

The effect being, (*ceteris paribus*), as the square of the velocity, we may estimate what the height of the waves, moving at the rate of 46 feet, should be, to equal the impulse of the waves 27 feet high, and travelling at the rate of 41·8 feet per second.

Put x = the required height.

Then $41\cdot8^2 \times 27 = 46^2 x$. Now by this equation the value of $x = 22$ feet. Hence it would appear the height of the waves on the 28th of September must have been greater than twenty-two feet to produce the results upon the breakwater, although their height was certainly less than the height of those measured on the following day.

WILLIAM WALKER.

To the Editor of the Nautical Magazine.

ORTON'S LIFE-BOAT.

THIS is an invention which is reported in the local papers to have excited considerable interest in Sunderland and the neighbourhood, and which presents some features quite novel in the construction not only of life boats, but of boats in general. The leading peculiarity lies in the circumstance of the boat being perfectly open to the sea, the bottom being grated, so that any volume of water which may break into her is immediately discharged.

The boat is twenty-six feet long and six broad ; on each side there is an air-tight metal cylinder, and at each end an air-tight case, marked (1) in the cuts. These cylinders and end cases form the buoyant portion of the boat, and afford a buoyancy capable of supporting upwards of 4000lbs. The external surface of the air-tight cases is covered with double planking, (2), forming at once a protection to the cases and an outer facing of great strength to the boat. Extending across the boat are six broad thwarts, (3), contributing greatly to her strength, and materially increasing her buoyancy. Below these thwarts, extending from end to end of the boat, is the well (4), formed of two planks converging below. The flooring of this well is formed of metal rods, which supply not only the flooring of the well, but the ballast also of the boat. This ballast is still further increased by cylinders on each side of the bottom of the well, which, when empty, add little to the weight of the boat, but when full of water, as is the case when the boat is launched, give so much additional ballast. The boat is thus closed in at the bottom, except the spaces between the lateral cylinders and the well, and this is filled in by three strips of wood, (x), extending from end to end of the boat ; upon these strips are rowlocks for the paddles to work in.

We thus have the novel feature of a boat perfectly open to the sea, and yet so entirely buoyant that no volume of water breaking into her can sink, or even materially affect her progress, since it is immediately discharged. Again, her construction almost precludes the possibility of her being upset. It is evident that any power operating to elevate one side, will be immediately counteracted by the submersion of the cylinder on the other, which struggling to rise, will catch up the boat and prevent her going over. Besides this, her stability is further secured by the weight of the metal rods at the bottom of the well and the two deep keels which are afforded by the two sides of the well. Should, however, any extraordinary force capsize the boat, she possesses a quality claimed by all life boats, but possessed by very few, that of righting herself. It will be perceived, by reference to the side view, that the end cases rise one-and-a-half feet above the level of the lateral cylinders, so that when upset she rests upon two points, and consequently cannot fail in a sea way to cant over to one or other side, when she is immediately caught by the weight of her well and ballast, and set right again. As a further security for effecting this, there are three scuppers at each end ; these scuppers are fitted by metal plugs, which fit close when the boat is right, but fall a certain distance when upside down. In this position the water

is admitted into compartments corresponding to the scupper holes, and thus the boat is canted over to one side, when coming under the influence of her ballast, she cannot fail to come round. When right, the water is immediately discharged by scuppers at the sides of the end cases, and the boat is again in her original condition.

We thus have a boat which it is almost impossible to capsize, which when capsized must of necessity right again, but we have also further security in the fact that if capsized, and by any cause, such as entanglement with wreck or other impediment she should be prevented coming round, she is still a perfectly safe boat, from the circumstance that all within have an ample supply of air through the grating of the well, while those thrown out have ample means of remaining on her bottom till they can relieve themselves, or have assistance rendered from the shore.

Another novel feature in Mr. Orton's plan is the means of propulsion; this is effected by paddles, the construction of which is best understood by reference to the cuts. It will be seen that in striking the water the flaps of the paddles close down and present a broad surface, while in bringing the paddle back for a second stroke the flaps rise and allow the water to pass through; these paddles are worked immediately under the boat the blade being passed perpendicularly downwards between the strips, each man working two. The advantages attained by the paddles are numerous; their action is uninterrupted; they do not hold the wind, are not liable to miss the stroke, do not prevent the approach of a boat to the wreck, since by these she can be worked close to as well as at a distance from the wreck. The paddles are not, however an essential part of Mr. Orton's invention as his boat may be worked with oars as easily as any other boat.

The advantages obtained by a boat of this construction are numerous.

1st. Lightness so that 9 or 10 men may launch her.

2nd. Lowness in the water, her rise being only 27 at the stems. She thus presents very little surface of opposition to the wind against which she has to make head.

3rd. Her permeability to the water which renders her less liable to be carried away by the stroke of the sea, and by discharging the water as fast as it breaks into her, saves the crew all the labour of propelling a weight of water in addition to that of the boat.

4th. The great improbability of her upsetting.

5th. If upset the certainty of her righting again unless materially damaged or entangled by surrounding objects.

6th. If damaged and bottom upwards still a safe boat, since the men within have a free supply of air, while those outside can get upon and cling to the bottom till relieved.

7th. Her propulsion by paddles obviating the numerous objections to oars.

NAUTICAL SKETCHES.—NO. II.

“Homer! could I breathe thy fire,
 Like thee the dullest soul inspire,
 No longer would my ardent muse,
 The animating task refuse,
 Of singing each great seaman’s praise,
 In thy heroic lasting lays.”

INTEREST is a term of vast import in the concerns of man. It is an influence which has often given to the state very efficient servants, but as often, if not oftener, perhaps, many whose qualifications are unsuited to the occupation into which they have been thrust. Adventitious circumstances, and what is called “good luck” or good fortune, also place men in situations of which, on setting out into active life, they had no expectation; and lastly, merit, from abilities or conduct, introduces individuals into stations which, without any other aid than that which arises from those qualifications, seem naturally to be their due.

“There is a tide in the affairs of men, &c. ;” here the inimitable bard of Avon has figuratively expressed that mysterious course, which observation abundantly confirms; its realization, which is universally prevalent, fails not to claim and receive attention, though often thought unaccountable. There can be no doubt, however, that under the superintending care of a wise Providence, it arises from the play of circumstances, over which, individual foresight and power have no control. It would be an endless task, therefore, to endeavour to seek out the “why” and the “wherefore” in every case.

Those players in the drama of life who are successful in their career, are often surprised with the whims of “Dame Fortune,”—that blind divinity with strange, if not undefinable attributes, who apparently distributes her favours indiscriminately,—but too well pleased to fatigue themselves in vain endeavours to unravel the clue which has led to their prosperity. Those whom she passes by, misses, or neglects, console themselves by courting another goddess, who is universally acknowledged under the appellation of “Hope,” but who is as capricious and uncertain as the former, in the realization of wishes and expectations. Under whatever aspect these personifications of the very vague, but inspiring celestial natures named are viewed, they exercise an unlimited and most important influence over the finite reason of man. These preliminary remarks will not, perhaps, be thought misplaced, as an introduction to some slight sketches of the successful rise of nautical men, through all obstacles to ascent, in a profession where the field for the display of talent has been necessarily circumscribed by the exercise of interest and patronage. I shall not attend to chronological order, but take the names as they occur to me. The notices will be mere outlines, but brief as they will be, they may serve to stimulate the young sailor to exertion. To diversify the subject, I shall add some instances of rapid rise, by the aid of interest and other means, arising from circumstances.

Among the interesting memoirs of sea officers who flourished in the latter part of the eighteenth century, is that of Admiral John Hunter, whose name is so intimately associated with that extraordinary and extensive insular portions of the world, formerly called New Holland, but which is now known as Australia.

- “ The plodding Dutch who re-discovered it,
 Called it ‘ New Holland,’ perhaps to show
 And retain the uncommon merit,
 Of being the third thus far to go.
- “ But time is an innovator of hopes;
 Besides, the world’s become classical.
 Has grown quite skilful in the use of tropes,
 Which, tho’ thought to be fantastical,
- “ Some modern cosmographer—a wise wight—
 Being shocked with the vulgar compound,
 Forthwith changed it for another, quite
 Delightful to his ear in sound.
- “ That is, he changed it to ‘ Australia.’
 By the same right, the land was seized;
 But the cold-ton’d sons of Batavia—
 It being spiceless—were not displeas’d.
- “ The truth seems that, a century before
 The Dutch voyage, the Spaniards saw it,
 And ’tis said the Portuguese swore
 Of the first sight they had the merit,
- “ To end the matter, John Bull—a royster
 When he pleases—lent a helping hand,
 As in the famed fable of the ‘ oyster,’
 Gave to each its claim, and seized the land.”

M. S. Australian Sketches.

The officer we are speaking of, was the son of a gentleman who commanded a merchant ship from the port of Leith, and whose family was well connected. Whilst yet a little boy, he ventured on a voyage with his father, but had the misfortune to be shipwrecked on the coast of Norway. It is remarkable that his early desire was to be educated for the profession of music, whilst his friends directed his studies for the church. Neither, however, was realized; for, notwithstanding his early introduction to one of the most trying incidents of a sea-life, he determined on following it.

He voluntarily entered the Navy, as a wider field for the display of his aspiring genius, than the merchant service presented to his view, although he gained no higher station on his *début* than one “afore the mast.” This was in 1754, when he was sixteen years of age. Whilst in this humble station, he applied himself to the rules of navigation, and soon mastered the common practice of the day. His good conduct soon attracted notice, and in 1756 he was placed on the quarter-deck as a midshipman; in 1760, he passed his examination for the rank of lieutenant, though with but faint hopes of obtaining it. Years rolled on, and finding that without strong interest he was not likely to gain his wish, he, in 1769, passed an examination at the Trinity House for master, and received a warrant for the *Carysfort*.

After a variety of interesting service we find him in 1775, the master of the *Foudroyant*, commanded by Capt. Jervis, (afterwards Lord St. Vincent). The next year he joined Lord Howe's ship, and proceeded to the American station. On his return, although application was made to the Admiralty for his promotion, by some captains who considered him highly deserving of that rank, it was unsuccessful. Subsequently Admiral Sir Charles Hardy appointed him a lieutenant of the *Union*, but he was not confirmed; still, however, persevering, he went out to the West Indies as a volunteer, and, was commissioned as a lieutenant to the *Berwick* by Lord Rodney.

In 1782 he was appointed to the *Victory*, Lord Howe's ship, and soon became her first-lieutenant; and after the action with the combined fleets of France and Spain, he was promoted to the rank of commander, after twenty-eight years of active service.

In 1786, on the settlement of New South Wales being determined on by the government, Capt. Hunter was selected to fill the post of second captain in the *Sirius*, the first captain* having been nominated governor of the new colony. In 1788 the frigate was wrecked on Norfolk island; and in 1791 Capt. Hunter returned to England. In 1795, he was appointed governor of the settlement, and lastly obtained the reward of his faithful services by reaching the high and honorable grade of Admiral.

The career of this excellent officer shews what perseverance and good conduct, aided by abilities may be expected to gain. Many, no doubt, under the trials of disappointment and neglect, would have given up, and entirely ceased their endeavours to push through the difficulties that lie in their way. But the subject of this sketch was of quite a different temperament; and his untiring exertion to gain success, is worthy of imitation by those who have to look principally or solely to their own talents and good conduct for advancement in life.

“Perseverance keeps honor bright; to have done,
Is to hang quite out of fashion, like rusty mail
In monumental mockery. Take the instant way,
For Honour travels in a strait so narrow,
When one but goes abreast; keep then the path,
For Emulation hath a thousand sons,
That one by one pursue; if you give way,
Or, edge aside from the direct forthright,
Like to an entered tide, they all rush by,
And leave you hindmost.”—SHAKESPEARE.

It is remarkable, as exemplifying the freaks of fortune, that the admiral's elder brother died a lieutenant of Greenwich Hospital. He was, in his way an “original,” even among a class proverbial for the irregularity of character which it comprises. He possessed a vast fund of bonhomie, and a store of that resigned wisdom which upholds the mind in the struggles of life.

Admiral William Bligh, better known as “Bounty Bligh.” This

* Arthur Phillip.

officer, who at one period of his life commanded a merchant ship that traded to Jamaica, was master of the ship commanded by the celebrated circumnavigator, Capt. James Cook, at the time he was killed at the Sandwich islands.

A vessel being required for the purpose of conveying the bread-fruit, and other useful plants from Tahiti to the West India islands, he was appointed to the command of her as a lieutenant. The result of that voyage is universally known; the circumstances being extremely unusual, made a deep impression at the time, and they still hold their place in the remembrance of posterity.

Though there could be no possible excuse for the conduct of the master's-mate Christian, (who was a gentleman by birth,) it has appeared that Lieutenant Bligh's tyrannical and overbearing system of command was the main cause of such a sad, but indefensible, action. There is, however, one redeeming feature in the episode, it was a bloodless mutiny; and the event gave rise to two very remarkable and extremely interesting consequences—the settlement of an uninhabited island, remotely to the south-eastward of the Society Islands, called Pitcairn isle, by Fletcher Christian, some of his co-mutineers, and a few natives of both sexes from Tahiti;—and Bligh's extraordinary boat voyage, surpassed only by one performed voluntarily by a Portuguese from the East Indies to Europe. Bligh's was compulsory; but that scarcely robs it of any portion of its merit, as a bold and successful exploit.

With reference to the event caused by the mutineers, there is another episode connected with the circumstance, or rather the event gave rise to another enterprise, that terminated in a very melancholy way, the loss of the *Pandora* frigate, under Capt. Edwards, that was sent in search of the *Bounty's* people. Whatever claims to the feelings of humanity the captain of that ship may have possessed, his excessive rigour towards the misguided men whom he had secured, has been deservedly censured. To aid the ends of justice it is not necessary to employ cruelty. It may be possible that the error committed on the occasion was one of the head rather than of the heart; but tyranny is hateful under any guise, or from whatever principle springing.

Conjecture was busy at the period, after the unfortunate affair was bruited about in Britain, to determine the "whereabouts" of the rebellious beings who had turned this chief adrift, but, for a number of years without obtaining the least clue that could lead to the spot of their seclusion. Reports there were, such as that Christian had been seen among the Spaniards on the Pacific side of the continent of South America; but none of these were authentic, and the idea at last prevailed that they had perished in the ocean. The circumstance as time rolled on was quite forgotten, when in 1811, I believe that was the year, an American trader, Capt. Mathew Folger, incidentally discovered the island, whereon they had fixed their abode after quitting Tahiti. The sequel of their romantic tale is well known, and has excited the liveliest interest throughout the kingdom. At the time of the visit, only one Englishman remained of the original crew of the *Bounty*, John Adams, and he had redeemed this transgression, by instilling religious and moral principles into the hearts of the youthful successors of their misguided fathers.

The circumstances are altogether very remarkable, interesting, and instructing, and would have suited and harmonized exceedingly with the turn of mind of Sir Philip Sydney.

The community small as it was, after all means of separation had been removed, the ship having been destroyed, could not live in peace. The evil passion of the civilized man who had conducted his followers to this secluded retirement, broke forth, and led to a most tragical event. An arbitrary act of Christian created resentment in the breasts of the male Tahitians, who rose in the night and massacred all the whites except Adams, who, however, was wounded. This, in turn, so exasperated the females, that in the frenzy of mind created by the loss of their husbands, they murdered their countrymen.

It was a happy circumstance that the children were at this time too young to have their minds debased by such shocking displays of the depravity of the human heart; and happy, too, was it for them that a merciful Providence had left to their wants a common father whose mind was so disposed as to induce him to make atonement for his former dire-ction of duty, by diligently instructing those now committed to his sole charge in the principles of virtue. It is greatly to be regretted that after their discovery, any European should have been allowed to have fixed his abode in the island; and equally to be deplored that our Government did not feel itself called upon to prohibit any interference on the part of adventurers to mar the happy innocence which existed among them at that period.

After a variety of incidents Lieutenant Bligh, in his boat, passed through the Barrier reefs which front the eastern coast of Australia, and reached the island of Timor safely. He subsequently returned to England.

Among the young officers of the *Bounty* who got involved in the charge of mutiny was the late Captain Peter Heywood, R.N. He was, I believe, condemned to death. I presume no moral stain rested on his character, as he remained in the service and rose to the high rank of Captain.

Bligh was again despatched on the same duty, in the *Providence*, and this time succeeded in his mission. The plants were distributed among the different West India islands; but the contemplated benefit does not appear to have been realized. The taste of the negro is not that of the Polynesian, and the result is that the bread-fruit is seldom used by him. I recollect to have seen one of the original plants introduced into Jamaica, at the Ramble Penn; it was in the year 1814 about fifty or sixty feet in height, and of large dimensions. Captain Bligh commanded a ship in Duncan's action off Camperdown, and was also appointed Governor of New South Wales, where his tyrannical conduct brought him into trouble. He died an Admiral; and it would appear that, the only celebrity attached to his career was that of his boat voyage. Altogether his life affords grounds for deep reflection to the young officer. A man may be prosperous, and reach an elevated station, without obtaining that respect which a strictly followed line of high integrity of principle can alone insure to him.

Captain Jeremiah Coghlan, c.B.—This officer was promoted to the rank of Lieutenant by an order in council before he had served his regulated time of probation,—six years,—for cutting out the French brig of war *Cerbere*. It was a very gallant affair; but it is not improbable that had not the lucky mid been an especial *élève* of Sir Edward Pellew, the promptitude (so unusually) displayed in his advancement would not have taken place. However, be that as it may, it was a most encouraging incentive to his future efforts; and it may be remarked, by the way, that a Government may always calculate on good arising (because the effect is not confined solely to the individual rewarded, but spreads its benign rays over an entire profession,) from the fostering of conspicuous merit wherever it is found; whilst an opposite policy has the tendency to depress exertion and lead to discontent in the public servant, to the manifest injury of the general interests.

It must be observed that there was another circumstance which may have operated in favour of the officer of whom we are speaking. He was a “bearded-man” and was a practical sailor; having been bred up in the Merchant Service, wherein he had reached the grade of mate. His promotion, however, was a very complimentary act, and must have been most gratifying to his feelings, as I believe there was but another instance of a midshipman having been so advanced, a follower of Lord Nelson.

There is a story told of a quaker having put the following question to Mr. Coghlan on his arrival at Plymouth—“Friend Coghlan, how didst thou feel when caught in the net?” (alluding to the boarding-netting triced up around the French vessel,) “Very like a fish out of water.”

The career of this brave man was one of continued good fortune; the tide of flood carried him on, and he, in his public station, knew no ebb. He had subsequently to his dashing *débüt* several opportunities of distinguishing himself; and it was reported that whilst in command of H.M.B. *Elk* he realized a good fortune by prize money.

His incidental entry into the navy from the mercantile service was a most fortunate step for him, realizing the adage that “What is one man’s poison is another man’s sop.” It is well known that his activity in saving the lives of the crew of an Indiaman wrecked at Plymouth, first brought him into notice, and into, the then, so much dreaded navy, wherein by his own good conduct, and the kindness of his excellent patron, he prospered, thus affording in his case, an instance that “*Fortuna favet fortibus.*”

Captain Robert Fair had been a master, and rose by his merit. I think he was with Sir Michael Seymour in the actions fought by H.M.S. *Amethyst*.

Mr. Fitzmaurice was master with Captain Tuckey in his exploration of the river Congo in Africa, and succeeded to the command by the death of the latter promising but unfortunate officer.

Captain James Cook, the celebrated circumnavigator had been a mas-

ter. His merit was, however, not the sole cause of his rise in the service, although without it he would probably have been stationary. Circumstances and patronage aided him; but assuredly he was the architect of his subsequent good fortune,—the wheel caught him up in the nick of time,—diligence was his *Alma Mater*, and hence he becomes an example to all young officers. The conqueror's fame may catch the imagination, and be greatly extolled; but the calm and less showy renown of him who follows the arts of peace, is more likely to live in the remembrance of the heart,—“*Sic itur ad astra.*” *

These few instances (there are other no doubt) of the rise of Masters to the rank of Captain, may serve to show that those who have had the power of rewarding any particular merit in the class, did not neglect to do so. The grade of Master is one of much importance in the navy; and it appears necessary that the great responsibility should rest on individuals properly qualified by previous training. If they were merged in the Lieutenant's list, the servitude required must be made compulsory, and not as it is voluntary; and the Master would still be a Master under a different title, for it would be a hardship to compel the Lieutenant regularly so brought up, to perform the duty of a station he was not qualified by early habit and education to undertake. It would be better far to make the masters eligible for promotion to Commander after serving eight years afloat; but even then they would be as far off the mark they aim at, as ever, for the eligibility could give them no more claim to advancement than the Lieutenant possesses. It may be a thing to be desired, for it is very natural for a man to wish to rise in life, but clearly there is, under the present circumstances of the Master's case no hardship, because he voluntarily enter upon his station knowing the restrictions with which it is environed.

Admiral Sir Erasmus Gower was promoted from being the first lieutenant of Admiral Sir George Rodney's flag-ship, the *Sandwich*, to the rank of “post” captain, into a prize ship called the *Guipuscoa*; afterwards re-named the “*Prince William*,” in honour of (then) midshipman His Highness Prince William Henry, subsequently Admiral of the Fleet, as Duke of Clarence, Lord High Admiral, and ultimately King William the 4th of Great Britain. Whether the intermediate step of commander was dispensed with by order in council, or the commission was *pro forma* made out, does not appear. There are other instances I believe, one or two after the action of Trafalgar.

Captain Hanwell, when first lieutenant of the *Sheerness* frigate, on the coast of Africa, on the death of Commodore Cornwallis, promoted himself to the rank of “post” captain, by virtue of succession; and this appointment was confirmed by the Admiralty. An opinion long prevailed in the navy that, by a regulation of the Commissioners for executing the office of Lord High Admiral, officers who succeeded to command, from death vacancies, would be confirmed in the rank, on this station, upon a consideration of the unhealthy nature of the climate. On

* “Such is the way to immortality.”

any other station, the vacancies from death were in the gift of the Commander in Chief. If correct, it does not appear to have been immutable, but allowed only on sufferance.

There are other instances ; one I recollect ; Lieutenant Roberts succeeded to the command of the ship, (I think the *Snake* sloop of war), on the death of the captain ; I believe, too, that the first lieutenant of the ship which was commanded by that amiable and gentlemanly officer, Captain Nairn, succeeded on his death.

From the early naval history of this country we learn that sea-gunners were eligible for promotion to the rank of Captain. In the seventeenth century it appears that the master-gunners' station was considered "highly respectable." It would, perhaps, be of advantage to the service, if the gunners of the present day were more scientifically educated ; but the objection to any alteration, I imagine may proceed from the ill effect that would follow any reduction of the wholesome patronage for good conduct in the 'fore' mast man ; and whilst the post is still open to the deserving of that class, the authorities have wisely drilled the lieutenants, and a certain number of seamen, into the proficiency of the art ; which, upon the whole may be considered a better plan than that of constituting a new order of master-gunners.

Capt Richard Leake was, prior to his advancement, gunner of H.M.S. *Neptune* ; and was succeeded in that station by his son, afterwards Admiral Sir John Leake. From the situation of gunner, he was promoted (1688) to the rank of commander of the *Fire-Drake*, fire-ship. In the battle off Cape La Hogue, he commanded the *Eagle* 74 ; and his share in the action may be judged of from the amount of the loss which that ship sustained,—70 men killed, and 150 wounded ! Seventeen of the guns were dismounted. He rose to be commander-in-chief of the fleet, and was constituted Rear-Admiral of Great Britain, an honorary office held by patent. But such is the mutability of all worldly affairs that, on the death of Queen Anne, he was, by a change of men to power, deprived of his appointments.

The Naval Historian makes the following remarks on the treatment this veteran received :—"To crown at once the ill-usage he met with from those persons who, at that day, called themselves friends to their country ; this man, who had spent the whole of his life honestly, and with unblemished reputation in the service ; who had procured it as solid advantages as any, either of his contemporaries or predecessors had done, was obliged to retire on a pension of £600 a year ; a sum barely equivalent to his half-pay. Yet, this he accepted without a murmur, and without the smallest attempt, by painting the hardships of his case, to render odious the government of that country to which he had ever proved himself a steady friend, a zealous defender, and an able minister." He died in the year 1720.

THE NAVAL UNIFORM.

THOSE of our readers who have any taste for nautical antiquities, may find some entertainment in the following particulars of the wardrobes of our ancestors of naval celebrity, those hardy veterans of the old school, who have left behind them, perhaps, not many vestiges of their sea-kit,—for how could they, as the story goes, this was contained in a purser's worsted stocking! but of that hardy and noble daring which we all of us know right well, and which has been always imitated both at home and abroad. In the higher grades of naval officers even of the present day, there are doubtless many who will recognize the peculiar cut of the first uniform which was established for the profession, and which, certainly, contrasted with the glittering appendages of that now worn, had the advantage of being more adapted to the nature of the service for which it was intended.

About the time that our last number was going through the press, a very interesting paper on naval uniform, communicated by Mr. John Barrow, formed the subject of a discussion at the *British Archaeological Association* in London. Any contributions towards a history of naval uniform must, of necessity, be amusing to naval officers, and we considered ourselves bound to transfer some of the particulars to the pages of the *Nautical*, more especially, as the source from which they come is authentic. This we are enabled to do by permission of the Committee of the British Archæological Association, a body of noblemen and gentlemen, presided over by Lord Albert Conyngham, and established in 1843, for the purpose of disseminating a correct knowledge of, and respect for, our national antiquities. We have thus had placed in our hands the following letter, dated in 1830, addressed to Sir Henry Ellis, the Secretary of the Antiquarian Society.

Greenwich Hospital.

“DEAR SIR.—I have been quite disappointed in my expectation of obtaining for you some early documents from the Admiralty, respecting our naval uniform, but though Mr. Croker assisted my enquiries in the Record Office there, none can be found earlier than 1763, before which time it appears papers were very improperly preserved.*

“In the copy of King James's warrant, with which you favored me, I see that he merely renews Queen Elizabeth's grant of the 'Livery Suits,' appointed for the six principal masters of her royal ships. Perhaps the Wardrobe Office might help you to trace this annual gift somewhat later, though as among the multitude of naval portraits, I never saw one arrayed in gorgeous habit, I doubt if it survived that reign.

“In the naval gallery of this institution I can shew you every variety

* It is quite true that a reference to Papers of the Record Office prior to this date is difficult, from an absence of that system of late years adopted; but the assiduity of Mr. John Barrow (who has charge of that office) in classifying and arranging the most important papers has brought to light the original order, which appears to have been the object sought after, and which will follow—Ed.

of cut and complexion of dress,—Nottingham, Raleigh, and Torrington, expand their dignities in courtly costume; Lawson, Harman, and Monk frown in buff belts and jerkins; Sandwich, Munden, and Benbow shine forth in armour; while Rooke, Russell, and Shovell, the heroes of a softer age, are clothed in crimson and Lincoln green, surmounted with the flowing wig, which then distinguished alike the men of the robe, and of the sword.

“A portrait of one of my naval ancestors (Commodore Brown, who with Vernon took Porto Bello in 1739,) exhibits him sword in hand in a full suit of russet brown, (perhaps a play upon his name). Every man then dressed as seemed good in his own eyes. Some of the ‘crack-captains’ even carried it so far as to have a special uniform for their own ships. My late gallant father, who went to sea in 1745, used to tell us that Captain Windham and all the officers of the Kent of 70 guns, in which he embarked, wore gray and silver, faced with scarlet. Such foppery, however, at that period, was not unfrequently combined with checked shirts and petticoat trousers.

“In that same year a club of sea officers, who met every *Sunday* evening at Wills’ coffee-house in Scotland-yard, for the professed purpose of watching over their rights and privileges, determined among other matters, ‘That a uniform dress is useful and necessary for the commissioned officers, agreeable to the practice of other nations;’ and ‘Resolved, that a committee be appointed to wait upon the Duke of Bedford and the Admiralty, and if their Lordships’ approved, that they will be pleased to introduce it to His Majesty.’

“The original Minute dated 15th February 1745-6, now lies open before me. This curious old volume amidst a strange jumble of professional politics, charitable grants, and club accounts, with autographs of most of our ablest officers, still *smacks of Wills’ coffee-room*, but nothing more does it tell of the success of the aforesaid memorial there concocted. But of this transaction my boyish memory has preserved an anecdote, which some thirty-five years ago, I heard from the lips of Mr. Forbes, then Admiral of the fleet, whom I was allowed occasionally to visit with my father, who delighted to listen to the stories of his venerable friend, and who, though confined by age and infirmities to his chair, still recounted them with uncommon accuracy.

“Adverting to the establishment of the naval uniform the Admiral said, he was summoned on that occasion to attend the Duke of Bedford, and being introduced into an apartment surrounded with various dresses, his opinion was asked as to the most appropriate. The Admiral said red and blue, or blue and red, as these were our national colours. ‘No’ replied his Grace ‘the King has determined otherwise,’ for having seen my Duchess riding in the park a few days ago in a habit of blue faced with white, the dress took the fancy of his Majesty, who has appointed it for the uniform of the Royal Navy’.

“It is remarkable that for this regulation, we cannot trace any order, or Board-warrant at the Admiralty, though the year of its institution is proved by the Gazette of 1767, where an order of Council appears ‘superseding the embroidered uniform clothing, established in 1748,’

(evidently that just mentioned), and appointing in its stead a uniform (fully particularized) for the Flag Officers, and others under their command.

“In 1783 and 1787 further changes were made in like manner, and in 1795, when Earl Spencer was placed at the head of the Admiralty epaulettes were added, which though the proper appendage of a military dress were regarded with prejudice as a foreign fashion. In this anti-pathy of the Old school, our illustrious Nelson once joined, for in one of his early letters to my father, written during a short tour in France in 1783, he speaks with indignation of two of his brother captains ‘who’ he says ‘wear fine epaulettes for which I think they are great coxcombs; they have not visited me, and be assured I shall not court their acquaintance.’

“One of these officers was the late Sir Alexander Ball, who became in after life one of Nelson’s ablest supporters, and most attached friends, and Nelson himself, who in his youth thus shrunk from the glitter of an epaulette, displayed his galaxy of stores to the public gaze, with an anxiety which ill-assorted with the general simplicity of his character.

“See what you have brought upon yourself by encouraging me to tell ‘tales of the sea.’ It is now almost ‘the middle watch,’ and you are relieved.

Believe me, my dear Sir,

Very sincerely yours,

E. H. L.

The following are the passages above alluded to, wherein Lord Nelson speaks his mind on this subject. The first is dated St. Omer, Nov. 2nd, 1783, and the second 26th November same year and place.

“Two noble captains are here, Ball and Shepard, you do not know, I believe, either of them; they wear fine epaulettes, for which I think them great coxcombs: they have not visited me, and I shall not, be assured, court their acquaintance.”

The next is for the most part a repetition of the foregoing, but concludes with the additional remark:—“You may suppose I hold them a little *cheap* for putting on any part of a Frenchman’s uniform.”

We find the following remarks added by the editor, Sir Harris Nicolas.

“The two captains were Alexander John Ball, afterwards a very distinguished officer, a rear-admiral and baronet, and Nelson’s intimate friend, his letters to whom are among the most interesting of this collection; and Captain James Keith Shepard, who died a vice-admiral of the red, 1843.

“Epaulettes were first ordered to be worn, as part of the naval uniform, on the 1st of June, 1795. The name shews that they are of French origin, and it appears from Nelson’s next letter (quoted) that they were worn by the French previously to the year 1783.”—*Extract from the Dispatches and Letters of Vice-Admiral Lord Viscount Nelson.*

Arriving now at Mr. John Barrow's paper read at the meeting of the Archaeological Association on the 31st January last, he says:—

“Considerable doubts have hitherto existed as to the precise period, in the reign of George the Second, in which a regular uniform was first established for the officers of the Royal Navy, and still greater doubts as to the description of the uniform which was then worn by them.

“My attention was drawn to the subject on the occasion of her Majesty's *Bal Costume* (last summer) when it was considered desirable to ascertain in what uniform those distinguished officers of the navy, who were honoured with the Queen's command to attend the ball, should make their appearance, the period selected by her Majesty happening to be that in which the Naval uniform was generally supposed to have been first established.

“Much difficulty was experienced in tracing any order upon the subject; there was no order in Council, no mention of it in the *Gazettes*, no allusion to it in the *Annual Register*, in short after a fruitless search, all hope of tracing the uniform was given up, and recourse had to the engravings from the authentic Portraits of Sir Joshua Reynolds, such as those worn by Admiral the Hon. E. Boscawen, afterwards a Lord of the Admiralty—Lord Anson, who was one of the Lords at the period in question, the Earl of Sandwich being then first Lord.

The same difficulty in tracing the original Order had been experienced by my Father, Sir John Barrow, when he published his *Life of Anson*.

“About the same time, he says, (that is in the year 1747) the Board of Admiralty decided to give an established uniform to naval officers; one account says, blue with white collars, cuffs and facings, selected by the King and taken from the Duchess of Bedford's riding habit. But no order in council was issued, as has since been usual, nor was it gazetted, and there is some reason to believe that the general adoption of it was confined, or nearly so, for some time afterwards, to flag officers and captains.

It is stated, on what appears good authority, that when it had reached the ship's ward-room, there was but one uniform coat, to be put on by any of the lieutenants, when sent on duty to other ships, or on shore, that the colour of the breeches was still left to the fancy of each, and was generally black or scarlet. Major Rennell in a letter to a friend says, “Before Anson's time, it is said, the lieutenants of the navy on the Mediterranean station purchased the soldiers' old coats at Gibraltar and Mahon, and trimming them with black, wore them as an uniform. Sixty-two years ago (in the year 1759) I saw, says the Major, a master of a man-of-war who wore a red coat so trimmed and thought himself smart. Perhaps it was one of the lieutenants' old coats as they the wore blue uniforms.

Another account seems to upset the story of the Duchess of Bedford's riding habit, and that the uniform, originated in the following manner. In a letter from Captain Keppel to Captain P. Saumarez, dated London, 25th August, 1746, is the following passage:—“Tim Brett tells me you have made a uniform coat, &c. after your own fancy; my Lord Anson is desirous that many of us should make coats after our own taste, and then

that a choice should be made of one to be general, and if you will appear in it here, he says he will be answerable your taste will not be amongst the worst," What the uniform selected was does not appear, nor can any order in council be found in the council office or in the Admiralty."

Barrows' Life of Anson.

"At the risk of being considered an undutiful son, I must nevertheless be permitted to remark that what the uniform selected was, does now appear in this room. The following passage in the *Quarterly Review*, Vol. 48, page 503, is equally inaccurate.

"From whatever causes the records of the Admiralty are very imperfect in the reign of George the Second.

"It is not even known, from any document in the Admiralty, when the first naval uniform was established by George the second, nor does it appear by the Gazette."

The passage quoted from the Life of Anson is, upon the whole, remarkably accurate, in the absence of all *authentic* documents, as is now fully established by the search, I have been enabled to make, in consequence of the recent arrangement of the record branch of the Admiralty, by the present Board; and by which many curious old documents have been, and more will be, brought to light.

In the year 1748 this order was addressed to the commander in chief of the several squadrons, and to every officer in command of a ship at home and abroad; yet, strange to say, business-like as the wording of the order is,—it would appear to have been issued to the officers employed on Foreign service, without any accompanying description or pattern of the uniform.

The following quaint extract of a letter from Admiral Boscawen, may serve to account for the Master of a man-of-war having been seen by Major Rennell some years after the order was issued with a red coat trimmed with blue. He had probably just returned from Foreign Service.

The letter is dated Fort St. David's, 13th February, 1749. "The order, he says for establishing the uniform enclosed in your letter of the 13th April, cannot be complied with, as I am entirely at a loss with respect to patterns, but I shall have due regard to the Acts of Parliament for further regulating the proceedings in Courts Martial".

Since the period in question, several partial changes have been made in the naval uniform. His late Majesty when Lord High Admiral having ordered the collars and cuffs to be red, which have since been restored to white.

The following order was addressed to 21 Admirals, Vice-Admirals, and Rear-Admirals, 132 Captains, Commanders, and Lieutenants, in command of vessels.

"Whereas, we judge it necessary in order the better to distinguish the rank of sea officers, to establish a military uniform cloathing for Admirals, Captains, Commanders, and Lieutenants, and judging it also necessary that, persons acting as midshipmen should likewise have an uniform cloathing, in order to their carrying the appearance which is necessary to distinguish their class to be in the rank of gentlemen, and

give them better credit and figure in executing the commands of their superior officers; you are hereby required and directed to conform yourself to the said establishment, by wearing cloathing accordingly at all proper times; and to take care that such of the aforesaid officers and midshipmen, who may be from time to time under your command, do the like. And it is our farther direction that no commission officer or midshipman do presume to wear any other uniform than what properly belongs to his rank. Patterns of which, for Admirals and Vice-Admirals, and also for Rear-Admirals, may be seen at the Admiralty Office; and patterns for each class of other officers, viz., Captains who have taken post three years, and by His Majesty's late regulation rank as Colonels, all other Post-Captains, who by the said regulation rank as Lieutenant-Colonels, Commanders not taking post, and Lieutenants, and likewise for Midshipmen, will be lodged at the Navy Office, and with the store-keeper of His Majesty's Yard at Plymouth. Given, &c., 13th April, 1748.

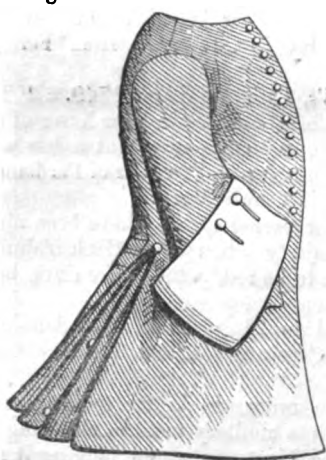
Hats.—Two are preserved, one of which has silver lace.

Duncannon,
Welbore Ellis,
John Stanhope.

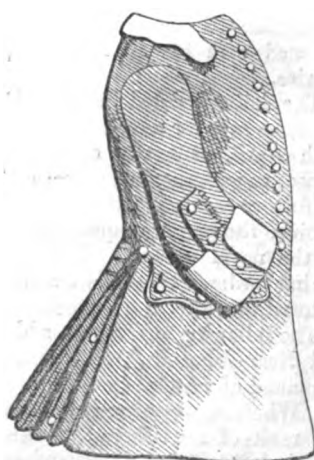


1. *Captains who have taken Post three years.*—A blue coat with a large loose white cuff and white lining.

2. *Other post Captains.*—A blue coat with slashed sleeve and white cuffs, meeting at the slash.



1

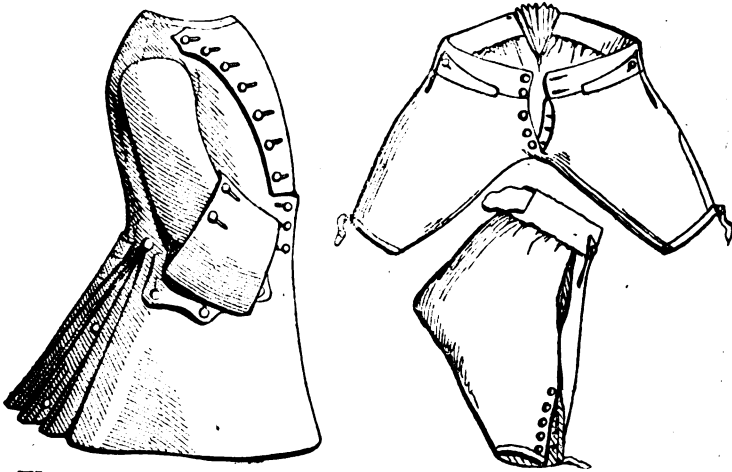


2

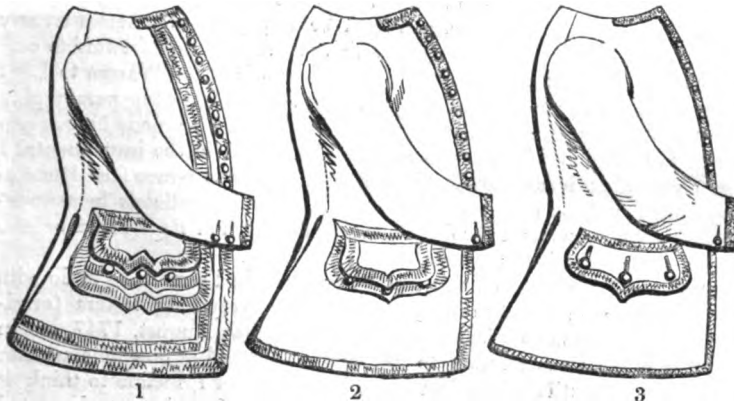
3. *Commanders not taking Post and Lieutenants.*—A blue coat with large loose cuff, same colour as the coat, and lapelles in front, buttoning back, and of same colour.

Breeches.—Kersymere, white or blue, probably according to full or undress.

3

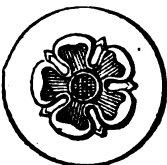


Waistcoats.—White kersymere, wristbands of sleeves embroidered with lace reaching beyond cuff of coat.



1—Post Captain of three years. 2—Other Captains. 3—Commanders and Lieutenants.

Buttons.—The first or rose pattern is no doubt remembered as the uniform button by old officers. The second or knob button is peculiarly made, being formed of wood, faced with brass and the shank by which it is attached to the coat being a piece of catgut inserted through the wood. The third will be recognized as the old warrant officer's button, it evidently is of a recent date and does not belong to the old uniform.



3



1 and 2



The patterns of the admirals' uniforms alluded to in the foregoing order as to "be seen at the Admiralty Office," have unfortunately not been preserved, nor those "lodged at the Navy Office." But those referred to as to be lodged "with the Naval-storekeeper of His Majesty's yard at Plymouth," at the suggestion of Mr. Barrow were ordered to be sent up the Admiralty, and are the subjects of the foregoing sketches.

We understand it is intended they shall, in future, be preserved at the United Service Museum, or at Greenwich Hospital, certainly a most appropriate place for them, where they will not only be kept with a scrupulous care; but open to the inspection of visitors, and in the same establishment with many naval veterans with whose history these relics of bygone days are so intimately connected.

The coats have the peculiarity of being, with the exception of one, destitute of collars, and that collar is exceedingly small, and only attached behind. This corresponds with the fashion of the time, the neck being covered with frill and lace. The cloth of all of them is a Prussian blue, and very thick, and the sleeves are purposely made short and large so that the wristbands of the waistcoats having sleeves to them with their laced edge may show beyond them.

We shall conclude this with the following extract of a letter addressed to Mr. Crofton Croker, the Secretary of the British Archæological Association, by Mr. Robert Cole, and shall be happy to add, hereafter, any further information on the subject which our readers may forward to us.

In the *draft* of a very long letter* from Sir Peter Warren to Lord Anson, dated Plymouth, 3rd August, 1747, is the following paragraph.

"I can't conceive what reasonable objection can be made by our services to the uniformity of dress and rank proposed in the instrumental I sent you, if it is approved of in that form by his Grace (the Duke of Bedford), and you pray let me know, and I will immediately be answerable for the carrying it thro' with many of our junior flags, and I believe with all the captains in general."

"It would appear from this that Warren had had something to do with the projected uniformity of dress. I have two very long letters (originals) from Anson to Warren, dated 1st and 4th August, 1747, but in neither is there any allusion to the subject. I had at one time another letter (sadly mutilated) of Anson's to Warren; and I incline to think it was a reply to the letter above mentioned; but I unfortunately parted with it some two years ago, and I know not now where it may be got at. The whole correspondence was private, though referring to the service.

"In the first volume of the Nelson Dispatches are two letters from Lord Nelson to Capt. Locker, alluding to Captains Ball and Shephard wearing epaulettes, in 1783, one only is referred to in Mr. Locker's letter to Sir Henry Ellis, read by Mr. Pettigrew last night.

"I do not place much confidence in the costume of celebrated men, as shewn by the portraits painted a century and half ago. It is pretty well understood, I believe, that the dress was according to the fancy of the painter or the party. Admiral Penn's dress is characteristic of his profession, whilst his son the *Quaker* is handed down to us in *armour*."

* Entirely autograph.

NAUTICAL NOTICES.

THE PORTS OF SOUTH AUSTRALIA ARE FREE.

Port Adelaide, July 15th, 1845.

We beg to call the attention of merchants and others to the following notice on this subject, extracted from one of the latest Adelaide papers:—

TO MARINERS OF ALL NATIONS.—Port Adelaide and all the other harbours of South Australia, are now free ports; his Excellency, the Governor, in Council, on the 3rd of July, 1845, having passed an ordinance, abolishing all tonnage dues, pilotage rates, harbour dues, entrance and clearance dues, wharfage dues, and even the government fees, payable at the Custom-house.

We therefore take this, the earliest opportunity of informing captains, managing owners, and all other persons interested in mercantile, whaling, or other shipping, that vessels navigating these seas, may now freely come into our waters for refreshment, refit, traffic, or freights, and depart thence, without incurring one farthing of expense in the shape of fiscal or official exactions.

In addition to the certainty of always finding abundantly furnished and cheap markets, water and fuel also are plentiful and cheap, and pilots will be in attendance, as heretofore, but no charge will be made for their services.

The passage into St. Vincent's Gulf, through Investigator's Straits and Backstairs Passage, are well described in modern charts, and the passage up the gulf itself to the mouth of our harbour is so free from danger, that hundreds of ships and vessels have arrived and departed without loss or serious disaster.

SAILING DIRECTIONS FOR GULF ST. VINCENT.—After making Kangaroo island, steer E. $\frac{1}{2}$ N. through Investigator's straits, between that island and Althorpe island. Should the wind be from the eastward, you will find no difficulty in beating through the straits, nor anything in the way more than is pointed out in Flinder's chart. If bound up Gulf St. Vincent, great care is requisite to avoid Troubridge Shoal, situated on the west side of the entrance, as the flood tide through Backstairs Passage sets strong, (particularly on the full and change of the moon), directly upon the shoal; therefore, coming from the westward, the course should not be altered until Point Marsden bears S.W.b.W. $\frac{1}{2}$ W., when you will be about ten miles from the high land inside Cape Jervis, named in Flinder's chart N.W. Bluff, when you may shape your course for the Light Vessel N.N.E., forty miles distant. For about six leagues up the gulf, the land is high and bold; but above that, the shore becomes very low, with hummocks of sand upon it; and the same description of coast prevails to the head of the gulf. After passing the high coast land, the water shoals far out, and in some places (when within the distance of ten miles from the Light) five fathoms will be found at a distance of four miles from the beach. Be careful of your soundings, particularly at night; and in running up to the light, keep, as nearly as you can, in between five and six fathoms water, not approaching inside five, as within that depth the water shoals suddenly; and if you keep outside six fathoms, you may pass to the westward of the light and not see it. In these soundings you will make the light a-head, which may be seen twelve miles from the deck of a ship. The shoal—called the Bar—at the entrance to the port, bears N.E. one mile from the Light Vessel. When you are within a proper distance, a boat will be sent to you from the Light Vessel with a pilot, and to receive all mails and letters. Should you sight the light in the early part of the night, you may anchor anywhere to the southward of it in six fathoms; or keep under weigh

until daylight, taking care to be to the southward of the light, and as near as it is possible in the morning, as the tide answers early. Where there Light Vessel is moored, in latitude $34^{\circ} 44'$ south, the anchorage is safe; but a good full scope of chain is required, never less than fifty fathoms, and if it blow, a full chain. Never let go the second anchor if you can avoid it: rather give more chain, as your vessel will ride much easier with one anchor down than two.

When bound down the Gulf, steer from the Light Vessel S.S.W., which will keep you in sight of the land on the east side of the Gulf, and out of the influence of the tide through Backstairs Passage, until you are to the southward of Troubridge shoal; but on no account shape a course that you may fancy will enable you to weather the shoal, (thereby laying the ship's broadside exposed to a rapid tide running directly upon it), until you are sufficiently to the southward to shape your course down the strait.

In beating down the gulf, never exceed a distance of ten miles from the larboard shore, as the opposite side is shoal, and be careful, when standing in, to have a cast of the lead, as it is shoal a considerable distance off, until you get down to the high land. In some places to the northward of Holdfast Bay, there are not more than five fathoms at a distance of four miles from the beach, and the water shoals very quickly within that depth; but where the high land fronts the sea, the shore is steep, except a reef that lies a mile off, about three miles to the southward of Holdfast Bay. The flagstaff at Holdfast Bay is in latitude $34^{\circ} 58' 28''$ south. In moderate weather, endeavour to be as close to the land as possible by sunset, when you will be certain of the wind off the land, which will lead you down the coast. Do not allow yourself to be thrown off until you are well down with Cape Jervis, and to the southward of Troubridge shoal, which is an extensive flat, and only in the middle shows a patch of about 200 yards at high water.

Ships bound down Investigator's straits, meeting a strong westerly wind, and wishing to anchor, will find good holding ground close in on the east side of Point Marsden, in six fathoms water.

Vessels coming from the eastward through Backstairs Passage, and bound up the Gulf, should night be approaching, must keep on the north side of the passage, and haul round Cape Jervis—all that coast being quite bold. When the Gulf is open, shape a course N.b.E.½E. for the Light Vessel.

THOMAS LIPSON, R.N.,
*Naval Officer and Harbour Master of the
 Province of South Australia.*

Trinity House London, 12th January, 1846.

CHANNELS IN THE VICINITY OF YARMOUTH.—Notice is hereby given, that in conformity with the intention expressed in the previous notice from this House, dated the 30th ult. the following alterations in the buoyage in the vicinity of Yarmouth and Lowestoft, have been carried into effect, viz:—

The Scroby Sand

Having extended to the westward between the S.W. and west buoys, a White Buoy, marked "Scroby Elbow" has been placed in $6\frac{1}{2}$ fathoms, with

Lacon's brewery chimney, on the south end of the silk factory, about one-third the length of the factory, and bearing

| | | | | |
|---------------------------|---|---|---|-----------|
| West Scroby Buoy | . | . | . | W.b.N.½N. |
| South West Scroby Buoy | . | . | . | N.b.E.½E. |
| St. Nicholas Light Vessel | . | . | . | S.½W. |
| | | | | S.b.W.½W. |

Corton Sand.

A ridge having grown up in a westerly direction between the W. and S.W. buoys, a White Buoy, marked "Middle Corton," has been placed thereon, in $3\frac{1}{2}$ fathoms, with

| | |
|--|---------------------------|
| Lowestoft Church, in line with a roadway leading to the beach | S.W.b.W. $\frac{1}{2}$ W. |
| The high chimney at the silk factory, in line with the mill, next north of the inner end of the Yarmouth Jetty | N. $\frac{1}{2}$ E. |
| West Corton Buoy | N.E. |
| South West Corton Buoy | South |

The North St. Nicholas Buoy.

Has been moved in a southerly direction, and now lies in $4\frac{1}{2}$ fathoms, with Gorleston south mill, in line with the north pier head, at that place

| | |
|---|---------------------------|
| Yarmouth Old Church, a little open north of the highest mill on the North Denes | N.N.W. $\frac{1}{2}$ W. |
| South St. Nicholas Buoy | S.b.W. |
| St. Nicholas Light Vessel | S.W. $\frac{1}{2}$ S. |
| South Scroby Buoy | S.S.E. |
| Scroby Fork Buoy | S.E.b.E. $\frac{1}{2}$ E. |
| South West Scroby Buoy | N.N.E. $\frac{1}{2}$ E. |

Lowestoft Roads, Inner Shoal.

The White Buoy hereon has been moved about $1\frac{1}{2}$ cables length to the S.E., and now lies in $2\frac{3}{4}$ fathoms, with

| | |
|---|-------------------------|
| Lowestoft Church spire, in line with a round topped tree in the town. | N.W. $\frac{1}{2}$ N. |
| Pakefield Mill, in line with the northernmost house at that place | W.b.S. $\frac{1}{2}$ S. |
| Inner Shoal, Black Buoy | W. $\frac{1}{2}$ N. |

An additional buoy (black) has also been placed on the inner or western edge of the said inner shoal, in 11 feet water, with

| | |
|--|-------------------------|
| A white house south of the Pier at Lowestoft, in line with the South Pier head | W. $\frac{1}{2}$ N. |
| Lowestoft low light house, just open north of a high chimney in the town | N.b.W. $\frac{1}{2}$ W. |
| Inner Shoal white buoy | E. $\frac{1}{2}$ S. |

Note.—The foregoing bearings are all by compass, and the depths those of low water spring tides.

Mariners are also required to observe, that in fulfilment of the farther intention notified by the aforesaid advertisement of the 30th ult., and in order to facilitate the navigation into and out of Yarmouth Roads through the wide and deep water channel between the Scroby and St. Nicholas, or Kettle-bottom sands, commonly called, "Hewett's Channel," the St. Nicholas Light Vessel will, on or about the 1st of April next, be taken away and moved to the position now occupied by the Red Beacon Buoy at the southern end of the St. Nicholas (otherwise Kettle-bottom) Sand; that the said Red Beacon Buoy will, at the same time, be removed to the spot in which the Light Vessel is now moored; and that a black Beacon Nun Buoy of large size will replace the present chequered Buoy on the south end of the Scroby.

By Order,

J. HERBERT, Secretary.

NOURSE RIVER—ENTRANCE.—Important correction in Latitude.

Dundee, 21st January, 1846.

SIR.—In your number for this month, I observe that Lieut. Ruxton, in his notes on the south-west coast of Africa, quotes my name as having communicated to him the latitude of Nourse river, which I had an opportunity of seeing in my passage up the coast from Walwich to Great Fish bay, as being 17° 50' south.* I beg you will, in your next number, correct the above latitude, as Lieutenant Ruxton has mistaken it in some way, the true latitude being 17° 15' south. The other particulars are correct.

I may here mention, that on the 18th of April last, at two P.M., being about one-and-a-half miles off the entrance of the river, in nine fathoms dark mud with fine sand; the atmosphere at the time very clear, from the mast head I traced the river of nearly an equal breadth for about three miles, in a north-east direction, when it appeared to take a more easterly direction, among some sand hills, and far in the interior there was some very high table land, which appeared covered with verdure.

I am, &c.,

C. W. STENING,

Master of the barque John Cock.

P.S.—The bearings by compass, and the water very shoal for about two miles out, on the north side of the river.

C.W.S.

To the Editor of the Nautical Magazine.

WALKER BANK, CHINA SEA.—The following communication adds another to the banks of the China sea. It appears to be quite new, and about fifty miles west of the Grainger bank, reported in 1844. We have named it after its discoverer.

Whitehaven, January 29th, 1846.

SIR.—I beg leave to inform you, that on my passage from Hong Kong to England in April last, I passed over a coral bank in the China sea, which I made in latitude 7° 32' north, and longitude 109° 35' east; ship steering to the south-west, under all sail, with a light air from the north-east, and a heavy swell; the sea full of mushroom blubber. Observed a number of sharks coming up astern, and while trying to catch one, plainly saw the coral rocks under the ship. Had several casts of fourteen fathoms, and then no bottom with thirty, the water not discoloured, and the bruized coral on the lead had a very disagreeable smell of putrid fish. Sounded half a mile in fourteen fathoms, south-west and north-east.

M. B. WALKER,

Commander of the brig Vanguard, of Whitehaven.

To the Editor of the Nautical Magazine.

COLUMBIAN ROCK.—The following account of a new danger, from the master of the barque Columbian, of Liverpool, will serve as a useful caution to seamen.

48, Windsor Street, Totteth Park, Liverpool.

21st January, 1846.

SIR.—I have taken the liberty of sending you an account of the loss of the barque Columbian, of Liverpool, under my command, which I beg you will insert in your much esteemed journal. I left Sydney, New South Wales, 7th of February, 1845, bound to Singapore by the western route, with part of a general cargo, some horses, sheep, and four gentlemen passengers. On the 7th of April, at dusk, the north point of the Pulo Leat bore S.S.E. twelve

* See page 13.

miles, and being clear of all dangers in the Straits of Gaspar as laid down in the charts, the ship was kept under sail for the night. At 3h. 30m. A.M., on the 8th inst., just after heaving the lead in seventeen fathoms, the ship struck on a sunken rock, about ten feet under the water, but without stopping her way. The anchor was immediately let go; the carpenter reporting her to be making much water, the pumps were set on, and the mate in going below found the leak to be under the larboard bow, about two planks from the garboard streak. At 10, finding the water above the ballast, and gaining in spite of every effort, the boats were immediately got out, provisioned, and armed, and at noon we found ten feet of water in the hold. Abandoned the ship, and pulled in for Gaspar Island, intending to land and restow the boats, but we found a number of Malays and Prahus about the island, and thought it most prudent to avoid them; made up our minds and shaped our course for Singapore, and after suffering great privations we landed, after eleven days, during which time, from the strong contrary current, we pulled and sailed over about 500 miles. Arrived all safe, on Friday, 18th instant, at noon.

P.S.—Part of the China mails were thrown overboard, in a gale, from the boats, with some other articles. The bearings of the Gaspar Islands when the ship struck, were E.b.S., fifteen or sixteen miles; Tree Island, S.E.b.E.½E., twelve miles; the bearing was taken about five minutes after the ship was anchored.

Your most obedient servant,

G. WAKEM.

To the Editor of the Nautical Magazine.

LIGHT AT CAPE COAST CASTLE.—We understand that measures have been adopted, at the recommendation of the Lords' Commissioners of the Admiralty, for preserving the efficiency of the light at Fort William, recently proposed to be discontinued. An account of the establishment of this light will be found in our volume for 1836.

BUPHAM'S EAST COAST SIGNALS.

Southampton, 26th January, 1846.

SIR.—I believe it is not generally known that a small code of signals, and the cheapest I have ever seen, has lately been published under the title of the *East Coast Signals*, by one Bufham, a master mariner, price one shilling. I was induced to try this new code, and especially as it only required one flag besides the ships ordinary colours. I accordingly found myself possessed of a complete code of signals, including the book for six shillings. Having fallen in with a ship on my passage from the Baltic, which happened to have them, I put them to the test, and found them to answer every purpose for which signals are designed.

I asked the captain his longitude, hour and minute of the day, how many day's passage, where from, where bound, ship's name, &c., besides a number of words exchanged by spelling; I received correct answers to the questions, and also returned them. The two ships were under canvas at the time, distant about three miles. Now, it is well known that ships on the east coast, and in the Baltic trade are seldom or never supplied with signals for the purpose of communicating with another ship, and probably because of the large number of flags, and the great expense of a large code. I have been in the Baltic trade for many years, and have had Marryatt's signals on board for some time, but often as I have shown them to other ships, I have never found one that had them, and generally, they are but little used to the north of the Downs, for the above reason, *i. e.*, expense.

My present motive for now troubling you is, that the masters of the above trades may be induced to purchase this little code, which is published by

Trial and Carr, Sunderland. Every ship might be furnished with almost no expense, and thereby be enabled to report each other's ships on arrival. I am a constant subscriber to the *Nautical Magazine*, although I have never troubled you before; if, therefore, you think this worthy an insertion in your useful periodical, I shall be obliged.

I am, &c.,

A MASTER MARINER.

To the Editor of the *Nautical Magazine*.

P.S.—I must borrow a phrase from Keane, "If there is too much tar in this yarn please to draw it through your fingers."

SWEDISH TARIFF.

List of Articles upon which the Import Duty has been reduced under the New Tariff.

| | Duty under Former Tariff. | | | Duty under New Tariff. | | |
|---|------------------------------|-----|------|---------------------------|-----|-------------|
| | rd. | sk. | r. | rd. | sk. | r. |
| Brushes | Rd.100 | 33 | 16 0 | 25 | 0 | 0 |
| Colours—Cathechue | 16 | 0 | 4 0 | 0 | 0 | 4 |
| Black Shellac | 16 | 0 | 4 0 | 0 | 0 | 4 |
| Yarns—Cotton twined and doubled, which formerly paid duty as thread in hanks, 16sk. per lb., but will henceforth be treated as single cotton yarn— | | | | | | |
| Under No. 26 lb. | | 0 | 16 0 | 0 | 6 | 0 |
| No. 26 and upwards lb. | | 0 | 16 0 | 0 | 6 | 0 |
| Dyed Turkey red lb. | | 0 | 16 0 | 0 | 8 | 0 |
| Ditto all others lb. | | 0 | 16 0 | 0 | 12 | 0 |
| Woollen-dyed, twined, and doubled lb. | | 0 | 16 0 | 0 | 8 | 0 |
| Horn—unwrought lb. | | 0 | 6 0 | 0 | 0 | 3 |
| In plates lb. | | 0 | 2 0 | 0 | 1 | 0 |
| Wrought Buttons lb. | | 1 | 0 0 | 0 | 12 | 0 |
| Knives, other sorts, and forks not specified Rd. 100 | 33 | 16 | 0 | 30 | 0 | 0 |
| Chalk, white, in pieces, and Chalk Stone Turm a | | 0 | 10 0 | 0 | 5 | 0 |
| Leather works of lackered Rd. 100 | 33 | 16 | 0 | 25 | 0 | 0 |
| Needles, sewing and embroi- dering lb. | | 0 | 40 0 | 0 | 20 | 0 |
| Salt, common Turm a | | 0 | 36 0 | | | Free. |
| Millstones, English ad valorem, 5 per cent. | | | | | | 1 per cent. |
| Coal and Coke Turm a | | 0 | 4 0 | | | Free. |
| Sulphur—Sicilia or Natural Sulphur, suitable for making sulphuric acid lye | | 0 | 16 0 | | | Free. |
| Saw blades ad valorem, 30 p. cent. | | | | | | 19½ p. cent |
| Wood—staves of certain di- mension— | | | | | | |
| Oaken 120 feet | | 0 | 40 0 | 0 | 24 | 0 |
| Other descriptions . . ditto | | 0 | 8 0 | 0 | 6 | 0 |
| Wool—common lb. | | 0 | 8 0 | 0 | 2 | 0 |
| Woven goods—half-silk stuffs and plush lb. | | 2 | 24 0 | 1 | 24 | 0 |

THE NEW SWEDISH TARIFF.

List of Articles on which the Import Duty has been increased under the New Tariff.

| Articles. | Duty under Former Tariff. | | | Duty under New Tariff. | | | | |
|--|------------------------------|-----|----|---------------------------|---------|----|----|---|
| | rd. | sk. | r. | rd. | sk. | r. | | |
| Alabaster — unwrought, not specified | 100Rd. | 0 | 15 | 0 | 23 | 0 | 0 | |
| Tin—wrought, not lackered, | lb. | 0 | 8 | 0 | 0 | 12 | 0 | |
| Ditto lackered. | lb. | 0 | 10 | 0 | 0 | 16 | 0 | |
| Coffee | lb. | 0 | 3 | 0 | 0 | 3 | 4 | |
| Thread—linen, white | lb. | 0 | 12 | 0 | 0 | 24 | 0 | |
| Ditto coloured | lb. | 0 | 18 | 0 | 0 | 36 | 0 | |
| Hides and skins, dry | lb. | 0 | 1 | 0 | 0 | 2 | 0 | |
| Other descriptions | lb. | 0 | 0 | 6 | 0 | 1 | 0 | |
| Iron nails—2in. in length | sklb. | 8 | 16 | 0 | 10 | 0 | 0 | |
| Ditto all others, and all other manufactured handiwork in iron, not specified | sklb. | 0 | 16 | 0 | per lb. | 0 | 36 | 0 |
| Animals—horses, except stallions | each | 12 | 0 | 0 | 16 | 0 | 0 | |
| Cows and young cattle | each | 4 | 0 | 0 | 6 | 0 | 3 | |
| Calves | each | 2 | 12 | 0 | 3 | 0 | 0 | |
| Hogs and boars | each | 2 | 0 | 0 | 3 | 0 | 0 | |
| Other four-footed (not oxen) | each | 1 | 0 | 0 | 2 | 0 | 0 | |
| Potter's Ware not specified | lb. | 0 | 0 | 0 | 0 | 3 | 0 | |
| Leather — Condoven and other coloured & printed skins | lb. | 1 | 0 | 0 | 1 | 24 | 0 | |
| Other kinds, except sole leather | lb. | 0 | 12 | 0 | 0 | 24 | 0 | |
| Furs—All other descriptions | 100rd. | 10 | 9 | 0 | 13 | 16 | 0 | |
| Paper tapestry and borders | lb. | 0 | 10 | 0 | 0 | 16 | 0 | |
| Sugar—Muscovado, &c. | lb. | 0 | 2 | 6 | 0 | 3 | 0 | |
| Lump, &c. | lb. | 0 | 5 | 0 | 0 | 6 | 0 | |
| Tea | lb. | 0 | 8 | 0 | 0 | 12 | 0 | |
| Tobacco leaf | lb. | 0 | 6 | 0 | 0 | 7 | 0 | |
| Cigars | lb. | 1 | 0 | 0 | 1 | 6 | 0 | |
| Cut, in paper packages | lb. | 0 | 12 | 0 | 0 | 14 | 0 | |
| Ditto canister | lb. | 0 | 32 | 0 | 0 | 36 | 0 | |
| Snuff | lb. | 0 | 12 | 0 | 0 | 16 | 0 | |
| Spun and Negrohead | lb. | 0 | 8 | 0 | 0 | 10 | 0 | |
| Carrot | lb. | 0 | 16 | 0 | 0 | 18 | 0 | |
| Stalks | lb. | 0 | 2 | 0 | 0 | 4 | 0 | |
| Woven goods—half woollen, in piece, all other descriptions (except flannels), of less than 1½ ell in width | lb. | 0 | 24 | 0 | 0 | 36 | 0 | |
| Of 1½ ell in width and upwards | lb. | 0 | 24 | 0 | 1 | 0 | 0 | |

COMMERCIAL REGULATIONS OF MANILA.

Port Charges, Import Duties, Export Duties, Entrepot Duties, Port and Custom-House Regulations, Terms for Sales and Purchases.

PORT CHARGES.—On foreign vessels, 2rs. per ton, and one half on such as neither load nor unload cargo, besides fees amounting from 5 to 15 dollars, according to the size of vessels. Monies—The Spanish dollar divided into 8rs. and the real into 12 grains, or 20 c. Weights.—The pecal, equal to 137½ lbs Spanish, (140 lbs. English), the quintal to 100, and the arroba to 24, these being 2 per cent. heavier than the English lb. Measures.—The cavan, which contains 5998 cubic inches, and is divided into 25 gantas. The vara, which has 36 inches, and is 8 per cent shorter than the English yard, by which latter, cotton and other manufactures are sold by the importers. A carge is 30 pieces.

IMPORT DUTIES.—Spanish commodities, by Spanish vessels, pay three per cent. *ad valorem*, and 8 by foreign. Foreign commodities, by foreign vessels, 14 per cent., and 7 by Spanish; in general being eight per cent under national flag from Singapore, and 9 from China. Spirits and strong liquors, produce of Spain, by Spanish vessels, 10 per cent., and 25 by foreign, if they be foreign produce, by Spanish vessels, 30 per cent, and 60 by foreign. Cider and beer, produce of Spain, by Spanish vessels, 3 per cent., and 10 by foreign, if they be foreign produce, by Spanish vessels, 20 and 25 by foreign. All Spanish wines, by national vessels, 3 per cent., and 8 by foreign. Foreign wines, by Spanish vessels, 40 per cent., and 50 by foreign, except champagne, which pays, by Spanish vessels, 7 per cent., and 14 by foreign. Cotton twist, grey, black, blue, and purple—knives, or bolos, such as the natives use—ready-made clothes, boots, shoes, preserved fruits, confectionary, and vinegar, by Spanish vessels, 20 per cent., and 30 by foreign. British and other foreign cotton and silk manufactures, made in imitation of native cloths, chiefly stripes or checks of black, blue, and purple colours, Madras and Bengal grey, white and printed cottons, towels, table napkins, and table cloths, 15 per cent., by Spanish vessels, and 25 by foreign. Biche de mer, rattans, diamonds, tortoise-shell, mother-o'-pearl shell, and birds-nest, 1 per cent. by Spanish vessels, and 2 by foreign. Machinery of all sorts for the promotion of industry of the country, cotton twist of red, rose, yellow, and green colours, gold and silver, coined or uncoined, plants and seeds, free. Tropical productions, similar to those of the Phillippines, also arrack and gunpowder are prohibited. Opium is only admitted to be deposited for re-exportation. Swords, fowling pieces, muskets, pistols, and warlike stores may be deposited for re-export, and cannot be introduced without the special license of government, but cannon and dress swords are admitted.

EXPORT DUTIES.—Commodities and produce of every description to Spain, by national vessels, pay 1 per cent, and 2 by foreign. Elsewhere, 1½ by Spanish vessels, and 3 by foreign. Hemp, by national vessels to whatever destination, 1 per cent, and 2 by foreign. Rice, by Spanish vessels, free, and 4½ per cent by foreign. Manufactured tobacco, and cordage, of Manilla hemp, free by all flags. Gold dust, gold in bars, and silver in bars, free.

ENTREPOT DUTIES.—One per cent *ad valorem* at, and 1 per cent at the exportation, with 1 per cent more if the commodities should be kept there more than twelve months, two years being the longest time allowed for it.

PORT AND CUSTOM-HOUSE REGULATIONS.—Vessels newly arrived are not to communicate with the shore until having been visited by the port-captain's boat, and within thirty hours after the visit, a manifest must be presented,

stating packages, marks and numbers, but the vessel may retain her cargo ten days in transit, without stating whether for consumption or deposit, and without being obliged to land, or incurring any charge on the same, except gunpowder, pocket pistols, and forbidden arms.

TERMS FOR SALES AND PURCHASES.—Sales are generally made, duty paid, at three to five months' credit, occasionally at 2½ per cent discount for prompt payment, and exports are bought for cash.

THE EXAMINATION OF MASTERS AND MATES IN THE MERCHANT SERVICE.

(Continued from page 53.)

We now place before our readers the second list which has been issued of the masters and mates who have passed an examination upon the voluntary system, established under the authority of the Board of Trade. It will be found to be in some degree more complete than the first list, inasmuch as it gives the ages of the officers in several instances, and also the names of the ships in which they last served, or may be at present engaged. It is to be regretted that it is still very deficient of even these particulars, because it indicates a somewhat careless feeling on the part of the examining officers of those considerations, which cannot fail to carry great weight with them.

It cannot, surely, be matter of indifference whether the party examined is a youth or an experienced seaman of mature age, nor can there be any good reason for omitting altogether the names of the ship in which he last served. Perhaps, too, if he be not belonging to the ship at the time, it would be useful to know how long it was since he served in his last ship. Such information is not only desirable to enable the public the better to judge of the claims of the respective individuals who shall have obtained certificates of qualifications, but it is equally so to serve as an incentive to other masters to submit to the required examinations. At present, a very great unwillingness to do so prevails, but there is nothing extraordinary in this. It is only natural for old seamen, especially those who have hitherto been tolerably successful, to rely upon their own qualifications, and it has come to our knowledge that many are not very willing to admit the *superior* qualifications of the *members* composing the "Boards of Examiners." Such prejudices, from which even the best possible system would not be entirely free, are the certain effects which must always result from any attempt to bring about an entire change in human affairs, no matter what class may be affected by it. Time is the only cure, and with the force of good examples we cannot doubt that the very great improvement which is arrived at in the characters of the masters and mates in the merchant service, will, in the end, be accomplished. Upon comparing the two lists, we find that of the masters examined, seventeen have obtained certificates of qualifications for the *first* class, six for the *second*, and three for the *third*, making in all twenty-six. Of the mates examined, five have obtained certificates for the first class, two for the second, and one for the third, in all only eight. Thus, it appears, that notwithstanding the regulations of the Board of Trade, (which were published in our last number,) came into operation on the 1st of November last, only thirty-four masters and mates have been examined with success. We do not know how many have offered themselves for examination, or what number may have been sent back for further improvement, or been entirely rejected for the present. It must be confessed, however, that with a mercantile navy consisting of 30,000 ships, comprising 3,000,000 tons the foregoing number of successful candidates bears a very small proportion to the number required. As yet, it would appear, that nothing whatever has been done by some of the boards of

examiners. Of the masters who have been passed, we find that eighteen were examined at the Trinity House, London, four at Dundee, three by the Marine Board at South Shields, and one by the Trinity House, Newcastle; of the mates, four were examined by the Trinity House, London, and four at Dundee.

In the schedule arranged to the printed regulations issued by the Board of Trade, other boards of examiners than those just enumerated, are included. They are the branch boards, consisting of the Sub-Commissioners of pilotage at Beaumaris, Gloucester, Milford, Plymouth, Portsmouth, Great Yarmouth, Trinity House, Hull; Trinity House, Leith; Board for Licensing Pilots, at Glasgow; Ballast Board, Dublin; Commission of Pilotage, Liverpool.

We trust that by bringing these Boards thus prominently under the notice of the public, it may stimulate men to exertion. Much will depend in their giving a fair and liberal interpretation to the intentions of the Government in promoting this measure, whether or not it will be attended with the success which it eminently deserves. We shall continue to watch its progress, and give it all the support in our power.

A LIST of Masters and Mates in the Merchant Service, who have voluntarily passed an examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Name of Examining Board. |
|---------|---|-----------------------|------|-----------------------------------|--------------------------|
| 1845. | | | | | |
| Dec. 16 | N. Shannon..... | 1 | ... | ... | Tr. Ho. London. |
| 1846. | | | | | |
| Jan. 6 | J. Broomfield ... | 1 | ... | ... | Tr. Ho. London. |
| " 6 | T. G. Hinson ... | 1 | ... | ... | Tr. Ho. London. |
| " 6 | C. W. Decker... | 2 | ... | ... | Tr. Ho. London. |
| " 10 | C. Macdonald... | 2 | ... | ... | Tr. Ho. Dundee. |
| " 15 | Peter Brown ... | 1 | 41 | Ecuador, 394 tons ... | Tr. Ho. London. |
| " 14 | J. Thompson ... | 1 | 28 | Renovation, 325 tons | Ma. Bd. S. Shields. |
| " 14 | H. Caithness ... | 2 | 26 | Useful, 214 tons | Ma. Bd. S. Shields. |
| " 14 | John Wilson ... | 3 | 31 | Navigator, 130 tons . | Ma. Bd. S. Shields. |
| " 16 | Joseph Kirkup. | 3 | ... | ... | Tr. Ho. Newcastle. |
| " 23 | J. J. Robinson. | 2 | 28 | Earl Grey, 571 tons | Tr. Ho. London. |

(as Mate.) No. of Register Ticket, 20,225.

MATES.

| | | | | | |
|---------|--------------------|---|-----|---------------------|-----------------|
| 1845. | | | | | |
| Dec. 24 | James Bridie ... | 1 | ... | ... | Tr. Ho. Dundee. |
| " 27 | John Gardlyne . | 1 | ... | ... | Tr. Ho. Dundee. |
| " 31 | J. F. Pattullo ... | 1 | ... | ... | Tr. Ho. Dundee. |
| 1846. | | | | | |
| Jan. 3 | Joseph Watson . | 1 | ... | ... | Tr. Ho. London. |
| " 12 | D. E. Craggs ... | 3 | ... | ... | Tr. Ho. London. |
| " 23 | Thomas Keen... | 2 | 24 | Camilla, 148 tons . | Tr. Ho. London. |

(as Mate) No. of Register Ticket, 74,415.

Board of Trade, January 26th, 1846.

FLOATING WRECKS.

(Continued from page 43.)

- Unknown*, lat. 20° north of Cape Finisterre, 23rd November; vessel about 500 tons, flush decks, painted ports, dismasted, waterlogged, and abandoned. Reported by Madras. [Appears to be the *Henrietta Wilhelmina*, and alluded to further on, and in page 43.]
- Large Vessel*, 26° north-west of Scilly. Reported by the Lord Stanley. *Shipping Gazette*, December 19th. [Mentioned in page 43.]
- Large Barque*, 45 $\frac{1}{2}$ ° north, 49 $\frac{1}{2}$ ° west, 4th November; from 600 to 700 tons; waterlogged, and abandoned, mainmast and bowsprit standing. Reported by the Glasgow, May, arrived at St. John's, N. B. *Shipping Gazette*, 20th December. [Reported in same position in page 44.]
- Unknown*, 58° north, 12° west, 14th October; about 450 tons, timber laden, waterlogged, and abandoned; reported by the *Reliance*, Briggs. *Shipping Gazette*, 20th December. [Reported as before; some typographical error in position.]
- Glenview*, of Belfast, about 700 tons, 46° 1' north, 13° 4' west, 17th October; abandoned, waterlogged, and timber laden, sails loose and shattered. Reported by the Prince Albert.
- Charlotte*, of Prince Edward's Island, 43° north, 53° west, January; dismasted, waterlogged, and abandoned. Reported by the *Lochibo*.
- A Ship*, 400 tons, 44° 5' north, 13° west, 11th October; waterlogged and abandoned. Painted ports and round house, heavy sails in ribbons, topsails furled; two kegs and set of sails in maintop; quarter boat gone and long boat. Reported by the *Windsor Castle*, arrived at New Orleans. *Shipping Gazette*, 23rd December. [Possibly the *Hope*, of London, which is traced in four positions in page 42. She is also about a degree and a half of latitude south of the *Glenview*, but seen six days before her. A strong south wind might have drifted her to the place of the *Glenview*.]
- Barque*, about 500 tons, 46° 4' north, 43° 8' west, 7th December; waterlogged and abandoned, mizen and bowsprit standing, decks washed off, and high poop. Reported by the *Belmont*, from St. John's, N. B., arrived at London. *Shipping Gazette*, 26th December. [Perhaps the *Blake*, of Liverpool, mentioned in page 43.]
- Vessel*, 250 or 300 tons, 39° 9' north, 33° 8' west, 16th November; waterlogged, part of foremast standing. *Shipping Gazette*, 20th December. [Likely to be the *Lancer*, of Sunderland, mentioned in page 42. Her drift since the 26th of October.]
- Packet*, of Yarmouth, 40° north, 40° west, 28th September; was from Port au Prince for England. *Shipping Gazette*, 26th December.
- Jane Charlotte*, schooner, of Prince Edward Island, 45° 1' north, 55° 1' west, 31st November; abandoned. Reported by the James Moran, from Dundalk, at St. John's, N. B. *Shipping Gazette*, 2nd December.
- Blake*, of Liverpool, 46° 5' north, 48° 8' 24th November; masts all standing, no rigging, and full of water. Reported by Francois. *Shipping Gazette*, 29th December. [Reported, also seen on following day by another ship; position corresponds very well, allowing for drift.]
- Barque*, 43° north, 48° west, 28th November; abandoned. Mizen and mizen rigging standing, mainmast and all above head of foremast and bow-

- sprit gone, decks and side stove in. Reported by Olive and Eliza. *Shipping Gazette*, 30th December.
- A Wreck**, $14^{\circ}3'$ north, $27^{\circ}9'$ west, December 6th; with painted ports. Reported by the St. Hiliers, Hamens, arrived in the Downs. *Shipping Gazette*, 30th December.
- Granite**, of Liverpool, 39° north, 65° west, 23rd December. [About sixty miles south of the Gregg, of London. Seen December 1st.]
- Pagoda**, $42^{\circ}9'$ north, 21° west, 23rd January; crew and passengers saved by the Dram Alley, from Para; encountered much bad weather. *Shipping Gazette*, 2nd February.
- London**, brig, 39° north, 20° west, January 10th; dismasted, waterlogged, and abandoned, bowsprit standing, timber laden. Reported by Tiberius Crowell, arrived at Apalachicola. *Shipping Gazette*, 2nd February, [Possibly the Hope, of London, last seen 20th October, see page 42.]
- Lord Lynedoch**, 638 tons, St. John's, N.B., to London, December 23rd; abandoned on this day, being full of water, fore and mizen masts gone, maintopmast off by the cap, and cabin and forecabin washed away. Crew saved by the Cambridge, arrived at New York, 31st December.
- Unknown**, about 100 tons, January 18th; dismasted schooner, apparently Dutch, passed this day, derelict by a French fishing boat, put into Torbay on 19th January.
- Henrietta Wilhelmina**, about 500 tons, Corunna, 1st January. The wreck of about 500 tons which was fallen in with on the 23rd November, near Cape Finisterre, and subsequently drifted landwards, near the Sisarga Islands, is the Henrietta Wilhelmina; she is timber laden; and the wreck now lies upon rocks, and in a very dangerous position.
- John of Liverpool**, 182 tons, December 31st., Douglas, Isle of Man, 7th January. This vessel, dismasted and abandoned, was fallen in with off the northern end of this island by a trawl boat, but cast adrift in consequence of the violence of the gale.
- Brilliant**, of Jersey, sloop, Cherbourg, 11th January. This sloop totally dismasted and abandoned, with no anchor on board, nor rudder at her stern, and in ballast; came on shore near Sartainville, on the 30th ult.
- Barbados**, of London, 322 tons, America to London, 46° north, 32° west, December 3rd, New York, 31st December. Passed by the John George, from Bremenbothis; the Barbados abandoned, long boat gone, mast standing, a signal of distress flying at the maintop gallant mast head, supposed the crew had left her the day previous.

A MARVELLOUS FEAT IN A HURRICANE.

SIR,—The Falmouth *Packet* gives the following feat performed by a vessel in a circular hurricane:—

“STORMS.—A curious illustration of the circular theory of storms, has been recorded in the log of the Charles Heddle. For some days, from the 25th to the 28th of February, in this year, she scudded round in a hurricane circle, during which she ran upwards of 1300 miles, and the direct distance made by her, from point to point, was only 354 miles.”

The curiosity of the hurricanists will, no doubt, be excited by this account, but as it is ambiguously worded, the captain is invited to send a copy of his

log to the *Nautical*, for the benefit of his brother sailors, and which I have no doubt, Sir, you will willingly insert.

By the expression "round and round," it would seem that the vessel made more than *one* revolution.

The first thing that will strike the seaman on reading the statement is that, if the storm was a rotary one, it must have been stationary so as to have enabled the vessel to scud round the area of the circle; for, if the meteor progressed—even at a slow rate—she would not, in all probability, have completed *one* entire circuit.

The next difficulty is as to the time occupied in running the 1300 miles and more—three days, or seventy-two hours; or four days, or ninety-six hours?

In the one case her rate would amount to about eighteen miles and a quarter an hour; in the other to not quite fourteen miles an hour.

We require to know the "wherabouts" also; the changes of wind, &c.

There have been examples of these storms remaining stationary for some time, but whether sufficiently long to admit of a vessel scudding round the circle, I think doubtful.

I trust that the captain of the vessel named, will feel a pleasure in affording the necessary information.

I have the honour, &c.

To the Editor, &c.

S. J.

[We hope the captain will attend to this request.—ED. N. M.]

BOOMS, STOCKADES, AND STEAM-FUNNELS.—In the late affairs at Mulluda Bay, against the Borneo Pirates, and at New Zealand against the natives, the severe losses on our side were sustained in forcing or cutting away the boom which the pirates had formed and placed across their river, and in forcing the stockades behind which the natives had posted themselves. In both instances our gallant fellows had to expose themselves to the fire of a sheltered enemy, and their only chance of escape from being shot was in the erring aim of the marksmen; but when the obstruction was removed, and they approached to the "collar work," as it is termed, the enemy fled, or were soon mastered with very trifling casualty. The circumstances under which the above actions took place have led to some experiments at home, in order on any future occasion more speedily to effect their object, with less personal risk. Commodore Chads, C.B., of the *Excellent* gunnery ship, at Portsmouth, has conducted one of the experiments; and, we believe, Sir J. M. F. Smith, K.H., R.E., the director of the establishment at Chatham for instructing the corps in Military field works, is about to have some stockades constructed for the purpose of proving the most expeditious and least hazardous method of overcoming these formidable barriers. At Portsmouth, last week, Commodore Chads obtained a spare mast, and had it chained fast to a floating buoy in the channel near the *Excellent*. A breaker, or small cask, which had been prepared for the occasion, was filled with powder attached to the mast, the operation occupying only a couple of minutes. A fuse was then lighted, to ignite the powder, and after a sufficient time had been allowed for the boats to pull off, the explosion took place, tearing off large pieces of the timber, from six to ten feet in length. The experiment was in every way successful, and demonstrated the great advantage of this method of removing such obstruction to armed boats going up creeks and rivers, over the tedious plan used at Mulluda; the one operation occupying only two or three minutes, and could be performed by three or four hands, whilst the other, with a very large force,

took nearly an hour (not "some hours") to perform with axes, &c. was attended with the loss of many lives. This week further experiments by Captain Chads, for testing the practicability of destroying floating booms, and made at the suggestion and by the order of the Earl of Ellenborough, the new first Lord of the Admiralty, have taken place. Tuesday's trial was on a small spar, which was destroyed by the explosion.

Wednesday the experiment was made on a more extensive scale—on two large spars, the lower masts of the *Thalia*, 42, the diameter of each being about twenty-seven inches and length about ninety feet. A strong chain cable was placed along the spars, then both, with the chain, were strongly wouled together with a ten-inch cable. This was moored some distance from the *Excellent*, and then a breaker in which a long copper fuse was fixed, and which contained fifty-six pounds of powder, was lashed in a very short space of time under the boom. At about twenty minutes past eleven, the fuse was fired by Lieut. Jenner, of the *Excellent*, the boat in which he was pulled was rowed out of danger, and in five minutes and a half from the lighting of the fuse the explosion took place. It was a grand spectacle; the water along the whole line of the boom being thrown up to a considerable height, forming a dense mass, above which the fragments of the spars were seen in great quantities. One large piece of at least fifteen or twenty feet in length, the entire substance of one of the spars, was thrown to at least an hundred feet. The demolition was most complete; not only were they splintered, but they were broken short off in a variety of places. The chain, of course, sank; therefore it was not immediately ascertained whether or not it had been broken. This experiment has completely and satisfactorily proved that booms, &c. placed across the mouths of rivers and harbours, may be easily destroyed by means of a very simple plan.

The following is an extract from "Thomas Lediard's History, from the conquest 1066 to the conclusion, 1734; and published by John Wilcox, at Virgil's Head, opposite the New Church, Strand, 1735."

A List of ships cast away in the storm 26th November, 1703.

- 1.—*Reserve*, fourth rate, Captain John Anderson, lost at Yarmouth, captain, surgeon, clerk and four-and-forty men saved, the rest of her company, being 175, drowned.
- 2.—*Vanguard*, second rate, sunk in Chatham Harbour, neither men nor guns on board.
- 3.—*Northumberland*, third rate, Captain Greenaway, lost on the Goodwin Sands, all her company was lost, being 220 men.
- 4.—*Stirling Castle*, third rate, Captain Johnson, on the Goodwin Sands, 70 men, of which four were marine officers, saved; the rest, being 206, drowned.
- 5.—*Restoration*, third rate, Captain Emmes, on the Goodwin Sands, all her company lost, being 391.
- 6.—*Mary*, fourth rate, Rear Admiral Beaumont, Captain Edward Hopson, on the Goodwin Sands, captain and purser on shore, one man saved, the rest, with the rear-admiral, drowned, being 261.
- 7.—*Mortar Bomb*, fifth rate, Captain Raymond, on the Goodwin Sands, all her company lost, being 65.
- 8.—*Eagle*, (*Advice Boat*), sixth rate, Captain Bestock, lost on the coast of Sussex, all her company, being 46 saved.
- 9.—*Resolution*, third rate, Captain Lisle, on the coast of Sussex, all her company, being 221, saved.
- 10.—*Litchfield*, (*Prize*), fifth rate, Captain Chamberton, all her company being 108, saved. She was afterwards got off again.

11.—*Newcastle*, fourth rate, Captain Carter, lost at Spithead, carpenter and thirty-nine men saved, the rest, being 193, drowned.

12.—*Vesuvius*, (*Fire ship*), fifth rate, Captain Paddon, at Spithead, all her company, being 138, saved, and she was got off again.

13.—*Arundel*.

Total of the seamen lost, 1519.

The *Association*, *Russell*, *Revenge*, and *Dorsetshire* were drove from their anchors at the Gunfleet, and after having surmounted incredible dangers were almost miraculously saved.

In the Downs, the *Nassau* cut away her main-mast, the *Guardland* and *Dunwich* all their masts, and the *Postilion* (*prize*) her main and mizen masts. At Spithead, the *Firebrand* (*fire ship*) lost her main-mast, the *Jefferies* (*hospital ship*) her rudder, and the *Burlington* her masts. At Yarmouth, the *Lynn* and *Margate* were obliged to cut away their masts.

The House of Commons besought Her Majesty that she would immediately give direction for repairing this loss, and for building such capital ships as Her Majesty should think fit, and to assure Her Majesty that at the next meeting the House would effectually make good that expense, and would consider of effectual means for promoting trade, for manning Her Majesty's Navy Royal, and for encouraging the seamen. That in the mean time, Her Majesty would graciously think of some provision for the families of those seamen who had been lost out of Her Majesty's ships in the storm, till the House could provide for the same.

MERCHANT CAPTAINS' ANNUITANT SOCIETY.

In a recent number we referred to an Annuitant Society establishing with offices at No. 17, Royal Exchange, the object of which is explained in the prospectus as follows:—

The Merchant Captains' Annuitant Society is formed on the plan of the Royal Naval Annuitant Society, established in 1823, which has been so eminently successful; and its object is to secure to the Commanders, Officers, and seamen of the Merchant Service (which has neither half-pay, retiring allowance, nor widows' pensions), the same benefit which that Society has secured to officers of the Royal Navy, namely, a *permanent provision for their families by means of a very small annual payment*.

The manner in which this object is attained is as follows:—Every member, from 20 to 60 years of age, may take from half a Share to ten Shares, and will have the right of nominating his Wife, or any female branch of his family, as an Annuitant on any number of his Shares *not exceeding four for any one person*. Thus, a Member thirty years of age, nominating a female of the same age, will have to pay at the rate of four guineas per Annum on each Share; and a Member forty years of age, nominating a female of thirty will have to pay six pounds per Annum on each Share. At the end of five years, it is expected, the Shares will not pay less than fifteen pounds each; therefore, the nominee of a Member taking one Share, will at his death receive fifteen pounds, and the nominee of a Member taking four Shares, sixty pounds a year during their respective lives; provided always that such Member shall have paid on his Shares during the space of five years. It is expected that this will be the Annuity payable on the calculation; but as the Royal Naval Annuitant Society has, in the course of twenty years, with only 1248 Members, accumulated an invested Capital of £225,000 it is expected that the funds of the Merchant Captains' Annuitant Society, which is open to more than three hundred thousand persons, will be so increased by the increasing numbers of

the Members, and by the Donations from a benevolent public, which never fails to appreciate a meritorious undertaking, that in a few years the Annuities will be greatly augmented. Every Member pays an entrance fee of One pound; and every Member who does not nominate an annuitant, pays One pound annually.

We shall have more to say on this subject in a future number. In the mean time we recommend to our Merchant Captains to "look ahead" and see into it.

WRECK OF THE CATARAQUI, *Emigrant Ship, 800 Tons.*—It is our melancholy duty to lay before the public the particulars of the most awful shipwreck which has ever occurred in these colonies—the total wreck of the emigrant ship *Cataraqui*, upon the iron-bound coast of King's Island. How terrible does this catastrophe give weight to the observations we made in our last number upon the imperative necessity of constructing lighthouses on the shores of Bass's Straits, whilst daily and hourly hundreds of valuable lives are incurring the same dangers as those who have thus been sacrificed!—The following particulars are from Mr. Guthrie, the chief mate who, with his eight fellow survivors, reached the shore almost in a state of nudity, having of course lost everything they possessed.

The *Cataraqui*, Captain Finlay, sailed from Liverpool on the 20th of April, with 369 emigrants, and a crew including two doctors, Mr. C. Carpenter and Edward Carpenter (two brothers), of 46 souls. The emigrants were principally from Bedfordshire, Staffordshire, Yorkshire, and Nottinghamshire. About 120 of the passengers were married, with families, and in all 73 children. Nothing particular occurred until about a fortnight prior to the 4th August, with the exception of the weather being boisterous, with a strong gale of wind from the north-west to the south-west, and incessant rain.

On the night of Sunday, the 3d August, at seven in the evening, the ship was hove-to, and continued laying until three o'clock on the morning of the 4th. At half-past four, it being quite dark and raining hard, blowing a fearful gale, and the sea running mountains high, the ship struck on a reef situate on the west coast of King's Island, at the entrance of Bass's Straits. No opportunity had offered for taking an observation to enable the master to ascertain the ship's course for four days prior to the ship striking; and from the dead reckoning kept, it was presumed that the vessel was in 141° 22' E. long., and 33° 17' S. which would make her between sixty or seventy miles from King's Island. Immediately the ship struck, she was sounded, and four feet water in her hold. The scene of confusion and misery that ensued at this awful period it is impossible to describe.—*Australian Paper.* [We shall return to this subject in an early number,—ED. N.M.]

EXPLORATION OF THE INTERIOR OF NEW HOLLAND.—Accounts have reached Sydney of a most satisfactory character, with regard to the expedition sent out from Adelaide for the purpose of exploring the interior of New Holland, under the able superintendance of Captain Charles Sturt. This intelligence gave new life and vigour to the holders and breeders of horse stock for the East India markets, as they anticipate a successful result from the expedition intended shortly to set out to explore the route from Sydney overland to Port Essington. Should this be successful, the horses can be driven in large herds from the middle and southern districts overland to Port Essington, ready for the season of re-shipment, and then put on board in prime condition, and reach India by performing only about three-fifths of the distance in the passage that they have hitherto had to do from Sydney, besides

avoiding the most dangerous part of the passage through Torres straits. Mr. Winter, master of the brig Eliza Kincaid, said he spoke the ship Cataraku on the 9th of July, during his passage from Bahia to Hobart-Town, when in lat. 45° 51' south, lon. 60° 54' east, which vessel was from Liverpool for Port Philip, with emigrants. This may probably be the vessel, of whose loss on the Harbinger reefs, Bass straits, a report had reached Hobart Town a short time previous to the sailing of the Sons of Commerce. The accounts from the colonial whalers at sea had been satisfactory; most of them having been very successful for the time they had been out.

WRECKS OF BRITISH SHIPPING,

Continued from p. 101.—cs crew saved. cd crew drowned.)

| Vessels' Names. | Belong to. | Masters. | From. | To. | Where. | When. |
|-----------------|----------------|-----------|--------------|--------------|----------------|--------------|
| Æolus | 77 Dover | Theaker | Ramsgate | Newcastle | Off Flambro' | Jan. 1. cs |
| Aurora | | | | | Calais | |
| Ann | | M'Cavery | Whitehaven | | P. L. Perch | Jan. 20. |
| Atlas | 80 | Hobson | Quebec | | At sea | Sept. 18. cs |
| Barbados | London | passed | abandoned | 46 N., 32 W. | | Dec. 2. |
| Edellium | Shields | Moore | Shields | | Shipwash | Feb. 5, cs |
| Bencoolen | | Claributt | Callao | Liverpool | Liverpool | Feb. 7, 11d |
| Camden | | | Table Bay | | Delagoa B. | Nov. |
| Cataraku | 85 | Finlay | Liverpool | V Diemen L. | King's I.B.S. | Au 4. 414d |
| Ceylon | | Skene | Quebec | | I. Bic | Nov. 30 |
| Comet | | Forster | Hull | Plymouth | Cockle Gat | Jan. 1. |
| Charles | Guernsey | | | | Cape G. H. | Nov. 15, cs- |
| Charlotts | P. Edward I | | passed | abandoned | 42 N. 53 W. | Jan. |
| Countess Errol | 90 Rye | Wright | Shields | Rye | Foundered | Jan. 24. |
| Eliza | Sunderland | | | London | Gunfleet | Jan. 31, cs |
| Elizabeth | | Lloyd | Quebec | Glasgow | Magdalen I. | Dec. |
| Emeline | | Hilton | Trinidad | Yarmouth | Brier I. | Dec. 11. |
| Evenwood | Hartlepool | | Quebec | Liverpool | Stornway | Dec. 7. |
| George | 95 Jersey | Barbier | Gibraltar | Malaga | Calahonda | Dec. 23. |
| Granite | Sedgwick | | passed | abandoned | 39 N., 65 W. | Dec. 23. |
| Gregg | London | | Quebec | | abandoned | |
| Heywood | Liverpool | Blacklock | Africa | Trinidad | Caernarvon | Feb. 7, cs |
| James | | White | London | Hull | Calais | Jan. 26, cs |
| James | 100 Hull | Patrick | Harwich | Hull | Cutler | Jan. 4, cs |
| Jean | Aberdeen | MPherson | | Lerwick | Ronaldsha | Dec. 21 cd |
| J. Mowlem | | Fowler | Hartlepool | Weymouth | Long Sand | Jan. 1 |
| J. Morrison | | Penreath | Quebec | Glasgow | Man'cougan | Dec. cs |
| Kate Nickleby | Glasgow | | | | | Jan. 3. |
| Lady Bassett | 105 Falmouth | | St. Ives | Pernano | C. Spain | Jan. 17, cs |
| Laurel | | | Quebec | London | Green I. | Dec. 12. |
| Lord Lyndoch | | Fairmo'th | St. John | London | 42 N., 65 W. | Dec. 23, cs |
| Magnet | P. Edward I | | | | Green I. | Nov. 4, cd |
| Manfred | Whitby | Garbutt | Ardrossan | Malta | Breaksea P. | Dec. 11, cs |
| Milroy | 110 Sunderland | | | C. Durham | C. Durham | Jan. 28, cs |
| Margaert & Jane | Newcastle | | N. Shields | Grangemoth | Fern I. | Dec. 29. |
| Mary Ann | Belfast | Wilson | Belfast | Maryport | Glasserton | Jan. 25, cs |
| Mary Ann | Perth | Melville | | | Herd Sand | Jan. 28, cs |
| Merlin | Newcastle | Venus | Oporto | London | Oporto | Jan. 4, cs |
| Montreal | 115 | Douglas | Quebec | London | C. Chat | Dec. 20, cs |
| Pagoda | | Byron | abandoned | sinking | 42 9 N., 21 W. | Jan. 23, cs |
| Parsee | Greenock | Chivas | Singapore | Shanghai | Bintang I. | Nov. |
| Pandora | | Dec. 18 | see contents | of bottle | paper | Jan. 5, |
| Peru | | Trought'n | Marseilles | London | St. Vallery | Jan. cs |
| Ranger | 120 Poole | Cairns | Poole | Newcastle | Off Whitby | Jan. 20, |
| Richmond | | Brown | Nelson | | New Zealand | June 29, 3d |
| Ruby | Liverpool | | Windan | Shields | Baltic | Dec. cs |
| Rutland | Killaugh | Killen | | | C. Ireland | Jan. 24, cs |
| Shiraz | | Mariat | | Pt Sojoton | I. Negroes | Oct. |
| Sir R. Jackson | 425 | | Quebec | | Man'cougan | Dec. cs |
| Squirrel | | | Youghal | Liverpool | Formby | Nov. 28, cs |
| St. Andrew | St. John | Robertson | Hull | St. John | Machias | Dec. 19. |
| St. David | Liverpool | Evans | Havre | Dublin | C. France. | Dec. 29. |
| Symmetry | Sunderland | | | | Dagoe | Nov. 23. |
| Waterwitch | 130 Jersey | Wallace | Sunderland | Jersey | Kentish K. | Jan. 26, ca |
| W. Bayond | | Miller | Quebec | | C. Chat | Dec. 6, |
| Zilli | Penzance | Barrae | Penzance | C. Venhla | Off R. Lisbon | Jan. 17, ca |

- 77—Foundered, crew saved by the John and Isabella brig, which bore down to her.
 78—Crew landed at Portsmouth, Dec. 30.
 82—Foundered after collision with the British Queen.
 89—Date not given, passed by Infanta, left St. John, N.R., 28th Dec.; 6th Jan. heavy weather, threw cargo overboard.
 91—After collision with the Content of Newcastle.
 94—Drifted into L. Curloway dismasted, decks gone, and 'ween decks, cargo of timber. Some papers found.
 92—Crew saved by Brilliant, Allen of Hull, and landed at Great Yarmouth.
 104—Six bodies washed on shore at Balline.
 107—Crew saved by ship Cambridge, Barston, from Liverpool, a timber ship, ship's company found living in the long boat, left sinking. She will probably yet drift about, being a timber ship.
 111—Sprung a leak and foundered. Crew saved from her boat by Venus of Aberdeen; have lost every thing.
 114—By fire, crew saved and taken to Gibraltar by a Foreign schooner.

THE ACTION ON THE PARANA AT OBLIGADO.

On 28th Nov, the *Prociel*, French hired vessel arrived at Buenos Ayres, bringing word that on the 20th Nov. the combined Anglo-French forces took up their position at ten a.m. The *San Martin*, bearing the flag of Capt. Trehouart, leading, followed by the *Comus*, who upon taking up her position had her cables cut through, and went adrift. One hour and a half elapsed (from want of wind) before the *Dolphin*, could pass the *San Martin*, which she did inside, between her and the left bank of the river. The action was kept up with great spirit on both sides until one p.m., when a shot from H.M.S. *Dolphin*, blew up the *Republicano*, gun-brig, moored at a *tete du pont* above the boom. As the fire from the enemy's works did not slacken, Capt. Hope manned his boat, and cut away the chain cables and vessels comprising the boom, thus allowing the steamers to pass and take the fort in reverse. This service was performed in a most gallant style, Capt. Hope being exposed, to a very severe fire of musketry. At four p.m. the enemy's fire slackened, and carts were seen to be employed carrying away the dead and wounded from the batteries. The batteries were surrounded by a body of Cavalry 3,000 strong, armed as Lancers. At half-past four the gunners and soldiers in two of the enemy's batteries were seen to run from their guns, and endeavour to pass the line of Cavalry; these latter charged upon them, and for a short time a severe skirmish was kept up between the two parties. The gunners were ultimately driven back to their posts, and another attempt was repeated on their part with the like ill success. At six p.m. the French Commander-in-Chief proposed to Capt. Hotham to land and carry the batteries. Capt. Trehouart passed up the line of the enemy's fire most gallantly, and landing at the highest fort carried it, and the enemy precipitately abandoned his position. It appears the guns had been worked on the enemy's batteries by Englishmen, Americans, and negroes. A son of Adm. Brown made himself very conspicuous on the ramparts of one of the batteries, and escaped unhurt. The enemy's loss amounted to 120 negroes (gunners, &c.) found dead under their guns, and about 400 whites killed, and the like number wounded.

English loss—10 killed, and 25 wounded.

French loss—18 killed, and 70 wounded.

Large quantities of ordnance and stores were found in the works. Nineteen brass guns were reserved, the rest of the ordnance destroyed. The *Fulton*, French steamer, had her paddles knocked away, and her chimney cut through, besides 107 shots in her hull. The *San Martin* had 104 shots in her hull, the *Dolphin* riddled. Lieut. Brickdale, *Satellite*, killed; Mr. G. Andrews, clerk in charge, killed; Lieut. Doyle, of *Philomel*, killed.

The following may be regarded as authentic:—

On the evening of 19th Nov. Capt. Hotham had made the necessary dispositions for his attack the next morning, the enemy's arrangements having been reported by reconnoitring parties.

The passage forced is the narrowest point, forming a sort of elbow, about 800 yards wide; downwards it gradually widens and above it expands to the left. On the right bank were four batteries, at nearly equal distances from each other, mounting from twenty-four to thirty guns, most of them 24-pounders. Three of the batteries were established at the narrowest point facing downwards athwart the stream, the rate of whose current, at the precise spot being three knots: and the fourth was above the others at a projection commanding the length and breadth of the Parana. The background was covered with thick woods. Between the second and third batteries, and close to the second, twenty-four or twenty-five small vessels were moored directly across the river to the opposite bank, and these were strongly secured together by three frigates' chain cables. There were no batteries on the left bank, but just above this bridge of small vessels, on the left bank Rosas's brig, the *Republicano*, was moored broadside across the river. This brig had six guns of heavy calibre, and was so placed as to take *enfilade* the opposing ships. The whole was admirably disposed for defence, and at great advantage for dealing destruction on an attacking force.

Under the second battery, and close to the bridge of boats, four fire-ships were stationed, to be used as circumstances might require.

On the morning of 20th, the attacking parties moved up the river towards the Point. They were formed into three divisions. The first was composed of the *Proceda* (French) brigantine, Capt. de la Riviere; *Philomel*, 6 (English) Com. Sullivan; *Fanny*, brigantine (English) Lieut.-Com. A. C. Key, Second-Lieut. of the *Gorgon*; and the *Expeditice*, corvette (French) Capt. de Miniac. It was under the Command of Commander Sullivan. It took up a position on the right side in the above order in a line across the river, and thus commenced operations. The second division consisted of *Dolphin*, 3 (English) brigantine, Lieut.-Com. Levinge; *San Martin*, the French Commodore's ship once a brig, formerly in Brown's squadron; *Comus*, 18 (English) Lieut.-Com. Inglefield (Act.); and *Pandour*, (French) brig, Capt. Du Parc. This division was under the command of Capt. Trchouart, and proceeded to the bridge of vessels, and took up a position close to them in the above order, on the left side of the river, engaging the batteries, receiving their fire and also the broadside of the *Republicano* with damaging effect, but which they returned with the most successful results. The third division, composed of the steamers, *Gorgon* and *Firebrand*, Capts. Hotham and Hope, and *Fulton* (French) Capt. Mezcras. This division, under the command in chief of Capt. Hotham, was at first stationed at the longest distance from the batteries below the first division, but on the left side of the river, their broadsides bearing on the three first batteries. From this position, after using their heavy guns for some time they proceeded to join the second division—the *Fulton* first; and after Capt. Hope had, with the utmost intrepidity and coolness, in a boat, cut asunder the cable which bound the bridge of vessels together, the steamers passed through the opening, and taking up a second position above the fourth battery, on the left of the centre of the river, they attacked the batteries in flank with considerable success.

The affair commenced at ten in the morning and ended at seven in the evening. The enemy behaved very well on the whole, although it appears that when the men deserted their guns the cavalry charged, and drove them back to their posts. For many hours the fight was rather hot, the enemy's guns were well served by Englishmen and Americans, some of whom were taken prisoners.

GUANO.—Mr. Wallace states that ships have searched the coast as far down as Port Desire, and the quantity of guano is trifling, not more than would fill the ships, but of a very superior quality, principally consisting of pure ammonia. The Norna left at least 200 tons of it in that state; and he states that the coast both in winter and summer, is one of the finest he ever visited.

CANADA.—We perceive that Mr. Arrowsmith has published a general map of Canada, shewing the several public works completed and now in progress, exhibiting the different lines of roads and canals undertaken by the respective districts. It is the only one we have met with that has any pretensions to shewing the canal navigation.

NEW BOOKS.

VOYAGES OF DISCOVERY AND RESEARCH WITHIN THE ARCTIC REGIONS, from the year 1818 to the present time, &c., by Sir John Barrow, Bart., F.R.S.—Murray, London.

There were many circumstances which rendered a collection of the Arctic voyages, performed within the time above specified, very desirable, from the pen of Sir John Barrow. The reasons are too obvious for us to point them out. At a time too, when with nearly twenty years' experience to profit by, with a stock of geographical knowledge fairly gained step by step, an expedition well provided and ably commanded, not only by its principal, but by its secondary leaders, is struggling with the difficulties of the passage; such a time, we say, was well chosen for such a work. Without troubling himself about the numerous quarto volumes that have appeared on these matters, any one may take the work before us and readily master the whole subject of these expeditions. On the subject of one of them we have received the following from Captain Sir John Ross, R.N.

London, February 18th, 1846.

Sir,—Supposing it may be your intention to notice Sir John Barrow's recent publication entitled "Voyages of Discovery and Research within the Arctic Regions, &c." in which my name is pointedly mentioned; I take leave to inform you that it is my intention to publish a full and complete answer to all the assertions contained therein.

I am, sir, your obedient servant,

JOHN ROSS, Capt. R.N.

To the Editor of the Nautical Magazine.

Reverting to the present polar expedition, the ships of which, at the time we write, are no doubt securely moored in some snug place, not far, perhaps, from Winter Harbour; anxious will be the expectations when the navigable season opens to unlock their icy prisons. That our readers may see the actual space they have to traverse, we have made the following rough measurements from the place where they were last seen, on the 26th of July. From Baffins Bay to Winter Harbour, 690 miles, from Winter Harbour to Icy Cape, 900 miles, or 1590 miles to where they may be said to have cleared the ice. Then, from Icy Cape to Aleutian Isles, 1020 miles, from Aleutian Isles to San Francisco, 2040 miles, from San Francisco to Panama, 3300 miles, making a total of 7950 miles from Baffins Bay to Panama. Now, if the ships could make good five knots per hour, (a very moderate rate,) about nine or ten weeks would take them to Panama, but allowing a stay of three weeks to refit at San Francisco, and that they leave their winter quarters on the first of June, about the latter part of August it is possible might find them at Panama, and the news of their arrival there would be in England about the end of October. These are mere possibilities, but we state them as such, and well contented might we all be to see them realized.

SHIPS AND RAILWAYS—*Longman, London, 1846.*

With the foregoing title a little pamphlet has just appeared, which although extending only to a small number of pages, abounds in matter of the most important description. The title in itself has sufficient attraction, as naming the two leading powers, for one of which, England has long been celebrated, and the other only so far as yet in setting the leading example to the whole world. With these we have nothing to do, so long as they confine themselves to their own legitimate purposes; but when they arrogate to themselves the province of the former, and would establish themselves as the means of commercial intercourse amongst us, transferring to the shore a whole trade, which since its commencement has been waterborne, and thus banishing from our coasts above one thousand vessels between Sunderland and London, manned with between seven and eight thousand seamen, we have then a right to look a little further into the matter. We have stated round numbers because we are for principle, and that principle is tolerably well known. It is well known that we are a maritime nation, and that our very existence must ultimately depend on ships and seamen. To deny this, would argue ignorance of the most fatal kind, indeed, a very absurdity; and yet in the face of this, we learn from the pamphlet before us that this nursery of our seamen is to be annihilated by a notable project to be "put forth for the sanction of Parliament and the country, entitled and called *the Newcastle and London Coal Railway*." Then follows of course the usual railway appendage of provisional committee, or rather "committee of management provisionally registered, with a capital of £5,000,000, &c., &c." Well, in spite of the golden views of all these gentlemen and their whole body of shareholders we trust sincerely that their project will fall to the ground, and we rejoice to find that the most determined and powerful opposition is accumulating and gathering strength every day to send the whole affair to where it should go. But besides the coal trade by sea, the whole coasting trade appears to be threatened with destruction by the railway mania, thus throwing out of employ 45,000 seamen, and sending them to seek their living elsewhere. These are facts which we say vitally concern us, and we are glad to find that a warning voice has been raised against it. We shall most probably return to the subject, but have little doubt that it will not have been raised in vain, and we would have every Englishman consider well the pamphlet on *Ships and Railways*.

THE PHYSICAL ATLAS, PART 1., by *Henry Berghaus, L.L.D., &c.*—Johnstone, Edinburgh; Saunders, Charing Cross; and Groombridge and Sons, London.

We are right glad to welcome the very valuable labours of Professor Berghaus in their English garb. A series of maps, of which this forms the first part, "illustrating the geographical distribution of natural phenomena," is most interesting and useful. Its value is not confined merely to the botanist or the mineralogist, but the seaman may consult with advantage the charts it contains of the ocean, for the various streams of current which will affect his vessel's course, to which subject we find a large portion of the part before us is devoted. Under the titles of the different currents of the north and south Atlantic Ocean, elaborate descriptions are given of their origin, extent, and velocity, with additional remarks, all of which, besides the graphic delineation of them in the charts, form highly valuable reference for the seaman. The whole is compiled with great care, and is no less remarkable for the neatness of its execution than for the vast mass of information which it

presents within a very small compass. We can assure our naval friends that they would find it a very interesting and useful addition to their collections of nautical materials.

THE EXPEDITION TO BORNEO OF H.M.S. DIDO, for the Suppression of Piracy, with Extracts from the Journal of James Brooke, Esq., of Sarawak, by Captain H. Keppel, R.N., 2 vols.—Chapman and Hall, 1846.

So little is known of Borneo, its various inhabitants, with their curious manners and customs, the geographical features and marketable productions of the island, as well of its mines as its vast fruits; and again, so little knowledge do we possess of even the outline of its shores, much less of their approaches from sea, that anything on these subjects, especially in the present day, is most acceptable. The "expedition" as it is named, consists for the most part of the journal of Mr. Brooke, who impressed with the vast importance of discovery among the rich islands of the Indian seas, equipped his yacht, the *Royalist*, for the purpose, and sallied forth with that exciting object from England, in 1838. It would take us beyond our limits to follow the *Royalist* and her intrepid leader through all the various interesting scenes related in the volume before us. Mr. Brooke succeeds entirely in his object, becomes a Rajah, in Borneo, and eventually agent for the British government in the Island. But we began with the expedition of the *Dido*, which vessel, under the command of Captain Keppel most opportunely arrives and assists in suppressing piracy. Piracy appears to be the principal evil by which these eastern islands are afflicted.

But it would take us far beyond our limits to touch the numerous subjects which form the substance of these volumes; they abound in adventure and description of the most interesting kind, concerning a country and people of whom we know little. The work is illustrated with well executed lithographs, from the pencil of Mr. Haghe, and charts of coast line, all neatly and well executed.

NEW CHARTS.

(Published by the Admiralty, and sold by R. B. Bate, 21, Poultry)

PONZA ISLANDS.—*Capt. W. H. Smith*, 1818.—Price 1s. 6d.

GULF OF NAPLES—1817 and 1819.—Price 2s.

SIRANGOON HARBOUR AND JAHORE CHANNEL.—*Captain Bethune, C.B.*, 1845.
Price 1s. 6d.

PRINCESS ROYAL HARBOUR.—*Com. Stokes and Admiral D'Urville*, 1843.
Price 2s.

PORTLAND BAY.—*C. J. Tyers, Master, R.N.*, 1840.—Price 6d.

MACQUARIE HARBOUR.—*G. W. Evans*, 1819 and 1822.—Price 1s. 6d.

KOOMBANAH BAY AND LESCHENAULT INLET.—*Com. Stokes*, 1841.—Price 1s.

PORT ETCHES.—*Sir Edward Belcher, C.B.*, 1837.—Price 1s. 6d.

HILLSBOROUGH BAY.—*Prince Edward's Island.*—*Capt. H. W. Bayfield*, 1842.—Price 3s.

YARMOUTH ROAD.—*Captain Stanley, corrected to 1845.*—Price 6d.

LOWESTOFT ROADS.—*Captain Stanley, corrected to 1845.*—Price 2s.

CANTON RIVER.—*Sir Edward Belcher, C.B.* 1840.—*Sheets 2, 3, 4, and 5.*—
Price 3s. each.

NORTH BAY OF CHUSAN ISLAND.—*Lieut. Byron Drury*, 1842.—Price 6d.

API POINT TO RIVER SARAWAK.—*Borneo.*—*Sir E. Belcher*, 1844.—Price 2s.

OLD PASSAGE.—*Severn River.*—*Capt. F. W. Beechey*, 1845.—Price 6d.

MONTHLY RECORD OF NAVAL MOVEMENTS.

The following have left Plymouth for Foreign Stations since our last number:—

Grampus, 50, Capt. Martin, 10th Feb. *Harpy*, st. v., Lieut. Com. E. Proctor, 10th Feb., for South America. *Rapid*, 10, Com. H. J. Galloway for Africa. *Viper*, 6, Lieut. Com. E. Grey, 15th Feb., for West Indies.

PORTSMOUTH.—In Harbour.—*Victory*, *St. Vincent*, *Excellent*, *Victoria* and *Albert*, *Carysfort*, *Sparrow*, *Harlequin*, *Retribution*, *Cyclops*, *Fairy*, *Dasher*, *Comet*, *Scourge*, *Rattler*, and *Echo*. In Dock—*Prince Regent*, *Java*, *Rodney*, *Leander*, *Alfred*, *Rifleman*. In Basin—*Nelson*, *Wanderer*, *Edinburgh*, *Amphitrite*, *Childers*, and *Trincomalee*.

SHEERNESS.—In Harbour.—*Trafalgar*, *Ocean*, *Calyppo*, *Fearless*, *Raven*. In Basin.—*Havanna*, *Brilliant*, *Electra*, *Snake*, *Ferret*, *Tartarus*, *Wildfire*. In Dock.—*Horatio*, *Dido*, *Conquistador*, *Corrwall*, *Griffin*.

CHATHAM.—In Harbour.—*Poitiers*, *Calyppo*, *Meander*, *Scout*, and *Fearless*, steamer. In Dock—*Raleigh*, *Eurotas*, *Columbine*, *Cockatrice*, *Magpie*.

PLYMOUTH.—In Harbour.—*Queen*, *Caledonia*, *Albion*, *Samson*, *Alban*, and *Confiance*.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

COMMANDERS—Sir W. S. Wiseman. W. Lester on the retired list.

LIEUTENANTS—J. M. Jackson, H. G. Simpson, P. Hudson, L. W. Hammet, G. H. E. Greathead, H. B. King, R. Dew, and H. Boys.

APPOINTMENTS.

CAPTAINS—P. M'Quhae (1815) to command the naval force at New Zealand—Sir T. Herbert, KCB., (1822) to *Raleigh*.

COMMANDERS—W. Clark (1840) to *Rodney*—F. Kemble (1845) to study at Naval College—P. H. Somerville (1842) to command *Wanderer*.

LIEUTENANTS—J. M. Jackson (add.) to *Collingwood*—A. B. Kingston (1840) and J. B. Kingsman to *Ferret*—H. B. King (add.) *Agin-court*—H. G. Veitch to *Queen*—A. Wilmshurst (1845) and H. G. Simpson to *Excellent*—G. H. H. Greathead (1846) to *Harlequin*—H. Ingram to *Raleigh*—J. R. Forest (1814) to *Ringdove*—R. Williams (1840) to *Albion*—F. Morris (1842) to *Cyclops*—F. A. Boyce to study at Naval College.

MASTERS—H. Norway to *Ferret*—F.

R. Sturdee to *Harlequin*—H. D. Burney to *Wanderer*.

MATES—W. K. Joliffe to *Hibernia*—C. Vesey to *Rapid*—F. W. Smith to *Terrible*—E. A. Drummond to *Agin-court*—T. C. Bruce to *Harpy*.

SECOND-MASTERS—W. G. Sturgess to *Dasher*—T. Hups to *Superb*.

MASTERS' ATTENDANTS—C. P. Nicholl to *Harlequin*—J. Jones to *Cyclops*.

MIDSHIPMEN—F. A. Bullock to *Excellent*—A. M. Cochrane to *Ringdove*.

SURGEONS—J. Campbell to *Harlequin*—R. Hopley to *Wanderer*—J. Smith (b) to *Warspite*.

ASSISTANT-SURGEONS—W. Baker to *Pique*—J. Forbes to *Conus*—T. Hunter to *Nimrod*—C. P. Mingaye and J. W. Slight to *Caledonia*.

CHAPLAIN—Rev. F. S. Phelps to *Caledonia*.

NAVAL INSTRUCTOR—W. Ray to *Samson*.

CLERKS—C. H. Elkins to *Harlequin*—A. Nash to *Wanderer*.

COAST GUARD.

Removals—Com. F. C. Seyer to *Go-rey*—Lieut. J. P. Brouncker to *Coatham*—Lieut. J. Stubbin to *Whitby*.

Births.

Feb 13, at Weymouth, the lady of Com. Crispin, of the Royal Yacht, of twin daughters.

Jan. 29, at Bittern, near Southampton, the lady of Capt. James Wigston, R.N., of a son.

Jan. 30, the lady of Mr. Dunsterville, R.N., Hydrographic Office, Admiralty, of a son.

Marriages.

Jan. 21, at St. Marylebone, Captain Hamilton Fleming, R.N., to Sarah Sophia, youngest daughter of the late Samuel Chambers, Esq., of St. John's Wood.

Feb. 5, at St. Mary's, Bryanstone

square, L. Strachey, Esq., eldest son of Captain Strachey, R.N., to Eliza, only daughter of B. Trecothick, Esq., of York Street, Portman square.

Feb. 5, J. E. Frere, Esq., Lieut. R.N., to Anne, daughter of G. Frere, Esq.

Deaths.

Jan. 30, at Mount Radford, Exeter, Com. Francis Charles Annesley, R.N.

Jan. 13, at Weymouth, Caroline, wife of Com. Crispin, of H.M. yacht *Victoria and Albert*.

Jan. 19, at Jersey, retired Com. Robert Mayne, (1842).

Jan. 17, at his house, Tregayan, Vice-Admiral Robert Lloyd, at a very advanced age.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory. From the 21st of January, to the 20th of February, 1846.

| Month Day. | Week Day. | Barometer. | | Fahrenheit Thermometer, In the Shade. | | | | Wind. | | | | Weather. | |
|------------|-----------|------------|--------|---------------------------------------|--------|-----|-----|----------|------|-----------|------|-------------|------------|
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | W. | 29.32 | 29.34 | 44 | 52 | 41 | 53 | S | SW | 2 | 6 | or (1) | gor (4) |
| 22 | Th. | 29.03 | 29.17 | 51 | 53 | 50 | 54 | SW | SW | 8 | 6 | qop (1) (2) | qbc |
| 23 | F. | 29.23 | 29.18 | 47 | 48 | 43 | 52 | S | SW | 2 | 3 | or (2) | ber 4) |
| 24 | S. | 29.42 | 29.50 | 46 | 49 | 44 | 50 | SW | S | 2 | 2 | o | or 4) |
| 25 | Su. | 29.17 | 29.33 | 52 | 54 | 45 | 55 | SW | SW | 2 | 2 | or (1) (2) | o |
| 26 | M. | 29.20 | 29.18 | 49 | 50 | 47 | 51 | SW | SW | 3 | 3 | op (2) | bc |
| 27 | Tu. | 29.40 | 29.54 | 44 | 49 | 42 | 51 | SW | W | 2 | 3 | b | bc |
| 28 | W. | 29.38 | 29.41 | 47 | 49 | 43 | 50 | W | W | 2 | 2 | or (2) | bc |
| 29 | Th. | 29.48 | 29.34 | 44 | 52 | 42 | 54 | S | SW | 1 | 2 | or (2) | bc |
| 30 | F. | 29.93 | 29.87 | 42 | 50 | 39 | 51 | SW | SW | 2 | 3 | bc | ed (2) |
| 31 | S. | 29.00 | 30.90 | 49 | 41 | 49 | 53 | SW | W | 4 | 4 | o | bc |
| 1 | Su. | 29.83 | 29.90 | 48 | 48 | 47 | 49 | NW | NW | 3 | 3 | bcm | bcm |
| 2 | M. | 29.65 | 29.85 | 40 | 42 | 39 | 43 | NE | W | 3 | 1 | bc: 1) | bc |
| 3 | T. | 29.90 | 29.82 | 44 | 51 | 38 | 52 | SW | SW | 4 | 4 | o | o |
| 4 | W. | 30.03 | 30.09 | 40 | 45 | 39 | 46 | W | W | 2 | 2 | b | bc |
| 5 | Th. | 29.78 | 29.80 | 40 | 43 | 39 | 44 | N | NW | 2 | 1 | bcmr 1) | o |
| 6 | F. | 29.95 | 29.99 | 36 | 45 | 35 | 46 | NW | W | 2 | 4 | bm | qbc |
| 7 | S. | 29.83 | 29.81 | 48 | 49 | 42 | 52 | W | W | 6 | 5 | qbcprh 2) | qbcprh (3) |
| 8 | Su. | 29.98 | 29.96 | 39 | 41 | 35 | 42 | NW | NW | 3 | 5 | b | qbc |
| 9 | M. | 30.10 | 30.10 | 33 | 35 | 31 | 37 | N | N | 4 | 2 | beps 2) | bc |
| 10 | Tu. | 30.33 | 30.31 | 30 | 34 | 28 | 35 | NE | NE | 3 | 2 | beps (2) | bc |
| 11 | W. | 30.09 | 30.03 | 31 | 41 | 27 | 43 | W | NW | 2 | 3 | bcm | bcm |
| 12 | Th. | 30.13 | 30.15 | 33 | 39 | 30 | 40 | W | W | 1 | 1 | of | of |
| 13 | F. | 30.12 | 30.10 | 41 | 43 | 36 | 44 | W | NW | 1 | 1 | o | o |
| 14 | S. | 30.13 | 30.11 | 38 | 45 | 34 | 46 | W | NW | 1 | 2 | bcm | o |
| 15 | Su. | 30.28 | 30.25 | 30 | 44 | 31 | 45 | NW | W | 2 | 2 | bcm | o |
| 16 | M. | 30.20 | 30.22 | 41 | 45 | 39 | 47 | NW | W | 1 | 1 | od 2) | o |
| 17 | T. | 30.16 | 30.08 | 43 | 44 | 42 | 45 | W | NW | 1 | 2 | o | o |
| 18 | W. | 22.97 | 29.97 | 41 | 45 | 40 | 46 | NW | NW | 1 | 2 | o | o |
| 19 | Th. | 30.00 | 30.02 | 41 | 44 | 40 | 45 | SW | SW | 1 | 1 | o | o |
| 20 | F. | 30.10 | 30.08 | 42 | 46 | 41 | 47 | SW | SW | 1 | 1 | o | o |

JANUARY 1846—Mean height of the Barometer = 29.777 inches; Mean temperature = 43.7 degrees; depth of rain fallen = 3.09 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We shall always be happy to hear from our correspondent on the subject of "Ocean Wrecks."

Want of space prevents the insertion of our Yachting Intelligence; it shall appear next month.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

APRIL 1846.

OBSERVATIONS ON COLONIAL LIGHTHOUSES.

IN justice to the Shipping interest of the Empire, all our Colonial and Foreign sea lights, should be erected and maintained, at the smallest possible original and annual cost, consistent with perfect efficiency, and with the loss of as little time as possible.

Economy in the original cost, will permit the erection of lights in more situations, and by economy in the annual expenditure, the light dues will be less oppressive. I am, therefore, induced to offer the following observations, in hopes you will accept and publish the same as my humble contribution to the pages of the *Nautical Magazine*; the best channel for sending forth the advantages of metal light houses, and the proposition of a centralized system for all Colonial sea lights.

Jamaica.—Having been applied to by the commissioners for erecting and maintaining a lighthouse at Morant Point, Jamaica, I considered the character and value of the more recent lighthouses at home, especially that of St. Catherine, in the Isle of Wight. But the site at Jamaica being on a coral rock at the eastern extremity of an extensive morass, occasionally subject to inundation by the sea, and urged as I was to furnish some design capable of expeditious execution, because of the extremely unhealthy nature of the spot, I soon abandoned the notion of attempting so lofty a structure in masonry, as it would have required several years time, and the lives of many of the European masons must have been sacrificed by the climate and the swamp, even supposing that the numerous shocks of earthquakes which have since been felt at the site might not have shaken it down. These considerations, with the know-

ledge of the limited funds at the disposal of the Commissioners, induced me to propose and recommend a cast iron lighthouse tower.

In March 1841 the Commissioners in Jamaica adopted my report, and directed me to proceed in the construction of the entire lighthouse, in London, having the tower made of cast iron; and by the month of October following, I reported that the whole was completed, had been erected and tried in London. In December 1841, the lighthouse in pieces and in packages, arrived out at Port Morant, and my assistant Mr. Grove, with two workmen from England, proceeded to carry out the written instructions I had given him.

Morant Point is very low, and at the extremity of a vast morass, over which all the parts of the lighthouse had to be transported, and a road over the morass had to be constructed by Mr. Grove, and huts to be erected for his workmen, before he could commence the erection of the tower.

On the 26th of July, 1842, the lighthouse was complete, and ready for lighting. It was permanently lighted on the 1st of November, 1842, and has been continued in operation with satisfaction to all parties ever since, without any repair, other than painting, whilst the repairs of the St. Catherine lighthouse, were;—in the year 1843 £159 Os. 2d., and special repairs £211 9s. 9d.—together £370 9s. 11d.

The total expense of the Jamaica lighthouse completely erected and lighted in England, taken to pieces, packed, and put on board in the Thames, was £3,500. Some courses of Bramley fall stone, cut and shipped, to be used as a foundation, to prevent the filtration upward of salt water, through the coral rock, to the injury of the iron, cost £300 more. If the same lighthouse had been erected at St. Catherines, and of the same altitude, it would have cost less than £4,000. The present lighthouse at St. Catherines cost £11,600, which looks like an unnecessary expenditure of £7,600; and the *repairs* of this more expensive lighthouse for the year 1843, stated above, ought not to be lost sight of.

The lower part of the Jamaica tower is filled in, 25 feet high, with concrete to give weight and stability, and to prevent vibration. Plate II. shows the lighthouse, as it now appears when looking seaward, and the huts are those in which the workmen lived during the time of erection of the lighthouse.

Bermuda.—This lighthouse is the second on a large scale, constructed of iron. I was called upon by the Treasury to recommend one suitable for Gibbs hill, and somewhat similar to that at Jamaica. The Treasury having handed the matter over to the Board of Ordnance, I was employed by that department; and, a lighthouse, of which a section is given in Plate III. has been erected on Gibbs' hill.

Mr. Grove and two workmen were sent out from England along with the lighthouse complete. The first plate was erected on Gibbs hill on 19th of December, 1844, and the last plate of the tower on the 9th of October, 1845. At the lower portion of the tower it will be seen how stability is given by concrete filled in 22 feet high. At this height is the first floor; above this there are seven rooms, each 12 feet in height, divided from each other by iron floors, supported on the outer plates, and

on a central hollow column, which runs from top to bottom of the lighthouse, and serves for a passage for the weight of the light revolving machinery by night, and the passage of oil and stores by day; and in it is fitted a soil pipe from the top of the lighthouse to the base. The ascent is by a winding iron staircase with wooden treads. The two rooms next above the concrete are lined with brickwork to serve as oil and store-rooms; the higher rooms are all lined with sheet iron, disposed in large panels, with oaken pilasters, cornices and skirtings, and form comfortable dwelling rooms.

| | | | ft. | in. |
|--------------------------------|-----|-----|-----|-----|
| The height of Gibbs hill is | ... | ... | 245 | 0 |
| Lighthouse to Gallery | ... | ... | 105 | 9 |
| Gallery to centre of light | ... | ... | 11 | 0 |
| Centre of light to top of vane | ... | ... | 17 | 0 |

Total height from high-water level 378 9

By calculation the light will be seen from the deck of a vessel 26 or 27 miles off, all round the horizon except where obscured by high land to the N. and E., between Gibbs hill and Castle harbour. But in certain conditions of the atmosphere it may be seen 32 or 33 miles off. The cost of this lighthouse tower in London, ready for shipment was £4,400. That of the lantern and light apparatus I am unable to state, as they were ordered some years ago, and supplied by the Trinity-House without limitation as to price; they may have cost nearly £3,500. I do not hesitate to say they should not have cost half of that sum. Over the expenses of the lantern and the lights I had, however, no control, and over the expenses of the tower I had little, if any. What could an individual reformer be expected to do, when brought to oppose the views of two of the most powerful Boards of the country?

With the selection of the site of the light I had nothing to do. Gibbs hill lighthouse is, for the reason just stated, of little, indeed of no value to vessels entering Bermuda at the east end. Another,—a small light will be found necessary at St. David.

Ceylon.—Having been honoured by employment to design and specify the tower and lights, &c., for a lighthouse at Point de Galle, I have recommended a cast iron tower 93 feet 6 inches from the base to the gallery railings 14½ feet diameter at the base, and tapering to 7 feet diameter under the gallery, resembling the Jamaica tower already described. The cost for this lighthouse when lighted in Ceylon, I estimate at £2,350, or with a tower 25½ feet less in height £1,800. This work will, it is expected, be immediately put in hand. Many years ago the late Mr. Telford proposed a lighthouse for that Point which would have cost about £25,000.

Denmark.—The Danish Government have lately engaged me to design and specify a similar lighthouse to be founded on the sand under high-water mark on the west coast of the Duchy of Sleswig. I have estimated its completion and lighting at £4,000. A few years ago the Trinity Corporation erected the Maplin sand light at a cost of £8,000.

When the foundation of this proposed lighthouse shall be undertaken, instead of driving down either solid or hollow pipes by the common method of percussion, or sinking hollow piles by misering, I propose adopting the novel method invented and introduced by Dr. Potts. This consists of sinking hollow piles, shafts, or caissons of iron, or indeed of any suitable substance by pumping or sucking up from within each pile or column, or shaft, the sand and mud, or other soft soil or shingle of the included area, and by such suction disturbing the area immediately below and closely around the lower end of the sinking pile or column which descends therein by its own gravity. The faster the exhausting apparatus is worked the more rapidly does the body descend. The transporting power of the water as it rushes up the hollow pipe, is sufficient to raise even large shingle, removing it upwards to allow the pile to sink deeper and deeper as the soil or shingle is put in motion below, by the process of exhaustion carried on above.

The Trinity corporation have already ascertained the practical value of this system of procuring foundation in the Goodwin Sands, where they sunk a hollow iron pile of 30 inches diameter $33\frac{1}{2}$ feet in the short working time of $5\frac{1}{2}$ hours. Any number of piles or hollow cylinders of any required diameter, or the lower portion of any iron lighthouse tower, having been thus sunk, can be cleared of the remaining contents, and the interior filled with concrete, masonry, wood, or other materials, either for providing against chemical change or mechanical failure of the surrounding iron, and when sunk down to solid rock below, may by the facility of descent afforded through the hollow pile, when empty, be firmly and permanently attached to the rock, and an artesian well may even be sunk through this shaft before the masonry or other core, is filled in.

The ready adoption by the Trinity Corporation of this beautiful system for making foundations in sand banks and shingle, is a real boon conferred on hydraulic architecture.

Singapore.—The East India Company gave their sanction for a lighthouse tower in masonry near Singapore. It had been submitted for their approval by the local authorities, to be erected to the memory of Capt. Horsburgh. The superintending engineer of public works in the Straits, has estimated the cost for the masonry at £15,000. Neither the East India Company, nor the superintending engineer had at that time known of my proposal to erect a *wrought* iron tower 100 feet high, 18 feet diameter at the base, and 10 feet diameter at the top. The whole to be tried in this country and delivered at the site for £3,000, and capable of expeditious erection there.

Capt. Sir Edward Belcher, R.N., had suggested that provision be made against surprise by pirates. I, therefore proposed the lower room of this tower to be 25 feet above the base, and provided it, as recommended by Sir E. Belcher, with space for two or more howitzers or carronades. Being altogether constructed of wrought iron plates, it would be perfectly secure against musketry; and experience, by practice with great guns, against steam boat funnels, shows that even heavy shot would be a long time in making much impression against it.

Other lighthouses.—My professional attention has been called to similar

works in various parts of the world ; on some I have already reported ; and it may safely be said, there need never elapse more than eighteen months time, in the erection of any such lighthouse in any part of the world. The lighthouse now proposed for Newfoundland could be lighted there within six months. The long and anxiously sought light at Barbadoes could be completed, there, in nine months. The much wished for light at Cape das Agulhas at the Cape of Good Hope, could be erected, even with a more lofty tower than that at Bermuda, within fifteen months time, and the long talked of funds for a testimonial there, to the memory of Capt. Horsburgh could not be better applied.

It will be seen that iron lighthouses, constructed of *cast* iron or of *wrought* iron, according as circumstances may demand, are cheap, easily erected, strong to resist vibration in hurricanes, cannot be injured by lightning, and are safe in case of earthquakes and fire. The lining of these towers and the arrangement for ventilation, provide the desired and uniform temperature. These advantages and the advantages of wrought iron towers or funnels in floating lights, by which the light attendants can ascend to the light in all weathers, are all more fully stated in my evidence before the Select Committee of the House of Commons on lighthouses 1845.

The Skerryvore lighthouse recently completed by the Commissioners for Northern Lights, cost £100,000, and its constructor, Mr. Alan Stevenson, expressed his opinion in the last Lighthouse Committee of the Commons that, "The foundation of an iron lighthouse must every day grow worse instead of better, because there must be a constant tremor if the sea strikes it, and that tremor must cause a grinding of the surfaces composing the fixtures, which will at length get loose. It was upon that ground chiefly that the adoption of stone was determined upon for Skerryvore."

I may not be able to prevent the Northern Light Commissioners throwing away the tens of thousands of the money they have in trust, but with the view to bring the truth of the stability of iron lighthouses before the same Committee and the nautical public, I said in evidence, "That in fixing an iron or gun metal lighthouse tower under the level of the sea, either under high or under low water line, I do not propose to depend solely upon the metal attachment by clamps, lewisses, &c., but to depend mainly upon the solid core of concrete or inferior masonry, which I use in cases of foundation on land. The solid core not only prevents vibration, but by its inertia resists violent shocks of the sea. French engineers at the port of Algiers, have shown that large masses of concrete are not disturbed by heavy seas when the cubic contents are sufficiently abundant. As the blows of the sea act on the surface, and are resisted by the inertia of cubic contents, the success of the French engineers is accounted for. The surface exposed increases only as the squares, whilst the contents, which resist, increase as the cubes. I am of opinion that a cast iron or gun metal tower of suitable diameter, properly made, and filled with a solid core of concrete or masonry, would be one mass, compact and bound together, and to the rock in a manner that no stone building can be, and at an expenditure of money and time, much under what is required for a tower in masonry."

The Skerryvore lighthouse might have been constructed of metal, with a solid core, for £15,000 or £20,000, according to the metal employed, instead of *one hundred thousand pounds*.

It does not appear that the objection urged by Mr. Alan Stevenson, had much weight with the English authorities, for the Deputy Master of the Trinity-house Sir J. H. Pelly, Bart, shortly after, called for my proposals and designs for building a lighthouse on the Pollard rock, on which a very small base can be had for such a structure. Plate III. shews an elevation of the design I submitted, and the following are quotations from my report :—

“The shell or carcass must be firmly secured to the rock, and depend mainly upon the solid core which I propose to build and bond perfectly (with iron) within it, and whilst availing of the strength of the metal of the tower, it is proposed to trust to numerous 4-inch rods of iron deeply fixed in the rock, and extending upwards whenever there is concrete or masonry, and also to the *inertia of the mass*.”

I also proposed the cage (shown on Plate III) and “the building of that cage on the rock must have the first attention, and it must be completed and stocked with food and water before the erection of the shell or carcass, and other parts of the tower be commenced. The jumping or drilling of the holes in the rock and lewising the main uprights, will be the slowest part of the work, but as soon as one or two of the holes are made, and even temporary standards or staunchions lewised into them, the workmen can proceed in their duties without fear of slipping or being washed off the rock, and when several staunchions are up, they may erect screens for the working time, to keep off spray and even wind drift, provided the screens are taken down before a storm of wind or rise of sea.

“When the cage is complete, and when the tower is complete, boats can come along any side where there is the least swell, and their crew and passengers can climb or descend by the various ladder steps and other articulations of the cage, and by the ladder leading from the open cagework platform to the door of the lighthouse.

“This cage will break the sea so effectually, that it cannot be thrown up over the gallery and lantern, as it is in the Eddystone.

“The choice of metal for the cage and tower, can be no difficulty ; all that is under or near the water must be either of iron or of gun metal and copper ; the latter will be more costly by £7,000 to £10,000, (according to the height it is used.) The former will be equally effective, though requiring greater current expense for coating it from time to time with pitch and hot sand, or for renewing numerous protectors.”

In concluding these observations, permit me to remind your readers that there is at present no department of Her Majesty's government to which the colonies are *encouraged* to apply, and there is no lighthouse board to which they can *directly* apply for information and advice, as to establishment and maintenance of lights, however much they may be desired.

Of the three lighthouse boards of Great Britain, the Trinity House corporation alone takes charge of any colonial lights. These are Gibraltar,

which almost pays its own current expenses, and Heligoland, which yielded in 1843, a *surplus* revenue of £1,360, to be swallowed up in the pecuniary affairs of the Trinity Corporation, burdened as it is with a debt of nearly one million pounds.

Some of the colonies would gladly be relieved of the responsibility of their sea lights; all of them would be the better for a centralized system of advice and supervision. The three existing lighthouse boards at home for England, Scotland, and Ireland have enough to do, and wish no more responsibility and trouble.

Why then should there not be a new system introduced? A department established for erecting and maintaining Colonial lights. Such a department would be obliged to study economy, and would show other boards how to practice it.

An occasional examination of the subject of lighthouses by committees of Parliament is a clumsy remedy, notwithstanding the indefatigable labours of Mr. Hume, and other honourable members. I am the last man to overlook or undervalue the many benefits which may, and must arise from such enquiries, but I cannot shut my eyes to the fact, that in parliamentary investigations, the patience and perseverance of honourable members is sometimes wasted, particularly as to remedy of original and current cost of lighthouses. The committee of the House of Commons, (1845) for instance, have published their "belief that a great saving might be effected in our lighthouses by the use of lard oil and gas from rosin," because these bodies have been advantageously introduced in the United States of America. I can, after many years of experience in the manufacture of rosin gas, declare it to be, for lighthouse purposes, difficult, uncertain, and dangerous; and as to its economy in the United States, it was no doubt as observable there, as my men in Jamaica found the economy of good turtle to be, as food in the West Indies. And as to "lard oil," it must be dearer than sperm oil in England; and if the honourable committee had adjourned to Bellamy's, the cook would have illustrated the more appropriate position of lard, here, in pie crust.

Not only do I take credit for the practical introduction of iron lighthouses for great sea lights, but consider that the safety of the English lighthouses has been materially promoted by my report to the Board of Ordnance, 27th January, 1843, wherein I say, "Lightning cannot injure such a tower as that of Jamaica or Bermuda. The conducting property and abundant quantity of the metal insure the quiet passage of electricity, and the four radiating conducting chains at the base are for the prevention of any discharge there. The copper lightning rod at the top of the lantern, is for soliciting the current of electricity. The point is to be highly gilt, and tipped with a piece of gold, to prevent oxydation. The same management was adopted in my Jamaica lighthouse; and any one of the several severe thunderstorms to which it has already been exposed, would have destroyed an unprotected structure. The Trinity House of London appear to entertain quite a different opinion, that corporation having, in its recently constructed lighthouses, fixed *glass repellers* on the top. It is but fair to suppose they have not consulted Mr. Faraday on this matter."

That report having been referred to the Trinity corporation, accounts for their consultation of Mr. Farraday, eight months afterwards, as may be seen in the report of the Committee of the House of Commons, 1845, (Mr. Herbert's answer 4707, and Mr. Farraday's report, appendix, p. 481.) Mr. Farraday's report is dated 25th September, 1843. In it he says, "Lighthouses should be well defended from the top to the bottom; *glass repellers are in every case useless.* That it is important, casual arrangement should never be depended upon for lightning conductors. As to the Eddystone, it is desirable to connect the system of wrought iron ties in it with the lightning conductor." Again he says, "That the Dungeness lighthouse is in a *very anomalous* condition, to rectify which, the two *repellers should be removed*, and also the representative of the top of a lightning rod attached to the flues."

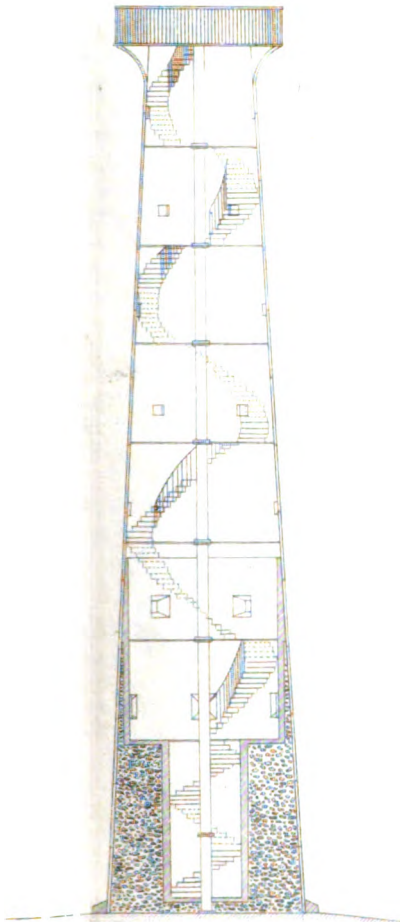
Not aware that these most essential means were even in dilatory progress, I expressed my opinion to the Committee of the House of Commons (16th June, 1845,) that the custom of the Trinity-House in fixing glass *repellers* (!) was "perfectly absurd;" and on the 30th of the same month the secretary of the Trinity Corporation appeared before the Committee, his "object merely to state that the subject has attracted the *special attention* of the Corporation." All which evidence just goes to prove that the wealthy powerful body had been forced to look to the safety of their lighthouses against lightning, requested their engineer in Sept. 1843, to "cause the lighthouses of the Corporation to be protected by the means recommended by Mr. Farraday;" and that the important work, under a Corporation of such vast means had actually on the 30th of June, 1845, that is to say, in the space of twenty-one months been able to have thirteen of their ninety-one lighthouses so "protected."

And lest the Trinity-House should be, on account of the delay, reported by the Honorable Committee, their engineer's report is given in evidence that "no opportunity that has offered for carrying into effect the Corporation's direction to fix the improved conductor at *all* the lighthouses has been lost, but the work is of a nature *that requires care and a knowledge of a variety of trades, on the part of the superintendant*, therefore, where I have found that *particular individual* has done the work satisfactorily, I have thought it better to take advantage of *his* tried qualities, then to set on a number of inexperienced hands, to do so *delicate* a work."

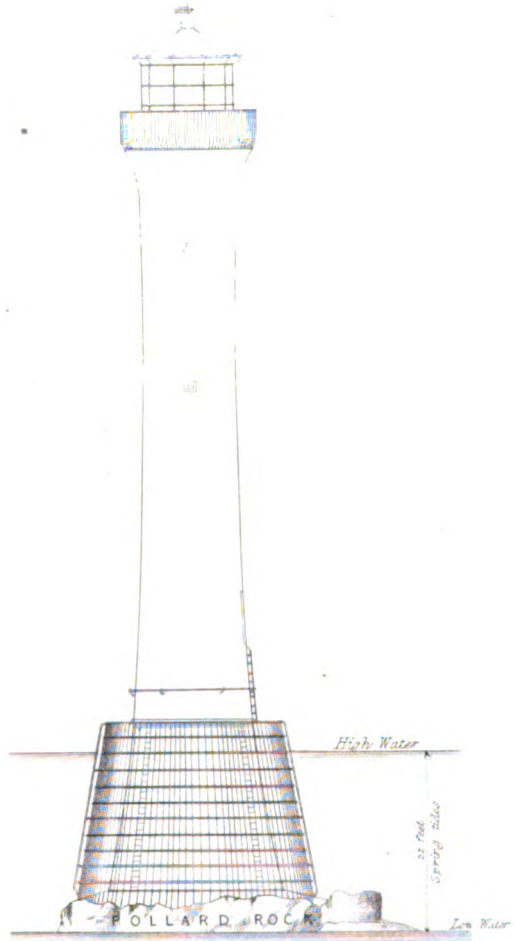
What the words which I have shown in italics may mean it would be difficult to say, for no one who knows the theory of electric currents can imagine how, one "particular individual," or such a recondite "superintendant," is required for fixing lightning conductors.

ALEXANDER GORDON,
Mem. of the Inst. of Civil Engineers.

22, Fludyer Street, Whitehall,
8th March, 1846.



SECTION
OF
BERMUDA LIGHTHOUSE TOWER



0 5 10 20 30 40 Feet

F. J. Baker & Co.

NAUTICAL DIRECTIONS FOR COPIAPO.—*By Mr. J. W. R. Jenkins,
Master R.N.*

The chief dangers to be avoided in entering the harbour of Copiapo are the Caxa Grande and the Caxa Chica shoals; between these and the point Dallas, the southern extremity of the bay in which the port and harbour of Copiapo is situated, are several other small and dangerous shoals, on one of which, the Pacific Steam Navigation Company's vessel Peru, got on shore, and was nearly lost, and sustained very considerable damage, in the year 1842, on her passage from Valparaiso along the coast.

The Caxa Grande, the northernmost of the two first mentioned, is a rocky shoal under water, about three-quarters of a mile long, and one-third of a mile broad, and lying in a north and south direction, nearly; its situation is pointed out by the heavy sea on it, whenever a swell sets into the bay. The Caxa Chica is a small rocky shoal, having in the centre of it one large rock always above water; it lies south of the Caxa Grande, with a passage between them of nearly a mile in breadth, though appearing much less from the rollers extending some distance across it on the Caxa Grande side. In going through this passage the Caxa Chica should be given a convenient berth of from one to two cables' length, but unless the wind is steady and to be depended upon, it should not be taken on any account. The flagstaff above the town of Copiapo, bearing $W.\frac{1}{4}N.$ leads through the passage.

The passage between point Dallas and the southern shoals, should on no account ever be taken, as should the wind fail, which when so near the high cliffs in this vicinity is of common occurrence, a ship would be placed in a very dangerous position.

The chief and best passage in, is to the northward of the Caxa Grande, to avoid which, coming from the southward, bring Isla Grande, (which is situated about five miles to the northward of the town of Copiapo,) to bear N.E. on the passage between Isla Grande and the main land, open on the same bearing, and steering for either on that bearing, till the northern extreme of the Sandstone rocks, to the northward of the town of Copiapo bears E.b.S. Haul in for it, and when the flagstaff above the town of Copiapo, bears S.E. $\frac{1}{2}$ E. steer in for it, and anchor where convenient. Should the flagstaff, which is small, not be visible, a large house in the town, remarkable for its bright green roof, which is of copper, and may be seen when the flagstaff cannot, brought on the same bearing, will be an equally good mark.

Coming from the northward, vessels will most probably have to work in, in which case the shore may be approached to half a mile, and Isla Grande to within that distance, and when nearly as far south as the Caxa Grande, stand no nearer to it or any of these shoals, than to bring the western extreme of Isla Grande to bear N.N.W. or the bluff part of point Dallas to bear S.S.E. Should the wind be from the northward, the flagstaff on a S.E. $\frac{1}{2}$ S. bearing will carry you up to the anchorage in from twelve to six fathoms. A large scope of cable should always be given

at this anchorage, and it would be advisable to drop another anchor under foot, as the rollers often set in with very little warning, and the bottom is bad for holding. I sounded all over this anchorage, and found the soundings very regular from twelve fathoms to three, close up to the beach, but the bottom chiefly of hard yellow sand, and occasionally patches of yellow sandstone rock. Several vessels have been driven on shore here from their anchors, by the rollers suddenly setting in; the wreck of one was lying there at the time the *Salamander* arrived.

The anchorage of the *Salamander* was close in, in 5 fathoms, with the following bearings, viz., the Caxa Chica, W.S.W.; west extreme of Isla Grande, N.W. $\frac{3}{4}$ N.; the jetty or landing place, S. $\frac{1}{2}$ E.; and the flagstaff over the town S.S.W. $\frac{1}{4}$ W.

We passed through the space between the Caxa Grande and Chica going out, and carried soundings out from ten to twenty fathoms, but obtained no bottom between them with the latter depth.

When the Morro of Copiapo, a high hill to the northward of Isla Grande, (and which may be seen thirty or thirty-five miles in clear weather), or the land around it is open of Isla Grande, you are well to the westward of all the dangers off Copiapo.

THE PROVIDENTIAL RESCUE OF THE OFFICERS AND SURVIVING CREW OF THE BARQUE "LETITIA."

Madras, 6th January, 1846.

MR. EDITOR.—I have been favoured with the following letter and sub-joined narrative from Capt. Budd, of the barque Teazer. Captain Budd was not aware that tidings of the wreck of the *Letitia*, had been made known through the information conveyed by the French ship *Atalanta*, which vessel fell in with the raft on the 9th of October, on which were three of the Lascar crew of the *Letitia*, and conveyed two of those persons to Calcutta; the other Lascar, having from all appearance, died on the raft, a short time before it was boarded by the *Atalanta*. This narrative, so full of interest, compels me to deprecate in the strongest terms, that apparent want of humanity and fellow feeling, which could allow the several vessels alluded to therein, to pass close by the wreck without attempting to ascertain the forlorn and perilous condition of so many human beings as were then clinging to a sand bank, and bereft of all other prospect of relief, than such providential discovery as those chance vessels seemed to afford. It may be proved that a *bad look out* exonerates the Commanders of those vessels *from any other blame*, although appearances are much against them.* But, Mr. Editor, it is

* The Hurkaru of November 15th. states, "We have been informed that a ship now lying in the port, which left the Mauritius a few days after the unfortunate *Letitia*, sighted the island on which that vessel is supposed to have been wrecked, Cargados Garajos, and saw a flag staff with a flag flying, and the ap-

with heartfelt pleasure I call your attention to the manly bearing of the respective commanders of the ships Teazer, Lord Elphinstone, and Intrepid, who hauled out of their course and did their utmost to search for the raft, which they imagined was still adrift, when they sailed from the Mauritius. Such conduct well becomes the character of British seamen, and might well be expected from those excellent officers, whose high character is generally known and established at this presidency. From the first intelligence of the wreck of the Letitia, which was communicated by the Calcutta press, I was very much surprised that the authorities there, did not strictly enquire of the Lascars, how many of their shipmates left the wreck, and what became of those who were missing? One report did state that there were twelve Lascars, and the captain of the Atalanta mentions the same number, and we now find by the narrative, a proof of that statement. But why was not this fact, and the fate of those who must have perished, clearly ascertained by the owners or agents, or other persons duly authorized to hold an enquiry on so important a subject?

The public are aware that the supreme Government most promptly and generously dispatched the Tenasserim to the Cargados Garajos bank, for the purpose of rescuing the officers and surviving crew of the Letitia; and although too late to carry the orders of Government into effect, yet the dispatch of that steam vessel is an instance of noble minded promptitude, and cannot fail to command universal respect and admiration; and at the same time it will inspire that confidence amongst all classes of seamen, inciting them to cherish hope in every peril and danger, and to bind them in lasting ties of gratitude to that powerful and commanding hand which protects the mariner from wrong, and saves him from destruction. The meritorious conduct of Captain Barois, is deserving of the highest praise and commendation, and an ample reward should be his well earned meed; whilst those persons who were rescued from the Cargados Garajos shoal by his noble exertions, must ever be impressed with a fervent sense of gratitude to God, and thankfulness to Captain Barois, for their providential and happy deliverance.

Under all the circumstances of this lamentable wreck, and the providential escape of so many persons from a sand bank, there yet remain a few important questions to be explained, which are dictated by a sense of justice and humanity, and I hope the officers of the Letitia will satisfactorily answer them, viz., *Why were twelve Lascars launched adrift on the raft, without one officer or European to guide them? and what means had those hapless creatures to conduct the raft, and to sustain life in their perilous attempt to seek for succour and relief? and how was that raft constructed to contend against wind and sea?* Every officer should bear in mind, his own character and the responsibility which devolves on him when life is at stake; and that it behoves him to guard

pearance of a wreck. This of course attracted the attention of those on board, but the commander unfortunately, as it turns out, came to the conclusion that it was only a party of seal fishers engaged in their calling."

The Letitia was built at Calcutta about eighteen months ago, and was a strong sound ship.—C. B.

and protect both life and property by every means at his disposal, and never to incur any risk without setting himself the highest example of fortitude and resignation. In a word, when it becomes necessary for the preservation of a portion, or the whole of the persons under his command, to undertake an enterprise, however dangerous it may be, it is his duty to see that exemplary influence and control should provide for the safety and preservation of those who are directed to obey. The narrative states the general misconduct of the Lascars after the ship was wrecked, which appears to have been most disgraceful; but unless they were guilty of open mutiny, no plea can justify a partial allotment or disposal of persons in extreme cases of peril. Therefore, in my opinion, it is due to the public at large, that these important questions should be fully explained.

I am, Mr. Editor, &c.

CHRIS. BIDEN, *Master Attendant.*

Madras, January 7th, 1846.

MY DEAR SIR,—I hasten to send you the accounts of the wreck of a fine new ship, the *Letitia*, of Calcutta, on the Cargados shoals, on the 15th September, 1845.

The *Teazer* left Mauritius on the 30th November, in company with the *Lord Elphinstone* and *Intrepid*, and with light northerly winds we persevered in beating up to the westward of the shoals, keeping a good look out both night and day, and hoping to fall in with the unfortunate fellows on the raft from the wreck; but as we found the current strong to the westward, they must have been carried a long distance off towards Madagascar, where they probably might reach, should they survive, which is doubtful. The weather was very fine, and exceedingly smooth water during the time, but the heat was very intense, being nearly a vertical sun. On the 22nd December, parted company from the *Intrepid*, and from the *Lord Elphinstone* on the 14th, bound to Calcutta.

I am, &c.,

(Signed) VINCENT BUDD, *Barque Teazer.*

To C. Biden, Esq., Master Attendant.

The *Eliza Jane*, Captain Barois, arrived here on Tuesday, bringing the officers and crew of the *Letitia*, which left this for Calcutta on the 13th of September, and was wrecked two days after on Frigate island, a low sandy spot about a mile in circumference, situated in 16° 33' south latitude, and 59° 30' east longitude, and forming part of the Cargados group.

Having obtained the particulars of this melancholy event, we proceed to lay them before our readers.

The *Letitia* left here, as stated, on Saturday the 13th of September, and proceeded on her voyage to Calcutta, steering a north-east course. On Sunday night the Captain gave the course as above, but said nothing respecting keeping a look out for land. The night was squally, and the first mate, who had the morning watch, did not stir from the weather

side of the poop during that time, watching the squalls as they came towards the ship, the weather being threatening. At about five o'clock the second officer called the hands to wash decks, about half an hour after which he observed a ripple on the water, and thought the wind was shifting; before he could make himself sure of this, the ship, which was going about eight knots through the water, struck on the rocks. The sails were backed, and every thing done that could be thought of to get the ship off, but she had struck with such force that she was as immovable as the rock on which she struck. The hatches were then opened with the intention of lightening the ship, and the Lascars ordered into the hold for that purpose, but they were totally unmanned, and clung to the rail, calling on Ali to save them, and would not stir to help in any way. A tremendous sea now struck the ship, and smashed the cutter to pieces and washed it away, with several hen coops. They then endeavoured to persuade the Lascars to lend a hand to get out the long boat; but in vain, not one of them would exert himself.

Unfortunately all the provisions were in the hold and on the gun deck, and the sea making a clear breach over the vessel, and pouring down the hatchways in torrents, rendered it impossible to get any thing up. The second cutter was then lowered, and the second officer and two seaconies got into her, with the intention of carrying a rope on shore, which they happily effected, though the boat was stove in the attempt, and the second officer's foot severely cut. The boat was then shoved off again to the ship, and some lascars got into her, in a sinking state as she was, but she was dashed on shore on her broadside with such violence, as to be rendered utterly useless. The long boat, too, was dashed to pieces on deck, and washed overboard, so that the only means of communication remaining was the rope. All the hands got on shore by this, with the exception of the captain, mate, carpenter, steward, and six Lascars. While the captain was endeavouring to save a box of specie, his chronometer, and papers which were in the cabin, the rope broke, and their communication with the shore was thus cut off. The sea broke over the decks with such fury that every thing was washed away, and the sea strewed with live stock, of which, one sheep, a duck, and a goose were alone secured by those on shore. Those who remained on the wreck now determined to wait till the ship broke up, and get on shore on any thing they could secure. The ship was now careening over to seaward, and the captain ordered the carpenter to cut the weather rigging, which he accordingly did, and the masts immediately went, but as they fell to seaward and were washed in board by the surf, it only rendered the destruction of the ship more rapid.

As the situation of those on the wreck was becoming more and more perilous, at four P.M. the captain determined to make an effort to get on shore, taking a rope's end with him to facilitate the escape of those who remained. But alas! before he got half way to the shore his limbs failed him, and he convulsively grasped a piece of the wreck, when the spectators saw him suddenly relax his hold, his head and legs sank, but his back was above water, and in this position he was floated off to the ship again, but life was extinct. This cast a still deeper gloom over the

melancholy survivors, as each one thought the poor captain's fate was but a presage of what awaited him. Night was now coming on, and those on shore huddled together under such shelter as they could contrive with some torn sails and bamboos which were washed ashore, and those on the wreck took refuge in the larboard quarter gallery, that being the most sheltered spot in the ship; but they thought when the sun set, that it was set for ever to them. However, they weathered out the night, and in the morning found the deck was completely broken up, and every thing in the hold dashed to pieces by the surf, which at each surge bent and twisted the ship in such a manner which would not be deemed possible by any one who had not seen it. The successive portions which were detached by the surf so lightened the wreck, that about three A.M. it swung round, and drifted close in shore, shortly after which, all those who had remained on the wreck, landed in safety, and were cordially welcomed by their companions in misfortune.

On exploring the island they found it about 12 feet above high water mark, with a regular ebb and flow of tide, and covered with scrubby bushes, one of which bears a little berry, something like the Calcutta gooseberry. They also found a kind of brede,* but what was much more important, they found a well of pretty good water, and an immense quantity of eggs and sea fowl. During the day they picked up a few articles from the wreck, but nothing eatable except two pieces of salt meat, and nothing that could supply the means of getting what they now most wanted—fire. They got a staff set up, with a union jack down as a signal of distress, in case of any vessel passing. They arranged their tent as well as circumstances permitted, and having picked up many pieces of sail, bags, and clothing they made a tolerable bed. They found many fine oysters on the rocks, which formed their most palatable article of food, as they were obliged to eat their birds raw, after skinning them and drying them in the sun. They strove, but in vain, to produce fire by friction, for though they could blacken the wood and make it smoke, they could not succeed in kindling any thing by it. On the third day the larboard side of the ship gave way, and left nothing standing. On the 19th they raised a mound over the Captain's grave with a plank over it, inscribed with his name, Malcolm, and the date. At this time the water began to grow scarce, but by digging a little deeper they obtained a plentiful supply. Some cutlasses and pistols were picked up from the wreck. They now set to work to construct a raft, but the Europeans alone assisted, the Lascars remaining utterly inactive. The birds sensibly diminished, but such were the countless multitudes that remained, that they still got as many as they wanted, and plenty of eggs, with a tolerable supply of oysters. They employed themselves in drying a stock of birds to provision their raft, and amassed about five hundred for this purpose.

On the 21st of September they saw a brig pass, so near that they could discern her hull; but the hopes this inspired speedily died away, as they saw her continue her course. From her being so near they had confidently expected to be seen, and made every preparation for leaving

* Brede is a vegetable.

their desolate abode. Their disappointment was proportionably greater when they saw her continue her course. They now continued the raft, and some suggested launching it with a letter enclosed in a bottle lashed to its mast, and trusting to its falling in with some ship, while others preferred victualling it, and starting in the hope of reaching the northern part of Madagascar. On the 29th of September they saw a barque passing, and twelve hands put off on the raft in the hope of reaching her, or at least, attracting her attention. But alas! not only were they again doomed to disappointment, but the unfortunate beings on the raft were carried away by the currents, doubtless to a miserable and lingering end. On the two following days their hopes were again excited by seeing two barques passing, but hope deferred again made their hearts sick, and despair was fast taking possession of their souls. They however set about another raft, and got it completed by the 22nd of October, but could not launch it, there not being sufficient water on the reef. The 27th of October was a day of great rejoicing, for one of the Lascars picked up the lens of a spy glass, by which their lot was rendered comparatively comfortable, as it afforded them the means of lighting a fire and cooking their food. On the 8th of November their hopes were once more excited by seeing a steamer passing, so near that they could distinguish her funnel; but they were once more doomed to disappointment, as she went on her way and they saw her no more.

On the 12th of November there was much quarrelling among the Lascars, as however incredible it may appear, they had been stealing from each other, and the detection of the thefts caused great dispute. The carpenter now endeavoured to repair the boat, thinking they might thereby get a chance of reaching some vessel. On the 13th of November, to their great regret, they found the eggs finished. On the 15th, they saw a schooner to the windward of the island, and launched the boat in the hope of reaching her, but could make no way against the heavy sea, and were obliged to return. The ship, however, still remained nearly in the same spot, and the next day they made another attempt, but after labouring hard for two hours were obliged to give it up. The boat was so leaky that it was as much as two hands could do to keep her afloat by baling. To their great encouragement the vessel still remained nearly stationary. On the 18th, about eight A.M. to their great joy, they descried a boat pulling for the shore, which landed safely, and the mate was taken on board, where he was received by Capt. Barois with the greatest possible kindness. As early as possible the next morning the boat was dispatched with a bag of rice for the Lascars, and directions to the second mate and carpenter to come on board the schooner, which went the next day and took the Lascars on board, and set sail for the Mauritius, where they arrived in safety on the 25th instant. During their sojourn on this island they had consumed nearly fifty thousand birds, and the mate's mess alone consumed upwards of seven thousand eggs. What the Lascars used of the latter article must have been, at least, twenty times as many. One might suppose, from such immense multitudes of birds, that the island in question must be covered with guano, but the presence of vegetation proves to the contrary.

We should be wanting in our duty did we fail to express the gratitude of this crew to Captain Barois whose treatment of them was characterised by true Creole hospitality. No consideration of interest induced him to deny a single hour the restoration of his unfortunate fellow sailors to those comforts which they had almost despaired of ever enjoying again. A considerable pecuniary loss will accrue to the owners from this circumstance, but we have too high an opinion of Sir William Gomm's humanity and justice, to suppose for a moment, that he will allow that loss to remain uncompensated, or that Captain Barois will not receive some testimonial of that approbation which every English heart must feel at his conduct.—*Sentinel de Maurice, November 18.*

The *Letitia* was a splendid built vessel at Calcutta, was about eighteen months old, and I never observed a vessel finished as well in all her fastenings below as in her. I saw her on the slip ere launched, and recollect remarking her fastenings at the time.—V. B.

N.B.—In the chief officer of the *Letitia's* report, which was published at the Isle of France, he states, "On the 29th of September, twelve of the crew proceeded on a raft, with the intention of going to Madagascar; thirty-nine of the crew, officers included, have arrived safe by the *Eliza* and *Jane*."

"(Signed,) HY. SWAN, *Chief Officer.*"

Mauritius, November 25th, 1845.

The first account of this wreck will be found in our February Number p. 105.

TIDES IN THE GULF OF NORMANDY.

Jersey, January 13th, 1846.

SIR,—On the receipt of your last communication, I forwarded to M. Beautemps Beauprè by the French cutter *Moustique*, the corrected copy of my sailing directions, purchased some time since of Mr. Bate, and presuming that you possess a copy of the French Instructions Nautiques (redigées par M. Givry.) I consider it incumbent on me to offer a few observations on the matter they contain, more especially as my work on Alderney is therein largely quoted from. In my sailing directions for this region I state distinctly that the periods of high water at Alderney, Ortach and the Casquets are simultaneous, viz., VI. 45, an assertion I am by no means inclined to depart from, notwithstanding the opinion of M. Givry, at the bottom of page 5 of whose work I find the following note in allusion thereto.

"Il est vraisemblable, que cela, (meaning the simultaneous periods of high water), n'est pas rigoureusement exact, et que la mer arriva à son plein sur le rivage des Casquets, au moins 15 minutes plus tôt qu' au port de Braye d' Aurigny, car la Haute mer a lieu dans ce port 30 minutes plus tard, qu' au port de St. Pierre de Guernsey, et 15 minutes plus tôt qu' au Cap de la Hague, et a en juger par les distance que l'ondulation de la marée doit parcourir pour franchir les intervalles que separent ces points, les uns des autres

il n'est pas possible d'admettre que la mer soit plein au même moment aux Casquets, et a Aurigny."

Now, with every consideration for the known abilities of M. Givry, I must say that his opinion of its being high water at the Casquets before it is so at Alderney, is not only negatived by observation, but the reasons he advances in favour of such a phenomenon theoretically, seem, in my opinion, to militate altogether against it. And this I shall now endeavour to show, remarking here, that it is not even supported by the French recorded periods of high-water, viz., St Malo, VI. 5; Granville, VI. 9; Chausey, VI. 14; Jersey, VI. 22; Guernsey, VI. 28; Alderney, VI. 57; Goury, VII. 8; according to which it is high-water at Granville before it is so at Chausey; at Chausey before it is so at Jersey; and at Jersey before it is so at Guernsey; which clearly evinces, that although the volume of water which fills up this Gulf, enters it in the first instance from the westward, yet *that the undulation eventually changes and returns upon itself*, or in other words, that the local high-water at the islands is really made up and completed by this re-action from the French coast, a re-action which begins to show itself on the surface in the vicinity of Chausey, as early as half flood there; it appears at the Ecrehoes and les Trois Grunes at four hours flood; and lastly, on the Banc de la Chole, at the Blanchard, Burhou, and the Casquets, between four hours and a half and five hours flood; and where at high-water it runs to the northward and westward, so that the contribution towards effecting high-water at Alderney and the Casquets, actually commences in the vicinity of Chausey, one hour and a half, before any similar inclination visibly manifests itself between the western shores of Guernsey and the Casquet middle, clearly demonstrating that, the early commencement of the north-easterly stream in the Deroute, Russel Channels and Race of Alderney, is in the first instance owing to its deflection from the coast of Brittany into a northerly direction by the opposing influence of the shore of Normandy. And though it becomes in a great degree neutralized in proportion as it recedes from the latter coast, yet we find, that the stream runs very little to the eastward of north at high-water, even four leagues to the westward of the Casquets, whilst between Jersey and Cape Frehel, it continues to run to the south-eastward until that period nearly, and thereby continually adds to the elevation of the water along the coast of Normandy, as the stream travels to the northward, a portion of which, is necessarily thrown off towards Alderney and the Casquets, before it is so at Alderney, (as M. Givry supposes,) the deflection in question must reach the former rocks before it operates at Braye, an incongruity, which neither the relative positions of Tobourg-nez, Alderney, and the Casquets, the peculiar trend of the coast-line between Granville and Cape la Hague, or the tangential motion of the water already described, will by any means tolerate. Nor should I be inclined to place too much reliance on the consecutive steadiness of the high-water level at Goury, during the springs, as it must inevitably partake of the state of the race, which will prolong the moments of the waters ceasing to rise and fall sometimes, and retard them on others, so as to mark effectually

the mean point between them. This irregularity in the time of high-water at Goury is indeed admitted in page 54 of M. Givry's work, independent of which, there is a difference of six minutes between the same observers at Dielette, and four minutes at Goury, which induces me to contend, for an acceleration at the latter place, over that at Alderney of three or four minutes, making the time of high-water at Goury, according to the French tables at VI. 53, and according to mine VI. 42.

The remark of M. Givry, that the bank of Coquelihou and the shoals south-eastward of Longy, "avaient échappé, aux recherches de Monsieur le Capitain M. White," are true to a certain extent, but notwithstanding the alleged impossibility and imprudence of anchoring in the race, as set forth by M. Givry, the Cracker cutter has since been on all these shoals, and was several hours at anchor upon "La Basse du Raz," a shoal nearly in the heart of the Race.

To conclude, I have the satisfaction of knowing, that M. Beautemps Beaupré accords fully with me, in respect to the motions of "les Courans de la Maree," every where on the French coast.

I am, &c.,

To Capt. Beaufort, R.N.,
Hydrographer, Admiralty.

M. WHITE,
Captain R.N.

SHIPS AND RAILWAYS.

WE promised in our last number to recur to this subject. We find that no time is to be lost. Neither professionally nor constitutionally alarmists, yet we cannot help feeling, on a review of all the circumstances connected with it, that a fatal danger is impending over England,—a cloud lowering and ready to burst which, if it do not sweep away, will at least seriously cripple her best security, her time-honoured and glory-hallowed defence, involving the future honour, interests and integrity of this vast empire.

For three centuries, since our naval struggles with the Spaniards, and afterwards with the Dutch and the French, so great a question to the maritime interests and supremacy of England has not arisen. It demands the immediate and gravest consideration of the public, as well as the Government and legislature to avert the threatened evil.

The Coasting Trade of Britain employs no less than from 45,000 to 50,000 seamen, these seamen the best and hardiest that Britain possesses. *This Trade a nursery for the Navy since the time of the Commonwealth, is about to be destroyed, and these 45,000 seamen to be discharged*; who, no longer available in case of need for the defence of their country, but probably finding employment in foreign states, may turn their courage and able seamanship, as in the last American war, against the land of their birth.

The bare statement of the early probability of such results is enough to produce a feeling of anxiety in every mind interested in the future welfare of Britain,—As who is not?

To enable this matter to be examined in a more tangible shape we will adduce a few facts that, we humbly conceive, cannot fail to carry conviction home to every right thinking man in the empire.

The Average *Coal Trade of the North to London* for ten years past has been 2,584,824 tons, employing nearly 10,000 seamen. The average *Coal Trade to all the ports of the British Islands* was, in 1844, 7,377,862 tons employing about 31,000 seamen, forming *seven-ninths* of all the coasting trade by sailing vessels. The *entire coasting trade by sailing vessels* was 9,438,168 tons; and by *sailing vessels and steamers* 12,826,328 tons, employing at the least 45,000 seamen.

Now 7-12ths of all this trade is in coals, and were there no other existing coal-field in Britain than the Northumberland and Durham, there would exist a probability that part of this trade to the most distant points, as to London, might be preserved; for that coals could not be carried from 300 to 400 miles by the railways at a less cost, the empty waggons to be returned, than by ships, provided a fair charge was placed upon their carriage by railway, though by the present exorbitant charges on passengers to counteract the unprofitable charges on goods even that would be a doubtful point. With a railway however, like the projected *Newcastle and London Coal Railway*, with no passengers to sustain such reduced rates, the competition against ships would be impossible, as the detail of the pamphlet, before referred to, clearly demonstrates.

But the coal-fields of England, Scotland, and Ireland, stud the islands in all directions, and on an average do not lie fifty miles apart from each other.

We have first the *Scotch coal-fields* from Ayrshire on the west coast running across the island to Haddington on the east, abounding in excellent bituminous coal, fitted for manufacturing and household purposes; then within a radius of less than 60 miles of it, we have the *Northumberland and Durham Coal Field* from its facilities of transport, being intersected by three navigable rivers, the Tyne, Wear, and Tees, known to the whole world; within the same radius from the southern parts of this field we have the *Yorkshire and Derbyshire Coal Field*, greater than the last in superficial area, and excellent in every description of coal, supposed by Conybeare, the geologist, to be a more important one than the Northumberland and Durham Field, and only hitherto kept out of the market, except for local supplies, for want of facilities of transport, owing to its position in the interior; to the west of these are the *Cumberland and Lancashire Fields*, not more than a fifty miles radius distant, with their unsurpassed *bituminous* and *cannel coal*, having some seams 9 feet thick; then the *Staffordshire* with a deposit (in it a seam 80 feet,) capable of supplying London at its present rate of consumption upwards of 1000 years; then the *Shropshire, Warwickshire, and Leicestershire Fields* with excellent coal; and again westward in Wales we have the *splendid South Wales Basin*, extending over 1000 miles sea, with a supply of *anthracite* and *bituminous* coal, of itself enough to serve the country at its present rate of demand about 3,900 years, taking the bases of *Bakewell* for calculation.

There is no point of the country further removed than 50 miles from

coal, except the south-east of England and north of Scotland. London is within 100 miles of the Warwickshire coal, 122 of the Leicester, 125 of the Staffordshire, 144 of the Welsh, 152 of the Derbyshire, 190 of the Lancashire, and 240 of the Durham and Northumberland coal. These are the distances by railways, established, constructing or projected to these various coal fields. The produce of the interior and the southern fields has been shut up for want of facilities of transport, but those railways now intersecting or about to intersect these fields in all directions, inducing capitalists to engage in mining, will remove the only obstruction that has hitherto prevented its general distribution.

If a low rate of carriage be taken on these new railways such as is now charged on the *Stockton and Darlington* line for coals, *five-eighths of a penny* per ton per mile; or as on the *Hull and Selby* line *one half penny* per ton; or as on the *Great North of England* railway, *one farthing per ton per mile*, coals will be delivered in London from the Welch, Derbyshire, Staffordshire, Warwickshire, and Leicester mines at a carriage charge at the *highest* of from 5s. 3d. to 8s. per ton; if at the Hull and Selby rate from 4s. 2d. to 6s. 4d. and if at the present rate of the Great North of England line from 2s. 1d. to 3s. 2d. according from whichever of these fields the coals may be derived. In addition, the coals of these deposits can be worked at 1s. 6d. to 1s. 9d. per ton cheaper than the Northern, and are more accessible from their depth being less, seldom ranging over from 250 to 320 yards, and the Welsh frequently worked level free, while the Northern are frequently from 350 to 500 yards down, to be penetrated often at great cost through quicksands and feeders of water, requiring a higher price for more capital invested, more expensive processes for ventilation and greater difficulty of working.

Now *ships* cannot carry coals to London from the North under 5s. 7d. to 5s. 8d. per ton, and about 2s. 7½d. per ton at London for lighterage and screenage, making a total of 8s. 3½d. carriage charge, *these the mere expenses without any profit whatever to the owners*, who must have at the very least 1s. 6d. per ton more for risk, interest of capital employed, &c., making a total for sea-borne coal to London at the lowest 9s. 9d. per ton carriage charge. This can never compete with coals from the Southern and Western Districts carried by railways, about equal in quality, and worked cheaper, making a total average on all these items *in their favor* of 6s. 6d. per ton. The Birmingham and London Railway delivers at present, coals in London, at one penny per ton per mile, which, from the Warwickshire mines would be less even at that rate than the sea-borne coal of the north, free at the same time from the uncertainty, delay, and injury from shipment and trans-shipment.

What say practical men to the question? Mr. George Stephenson, the celebrated engineer, interested in large manufacturing properties in the North, and brought up at a Northumberland mine, emphatically declares his opinion by buying large mining property in the South, and investing much capital in coal mines in Leicestershire and Derbyshire, and at this moment is sending their produce so far off as Chesterfield, 150 miles along the railways to London. Mr. George Hudson, the

great Northern Railway Director, has also possessed himself of large mining property in Derbyshire, and Mr. Joseph Pease, Jun., in South Wales in anticipation of the future demand from these districts. While Mr. Mahon, engaged in the Derbyshire mining for more than twenty years, stated to a Committee of the House of Commons last session :— “ That the coal fields of Claycross, Wingerfield, and Staley, were capable of *unlimited supply*, and he believed that the Claycross and Staley coals were *quite equal to the Durham*. By the proposed new lines of Railway he states, “ these coals could be delivered in London at 14*s.* 10*d.* per ton, and Ewewash coals as low as 10*s.* 6*d.* per ton.

This unlimited supply of Derbyshire coal as good as Durham, delivered by railway in London at 14*s.* 10*d.* per ton, when Durham and Northumberland cannot be sold in the same market, with the addition of the Thames expenses, at the lowest possible profit, under 19*s.* to 20*s.* per ton, will when the railway arrangements are completed, aided by the other Southern produce, entirely annihilate the Northern general Coal Trade. While the construction of the *Welsh South Midland and Gloucester Junction Railway* will afford a cheap and easy means of transit to the Anthracite coal of Wales, the best in the empire for steam purposes, bringing 30 per cent higher price in the London market than the finest from the north. By which railway also the fine bituminous coal of Monmouthshire will be brought within *five hours* transit of London, instead of a voyage as now, round the Land's End of nearly 300 miles, lasting ten or twelve days.

This railway is being constructed almost for the express purpose of delivering coals and minerals in the metropolis, in a few hours from the Welsh mines, without sea risk, detention or insurance. It is impossible to doubt the result. The whole coasting trade to London will evidently be destroyed; and if the metropolis from 100 and 150 miles from the mines can be thus in preference supplied by railway, then it follows that as there is no part of the coast, east or west, more than 50 miles from the railway, when completed, the entire coal trade along the coasts will be still sooner and more easily destroyed, and, if in an article like coal more easily still in lighter and more manageable merchandize. In the words of the pamphlet on “*Ships and Railways*,”—“ That when the new and projected railways are established over all the coal fields, and capital thereby induced to be more largely invested in them, and the arrangements of these, and the existing lines completed, ship carried coals will be undersold and driven without difficulty out of the market; and if in the bulky article of coal, then also in less bulky and more manageable produce and merchandize; that, therefore, the entire coasting trade of Great Britain amounting last year, 1844 to 12,826,323 tons, employing at least 45,000 seamen will be annihilated, and those seamen being no longer required will eventually be lost to their country.”

The thing is as clear as a mathematical demonstration. These results are already beginning to develop themselves. Goods and minerals from the Midland districts that used to come by canal, and be shipped on the Humber for the North, now invariably proceed direct by railway, throwing out of employment a great quantity of tonnage. The Welsh coal

that used to be taken by sea to the southern coast of Devonshire, is now being delivered by railway, after crossing the Bristol Channel at 2s. per ton cheaper, driving the ships out of the trade.

From the southernmost verge of England, and from London to the extreme north, a distance over 300 miles, all light goods, merchandize, and much of the agricultural produce are invariably dispatched by railway, though swift sailing vessels and powerful steamers offer themselves, but offer themselves in vain for competition,—they are undersold. And within two months all the coal coasting trade to Scarboro' and its district has been destroyed by railways, amounting last year to upwards of 24,000 tons; the railways, carrying coals more than 80 miles, are able to undersell the ships, carrying the same coals scarcely 50 miles, by 3s. per ton,—not a ship is now employed. These are indications of what is to follow speedily to the entire coasting trade, if wise foresight and firm purpose do not prevent it. The death-struggle is already commencing in the Capital, upwards of 1500 tons a week are delivered into it, and the whole district around it is overwhelmed from the Southern and Western Coal Fields by the Birmingham and other railways.

If the present session of Parliament pass over, and all the new lines of railway be sanctioned without any provision to secure our Coasting Trade, it will be evidently lost to us, without the power or possibility of redemption; and in this Coasting Trade, what vast national consequences are involved?

Forty-five thousand brave seamen are something to a maritime state; their families and all the intermediate families existing by their trade are something to a Christian state;—the eight or ten millions of capital and its respectable and honourable proprietors are something to a commercial state, infinitely of more consequence, we will venture to say, than the plethoric capitalists and reckless speculators, who, with wild and visionary schemes, are precipitating England into a course permanently injurious to her interests, happiness and safety.

Withdraw or scatter these 45,000 seamen into foreign ports, and from a great maritime state, the greatest the world ever saw, sustained chiefly by this threatened Coasting Trade, destroy your means of being so: reduce your home mercantile fleet to ruin; your crowded coasts to a waste of waters, your busy ports to vacant spaces, spurn the designs of Providence in the advantages of your insular position, and what will be the results?

Our merchant vessels to foreign ports, those to the East and West Indies, those to America, the Baltic and Mediterranean seas are absent sometimes for 3, 4, 5, and frequently more months together, and only arrive in detail, now and then by scattered or single ships. From the month of March to June with scarcely a single vessel in port, if war suddenly break out, and a wise and energetic enemy would be sure to seize the moment of your weakness, where is your resource in such emergency? Where is your defence? Your 45,000 seamen of the coasting trade, the best and bravest of Britain, were ready in such a case to step from the decks of their merchant ships to the decks of a fleet. Their presence is a security against national surprise. They are ever operating as a pro-

tection. Acting as a patrol and advanced guard to our islands, nothing can stir around us without being remarked, nothing approach in a hostile shape without an ever-ready resistance.

How will you then protect your coasts from a gallant and adventurous enemy? Instead of the mercantile marine, diffusing riches, comfort and civilization, affording protection, and ready for war, you must have a large fleet perpetually cruising around your coasts, always prepared for action. Not less than the same amount of men now in your mercantile marine you must then exclusively devote to war. These men so employed will produce nothing to the country,—protection and not production is their duty, an all important duty certainly, enabling your commercial and industrial operations to proceed and your state to exist, yet you lose thereby the peaceful industry of the same amount of men, and you have these men waiting for war, in addition to support. You lose that. And then what becomes of your nursery for seamen for manning such a fleet. You man it now, but how will the next generation man it? The maritime education on our coasts from childhood renders these sailors the hardest and best in the world. That will be gone too, and *you will have to devote a portion of your children to war from their infancy*, and those will never supply the sacrifice you are about to make.

But perhaps you prefer to save the expense of such fleets and purpose to fight your future battles on shore? Instead of that gallant alacrity which has hitherto impelled you to meet your foes at sea, or seek them in their harbours, keeping afar off from Britain the horrors and ruin of war, you mean perhaps to follow the opinion of a gallant Admiral, and prudently wait to be attacked on your own shores, and bearded on your own soil? A high authority is quoted that this is to be the future *defensive* line of operations of Britain.

Mr. Cardwell, the Member for Clitheroe, secretary to the Treasury, a man of talent and influence, in his speech in Parliament on the 26th of February states:—He alluded to the Gallant Admiral who had been appointed chairman of the commission, to enquire into *the state of the maritime defences of England*. This distinguished person observed to him, “You have been told that England’s ancient boast is over, and *that she can no longer rely for security on her far-famed wooden walls*. *You have been told the truth. The march of improvement has deprived us of our old security*. But our policy is clear. Let us not be afraid of the march of improvement, let us study to keep pace with it. If we do all will be well. It has robbed us of our old security, but it will provide us with a *better*. One modern invention will tell us which is *the point of danger*, and another will concentrate on *the point of attack* all the disposable resources of the country. *Let us keep pace with the spirit of the times, and our country will become not a defended country, but a fortified citadel.*” This statement the House of Commons received with “*loud cheers.*”

In the excitement of the moment, it is possible that they have reckoned without their host. This better security, that is, to turn England into a fortified citadel, with the modern *improvements of points of*

danger and points of attack. What is it? Has it been calculated what amount of military force will be required for this fortified citadel? Should it ever occur that France was the power to oppose you with her 300,000 armed and disciplined troops, besides national guards, you must have an army able to meet them in the field, if our "old security" is to be forsaken, and we are to trust to electric telegraphs and railways to point out the danger and carry us to battle on our own soil. An army, such as Englishmen have never yet beheld concentrated in England, since the time of the conquest, and against which constitutional grounds, as ancient as the constitution, exist. England, to be turned into a fortified citadel, inviting war into the bosom of the country, making it the *seat of war*, with marches and countermarches of troops—perhaps a ravaged country—sacked towns and bloody fields—peaceful homes invaded—citizens and families slaughtered—industry and commerce overthrown—property destroyed—and our institutions in jeopardy, depending on the struggles of armed men, perhaps on a single battle; *is this a better security than the old—is this the march of improvement?* Abolish the navy—restore the heptarchy.

Even should none of these dreadful results take place, and that we are always successful in our coast battles, our people's manners and habits will be changed—the peaceful arts laid aside for the sword—manufactures, agriculture, and commerce interrupted by crude military preparations and aspirations after glory—the energies of the country now concentrated on peaceful pursuits, that have raised it as high in the scale of nations as its military glory, these all suspended, checked, or destroyed, ruining good citizens, making bad soldiers. Your people become changed, will no longer be recognized as those that have won triumphs over nature herself, and have carried peace as well as war victorious into the farthest verge of the earth.

Are you prepared for all this, and more? Can this home army, like a spider in its web, do more than defend its own home, if it can always do that? What is to become of your Empire—colonies scattered over the whole globe? Are they to be forsaken? Is your home army to march to them, or are we to have proportionate home armies for them too? The highway to our outlying Empires is it to be forsaken; the link that unites us to be broken? Do you seek to be beaten in detail or like the Roman Empire crushed beneath the weight of your own military force?

If you will forsake the battle field of England, which has witnessed her triumphs for a thousand years, do so after a due calculation of the results, after a preparation becoming the mightiest state in the world's history, and not be juggled into ruin and dishonour by a trick of the time, a scheme of adventurers and railway speculators, that the Legislature should guide and curb, not follow.

We cannot conceive that the country will insanely permit all these changes; a great people metamorphosed into a mongrel tribe of half citizen, half soldier, and neither one nor the other; the arts, sciences and civilization checked, or destroyed; crippled resources; an over loaded exchequer; the highway to their distant possessions made patent to the enemy;

cooped up in these limited islands, instead of coursing the earth on the wings of the wind, or by their own genius, and ruling the world by their trident sceptre, falling at last without sympathy and sinking without honour, destroyed by an insane lust for mere vulgar riches. All this is surely not to be and no effort made to prevent it, yet is it the inevitable result of destroying our coasting trade, forsaking our "old security" and turning Britain into a "fortified citadel."

We conceive all this as far as it relates to the gallant Admiral, the member for Clithero and the House of Commons a mistake, and we expect to hear of their all rising some day to explain, to use a parliamentary phrase. Without indeed as far as the distinguished and gallant admiral is concerned, it turns out a grave salt water joke upon this ardent, though respectable, railway director. Meantime we may quote the settled opinion of the House of Commons, the Peers, and Her Majesty, as recorded in the Preamble of an Act of Parliament passed last session of the Seamen's Registration Act, "*Whereas the prosperity, strength, and safety of the United Kingdom and her Majesty's dominions do greatly depend on a large, constant, and ready supply of seamen; and it is therefore expedient to promote the increase of the number of seamen and to afford them all due encouragement and protection.*"

This we believe to be the true opinion, not only of the legislature, but of the entire people of Britain, taught by the experience of ages and the knowledge of their position and its duties.

It must then be admitted on all hands, that having empires under our jurisdiction and forming integral portions of Britain in every part of the world, as in the East and West Indies, Asia, Africa, America, and Island Continents in the Pacific Ocean, *that a powerful navy, and that alone, can be the combining and protecting link with the parent state, as well as the safe and natural security of these Islands;* and that without such naval force possessing a supremacy at sea, this connection will be broken, and the safety and honour of Britain be compromised. It must also be admitted that this navy to be efficient must be manned by able and practical seamen; and that the nursery and supply of such seamen can only be found in the Commercial and Mercantile Marine of the Country, above all others admittedly in the Coasting Trade; and that therefore it is altogether impolitic and dangerous to allow this naval resource and source of national existence to be destroyed, by railways or any other cause.

We feel this to be the opinion of the British public, and all that is necessary to prevent the fatal course impending, is a clear understanding of the precautionary measures necessary, which, with deference, we will venture briefly to point out.

The Railways are producing the fatal result, the destruction of the coasting trade, the best means of manning the navy, by unjust and exorbitant charges upon passengers, thereby rendering the public the instrument of its own eventual ruin, besides the present loss by these overcharges. Let us see. The Great North of England railway while it charges the carriage of coals only *one farthing per ton, per mile*, charges the third class passengers at a rate of 60 times as much, and the

second and first class passengers double and treble that rate. From the northern coal field it would carry to London one ton of coals for five shillings, at its present rate, if its directors possessed the entire line, while for a ton of third class passengers, sixteen to the ton, it charges £19 4s., or about 6,300 per cent more, and nearly 20,000 per cent more upon its first class passengers. The Birmingham railway charges upwards of 4,000 per cent on first class passengers more than on the coals, which it carries to London from the Midland districts. The Hull and Selby line charges upwards of 6,000 per cent more on passengers than on coals. And the Great Western railway charges 4,200, per cent more; *for one ton of coals from Bristol it is eleven shillings and ten pence, for one ton of passengers it is twenty pounds sixteen shillings.*

The grasping nature of these monopolies is evident in these rates. Monopolist charges on passengers, in which there is no competition, sacrificing charges in which there is competition, for the purpose of destroying their competitors, that they may obtain the exclusive carriage on merchandize, produce, and minerals too, and then raise the rates on these articles to the same exorbitant proportion as on passengers. The real spirit of overbearing monopoly is clearly exhibited in this very proceeding.

It is thus easy for railways to undersell in carriage the shipping; because imposing a monopoly price on passengers, they pay by it all their expenses of management and machinery, and therefore can afford to charge this disproportioned rate upon minerals and goods; and by this process, ruining their sea competitors, they will gain entire possession of the whole carrying trade of the country, which having accomplished, the whole country will be at their mercy.

The governments of continental states have secured their people from this monstrous injustice, and obviated this fatal error in the English railway arrangements, and though they have, many of them, been obliged to import machinery, mechanics, and means of constructing their railways, as well as fuel from England, *yet do they charge a lower rate for passengers than the English lines, to the extent of 100, 200, and 250 per cent.*

The Glasgow and Edinburgh railway charges about 2d. per mile for first class passengers; the Birmingham upwards of 2½d.; the Great Western 2¾d.; and the Great North of England, with its junctions from Newcastle to London 2¾d. per mile: while the German, Belgic, and French charge rarely more than 1¼d. for first class passengers per mile, as on the Antwerp and Cologne, Antwerp and Aix-la-Chapelle, the Berlin and Leipsic, the Brussels and Cologne lines; and the highest, from Paris to Rouen and to Orleans, is only 1¾d.; while the Northern French line, and Ostend and Aix-la-Chappelle line are only 1d. per mile for first class passengers.

These are demonstrative proofs by what means the English railways are overwhelming their competitors—by an exorbitant and unjust personal charge upon the British public. It is thus that the coasting trade is being ruined by railways. Abroad, having no sea competitors in heavy carriage, their charges are proportionate and reasonable; but possessing

the power of monopolies, which always creates the disposition to use it, their respective governments step in to the protection of the public.

In England, railways are operating as monopolies of the worst description, by which the whole public is daily injuriously affected by serious impositions, and are spreading, at the same time with locomotive speed, fatal ruin amongst the chief sources of the defences of the country, by means of their injustice. Not a moment is to be lost to prevent the accomplishment of their destructive objects; the government and legislature are the only powers to counteract them. The French government and legislature have, in this, established a wise precedent. 'Take an example. The charges on *the French Northern Line* have been thus arranged by them:—

| | |
|--------------------------------------|---------------------|
| Third class passengers, each 5 cents | } 88 cents per ton. |
| per kilometre, or about - - - | |
| Metals, &c. - - - - - | 18 " |
| Agricultural produce, &c. - - - | 16 " |
| Minerals, chalk, limestone, &c. - - | 14 " |
| Coals - - - - - | 10 " |

Making a differential charge in favour of metals, 5 times, agricultural produce $5\frac{1}{2}$, minerals $6\frac{1}{3}$, and coals 8 8-10ths, instead of 40, 50, and 60 times, as on the English railways; the passenger charges being thus proportionally reduced. If a proportionate scale be necessary in France and other continental states, how infinitely greater the necessity for it in England, where the consequences involved are in magnitude almost incalculable.

Fortunately for the country, there is a tendency in the right direction by the House of Commons, and all this may be accomplished under the 27th resolution of their Special Committee on Railways, in their report of the 10th of February. For it declares, "*That every committee on a railway bill shall fix the tolls, and shall determine the maximum rate of charge for the conveyance of passengers, and of goods on such railway.*"

This resolution of the Commons, judiciously applied in the spirit of the French railway arrangements, will secure the public from gross injustice, and the coasting trade from ruin, averting the fearful national consequences involved in that ruin.

In addition to the establishment of a low rate of passenger charge upon the English railways, as upon the continental, at from 1d to 1½d per mile upon the first class, with a proportionate charge on the second and third classes and goods, there are some peculiar and exclusive imposts upon ships in the coasting trade, which ought, in justice, at once to be abolished, to render their position equal with the railways.

Upwards of half a million sterling a year is paid by ships for *port charges* and *harbour dues*, for entering port to embark or discharge their cargoes of merchandize or minerals, for the convenience of the community; while railways may enter the towns of these ports, amongst the same community, and remove or deliver the same articles without the slightest charge whatever for that object; and they may convey them to any other point or port, however distant, without paying any *light dues*

which the ships cannot do, for this purpose, under a cost of upwards of £160,000 a year; thus giving railways on these two items alone a premium of nearly £700,000 a year to aid in the destruction of ships.

The harbours and coast lights ought to be sustained at the cost of the country, and be in the disposition of the Admiralty of this great maritime state, which irrespective of the reasons just assigned, will now be found indispensable in war, for the perfect defence and safety of the country, with the new and powerful element of naval evolutions in operation.

The Parliamentary Committee on Lighthouses, report on their branch of the subject, as to the removal of the coasting charges, "That from the evidence before the committee, *the coasting trade, which has beyond all other trades afforded to the navy the largest supply of the hardest of our seamen, is likely to decrease, unless Parliament shall adopt timely measures to protect it. The coal trade from the north of England must be considered the chief branch of the coasting trade, and the evidence respecting the rising competition of railroads deserves the particular attention of Parliament*, with reference to the burthen arising from the light dues." If their sphere of duties would have permitted them, they would have evidently added, "*port charges and all other burthens,*" their premises and opinion lead clearly to that conclusion.

At present we take leave of this vast national question, with a determination again to recur to it, unless, happily, in the mean time, a settlement takes place, becoming the national justice and the public security. We are rejoiced to learn that already amongst parliamentary and official men, as well as the public, it is making its way towards a satisfactory solution.

DISTRESS SIGNAL LIGHTS FOR VESSELS AT SEA.—By R. Rettie, Esq.

SIR.—The importance of the subject is my only apology for troubling you with an explanation of my various signals, provided for the greatly extending marine of our country, trusting that their importance will be such as to interest your readers, while at the same time it may be the means of drawing the attention of many to them, who have never even given them a thought, or ascertained the utility and absolute necessity for signals at all.

It will scarcely be believed that such is the indifference of those even, whose lives are daily depending upon some such valuable improvement, that they seem not only apathetically indifferent to any improvement, unless it has something *showy or gorgeous* in its appearance, so that it will be attractive in itself, however useful it may be, otherwise it will have no charms in the least for them. But when we reflect that the whole of the merchant service has been, as it were, from time *immemorial without a means* or method of giving a signal, during the darkness of the night; that should the *vessel* require assistance from the shore, they have no means at this moment to solicit this assistance from the shore,

but must lie throughout the *whole night* in the midst of *the ocean*, until the morning sun may dawn, if peradventure they may be able to hold out till that time arrives. Surely then, if the value of life and property is worth while at all, or if the *life boats* are to be held a necessary adjunct to a vessel's outfit, much more so ought any important invention be, that can decidedly shew a vessel in the midst of *the ocean* at all hours of the night, should she require assistance, or be in risk of *foundering before morning*. But perhaps the simplicity of the *cure* may cause the *value* thereof to be looked upon, by *some*, as utterly unworthy of attention. Six-pence a night to save a vessel perhaps worth £50,000, or bring assistance to a crew of fifty *human beings*, which otherwise might lie a whole night exposed to the buffetings of the merciless waves, when otherwise, *assistance* might have been had by the simple means now proposed.

The time has now arrived when the government not only of this country, but the various foreign governments in conjunction with our own, has now resolved that one *universal code of signals*, can be made *general and useful*, not only for our own country, but for the use of the whole *maritime nations* of the world; *and no single plan will ever be able to accomplish this great gigantic and humane scheme* but one founded on the utmost simplicity of universal adaptation, *few in number, easily comprehended, and all* equally differing, so that the one cannot at any time, or in any way, be taken or mistaken for another.

It is my intention, Mr. Editor, to lay before you, by your permission, my *whole simple and effective* uniform system, which has been seen by all the various practical and experienced officers of the day, and will, as the leading experienced commanders of the various influential merchants, companies, and steamers, have not only been without any qualification or reservation approved of by all as the *simplest form*, and so easily to be understood, even by all the foreign nations as well as by those of the British nation, which makes it so very valuable, that already have the Scottish ports months ago assented to their general adoption as a truly valuable means of saving many lives and much property. Nor need I add to the powerful appeals made by the press of the various ports, as well as to the influential description given by such force and clearness by the leading journal of Europe—the *Times*, when the valuable experiments at Portsmouth were made under the order of the Hon. the Lords of the Admiralty, to whose kindness I cannot but feel grateful, for the readiness with which the trials were supported by Admiral Sir Chas. Ogle, Bart., and the various officers under his command, to whom the trials were entrusted, I shall ever feel grateful, because it enabled me to show to the world that my system was based on a sure foundation, with the full merit also of having secured practical *mechanical skill*, brought to bear on a very important “blank” where many *thousands* have been lost, who otherwise, by the *simple means and plans I have thus devised*, might have been spared to their country and their friends..

In following up this letter, I will first give an account of the signal of distress, illustrated by diagram, and with a view of the code of signals,

showing by a little explanation, that no vessel of any size or importance need now want the means of making known that they require assistance, but of learning that assistance may be had from the shore.

CONTROL OF MERCHANT SEAMEN.

WE take the following observations from the *Shipping Gazette*, believing that they point out serious evils which have yet defied the law to redress. We have repeatedly alluded to the same in the course of our own duties as journalists; but, there are in these remarks some valuable hints respecting the relation of naval officers in these matters, which, in our opinion, are too good not to be repeated.

WHEN the Act 7th and 8th Victoria, to amend and consolidate the laws relating to Merchant Seamen, was passed, indeed before it had gone through all its stages, we remarked on what we considered a very prejudicial omission in it, in not giving to the commanding officers of her Majesty's ships on foreign stations concurrent jurisdiction with the magistrates, consuls, &c., to enforce and carry the act into effect. We observed at the time that the power given in the 55th clause of the act was perfectly absurd, because it was perfectly useless. By this clause the master of every ship is required to produce to the captain, commander, or other commissioned officer, of any of her Majesty's ships requiring it, the log-book, muster-roll, ship's articles, indentures of apprentices, &c.; and such officers have also the power to muster the crew; and all this "in order to be satisfied that the provisions of the act, and every other act by which the crews of such ships are regulated, and the laws relating to navigation, have been duly complied with." Any refusal, obstruction, or production of false documents, subjects the master to a penalty of 20*l.* But of what utility is this? Suppose such officers discover that the act has not been complied with—that the crew have not been supplied with the proper quantity of provisions stipulated for in the agreement under shedule A of the act, or that the provisions are of a bad quality, or the water and medicines are insufficient or unfit for use; under the 57th clause of the act, these are matters with which they have no right to interfere, nor in any way to inquire into. They may satisfy themselves that the Act of Parliament has been violated in different ways; that the ship is not provided with the proper number of apprentices; they may learn that the crew are disorderly or mutinous, that the master has misconducted himself; all this they may learn, but they have no power to apply a remedy. The power to remedy or punish irregularities or abuses, in fact in any way to enforce the Act of Parliament, is merely given to consuls, vice-consuls, and custom-house officers; though the ship may be on the high seas, hundreds of miles from any such functionaries. There are certain omissions of the act with which her Majesty's naval officers may make themselves acquainted; but they are not even instructed what they are to do when they acquire this knowledge. They are not directed to make any official report to any public board; they are not required to make an entry in the log-book of the ship; and although the master is bound, under a penalty of 50*l.* to produce the log, we very much doubt if he would not be justified in preventing any naval

officer from making an entry in it : the act of Parliament certainly gives no such authority.

It is almost superfluous to say how much better qualified naval officers would be to inquire into the internal economy of a merchant ship than consuls and collectors of customs ; how much fitter persons they would be to adjudicate on the complaints of master or seamen ; how much more readily they would discriminate between frivolous complaints and real injustice, or insubordination. In whatever way we consider the subject we are confident that no greater benefit could be conferred on the Merchant Navy, as regards its discipline and the comfort of both the masters and their crews, than by vesting in the officers of the Royal Navy in foreign ports and on the high seas this magisterial authority, in fact all the authority which the act now confines to consuls and collectors. The late Mr. Somes, in his examination before the Select Committee on British Shipping, in 1844, said in reply to Mr. Hutt (617), " I would always rather refer a master to a Captain of the Navy than to the consuls ; but the Captains of the Navy are always tenacious of interfering with English Commanders of merchant vessels." They are, of course, tenacious of interfering with either commanders or men, because they have no right to interfere ; the Merchant Seamen's Act confers no such power on them. Few men could have been better qualified than the late Mr. Somes to arrive at a correct judgment in such a matter. He had himself, in his early life, served before the mast both in the Royal and the Merchant Navy, he had commanded ships ; and at the time he gave his opinion, was probably the largest shipowner in the world.

A gentleman who was a member of the committee for regulating the guano trade at Ichabo, in a small pamphlet which was appended to the *Nautical Magazine* some time back, gave a deplorable account of the scenes of riot and disorder which, notwithstanding the exertions of the committee, occurred there, until the arrival of H.M. ship *Iris*. These disorders were renewed on her departure : and it was found impossible to leave the anchorage and the island unprotected by a vessel of war. This writer remarks, after relating the particulars of a riot on the island :—

" When a riot occurs on shore, either in Great Britain or her colonies, and the magistrate finds the civil power insufficient to quell the disturbance, he at once reads the Riot Act, calls in the aid of the military, and, in a manner authorized by the laws of his country, restores tranquility. Why should not naval officers commanding vessels, and *being naval magistrates*, on being called on to quell a disturbance amongst seamen, be empowered to act in the same manner ? How very satisfactory it would have been to both Sir John Marshall and Commander Broke to have been possessed of the power on the occasion above alluded to, and how very necessary that they should have been."

This gentleman thinks that the commanding officers of men-of-war are discouraged by the Admiralty from interfering with merchant seamen, from a dread that it may give them a dislike to entering the navy. We imagine, however, that it is a matter with which the Admiralty in no way concerns itself. It is quite sufficient for naval officers to know that the law gives them no right to interfere ; and that were they to attempt it, they would be fishing in troubled water. We quite agree with the writer, that if the Admiralty did put such a restriction on Naval officers for the purpose he supposes, it would be a mistaken policy ; for, as he observes—

" The nearer that the discipline of the two services can be assimilated, the more readily will the seaman join a vessel of war in preference to a merchantman. How often have I heard the man-of-war's man say, ' Why, I only ran from such a vessel and joined the merchant service to have a spree, and liberty to do as I like.' Were the discipline of the two services as

nearly as possible assimilated, what seaman in his senses would prefer the miserable, dark, damp, unwholesome hole he must live in on board a merchantman, to the clean, well-aired, comfortable, berth-deck of a man-of-war; the greater labour and fewer hands of the former, to the comparative ease of the latter; the wholesome food and comfortable clothing of the one, to the often decayed provisions, and whatever clothing his dissipation on shore may have left him, of the other?"

We have ourselves repeatedly pointed to the habitual disorders into which the seamen of the Merchant Navy are allowed to run riot, compared with the discipline and regularity of a man-of-war, as the chief difficulty to the manning of our fleet. Long habits even of dirt and discomfort beget a dislike to cleanliness and good order. We need not go to sea for proof of this, as it may constantly be witnessed among the lower class on shore. Besides this we regret to say that the love of disorderly and dissipated habits is on the increase among seamen; and with such men the liberty to indulge in them will always be preferred to the comfortable restraints imposed by the discipline of a man-of-war. Until not so much the discipline as the habits of seamen generally be brought up to the standard required of them when serving in the Royal Navy, a difficulty will always be experienced in manning our fleet; and we see no more likely way to bring about this moral improvement than by an amendment in the Merchant Seamen's Act, so as to give to Naval officers full concurrent powers with consuls, magistrates, and collectors of customs in our colonies and in foreign ports, as well as on the high seas.

The writer from whom we have already quoted observes, that "It seems from the omission of the names of Naval officers as persons in authority under the new Merchant Seamen's Act, that they are not required to pay any attention to it; yet who so competent as they to see its enactments carried into execution, and its requirements attended to?" He complains that although our men-of-war are in almost daily contact with the Merchant Service, the officers of the former are not even furnished with a copy of the act; but when they require to see it, they have to borrow it from a merchant vessel. We shall only add, that the present disgraceful state of discipline in the Merchant Navy, and the requirements of the Royal navy, render it imperative that some efficient measures should be at once taken to remedy such serious disorders.

It is incredible to what expense and inconvenience shipowners are put through the conduct pursued by the crews employed on board their vessels in the St. Lawrence, or the harrassing annoyance to which it subjects the masters. Desertion from the vessel, under the tuition and fostering care of the crimps, is the invariable practice; and in this way not only are vessels most injuriously detained, but the most exorbitant rate of wages has to be submitted to for the run home. Yet, notwithstanding these high wages, we will venture to say that no seamen reach this country from a foreign voyage in so destitute and so degraded a condition as the majority of those from North America. They desert from the ships they go out in; they are taken up by crimps—or, rather, they are "taken in and done for" by them. In engaging with a new master there is generally a stipulation that half the wages for the run home is to be paid in advance; and this half is for the most part the crimp's share of the plunder: there is a bill for board, lodging, and *et-ceteras*, to be liquidated.

During the time these deserters are "done for" in the moral asylums provided for them by the crimps, they are indulged with—perhaps for the first time initiated into—scenes of the most loathsome profligacy. Drunkenness, and every other kind of debauchery, rule from morning to night, and from night to morning; every moral restraint is disregarded; and thus it not unfrequently happens, that the men so misconduct themselves on the homeward

voyage, that on their arrival in England the remaining moiety of their wages is forfeited.

We had hopes that the Registration Act would check desertion in foreign ports; it does not, however, appear to have proved the slightest remedy for this serious evil. It has been decided, we believe, that seamen may be shipped at foreign ports without the production of a register ticket. This, no doubt, relieves masters of vessels from much difficulty; but it is calculated to perpetrate the evil of desertion.

When a seaman deserts, he necessarily leaves his register ticket in the hands of the master of the vessel from which he deserted; and if he could not obtain another ship without it, he would be thrown out of employment in a foreign country. This would be a sad blow to the crimps; as they would find themselves with a stock on hand which they could not dispose of. The want of a register ticket is no impediment to the seaman when he arrives in England; for from the defects in the act, which we long since pointed out, he finds no difficulty in procuring a new register ticket.

We think, however, it is a mistake to suppose the Merchant Seaman's Act dispenses with the production of a register ticket at foreign or colonial ports. The 20th clause of the act says—"No person shall serve in any capacity on board any ship subject to any of the provisions of this act, who is not possessed of such register ticket." This to us seems sufficiently distinct: he is not to serve in a British ship without a register ticket. Waving, however this point at present, it sufficiently appears that the magistrates, and police at Quebec, notwithstanding all their exertions, have failed to check desertion, or to prevent disorders, amongst the seamen there; the crimps have proved too powerful for them. We need not be surprised at this after what we have experienced from the same class in the port of London. Hence the necessity of the more efficient services of a few vessels of the royal navy. A man-of-war, with her boats, her crew, her marines, might, we think, prove a match for the water-side pirates of the St. Lawrence, provided the Captain and Commissioned Officers had authority to act. To this omission in the Merchant Seaman's Act, we directed attention in the *Shipping and Mercantile Gazette* of 24th ult. But even without this authority—for which, however, we still contend,—the officers and crews of the vessels of war would prove a most valuable aid to the civil power in restraining disorders which for the most part occur on the river or in its immediate vicinity. Guard-boats from the ships of war would likewise intercept seamen deserting from their vessels at night; and we cannot but think that the presence of such vessels among the merchant shipping would have some effect in deterring the crews from those acts of insubordination which are of such frequent occurrence. Independently of all these considerations, it appears somewhat extraordinary that a place which is frequented by some hundreds of British shipping during the summer months, should be left without a vessel of war during that period.

The Merchant Seaman's Act sets out with saying, that "The prosperity, strength, and safety of this United Kingdom and her Majesty's dominions do greatly depend on a large, constant, and ready supply of seamen; and it is therefore expedient to promote the increase of the number of seamen, and to afford them all due encouragement and protection." All this is very true; but such seamen as are, for the most part, made by the North American trade, as it is now conducted, will add but little to the strength or safety of her Majesty's dominions. In our paper of Tuesday last we showed that it was the love of unbridled disorder, the dread of any wholesome control, which deterred so many seamen from entering into her Majesty's ships. The more this is enquired into, the more it will be found to be true; therefore we say that the Admiralty have a deep interest in promoting orderly conduct and proper discipline in the Merchant Navy. We would direct their attention to the St.

Lawrence, as a place where they will find ample scope for their exertions, and one to which they should apply the earliest remedy. The complaints of our Shipowners trading to North America have been long and loud on the subject we have touched upon. We now point to one remedy at least; and we will leave the matter in their hands to follow it up by the necessary representations to the proper authorities.

ON LIGHTS AND LIGHTHOUSES.

SIR,—Permit me to ask, through the medium of your pages, a few queries respecting those parties whose duties are to establish lighthouses.

1st.—How is it they intend placing a light ship on the Helwicks Sands?

2nd.—Who are the parties who have pointed out this spot, to run the risk of a light ship, with a crew perhaps of eight or nine men, to be exposed, during the tempestuous gales which are experienced on that frightful point, at the enormous outly of £10,000, besides the keeping up perhaps of two or three thousand annually?

3rd.—Might I ask who is the engineer for this job?

4th.—Could he not cast his eyes about him? Did he not see that Nature had provided a splendid rock, 164 feet high, on the very spot, *made* as it were, for the very purpose of placing a light thereon, at a cost of a few hundreds, say £200; and annually only an expence of £100, and *without risking a single life*.

Surely there is a *rotten state of things here*, Mr. Editor, when the Carmarthen folks are requested to sign a document to get a "light ship." Surely the "shipowners" must be fond of paying heavy ducs? How comes it they don't bestir themselves and point out such glaring waste of public money—money that might *plant fifty coast lights* on the various dangerous rocks along this wild and rugged shore, and which can easily be *done at the cost of what they put out for this single, useless, extravagant light ship* upon the "Helwicks," which is not only liable to be *blown about*, but *drifted from its moorings* from the exposed point on which it will be fixed, and more than likely a loss of life. I trust that active commerce will cast its fatherly care over this important job, and see that all things are duly done in order, and with a due regard to *economy* and utility. That a light should have been there long ago, is beyond a doubt, and it is little to the credit of the parties, that so many brave seamen, have found on that spot a watery grave.

Yours truly,

PRO BONO PUBLICO.

To the Editor of the Nautical Magazine.

THE "AMERICAN DEVIL," OR STEAM EXCAVATING MACHINE.

(From the Hull Advertiser.)

The first is the new name given in common consent by the whole tribe of navigators to a gigantic rival to their muscular power, and successful competitor in the earning of wages, which has been brought to this town by Messrs. Huntington and Co, the sub-patentees, for the purpose of excavating the Victoria Dock. The inventor is a Mr. Otis, of New York; the design and operation are alike simple, and the effects prodigious, as compared with manual

labour. The inventor acted wisely, however, for himself, and we doubt not that both he and his licentiates will have made a fortune before the patent, which has eleven years to run, shall have expired. Both this machine, and one for pile driving by steam were invented by the same person in America, we believe about eight years ago, and have been extensively used in that country. As however, this is the first occasion on which they have been introduced into this town, and the identical excavator now at work has only been used upon one contract in England previously to its arrival here, but is destined, we apprehend, to a much wider field of operation, we shall be excused in giving a short description of it.

In the first place, then, there is a strong and very low timber platform, about eight feet broad by twelve feet long, formed into a truck by being placed upon axles and wheels, with flanges, to traverse a railway; and when in use, a railway is laid down for it to traverse. Upon this platform is erected a portable steam-engine, worked at high pressure; the one just brought here is about 16-horse power, and worked at a pressure of 90lbs to the square inch. This machinery is protected from the weather by a wooden house or shed, erected upon the platform. All that the engine has to do is to turn a fly-wheel, working a crane, whose post is erected upon the platform, and as near to the boiler as convenient. To the jib of the crane is suspended a square bucket of wood, strongly hooped, and of sufficient capacity to hold a ton and three quarters of earth. The bucket is strongly fenced with iron ribs, of which six, on the off side, rise above the bucket, in the form of teeth or tusks, about ten inches long, four inches thick, and six inches apart. To the bottom of the bucket is a chain, attached to the crane, and which prevents the bottom from descending below a certain point, at which the bucket turns over; and this steam elephant then lowers his tusks, and the cogs being altered to bring the power of the fly-wheel upon the lifting chain, master "devil" steadily raises his head, the tusks pierce the earth, and turn it into the bucket, which comes up full. Tusky then turns his head, (which he can do on either side,) and holds it over the earth waggon, placed upon one of the lines of railway—(of which there are two, running parallel with that upon which the machine travels)—a string being pulled, out come a couple of bolts, the trap-door of the bucket falls, as when a culprit is launched into eternity, and our elephantine excavator deposits his load in the earth waggon, as easily as a living "Chuney" in the Zoological Gardens would discharge at pleasure so many buckets of water from his proboscis.

Two of this steam elephant's mouthfuls fill an earth waggon. Each cubic yard of earth weighs 28 cwt. The machine excavates and carries off at every stroke a yard and a quarter; at twice it elevates and places in the earth waggon 70 cwt. or $3\frac{1}{2}$ tons, and it was, on Thursday last, working at the rate of about 200 waggons a day. The supply of waggons has hitherto been deficient, and the steam elephant had often to wait for both horses and men. It is capable, we are informed, of filling 300 waggons per day—in common working hours, and will shortly be seen to fill 250 in that time. Its progress on the rails depends of course upon the "face" which the excavation presents; that at which it is now working is eight feet deep. It commences at the bottom, undermining the ground as it proceeds, and, with tolerably loose earth, it is of little consequence, whether the face be eight or eighty. The "devil" in the Victoria Dock is now removing about 500 cubic yards of earth per day; when put to his full work, he removes 750. The patentee has another similar machine in America, which has excavated 1,000 yards per day upon a railway. The machine requires two engineers, and three other men to attend to the crane and the trimming of two sets of waggons. These are sufficient to fill 300 waggons, which forty men could not accomplish in a day. One man can fill not quite seven waggons per day; therefore when the machine fills 210,

it does the work of thirty navigators. His owner, however, does not, we are informed, allow him to run down wages; whatever the navigators undertake to work for, he undertakes to perform the work as well and more quickly for the same money. Promoters of and contractors for public works, however, in America, prefer the use of such an instrument for the sake of completing their works early. The one of which we are now speaking has been used eight years in that part of the world. A second is about to be brought to the Victoria Dock, which will lift $2\frac{1}{2}$ yards at a time, although worked by an engine of only fourteen horse power. Messrs. Huntington and Co. the sub-patentees, hold three-fourths of the licenses which have been granted for the British dominions. They are also licentiates for Mr. Otis's patent steam pile driving machine—a locomotive upon a somewhat similar principle, excepting that the force of the one is applied upwards, and of the other downwards.

The pile driver gives 120 blows per minute; it is capable of earthing six piles without being removed. It moves along upon beams laid on the top of the piles which it has driven. This instrument is a variation of one, by the same inventor, which has obtained the cognomen of Brother Jonathan, and in America, in the manner just described, completed a contract of seventeen miles of railway through a swamp. When the piles are driven to a sufficient depth, it cuts off the heads and leaves them smooth and level, ready for the beams or walls which are to be placed upon them. The extent to which steam power is superseding manual labour is strikingly exhibited in the introduction of these machines and other engines into Hull. When the entrance to the Old Dock was improved about the year 1816, the whole of the earth was excavated by hand and spade, and carried off in wheelbarrows. The piles were also driven by hand, about a dozen men being employed to raise one ram—the strokes would not exceed one or two per minute, whilst Brother Jonathan gives 120 in the same space of time. The Junction Dock was opened in 1829. The excavations were done by hand, but tramways were laid, and numerous waggons drawn by some of the finest horses of the country, were employed to take away the earth. One steam engine was used to work a pump, but the piles were driven by hand, and a horse-mill used for grinding mortar. At the Railway Dock, now fast approaching towards completion, the earth has entirely been dug with the spade, and has been raised partly by horses attached to the earth waggons, and partly by means of a stationary steam engine. The whole of the cement has been ground by steam power, an engine having been built expressly for that purpose. So that two steam engines (both stationary) have been employed in the construction of the Railway Dock. At the Victoria Dock, in a short time there will be *ten* steam engines at work, in the construction of the works. Four of these will be locomotive. Messrs. Huntington, in excavating and pile driving will employ five, and Messrs. Diggles and Bolton, the contractors in chief, will have in operation five more. Messrs. Huntington and Co., will employ two excavators, two pile drivers, and one stationary engine to draw up the earth waggons. Messrs. Diggles and Co. have already two steam engines erected facilitating certain parts of the excavations which they are performing themselves, and for working the earth waggons, and in the course of the summer three others will be erected for the grinding of cement and mortar, and raising heavy weights. Hull may be considered as tolerably forward in the use of these steam instruments—the excavator having come direct here from the scene of its first work in England, viz., Brentwood, in Essex, where it removed 120,000 yards of an earth-slip upon a railway. It arrived here in November, and was in working order on the 18th of December. As soon as a few waggons were supplied, operations were partially commenced, on the 4th February, but it was not until last week that it got anything approaching its full amount of work.

TRIUMPH OF BRITISH SEAMANSHIP.

With feelings of national pride and exultation we record two of the most brilliant and splendid feats of active seamanship performed at Portsmouth and Plymouth: at the former port by the crew of H. M. ship *Rodney*, 92, Captain Edward Collier, C.B., and at the latter port by the crew of H. M. ship *Albion*, 90, Captain N. Lockyer, C.B. The fact of itself speaks volumes, and proves that Great Britain is still "the undisputed mistress of the seas."

On Monday morning at 4 a.m. the *Bellerophon* was alongside Portsmouth jetty, with only her bare masts and bowsprit in; no tops nor caps over, and in 54 hours was anchored at Spithead, all ready for sea, completely rigged, royal yards across, sails all bent, three months' provisions on board, guns all in, and fitted for service. In fact, she was in a fit condition to go into immediate action with an enemy, powder only being required, and that the harbour regulations prevented her from taking in.

The *esprit*, the enthusiasm, and alacrity which every person belonging to the *Rodney* displayed, from the captain down to the boy, have been a source of gratification to every person who has witnessed it. The many nautical people of Portsmouth have been completely astonished. Saturday was the first day named for her being completed; then, when it was observed that the gallant crew were getting on rapidly, Thursday was fixed as the day for her going to Spithead; but not a single individual expected she could be got ready and go there by noon on Wednesday; however, there she was; her fitting excited the most lively interest among the nautical and other persons residing in the neighbourhood. The jetty was thronged with gentlemen, and some few ladies. The two gallant Admirals, Lord Yarborough, commodore of the Royal Yacht squadron, and many members of the Yacht Club, were among the spectators.

The *Bellerophon* was taken down under the sheers at Portsmouth Dockyard on Friday, and her topmasts pointed through; her spars were also all brought down on Saturday on the jetty, her lower yards were rigged, and her lower rigging was ready for going over the mastheads. Her shot, chain-cables, gun-carriages, seamen's tables, and all her anchors, except the small bower, were on board. One tier of tanks, filled with water, were also stowed in her hold. The crew and officers of the *Rodney*, with their hammocks and traps, were shifted to the *Bellerophon* on Saturday, to prevent losing time in going backwards and forwards to their meals. Saturday was then named as the day on which it was likely she would be at Spithead. On Monday at 4 a. m., the fellows turned to work, and left off at 7 p. m., when the liberty men were allowed on shore. The tops and caps were got over on that day, the lower rigging on, the bowsprit gammoned and partly clothed. The topmast, crosstrees and caps put on, and the topmast rigging got over, and the topmast fidded, and the main yard got across, all heavy work, besides which the tanks were hoisted on board and the water filled. On Tuesday the rigging was set up and rattled down, the top-gallant-masts fidded and rigged, bowsprit completed, bobstays and shrouds set up, and jib-boom got out, various spars and stores received, and a number of the main and lower-deck guns got on board; and advantage was taken of the beautifully fine weather to paint her sides. Thursday evening was the time then named for completion. In the afternoon she completed painting, received more guns, provisions, rum, bread, and a variety of other stores, got part of her spars in and partly stowed away, got jib-boom out, spritsail-yard across, and, the last thing, bent topsails and courses. At 7 p. m., part of the people had leave on shore for the night. On Wednesday morning, at 4 a. m., began work—got up top-gallant and royal yards, with sails bent, bent head sails and driver, got remainder of lower-deck guns on board, stowed the booms, got a portion

of the boats in, received breeching and gun-tackle gear. At 11 a. m., cast off warps, and, in tow of the *Echo*, steam-tug, proceeded to Spithead.

So pleased were the crews of the ships in harbour with the energetic conduct of the *Rodney* ship's company that, as the *Bellerophon* passed, the *St. Vincent*, 120, flag-ship, and *Victory*, 104, guard-ship, turned up all hands, and loudly cheered that ship as she proceeded out of harbour. The same compliment was paid them by the *Carysfort*, 26, and the war steamers, when the *Bellerophon* anchored at Spithead. When at the harbour's mouth the *Bellerophon* saluted the flag of the Commander-in-chief, Admiral Sir Charles Ogle, which the *St. Vincent* returned.

On Thursday a telegraphic dispatch was received, by the Commander-in-chief, from the Admiralty, ordering the *Bellerophon* to return into the harbour. A few minutes after, however, the port Admiral received another telegraphic order for the *Bellerophon* to remain at Spithead until her Majesty has passed through, yesterday, *en route* from Ostend to Buckingham Palace.

On Wednesday afternoon, Prince Albert was witness of what British seamen could accomplish. In the Fairy tender his Royal Highness visited Spithead. The *Rodney's* people in the *Bellerophon* were not to be caught napping, they had their liveliness in the yards, and as the Royal yacht came near them, she manned yards, saluted with 21 guns, and cheered the Royal party on board the yacht.

It is only bare justice to Captain Collier, to Commander Clarke, and to Mr. M'Donald the master, to observe that no three officers in her Majesty's service could have done this work in better style than they have. The whole crew, seamen and marines, were most admirably stationed, whereby confusion and waste of time were avoided; every person had his work pointed out, and the different gangs did not interfere with each other. A lighter, with 400 bags of bread, was cleared, and the bread stowed away in something over an hour. The guns were got on board in an admirable manner; but it is impossible to particularise the number of instances of excessive activity where all worked so well. We only anticipate what is due to the gallant officers and crew of the *Rodney*. The Lords of the Admiralty have marked their sense of the thorough seamanship exhibited, and the noble example set by the officers and crew of the *Rodney* in their unparalleled work of fitting the *Bellerophon*, 78, by awarding them a vote of thanks, which was read to them on the quarter-deck by the Commander-in-chief, on his official inspection.

We now come to the *Calcutta*, 84, and the *Albion's* officers and crew. It was deemed highly probable that the *Albion's* men would get their ship ready before the *Rodney's* men had theirs, for the reasons that the *Albion's* crew have been together for two years, and were picked men; the *Rodney* has been in commission about twelvemonths, and took what men she could catch.

By Thursday evening it was supposed that the *Calcutta* would be in Plymouth Sound. She was however ready by Wednesday night, and actually anchored in the Sound on Thursday noon.

The *Calcutta* was taken from her moorings to the sheer hulk on Friday, where her bowsprit was put in and the ship was taken to the dockyard. Her tanks were filled on Saturday, and she was advanced as much as the *Bellerophon*. The *Albion's* officers and crew went to work on the *Calcutta* on Monday morning, with capital spirit, and the progress they made in a few hours proved that Jack was put on his mettle. By twelve o'clock the lower rigging was on, set up, and all three topmasts were on end. At 2h. 15m. p. m. the mizen top-gallant mast was up, and mizen top-sail yard across. By 7h. p. m. she had her topmasts rigging set up, and her lower yards across, and at the time of the post leaving on Tuesday the top-gallant masts were up, rigging was set up, and the men rattling it; the topmast yards were

across, jib-boom was out, the guns were being taken in, provisions were got on board, and everything was progressing in prime style. On that day a victualling lighter and an ordnance lighter were clearing at once at the port side, whilst other parties were taking on board stores from the dockyard on the starboard side. At the same time her hempen cables were being hauled on board by that always hardworking body of men, the Royal Marines, and the *elite* of the seamen were completing the rigging aloft. All this was going on without the slightest confusion, each party being intent on its assigned duty. On Wednesday, at two o'clock p. m., her sails were bent, and the last lighter was alongside with the remaining guns to be taken on board. So truly expeditious had this fine crew been in their work, that they made sure of beating the *Rodney's* men at Portsmouth. By the evening she had everything ready.

On Thursday morning the *Tartarus*, steam vessel, Captain Wolfe, arrived from Portsmouth with the intelligence that the *Bellerophon* was at Spithead, and this steamer and the *Confiance*, tug, towed the *Calcutta* into the Sound between twelve and one o'clock, with all her stores, and three months provisions on board, stowed in their proper places; all sails bent, even to royals, guns mounted, breechings rove, and guns secured, in all respects ready to proceed to a foreign station, or fight an action. She saluted the Port Admiral's flag on her arrival in the Sound.

It is impossible to estimate too proudly the important examples which have been shown this country and foreign nations during the past week, or to praise too highly Captains Lockyer and Collier, and the officers and men who performed the work. With four such crews alone, the remaining 28 sail of the line, now advanced ships, could be got ready for service in less than twenty days, and of the 300,000 seamen who manned our merchantmen last year, at least, we should get enough at the ports to man and fight them. But we trust that we shall always be ready.—*Nautical Standard*.

IRON VESSELS FOR OUR MERCHANT MARINE.

It is clearly perceived, even by those whom we might expect to find prejudiced, from past associations, in favour of the old system of naval architecture, that the day is not far distant when iron will supersede wood, at least for the purposes of our commercial marine, as the main material for ship building. It is, therefore, becoming daily a matter of growing importance, first that the principles upon which these metallic structures ought to be formed and apportioned to each other should be well defined and understood, and secondly that the most advantageous field for supplying the material and the most economical mode of working it, whether for the body of a ship or its machinery, should be satisfactorily ascertained. With regard to the first part of this problem, the condition to be satisfied is to obtain the greatest degree of lightness compatible with a sufficient degree of strength; and upon this point, in the judgment of those who are practically as well as scientifically conversant with it, the mode at present adopted by most ship-builders in iron is erroneous. They seek strength in an unnecessary thickness of the plates, and endeavour to compensate for the weight with which they thus encumber themselves by allowing an inadequate degree of strength to the frame-work. The correct principle is the very reverse; for iron vessels, which are constructed in isolated compartments, run in no danger from the plates starting or being stove in, while the seaworthiness of such a vessel does most essentially depend upon the stoutness of the frame-work which is to hold all together against the shocks of heavy seas, and the fearful encounters of a lee shore. The practice

too, of using angle iron instead of T iron, is an error not only capable of mathematical demonstration, but even self-evident to the eye, the former possessing only one-half the strength of the latter; and when we consider that there must be the same talent employed to design, and the same hands to execute, the work on a wrong principle as upon a right one, and that the cost of the additional material necessary for the adoption of the latter, is comparatively insignificant, no reason, even on the score of economy, can be urged for adhering to a system of structure so mistaken as the one we have pointed out.

To the other part of the subject—namely, the most advantageous field for procuring a supply of the material, and the most economical locality for working it, our attention, has been drawn by a rough draft of the prospectus of a company for combining an existing large foundry, engineering and iron ship building establishment, adjacent to our greatest estuary in the west, with another establishment on the banks of the Thames. In iron ship building the manufacturing process must be necessarily carried on at the spot where both ore and fuel are accessible and cheap, and as according to the modern mode of construction, the framing, plating, beaming, kneeing, &c., are fitted hot, vessels must either be brought to the foundry or the foundry to them. Now an establishment on the banks of the Thames, in conjunction with another large working establishment in the most favourable part of the great iron and coal fields in the west, would most essentially expedite and economize this branch of the business, aided by iron coasters on the ever available principal of the slow screw; and as those steamers would always be sure of a ready back cargo of colonial and other products to be distributed along the coast (which cannot be done by the northern traders), as well as through the industrious and densely populated districts which extend in every direction from the seat of the provincial works, the charge of their maintenance would be reduced to a very moderate figure indeed.

We throw out these hints for general consideration, being satisfied, after the splendid example of the Great Britain, that wooden ships and paddle-wheels will soon be out of date, and perhaps for the coasting trade of England sooner than in any other department of our mercantile marine.

NAUTICAL NOTICES.

NAVIGATION OF BASS STRAITS.

SIR,—Having as a master mariner frequently passed through Bass straits, I beg to offer a few remarks. Masters of vessels, on approaching Bass straits from the westward, ought, (as advised by your correspondent's letter from Liverpool, inserted in yesterday's *Shipping and Mercantile Gazette*) to make the land on the coast of New South Wales about Moonlight Head, or sight Cape Otway, which are tolerably bold headlands; also on account of a current which has been found setting from Cape Otway across the entrance to Bass straits towards Harbinger reefs, and north-west end of Kings island.

After entering the straits, and the position of the vessel determined, shape a course for Rodondo or Curtis islands, which ever route may be preferred. The Crocodile Rock is a very small patch, rarely seen in bad weather. I have seen it break in moderate weather. Thick weather frequently occurs after entering the straits, particularly with a N.N.W. or N.W. wind blowing hard.

Vessels should in winter, if bound to the eastward, and the situation of the vessel known, run with a westerly wind, although the weather may be hazy with rain, the distance on chart carefully marked every hour, and an allowance for an easterly current. All the islands are bold close to, and generally seen on approaching near. After passing Moneur Islands the vessel might be hove to, until clearer weather, or a direct course shaped for Ram Head, and the vessel will generally make Cape Howe, off which the currents set to E. and E.S.E. at a moderate distance off shore.

To heaving to, after entering Bass straits in thick weather, may be attributed the loss of many vessels—City of Edinburgh, &c. With a N.W. or westerly wind, run, when the position of the vessel is accurately known, keeping a good look-out; marking distance run on chart every hour, is the plan I and other coasting masters always adopt, and have always passed safely, frequently close to the islands. The erection of light-houses and lights on Cape Otway, Curtis Island, and Cape Howe are much required. If bound to Sydney, and having passed Cape Howe, keep well in with the land, to prevent being blown off by strong westerly gales, in winter. In summer, during the prevalence of N.E. winds, keep well under the land during the night, for benefit of land breeze. Towards daylight, stand off until the wind freshens from N.N.E. or N.E., then by standing to N.W., a good lay along the land will be made. The current sets to the southward, at a moderate distance off shore, in the offing, S.S.E. and S.E., one mile per hour.

Off shore, the Pigeon-house, by compass, bearing N.N.W. $3\frac{1}{2}$ or 4 miles, lies the William Rock, with only nine feet water, seldom breaks, and not laid down on any chart.

I am sir, your obedient servant,

AN OLD COASTER.

London, February 10th, 1846.

SWAN ISLAND LIGHT.—A new revolving light has been placed on Swan Island situate near the north-east extremity of Van Diemen Land, in Banks Straits leading into Bass Straits. The description is as follows:—The revolving light comprises one concentrated lamp, with 352 stationary mirrors, of which 220 are placed in the form of a dome, above the concentrated lamp, and 100 mirrors are fixed in a diagonal line from the concentrated lamp, and 28 below the concentrated lamp, facing each other. The revolving apparatus consists of an iron column, revolving rollers which work round it, with arms and up-rights, &c., that supports eight refractors or glass lenses of two feet six inches square each—made of a number of circular pieces of polished glass—the refractors work in the open space between the upper and lower mirrors. The clock work is a splendid piece of mechanism, which will be lighted up on the 1st of November, 1845. The lighthouse is under the superintendance of Mr. Charles Watson.—*Adelaidé Observer.*

BASS STRAITS.—The *Sydney Herald* of Oct. 24th publishes a long report of the Select Committee of the Legislative Council on Lighthouses, in which the committee recommend that four lights—on King's Island and Cape Otway at the western entrance of Bass Straits, and on Cape Howe and Kent's Group at the eastern entrance, should be erected. The committee examined Captain Blackwood, H.M.S. *Fly*; Lieutenant Moriarty, port master; Mr. Kirsopp, R.N.; and Captains Sproule, Thom, Simpson, Deloitte, Fox, and Gilmore, all well known as commanders of vessels trading in the straits; and also obtained letters from Messrs. Cole and Cain of Port Philip, and on this evidence found their recommendations. Mr. Lewis, the colonial archi-

tect, was also examined relative to the expense of erecting the buildings, procuring lights, &c. Mr. Robinson was to move on the 24th of October for an address to the Governor, requesting his Excellency to place upon the estimates a sum for the erection of these lights, which, it was presumed, would be acceded to without opposition, for the necessity for them has been but too fatally proved.

We think it doubtful, however, remarks the *Sydney Herald*, whether any charge should be made upon ships for the maintenance of these lights. If there is a charge at all, it should be but small, not more than one halfpenny per ton per light, and no vessel to pay for more than three. Every facility afforded to vessels is a direct saving to the colony. The lights will have the effect of shortening the time occupied in a voyage, and that, in these times of competition, will lower freights, which will reduce prices in Sydney; therefore, we say, do not impose more taxes upon the shipping than are absolutely necessary. No time should be lost in the erection of the tower on King's Island; it should, if possible, be lit by the beginning of next winter. This we hope may be effected, if diligence is used in procuring the machinery from England.—*Shipping Gazette*.

[We recommend the Committee after reading Mr. Gordon's paper in this number to consult him on the subject.—Ed. N.M.]

PINANG.—The following instructions, drawn out by Mr. Congleton, of the East India Company's steam vessel *Diana*, for the guidance of commanders of vessels entering the southern channel, leading to Pinang harbour, are published for general information.

T. CHURCH, *Resident Councillor*,
Singapore, December 3rd, 1845.

Vessels approaching the island from the southward, intending to enter the harbour of Pinang, should be guided by the following directions:—

1st.—There are two lines of beacons; those on the east side, five in number, painted white, in the form of a cross; and those on the west side, three in number, painted red in the form of a triangle.

2nd.—The first or southernmost white cross beacon is visible from three to four miles, bearing E.½N. from the south end of Saddle island, and S.S.E. from the middle of Pulo Rymo, distance one mile.

3rd.—Vessels will be safe in working if they do not stand to the eastward of the white cross beacons.

4th.—The southern red triangle beacon is off the north end of Pulo Jerajah, and after having passed it, care must be taken to keep more on the east side of the channel to avoid a small patch, with 2½ fathoms low water, bearing nearly N.N.E., about a quarter of a mile.

5th.—With this exception between the first and second red triangle beacons, all vessels can safely work in, if they never go to the eastward of the white cross beacons; or to the westward of the red triangle beacons, each beacon is placed on projecting spits of sand or mud, in two fathoms low water spring tides.

CONGLETON, *Commander*.

H. C.'s steamer *Diana*, Singapore, 28th November, 1845.

(True Copy.) T. CHURCH, *Resident Councillor at Singapore*.

ANJEE.—We copy the subjoined from the *Singapore Free Press*:—

“The following is an extract of a letter from Mr. Alex. Rodger, of the barque *Ellen*, from China for London, dated off Anjer, November, 17th, 1845; containing information of the existence of a shoal in a part of the sea which on

the charts appears to be free from any thing of the kind. The Dutch charts lately published may perhaps notice it.

“On the morning of the 6th inst. (6h. 30m. A.M.) we were so unfortunate as to discover a shoal by touching it. She only struck once and went over the rock without stopping, but that one blow took away the after part of the false keel and nearly unshipped the rudder. It was a fine morning, wind light at S S. W., and sea smooth, and the watch washing decks, and in a place where no shoal is laid down in the latest published charts by Horsburgh. It lies in lat $0^{\circ} 40'$ north, long. $107^{\circ} 34'$ east, the peak of the highest Tambilan N. 1° E., distant twenty miles, and in a line with Pulo Janang distant ten miles. Very soon after I went in the boat with three men and examined the shoal, and found it to be about 100 yards square, and all sharp pointed rocks from five fathoms to nine feet, which was least water; but great part of it had only fifteen to eighteen feet, and some places twelve feet, and in one place nine feet. Over it had the Ellen got, on the middle of the shoal, she would have lain there, and you might have had a visit from us in our boats. There were nineteen to twenty-one fathoms close to and all around it.”

HAVRE, FEB. 11.—Vessels have heretofore been in the habit of bringing up in the Hoc-roads in four or five fathoms at low water. An alteration has, however, taken place of late; there not remaining more than two fathoms water, or even less. Therefore, any vessel running for the Hoc must go inside, round the point, where she can lay aground without danger, there being no safety for them outside.—*Shipping Gazette.*

NIDINGEN LIGHTHOUSES.—The following lighthouses will be constructed in the course of the present year at Stockholm, of which notice has been given by the Swedish Royal Naval Board:—

“1st.—The two coal lighthouses placed on the rock Nidingen, situated in the Cattegat, lat. $59^{\circ} 19'$ north, and lon. $30^{\circ} 6'$ east of Ferro, or $11^{\circ} 56'$ east of Greenwich, will be rebuilt, the towers considerably raised, and lentille lights of the third class placed therein. The rebuilding will be commenced in April, and during the interval, until the new lights can be exhibited, a lamp will be suspended from each of the towers, throwing its light towards the Cattegat. It is expected that the alterations will be completed by the 1st of October this year; but in case, from any unexpected impediments, this cannot be effected, the provisional lamps will remain during the winter, until the new lights will be ready.

“2nd.—The erection of the lighthouse will be commenced this spring, on the south side of Wottand, about 3,000 ells from Hobergs point, on a rock called Klafsaen, and which will be provided with a revolving reflector light.

The period for lighting, as also the revolving time and bearing of the last mentioned lighthouse, will in due time be communicated.”

Hydrographic Office, Admiralty, February 20, 1845.

WEST INDIES.—*Revolving Light at Puerto Rico.*—A revolving light has been established at the entrance of the harbour of St. Juan, in the island of Puerto Rico.

The lighthouse stands in latitude $18^{\circ} 20'$ north, and longitude $68^{\circ} 7' 15''$ west of Greenwich, on the Morro Castle, and at an elevation of 187 feet above the level of the sea.

Each revolution is completed in two minutes, during which interval the light appears only for six seconds, and may be seen at the distance of about five leagues.

LIGHTHOUSE ON ROMANIA ISLAND.—We hear that the H.C. Steamer Diana, proceeds to Point Romania in the end of the week, with the government surveyor, to allow of the latter superintending the erection of brick pillars on different parts of the outer Romania Island, with the view of testing the effect which the present monsoon would have upon a lighthouse.—*Singapore Free Press, Dec. 22.*

ELZIE-BY-WICK, Feb. 21.—The coast-guard being removed from Feswick to this place, close to Noss Head, the signal post erected at Skerza Head, to lead vessels to Duncan's Bay Head, has been taken down, and vessels needing pilots for the Pentland Firth had better make for the Noss Head, where arrangements will be made to supply them with pilots, or to attend to any thing else they may want. The flagstaff is now on Elzie Point.

THE EXAMINATION OF MASTERS AND MATES IN THE MERCHANT SERVICE.

It having been discovered that there were some inaccuracies in the lists which had been published, the Board of Trade have issued a complete list, including all the masters and mates who have been examined and have obtained certificates of qualification, up to the end of February. This list has been reprinted by the Committee for Lloyds' Register of British and Foreign Shipping, and circulated among their extensive subscribers. We now present one for the information of our numerous readers. It will be seen that there are more particulars given in this list than in those which preceded it, and on the whole, the parties are now pretty well identified.

The following officers appears to have passed an examination successfully for the *first* class, and are in command of the vessels against their names expressed, viz.—

| | | |
|-----------------|------------|-------------|
| William Gray, | Captain of | Vera. |
| John Smith | ditto | Mars. |
| John F. Pattulo | ditto | Esker. |
| Jacob Thompson, | ditto | Renovation. |

The three first-named vessels belong to Dundee, and their commanders have obtained their certificates at that port. We notice this commencement of the system with some satisfaction, as shewing that it has received the countenance of shipowners in the north, and we trust the example will have its first influence.

We still observe, and we do so with regret, that not any masters appear to have been examined either at Grenock or at Glasgow, to which ports belong the most strenuous advocates of the system. Either the shipowners of those places were parties to the powerful appeals made to Captain Fitzroy, to put forward his bill, or by their silence they countenanced them. The public have a right to feel somewhat disappointed that no step whatever appears to have been taken, on their part, to induce the captains, and others in their employment, to prove their qualifications, under the voluntary system now open to them. We advert to the fact, not in any spirit of unkindness, but in the hope that the hint may not be entirely without effect. We should be glad if some of our readers on the borders of the Clyde would give us some explanation on this interesting subject.

A LIST of all the Masters and Mates in the Merchant Service, who have voluntarily passed an examination, and obtained Certificates of Qualification for the Class against each assigned, under the Regulations issued by the Board of Trade.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Number of Register Ticket. | Name of Examining Board. |
|---------|---|-----------------------|------|--|----------------------------|--------------------------|
| 1845. | | | | | | |
| Nov. 10 | T. W. Pixley ... | 1 | ... | ... | — | Tr. Ho. London |
| " | 14 William Pigott | 1 | ... | ... | — | Tr. Ho. London |
| " | 17 William Gray... | 1 | ... | Vera, Dundee | — | Tr. Ho. Dundee |
| " | 24 W. R. Probert . | 1 | ... | ... | — | Tr. Ho. London |
| " | 24 John Paterson . | 1 | ... | ... | — | Tr. Ho. London |
| " | 25 Josiah Napier . | 1 | ... | ... | — | Tr. Ho. London |
| " | 28 J. H. Smith ... | 1 | ... | ... | — | Tr. Ho. London |
| " | 28 Edwin G. Dent . | 1 | ... | ... | — | Tr. Ho. London |
| Dec. 1 | W. L. McLeod... | 1 | ... | ... | — | Tr. Ho. London |
| " | 2 Andw. Davidson | 3 | ... | LordPanmure, D'ndee | — | Tr. Ho. Dundee |
| " | 8 G. Scott Jeffery | 1 | ... | ... | — | Tr. Ho. London |
| " | 8 Alex. Alcock ... | 2 | ... | ... | — | Tr. Ho. London |
| " | 8 John Jones | 2 | ... | ... | — | Tr. Ho. London |
| " | 11 John Smith | 1 | ... | Mars, Dundee | — | Tr. Ho. Dundee |
| " | 12 Geo. McPherson | 1 | ... | ... | — | Tr. Ho. London |
| " | 16 Niel Shannon ... | 1 | ... | ... | — | Tr. Ho. London |
| " | 30 J. F. Pattullo ... | 1 | ... | Esler, Dundee | — | Tr. Ho. Dundee |
| 1846. | | | | | | |
| Jan. 6 | J. Broomfield ... | 2 | ... | ... | — | Tr. Ho. London |
| " | 6 T. G. Hinson ... | 1 | ... | ... | — | Tr. Ho. London |
| " | 6 C. W. Deecker . | 2 | ... | ... | — | Tr. Ho. London |
| " | 9 C. Macdonald... | 2 | 23 | David Grant, 197 tons | 32,658 | Tr. Ho. Dundee |
| " | 13 Peter Brown ... | 1 | 40 | Ecaudor, 394 tons | — | Tr. Ho. London |
| " | 13 J. Thompson ... | 1 | 28 | Renovation, 325 tons | — | Ma. Bd. S. Shields |
| " | 14 H. Caithness ... | 2 | 26 | Useful, 214 tons | — | Ma. Bd. S. Shields |
| " | 14 John Wilson ... | 3 | 31 | Navigator, 130 tons | — | Ma. Bd. S. Shields |
| " | 16 Joseph Kirkup . | 3 | ... | ... | — | Tr. Ho. Newcastle |
| " | 20 William Smith . | 2 | 25 | Tynemouth Castle, 280 tons (<i>as Mate.</i>) | — | Ma. Bd. S. Shields |
| " | 23 J. J. Robinson . | 2 | 28 | Earl Grey, 571 tons (<i>as Mate.</i>) | 20,522 | Tr. Ho. London |
| " | 23 William Shipley | 3 | 32 | Zaider, 217 tons (<i>as Mate.</i>) | — | Ma. Bd. S. Shields |
| " | 29 David Brown ... | 2 | 32 | Topaz, 254 tons | 238292 | Ma. Bd. S. Shields |
| " | 29 George Turner . | 2 | 30 | Middleton, 316 tons (<i>as Mate.</i>) | 185185 | Ma. Bd. S. Shields |
| " | 30 David Bower ... | 1 | 30 | Concord, 287 tons | — | Tr. Ho. Dundee |
| Feb. 5 | James Emery ... | 2 | 30 | Late Mate of the Earnest, 184 tons | 45,383 | Ma. Bd. S. Shields |
| " | 9 W. Staincup ... | 2 | 31 | Onyx, 278 tons (<i>as Mate.</i>) | 45,385 | Ma. Bd. S. Shields |
| " | 9 Thomas Wood . | 2 | 39 | Jennett, 236 tons | — | Ma. Bd. S. Shields |
| " | 10 John Corrigan . | 2 | 24 | Ruth, 245 tons | — | Ma. Bd. S. Shields |
| " | 13 N. H. Palmer ... | 1 | 26 | Gloriana, 1056 tons (<i>as Mate.</i>) | 26,348 | Tr. Ho. London |
| " | 13 James Morgan . | 2 | 25 | Prince Albert, 301 tons, (<i>as Mate.</i>) | 6,91 | Tr. Ho. London |

MASTERS (continued.)

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Number of Register Ticket. | Name of Examining Board. |
|---------|---|-----------------------|------|--|----------------------------|--------------------------|
| Feb. 13 | George Hyde ... | 2 | 28 | Bombay, 1400 tons (as Mate) | — | Tr. Ho. London |
| " 13 | Walter Iago. ... | 3 | 30 | Dahlia, 500 tons (as Mate) | 244010 | Tr. Ho. Ply.Branch |
| " 13 | John Smith ... | 2 | 27 | ... .. | 45,313 | Ma. Bd. S. Shields |
| " 13 | Joshua Stevens ... | 3 | 29 | ... .. | 54,150 | Ma. Bd. S. Shields |
| " 17 | P. D. Blyth ... | 2 | 24 | Cressy, 730 tons (as Mate) | 33,326 | Tr. Ho. London |
| " 17 | John Totherick | 2 | 25 | Rolla, 292 tons | — | Ma. Bd. S. Shields |
| " 17 | Edmund Grieve | 3 | 32 | St. Lawrence, 236 tons (as Mate) | — | Md. Bd. S. Shields |
| " 18 | Tom Aug. Bevis | 1 | 24 | Emperor, 572 tons (as Mate) | 227953 | Tr. Ho. London |
| " 19 | Samuel Hurrel. | 2 | 33 | Frederick Young, 260 tons (as Mate) | — | Ma. Bd. S. Shields |
| " 20 | Charles Young. | 2 | 33 | W. Wilson, 407 tons | 327316 | Tr. Ho. London |
| " 24 | Geo. Richardson | 1 | 30 | Trafalgar, 608 tons | — | Tr. Ho. London |
| " 24 | William Hurrell | 2 | — | ... .. | 101889 | Ma. Bd. S. Shields |

MATES.

| | | | | | | |
|---------|------------------|---|-----|-------------------|--------|--------------------|
| 1845. | | | | | | |
| Dec. 1 | John Gray ... | 2 | ... | ... .. | — | Tr. Ho. London |
| " 10 | Robert Allan ... | 1 | ... | ... .. | — | Tr. Ho. Dundee |
| " 19 | James Bridie ... | 1 | ... | ... .. | — | Tr. Ho. Dundee |
| " 26 | John Gardyne. | 1 | ... | ... .. | — | Tr. Ho. Dundee |
| 1846. | | | | | | |
| Jan. 3 | Joseph Watson. | 1 | ... | ... .. | — | Tr. Ho. London |
| " 12 | D. E. Craggs ... | 3 | ... | ... .. | — | Tr. Ho. Ply.Branch |
| " 23 | Thomas Keen... | 2 | 24 | Camilla, 148 tons | 74,415 | Tr. Ho. London |
| " 23 | P. Soutar Ducat | 3 | 22 | Livonia, 177 tons | 12,140 | Tr. Ho. Dundee |
| Feb. 17 | John Spencer ... | 3 | 31 | Psyche, 260 tons | 27,046 | Tr. Ho. London |

Board of Trade, January 26th, 1846.

WRECK OF THE LIVERPOOL STEAMER.

The following is the account of the wreck of the Great Liverpool, given by her late commander, whose unhappy fate, as related in the succeeding paragraph, and the events which led to it, are much deplored.

Vice-Consulate Office, District of Corcubion,
February 28th, 1846.

"DEAR SIR,—It is with feelings of the most painful grief that I have to acquaint you, for the information of the managing directors, and all whom it may concern, that at four o'clock on the morning of the 24th instant, while steering N.N.E., with a strong wind from the S.S.W., and a heavy sea running, and about seven to ten miles from Cape Finisterre, the weather thick, dark,

and hazy, the ship going about ten knots an hour, we struck upon a shoal or rock, and made so much water in the engine room that she soon became unmanageable from the fires being put out, and consequently drifting towards the land, and grounded in a small sandy shoal bay, called Guros, about one and a half leagues to the southward of Corcubion, where she lay with her head to the southward, broadside on the beach, at the distance of about 300 yards, on which a heavy sea was breaking. The boats were all got ready for lowering to land the passengers and crew, and the larboard life-boat was sent with a party of seamen and a line to haul a rope on shore, which they with difficulty reached in safety, and we soon after got a hawser on shore, and the end of it made fast and hove taut from the ship. Mr. Hamilton, chief officer, was sent in the launch with a party of passengers and crew, amongst whom were several ladies and children; all were safely landed, except Mrs. Archer, a child belonging to Mrs. Morris, about seven years old, and a native female Indian servant, who were lost in the surf on the beach, by the swamping of the launch, though every exertion was made, both by those on the beach, and in the launch to save them. After this the launch, which was with great difficulty hauled alongside by us on board and baled out, made several successful trips, and all on board were safely landed by eleven a.m., going myself in the last trip, having previously ascertained that every person was out of the ship; the sea at that period was breaking heavily over her, and she was fast breaking up on the starboard side, amidships. The pinnace was stove in lowering, and the starboard quarter boat by the sea striking her violently. On getting on shore, I found several articles of different kinds had already floated there, and a number of the people of the coast had come down and were plundering all they could get away, though all means were taken to prevent it. In fact we have been most shamefully plundered and robbed in every possible way.

“Considering it necessary to communicate with the nearest English consul or agent, I despatched Mr. Lane (purser) to Corcubion, where I learned a consular agent resided, to claim protection for ourselves and property that might come on shore. On his arrival there, he found the consular agent, (a Spaniard, and not speaking English,) to be a person of no influence; indeed, apparently incapable of rendering assistance of any sort. He, therefore, deemed it indispensable to proceed at once to Corunna, a distance of forty-five miles, and communicate with Mr. Santos, the consul general for Galicia, and was promised by the consular agent that passports, horses, and guides, for himself and three passengers, should be ready at half-past five on the following morning. Instead of this, neither horses nor passports were ready, but finally, a refusal to allow him to proceed. He afterwards found that the consul had sent a messenger to Corunna that morning, without even allowing Mr. Lane to know he was going to do so. The passengers, I fear, have suffered much from the vice-consul not having sought or selected any place for them to go to, and also from the scarcity and difficulty of getting provisions of almost any sort, and the accommodation they have been enabled to get being of the most miserable description.

“I am happy to say that every officer and man under my command behaved themselves, under these most trying circumstances, to my most entire satisfaction, and I cannot omit mentioning to you the great assistance I received, and the praiseworthy exertions that were made in our critical situation, by Captain Bowen, of the ship *Hindustan*, passenger on board from Ceylon.

I am, &c.,

A. M'LEOD, *Commander.*

*To J. Allan, Esq., Secretary,
Peninsular and Oriental Steam Company.*

SUICIDE OF CAPTAIN M'LEOD, OF THE GREAT LIVERPOOL STEAMER.—It is with extreme regret that I announce the death of Captain M'Leod, the late commander of the Great Liverpool, who died by his own hand immediately after the last of the passengers had departed for Corunna. He had been in a most desponding state of mind ever since the unfortunate occurrence, and it is supposed could not bear up against misfortune. The melancholy event has left a gloom over the whole town. He was a man universally beloved and respected. He has left a large young family, with prospects of an early increase. There is nothing further saved from the wreck of the Great Liverpool. The ship is entirely gone to pieces, and what valuables floated ashore were principally purloined by the rascally natives. The Queen brings home her mails. I have personally inspected them; but as they are in boxes it is impossible for a casual observer to state what damage they have received. I regret to add that Lieutenant Williamson, the Admiralty agent of the Great Liverpool, lies dangerously ill at Corunna, so much so, that his life is despaired of. He was totally unable to come to England in the Queen. Too much praise cannot be given to Captain Russell for his kind, humane, and polite attention in every respect to his unfortunate passengers. Most of their friends were waiting at the various hotels in the town to receive them, and it may be readily imagined the greetings were of a most cordial character. —*Herald Correspondent.*

TOTAL LOSS OF THE BARQUE "FRANCIS SPAIGHT," AND TWENTY-ONE LIVES LOST.—The ship England's Queen arrived in the Mersey, from Bombay and the Cape of Good Hope, brings accounts of the loss of the barque Francis Spaight, of 366 tons, from Manila to London, off the Cape of Good Hope. A whale-boat and a surf-boat were sent from Cape Town; the whale boat succeeded in getting alongside the barque, and a line was thrown over the vessel by the rocket apparatus. The moment the boat touched the side, the crew of the barque, who appeared to have lost all presence of mind, rushed into her, when she was filled and capsized, and the captain and fourteen men of the crew were drowned, together with four men of the boat's crew. A surf-boat and another boat were also sent; both boats capsized, and two men were drowned. The vessel is broken in midships and is a total wreck, and very little of the cargo will be saved uninjured.

LOSS OF THE IDA.—The loss of two vessels, the *Ida*, 550 tons (British barque), and the *John Minturn* (American vessel), were reported at Lloyd's, on Monday. The *Ida* was commissioned by Government for the conveyance of stores to Canada, and left the river on the 18th of last December, for Portsmouth, where she took in the stores, and finally sailed for St. John's, New Brunswick, on the 4th of January. There were on board, besides the crew, (eighteen in number, including the master, Captain William Chamber,) thirty-eight passengers, male and female. After her departure nothing was heard of her until Monday last, when the intelligence of her fate was received. A letter stated to be written by Mr. Sherwood, the British Consul at Portland, thus describes her loss:—"On the 26th of January, being in lat. 44° north, long. 52° 30' west, the barque broached to, while scudding before a severe gale from S.S.E. and was thrown on her beam ends. Orders were given to cut away the foremast, but before they had time to do so the barque righted, full of water. The captain then ordered the long-boat to be got under the lee, the other boat having been lost. The passengers immediately rushed into her promiscuously, followed by the captain and crew, to the number of forty five. The painter parted, and the boat dropped astern. The land bore N.N.E., distant about thirty leagues by observation. The boat got about two

cables' length from the vessel, when she shipped a sea, filled, and all in her perished. The mate, nine men, and one young woman remained on the wreck, in the tops, from Monday morning until Friday morning, when they were taken off by the schooner *Three Sisters*, of Eden, and were landed much frozen, and in destitute circumstances; the mate being the only one able to travel.

LOSS OF THE CATARAQUI EMIGRANT SHIP.—Lloyd's agent at Melbourne N.S.W., in a letter dated the 4th of October, respecting the loss of the *Cataraqui*, her crew and passengers, upon King's Island, writes that the colonial government had taken steps for the interment of the shipwrecked dead, and for the erection of a tablet to mark the spot, and to record the calamitous event. At a public meeting it was observed that the fittest monument would be one which should guard against the future occurrence of similar catastrophes, by the erection of a lighthouse by government either upon the island or Cape Otway. Five wrecks having occurred upon Kings Island since the year 1835, would seem sufficient evidence to convince the government of its necessity. The *Neva*, with female convicts, in 1835; the *Harbinger*, in 1835; the *Isabella*, in 1840; the *Rebecca*, in 1843; and the *Cataraqui* in 1845, have all been totally wrecked upon Kings Island.

With reference to these wrecks, Lloyd's agent remarks that the sailing directions for Bass Straits appear to him to excite an unnecessary fear of approaching the main land of Australia on account of the swell prevailing from the south-west, and that the swell is quite as dangerous off Kings Island, which may be approached too closely, for that the *Neva* and *Isabella* were both driven on shore by it. The inter-colonial traders have no such fear of approaching the main land, and constantly coast from port to port in Australia. Instead, therefore, of vessels approaching the strait in lat. 40° S, it would appear safer for them to sight the main land somewhere between Kangaroo Island and Cape Nelson, and from thence to take a fresh departure for Cape Otway. Lloyd's agent also observes that the lighthouse would be of more general service placed upon Cape Otway, in preference to Kings Island; and an additional reason for its being so placed arises from the circumstance of Kings Island being within the jurisdiction of Van Diemen Land, which, in these neglected colonies, would occasion the loss of much time before arrangements could be made between the two governments (New South Wales and Van Diemen Land) for its erection there.

In illustration of this reason it is observed that the matter was taken in hand by both governments in 1842, but that nothing whatever has been done up to the present date. The wreck of the *Cataraqui* and remaining cargo had been sold for 86*l*.

The *Port Philip Gazette*, of September 30th, says:—"The committee for the relief of the sufferers by this vessel have very properly distributed the amount of gratuity which the subscription list enabled them to do, amongst the seamen saved from this vessel, in order that they may at once be set at liberty to procure employment. The committee have paid for their board and lodging, and given to each man an ample outfit of clothing, together with a month's wages, amounting altogether to the very handsome sum of 43*l*. 15*s*. 9*d*. The committee met yesterday to apportion the gratuity to the emigrant, Solomon Brown, to the chief mate, and to other parties who came forward in the good cause.

From the statement laid before the committee, it appeared that the sum of 151*l*. 2*s*. had been actually paid, and a few pounds more promised, from which deduct 43*l*. 15*s*. 9*d*., disbursed as above, and 10*l*. voted the emigrant, there remained at their disposal 97*l*. 7*s*. 3*d*., which it was agreed should be

thus distributed:—the mate 30 guineas; Howie's party, 40 guineas (viz. 10 guineas a man); gold medal to Howie, 5 guineas; gratuity to two men on board the *Midge*, 4*l.*; two silver snuff-boxes to Messrs. Fletcher and Cockburn, with suitable inscriptions, 10 guineas.—Total, 93*l.* 5*s.* leaving a sum of 4*l.* 2*s.* 3*d.* in hand to meet the expense of printing and advertising. The committee decided that a letter of thanks should be written to Mr. Coppin, for his liberality in raising the sum of 66*l.* through giving a benefit at the theatre; and finally agreed that in the event of further subscriptions being received from Geelong, as expected, that the sum of (not exceeding £10.) should be paid to Solomon Brown, the only surviving emigrant.

ROYAL THAMES YACHT CLUB, A.D. 1846.

This club was founded in 1823, and, till the end of 1845, met but once a month, chiefly at the British Hotel, Cockspur Street, (London.) In 1846, rooms were taken at the Piazza Hotel, Covent Garden, (Cuttris's) and here for the first time since the establishment of the club the members are enabled to meet daily throughout the year. The Subscription to the Royal Thames Yacht Club is two guineas, payable in April in each year. The following selections from the "*Laws and Regulations*," are sufficiently explanatory of the objects of this metropolitan association. The entrance is three guineas.

Section 1.—The object of this club being the encouragement of Yacht Building and Sailing on the river *Thames*, It is enacted that the funds of the club be appropriated to the necessary and current expenses, and to the purchase of cups or other prizes, to be sailed for by Yachts belonging to the members only. [See Section 23.]

Section 21.—That the club flag be the Blue Ensign of Her Majesty's Fleet with a crown in red, agreeably to a warrant dated 22nd July, 1842, granted to the club by the Lords Commissioners of the Admiralty, and their Lordships' letter to the club, dated 17th November 1842; and that the Burgee be blue with a white cross, and a red crown in the centre; the hoist of each to be two-thirds of the length.

Section 23.—That the maximum tonnage of yachts eligible to sail in matches for cups or prizes given by the club be *twenty-five* tons o.m. and that the measurement for the purpose of ascertaining such tonnage shall be taken in the manner prescribed by the act of the 3rd and 4th William IV. ch.55. Sec. 16, *Provided always* that in taking such measurement, the *length* shall be taken from the fore part of the stem, including all false work, and with reference to the *breadth*, the word "exclusive" in the said act shall be expunged and the word "inclusive" substituted instead thereof.

Section 25.—By this section of the rules yachts not exceeding twelve tons form the second class for races in the Thames. The "London Yacht Club" till lately known as the "Arundel Yacht Club" does not admit yachts above ten or twelve tons o.m. in its sailing matches.

Section 42.—That the owners of yachts shall open the season by sailing down the river in company on the Thursday preceding Good Friday, in each year. (In 1846 this falls on Thursday 9th of April.)

Section 43.—That the Annual closing trip be fixed at the monthly meeting in August in each year.

It thus appears that no yacht measuring more than *twenty-five* tons o.m. can race in a match of the "Royal Thames Yacht Club." Notwithstanding this rule many yacht-owners having larger craft and belonging to the seagoing

squadrons have entered as members of the Thames club although entitled under their own colours to all the privileges the Thames club can confer, and although prevented by Section 23 (as quoted above) from contending for any prize on the usual river course from Greenwich to Greenwich *via* Gravesend. The races between these Thames boats are ever most ably and graphically described in "*Bell's Life in London*" a weekly newspaper supported for years past by all yachtsmen, as well as sporting men in general. In yachting matters *Bell's Life* is certainly without a rival among its brethren of the press.

THAMES NAVIGATION AND PORT OF LONDON COMMITTEE, 1846.

We are indebted to the *Nautical Standard and Steam Navigation Gazette* for the following names of persons who form the Thames Navigation and Port of London Committee. Doubtless the proper conservancy of the navigation of the river Thames is important to the trade of London, but what about qualifications? What is the standard of a conservator, or which of the trades enumerated below is essential to the craft, the *Nautical Standard* has not told us.

Right Hon. John Johnson, Lord Mayor, Mansion House; Sir John Key, Bart., 9, King's Arms-yard; Sir Chapman Marshall, 179, Upper Thames-street; Sir William Magnay, Bart., College-hill: Michael Gibbs, Esq., Walbrook; Thomas Wood, Esq., 4, Corbet-court, Grace-church-street; John Musgrave, Esq., 18, Old Broad-street; William Hunter, Esq., 10, Finsbury Circus; Thomas Challis, Esq., 32, Wilson-street, Finsbury; William Hughes Hughes, Esq., 17, Great Distaff-lane; Thomas Sidney, Esq., Ludgate-hill; Francis Graham Moon, Esq., 20, Threadneedle-street; Mr. Solomon Maw, 14, Aldersgate-street; Mr. Edward Fisher, 36, Leadenhall-street; Mr. John Britten, 21, Basinghall-street; Mr. Benjamin Bower, 106, Lower Thames-street; Mr. Richard Thomas, 102, Bishopgate-street; Walter Anderson Peacock, Esq., Deputy, 161, Bishopgate-street; James Southby Bridge, Esq., Deputy, 21, Bread-street; Mr. Joseph Blades, 11, Abchurch lane; Mr. Benjamin Hardwick, Weavers' Hall, Basinghall-street; Mr. William Colingwood, 11, Newgate Market; Mr. Thomas Henry Hall, 48, Finsbury-square; Mr. Thomas Joyce, 70, Watling-street; Edward Harrison, Esq., Deputy, 82, Cornhill; Mr. John Lart, 116, Wood-street; Mr. Francis Sadler, 1, Fore-street; John Brown, Esq., Deputy, Cousin-lane; John Wheelton, Esq., 4, Bath Street, Newgate-street; Mr. George Virtue, 26, Ivy-lane; Mr. Richard Williams, 44, Ludgate-hill; Robert Obbard, Esq., Deputy, 2, Crescent, New Bridge-street; Mr. William James Frodsham, 4, Change Alley; Mr. Daniel Cork, 18, Leadenhall Market; John Parker, Esq., 95, Minorities; Mr. James Curtis, Old Fish-street; Mr. George Selson, 42, Great Tower-street; Henry John Elmes, Esq., Deputy, 18, Cloak-lane; Mr. Edward Conder, 2, Salters' Hall-court; Mr. Jacob George Cope, 133, Upper Thames-street; Mr. Henry Gadsden, 18, Old Broad-street.

In the above *nautical* committee we find—1 pavier; 1 grocer; the churchwarden of Walbrook; 1 skin broker; 1 tea dealer; 1 printseller; 1 surgical instrument-maker; 1 plate glass factor; 1 city measurer of woollen cloth; 1 orange merchant; 1 oilman; 1 baker; 1 essence of spruce merchant; 1 painter and glazier; 2 auctioneers; 1 engraver; 3 attorneys; 2 meat salesmen; 1 hatter; 1 leather seller; 3 stationers; 1 hosier; 1 undertaker; 1 iron merchant; 1 packer; 1 bookseller; 1 umbrella seller; 1 glass merchant; 1 chronometer-maker; 1 warehouseman; 1 druggist; 1 wine merchant; 1 bricklayer; 1 coffee dealer.

ROYAL KINGSTOWN YACHT CLUB, DUBLIN BAY.

The rules and regulations of this club, which first received the patronage of her Majesty on the 3rd of May, 1845, allow of an unlimited number of members, exclusive of the Lord Lieutenant and Lord Chancellor of Ireland and other Honorary Members. The Committee is chosen annually on the second Tuesday in April. Each member of the Royal Kingstown Yacht Club, whether a yacht-owner or not, pays on his election *eight guineas* as entrance money. The annual subscription is *two guineas*, and this becomes due and payable on the first of January in each year. But members admitted in any year after the 30th of September are not required to pay a subscription again until the first of January of the second year. The club house which has been open upwards of three years commands a splendid sea view, and to this edifice ladies are only admissible as visitors and when accompanied by a member, and they are always subject to such regulations as the Committee may from time to time deem necessary.

During a regatta the Committee have however a discretionary power to invite and admit all such persons as they may think advisable, and at other times the committee may also invite strangers visiting Ireland to make use of the club for a limited period, their names being entered in a book kept for that purpose. Relative to racing we may mention that by rule 34, "No yacht belonging to any person residing *within ten miles* of Kingstown Harbour and who is *not* a member of the club, is allowed to enter or start for any prize given to be sailed for at the Royal Kingstown Yacht Club regattas." The club already contains 508 members, some of whom possess first rate vessels. It is necessary to mention that the privileges of this club are extended only to such members of it as possess yachts of ten tons or upwards, old measurement, British register.

This association takes its immediate rise from the "Kingstown Boat Club, and we ought perhaps here to add that it flourishes without an adjacent rival since the "Royal Irish Yacht Club" (of Dublin) is now defunct. *Ireland* indeed (like Scotland) possesses but *two* yacht clubs at present, viz. the one we are now describing, at *Kingstown*; and another at *Cork*; which latter was noticed in our volume for 1845, p.p. 32, 35, 315, and which, founded more than a century ago, is decidedly the oldest yacht club in the world.

REMARKABLE HISTORY OF A SLAVER.—It appears that the Alert captured a Brazilian slave-vessel without colours, and name unknown, having between seventy and eighty slaves on board, at Cabenda, and having put Mr. Wasey and a prize crew on board, he was ordered to proceed to Sierra Leone for adjudication. The gales, however, were unpropitious, and he was driven by their force on the south-east coast of America. He managed, however, by almost superhuman exertions to reach Maranham, one of the northern presidencies of the Brazils, although he had frequently seven feet water in the hold, with fresh leaks breaking out at intervals, and only kept her afloat by dint of extraordinary perseverance, in working with great difficulty the pumps, and baling. On his arrival at Maranham the British consul rendered every assistance, and an endeavour was made to secure the officers of the government in obtaining proper protection for the slaves until a vessel could be procured to take them. In the mean time, whilst Mr. Wasey was engaged on shore with the President in endeavouring to effect his object, a body of about forty or fifty armed men, in the uniform of the national guard, proceeded to the vessel, saying to those on board that they were instructed to take the slaves and crew, and conduct them to a place of safety for the night, it being

then impossible for any one to remain on board, as the water was washing over the decks. The English seamen refused to leave the vessel in the absence of their officer; but all the slaves, together with the captain and crew of the slaver, landed with their visitors. Mr. Wasey soon after returned, and finding the eighty slaves and the prisoner gone, he immediately instituted inquiries; when he ascertained that the visitors were a party of brigands in disguise of Brazilian soldiers, who had made themselves masters of the cargo, and had marched them up the country. An appearance was made on the part of the government to recover them, but of course, without success; but finding all attempts fruitless, Mr. W. embarked his men on board a merchantman for Liverpool. Great credit is due to Lieut. Wasey, for his conduct throughout the affair. He preserved this vessel under the most disadvantageous circumstances of wind, weather, and cargo, until she reached a place of safety, and on the voyage succeeded in preventing an outbreak, which he had reason to apprehend was meditated on the part of the slaves and the slaver captain, and of which warning was given by one of the slaves who could speak a little English. Like the Jews when rebuilding the walls of Jerusalem, they had to work all day and night with their arms by their side, baling out the water, or their vessel would have gone down. Mr. Wasey, we are rejoiced to find, has received his well-merited promotion.—*Nautical Standard*.

THE SEAMAN'S HOSPITAL.—Lord Ellenborough presided at the last anniversary festival of this admirable institution. As first Lord of the Admiralty, and as an English nobleman, he never appeared to more advantage. Supporting him, in behalf of "The Seamen's Hospital," we saw Rear-Admiral Bowles, a junior Lord of the Admiralty; Capt. Baillie Hamilton, R.N., a secretary of that honourable board; Admiral Lord Colville, Admirals Malcolm, and Tomlinson, General Pasley, and many other officers of high rank in the navy and army; together with a numerous assembly of gentlemen connected with the mercantile shipping interests of England. We feel certain that the influence of the anniversary dinner will be evident in the list of benefactors to the Dreadnought, which is now preparing for publication.—*Nautical Standard*.

WRECKS OF BRITISH SHIPPING.

(Continued from page 161.—cs crew saved, cd crew drowned.)

| Vessels' Names. | Belong to. | Masters. | From. | To. | Where. | When. |
|-----------------|--------------|------------|-------------|-------------|---------------|-------------|
| Alice | 133 | | St. Domingo | | Donomore I. | Mar. |
| Arethusa | Maryport | Lister | Montreal | Plymouth | G. St. Lwrn | Dec. 5. cs |
| Bristol | | Cowart | London | Bombay | C. Verdis T. | Dec. 23. |
| Castle Huntley | | McIntyre | Canton | Bombay | Paracels | Oct. 27. cs |
| Dee | | | Honduras | Liverpool | | |
| Deveson | | Patterson | Newcastle | St. John | Gr. Manan | Jan. 2. |
| Eliza | | Collin | Montego B. | Falmouth | Ann Bay | Jan. 13. |
| Great Liverpool | 140 | McLeod | Alexandria | Southampton | C. Finisterre | Feb. 24 3d |
| Joseph | Yarmouth | Brereton | Seaham | in contact | Off Beachy H | Feb. 10 cs |
| Portland | | M'Allister | Cuba | London | Foundered | Jan. 29 cs |
| Parmelia | Quebec | Attridge | Savanna | Liverpool | At Sea | Feb. 10. |
| Scotia | St. John, NB | Crowell | Halifax | St. John NB | Tuskets I. | Jan. 17. cs |
| Steadfast | 145 | Adams | Quebec | Bristol | Magdalen I. | Dec. 8. cs |
| Trial | Glasgow | | Gibraltar | Ayamontes | C. Portugal | Jan. 13. cs |
| William | 147 | Lloyds | | | Magdalen I. | Dec. |

MONTHLY RECORD OF NAVAL MOVEMENTS.

Alarm, 26, Capt. Frankland, 14th Feb. arr. at Bermuda, 21st sailed for Jamaica.

Calypso, 20, Capt. H. I. Worth, 14th March, left Plymouth for South America.

Castor, 36, Capt. C. Graham, 27th Oct. at Anjer.

Endymion, 44, Capt. Lambert, 16th Jan. off Funchal; *Eurydice*, 26, Capt. G. Elliott, 30th Jan. arr. Trinidad.

Fly, sur. v., Capt. Blackwood, 24th Sept., arr. at Sydney from Singapore, 19th Oct. remained; *Fox*, 42, Com. Sir H. Blackwood, 30th Jan. at Bombay.

Herald, sur. v., Capt. Kellet, Nov. arr. at Valparaiso; *Hyacinth*, 18, Com. F. Scott, 1st Feb. arr. Trinidad.

North Star—26, Capt. Sir E. Home, 15th Oct. at Bay of Islands.

Osprey, 12, Com. Patten, 9th Oct. at Bay of Islands.

Pandora, 10, Lieut. Wood, 30th Oct. arr. Valparaiso; *Pique*, 36, Capt. Stopford, 20th Feb. at Bermuda.

Samson, st. v., Capt. Henderson, left Plymouth for Pacific; *Samarang*, Capt. E. Belcher, arrived at Manila from China; *Serpent*, 16, Com. Neville, 29th December at Singapore, 6th January sailed for England; *Snake*, Com. Curry, 17th March sailed for Cape.

Talbot, 26, Capt. Sir T. Thompson at Valparaiso 30th Oct.

Vindictive, 50, Capt. M. Seymour, 30th Jan., arr. Trinidad.

Vizen, st. v., Com. Giffard, 6th Dec. arr. at Hong Kong.

Winchester, 50, Capt. Eden, 27th Dec., Simon's Bay.

SPITHEAD.—In Port.—*Retribution*, *Cyclops*, and *Electra*. In Harbour—*St. Vincent*, *Victory*, *Excellent*, *Rodney*, *Victoria* and *Albert* yacht, *Harlequin*, *Wanderer*, *Childers*, *Scourge*, *Dasher*, *Sparrow*, *Comet*, *Myrmidon*, and *Monkey*.

PLYMOUTH.—In Harbour.—*Queen*, *Caledonia*, *Albion*, *Favorite*, *Confiance*, and *Rattler*. In the Sound.—*Snake*. In Barnpool.—*Scout*.

AT SHEERNESS.—In Harbour.—*Trafalgar*, *Ocean*, *Raven* and *African*.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

ADMIRALTY, March 5.—With reference to the successful engagement at Punta Obligado, by the combined English and French naval forces, the following Naval promotions have taken place, dated 18th Nov. 1845, the day of the action, to be

Captain, R. J. Sullivan—*Commanders*, E. A. Inglefield, R. J. T. Levinge, C. F. Doyle, A. C. Key—*Gunner*, R. Rowe. The Board have also directed that W. Ross, caulker's mate, shall be advanced to be a Warrant officer, on his passing his examination.

DOWNING-STREET, March 9 —The Queen has been pleased to appoint Captain C. Hotham, R.N., to be a Knight Commander of the Most Honorable Military Order of the Bath.

PROMOTIONS.

CAPTAIN—W. Smith.

COMMANDERS—W. E. Triscott, M. Nolloth, S. Hunt.

LIEUTENANTS—E. F. Wasey, J. Cartwright, A. H. Douglas, G. W. Towsey, F. D. Rich, W. Perrier, G. H. Wale, F. Rooke, C. S. Stanhope, and J. F. Rooke.

MASTER—R. Roberts.

SURGEON—W. Wildey, M.D.

APPOINTMENTS.

CAPTAINS—R. B. Rundle, cb., (1842) to *Brilliant*—J. Pasco (1811) to Greenwich Hospital.

COMMANDERS—E. Edwin (1835) to

Royal Naval College for study—J. C. Pitman (1842) to command *Childers*—A. Murray (1840) to *Favorite*—E. Crouch (1843) to *Devastation*.

LIEUTENANTS—W. Peel (1844) and F. Marryatt (1845) to *Devastation*—M'L. B. Cockraft (1844), Boyd (1845), H. D'Aeth (1845), and J. H. Bridges (1838) to *Brilliant*—J. F. Werre (1841) and T. E. Symonds (1841) to *Scout*—G. Wale to *Ferret*—E. L. Strangways (1842) to *Favorite*—G. Baker (1844) to *Rodney*—W. Feyrier and A. Hamilton to *Excellent*—R. Sandom (1843) to *Raleigh*—R. Ellis to *Childers*—C. Douglas (1836) and Walters to *Wanderer*—J. Thurburu (1841) to *Harlequin*—C. B. Hore to *Carysfort*—A. Jolly to command *Pickle*—A. Sansum to *Calypso*.

MASTERS—H. Moriarty to *Devastation*—C. H. Dillon to *Raleigh*—F. Edington to *Brilliant*—J. D. Taylor to *Childers*—J. Saunders to *Electra*—H. Heath to *Favorite*.

SECOND-MASTERS—E. Youall to *Spitfire*—W. E. Farrant to *Hibernia*.

MATES—H. Graham—F. J. Partridge *St. Vincent*.

MIDSHIPMEN—H. Hawkes to *Rodney*—C. Gibbons to *Carysfort*—L. Thompson to *Terrible*—H. Lyon to *Excellent*.

NAVAL CADETS—G. Blisset to *Childers*—R. Chatfield to *Scout*—C. B. Dent, H. Anson to *Hibernia*—Hon. M. Nelson, J. H. Whited, W. Bingham, A. E. Maynard to *Harlequin*—L. H. Rooke to *Cyclops*—A. Law to *Carysfort*—J. H. Chads to *Raleigh*—G. Cooper to *Agincourt*—F. Bennet and H. Hale to *President*—C. Maberly to *Vernon*.

SURGEONS—J. Read to *Ferret*—W. Roberts to *Childers*—T. E. Ring to *Superb*—T. Thompson to *Brilliant*.

ASSISTANT-SURGEONS—C. P. Mingane to *Superb*—W. Hannant to *Harlequin*—G. A. Hallion to *Wanderer*—F. Brown to Haslar Hospital—H. Arnot to *Scout*—J. Ballantine to *Tartarus*—D. West to *Trafalgar*—J. Slight to *Retribution*—J. Lawrence to *Cyclops*.

PAYMASTER AND PURSER—D. Clow to *Favorite*—W. Norcock to *Flamer*—R. Singer to *Brilliant*.

CLERKS—B. Miall to *Harlequin*—G. Welch to *Collingwood*—R. Wiggins to *Bonetta*.

COAST GUARD.

Appointment—Lieut. C. Campbell to command a station.

Removals—Mr. J. Stirling to Larne—Mr. W. Harvey to Ardmore.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

March 8, at Chiefwood, Roxburghshire the wife of Capt. Craigie, R.N., of a daughter.

Marriages.

Feb. 18, at St. George's, Hanover-sq. G. B. Collier, Esq., R.N., son of Capt. H. Collier, R.N., to Stepney, daughter of the late J. Gulston, Esq., Derwydd, Carmarthen.

Mar. 19, at the British Embassy, D. C. Cumby, Lieut. R.N., to Georgina, daughter of the late H. Ivie, Esq.

Mar. 13, at Kingston, John Garnham, Esq., of Buxton Vale, Suffolk, to Caroline, daughter of Lieut. G. Williamson.

Mar. 10, at Chelsea, the Rev. Boden Powell, to Henrietta Grace, daughter of Capt. W. H. Smyth, R.N.

Deaths.

At Brighton, Mar. 18, Rear-Admiral W. Skipey, in his 90th year.

Rear-Admiral of the Blue, J. W. Lye, at Bath, 7th Mar., aged 63.

Rear-Admiral of the Blue, R. T. Hancock, at Weymouth, 5th Mar., aged 83 years.

Feb. 28, in Hampstead-road, aged 78 years, E. Fairfax, Esq., R.N., formerly Master of the Channel Fleet under Earl St. Vincent.

On Feb. 27, at Gosport, Com. T. B. Young, R.N., aged 79 years.

At Gibraltar, Feb. 19, Lieut. H. G. Williams, late of *Fantome*.

Mar. 1, at Compton, near Plymouth, Harriet, the wife of Commodore Sir G. Bremer, K.C.B., K.C.H.

At Greenwich, Mar. 11, Capt. J. Clavell, R.N., in his 70th year.

NOTES WORTH NOTING.—The tremulous motion, in screw steamers particularly, is so destructive to the pivots of Compasses that a new one is required for every voyage.—Wanted a remedy. The Screw of the Great Britain Steam Ship weighs

7 tons.—The WATERMAN'S Floating Pier at Greenwich has been declared a nuisance, and must be removed accordingly.—The proposed bridge over the Niagara, below the Falls, has been abandoned as *dangerous*; it is no doubt unnecessary.—The natives were as busy plundering the wreck of the Great Liverpool the other day, as those on the west coast of Ireland, and on the coasts of Devonshire and Cornwall generally are on such occasions.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.
From the 21st of February, to the 20th of March, 1846.

| Month | Day | Week Day | Barometer. | | Fahrenheit Thermometer, In the Shade. | | | | Wind. | | | | Weather. | | | |
|-------|-----|----------|------------|--------|---------------------------------------|--------|-----|-----|----------|------|-----------|--------|------------|-----------|--------|--|
| | | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. | | |
| | | | | | | | | | A.M. | P.M. | A.M. | P.M. | | | | |
| | | | In Dec | In Dec | o | o | o | o | | | | | | | | |
| 21 | S. | | 30.11 | 30.10 | 47 | 54 | 43 | 55 | SW | SW | 2 | 2 | bc | | bc | |
| 22 | Su | | 30.00 | 29.92 | 47 | 54 | 44 | 55 | SW | SW | 4 | 4 | o | | op (4) | |
| 23 | M. | | 29.81 | 29.81 | 50 | 53 | 49 | 54 | SW | SW | 2 | 1 | or (1) (2) | | od (3) | |
| 24 | Tu | | 29.63 | 29.59 | 52 | 56 | 50 | 58 | S | S | 5 | 3 | ro (1) (2) | | bc | |
| 25 | W. | | 29.54 | 29.64 | 52 | 56 | 50 | 57 | S | SW | 4 | 4 | qor (2) | | bc | |
| 26 | Th | | 29.82 | 29.76 | 46 | 55 | 42 | 56 | S | S | 5 | 3 | od (2) | | bc | |
| 27 | F. | | 29.68 | 29.64 | 51 | 57 | 46 | 58 | SE | SE | 1 | 1 | qbc | | bc | |
| 28 | S. | | 29.72 | 29.76 | 53 | 57 | 47 | 60 | S | SW | 1 | 1 | op 2) | | bc | |
| 1 | Su. | 03 08 | 30.06 | 30.06 | 49 | 54 | 43 | 55 | SW | SW | 2 | 2 | o | | bc | |
| 2 | M. | 29.97 | 29.95 | 51 | 54 | 45 | 55 | SW | SW | 2 | 4 | bc | | bc | | |
| 3 | T. | 29.90 | 29.86 | 51 | 53 | 43 | 54 | SW | SW | 5 | 7 | qo | | qbcm | | |
| 4 | W. | 29.42 | 29.44 | 52 | 52 | 49 | 53 | SW | SW | 6 | 2 | qor 2) | | bc | | |
| 5 | Th. | 29.50 | 29.56 | 47 | 50 | 42 | 51 | S | W | 1 | 2 | op (2) | | bc | | |
| 6 | F. | 29.59 | 29.68 | 43 | 48 | 41 | 49 | SW | W | 4 | 3 | op 1) | | bc | | |
| 7 | S. | 29.72 | 29.74 | 45 | 49 | 42 | 50 | SW | NW | 1 | 1 | or (2) | | bcm | | |
| 8 | Su. | 30.00 | 30.04 | 40 | 47 | 34 | 48 | NW | NW | 2 | 3 | bcm | | bcm | | |
| 9 | M. | 30.14 | 30.22 | 36 | 43 | 31 | 47 | N | NW | 1 | 1 | bcfm | | bcm | | |
| 10 | Tu. | 30.39 | 30.41 | 37 | 49 | 33 | 51 | W | W | 1 | 1 | bim | | bcm | | |
| 11 | W. | 30.43 | 30.46 | 44 | 50 | 37 | 51 | SW | W | 1 | 1 | bcm | | bcm | | |
| 12 | Th. | 30.63 | 30.61 | 44 | 49 | 35 | 51 | NE | SW | 1 | 1 | o | | o | | |
| 13 | F. | 30.44 | 30.40 | 43 | 51 | 36 | 52 | W | SW | 3 | 3 | o | | o | | |
| 14 | S. | 30.14 | 30.02 | 47 | 54 | 45 | 55 | SW | SW | 4 | 4 | od 1) | | o | | |
| 15 | Su. | 30.03 | 29.98 | 47 | 53 | 46 | 54 | NW | W | 2 | 2 | op (2) | | bc | | |
| 16 | M. | 29.54 | 29.36 | 50 | 52 | 47 | 53 | SW | SW | 6 | 6 | qbc | | qbcphr 3) | | |
| 17 | T. | 29.40 | 29.44 | 40 | 44 | 36 | 45 | W | NW | 1 | 1 | o | | bcm | | |
| 18 | W. | 29.51 | 29.53 | 35 | 43 | 29 | 44 | N | W | 1 | 1 | o | | o | | |
| 19 | Th. | 29.56 | 29.58 | 32 | 38 | 28 | 40 | SW | E | 1 | 1 | bcm | | bcm | | |
| 20 | F. | 29.54 | 29.58 | 33 | 29 | 27 | 41 | N | NE | 1 | 1 | os 1) | | bcm | | |

FEBRUARY 1846—Mean height of the Barometer = 29.962 inches; Mean temperature = 43.8 degrees; depth of rain fallen = 1.31 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

A review of Commander Slade's Pamphlet on "NAVAL CONSTRUCTION," &c. is unavoidably reserved for our next.

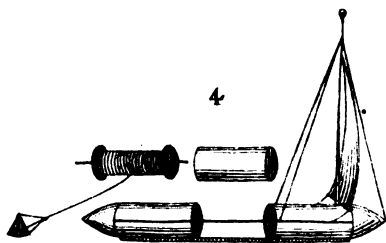
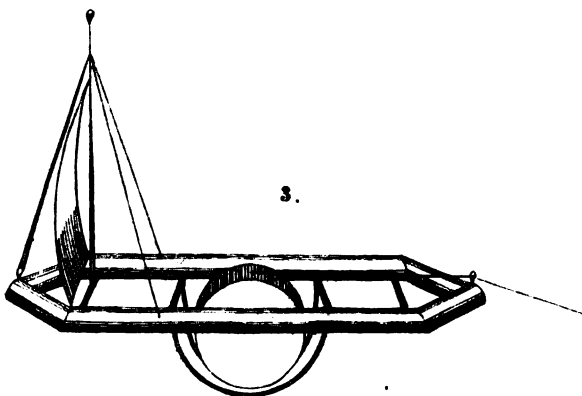
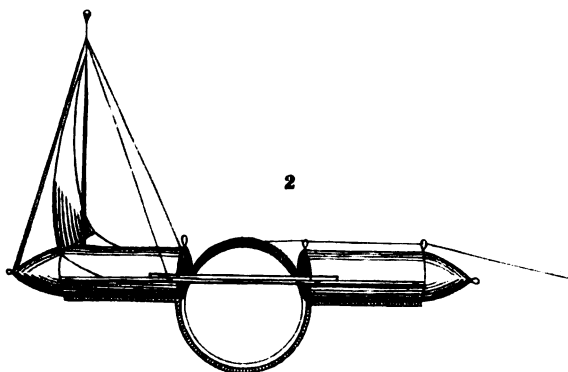
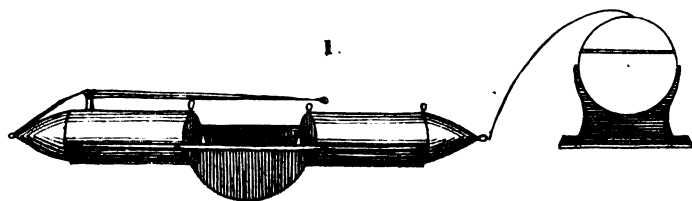
The subject of IRON LIGHTHOUSES with reference to Lightning &c., will be resumed in our next.

The length to which the important subject of "SHIPS AND RAILWAYS," is extended, has necessarily excluded our "SKETCHES", and some other papers. The letter on Mr. FitzMaurice's Promotion among them.

The Proprietor requests that his LIVERPOOL Subscribers will obtain their copies, in future, from Mr. WALKER of South Castle Street.

ERRATA.—Page 153, line 16 from bottom for *arrived* read *aimed*; page 154, line 6, for *arranged* read *annexed*; line 13, for *men* read *them*; line 13, for *ia* read *on*.

ORTON'S REEL BUOYS.



THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

MAY 1846.

ORTON'S LIFE-BUOY.

THE essential parts of these buoys are a floating body; a reel carrying a line; and a mast fitted with a sail, and having a portfire at the head. Any appropriate form of buoy may be used, and the reel may be fitted in either perpendicularly or horizontally. Their operation is to keep up a constant communication between the ship and buoy, and thus enable the latter to pick up a man overboard at sea without lowering a boat; to open a speedy communication between a stranded vessel and the shore, and thirdly, in one of its forms, to convey a number of men ashore, at once, by forming a cradle.

To adapt these buoys to vessels of different sizes Mr. Orton proposes three different forms as most appropriate, and these we have represented in the plate, 1 and 2 being views of the same buoy performing different functions.

1.—Represents the buoy as it would appear suspended at the stern of a middling sized ship. The mast is hinged down, and the reel with its line, is supposed to be standing on the poop of the vessel. On the cry of "A man overboard," a trigger is pulled, which allows the buoy to fall into the wake of the ship. In the act of falling the mast starts up by the operation of a spring, and lights its own port-fire. As the vessel passes onwards the line is paid off from the reel, as is now done with the log, and thus the buoy remains stationary where it fell while the vessel (though still in communication with it,) proceeds onwards. As soon as it is perceived that the man has got into, or is clinging to, the buoy, they are drawn up to the vessel, by means of the line, and thus got on board without lowering a boat.

2.—Represents the same buoy discharging its second function, that of conveying a line from a stranded vessel. It will be seen by the plate, that the difference in arrangement is simply that of setting the mast and sail, and introducing the reel and line into the buoy. The end of the line being made fast on deck, the buoy is launched to leeward, and, having the wind off the sea, must drive ashore, paying off the line as it proceeds. Having reached the shore the line is then used, for the transmission of a hawser, as is now done with the rocket line.

3.—Represents another form of buoy more perfect, inasmuch as it is applicable also to a third purpose, that of conversion into a cradle. This buoy like the preceding, can be used in the same manner, for picking up a man overboard without lowering a boat, and also for conveying a line ashore, which in fig. 3 it is represented doing. Having reached the shore it is stripped of its masts, sail, and reel, when the float alone is left, and this, by means of the whip line is passed along the hawser to the vessel, and five or six of the crew, having passed their bodies between, and their arms round the cylinders, are brought ashore floating breast high, instead of being dragged through the surf one at a time, as is now done:—sick, wounded, women, or children may also be lashed in, and sent ashore, under the protection of two able men, with much greater prospect of safety than at present.

The reason why this, the most perfect form of Mr. Orton's buoy, is not applicable to all vessels is, its greater breadth, (in length it is the same as No. 1,) which would render it somewhat cumbersome for any but large vessels. This objection in no way applies to No. 1, since being only 12 or 14 inches wide, it might be carried without inconvenience at the stern of almost any coasting vessel.

There is yet another class of vessels, the smallest, to which neither of these forms are applicable as they could not be stowed away at the stern. For these Mr. Orton proposes another form of buoy, which, being small and portable can be kept in the cabin or locker till required. Fig. 4 represents this form of the buoy, the case in the centre is capable of receiving the log, reel, and line, which being introduced are capable of revolving inside the case. Thus prepared the case is fixed into the buoy, and the line being fast on deck, the buoy must drive ashore as before stated of 1 and 3.

Regarding the construction, we have only to add, that the buoys are formed of hollow metal cylinders, divided, internally, into numerous compartments, and that the line is rendered buoyant, so as to prevent it dragging on the buoy, by sinking, when used at sea, or, chafing on the beach, when used for bringing a line from a stranded vessel.

The advantages of these apparatus are numerous. They are capable of performing any duty, of which the buoys now in use are capable, and much of which they are not capable. They afford the means of opening a speedy communication between a stranded vessel and the shore; they afford the means of picking up a man overboard, without lowering a boat, sometimes impracticable, often dangerous, they (in one form) are convertible into a cradle for conveying the crew ashore; and lastly they are of light cost, great durability, and easily repaired in case of damage.

Another circumstance to be considered with these buoys is, that of their affording much more security than the ordinary buoy when once reached by the sufferer. To the latter the man must cling till relieved by the boat sent to his assistance, and it is scarcely necessary to say how unable, from cold and fear, a man must necessarily be, to retain his hold. Besides this, his exposed situation renders him liable to the attack of sharks, if in the vicinity. There are many melancholy instances of men disappearing from these buoys, and the inference is from one or other of these causes. Now in Mr. Orton's buoy he is exposed to neither of these chances, as, once in, little or no further effort is required on his part, to retain his position, while from sharks he is perfectly secured by the two deep keels seen in fig. 1, and the grating which connects them below.

Another end attained by these buoys, and never attempted by any other apparatus is, the means they afford of opening a communication from a stranded vessel, with a desert or uninhabited shore, from which no assistance can be looked for by mortars, rockets, or life-boats. In such localities the buoy might be used to convey a line ashore, and at the same time have two men clinging to it, who, on reaching the shore, would strike the mast, and thus enable the crew to draw the buoy back to the vessel. After three or four trips she would have conveyed a sufficient number of men ashore to complete the communication, by a hawser, and thus afford the means of escape for the whole crew.

That vessels should be provided with every means of safety for their crews is not only a matter of humanity but also of expediency on the part of the owner. It is evident that men fearful of the loss of life will make the preservation of it their first consideration, and will take little heed of the property entrusted to them so long as they are in danger. On the other hand give them a means of escape, at any time, they labour no longer under the feeling that life is in danger, and will, consequently make every effort to save property.

A striking instance of this occurred in the *Isabella and Ann*, of Aberdeen, in a gale off Broach Bank near the mouth of the Tay. All hope of saving the vessel had been abandoned, and life being the first consideration, she was being run ashore when the life-boat appeared. Life was now, in all human probability secured, and this very feeling gave energy and effect to the efforts which followed, to save property also. With great care, and no little risk, the vessel was at last conducted into deep water, and the life-boat lay alongside of her till the following morning. The ship was quite new, 227 tons, built for the West India trade, and, at the time, coal laden. This is a case in point which needs no comment to force it prominently on the consideration of the shipowner, and convince him that in ministering to the safety of his crew he is contributing, not to their comfort only, but to his own advantage and interest. More particularly are insurance offices interested in seeing that all vessels are well found in means of security to the crew, as on them, more than on the shipowner, falls the loss of property resulting from shipwrecks. The argument, that facilities of escape, would induce the abandonment of vessels, more frequently than at present, is, to say the least of it, based on illiberal views; and is so strongly contradicted, by the case already cited, that we think it unnecessary to enter into the discussion further.

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes on Tampico, Tuccapan, Vera Cruz, Anton Lizardo, and Tabasco, &c., by Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Continued from page 120.)

From the bar of Laguna to near the bar of San Pedro the soundings in several places are very irregular, particularly so near point Hicalango, and from Laguna to the eastward they are much more so, as the soundings, when abreast the Isla del Carman are but an indifferent guide to indicate the distance from the land. The water should not be shoaled to less than ten fathoms during the night time. From San Pedro to Tabasco, and as far west as the entrance of the Chiltipec river, the soundings are regular, with a bottom of blue mud.

The bar of Tabasco is difficult to make, the land being quite low all along the coast, including the Isla del Carman, and although the charts have on them the "Mounts of Gabriel," between the San Pedro Bar and Laguna, there is no such elevation as would be supposed on this part of the coast. The mounts or hills of Gabriel are in fact upwards of sixty miles inland. The forest which is between San Pedro and point Hicalango, may be called by the Spaniards, "Montes de Gabriel," and would be quite correct, meaning thereby the woods of Gabriel.

From Laguna to the Rio San Pedro, the land runs nearly east and west. A few miles to the eastward of the mouth of the San Pedro river, is the entrance of a small river, its width appearing not to be above a hundred fathoms. There is a vigia on its eastern bank, near the shore.

On the west side of the entrance of the San Pedro, there is a vigia and a few huts erected; the mouth of the river appears to be from a third to half a mile across. The bar is shallow and only passable for bongos, (large canoes,) of from three to four feet draft of water.

From the river San Pedro towards the bar of Tabasco, the land trends to the S.W.; the most remarkable object that can be at all distinguished from the general formation of the coast, (in approaching the bar from the eastward,) is some trees in the Great Ox Island (Isla del Buey,) on its northern part, which are higher than those on any other, and form a kind of bluff; this island is on the west side of the entrance of Tabasco river.

The small Isla del Buey lies about three-quarters of a mile to the north of the large island; there is sometimes a hut and vigia fixed upon it, but these have often been blown or washed down during the northers. Between these islands the water is quite shoal, only passable for boats, and it appears to be fast filling up. As the small Ox Island is only a low sand bank, it cannot be seen until well in to the bar.

When the entrance of the river is clearly made, keep the eastern point bearing S.S.E., which is in the fair way for running over the bar, and if the wind is light stand into six fathoms water, and come to an anchor, and before the sea breeze sets in sufficiently strong to carry the vessel over the bar, the pilot will come off.

The bearings for the mid-channel over the bar, in December, 1841, were, the eastern point on with the centre of the island which is in the middle of the river, and above the fort about a mile, the bearings S.S.E. $\frac{1}{2}$ E. ; but since then the channel has altered a little. The leading mark for running in in 1842, was the hut on the east point, on with the island, as above, until abreast of the small Ox Island, from which the eastern shore had to be approached, as the vessel entered farther inside. Or by running in with the extreme point of land on the eastern shore, on with the high trees which open out to the westward of the island, the bearings will be S.S.E. ; these high trees are opposite La Frontera. The distance from the bar to the entrance of the river, or abreast the eastern point is about two miles.

In the season of the northers, (from September to March,) there is in general eleven feet water on Tabasco bar, and sometimes more, but this depth cannot always be depended on, for if a freshet takes place, (which is caused by the heavy rains in the interior,) and continues any length of time, the water shoals, by the accumulation of sandy deposit which takes place on the bar, which has been held in suspension in the river, until it meets the water in the Mexican gulf. It appears singular, that although the specific gravity of fresh water is less than salt, yet it should hold particles in suspension which are deposited as soon as it comes in contact with the salt water. The only way that I can account for it is, that in the narrow channel of the rivers the water having more velocity, and being obstructed in its course by logs of wood, (snags and sawyers as they are called in the United States,) causes a partial eddy, which tends to keep in suspension what would otherwise be deposited on the bottom, and that when the fresh water escapes from the narrow channel of the river, and comes in contact with the Mexican gulf, it spreads over such a large space that the current is decreased in proportion, when a deposit of the heavier particles, such as sand, forms a bar, and fills up the deeper parts of the channel. Both the bars of Tampico and Tabasco are always without the line of the coast. It is a well-known fact, in places, that when the river is highest, which is caused by the rains in the interior, there is less water on the bar, and when the river is lowest, the channel being then contracted in its width, that the water is deepest on the bar.

In December, 1842, there was only seven feet on the bar of Tabasco at high water ; this was shortly after the rainy season, and the northers had only been slight breezes. We succeeded in getting inside by discharging part of our ballast. Shortly after a strong north came on, which deepened the water to ten-and-a-half feet. But another freshet or rise took place in the river immediately after, when the bar was again filled up to eight-and-a-half feet. It is to be observed that almost every gale from the north has an effect on the bars of Tampico and Tabasco, and often alters the channel, particularly at the former place, and generally deepens the water, but depending more or less upon the strength of the gale, but is liable to be again filled up as stated above. Vessels have been detained upwards of four months inside the bar of Tampico in the rainy season, and more than two at Tabasco. The last named port has an advantage

over the former, which is, that the water is on most occasions deeper on the bar, and that excepting in a norther, and shortly after the sea goes down, insomuch that the bar can be crossed in a small boat, or common sized skiff, which the pilots come off to board vessels in. Although the bearings of the channel for running over Tabasco bar have been mentioned, no vessel should run for the river without a pilot, unless in a case of actual necessity.

The tides flow at full and change, at Tabasco bar, at 10 a.m., with a rise of two feet ; there is only one tide in the twenty-four hours, and as the water in the gulf is influenced greatly by the wind, it causes the tide to vary, both in height and time of high water.

About a mile above the entrance of the Tabasco river, on the east bank is situated a small fort, mounting about a dozen guns, in which is a vigia, from which is signaled to the Frontera, all vessels that make their appearance. Close to the fort is the pilot establishment, which consists of a few houses and boats, and men enough to manage one boat. As vessels scarcely or never take in any part of their cargo outside the bar, the pilots have only small boats, launches not being required.

Between the fort and the Frontera is an island about a mile and a-half long, thickly covered with trees, as is also the country round, except where clearings have been made for the cultivation of maize. From its north end a spit of mud runs out for about a mile ; the channel up the river is on its east side, and abreast of the island is rather less than half a mile wide. On the western shore, from a little above the Arroya de Trepichi, (which is opposite the Frontera,) down inside the island, and also inside the Isla del Buey, the water is only of sufficient depth for boats.

The river abreast the fort, and also at the Frontera is from three-quarters to a mile wide, but above this it is much less.

The Frontera is built on the east bank of the river, and is a straggling village, the houses chiefly built of bamboo, with the interstices filled in with mud ; a few of the better sort are of adobeys, and one of wood brought from the United States. The church is situated in a square, about the middle of the town, and is constructed of the same materials as the houses ; no stone is to be found near the Frontera, except what is brought as ballast in vessels. There are several shops indifferently stocked, but sufficient for the wants of the place ; as there is no market, supplies are at times difficult to be had. Canoes often come down from the different rivers with plaintains, pigs, poultry and eggs, &c. ; fish being plentiful in the river, can be purchased almost daily. Beef of an inferior quality may be had two or three times a week, or when a bullock is killed, which is known all over the place. The Frontera is the general stopping place for vessels on their arrival, as they have to deliver their papers and despatches, which are forwarded in canoes by the custom-house authorities residing here, to the capital of the state, San Juan Bautista, for the collector, at which place the merchants also reside, but have agents at the Frontera, as well as the log-wood cutters.

There is very little fruit grown here, except cocoa-nuts, limes, and mangoes, which are plentiful in their season. The mangoes are of

an excellent quality, and very large. There are also a few oranges and shaddocks, but mostly sour. Vegetables are not to be had at any price.

Opposite the Frontera is the Arroyo de Trepichi, which communicates with the river Chiltepec, and is only navigable for canoes; and about a mile and a half above the town, on the same side, is the Arroyo de Poola, which is also shallow.

The Tabasquillo branches off to the S.W. from the Tabasco river, about three leagues above the town, and although it is very narrow, the water is deep enough for any vessel to go up and load. The banks of this stream are in most places lined with lofty trees. It is preferable to take in the cargo off its entrance, (in the Tabasco,) than to go up to the loading-place, as the mosquitos are more numerous and troublesome there.

About a league above the entrance of the Tabasquillo, is Las Tres Brazos, or the three arms. At this place the rivers San Pedro el Chiquito and the Usumasinta join the Tabasco; their general direction from their entrances is towards the S.E. The current is said to be stronger in these rivers than in the Tabasco and the navigation not near so good, as there are a number of shoals in different reaches. Vessels go up these rivers to load log wood, but have great difficulties to contend with.

The rancho of Inouta is opposite the entrance of the Pajaros river, at which place it forms two branches, the Palisada which empties itself into the Laguna de Terminos, and the Usumasinta which enters the Tabasco at Los Tres Brazos, as before mentioned.

At nine leagues from the Frontera, the Chilapa river enters the Tabasco; at this place is a very fine rancho on the left bank of the last named river, and about two leagues further up the Tabasco is the Rancho de Escobas. At this place the canoes in general stop for a few hours in the first part of the night. Canoes which are bound from the Frontera to the capital most invariably leave from two to three in the morning, by which they can arrive at Escobas before dark, as this is the best place to either procure refreshments or to have anything cooked which may have been provided, and should the weather be rainy there is good shelter, and although the Mexicans are generally extremely independent in such places, here they were particularly obliging, and may be so still for what I know to the contrary.

Two leagues above Escobas is the entrance to the river Chilapilla. I was informed that this river has but few trees on its banks, it is narrow, but has sufficient water for vessels to go up and take in their cargoes. The principal place of loading is Pial, about ten leagues above its entrance, which is thirteen leagues from the Frontera; its general direction is about S.E.b.E. This stream is not near so rapid as the Tabasco, but much more so than the Chilapa. There are two arroyos, which branch off from it to the S.W., communicating with Lagunes, but have no water in them in the dry season. At the entrance of the Chilapilla is a rancho, the hut being merely a few poles stuck in the earth, and covered with palm leaves, the sides being entirely open, except on the north. Canoes occasionally stop here a few hours on their passage up the river, when there has been a breeze to assist them against the current.

The only thing to be had here is a few tortillas, occasionally a few eggs and beans ; even this supply should not be depended on ; but as those who have to go to the capital, or any other place on the river, in general lay in stores for the voyage, it is not of so much consequence, if the weather is favourable, but if on the contrary it is wet, I should advise no one to pass Escobas.

Above the Chilapilla there are several small arroyos or streams, but most of them, if not all, are only navigable for canoes in the rainy season.

There are a few shoals along the banks of the river, but the least water is said to be at Acachapa, in the Torno del Diablo, (the Devil's bend,) about two or three leagues below the capital.

No vessel ought to draw more than eight feet that takes in cargo for Tabasco, as it has to be delivered from the vessel at the capital, San Juan Bautista, not being allowed to be forwarded in small craft unless she has received some serious injury, and there is a great risk of the goods being damaged.

Vessels which have to proceed up the rivers above Tabasquilla, should be provided with a few light Manila or cayar lines for warping, as there are several reaches which will cause a great detention if not warped through. Rope made of hemp is not so good as the former which will float clear of the logs, plentiful along the banks of the river, and also in shoal places ; by having them it will save a deal of trouble and time.

The current in the Tabasco, as well as in the other rivers branching off from it, is very strong in the rainy season, and also at other times when there has been a great fall of rain in the interior, when warping is out of the question, or nearly so. In the Tabasco, with a north, most of the reaches can be sailed through, as will be seen by a reference to the chart ; the breadth of this river varies from 120 to 150 fathoms, but in some places it is less.

The capital is about twenty-four leagues from the Frontera, and is situated on the west or left bank of the river Tabasco. It is built on the first elevation of rocky formation, above the alluvial deposit. Most of the houses are built of stone in a substantial manner, and have flat roofs, many of them are pretty large. As the custom house is here, all the goods which enter the port have to be discharged at this place ; the vessels haul alongside of the river bank and deliver by a stage. There is not much regularity in the plan of the town, the streets are mostly narrow and far from clean. At the southern part of the town there are the remains of some houses which formed a very good square, but with the revolutions that Tabasco has unfortunately been visited, the most of them have suffered by the shot. Through a part of the north end of the town runs the Arroyo de Chiltipec, when the river is high or in the rainy season, but when it is low and no water running through the Arroyo, the stench is enough to cause a plague, and in several places in the streets pools of stagnant water are allowed to remain, which is no doubt the chief cause of the capital being so very unhealthy ; whereas, a

little expense would tend greatly to remove the evil. The town which is divided by the Arroyo is connected by a wooden bridge.

San Juan Bautista is in general well supplied with provisions, such as beef, of an inferior quality, pigs, poultry, fruit, and occasionally game, and also fish.

SECOND REPORT OF THE TIDAL HARBOURS COMMISSION.*

In our former report we confined ourselves to a few specific cases, bearing directly on the general question under consideration, and we adduced in proof some examples of the deterioration of the ports of the kingdom from neglect; of their impending ruin from encroachments; of the wasteful expenditure of money for want of sufficient control; and of the necessity of immediate legislative measures in order to stop these and other daily increasing evils to navigation. We then briefly recited the present state of the law with respect to the conservancy of harbours and rivers, showing that the jurisdiction of the Admiralty has, by various Charters and Acts of Parliament, been superseded, to the great detriment of the public service. And, lastly, we ventured to lay before your Majesty a few recommendations which appeared to us best calculated to meet the evils in question.

A more extended inquiry has fully confirmed the views which the limited examination of last year led us to submit to your Majesty. Not only is there a general want of control over the management and revenue of the ports, but there is not a single exception among the numerous cases which have come before us in which such a control might not have been the means of saving unnecessary outlay; of preventing encroachments that can now scarcely be remedied; or of stopping works that must be removed in order to secure the objects to which the attention of the Commission is directed.

The necessity of such supervision has also become more apparent since the publication of the returns to the orders of the House of Commons of August last, from which we learn that the income of the various ports of the United Kingdom considerably exceeds the sum of £800,000 a-year—the whole levied by Charters and Acts of Parliament, or otherwise, from dues on shipping, and on goods borne by shipping, but over the expenditure of which Parliament has not at present the slightest control.

That much of this money has been and is misapplied will excite no surprise, when we find that several harbours are governed by numerous, self-elected, irresponsible commissioners, (in some places exceeding even one hundred in number,) often conducting their proceedings in private, auditing their own accounts, publishing no statement of income or expenditure, and laying out large sums of money without the advice of an

* See former report in our last volume, p. 543, 603.

engineer ; and that these commissioners are frequently landed proprietors, sometimes non-resident, with occasionally a ship-owner, but rarely a sailor among them. Such, however, is the constitution of many of the harbour boards of this country acting under authority conferred by Parliament.

Since the date of our first report, we have, in compliance with that clause of your Majesty's commission, which directs us to visit and personally inspect all the harbours and shores of the United Kingdom, examined the chief ports on the east coast of England from the river Thames to the Tyne, thus including Yarmouth, Hull, and the principal coal ports of Durham and Northumberland, which, owing to the extraordinary increase in steam navigation, are daily rising into greater importance.

On the west coast we have personally inspected the rivers Lune, Wyre, Ribble, and Dee ; and the ports of the Isle of Man, which although of small extent as harbours become of consequence from their position in the centre of the Irish Channel, and as the head quarters of an extensive and increasing fishing trade.

In Ireland we have been enabled to visit most of the ports and fishing piers around the coast, and have been strongly impressed by a sense of the great value of its natural harbours, their depth and capacity, and the extent and capability for improvement of its fisheries, which even in their present state, and with the fishery piers often in ruins from neglect, afford employment to 19,880 vessels and boats, and 93,000 hardy fishermen.

But these natural advantages are very far from having been turned to the best account ; on the contrary, a detailed examination into the state of the principal port shows that although much has been done, and in many cases at a heavy expenditure of money, yet that if the works had been planned with a little more foresight, and steadily carried on under efficient control, the same expenditure would have led to far better results, and might have removed the causes of complaint, for which there is but too much foundation.

The harbour of Dublin and the river Liffey offer an instructive example of the correctness of these statements. Within the last thirty years many improvements have taken place ; the depth of water over the bar and up to the city quays has been increased several feet, by dredging and by the bold measure of running out the great north wall ; the traffic and consequent revenue of the port have more than doubled, and the latter has risen to £34,000 a year. Yet the evidence shows that the foundation of the quays is generally so imperfect that they will not in their present state admit of the river being further deepened ; that the south quay, the resort of three-fourths of the shipping of the port is encumbered at its foot by heaps of mud ; that the entrance into the Grand Canal Docks is all but blocked up by sand-banks ; that there is a great want of graving docks ; that there is but one public crane ; that the port charges are very high ; and that the ballast, of which, by Act of Parliament, the ballast office has a monopoly, and for which it charges about double the market price, is in many cases bad.

Wexford harbour, which, from its capabilities, its position in a rich country amidst an industrious population, and its vicinity to the English coast, ought to be one of the most prosperous in Ireland, is the resort of little more than coasting vessels. It appears in evidence that here are 104 harbour Commissioners; that the stream of the Slaney, and the tidal waters of its vast estuary, are left uncontrolled; that the heads of the piles on which the quays are founded, project some feet into the river, and have caused damage to several vessels; that a vexatious toll is levied on all vessels passing through Wexford bridge; and that heaps of stone, now forming an artificial bar eight feet high, have been thrown in at the foot of its piers to save the foundation from being swept away. Similar neglect appears outside the harbour, where the want of a light off Blackwater bank, and the absence of beacons on the other dangerous sands which line this coast, are stated to have been the cause of several shipwrecks, and of a great sacrifice of life.

At Waterford, a capacious natural harbour, considerable exertion has been made to deepen the ford, and obtain a channel up to the town, but an extensive mud bank still lines the foot of the finest range of quays in the United Kingdom; the soil dredged up in one part of the harbour is dropped into the stream in another; thousands of tons of refuse stone are annually swept into the river from the quarries at Granagh; while the bridge, with its thirty-six arches and corresponding piers and an opening for ships only eight yards wide, places a bar to the extension of navigation and improvement towards Carrick-on-Suir and Clonmel.

The celebrated harbour of Cork stands pre-eminent for capacity and safety, even in that country of fine natural harbours. The upper portion of it, which falls more immediately within the limits of this commission, extends for five miles below the city to Passage. This part, since the year 1820, has been considerably deepened; vessels of 500 tons now come up to the city, and, the traffic and income of the port have proportionably increased. Yet the harbour is far from being in that state which a revenue of £8,000 a year for the last twenty-five years would warrant. Complaints are made that banks at the foot of the quays cause great risk to the fine steamers which ply between the city and Cove; that seven weirs cross the river Lee within $1\frac{1}{2}$ miles of Cork, and impede the upward flow of the tide; that a wall has been built for 1,500 yards in a doubtful direction to guide the set of the current, and is now left in an unfinished state; that the silt dredged up from the channel is laid at the back of this wall, and washed down again into the river by every high tide; and that an area of 150 acres, over which the tides used to flow, has been partly enclosed, whereby a large portion of tidal water is excluded. Yet this large space, if enclosed by a wall properly directed, and the loss of the excluded water compensated by dredging the upper part of the bed of the river, might be a benefit to navigation, and form a park for air and exercise for the citizens, instead of being left as a nuisance; in short, to quote the words of a highly respectable witness "the harbour of Cork has throughout been the victim of half measures."

Complaints also are made that the Glanmire and Ballinacurra rivers

are both in a neglected state, while the latter has largely contributed to the Cork Harbour Fund, that a portion of the dues collected in Cork never reach the hands of the treasurer, and that money has been borrowed, and consequently a debt incurred, without the authority of an Act of Parliament.

Surveyors and sailors complain of the too great elevation and ill chosen position of Cape Clear Light ; of the want of a light on the Foze Rock, the western point of Ireland ; and that there is no coast light from the Old Head of Kinsale to the Hook of Waterford, a distance of seventy miles.

Limerick, at the head of the estuary of the Shannon, the noblest river in the kingdom, and now, by the energy of the Board of Public Works, rendered navigable almost throughout its whole length, offers great facility for navigation and commercial enterprise. Here there is a magnificent bridge, built across the harbour, at a cost of £85,000 ; yet, although the same act under which it was erected expressly gives powers for the construction of floating docks, the harbour still remains without a dock or place of shelter, and vessels at low water lie on the rocky bottom, and exposed to damage ; while its income of £4,000 a year, levied upon shipping, is mortgaged to pay the interest of money chiefly expended in building the bridge. It is also stated in evidence that while more than half-a-million of money has been laid out in improving the Upper Shannon, the estuary of that river, from Limerick to the sea, has been denied even a few hundred pounds to buoy and beacon the dangerous shoals, which, although easily removed, are allowed to remain, and obstruct the navigation of the port.

At Galway, similarly situated at the head of a large inlet on the western coast, sheltered from the Atlantic swell by the natural break-water of the Arran Isles, and shortly to be connected inland with the extensive navigation of Loughs Corrib and Mask, much spirit and enterprise has been shown since 1832, in making a floating dock of nine acres in extent, fit to contain vessels of 500 tons. In consequence the trade has increased, and the revenue of the port has risen from £340 to £2,000 per annum. Yet unhappily the whole of this income is mortgaged to pay the interest of the debt incurred ; and owing to some mismanagement, a rocky bar of three feet high, on which a vessel might break her back, has been left just without the sill of the dock gates. Great inconvenience is also stated to arise from the distance the Claddagh fishermen have to go to their fishing grounds, thirty miles off ; and that a pier half way down the bay would be a great boon to this valuable body of men, as well as to the owners of numerous turf boats which trade in this direction.

Sligo, with limited means, has recently extended its quays 700 yards, and removed a portion of the Blennick Point, while its trade has much increased. Private quays, however, still cause great inconvenience ; weirs exist, which obstruct the upward flow of the tide ; the ebb and flood streams require directing to prevent the increase of sand banks ; and the channel generally wants deepening, to enable the port to keep pace with its thriving trade.

Londonderry, on the Foyle, where the river expands into a spacious navigable estuary, has great natural advantages, which have been ill-seconded by art. Mud banks encumber the foot of the quays, which might be kept free by simply guiding the course of the stream. The quays, chiefly private property, are in a neglected state, and project apparently as the owners think fit into the river. Complaints are made by sailors and pilots of the leading lights on Innishowen Head being on the same level, of the want of a light on Rathlin Island, and of the more glaring want of a beacon on the Carrigh-vanan rock, which lies in the fair track of steamers to and from the port.

Belfast, the first town in Ireland in enterprise and commercial prosperity, ranks second only to Dublin as a port, and has an income of £22,000 a year. In the year 1840, a new channel up to the town was opened, having nine feet water at low tides, which has proved to be a great convenience to the fine steamers that daily run from hence to Glasgow and Liverpool. But even with this channel, the improvements in the harbour are far from having kept pace with the rapid advance of the town. Until very lately, the quays and docks have been private property, and thus have been permitted to oppose a barrier to improvement. The evidence shows that they are still in a very neglected state, and that there is so great a want of accommodation, that steamers are often obliged to discharge their cargoes lying alongside the quays three abreast. Complaints are made of the state of the Custom-house; that the lower lock of the Lagan navigation, is only a mile and a-half above the town, and thus prevents the upward flow of the tide; that encroachments are making on the banks of the river, and that still more extensive encroachments are threatened by railway speculation: in short, that everything points to the vigilant control which is absolutely necessary to enable this fine port to keep pace with the rapid strides, both in manufactures and trade, of the capital of Ulster.

Newry has the great advantage of lying within Carlingford Lough, which at a moderate outlay might be made a harbour of refuge, an inestimable boon on this part of the coast. The Navigation Company here, instead of deepening the natural channel of the river, have embarked all their capital in an artificial canal.

Dundalk has recently made great efforts, guided by a skilful engineer, to improve the harbour, and increase in steam traffic, consequent upon deepening the channel, already demands leading lights at the entrance of the river.

Drogheda has been much improved by steadily dredging the river Boyne, and the revenue of the port has been more than doubled during the last few years; there is, however, much yet to be done, and there are various symptoms of neglect that would vanish under efficient control; like Galway, its whole dues are mortgaged for a debt incurred in improving the harbour.

The Piers or Breakwaters of the artificial harbours of Kingstown, Howth, Donaghadee, Dunmore, Ardglass, and Portrush,—all built according to the same mode, of rubble stone, with a long slope to seaward, have all suffered very material damage from the effects of the

waves ; Ardglass pier, together with its lighthouse, now lies a mass of ruins in the sea.

Of the seventy fishing piers, constructed or repaired in 1822 and since, at a cost of £43,000, chiefly of public money, many of them, from neglect in receiving timely repairs, are falling to decay ; and one of them, at Newcastle, county of Down, has been entirely destroyed, to the great distress and almost ruin of the fishermen around. These piers have, nevertheless, proved highly beneficial to the districts in which they are placed, as have also the harbours built by the liberality of individuals, as the Earl of Courtown, at Courtown, Lord Annesley, at Newcastle, Mr. Ogilvie, at Ardglass, and Viscount Palmerston, at Mullaghmore, in Sligo ; and it is earnestly to be hoped that some efforts will be made to preserve them from a similar fate.

To the numerous instances of neglect which we have already cited, we must add that ballast and stone are very generally thrown over into the harbours with impunity. Bantry Harbour, on the west coast, and Skerries on the east, are two of the most glaring cases ; at the latter, it appears in evidence, that 2,000 tons are annually discharged, a great part of which is thrown into the harbour or the roadstead. But even worse than this is the complaint of the pilots, that at Larne—a secure and capacious natural inlet on the east coast—the limestone boats, after loading at the quarries as deep as they can swim, in order to swell their bills of lading, drop down by night to the entrance of the harbour, and there throw over the upper part of their cargo before they venture to proceed to sea.

For further details respecting the harbours of Ireland, we humbly beg leave to refer to the Appendix for the evidence taken at each place, to the various engineers' and other reports, and to the detailed reports of the examining commissioners on each harbour that was visited. The mass of information on the ports in that part of your Majesty's dominions we believe to be greater than ever before collected, and we feel assured that it will lead to immediate and vigorous measures for their preservation and improvement.

We must not omit to mention the assistance we received in the course of our examination from the Admiralty surveyors, and from the Coast Guard around the coasts of Ireland ; as well as from the Ordnance Map Office, and the Board of Public Works in Dublin. We have also to acknowledge the great advantage we have derived from the Ordnance maps and Admiralty charts of Ireland ; from the accurate lines of level carried across the country by the officers of the Royal Engineers, under Colonel Colby, a system which we hope may be extended to England ; and from the series of tidal observations discussed by Mr. Airy, in the Philosophical Transactions for 1845, for which a datum is at once obtained for tide scales, to be hereafter established in the ports, or other points of the coasts of Ireland.

The Isle of Man occupies an important position in the Irish Channel, directly in the track of communication between Liverpool, Glasgow, and Belfast, and of the coal trade from Whitehaven and Maryport to the whole of the east coast of Ireland. It has been aptly termed the "Beacon

of the Irish Sea," and as such, everything that care and skill can suggest, as to lights, beacons, and improvement of its harbours, would be well bestowed, and tend to prevent the recurrence of the numerous wrecks that have taken place around its shores. Yet such is far from being now the case; on the contrary, (with the exception of the coast lights maintained by the board of Scotland,) marked neglect prevails throughout; and here the evils of irresponsible, self-elected authority are but too manifest, the commissioners meeting only once a year, to go through the form of auditing their own accounts, keeping no regular minutes of their proceedings and practically leaving the whole power and authority in the hands of a single person.

On the north-west coast of England, the river Lune and the port of Lancaster are capable of much improvement. The recent Admiralty survey of this district, has shown that there is a deep-water channel, hitherto neglected, in Morecambe bay, approaching to within three miles of Lancaster, which, if properly lighted and buoyed, would afford a harbour of refuge—the great want of this part of the coast, where all are tidal harbours.

Fleetwood-on-Wyre, from its connection with the Preston and London Railway, and from its direct communication with Belfast and Glasgow, has at once become a port of consequence; and the admirable system of lighting adopted in its channel, its extent of quay accommodation, and its well-appointed and powerful steamers offer an instructive example of what well-directed skill and energy can accomplish in a few years.

The river Ribble and port of Preston offer a proof also of the value of skilful engineering, as applied to navigable rivers. Only five years since, spring tides rose but six feet, and neap tides not at all at Preston Quay, so that vessels were obliged to unload their cargoes at Lytham, near the mouth of the river, and send them up to Preston in lighters or flats drawing but six feet of water; whereas, now, by means of straitening the channel and deepening its bed, spring tides rise ten feet, and vessels of 200 tons, drawing eleven feet of water, come up to the quay. Thus judicious enterprise, has much increased the number of its shipping, as well as the amount of its revenue, and enabled the port in some measure to keep pace with the rapid advance of manufactures in the town.

The river Dee and the port of Chester afford a striking example of the danger to which the interests of navigation may be exposed by placing the power over the river in the hands of a joint-stock company, whose principal interest consisted in the successful reclaiming of land. The area of the estuary of the Dee, between Chester and Kelstra, was formerly about 12,000 acres, covered at every spring tide; of this space 8,000 acres have been enclosed, or as it is termed, reclaimed, and the tidal water excluded; about 5,000 acres of the land thus obtained on the Cheshire side, now form the Dee Company's estate, and nearly 3,000 acres on the Flintshire shore are the property of the adjoining landed proprietors. The Act of Parliament that sanctioned this extensive encroachment required that a depth of fifteen feet at ordinary spring tides should be maintained up to Chester, in default of which the rental of the company was liable to be seized and applied to the improvement of

the navigation. This condition, it appears in evidence, has not been complied with; the standard by which it should be ascertained and which was required to be maintained does not exist, and the river was in so bad a state, in December, 1844, that a vessel drawing only eight-and-a-half feet of water could not go up to Chester on a spring tide.

A LEAF FROM THE MARQUESAS.

Six months at sea! Yes, reader, as I live, six months out of sight of land; cruising after the sperm whale, beneath the scorching sun of the line, and tossed on the billows of the wide-rolling Pacific. The sky above—the sea around, and nothing else. Weeks and weeks ago our fresh provisions were all exhausted; there is not a sweet potato left—not a single yam.

Those glorious bunches of bananas which once decorated our stern and quarter-deck have, alas, disappeared; and the delicious oranges which hung suspended from our tops and stays, they too, are gone; yes, they have all departed, and there is nothing left us but salt horse and sea-biscuit. Oh, ye state-room sailors, who make so much ado about a fourteen day's passage across the Atlantic; who so pathetically relate the privations and hardships of the sea, where, after a day of breakfasting, lunching, dining off five courses, chatting, playing whist, and drinking champagne punch, it is your hard lot to be shut up in little cabinets of mahogany and maple, and sleep for ten hours, with nothing to disturb you but "those good-for-nothing tars shouting and tramping over head." What would ye say to our six months out of sight of land?

Oh, for a refreshing glimpse of one blade of grass—for a snuff at the fragrance of a handful of the loamy earth! Is there nothing fresh around us? Is there no green thing to be seen? Yes, the inside of our bulwarks is painted green; but what a vile and sickly hue it is, as if nothing bearing even the semblance of verdure could flourish this weary way from land. Even the bark that once clung to the wood we use for fuel, has long been gnawed off and devoured by the captain's pig, and so long ago, too, that the pig himself has in turn been devoured.

There is but one solitary tenant in the chicken-coop, once a gay and dapper young cock, bearing himself so bravely among the coy hens; but look at him now, there he stands moping all day long on that everlasting one leg of his. He turns with disgust from the mouldy corn before him and the brackish water in his little trough. He mourns, no doubt, his lost companions, literally snatched from him, one by one, and never seen again. But his days of mourning will be few, for Mungo, our black cook, told me yesterday that the word had at last gone forth, and poor Pedro's fate was sealed. His attenuated body will be laid out upon the Captain's table next Sunday, and long before night will be buried with all the usual ceremonies beneath that worthy individual's

vest. Who would believe that there could be any one so cruel as to long for the decapitation of the luckless Pedro ; yet the sailors pray every minute, selfish fellows, that the miserable fowl will be brought to his end. They say the captain will never point the ship for the land so long as he has in anticipation a mess of fresh meat. This unhappy bird can alone furnish it ; and when he is once devoured the captain will come to his senses. I wish thee no harm, Pedro, but as thou art doomed, sooner or later, to meet the fate of all thy race, and if putting a period to thy existence is to be the signal for our deliverance, why, truth to speak, I wish thy throat cut this very moment ; for, oh, how I wish to see the living earth again. The old ship, herself, longs to look out upon the land from her hawse holes once more ; and Jack Lewis said right the other day, when the captain found fault with his steering.

"Why, d'ye see, Captain Vangs," says bold Jack, "I'm as good a helmsman as ever put hand to spoke, but none of us can steer the old lady now ; we can't keep her full and bye, sir, watch her ever so close she will fall off ; and then, sir, when I put the helm down so gently, and try to coax her to the work, she won't take it kindly, but will fall round off again ; and it's all because she knows the land is under her lee, and she won't go any more to windward." Aye, and why should she, Jack ? Didn't every one of her stout timbers grow on shore, and hasn't she sensibilities as well as we ?

Poor old ship ! Her very look denotes her desires ; how deplorable she appears ; the paint on her sides burnt up by the scorching sun, is puffed out and cracked. See the weeds she trails along with her ; and what an unsightly bunch of those horrid barnacles has formed about her stern piece ; and every time she rises on a sea, she shows her copper torn away, or hanging in jagged strips.

Poor old ship, I say again : for six months she has been rolling and pitching about, never for one moment at rest. But courage, old lass, I hope to see thee soon within a biscuit's toss of the merry land, riding snugly at anchor in some green cove, and sheltered from the boisterous winds.

"Hurrah, my lads ! it's a settled thing ; next week we shape our course to the Marquesas !" — the Marquesas ! what strange visions of outlandish things does the very name spirit up ! naked houris — cannibal banquets — groves of cocoa-nut — coral reefs — tattooed chiefs — and bamboo temples — sunny valleys planted with bread-fruit trees — carved canoes dancing on the flashing blue waters — savage woodlands guarded by horrible idols — *heathenish rites and human sacrifices*.

Such were the strangely jumbled anticipations that haunted me during our passage from the cruising ground. I felt an irresistible curiosity to see those islands which the olden voyagers had so glowingly described.

The group for which we were now steering, (although among the earliest of European discoveries in the South Seas, having been first visited in the year 1595,) still continues to be tenanted by beings as strange as ever. The missionaries sent on a heavenly errand, had sailed by their lovely shores and had abandoned them to their idols of wood and stone. How interesting the circumstances under which they were dis-

covered. In the watery path of Mendonna, cruising in quest of some region of gold, these isles had sprung up like a scene of enchantment, and for a moment the Spaniard believed his bright idea was realised. In honour of the Marquess de Mendoza then viceroy of Peru, under whose auspices the navigator sailed, he bestowed upon them the name which denoted the rank of his patron, and gave to the world on his return a vague and magnificent account of their beauty. But these islands, undisturbed for years, relapsed into their previous obscurity, and it is only recently that any thing has been known concerning them. Once in the course of half a century, to be sure, some adventurous rover would break in upon their peaceful repose, and astonished at the unusual scene, would be almost tempted to claim the merit of a new discovery.

Of this interesting group but little account has ever been given, if we except the slight mention made of them in the sketches of South Sea voyages. Cook, in his repeated circumnavigations of the globe, barely touched at their shores; and all that we know about them is from a few general narratives. Among these are two that claim particular notice.

Porter's "Journal of the cruize of the United States frigate, *Essex*, in the Pacific during the late war," is said to contain some interesting particulars concerning the islanders. This is a work, however, which I have never happened to meet with; and Stewart, the chaplain of the American sloop of war *Vincennes*, has also devoted a portion of his book, entitled "A Visit to the South Seas," to the same subject.

Within the last few years, American and English vessels engaged in the extensive whale fisheries of the Pacific, have occasionally, when short of provisions, put into the commodious harbour which there is in one of the islands; but a fear of the natives, founded on the recollection of the dreadful fate which many white men have received at their hands, has deterred their crews from intermixing with the population sufficiently to gain any insight into their peculiar customs and manners.

The Protestant missions appear to have despaired of reclaiming these islands from heathenism; the usage they have in every case received from the natives has been such as to intimidate the boldest of their number. Ellis, in his "Polynesian Researches," gives some interesting accounts of the abortive attempts made by the Tahiti mission to establish a branch mission upon certain islands of the group. A short time before my visit to the Marquesas, a somewhat amusing incident took place in connection with these efforts, which I cannot avoid relating.

An intrepid missionary, undaunted by the ill-success that had attended all previous endeavours to conciliate the savages, and believing much in the efficacy of female influence, introduced among them his young and beautiful wife, the first white woman who had ever visited their shores. The islanders, at first, gazed in mute astonishment and admiration at so unusual a prodigy, and seemed inclined to regard it as some new divinity. But after a short time, becoming familiar with its charming aspect, and jealous of the folds that encircled its form, they thought to pierce the sacred veil in which it was enshrined, and in the gratification of their curiosity so far overstepped the limits of good-breeding, as to offend the

lady's sense of decorum. Her sex once ascertained, their idolatry was changed into contempt, and there was no end to the contumely showered upon her by the savages, who were exasperated at the deception which they conceived had been practised upon them. To the horror of her affectionate spouse, she was stripped of her garments, and given to understand that she could no longer carry on her deceits with impunity. The gentle dame was not sufficiently evangelised to endure this, and fearful of further improprieties, she forced her husband to relinquish his undertaking, and together they returned to Tahiti.

Not thus shy of exhibiting her charms was the island queen herself, the beautiful wife of Mowanna, the king of Nukuheva.

Between two or three years after the adventures recorded in this volume, I chanced, while on board a man-of-war, to touch at these islands. The French had then held possession of the Marquesas some time, and already prided themselves upon the beneficial effects of their jurisdiction, as discernible in the deportment of the natives. To be sure, in one of their efforts to reform they had slaughtered about a hundred and fifty of them at Whitiho, but let that pass. At the time I mention, the French squadron was rendezvousing in the bay of Nukaheva, and during an interview between one of their captains and our worthy commodore, it was suggested by the former, that we, as the flag-ship of the American squadron, should receive, in state, a visit from the royal pair. The French officer likewise represented, with evident satisfaction, that under their tuition the king and queen had imbibed proper notions of their elevated station, and on all ceremonious occasions conducted themselves with suitable dignity. Accordingly preparations were made to give their majesties a reception on board in a style corresponding with their rank.

One bright afternoon, a gig, gaily bedizened with streamers, was observed to shove off from the side of one of the French frigates, and pull directly for our gangway. In the stern sheets reclined Mowanna and his consort. As they approached, we paid them all the honours due to royalty, manning our yards, firing a salute, and making a prodigious hubbub.

They ascended the accommodation ladder, were greeted by the commodore, hat in hand, and in passing along the quarter-deck the marine guard presented arms, while the band struck up "The King of the Cannibal Islands." So far all went well; the French officers grimaced and smiled in exceeding high spirits, wonderfully pleased with the discreet manner in which these distinguished personages behaved themselves.

Their appearance was certainly calculated to produce an effect. His majesty was arrayed in a magnificent military uniform, stiff with gold lace and embroidery, while his shorn crown was concealed by a huge chapeau bras, waving with ostrich plumes. There was one slight blemish, however, in his appearance; a broad patch of tattooing stretched completely across his face, in a line with his eyes, making him look as if he wore a huge pair of goggles, and royalty in goggles suggested some ludicrous ideas. But it was in the adornment of the fair person of his

dark-complexioned spouse that the sailors of the fleet evinced the gaiety of their national taste. She was habited in a gaudy tissue of scarlet cloth, trimmed with yellow silk, which descended a little below the knees, exposed to view her bare legs, embellished with spiral tatooning, and somewhat resembling two miniature Trajan columns. Upon her head was a fanciful turban of purple velvet, figured with silver sprigs, and surmounted by a tuft of variegated feathers.

The ship's company crowding into the gangway to view the sight, soon arrested her majesty's attention. She singled out from their number an old *salt*, whose bare arms and feet, and exposed breast were covered with as many inscriptions in Indian ink as the lid of an Egyptian sarcophagus. Notwithstanding all the sly hints and remonstrances of the French officers, she immediately approached the man, and pulling further open the bosom of his duck frock, and rolling up the leg of his wide trowsers she gazed with admiration at the bright blue and vermilion pricking thus disclosed to view. She hung over the fellow, carressing him and expressing her delight in a variety of wild exclamations and gestures. The embarrassment of the polite Gauls at such unlooked-for occurrence may be easily imagined; but picture their consternation, when all at once the royal lady, eager to display the hieroglyphics on her own sweet form, bent forward for a moment, and turning sharply round, threw up the skirts of her mantle, and revealed a sight from which the aghast Frenchmen retreated precipitately, and tumbling into their own boat, fled the scene of so shocking a catastrophe.

SELECTIONS FROM ANCIENT NAVAL RECORDS,—No. III.
Communicated by J. Barrow, Esq., F.R.S.

The Chatham Chest.—The original "Chatham Chest," having been ordered by the Lords of the Admiralty to be conveyed to London, has been finally sent to Greenwich Hospital, with a request to the governor that it may be preserved as a memorial in such part of the building, as he may think proper.

The Chatham Chest was one of those ancient institutions of the naval administration of this country, the name of which is no doubt familiar to most naval officers, although there may be very few who have actually seen it. It is, however, a moderate sized iron chest, iron bound as a matter of course, and was originally established by that gallant Admiral, Sir Francis Drake, in the reign of Queen Elizabeth. Among the records of the Admiralty there is a MSS. volume of Instructions, Orders, &c., from the 18th of October 1646 to 1647, in which are the following entries respecting the Chest.

"Gentlemen.—Understanding by the Governors of the Chest at Chatham, instituted for the relieve of all mariners and ship carpenters that receive hurts and maimes in the service of the State. That amongst

other things which they have in occupation as trustees for the good of the said charitable uses, they hold a lease from the late Archbishops of Canterbury of a parcell of arrable, marsh grounds, and woodlands, containing by mensuration sixty-two acres, one quarter, and twenty-four perches, in the parish of Chislett, in the county of Kent, for the terme of twenty-one yeares, commencing the 13th November, 1635, in the eleventh year of the reign of King Charles, for which they pay yearly twenty-two fatt weathers, the accustomed rent for many years by past ; which said lands they understand are to be exposed to sale upon a somons which they had to show their lease unto Mr. John Madden, Mr. John Griffith, and Mr. Henry Belgrave, appointed surveyors of the said late Archbishop's land in these parts. And for as much as provision is made by the Ordinances of Parliament for that purpose, that the contractors shall have due respect to the immediate tenants, by the admitting of them to the pre-emption of such lands wherein they have interests before any others. As also to support that pious institution for the good of all seamen which are, or shall be maimed in the service of the state. We cannot but recommend the said Governors of the Chest unto your favor in an especial manner, to the end they may have the first refusall thereof, which we consider will be a very acceptable service, and fully consistent with that trust which is reposed in you. Thus, not doubting of your due regards to the premises, we bid your heartily farewell, and rest,

(Signed) “ Your very loving friends,
 “ WARW., FR. DARW^L., WA.. ERLE,
 “ WM. LEWIS, R. BENNETT.

“ *Westminster, 13th May, 1647.*

“ *To our very loving friends, Wm. Blackwell, Esq., Sir Wm. Roberts, Knight, Col. Richard Turner, James Russell, Esq., and the rest of the contractors for the sale of the late Archbishop of Canterbury's lands in the countie of Kent.*”

“ *At Whitehall, 20th January, 1667.*

“ *By His Majestie in Council,*

“ This board being informed that there are several sumes of money stopt out of seamen's wages at Chatham and Portsmouth for neglect of Duty ; as likewise, that whereas there is four-pence per month allowed out of each seaman's wages towards the maintenance of a minister in each ship, and that there are many ships in his Majestie's navy which have not had any minister to officiate therein for the time past ; as also, may not have any for the future. It was thereupon ordered that his Royal Highness the Duke of Yorke, Lord High Admiral of England, bee and is hereby desired and authorized to give speedy and effectual order that all such sumes of money as have been stopt at Chatham and Portsmouth for neglect of seamen's duties, as likewise the groats arising due out of seamen's wages towards the maintenance of a minister in such ships of his Majestie's navy where no minister hath been to officiate ; as alsoe where none shall happen to bee for the future, that the same be paid to the

Governors of the Poors' Chest for the Reliefe of Maymed Seamen and Pentioners."

" *At Whitehall, 30th March, 1688.*

" *By His Majestie in Council,*

" It is this day ordered by His Majestie in Council, That all fines, ameracements, and pecuniary mulcts laid, or from hence forward to be laid upon any commander, or other officer, seamen, or other person whatsoever serving his Majesty in any capacity at sea, or in any employment belonging to his royal navy on shore, whether by y^e authority and direction of y^e Lord High Admiral of England, or by any sentence or decree of courts martiall, shall be paid and applied to and for y^e sole use of y^e chest at Chatham, towards y^e better support and maintenance of y^e poor seamen and mariners belonging thereto, and to no other use whatsoever. And that y^e present and future supervisors and governors of y^e said chest for the time being, do from time to time demand, receive, and give discharges for all and every sume or sumes of money arising from any such fine, ameracement, or mulct from y^e person or persons, on whom y^e same are and shall be so imposed. And y^e Lord High Admiral of England, y^e secretaries of y^e Admiralty, and principal officers and commanders of y^e navy, and all other officers and persons concerned, are required to take notice hereof, and severally endeavour to see y^e same effectually complied with."*

In the reign of Queen Anne there is an order in Council dated 24th of April, 1703, which states that there was that day read at the board, a memorial from His Royal Highness the Lord High Admiral, (Prince George of Denmark), upon which, a recapitulation of the foregoing order of 1688 is given, and a direction that the supervisors and governors of the Chatham chest for the time being, do from time to time demand, receive, and give discharges for all and every sum and sums of money arising from any such fines from the person or persons on whom the same are and shall be imposed.

Upon the 9th of June, 1709, a memorial was read to Her Majesty in Council from the Lord High Treasurer, together with a letter from the Commissioners of the Navy, transmitting one from the Governors of the Chest of Chatham, "representing y^e great inconvenience it will be to y^e poor pensioners of y^e said chest, in case y^e fines, ameracements, and pecuniary mulcts, abated from officers and seamen serving in y^e navy, (which by severall orders of committee in y^e last reigns were appointed for y^e chest at Chatham,) should be applied to Greenwich Hospital, as directed by Order in Council, of 16th April last."

Her Majesty having taken the same into consideration, was pleased to order and direct that the said order of the 16th of April last, "be revoked, discharged and annulled, and that y^e abovementioned fines be continued to be paid as formerly, to y^e chest at Chatham, towards y^e support and subsisting y^e poor pensioners, according to former orders."

It would appear that in 1803 the establishment of the Chatham Chest was transferred to Greenwich Hospital by Act of Parliament, passed in the forty-third year of the reign of Geo. III.

* MSS. Admiralty.

IRON LIGHTHOUSES.

In my observations on Colonial Lighthouses, which appeared in the *Nautical Magazine* for April, I regret having omitted to say that to Capt. Sir Samuel Brown, R.N., is due the credit of proposing *iron* towers for lighthouses, on such rocks as the Wolf Rock and Skerryvore.

And now I will, at the risk of being tedious, offer some remarks upon the comparative value of different systems of lights for lighthouse purposes.

In my first report to the Board of Ordnance I referred to the lantern and Fresnell's First Order of Light Apparatus, that had been ordered from the Trinity Corporation for Gibbs hill, Bermuda, some years before I was employed to design and specify the iron lighthouse:

"A light apparatus such as I prefer for Bermuda, consists of 24 paraboloidal reflectors of great depth, arranged in a revolving frame showing six faces of four reflectors on each face. The prolate form of reflector is much preferable to the oblate form more usual in sea lights. Their effect will be more brilliant than any other mode yet proposed for directing the light for lighthouse purposes.

"It is of the utmost importance to examine the comparative value of a revolving light, from such paraboloidal reflectors, and of a revolving light from the glass refractors known as Mr. Fresnell's First Order, and in the course of the examination it must be borne in mind that the light required on Gibbs hill is not merely one to be seen between the S. and S.E. of the site where, as ships may make free with the land, an indifferent light might answer the purpose. The light must be seen from any point in 350° of the circle, and 23 or 25 geographical miles when looked out for from N. and N.N.E., and it must be remembered that Gibbs hill is sometimes foggy. The light ought, therefore, to be certain, and of the most distinct and striking character."

A glass lens has, like a paraboloidal reflectors, the property of rendering parallel the rays of light shot from its focus, and by refraction a lens produces the same effect that a paraboloidal mirror produces by reflection.

Mr. Fresnell, therefore, "brought all the lamp light into one small focal plane in the centre of the light-house, by making the lamp with four concentric wicks. He surrounded this one focal light by eight square lenses, each consisting of several concentric lenses. He placed the centres of the lenses in the same horizontal plane as the centre light, and at the proper focal distance. These square lenses formed thus a vertical prism, around the light, having a regular octagon at its base, throwing out eight beams of light to strike the seaman's eye, as they should be exhibited in the different parts of the horizon by the revolution of the frame in which they are all placed.

"The rays of light from the *one* lamp passing upwards, and the rays passing downwards, which the eight concentric lenses just described, do not intercept and direct, would pass off, and be practically lost were it not for the reflectors above and below, *which* direct *them* into an

azimuthal light constantly and equally visible at all points equi-distant from the light-house. But this azimuthal and *very large portion*, (about 6-tenths) of the light generated, being reflected at a great distance from the lamp is soon lost in hazy weather. When looked at it forms only a small vertical pillar, or stripe of light, and is soon lost by distance. The repeated presentation of one of the square lenses to the seaman's eye is the only valuable effect of the light when erected in such a situation as Gibbs hill, Bermuda.

"The octagon prism revolves by machinery once in eight minutes as at the Start Point, and the seaman (who by reason of distance, rain or thick atmosphere, may not see the constant light,) has one of the beams passing him every minute, and resting on his eye about nine seconds altogether; increasing, full, and decreasing, during that time. Thus he observes a star-like light for about nine seconds, and darkness for fifty-one seconds."

It has been found that Mr. Alan Stevenson, who has strongly advocated this French system, is correct in saying that the "uncertainty of the management of the lamp renders it more difficult to maintain the revolving dioptric light without fear of extinction; an accident which has several times occurred at Cordouan and other French light-houses." The same accident has, I find, occurred at the Isle of Wight, and Fresnell's system must always be subject to this serious objection. The extinction of one of a number of lamps in a revolving catoptric light, is "not only less probable but leads to no serious consequence, but the consequences of throwing the whole horizon into darkness by the extinction of the *one* lamp are infinitely great." Hence we may reasonably conclude that the *certainty* of the light recommended by the Trinity Corporation cannot be depended on.

Now as to the *distinct* and *striking* character of the dioptric or catoptric systems of lighting, I venture to affirm that in these essential features the periodical revolution of a beam from four such reflectors as I propose once in every minute, with a duration on the seaman's eye for twenty-two seconds, will be more *distinct* and *striking* than can be had from the eight-glass refractors, recommended by the Trinity Corporation.

There is no more light lost in a silvered reflector than in a glass refracting medium.

The value of radiated light as it recedes from the source (the lamp) diminishes as the square of the distance. The reflectors proposed for each beam not only embrace and turn into that beam one-tenth of the whole light produced from each face of four Argand lamps, but the mean distance of the reflection is not more than ten inches from the flames. The glass refractors recommended by the Trinity Corporation are so placed round the one powerful lamp, all at such a distance from it, that only one-twentieth of the whole light produced passes through the one forming the beam at the time of observation, and none of these reduced numbers of rays are deflected or diverted into the beam until they have travelled 36 or 40 inches from the source of this light.

TABLE SHEWING THE COMPARATIVE VALUE OF DIFFERENT LIGHT APPARATUS.

| Description of Light Apparatus | Fresnel's revolving beams, first order. | Revolving beams from 24 Paraboloidal Reflectors, 6 faces, 4 in each face. | Revolving beams from 18 Paraboloidal Reflectors, 6 faces, 3 reflectors in each face. | Revolving beams from 20 Paraboloidal Reflectors, 5 faces, 4 reflectors in each face. | Revolving beams from 20 Paraboloidal Reflectors, 5 faces, 4 reflectors in each face. |
|--|---|---|--|--|--|
| Oil used in 12 hrs. | 16 Pints | 18 Pints. | 14 Pints. | 15 Pints. | 15 Pints. |
| Numbers of sides to revolving prism. | 8 | 6 | 6 | 5 | 5 |
| Time of revolution of entire apparatus in seconds | 480s | 360s | 360s | 360s | 300s |
| Duration of intense light on seaman's eye. | 9 sec. in all, increasing, full, and diminishing. | 22 sec. being abrupt in appearance and disappearance, it will be full for 20 sec. | 22 sec., same as No. 2, but not so strong a light | 22 sec., same as before, as strong as No. 2. | 18s |
| Time between appearance and re-appearance of beam. | 60s | 60s | 60s | 72s | 60s |
| Duration of darkness intervening | 50s | 38s | 38s | 50s | 48s |
| Will be seen as a permanent light with beams at distance from L. H., of, say | 6 or 8 miles. | 6 or 8 miles. | 6 or 8 miles. | 6 or 8 miles. | 6 or 8 miles. |
| Distance at which the intense light will be visible | From horizon 24 miles. From topmast, from 5 to 10 miles further. | Same distance, but clearer in case of thick weather. | | | |

ALEXANDER GORDON.

22, Fludyer Street, Whitehall,
April 18th, 1846,

AUTO-BIOGRAPHICAL SKETCHES, by a Merchant Sailor, illustrative of the State of the British Merchant Service.

BELONGING to a sea-port town on the eastern coast of Scotland, I had early in life a predilection for the sea, which, however, my parents endeavoured, as much as possible, to over-rule, keeping me at the very excellent public schools of the town, receiving such a solid useful educa-

tion, as the Scottish public schools are famous for imparting. My earnest desire to go to sea on leaving school, was restrained by my father in a somewhat peremptory manner, and I was consigned to a merchant's office, under a written engagement to remain in it a certain period. My spirit, however, did not go with my occupation, and a thirst for reading, which access to a most excellent public library and plenty of leisure time enabled me to gratify, only fostered and increased my desire to try a nautical life, and be enabled to see for myself the many wondrous things recorded by the authors I perused.

I was aware, from former experience, that if my intention of pursuing a nautical life was made known, my parents would do everything in their power to thwart it, I therefore, while discharging my duties in the office, secretly prepared for pursuing the life I fancied, so soon as the term of my engagement terminated. I again went over the theory of navigation which I had previously learned at school, I pursued the study of the French language, and from an unfortunate Polish nobleman who was obliged to fly from his persecuted country on account of his share in the attempted revolution, I became partially acquainted with the German language, which afterwards proved extremely useful.

In pursuance of my secretly formed resolution to become a sailor, I left Scotland on the very day in which my engagement terminated, and went to London, nominally with the intention of procuring a situation in some mercantile establishment, but really with a view to pursuing the bent of my inclination. So eagerly did I long to commence my nautical career, that London, with its numberless curiosities and wonders to a country-bred youth, scarcely attracted my attention, and I only occupied my time in thinking of the best means of carrying out my intentions. So much had I been by my friends at home persuaded that I was unfitted for a nautical life, and that it was one of much suffering and privation, that I sometimes contemplated it proving so, on trial; and then the unpleasant idea of being termed in our provincial dialect a "stickit sailor," at times rendered me uncomfortable. Resolution to persevere prevailed, however, with this resolution, that I would, if possible, make the first voyage unknown to any one, in order that if I should not continue, I might again return to my former pursuits without any stigma attached to my name. With this view I recollected that a small brig belonging to Scotland, with the master of which I had formerly been intimate, and who had often been indebted to me for much assistance, was then at Antwerp from the Baltic.

Wishing to make a trial voyage aboard this vessel, and fancying there could be no objection on the part of the master, as I did not want any remuneration for my services, I at once took out a passport, and took passage in the steamer to Ostend, *en route* to Antwerp. Determined to commence at once as a sailor, so far as appearance went, I left in London all my shore-going apparel, having purchased such a stock as I deemed necessary for a short trip, I donned the blue jacket and trousers, and embarked, fancying myself already half a sailor. A stormy passage, and a consequent squeamish feeling, as well as my inability to walk the deck, soon proved to me that I was but a novice, and that the onward path

in the profession I had chosen, was not the smoothest in the world. An inward determination, however, urged me forward, and I recollect being even pleased that I was not positively sick, when almost all the passengers were so, and the ladies in particular suffering extremely. It was then the time of the Belgian revolution, when the citadel of Antwerp was still held by the Dutch; a strong body of soldiers lined the wharf at Ostend as the steamer approached, and no one was permitted to land until the passports were examined, and our appearance found to correspond with their description; our baggage was all taken to the custom-house, until passed by the proper officers. Almost bewildered at the strangeness of the scene, the immense crowd of civilians of every class, congregated just beyond the guard, all anxious to see the new comers—the hotel-keepers and their commissaries, all eagerly persuading the passengers to patronize their respective establishments—the officials at the same time telling us when, and how, our passports and luggage would be obtained—again, the chattering of the French which some were speaking, together with the broken English of others, and the harsh Flemish of the crowd, all tended to confound a novice to such scenes, just come from the quiet of a Scotch provincial town, and whose only experience of such matters was derived from reading. No one of the many hotel-keepers or their agents had ever addressed me, and I wondered why I should be passed by in their solicitations, until I recollected that my usual outward appearance was altered and that the unassuming blue jacket and cotton shirt of the sailor did not offer the ordinary inducements to the attentions of such parties. Thanks to my education, however, I recollected* sufficient French, (a language generally spoken in all the Flemish towns,) for my purpose, and I enquired the way to an hotel, I heard some of the passengers name during the passage. Arrived there, I found the commissaire too busy with the other passengers affairs, to attend to mine, but my knowledge of French carried me to the various offices where my passport was viséed and my luggage examined, with the greatest civility and dispatch.

On starting from Ostend the morning following, by diligence, for Antwerp, *via* Bruges and Ghent, I found some of my fellow passengers of the steamer, amongst others, a lady with whom after some time I entered into conversation, and to whom my knowledge of French proved of use, as she had forgotten or never learned it, and consequently found travelling disagreeable.

It was Sunday, and one of the great holidays of the Catholic church, when we entered Bruges after a tedious and rough journey over the Chaussé, between Ostend and that place. The country was most beautiful and interesting, the season being summer, the peasants all dressed in their holiday clothes, and the houses and churches adorned with ever-greens. Sabbath in a quiet, orderly, Scotch provincial town, to which alone I had previously been accustomed with all its solemn and religious associations,—the people grave and orderly, wending their way to the various places of worship, the shops all closed, no din save that of the church-going bell, the unassuming exterior of the places of worship,—the absence of all ornament, the feeling of devotion engendered by education, and fostered by the example of pious parents, bearing on the ap-

pearance and demeanour of the people ! how different such a sabbath to that which presented itself to my, then, inexperienced view, as we entered Bruges,—all was gaiety and noise, and jollity; a long procession of priests, and images, and the saint, whose fête was being celebrated, was passing from one church to another, followed by crowds of all classes and description, dressed in their holiday costume. Flags trailed from the windows of the houses; the doors were adorned with evergreens and flowers; here and there at intervals, a tradesman might be seen uninfluenced by such ceremonies, pursuing his usual avocations. Music and dancing, and many of the amusements of an English fair, met every encouragement from crowds of the happy looking people, altogether I could not fancy it was that day I had hitherto been accustomed to keep holy, nor is it possible to conceive any thing more unlike a British Sunday than a continental one.

Pursuing our way to Ghent through a country highly cultivated, and beautiful, we reached that city, shortly after noon, when we found, contrary to the reiterated assurances of the clerks in the diligence office at Ostend, that we could get no farther towards Antwerp until midnight, except we were inclined to pursue the circuitous route by Brussels, to which place most of our passengers seemed to be proceeding. My lady fellow-passenger was going to Antwerp, and after securing seats by the next diligence, we went to an hotel, where my French was exceedingly useful to my companion, for one can scarcely fancy anything more inconvenient than a lady travelling alone, and unacquainted with the language.

After refreshment we walked out to view the city, and I certainly was much surprised at its appearance, so different to any thing I had ever before seen, and so interesting and really beautiful. Its fine buildings, wide streets and squares, magnificent cathedral and churches,—its numerous canals, along whose banks trees were growing luxuriantly, pleasing to the eye, from their green foliage, and the feelings, by the shade they afforded from the summer sun,—the vast number of bridges over the canals necessary to keep up the communication between the various parts of the city,—the vehicles of the wealthy, as they rolled onwards to various places of amusement,—the holiday dresses of the poor, as they, on foot, wended the same way, their happy countenances and contented appearance, the *tout ensemble* of Ghent on that beautiful summer day, was delightful, and a realization of some of my boyish dreams of distant lands.

As we entered the diligence at Ghent at midnight, under the porte cochère of the hotel, by the glimmering of the lamp we perceived that the countenances of some of our fellow passengers were by no means prepossessing, and I think my companion de voyage evinced symptoms of uneasiness. We pursued our route, however, in safety, and reached the bank of the Scheldt opposite to Antwerp, but considerably above the city, being under the necessity of making a considerable detour to avoid the Dutch encampment, the flags displayed from which we observed as we were descending the river in a schuyt. On reaching the barriers of the various fortified towns we passed through, two gendarmes entered the diligence and remained until we reached the police office, here, also, on

embarking in the schuyt we were accompanied by two soldiers to enforce our landing at the Antwerp side. On reaching the city, I first sought out a good hotel, to which I safely conducted my companion, and then all eagerness to pursue my own course, I sought out the docks, in order to reach the vessel commanded by the man whose good services I trusted to make available in pursuit of my sea-faring predilection. With little difficulty I saw the vessel I was in quest of, and as it may be supposed, panting with the excitement of my situation, and the circumstances which led to it, I found my quondam friend the skipper, who, on my stating the object I had in view, received me with the utmost coolness and indifference, scarcely deigning to interest himself in my behalf, and speaking of my intention with a sullen, sarcastic sort of leer on his countenance, which thoroughly disgusted me. I turned from him and walked onwards, I knew not whither, pondering on my situation—the frustration of all my so eagerly desired intentions, a stranger in a strange place, my only acquaintance, who ought to have proved a friend, cold, careless, and uncivil. I felt for a moment completely disheartened. A little thought, however, soon recalled me to myself; a resolution to pursue my original course was formed; I once again turned me towards the vessels; and meeting some sailors belonging to some Scotch vessels, and stating my wish, they told me that a boy was wanted on board a brig, one of her apprentices having been left at a port in the Baltic, sick.

I went on board, enquired for the master, found him a kind-hearted looking man, of middle age, who at once listened to my desire to join his vessel, asked me several questions relative to my former life, agreed to receive me, gave me much sensible advice, told me I would have to mix with strange company, and hear and see much I had been unaccustomed to, advised me to behave well, and not learn either the language or habits of the sailors with whom I would now require to associate, and ended by calling the mate, a surly-looking man of forty, with evident symptoms of a frequent application to the bottle, who merely nodded his head, growled an assent to the master's orders, and told me, in the gruffest tone he could assume, to get my traps on board, and "turn to." That I soon accomplished; being ushered into the forecabin among my future shipmates, just before commencing their mid-day meal. The vessel was a brig of about 140 tons, regularly employed in the Baltic trade, belonging to an eastern port in Scotland, and just arrived in Antwerp with a cargo of rye, from Riga, which she had not then commenced to discharge.

The access to the forecabin, to which myself and traps were ushered, was by a small scuttle about two feet square, conveying the only light and air admitted into this singular abode; a ladder of a few steps carried me to the deck where I had to stoop, before I could further survey my future home. Situated in the very bows of the craft, the inside of the forecabin assumed a demi-spherical shape, being at the largest part from the scuttle to the stem about ten feet in length, the breadth proceeding from side to side, but decreased by the berths or "bunks," as they are called, composed of rough deals, nailed to the side, forming two tiers in height, and about 5 feet 10 inches long, and 2 feet wide. In these dormitories there was some comfort, there being no dread of chafing the skin from the bones when

the craft rolled, as to turn in them was impossible. I found the deck damp, or rather wet, with the accumulation of, I know not how many weeks filth upon it, the chests of the crew scattered about, their own clothes and persons filthy in the extreme, and their bed-clothes black as if a chimney sweep was the usual occupant. (Even up to the present day the Scotch Baltic sailors are notorious for their dirty habits, and the vessels as notorious for the miserable accommodation afforded the men, indeed the description given of the vessel in question will yet hold good, with a majority of them still employed in the same trade.) All were in anxious expectation of dinner for which the cook had gone to a cooking house on shore, no fire being allowed on board the vessels in the docks. Soon the cry of scaldings, and stand from under, announced the dinner, and a huge pan made its appearance, containing soup, a kid* accompanied it containing beef, and another containing biscuit. Each denizen of the fore-castle, produced from his chest, an iron spoon, and a tin pannikin; § from his pocket a clasp knife, and surrounding the saucepan, commenced operations on the broth, afterwards completing with beef and biscuit; the former being held in their hands, while a piece was cut and placed on the latter, which answered the two-fold purpose of plate and bread. I looked at first somewhat amazed at this novel mode of dining, but youth, previous exercise, and a good appetite, never previously spoiled by dainties, soon reconciled me to a trial of the food, which I found good and substantial. The meal now ended pipes were produced, charged and lighted, and presently a dense mass of smoke filled the fore-castle, while the conversation turned on various subjects; but mostly the amusements of the place, and the anecdotes connected with them. The hour allowed for dinner once past, the mate made his appearance in the companion abaft, and called out "grog ho!"; all hands going aft and receiving each a glass of undiluted spirits, which was drunk without any accompaniment. The discharge of the cargo not having yet commenced, the men were variously employed about the rigging, while I and the other boy, (for although in appearance I was more like what our Irish neighbours call a boy, I was still, on board so styled,) were variously employed in passing the ball, sweeping the decks, and lastly, but not least in importance, in assisting the cook to bring on board the supper. This meal consisted of tea, sweetened with molasses, boiled in a large saucepan, the same which made the soup for dinner, and biscuit and beef, ad libitum, for in the Baltic vessels there is seldom any stated allowance. Supper past, some of the married men of the crew passed their evening on board, while the majority prepared for a cruise on shore, never asking leave, or for a moment deeming such a step necessary.

On the morning at 5 A.M., three loud knocks of a handspike on the deck over our heads, with the mate's voice crying out, "Turn out there below," warned us of the necessity of commencing the labours of the day which we did after the majority of the crew had smoked a pipe. 8 A.M. brought the cook with his never-failing companion—the saucepan, now

* A small wooden tub used at sea to contain beef, pudding, &c.

§ A pannikin is a tin cup containing about a pint.

filled with coffee sweetened as before; the coffee and tea always being boiled in, and remaining in the pan, the coffee with bread and beef forming the breakfast. Our meals on board this vessel were constantly the same, no pork or pease or fish being on board, but the never failing beef and bread, with the addition of pudding on Thursdays and Sundays, made of flour, water, and the fat skimmed off the beef by the cook, technically called "slush." While in the Baltic in harbour, we had sea-pie on Sunday, consisting of alternate layers of cut beef, onions, and flour mixed with fat and water, no despicable mess, when well made of the fresh Russian beef. All the provisions in the Baltic vessels employed in the trade are generally good, from the shortness of the voyages, and the cheapness of the articles in the Baltic ports.

The discharge of the cargo commenced soon after my joining the vessel, and as I took my share, I felt the labour somewhat hard at first, and the filling of the rye in the hold, in a warm summer day, particularly disagreeable. My determination to conquer all these minor difficulties was however resolute; and I even succeeded in enlisting the sympathies of the crew in my favor. The mate, from the first, appeared resolved to play the tyrant: I was invariably called by him, "Boy, griffin, clumsy," and heard growled out occasionally "Young bear, all your sorrows to come;" or, "Teach you that going to sea is no joke." He invariably gave me all the most menial and dirty jobs he could find, and concocted others when no usual one was at hand, to make me assist the cook, (who also figured in the capacity of steward,) to scrub the cabin, the stove and funnel; and other such offices always seemed to give him pleasure. Fortunately I saw his object, and despising the man, I obeyed his orders, invariably performing the duties assigned me, to the best of my ability, and evincing every desire to take more than my share of the work. All my efforts, however, never met his approbation; but I was pleased to find my shipmates commending me occasionally; and the master, whom I seldom saw in harbour, always spoke to me when he had occasion to do so, with kindness. Three weeks enabled us to complete the discharge of the cargo, and take in ballast preparatory to a voyage to the Baltic.

PILOTS AND WATERMEN.

SIR.—Perhaps you will give place in your Magazine to the following remarks, which have been suggested to my mind, in consequence of the loss of the brig "Richard," Capt. Punchion, which was run on shore, upon the west end of the Tongue sand, on the north side of the Queen's channel, opposite Margate; the details of which I received from the mate of the Richard, and I will give them to you in something of log-book fashion. First premising that the Richard came from Liverpool with a general cargo, and according to a notion generally entertained came under the denomination of a "regular coaster," and the master considered

he was at liberty to employ any person he chose to pilot his vessel. He therefore took a Dover waterman, and placed the charge of his vessel in his hands as her pilot.

The log commences thus :—

“March 16th, 1846.—At about 9 A.M., passed through the Downs, rounded the North Foreland. About 11 A.M. stood for the Queen’s channel; made several tacks in company with other vessels. About 45 minutes past noon tacked from the southward, and hauled up the fore-sail and clewed up the fore-top-sail, the wind being strong from W.S.W. to W.b.S.; sent the people aloft to reef the main-top-sail; suddenly discovered that the brig was driving towards broken water upon the Tongue sand, and immediately called the crew down from the main-top-sail yard, and attempted to wear the vessel. In this attempt she ran upon the Tongue sand at 1 P.M.; and struck so heavily, that in a few minutes she became waterlogged. Boats from the shore came off to our assistance; but at about 3 P.M. the brig was nearly under water. All hands left her without saving an article, only what they had on their persons when she struck. About 4 P.M. landed at Margate.”—Here ends the log.

We all know, Sir, that causes produce effects; I have here given you very briefly the effects of a cause, and I mean to give you, in the best manner I can the cause itself.

It is well known that the Dover watermen seldom pass to the north-east of the South Foreland, unless it be to run a ship into the Downs in the absence of a pilot; or rather ships which the watermen run out of their course to avoid the pilots, and make good their job into the Downs, and afterwards to obtain the bounty for bringing a pilot off. This is the only experience these men have, and consequently they know nothing of the upper channels, but when a few pounds are in the way, they profess to know, and calculate upon following others who do know, as in the present case. The waterman above alluded to followed several other vessels; but from his unskilful management of the *Richard*, he was soon left behind, and was left to his own resources, and what followed. Here, Sir, I must, trouble you with a little seamanship, which I am happy to know you well understand. In the first place I observe that the tide flowed in the Queen’s channel on the 16th of March about 20 minutes past 2 P.M., and being a spring tide would run up fully half an hour after high water. The first of the flood runs to the W.S.W., and veers round during the tide until within an hour of high water, when it runs to the N.W.b.W. and N.W.

Now, the channel between the Tongue and Wedge sands where the *Richard* was situate when she tacked from the southward, lies W.b.N. and E.b.S. And the mate says the wind was about W.S.W. or W.b.S., I will give them the benefit of the point, and call it W.b.S. In that case you see the Tongue sand must have been at an angle of two points to the leeward: add to this the tide from the S.E., the Tongue sand must, therefore, have been a dead lee shore with the vessel’s head to the leeward

You know, Sir, Lord Nelson called himself a sailor. I address you as such, and I ask if you or he had to take sail off a ship in a strong wind,

and in a narrow channel would not our first proceeding be to put her head to the windward, when you could take your sails in with safety; but this waterman tries to wear the brig with all her head sails clued up, and nothing but a small fore-topmast-staysail to do it with, although he saw the breakers close under his lee. If he had let go the anchor the vessel would have immediately turned round with the tide with her head from the sand. A man who knew the business of a pilot would have done those things, but it is evident this man knew nothing about it.

I have been rather lengthy on this part, with a view to show how dangerous it is to employ such men, who know nothing of seamanship; and at a future time I may give you a number of cases similar to the above, with some curious affairs mixed with them.

If the Pilot Act were so simplified that the wayfaring man might "run and read and understand," such dangerous and ruinous enterprises as the above would not take place. You know all our laws are drawn up by lawyers, and with their "anything to the contrary, nevertheless, notwithstanding," they manage so to mystify, stupify, and stultify common sense, that they do not understand it themselves, and they take precious good care nobody else shall. For instance the LIX clause of the Pilot Act as regards exemptions from pilotage says,—“Or, of any Irish trader using the navigation of the rivers Thames or Medway, or of any ship or vessel *employed* in the regular coasting trade of the kingdom.” Would you believe it, the word “employed” has been so twisted that they profess to make it appear that any ship, large or small, which may arrive in the port of London, from India or any foreign port, if she takes in any part of a cargo afterwards, and bound to any port on the coast of Britain she is exempted from being obliged to employ a licensed pilot. But if she is in ballast not exempted. Can any thing be more absurd. What is a pilot employed for at all? Surely not merely to take care of the ship with some river excavation in her for ballast.

The first thought which forces itself upon us is that the more valuable the ship becomes in consequence of having a cargo on board, the more necessary it is that she be taken special care of. But the word—“employed”, according to the construction put upon it throws us and our thoughts “all aback.” But, Sir I ask you, who know the delicacies of the English language, how the words “employed in the regular coasting trade of the kingdom,” can be justly so warped and disjoined as to take hold of the word, “employed”, and leave the other words out; and by this means include all those magnificent ships belonging to Greenock, Glasgow, and Liverpool, which so often bring their cargoes to London from India, on the same footing with the numerous small coasters which constantly ply between London and the various ports on the coast.

Suppose the excellent Dr. Thomas Dick to be upon the wharf of one of our docks in London, and to see one of those majestic ships with her coppered bottom, and finely ornamented about the head and stern, and to go on board and see the rich carvings about her poop, &c., and examine her splendid cabin accommodations, and from thence be ushered on board one of those brigs, schooners, or sloops, (which are really regular coasters,) he should ask what rank in the order of nautical estimation do these two

vessels hold? What would his surprise be when told that they held the same rank and are denominated "regular coasters." He would be apt to think that there were as much difference between them as there is between the planets Jupiter and Mercury. But then he does not understand the Pilots Act.

You might ask me why the pilots do not try the validity of the word employed, before a Judge and a jury. But this they cannot do without a written and sealed sanction from the Corporation of Trinity House. This sanction the Corporation have refused, considering the word "*employed*," a *clincher* on the other side. But the primary evil lies in the ambiguous wording of the clause of the Act alluded to. Had it been as explicit as the Liverpool Local Pilot Act on this head, no misunderstanding could take place. The Liverpool act expresses in effect that any ship or vessel claiming exemption from the employment of a pilot, and having been previously employed in the foreign trade, must be six months out of that trade, before she can claim exemption from pilotage if she should be bound coastways.

In Liverpool there are no such persons known as unlicensed pilots or rather as we call them "*Birminghams*," therefore if any ship wants a pilot, there is none for them but the regular pilots. And such I believe is the case in all parts of the world, where a pilot establishment is lawfully formed, London alone excepted. In London we have a host of beings of the worst description who act the pilot principally in small vessels. These men are composed of discarded masters of coasters, with a sprinkling of fishermen and Greenwich watermen. They often go on board of Liverpool ships, are entered upon the Articles as mate or second mate, are taken ill at the Downs, land at Deal, and are seen a day or two after in London playing the same game. And if this be considered (as it is by some) too hazardous they put *Birmingham* below, get a river pilot to take the ship to Gravesend, which she passes either with a fair wind, or in tow of a steamer. The river pilot leaves her, up comes *Birmingham*, and takes charge, and if the wind be light and any fear of the pilots coming near; the steamer is ordered to go on, until she is fairly out of their reach. This extra towage generally costs the ship triple what they save in pilotage. Beside all this, look at the risk they run. Many of the out-port masters, and particularly the Liverpool men, do not consider that if any damage happen to their ship with one of these men on board their insurance becomes void, whether they come under the denomination of coasters or not, as no person is held responsible in law for the damage or loss of a ship but the master or pilot. They may fancy that they can do these things in the dark, but, if they come under the scrutinizing eye of the Underwriters, they may find themselves mistaken.

We pilots have no wish to force our services unnecessarily upon any one, but when we see ships with unlicensed men on board acting as pilots it is evident they want pilots of some kind; and if so, why should the master not be obliged to employ regular pilots, as they are in every other pilotage port in the world. But, Sir, there are facilities afforded for the evasion of pilotage in rather high quarters. For instance, any ship

or vessel liable to pilotage clearing out at the custom-house must give in the name of their pilot. I have known two brokers clear five ships in the same day, and both use the same pilot's name for the five ships! neither of them know the pilot, nor the pilot either of the ships. And I have actually known a broker to clear a ship with a pilot's name who had been dead for years! All this passes through the custom-house, and no notice is taken. If the master of a ship clears out coastways, and is bound foreign, he is under the penalty of one hundred pounds. But he may clear his vessel out one hundred times with the name of a pilot he never saw, nor ever intended to employ, or who does not exist, without penalty or even notice! Why then keep up this custom-house farce? I fancy if this matter was better looked after, we should be spared from so many "Birminghams." But I fancy if there were some pounds, shillings, and pence in the way in the character of some special impost, this affair would not be so easily blinked. Suppose a pilot to be engaged to pilot a ship, and he neglects to attend, and a complaint is lodged against him. Believe me Sir, the penalties which are neither small nor few would be enforced against him with an unsparing hand. But then he is only a pilot. I find I am advancing upon dangerous ground, and I must halt, and apologize for the length of my letter, trusting that you will give it insertion amongst your valuables in the *Nautical*.

I am, Sir,

Your obedient servant,

London, April 1st, 1846.

A THOROUGHOUT PILOT.

[We hope to hear again from the Pilot.—Ed.]

CURRENTS OF THE OCEAN.—*Bottle Papers*.

(Continued from page 555, Vol. for 1845.)

We revert to the bottle experiment, and have numbered the following, which have come to light since our last notice of the subject, in the order in which they will stand in the chart which appeared in our volume for 1843.

The two first, No. 45*a* and 51*a*, have followed the usual westerly drift near the equator. That of *Erebus*, Captain (now Sir James) Ross, thrown overboard not far from the Falkland Islands, would appear to have gone with the usual current to the eastward, making more than half the circuit of the world in high southern latitudes, until thrown on shore on Cape Liptrap, of Australia. The easterly current and prevailing winds in that part are well known to seamen. Mr. Pain, the master of the *Bravo*, will find that his bottle, No. 19*b*, has been picked up on the coast of France; we should have anticipated the course it appears to have taken, coinciding, as it does, with all the rest in the neighbourhood of the place, where it was thrown overboard. These will be seen by a reference to the chart to be Nos. 24, 29, 28, 33, and 37*d*. The part of the French coast on which this and No. 78*a* were found, and the date, are not stated; but if it be in the power of the French authorities to supply this information, the marked attention which all matters of science receive at their hands will ensure our having it. The S.E. current of which Mr. Pain speaks, no doubt carried it into the Bay, and deposited where it was picked up.

No. 56a, has followed the usual course, and with respect to the remaining two from the *Pandora* and the *Spey*, we must consign them to the owners of these vessels. All kinds of information is communicated by these brittle messengers; some conveying intelligence of fine weather, favourable passages, health and success, while others again impart tidings of a contrary nature. But the object of the experiment is answered, and our chart, with all the tracks on it of those yet found, may be considered as the commencement of an investigation, which, if followed up, will furnish some useful results hereafter. In the mean time, as we are quite aware that perhaps only a tenth part of those thrown overboard actually reach us, and that scarcely a ship makes a voyage without leaving some behind her, we would call the attention of our readers to the advice given on this subject in p. 91 of our February number.

(No. 19b.)

The following has been picked up on the French coast, and forwarded to Lloyds' by the French consul:—

“July 27th, 1845.

“Brig Bravo, of London, from Hamburg, bound for Jamaica, in lat. 46° 15' N., lon. 15° W.

“My object in trying this bottle experiment, is with the hope I may some day learn where it is picked up. For the past two days I have had the wind varying from N.W. to W., squally weather; have found tremendous strong currents, in fact, similar to those in the Gut of Gibraltar. This night from 12 p.m. to 12h. 30m. we passed through a current just like a race. By observations both for latitude and chronometer, I have found myself differ thirty miles each day from that of the account for the past two days. I have often been told of the existence of a N.W. current, and which is noted in the chart and directory; I have found it going to the S.E. Whoever picks this up, I hope will duly report it. All well on board.

“JAMES PAIN, Master of the Bravo.”

(*Times*, February 21st, 1846.)

(No. 45a.)

The following is the copy of a paper found in a bottle on the coast of Parnahiba in August last:

“June 9, 1845.—Thrown overboard from the brig Hampton, of Wicklow, from London for Saldanha Bay, in order to ascertain the strength and set of the westerly currents, lat. 5° 52' S., long. 22° 20' W.

“(Signed)

“G. MADDOCK, Supercargo.

“JAMES ROWLANDS, Master.”

(No. 51a.)

“July 26th, 4h. P.M. nautical time, lat. 12° 2' S., long. 28° W. This bottle was thrown from the barque Britannia, of Liverpool, Francis M'Gregor, master, on a passage from Newport, in Wales, to Singapore, forty-five days out, all well; strong breezes, and a nasty sea on.

“As this is hove overboard with the intention of finding the current, any one finding it and sending it to the *Shipping and Mercantile Gazette*, in London, will oblige

“FRANCIS M'GREGOR, Master Mariner,
“Barque Britannia.”

“N.B. Was picked up by a Jangado man on the 4th of September, 1845, about thirty miles to northward of Maccio.”

(No. 56a.)

PARIS, FEB. 22.—A bottle, containing a paper with the following notice, has been picked up off Heve, and deposited at Havre :—

“On board the ship *Windermere*, 563 tons, 3rd June, 1845.—An island of ice in sight this day, lat. 46°, lon. 35° 6' west, bearing S.E. $\frac{1}{4}$ E. by compass. The parties who may find this paper are requested to inform Lloyd's of its contents.”—*Shipping Gazette*, Feb. 24.

“The bottle containing this paper was thrown from Her Britannic Majesty's ship *Erebus*, 8 p. m., 4th April, 1842, in lat. 53° 59' south, and lon. 60° 47' west. Whoever may find it is requested to forward the paper to the Secretary of the Admiralty, London, with the date, together with a notice of the latitude and longitude where found.

“JAMES ROSS, Captain.”

“*Terror in Company.*”

[The foregoing paper was picked up at Cape Liptrap, on this coast, about the middle of September last, apparently only a few days on the beach. The figures and words marked by us in *italics* were in darker ink than the document itself, and must have been filled in by the captain, (whose signature is appended,) a few minutes before committing it to the ocean. The writing appears as fresh as if just written.—*Ed. Port Philip Herald.*]—*Times*, 11th April, 1846.

[We recorded the safe arrival of two more of Sir James Ross's bottles in our vol. for 1844.—*Ed. N.M.*]

PORTMADOC.—January 2, wind W.N.W., fresh breezes, clear.

On the 31st ult. a bottle was picked up on the beach near Harlech, containing a piece of paper, of which the following is a copy of the writing on it :—

“12 o'Clock at night, Dec. 18th, 1845, Pandora brig.

“We are just foundered, six feet water in the hold, one mast carried away. No hope; no land in sight; we suppose we are near the Isle of Man. May God have mercy upon us.

“J. ADAMS, Mate.”

DUBLIN.—February 16.—A bottle, containing a paper, on which the following is written, was picked up yesterday on the island of Dalkey. “Brig *Spey*, (or *Issey*), 4th Jan. 1846.—Six feet water in the hold. We expect to be soon all lost, unless some help arrives. We are about 37° 46' off Skerries. The captain was lost two days ago, and the mate is dead; he died of the yellow fever about a week ago.

(Signed) JOHN IGO, Seaman.

Our remarks had extended thus far, when another of the bottle genus has reached us from the West Indies. The letters it has conveyed are written in pencil, and the freshness of the writing confirms the remark on that subject given by our correspondent in p. 92.

Extract of a letter to T. C. Croker, Esq., Admiralty.

“*Government House, Dominica, March 25th, 1846.*

“Being under an obligation to the Governor of Martinique, to forward the enclosed documents to an official department in England, I have taken the liberty of forwarding them to you, accompanied by an official document from the mayor of the department in which the bottle which contained the letters

was picked up. The letters, you will perceive, were all opened, a circumstance for which the Mayor offers an explanation."

"Nous, adjoints au Maire de la Commune du François, ile' Martinique, certifions que la douze Fevrier mil huit cent quarante-six, il a été trouvé sur le rivage de l'habitation Aubior de Blampré, site en cette commune, dans le lieu dit *La Prairie*, une bouteille cachetée contenant quatre lettres dont les suscriptions suivent :—' To be forwarded, Alex. Reid, Esq., 6, Upper Barnsbury Street, Islington, London. Thrown overboard on 23rd February, 1844, * H.M.S. *Lily*; all well. Mrs. Wilkins, at Mr. Buchanan's, Royal Dockyard, Deptford, On Her Majesty's service, Commander Becher, Royal Navy, Hydrographer's Office, Admiralty, London. To the finder, please forward this to its destination, Alexander Watson, Esq., Peforthce, Stonehaven, Scotland.' Le negre entre les maines duquel etait tombé la bouteille, l'avait brisée, et avait decacheté trois des lettres par ignorance, Nous les avons soigneusement remplacées dans leurs envelopes, et adressées a M. le Gouverneur de la Martinique.

"Francois Martinique, le 24 Fevrier, 1846.

"L'Adjoint au Maire,

"L. BRIERE DE L' ISLE.

"Vu Le Gouverneur,

"A. A. CATHIEUX."

(No 14a.)

"H.M. Sloop "*Lily*," Lat. 39° 44' North, Lon. 12° 1' 30" West.

"February 23rd, 1845. Wind, N.W.

"DEAR SIR,—Having just read in your *Nautical* of a bottle from the brig *Flora*† reaching its destination, and having for some days experienced a strong S.E. set, I have been induced to make use of a similar conveyance, not only to ascertain the drift of the current, but to beg you will kindly remember me to my old friend, your brother, G. C. Becher, of Priory-place; and if not trespassing too much, to beg you will forward the enclosed letter.

"I remain, &c.,

Commander Becher, R.N.

"JOSEPH W. WILKINS, Master."

"H.M.S. *Lily*, at Sea. Lat. 39° 44' North, Lon. 12° 1' West.

"23rd February, 1845.

"DEAR SIR,—We have been now nine days at sea, having left Spithead on Friday week. The weather has been very stormy in coming down the channel, and in crossing the Bay of Biscay, but I am glad to say that all on board are in good health, and we expect to reach the island of Madeira in two days, when I may send a letter to Scotland. I have put this letter, among others sent by the officers of the ship, into a sealed glass bottle, and committed to the deep, where it may drift, or whether you will ever receive it I know not, but as we are now in the midst of the current setting into the Straits of Gibraltar, it is possible it may be carried up the Mediterranean. Should it reach you, keep a note of where it was picked up, if you hear, as the great object of sending such letters is to ascertain the direction of the currents of the ocean. With the kindest feelings of esteem and affection to you and enquiring friends, and with a sincere desire that the prayer for the recovery of your health, breathed from the deep, may be heard by Him whose ways are on the sea.

"I am, &c.,

"G. BROWN."

* So written on the letter, but evidently meant 1845, as the *Lily* was not commissioned until December, 1844.—*Ed. N. M.*

† See p. 182, vol. 1843.

The bottle has taken the usual course of others to the West Indies, but starting from a position to the northward of the rest, gives it a new feature. It would be interesting to throw one overboard the place of its starting and the Straits. We have numbered the *Lily's* bottle 14a.

We have only space to add the next, which we shall allude to in another number, having called it 78a.

(No. 78a.)

The French Consul General in London has forwarded to Lloyd's a piece of paper, enclosed in a bottle, picked up on the French coast, upon which is written the following:—

"This is to certify that the brig *Rhydiols*, of Aberystwith, Andrew Riddell, Master, foundered amongst the ice on the 10th of May, 1845, in lat. 47° 30' north, lon. 46° 30' west."—*Times*, 27th March, 1846.

REPORT OF EXPERIMENTS ON GUNPOWDER, MADE AT WASHINGTON ARSENAL,
In 1843 and 1844.—By Capt. A. Mordecai.

THIS report embodies the results of many thousands of accurate experiments made by Capt. Mordecai, under government authority, with instruments constructed in such a manner as to ensure perfect accuracy. Having had the satisfaction of inspecting the instruments, and of hearing from Capt. Mordecai an account of the methods of experimenting, we can speak of them with the greater certainty. The force of gunpowder, since the time of Hutton and the French experimenters, has been calculated by means of the *ballistic pendulum* and of a *gun pendulum*. The gun (in these experiments a twenty-four and a thirty-two pounder) is suspended in an iron frame, hung on knife edges of hardened steel, like a balance beam, the whole supported (a load of 10,500 lb.) on massive stone pillars. The recoil is measured on a limb of brass, having a curve, of which the frame work and the gun are the radius, and graduated to read to seconds by means of a vernier which is moved by the recoil, and retained at the point of greatest vibration by a slight spring. When the gun is adjusted and at rest, its axis is a horizontal line, and the vernier stands at zero on the scale.

At the distance of only fifty-five feet (between the centres), is inserted the pendulum block for receiving the shot and measuring its velocity. This pendulum is a counterpart to the gun, as regards its mode of suspension and motion, which is also measured in like manner on a graduated arc. This "block" as it is called, resembles a mortar or wide howitzer, with a bore of four and a half feet deep, and fifteen inches calibre, and filled with leathern bags of sand, and a bedding of lead. This block, the frame and counterpoise weights, weighed 9,358 lbs., and was suspended so as to hang when at rest, with its axis perfectly in one and the same line as the axis of the gun. When prepared for use, the aperture of the pendulum block was covered by a sheet of lead, which served to make the deviation of the ball from a right line, by the hole which was pierced in it. This deviation was found to be very slight.

It seems, to a person unaccustomed to such experiments, a rather daring attempt to fire a thirty-two pound shot, at the distance of only fifty feet, into the mouth of another gun. But that velocity which, left unrestrained, would serve to carry the shot for miles, is in this apparatus restrained within the range of a few feet, and imparts only a moderate motion on the great mass of

matter on which it impinges, which can be wholly and accurately estimated. Captain Mordecai remarks, that, "an observer, placed in such a position as to see the face of the block unobscured by the smoke of the gun, perceives, at the moment of impact, a circle of *reddish white flame* surrounding the hole made by the ball." He supposes "that this flame may be produced by the combustion of minute particles of iron and lead ignited by friction. He further remarks, that, "in firing a thirty-two pound ball into the pendulum block, with a charge of eight pounds, the sand immediately before the ball was compressed into a solid mass, forming an imperfect sandstone sufficiently firm to bear handling. A specimen is still preserved in that state, after a lapse of eighteen months." This sand, when examined, was found quite free from any calcareous cement. An apparatus of quite similar structure on a proportionate scale, was used for muskets. In these experiments powder from a great number of manufactories, and of great variety of composition, grain, and finish, was tested. The elements for calculating the strength of gunpowder, obtained by these experiments, were resolved by the formulæ of Hutton, and those which more recently have been employed by the French at Metz. This portion of the labour is performed with the accuracy and skill which characterize all the highly educated officers from West Point Academy. Captain Mordecai concludes from the results of his experiments, that the only reliable mode of proving the strength of gunpowder is to test it, with service charges, in the arms for which it is designed; for which purpose the ballistic pendulums are perfectly adapted.

In the twenty-four pounder gun, new cannon powder should give, with a charge of one-fourth the weight of the ball, an initial velocity of not less than sixteen hundred feet, to a ball of medium size and windage.

The initial velocity of the musket ball, of 0.05 in windage, with a charge of one hundred and twenty grains, should be

| | |
|--------------------------------------|-------------|
| With new musket powder not less than | 1,500 feet. |
| " rifle " " " | 1,600 " |
| " fine sporting " " " | 1,800 " |

The common *eprouvettes* are of no value as instruments for determining the relative force of different kinds of gunpowder.

The proportions used in making our best powder, 75.14.10, and the English 75.15.10, appear to be favourable to the strength of powder. The best mode of manufacture is in what is called the cylinder mills under heavy rollers, and this process alone is considered capable of making good sporting powder. The English have employed this process for fifty years, but the French still use the old method, by stamping or pounding. The "gravimetric density" should not be less than 850, nor more than 920. The charge for cannon for all ordinary purposes should be one-fourth. No purpose, even breaching a battery, requires more than one-third the weight of the ball. For small arms the following charges are proposed; for the percussion musket, 110 grains; the percussion rifle, 75 grains; the percussion pistol, 30 grains of rifle powder. It is proposed that musket and rifle balls should be made by compression, instead of casting, as at present.—*Silliman's American Journal*.

NAUTICAL NOTICES.

PORT PHILIP — *Light on Point Gellibrand*.—The light is 30 feet above the level of the sea, and may be seen from a ship's deck 3 or 4 leagues. Vessels intending to anchor in Hobson's Bay, should keep the light N.W.b.N., until the water shoals to six fathoms, then steer N.b.W.; when the lights of

Williams Town open out, bearing S.W.b.W., haul in for the anchorage, W.S.W. The best berth is in three-and-a-half fathoms, with the light bearing S. $\frac{1}{2}$ E., and the jetty at Williams Town S.W. $\frac{1}{2}$ W.

Thunder, February 21st, 1846.

The following beacons have been erected on the Turks' Islands, for navigating the channels leading into the Hawk's Nest anchorage:—

On Penniston Cay, a pole chequered black and white, twenty-eight feet long, the top of which is forty-two feet above the level of the sea.

On Toney Rock, a beacon, thirty feet in height, the top of which is forty-seven feet above the level of the sea.

On the north end of East Cay, a beacon twenty-two feet in height, the top of which is twenty-eight feet above the level of the sea.

The beacons are square open frames, having on the top a lantern; the frames of which are filled in with wood, and the whole painted black. The pole on Penniston Cay, in a line with the beacon on Toney, bearing N.W. $\frac{1}{2}$ N., leads through the Great Cut. The beacon on East Cay, in a line with the east end of Cotton Cay, bearing E.b.S., leads between the S.W. end of the reef and the S.W. bank.

The beacon on Toney Rock, in a line with the west end of Cotton Cay, bearing E.b.S. $\frac{1}{2}$ S. nearly, leads clear to the southward of the S.W. bank. All the bearings are true by the plan.

(Signed) E. BARNETT, *Commander.*

Nassau, N. P., January 27th, 1846.

A buoy having been placed on the point of Toney Rock Bar, at the entrance of the Harbour of Nassau, the Commissioners of Pilotage have directed the following instructions to be published for general information.

J. A. BROOK, *c.c.p.*

A Spar Buoy, with a *circular basket* on its summit, has been placed on the north end of the Toney Rock Bar, in twelve-and-a-half feet at low water, spring tides.

Vessels obliged to enter without a pilot, should after crossing the Bar, endeavour to pass to the eastward of this buoy.

IANTHE SHOAL.—The following does not yet appear to have found its place on the chart, and we have therefore given it the name of the ship that has discovered it.

New York, March 9.—The following is a description of a shoal fallen in with by the ship *Ianthe*, of this port, says the *Salem Register*, on the passage from New Zealand to Manila, and not laid down in any chart at the present time. This shoal is directly in the way of whale ships, and other vessels bound to the islands in the Pacific.—“On the 9th of January, 1845, discovered a dangerous shoal near us—in all light sails, and hauled close to the wind to the S. and W., passing over the eastern edge, and within one or two ship's lengths of the shallowest part, which appeared to be of sharp rocks, not more than 8 or 10 feet under water; the water very much discoloured, of a milky whiteness. The coral branches could be very distinctly seen under the bottom; soundings not exceeding probably 6 or 8 fathoms. The shoal appeared to extend from S.b.E. to N.b.W., about half a mile. By means of two chronometers, that varied but little from the time of leaving Auckland, a period of 45 days, we placed the shoal in 145° 39' E., and by a good meridian observation, in lat. 5° 53' N., the nearest land at the time being the Caroline Islands, about 85 miles distant.”—*Nautical Gazette.*

ELLEN SHOAL.—The following extract of a letter from Capt. A. Rodger, of the barque *Ellen*, bound to London, dated off Anjer, November 17, 1845, contains information of the existence of a shoal in a part of the sea which on the charts appears to be free from any thing of the kind.

“On the morning, 6h. 30m. A.M., of the 6th inst., we were so unfortunate as to discover a shoal by touching it. She only struck once and went over the rock without stopping; but that one blow took away the false keel, and nearly unshipped the rudder. It was a fine morning, wind light at S.S.W., and sea smooth, and the watch washing decks, and in a place where no shoal is laid down in the latest published charts by Horsburgh:—it lies in lat. $0^{\circ} 40' N.$, and long. $107^{\circ} 34' E.$, the peak of the highest Tambilan N. $1^{\circ} E.$, distant 20 miles, and in a line with Pulo Janang distant 10 miles. Very soon after I went in the boat with three men, and examined the shoal and found it to be about 100 yards square, and all sharp pointed rocks from 5 fathoms to 9 feet, which was the least water; but great part of it had only 15 to 18 feet, and some places 12 feet, and one place 9 feet over it. Had the *Ellen* got on the middle of the shoal, she would have lain there, and you might have had a visit of us in our boats,—there was 19 to 21 fathoms close to and all round it.—*Hong-Kong Register.*”

Admiralty, April 9th.

Notice is hereby given, that all transport and convict ships taken up in future, as well as all freight ships engaged for the conveyance of troops, ammunition, and gunpowder, will be required to be fitted with Harris's lighting conductors, and a preference will be given to such ships so fitted, as may hereafter be taken up for the conveyance of ordinary public stores.

UNITED YACHT CLUB.

ON Saturday the 18th of April, 1846, a party of yachtmen belonging to the Cowes, Ryde, Plymouth, Harwich, and Southampton clubs met at 87, St. James's Street, facing the west entrance to Pall Mall, to consider a proposal relative to the formation of an “United Yacht Club” in London, to which intended association no one should be admissible without the qualification of being already a member of some royal yacht club, and consenting moreover, if elected into the proposed metropolitan club, still to continue also in some one or other of the eleven royal yacht clubs of Great Britain and Ireland, on breaking which express condition, any member would cease *instantly* to have the entrée or belong any longer to the proposed United Club.

On the meeting being formed, it was carried unanimously that THOMAS WILLIS FLEMING, Esq., Commodore of the Royal Victoria Yacht Club, Ryde, should take the chair. WM. KNIGHT, Esq., Rear-Commodore of the Royal Harwich Yacht Club, then explained the proposal that had been entrusted to him by the proprietor of the house, No. 87, St. James's Street. The details or nature of this proposal we fear we are not at present at liberty to disclose, and we shall therefore simply state that certain satisfactory arrangements were made, and thereupon it was carried unanimously:—

I.—That the gentlemen now present do constitute themselves a club, to be called the “United Yacht Club.”

II. That William Knight, Esq., counsel to the Royal Western Yacht Club, and Rear-Commodore of the Royal Harwich Yacht Squadron be requested

to accept the office, and to act as Honorary Secretary to the United Yacht Club.

(Mr. Knight immediately consented to undertake the duties.)

III.—That the house, No. 87, is a proper site for the United Yacht Club-house.

IV.—That the said club-house open for the accommodation of members on Monday, the 1st of June, 1846, being the anniversary of Lord Howe's victory; on which date the members shall dine together.

V.—That the ambassadors and representatives of every maritime power be *ex-officio* honorary members of the United Yacht Club.

VI.—That the annual subscription be eight guineas, and not seven, as at first proposed, and that, for the present, members be admitted without payment of entrance fee.

Other business having been transacted, twenty-two candidates, including four flag-officers, were admitted members of the United Yacht Club; thanks were voted to the chairman, and the meeting soon, for the most part, separated, though, as it was "Saturday night," the gallant band did not forget before "getting under weigh" to toast "success to the undertaking" in bumpers of "sparkling champagne." Now, with six hundred yacht-owners in the kingdom, and several thousand yachtless members of yacht clubs the United Yacht Club cannot but meet with rapid success. At some future period we may return to the subject we have now so briefly touched upon. To bring into one *focus* the *elite* of our eleven royal yacht clubs must tend to diffuse and increase naval knowledge, and to foster an aquatic spirit, than which nothing is more advantageous to England.

BUFHAM'S "GENERAL EAST COAST SIGNALS."

Sutton Bridge, April 9th, 1846.

SIR,—I was much gratified on receiving the back numbers of the *Nautical*, to find that some "Master Mariner" had so kindly noticed the little work entitled "*The General East Coast Signals*." The author takes this opportunity of publicly acknowledging his kindness, and offering his sincere thanks.

Having for many years thought something might be done in the way of *telegraphing* at sea with the regular *ship's colours*, he determined, by adding another, (*a white*.) flag to the above, to attempt to supply a desideratum in the maritime affairs of our country, by preparing a code of the above *five* flags, "whereby conversation on any subject may be carried on between two ships at sea, as far as flags may be seen," and at the most trifling cost.

They were never intended to supersede either Marryatt's or Watson's signals; but merely to be used by those ships that do not possess them (the latter,) in consequence of the immense cost of Marryatt's, and the objections on the part of many, to pay the trifling expense of Watson's.

The latter are used principally off the different stations established by him for the purpose of reporting vessels to their owners and merchants, and not so much for communicating with each other *at sea*. Mr. J. H. Bernard, the superintendent of Watson's telegraph stations, has been pleased to say of the "General East Coast Signals," in a letter to the author, "I think your signals may be of very great utility to vessels in the East Coast trade, by enabling them to make known their wants to each other. As far as *economy* goes, I have never seen *any code to equal yours*."

Arrangements have just been completed with Mr. Bernard for reporting off

the different telegraph stations, any ship carrying the "General East Coast Signals," on payment of fifteen shillings per annum, without purchasing their flags. And it is hoped that few ships will remain unregistered at these telegraph stations, when so great a boon is now offered at so trifling a sacrifice.

Vint and Carr, not *Trial and Carr*, as in the communication of the "Master Mariner," are the printers of this little manual, where it may be had. A letter enclosing fifteen postage stamps, addressed to T. Buffham, Sutton Bridge, Wisbeach, will secure the transmission of a copy of the "East Coast Signals," to any part of the kingdom, *free*.

The insertion of this in your valuable miscellany will much oblige, sir,

Yours respectfully,

To the Editor of the *Nautical Magazine*.

THE AUTHOR.

We shall give our readers our opinion of the work in an early number.

THE ROYAL NAVY OF FRANCE AT DIFFERENT PERIODS.

The following table shews the number of ships of the line and seamen of France at the different periods expressed against them, and is drawn from the authority of the Baron Charles Dupin.

| | Ships. | Seamen. |
|-----------------------------------|--------|-------------------|
| 1680 under Louis XIV. ... | 100 | 66,000 |
| 1780 " Louis XVI. ... | 81 | less than 100,000 |
| 1814 " Napoleon ... | 108 | at most 120,000 |
| 1824 " Louis XVIII. ... | 53 | 65,000 |
| 1836 " Louis Philippe ... | 53 | 90,000 |
| 1846 as proposed by the Committee | 36 | 113,000 |

NATIONAL NAVIES.

The following is compiled from a return recently made to the American Senate.

| States. | In Commission. | | Building or Ordinary. | | Total in Commission & Ordinary. | | No. of Seamen. | No. of Steamers. |
|------------------|----------------|-------|-----------------------|--------|---------------------------------|--------|----------------|------------------|
| | Ships. | Guns. | Ships. | Guns. | Ships. | Guns. | | |
| Great Britain... | 371 | 4,718 | 300 | 15,054 | 671 | 17,772 | 40,000 | 121 |
| France..... | 187 | 4,157 | 129 | 4,625 | 316 | 8,782 | 27,551 | 37 |
| Russia..... | 179 | 5,976 | 5 | " | " | " | 59,000 | 6 |
| United States... | 47 | 1,155 | 30 | 1,190 | 77 | 2,345 | 8,724 | 5 |
| Turkey..... | 31 | 1,520 | 12 | 692 | 43 | 2,212 | " | 3 |
| Egypt..... | 35 | 1,448 | 3 | 312 | 38 | 1,760 | " | 1 |
| Holland..... | 48 | 308 | 86 | 1,344 | 134 | 1,652 | " | 4 |
| Sweden..... | 330 | 660 | 50 | 1,194 | 380 | 1,854 | " | 2 |
| Denmark..... | 96 | 344 | 12 | 732 | 108 | 1,076 | " | " |
| Austria..... | 74 | 686 | " | " | " | " | " | " |
| Brazil..... | 31 | 450 | 11 | 325 | 42 | 775 | " | " |
| Sardinia..... | 11 | 226 | 4 | 220 | 15 | 446 | " | 2 |
| Two Sicilies... | 17 | 338 | " | " | " | " | " | " |
| Spain..... | 21 | 348 | " | " | " | " | " | 4 |
| Portugal..... | 59 | 225 | " | " | " | " | 4,500 | " |
| Mexico..... | 23 | 42 | " | " | " | " | " | " |

Note.—Great Britain has besides the above, her Indian navy, 26 contract

mail steamers, under control of Government, and 72 revenue vessels carrying 810 guns. Russia has in addition, her Caspian fleet. The United States their revenue vessels, consisting of 13 sailing vessels, total tonnage 1,443; 8 steam vessels, total tonnage 3,110; the whole mounting 61 guns, and manned by 769 men. Of the two Sicilies and Portugal the report says, "It is probable a portion is in ordinary; they have a few war steamers, the number not known."

HER MAJESTY'S STRAMER TERRIBLE.

The Terrible war steamer of 1847 tons, was constructed by Mr. Lang, built at Deptford, under his superintendance, and launched in February 1845. She broke in launching only five-eighths of an inch in length between the perpendiculars of 226 feet, having been built on his new principle of uniting the frame timbers together with dowels, and felt between the joints, making one solid substance of the bottom so that the ship would swim without the planking on the outside. She has also the safety keel which has been found so very beneficial for the preservation of lives in many vessels since its adoption.* Her inboard works are diagonally formed, which has produced great strength to the fabric. She has two decks of guns right fore and aft, eight on each, which are as follows,—in the bow on a slide and pivot so as to fire fore and aft, in a line with the keel, and round the sides two in number, Monk's long 56-pounders 11 feet, and right aft in the stern, two of the same, each gun with the carriage and slide 6 tons and a half, can be fought all round the stern and quarter; and two 9 feet 6 inch guns on the upper deck, 68 pounders, each gun slide and carriage 5½ tons; two of Monk's long 56-pounders which can be fought in a line with the keel, on each bow, or on the broadside if required; and two of the same right aft in the stern, and two 68-pounders on each broadside as on the upper deck, making 16 heavy pieces of ordnance. She can fight five great guns from her quarter abaft at one point, if required.

She is well proportioned to her size, being comfortably high between decks, has only the captain's cabin on the main deck, like a frigate, having her gun room and officers' cabins on the lower deck abaft, and her crew berthed forward on the same deck, has a free passage with a good circulation of air, fore and aft on all her decks, and is well ventilated. Her engines are of a noble structure by Messrs. Maudealey and Field, 800 horse-power. She has four separate boilers and four funnels, the two after ones made to lower down to enable her to set her square mainsail. When sailing she has three masts, and in fact is a regular frigate in every respect. She carries her lower or main deck ports high from the water, and is very buoyant, bold, and war-like in appearance. She went to Spithead from the Downs, against a strong head wind and sea, with two boilers, at the rate of 8½ knots, when the ships were riding at their anchors with their yards pointed to the wind, and she passed the Widgeon Dover packet, dividing the sea on each bow in gallant style, neither rolling nor pitching; but as easily as if in a calm, much to the admiration of her captain and officers. The guns were fired from each deck, from every port—bow, stern, and broadside, without the least shake being felt in the ship, not even to crack a pane of glass, or disturb the fabric in any part. On her arrival at Spithead she fired a salute of 17 guns to the Admiral's ship, which astonished the people of Portsmouth, as no steamer had ever attempted the like. She can take on her deck in midships without interfering with the passage fore

* Described in an early number of this Magazine.

and aft, five 32 feet pinnaces in lieu of paddle-box boats, as from the great height of her boxes from the water it has been considered not to be safe to lower them into the sea, as with the motion it might endanger the boats and the paddle boards in the wheels. She can stow 600 tons of coals or more if required in sacks, if wanted for a long voyage; can berth a regiment of soldiers between decks, under cover, and from the construction of the four boilers can save her coals by using only one, two, or three boilers, as with half fuel she will steam $8\frac{1}{2}$ knots head to wind, and with 400 tons of coals, her power full speed may be made 14 knots or upwards. In fact it may be safely said that she could steam 30 days, if required, even if she were not to use her sails but steam alone. She has four small guns for boat service, in addition to the sixteen large ones before mentioned.

SHIPWRECKS.

Rio Janeiro, Feb. 21—By the English ship *Ontario*, arrived here on the 16th inst. from the coast of Patagonia, we received news of a severe S.S.E. hurricane, having swept on the morning of Jan. 3rd, about 60 miles up the coast, from the Bay of Camaras to the Island of Desejada, causing the loss of the following vessels:—In the bay of Camaras, barque *Edward*, Cuthbertson, from Sunderland; *Expositor*, Northwood, from London; barque *Integrity*, Hutchinson, from Liverpool; *Eagle*, Kerr, from Liverpool. In the bay of Malespina, *Mercy*, Norris, from London, *Achilles* and *Minerva* from Liverpool. On the island of Desejada, ship *Elizabeth*, brig *James Dickson*, and *Catherine* of Whitehaven. In Porto Mello, American schooner *Emma*, and *Brilliant* from Liverpool. The crew of the *Mercy* were all drowned; those of the other vessels saved. More than 200 vessels are said to have been loading more to the southward, and it is feared that should the hurricane have extended to that quarter, many others will have shared a similar fate.

THE EXPERIMENTAL FLEET.

The *St. Vincent*, 120, the flag-ship of Portsmouth, Capt. Sir R. Grant, the first of the three-deckers, has left Portsmouth harbour, and anchored at Spithead. She went out under all plain sails, and with her fresh painted blacked rigging looked what she really is—a most beautiful ship in most perfect order, and a perfect British man-of-war three-decker. The *Trafalgar*, 120, Capt. J. B. Nott, the flag-ship at the Nore, the smartest ship in the last squadron, anchored at Spithead. The *Queen*, 110, Capt. Sir Henry Leeke, flag ship of Devonport, saluted the Admiral on her arrival and anchoring.

The above are the three three-deckers.

The *Rodney*, 92, Capt. E. Collier, c.b., sailed out of harbour to her anchorage at Spithead. The *Albion*, 90, Capt. Lockyer, c.b., saluted and anchored on her arrival with *Queen*, and the *Superb*, 80, Capt. Corry, has been at Spithead for some time. Thus with respect to sailing vessels we have at Portsmouth at present, five out of the eight sail of the line, and to these will be added the *Vanguard*, 80, Capt. Willes, on her way from Cork; the *Canopus*, 84, Capt. Fairfax Moresby, c.b., on her way from Halifax; the *Raleigh*, 50, Capt. Sir T. Herbert, expected from the Nore.

The steamers are, the *Terrible*, 20, frigate, Capt. Ramsay, at Spithead; the *Retribution*, 10, frigate, Capt. Lushington, in dock; the *Cyclops*, 6, Capt. Lapidge, and *Scourge*, 2, bomb-sloop, at Spithead; and the *Rattler*, 5, screw-sloop, Commander Smith, in Portsmouth harbour; but to these will be added

the *Gladiator*, 8, frigate, Capt. Robb, and the *Devastation*, 6, sloop, Commander Crouch, both under orders at Woolwich for Spithead.

We may present in a tabular view the ships and steamers named as the squadron assembled and to come.

| | Guns. | Men. | Tons. | Built. | Captains. |
|--------------------------|-------|------|--------|--------|-------------------|
| <i>St. Vincent</i> | 120 | 960 | 2,612 | 1815 | Sir R. Grant. |
| <i>Trafalgar</i> | 120 | 960 | 2,694 | 1841 | J. N. Nott. |
| <i>Queen</i> | 110 | 870 | 3,103 | 1839 | Sir H. Leeke. |
| <i>Rodney</i> | 92 | 795 | 2,625 | 1833 | E. Collier, c.B. |
| <i>Albion</i> | 90 | 793 | 3,009 | 1843 | N. Lockyer, c.B. |
| <i>Canopus</i> | 84 | 735 | 2,257 | 1794 | F. Moresby, c.B. |
| <i>Superb</i> | 80 | 735 | 2,589 | 1842 | A. L. Corry. |
| <i>Vanguard</i> | 80 | 735 | 2,589 | 1835 | H. Willes. |
| <i>Raleigh</i> | 50 | 500 | 1,935 | 1845 | Sir T. Herbert. |
| | 826 | 7183 | 23,503 | | |
| Steamers. | | | | h. p. | |
| <i>Terrible</i> | 20 | 240 | 1,847 | 800 | W. Ramsey. |
| <i>Retribution</i> | 10 | 240 | 1,641 | 800 | S. A. Lushington. |
| <i>Gladiator</i> | 8 | 175 | 1,190 | 430 | J. Robb. |
| <i>Cyclops</i> | 6 | 175 | 1,106 | 320 | W. F. Lapidge. |
| <i>Devastation</i> | 6 | 145 | 1,058 | 400 | E. Crouch. |
| <i>Scourge</i> | 2 | 145 | 1,124 | 420 | J. C. Caffin. |
| <i>Rattler</i> | 5 | 140 | 888 | 200 | H. Smith. |
| | 883 | 8443 | 32,357 | 3,370 | |

Of the above, the *Queen*, *Albion*, *Superb*, *Vanguard*, *Retribution*, *Gladiator*, *Cyclops*, *Devastation*, *Scourge*, and *Rattler*, were constructed on the designs of the present Surveyor of the Navy—ten out of sixteen. The *St. Vincent* was built from a design furnished by Mr. Roberts, late master-shipwright of Devonport dockyard; the *Trafalgar* partly on the same lines, and partly from Mr. Lang's and the surveyor's suggestions; the *Rodney* is the design of the late surveyor, Sir R. Seppings; the *Canopus* was designed by Sane, built at Toulon, and was captured at the Nile; the *Raleigh* by Mr. Fincham; and one only of the whole list of steamers by a different constructor, Mr. Lang of Woolwich.

At Spithead, the *St. Vincent* was anchored to the westward, then the *Rodney*, *Trafalgar*, *Queen*, *Superb*, and *Albion*, the latter being the most easterly ship. They were nearly in line, but they have not yet taken up their exact position. The steamers *Terrible*, *Scourge*, and *Cyclops* were lying inside. The *Superb* is to have some more doctoring before she proceeds, and is going into dock for that purpose.

Only a few cables' lengths from the *Albion* rides her principal rival, the *Rodney*. "What a striking contrast," says a correspondent "does these two ships present. In the *Rodney* is seen all that constitutes a real ship of war, whilst in the *Albion*, built to eclipse her, we behold a splendid yacht of gigantic dimensions."

But this is neither the time nor place to draw comparisons. It is to be hoped that in the course of a few weeks we shall have an opportunity of hear-

ing of those two ships under other circumstances. One thing may be stated; before the Albion left Plymouth she took on board five months provisions, and the hold was so full up to the hatches that it was impossible to stow another cask; she is as deep as a sand-barge. No trial of sailing took place with the Queen on the passage from Plymouth, but those on board the Albion say that enough was seen to satisfy them that she has not improved in her sailing qualities as to fore-reaching. She steers, however, a little easier, and holds rather a better wind.—*Nautical Gazette*.

NEW BOOKS

A FEW WORDS ON NAVAL CONSTRUCTION AND NAVAL PROMOTION, by
Commander Adolphus Slade, R.N. Saunders and Othey, 1846.

We wish to call attention to this pamphlet, in which Commander Slade brings forward several suggestions worthy of consideration, on two of the most important points of naval administration of the present time.

He begins with allusion to the general impression that the French ships have answered their constructors design without those trials and alterations which our own have been obliged to undergo, and infers, that with our extensive fleets and the acquired experience of such alterations, this waste of labour and expense must be owing to the defective state of our system, and is principally to be referred to the want of science in the dockyards, and of sufficient examination into the capabilities of constructors. He cites the ten-gun brigs and the "forty thieves" as proofs of this defective system, and considers that such an alteration as that of a seventy-four into a better frigate than she made a line of battle ship, argues a complete mistake on the part of her constructor. On the other hand, the *Canopus*, built near fifty years ago, proves the advance of the French school at that time. He notices the employment of defective ships as a great hardship on those officers who have not interest to get them changed, and quotes a case in point. Commander Slade is of the opinion, held by some others, that the Swedish and French schools excelled in line of battle ships, but that they carried their principles too far, and made their small vessels too clumsy; and that the surveyor's ships err generally on the opposite side. He considers that one of the principal points on which to form a judgment of a line of battle ship is her rolling, because in large vessels the too sudden checking of the motion of such an enormous mass of timber, guns, &c., strains the structure, while the same amount of rolling in a smaller vessel, has little or no such effect; also, when the roll is moderate and easy, the aim is steadier, and wounded spars are less exposed to strain and the risk of falling. He considers that far too much stress is laid on the sailing, as a primary quality of large ships, whose motions in the fleet are never such as to depend on this quality exclusively, being necessarily regulated by the worse sailers.

In alluding to the establishment on board the *Excellent*, Captain Slade observes that in France the attention is paid to the proficiency of fire during motion, and the certificates *assez bon tir*, *bon tir*, and *tres bon tir*, have reference to such fire.

On the proceedings of the late experimental squadron, Captain Slade remarks in page 16, that "the sailing qualities only of the ships were tested. The question of fighting their lower deck guns in a sea, and enduring a continuance of heavy weather, remained undecided, though of far greater importance; for it cannot be too constantly borne in mind, that speed has little to do

with general actions, which is the chief purpose for which line of battle ships are built. Resting their merits entirely on their sailing is a practical delusion. In experimental trials of our men of war, we rarely consider their fighting capacities; reports and diagrams without number, are made about the relative sailing of two ships, but scarcely any interest is expressed about the firing of their lower deck guns in a sea, or the strain on their masts and yards, in anticipation of shrouds or a stay being shot away."

We entirely agree to the above remarks on the unsatisfactory and incomplete method taken to discover the relative capabilities of our ships in trial cruises. It is often difficult enough to discover whether one ship did or did not beat another in sailing alone, which is a question of fact, but how much the more must be difficult to decide whether one ship was easier than another, which is a matter of feeling. On the same points we find flat contradictions. Except that the diagrams, when they are given, show the positions of the ships at certain points of time, the whole result is a matter of opinion. We have sometimes thought that three or four officers might be appointed to pass a certain time on board each ship in succession, thus constituting a sort of visiting or roving commission, which, by not living constantly in the same atmosphere of opinion, might be free from some of those prejudices to the forming of sound views, which Bacon calls "idols of the den." But whatever might be done towards the collecting of better *opinions* in such cases, nothing will be definitive until the attention of the officers is directed to certain specific points, and these points are represented by *numbers*. Thus, if the rolls of the ships during a certain portion of time were registered, as to their *number* and *extent*, the question whether one ship rolled more or less than another in a given time and under the same circumstances, would be reduced from one of opinion to one of fact. If the several important elements were thus prepared beforehand by tables arranged so as to meet the varying circumstances, there would remain only to fill up the columns during the cruise, and to inspect the tables when it was over. Without this final appeal to facts and figures, the whole subject must ever remain floating in the same uncertain state. Individual observations may go for nothing, but there is no answering the results of large averages. We cannot place this in a clearer point of view than by referring to Bessel's determination of the parallax of the star sixty-one cygni. The quantity itself is far too small for any single observation, and several observations in succession differ by quantities far exceeding that which is the object of enquiry; yet the average of observations taken for several months at one time of the year, is found to differ from that of similar observations at another time of the year, and hence astronomers consider that a case is made out.

Captain Slade thinks that undue importance is attached likewise to the carrying of stores, as a primary quality of a line of battle ship, and that the objection made to the surveyor's ships on this ground is not worth consideration. At page 16, he notices the resemblance between the surveyor's ships and the merchant vessels of the Adriatic and the Ottoman men of war, built for a smooth sea.*

Our author is of opinion that the too often fruitless endeavours to deduce certain data for naval architecture from the results of our trials of ships of various constructions, according to the different ideas of their builders, might be remedied by a Board, composed of a practical ship builder, a naval officer, and some person of high scientific attainments. He considers that the examination which the different plans proposed would thus undergo, would save the country the expense of many a costly experiment; that its sugges-

* Captain Slade, as many of our readers will remember, accompanied the Captain Pacha on a cruise in the Black Sea in 1829.

tions would command attention, and the inestimable advantage would follow, viz., the digesting and classifying the data which are now virtually lost. To much of this we cannot but assent, but we are not partial to Boards, and do not expect a Board to originate these suggestions and improvements which emanate only from individuals of talent and industry, and which a Board, generally speaking, is as likely to discourage as to promote. An individual again, has responsibility, and feels it; a Board has none. Responsibility does not follow the law of proportion as other things do; if the Board of three, for example, had fifteen hundred pounds to divide among them, there would be no difficulty about that, but if it deserved to be hanged, what proportional punishment could be awarded to its three members? Boards are very well for established routine business, but we should be sorry to see a man of talent and enterprise, at the head of a subject, which, more than any other depends for its success on all sorts of trials and experiments, displaced for the conventional usages, slow convictions, or vicious habits of a Board. The advantage of such a Board, however, in registering and analyzing the results of trials, would be incontestable. What would be thought if the Admiralty were continually to employ surveying officers in different parts of the world, and there was no hydrographic office at home to organize the results. Yet our ships and fleets are from time to time sent to sea, at an enormous expense, for the purposes of trial, and the results are not, at least in any satisfactory or systematic manner made public. For example, we have heard it reported of Sir Thomas Hardy, that he had, previous to the experimental cruise of 1827, considered that a ship might be pressed by sail to a degree prejudicial to her velocity, but that from what he saw on that occasion, he altered his opinion. Now here is a point of considerable importance decided, and one which alone would be worth an experimental cruise. The professional point is remembered by those who have heard it as an anecdote of a distinguished officer, but the naval public is none the wiser.

On the subject of the screw-propeller, Captain Slade remarks that its popularity is premature, as it is by no means certain that the present form of steam vessels is adapted to that mode of propulsion, and in the event of failure, expensive alterations might be entailed. Indeed, when it is considered that in paddles the moving force is applied, in the case, to the vessel *above* the water, and in the screw *below* it, an essential difference of construction seems almost necessary. Captain Slade thinks that steam will ultimately be applied to ships in three different ways; but we have room only for a word on naval promotion. Captain Slade devotes some pages to a comparison between the French system and our own. The two systems are the reverse of each other. Ours is a selection for the junior ranks, and seniority for the higher; the French junior ranks succeed by seniority, the higher promotions go by selection. "This plan * * * ensures officers having sufficient practice in the inferior ranks, and does not prevent their attaining the highest rank before the working time of life is past. Seniority is allowed to advance *pari passu* with merit, to a certain extent, but is not allowed to extinguish it by its dead weight at the period when merit is distinctively required." It must be confessed that this system is clear of two evils which must vitiate our own: first, that young men of energy, love of the service, and talent, are not doomed to remain in the lower ranks, while others, possessing none of these recommendations, are passing continually over their heads, until these qualities, the cultivation of which is so important to the service at large, are blunted and destroyed; and secondly, that the admirals, whose position should point them out as the examples of energy and vigilance, are not all men whose advanced age and increasing infirmities would suggest their retiring from every other situation of active life. We must here refer the reader to the pamphlet for many details, as we entirely agree in the general tenor of Captain Slade's remarks, through the modification of our system, (for that it must be modified is a growing impres-

ation), may demand some peculiar attention. These considerations acquire more weight from year to year, not merely on account of the increasing age of the officers, but from the rapid growth and spread of new inventions, new powers, and new ideas. The combination of so many new elements, though easy enough to those who have been amongst them in early life, are strange and difficult to one brought up in a school that was formed and completed before such things were heard of, and whose own advanced age disqualifies him from making such matters familiar to him, or as they would become with younger people, a part of the mind. The failure of physical force is itself a serious detriment to an officer high in command. The battle of the 1st of June would, we know from good authority, have been much more decisive, but for the advanced age of Lord Howe, who was exhausted with the fatigues and anxieties of the three preceding days. We conceive, however, that the diminution of mere bodily vigour is the least part of the evil in these days of accelerated intellectual progress, in which men of a former school take little or no part.

Another effect of relaxing the old routine would be, that young men having the real prospect before them of becoming admirals, while yet in early life, would be encouraged to apply themselves to many points which the distant and uncertain future now holds out no inducement to attend to. Who, for example, would devote months of application to tactics, (unless, indeed, he had a strong bent that way,) when he knows that he cannot be in a position to apply such knowledge for the next thirty years? Before that time he will probably be dead, or tactics may have changed altogether. We refer the reader to the pamphlet for other remarks on this point of our naval system, and which has now become a subject of very serious consideration.

THE DISPATCHES AND LETTERS of Vice-Admiral Lord Viscount Nelson, with Notes by Sir Nicholas Harris Nicolas, G.C.M.G. Vol. 6th. Colburn, London.

Although this volume includes but a short period, from May 1804 to July 1805, it becomes the more interesting as it approaches the momentous event which closed the career of the immortal Nelson. The principal features of the correspondence are the blockade of Toulon and the memorable voyage to the West Indies. Another volume, which is shortly to appear, will close the work.

NARRATIVE OF A FOUR MONTHS' RESIDENCE among the Natives of the Marquesas Islands, or a Peep at Polynesian Life, by Herman Melville. Murray, London, 1846.

One of the merriest and unpretending little books that we have seen for a long time. It is a tale of real life throughout, abounds in adventure, and gives such "a peep at Polynesian" existence as will convey a tolerably correct idea of the characteristic traits of the inhabitants of the Pacific Islands. We could not help snatching a leaf from its pages that introduces the tale, from the style of which, a good opinion may be formed of the work.

DISCOVERIES IN AUSTRALIA, with an account of the Coasts and Rivers explored and surveyed, during the voyage of H.M.S. Beagle. In the years 1837 to 1843, &c. by J. Lort Stokes, Commander R.N. Two volumes. Boone, London.

The little space we have left enables us only to record the appearance of these volumes. They have, besides, reached us at so late an hour, that we can merely glance into them, but we have seen sufficient to convince us that the narrative of the *Beagle's* survey of Australia will assume its place among our naval annals, with the same grace as any of its predecessors. We par-

ticularly commend the work to the attention of all who are concerned in any way with that distant colony, on account of the new information it contains. To persons about to proceed there, the little chart they will find in it of Bass Straits will be acceptable. We shall return to the work in another number.

NEW CHARTS.

(Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.)

- ENDEAVOUR STRAIT.**—*Booby Island to Cape York*—Captain Blackwood, 1844. Price 1s. 6d.
BARRIER REEFS.—*Raine Island to Cape York*—Captain Blackwood, 1844. Price 1s. 6d.
NORTH-EAST COAST OF AUSTRALIA.—*Sheet 3, including Torres Strait, corrected to 1844.* Price 3s.
PORT ADELAIDE AND HOLDFAST BAY.—*Com. Stokes, 1841.* Price 6d.
HONG KONG, *corrected to 1845.* Price 3s.
DIRECTIONS FOR ENGLISH CHANNEL. *The Third Edition, 1846.* Price, with plates, 10s., without ditto, 3s.
BELFAST BAY.—*Captain F. W. Beechey, 1841.* Price 2s. 6d.
SALONIKI AND GRISSOS BAY, *with the Channel of Thassor.*—*Com. Copeland, 1835.* Price 2s.
ST. JOHN HARBOUR.—*New Brunswick.*—*Captain W. F. W. Owen.* Price 1s. 6d.
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MONTHLY RECORD OF NAVAL MOVEMENTS.

Athol, 4th April, arrived at Portsmouth from Jamaica. *Agincourt*, 29th November, Hong Kong. *America*, 50, at Mazatlan, 10th February. *Cleopatra*, 26, 25th January, at Simons Bay. *Canopus*, 80, 19th February, at Tenerife, sailed. *Cormorant* st. v., 25th December, at Callao. *Driver*, st. v. 9th November, Singapore for New Zealand. *Eurydice*, 26, 4th of April, arr. at Portsmouth from Jamaica. *Frolic*, 10th February, at Mazatlan. *Hyacinth*, 24th February arr. at Barbados. *Harlequin*, 16, left Plymouth 9th April for Mediterranean. *Juno*, 24th December, arr. at Bahia, sailed 27th for Valparaiso. *President*, 50, sailed 25th January for the Cape. *Ringdove*, 21st. February, arr. at Tenerife, sailed 24th. *Samson*, st. v., 2nd March, arr. at Pernambuco from Devonport, sailed 5th for Pacific. *Sparrow*, st. v., 5th April, left Portsmouth for Scotland. *Thunderbolt*, st. v., 25th January, arr. at Simons Bay. *Terrible*, st. v., 7th April, arr. at Portsmouth from Sheerness. *Talbot*, 10th Feb. arr. at St. Blas. *Vindictive*, 50, 21st February arr. at St. Thomas. *Vernon*, 50, flag-ship 27th November, arr. at Monte Video. *Winchester*, flag-ship, 25th January, arr. at Simon's Bay. *Warspite*, 50, 5th April, arr. at Plymouth from Gibraltar. *Wunderer*, 14, 23rd April, sailed for coast of Africa.

PORTSMOUTH.—In Port.—*St. Vincent, Queen, Trafalgar, Rodney, Albion, Superb, Terrible, Cyclops, Scourge, and Electra*, at Spithead. In Harbour.—

Excellent, (flag), *Victory*, *Victoria* and *Albert* yacht, *Winohester*, *Retribution*, *Apollo*, *Rattler*, *Childers*, and *Comet*.

PLYMOUTH.—In Harbour.—*Caledonia*, *Belleisle*, *Favorite*, *Adventure*, *Diligence*, and *Confiance*.

SHEERNESS.—In Harbour—*Ocean*, *Raven*, *Wildfire*, and *African*.

The Mediterranean squadron is thus divided:—

MALTA HARBOUR.—*Ceylon*, 12, *Beacon*, surveying vessel, *Bonetta* surveying vessel, *Virago*, war-steamer, Com. G. G. Otway, *Wee Pet*, steam-tug, and *Research*, tender to *Beacon*.

GIBRALTAR.—*Fantome*, 16, and *Meteor*.

CORFU.—*Orestes*, 18, and *Jackal*, steamer.

THE PIRÆUS OF ATHENS.—*Tyne*, 28, and *Bloodhound* steamer.

CONSTANTINOPLE.—*Hecla*.

BEYROUT.—*Inconstant*, 36.

COAST OF TROY.—*Amazon*, 19.

EN ROUTE TO THE LEVANT.—*Hibernia*, 120, and *Siren* 16.

ERRATA AND CORRECTIONS IN THE SECOND EDITION OF THE PRACTICE OF NAVIGATION.—By *Lieut. H. Raper*.

Continued from the Vol. for 1843, p. 583. (Corrected to April, 1846.)

Page 33, line 5 from below, alter 7925 to 7899.—124, No. 336, line 4, alter p. 94 to p. 120.—167, No. 449, Ex. 2, alter 5h 20m to 5m 20s.—169, Ex. 4, alter 6° 48' to 6° 53', and 6° 40' to 6° 55'—169, No. 454, (2) Ex. 1, end, alter 13' S. to 11' S.; Ex. 2, end, alter 6° 58' to 7° 0'.—184, No. 494, Ex. 2, alter h. ang. 3h. 48m. to 4h. 0m.—191, Ex. 1, top. The bar. corr. should be 7", the next 5", the dip 4', and the alt. 8° 45' 42".—194, No. 525, Ex. 1, alter S.W.b.S. to W.S.W.—199, No. 537, Ex. 1, N. should be 28°0.—219, Ex. 2, the half diff. should be 14m. 38s., the lat. would be unaltered.—219, Ex. 3. the index of the cosec. should be 1 instead of 0, the rest may be altered accordingly.—221, Ex. 1, the inner pol. dist. has been employed by mistake for the outer one.—253, *Erase* the right-hand division of the Table, and also the heading, "The ship in E. lon." as the longitude is immaterial. The example is right.—274, top, the star's corr. of alt. should be 4' 12" instead of 4' 6", and corr. 2' 17" instead of 2' 12".

NOTES WORTH NOTING.

The past winter in the Mediterranean has been unusually severe, and in England unusually mild

The Great Western started on her first trip for the season with 120 passengers, for New York on the 11th of April.

The crew of the Mary American whaler were massacred in September last by the natives of Woodlark Island, in the Pacific Ocean, the vessel having been wrecked there in a hurricane.

The height of Mount Vesuvius, by the Neapolitan government survey, is 3, 948 feet above the level of the sea; Hecla is 3,950; and Snowden 3,571.

The Menai railway bridge is to consist of an iron rectangular tube, fifteen feet wide by thirty feet high, 450 feet long, and 200 feet above the level of

the sea; the rectangular form of tube having been proved, by experiment, to be stronger than either cylindrical or elliptical.

Mr. M'Dowell's statue of Lord Exmouth is just completed for the Painted Hall at Greenwich, being the first of the three voted by Parliament for naval officers.

The pay of able seaman is now £2 15s. per month; scarce—homes empty.

The schooner, Lord Anson, has been fined 500 dollars for having on board 1,500 bricks and nine casks of lime as ballast on her voyage to Tampico from Jersey, for log-wood.

About 11,000 tons of shipping have been taken up by Government, for conveyance of troops to India.

The Southampton and Continental Steam Packet Company have established Ramsgate, instead of Dover, as the point of departure for Ostend, as being nearer and more convenient to the public. The voyage has been made in four hours and twenty minutes, and the whole journey to London in eight hours and a-half.

The National Life-boat Society estimate, *from authentic sources*, that the number of British vessels yearly destroyed by shipwreck, is 600; the value of property about £2,500,000 sterling; and the number of lives lost about 1,560.

A severe gale has occurred on the coast of Patagonia, by which twelve vessels collecting guano have been cast away.

Upwards of 3,500 persons have visited the United Service Museum during the Easter holidays.

The packet ship, Henry Clay, has been wrecked on Squaw Beach, New York, no lives lost.

The largest steamer in the world was launched a few days since at New York. She is 340 feet long, breadth of *guards*, seventy-five feet, 1,500 horse power, and is named the George Washington. So says an American paper.

The sum of £9,000 was voted in October last, by the House of Assembly at Sydney, New South Wales, for the erection of lighthouses in Bass Straits on Cape Otway, King's Island, Kent's Group, and Cape Howe. Something is said of a light on Pedro Blanco, near Singapore, and a great deal has been said of one at the Cape; the Bass Strait gentlemen seem to be men of business. We are to have a light on Cape Finisterre, for which invaluable boon to seamen we may be thankful, in a great measure, to the Peninsular and Oriental Steam Navigation Company, who have voted the sum of £200 a-year towards its maintenance. Such munificence is worthy of all praise. Perhaps some other *such* company will light up the long promised beacon at the Cape. The island of Cerigo is also to have a light, long wanted, and the celebrated Orinoco was suddenly lighted up with a light vessel on the 20th of January last, riding in the principal month of that noble river, in eighteen feet water, due north of Point Barrima. Another light (paid) has been established on Point Kikenas, on the south side of Alen Island, at the southern entrance of the Little Belt, and more are preparing on the coasts of Sweden and Denmark.

We observe that an annual trial of chronometers for prizes, similar to our own formerly at Greenwich, has been established at Brussels, under the superintendence of the Director of the Observatory, M. Quetelet. They are to be deposited like those at the Royal Observatory at present, on the first of January, and their merits determined in the course of the cold of the winter and the heat of the summer.

The celebrated astronomer, Bessel, expired at Konigsburg on the 17th of March. He was professor of the University of that city, and a privy councillor to the King of Prussia.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

LIEUTENANTS—M. B. Dunn, A. Butler, R. Jenkins, R. B. Reale, G. Durbin, H. T. N. Chesyre, J. King.

SURGEONS—S. Livesay, J. Belcher, E. Groves, C. T. S. Kevern, T. Graham, H. Trevern, G. Whitmarsh, A. Slight.

APPOINTMENTS.

CAPTAINS—G. Mowbray (1812) to Greenwich Hospital—J. Kingcome to *Belleisle*—J. Pasco (1811) to *Victory*—Sir B. W. Walker, K.C.B., (1838) to *Constance*.

LIEUTENANTS—P. G. Nettleton (1805) appointed by the Commodore on the west coast of Africa, to the command of the Brazilian slave steamer, *Cacique*, captured by *Penelope*—A. Royer (1841) to *Favorite*—E. Maunsell to *Ferret*—G. Rutherford (1840) to *Devastation*—A. H. Douglas (1831) to *Childers*—A. Gardner (1841), J. B. West (1831) and R. Dowse (1845) to the Royal Naval College for study—R. M. Sandom (1843) to *Raleigh*—W. Ferrier to *Excellent*—C. P. Coles (1846), J. P. Palmes (1842), T. E. Moore (1843), J. H. Shairp (1844) and J. B. Cator (1842) to *Belleisle*—W. Hoseason (1826) to *Torch*—C. E. Wilmot to *Griffon*—J. Sacombe (1842) and F. P. Porteus to *Vernon*—R. D. Aldrich (1842) and J. King (1846) to *Apollo*—T. Sibbald and H. Griffiths to *Wanderer*—A. H. Douglas and J. Stephens to *Childers*.

MASTERS—H. Dormer to *Volcano*—R. Mowll to *Belleisle*—H. Webb to *Spitfire*

—G. Biddlecombe to *Trafalgar*—J. W. King to *Vernon*—H. B. Hunt to *Superb*—C. Gahan to *Imaum*.

MATE—A. Murray to *St. Vincent*.

SECOND-MASTERS—W. C. Pyper to *Torch*—H. Hurrees to *Belleisle*.

MASTERS-ASSISTANTS—G. M'Farlane to *Torch*—M. Parsons to *Victory*—J. D. Switzer to *St. Vincent*—W. F. Lew to *Rodney*—E. Hicks to *Wanderer*.

MIDSHIPMEN—H. Douglas and G. H. Mansell to *Excellent*.

NAVAL CADETS—G. P. Twyford and G. M. Comber to *Veroon*—A. Annesley to *Rodney*—T. C. Chevalier to *Childers*.

SURGEON—E. Newman to *Favorite*.

ASSISTANT-SURGEONS—J. C. Austin to *Caledonia*—W. Wildey to *Belleisle*—J. Reid to *Rodney*—J. Findlay to *Excellent*—A. Brown to *William* and *Mary* yacht—T. H. Huxley to *Victory*—W. Brake to *Childers*.

PAYMASTER and PURSER—E. Williamson to *Belleisle*.

CHAPLAIN—Rev. J. Falls to *Caledonia*
CLERKS—S. Fisher to *Childers*—T. Dryden to *Victory*—H. K. Conquer to *Torch*—E. Gray to *Childers*.

COAST GUARD.

Appointments—Lieuts. H. Toby and La Farque to command stations—Lieut. Allen to command *Eagle*—Com. Fisher to be Inspecting Commander.

Removals—Mr. Smith to Hope Cove—Lieut. Reynolds to Scatterry—Com. W. Oliver to South Yarmouth—Mr. J. Wilcox to Lydd.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

March 18, at Totness, the lady of C. Wise, Esq., R.N., of a daughter.

Marriages.

At Limehouse, Mar. 19, R. S. Stuart, Esq., of Deptford, to Charlotte, daughter of Peter White, R.N.

At Deal, Mar. 19, Com. P. Fisher, R.N. to Catherine, daughter of the late T. Backhouse, Esq., Cumberland.

Nov. Van Diemen Land, Lieut. Kay,

R.N., to Maria, daughter of G. Meredith, Esq., Great Swan Port.

Deaths.

At Portsea, April 1, Mr. W. Care, R.N.
At Kingston, Jamaica, Capt. Smythe, R.N., Harbour-Master.

At Bayswater, April 12th, Mary, the wife of C.upt. Burridge, R.N.

West coast of Africa, Mr. J. Wilkins, Master of H.M.S. Lily.

At Dartmouth, April 9th, Jonas Augustus, son of Mr. J. Coaker, Master R.N., aged 18 Months.

Quarterly Naval Obituary.—Flag-Officers—Vice-Adm. J. Katon (1841), Rear-Adm. E. S. Clay (1837), S. C. Rowley (1837) W. J. Lye (1841). Captains J. Clavell (1808), Hon. W. Keith (1828), T. Smith (b|1841), R. Tucker (1840), W. Balfour (1840). Commanders—T. B. Young (1810), F. C. Annesley (1814), J. M'Douall (1814), E. Rayner (1831), B. Leigh (1833), R. Mayne (1842). Lieutenants—R. Corsbie (1809), W. Bowers (1810), W. Grant (1815), C. Turrell (1815), W. Macfarlane (1815), J. N. Smart (1815), C. Godby (1820), H. L. Williams (1821), G. H. Smith (1825), J. A. Bainbridge (1825), J. M'Cornish (1827), L. Halliday (1828), S. Y. Brown (1836), C. D. O'Brien (1840), C. Clavell (1841), H. W. Baugh (1841), C. J. Brickdale (1842). Masters—H. J. London (1840), H. Tompson (a 1802), E. Fairfax (1794). Second Master—W. Weatherley (1838). *Medical Officers*—Inspector of Hospitals—D. Rowlands, m.d., (1841); Deputy Inspector of Hospitals I. Ryall (1841); Surgeons—S. Sinclair, m.d., (1804), R. L. Birtwhistle (1836), A. Skirving (1811), J. Cook (a 1815); Assistant Surgeons,—J. W. Moffatt (1835), S. Sproule, m.d., (1837), D. Thomson, m.d., (c 1840), H. Gamble, m.d., (1841). Paymasters and Pursers—J. Richards (1800), J. Salter (1805), J. Wrigley (1808), T. G. M'Murray (1813), T. Willey (1820), H. Q. J. Pinhorn (1842).

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.
From the 21st of March, to the 20th of April, 1846.

| Month Day | Week Day | Barometer | | Fahrenheit Thermometer, In the Shade. | | | | Wind. | | | | Weather. | |
|-----------|----------|-----------|--------|---------------------------------------|--------|-----|-----|----------|------|-----------|------|-----------|-------------|
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | S. | In Dec | In Dec | o | o | o | o | S | S | 2 | 6 | bc | qor (4) |
| 22 | Su | 29-58 | 29-48 | 32 | 44 | 26 | 45 | S | S | 3 | 4 | bc | bcp (3) (4) |
| 23 | M. | 29-20 | 29-22 | 43 | 51 | 38 | 53 | SW | SW | 5 | 2 | bc | bcp (3) (4) |
| 24 | Tu | 29-16 | 29-23 | 42 | 52 | 35 | 42 | SW | SW | 5 | 4 | qbcpr(2) | bc |
| 25 | W. | 29-33 | 29-32 | 43 | 48 | 39 | 50 | SW | SW | 2 | 3 | bcp 2) | bc |
| 26 | Th | 29-38 | 29-36 | 45 | 45 | 38 | 48 | SW | SW | 4 | 4 | bc | op (3) (4) |
| 27 | F. | 29-46 | 29-54 | 43 | 49 | 38 | 50 | W | NW | 5 | 3 | qbcpr 2) | bc |
| 28 | S. | 29-80 | 29-76 | 43 | 50 | 36 | 51 | W | SW | 4 | 2 | bc | bc |
| 29 | Su. | 29-57 | 29-50 | 40 | 48 | 34 | 50 | NE | NE | 1 | 1 | bc | op 3) (4) |
| 30 | M. | 29-85 | 29-99 | 43 | 49 | 37 | 49 | N | N | 4 | 4 | o | bc |
| 31 | T. | 30-14 | 30-02 | 41 | 49 | 33 | 51 | SE | E | 2 | 2 | bc | bc |
| 1 | W. | 29-70 | 29-60 | 43 | 55 | 37 | 46 | SE | SW | 2 | 2 | bc | bc |
| 1 | W. | 29-58 | 29-54 | 52 | 56 | 43 | 57 | SW | SW | 5 | 5 | qbc | qbc |
| 2 | Th. | 29-28 | 29-18 | 54 | 56 | 46 | 56 | S | S | 5 | 6 | qbcpr (2) | qbcpr 3 |
| 3 | F. | 29-30 | 29-32 | 47 | 49 | 41 | 53 | SW | W | 5 | 5 | qbcpr 2) | qbcpr 3 |
| 4 | S. | 29-56 | 29-36 | 43 | 43 | 41 | 49 | SE | SW | 1 | 3 | or (2) | or 3 |
| 5 | Su. | 29-24 | 29-22 | 46 | 54 | 42 | 56 | S | SW | 2 | 2 | orh 2) | o |
| 6 | M. | 29-04 | 29-00 | 44 | 48 | 43 | 50 | SW | NE | 4 | 2 | orh 2) | bcp 3 4 |
| 7 | Tu. | 29-05 | 29-10 | 42 | 46 | 39 | 47 | NW | NW | 5 | 5 | qor (2) | qor 3 4 |
| 8 | W. | 29-19 | 29-25 | 45 | 50 | 41 | 52 | NE | N | 2 | 2 | bc | o |
| 9 | Th. | 29-64 | 29-74 | 42 | 52 | 37 | 53 | NW | W | 2 | 2 | bcm | bcm |
| 10 | F. | 29-80 | 29-82 | 47 | 55 | 36 | 56 | SW | SW | 3 | 3 | b | or 3 |
| 11 | S. | 29-58 | 29-43 | 53 | 55 | 43 | 56 | SE | SE | 2 | 2 | bc | bc |
| 12 | Su. | 29-40 | 29-50 | 54 | 61 | 42 | 62 | SW | SW | 1 | 2 | bc | bep 4 |
| 13 | M. | 29-57 | 29-68 | 54 | 59 | 46 | 60 | SW | SW | 5 | 3 | qor 1) | bc |
| 14 | T. | 29-74 | 29-64 | 52 | 59 | 42 | 60 | N.E. | SE | 1 | 1 | bcm | or 3 |
| 15 | W. | 29-63 | 29-71 | 52 | 52 | 46 | 52 | SE | E | 2 | 2 | od (2) | od 3 4 |
| 16 | Th. | 29-98 | 29-99 | 55 | 60 | 48 | 61 | E | E | 1 | 1 | bc | bc |
| 17 | F. | 29-94 | 29-86 | 54 | 58 | 44 | 60 | SE | SW | 1 | 2 | bc | o |
| 18 | S. | 29-91 | 29-95 | 47 | 49 | 45 | 50 | N | N | 4 | 3 | op (2) | o |
| 19 | Su. | 30-04 | 30-06 | 48 | 52 | 43 | 53 | N | N | 3 | 2 | o | o |
| 20 | M. | 30-10 | 30-10 | 45 | 49 | 37 | 50 | N | N | 5 | 3 | qbcpr 2) | bcp 3 |

MARCH 1846—Mean height of the Barometer = 29.775 inches; Mean temperature = 45.8 degrees; depth of rain fallen—1.03 inches.

HUNT, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

JUNE, 1846.

NEW ZEALAND HYDROGRAPHY.—*Approaches to Auckland.*

Auckland, 23rd October, 1845.

SIR,—As the gulf of Shouraka, in New Zealand, is now becoming much frequented by British and Colonial shipping, and several dangers have lately been discovered, which do not all appear on the (otherwise very serviceable) Admiralty chart of that gulf, I beg leave to offer a few observations which may prove useful to some readers of your valuable Magazine.

In steering for Auckland from the northward, the Taranga and Moro Tiri islands, called also the Hen and Chickens, may be passed on either side. Coasting vessels invariably take the inner passage. In a line between Shoutourou and the largest of the Fanal Islands, about six miles to the southward of the latter island, there is a rock above water called Simpson rock,* and in passing between Shoutourou and Otea, called also the Great and Little Barrier islands, care must be taken to avoid a dangerous sunken rock, lying about three and a half miles due east from the south end of the Little Barrier.

The coast line of the Great Barrier is very incorrectly laid down on the chart. About six miles to the northward of Cape Krusenstern, there is a good harbour; a very remarkable rocky column stands on the southern side of its entrance, from which the north end of Shoutourou bears about W.b.S. $\frac{1}{2}$ S.

The first cove on the left, about a mile in from the entrance, called Nagle cove, affords excellent shelter for a few vessels, and further up

* The position of Simpson Rock is given from report only.

there is an extensive anchorage, but it is not safe to anchor in the harbour with the entrance open.

A copper mine is worked near the harbour, and a large vessel is being built in Nagle cove, where good fuel and water can be obtained in abundance.

On the western side of Motou Takewau valuable copper mines have lately been opened. A creek running into the island on that side, forms an excellent harbour. Where reefs appear on the chart, there is really good anchorage, the reefs extending to a very short distance only from the shore.

Between Takewau and Point Taketou Fenoa, there is a good passage. A rock, which can always be seen, lies in the centre of the passage, bearing about S.S.E. from the point. The flat rock can be seen from the deck of a vessel at several miles distance.

The very remarkable island of Rangitoto, rounded at the summit, with a straight slope on all sides to its base, can be seen in clear weather soon after passing Shoutourou; a course should be steered to pass inside of Tiri Tiri Matangi island; the passage is clear, and there is plenty of room to work through. On the eastern side of Tiri Tiri Matangi, and about a mile distant from it in a line between the peaks of Rangitoto and Shoutourou there is a very dangerous sunken rock, having only two feet of water on it at low water. A buoy is placed near it, but is liable to be washed away.

In working up towards Rangitoto, it is advisable not to stand too close to the main shore, for reefs extend to a short distance from some of the points; with southerly winds vessels may safely anchor outside.

In nearing the north head, (a bluff point in advance of Point Victoria, the signal station,) a red buoy will be seen marking a rocky patch, dangerous to large vessels, that may be passed on either side.

From the southern shore a reef extends towards the North Head, marked by a beacon and buoy at its extremity. There is abundant room for a large vessel to work between the beacon and the head.

The Waitemata is navigable for large ships for eight miles from its entrance, the holding ground is excellent; and I am able to state that with the exception of some accidents to coasting crafts, no injury of a serious nature has been sustained by any vessel either in the port or in its vicinity, since the establishment of Auckland in 1840.

The passages towards Auckland at either end of Waiheke island are perfectly available as they appear on the chart.* The rock marked, position uncertain, off the north side of Waiheke, is above water, about two miles nearer to the shore than it appears on the chart.†

S.W. winds prevail on this coast; about the times of the moon's full and change, easterly gales accompanied with rain may generally be looked for; they continue two or three days, veer to the north-west, and some-

* A reef extends to the distance of a quarter of a mile from the N.W. point of Hieh island.

† A rock lately discovered on the same side of Waiheke about three-quarters of a mile from the shore bears from Bird Island, S.S.W.

times blow with great violence, gradually subsiding as the wind gets round to the S.W. The barometer rises at the approach of easterly winds, and its fall indicates a change of wind.

With westerly winds it is advisable to keep close to the shore, especially towards evening, when a land wind may be expected.

The flood tide sets to the southward in the gulf, and the ebb to the northward about one and a-half miles per hour.

At Auckland, good water can be procured, firewood, spars, provisions, and other supplies may be obtained at very reasonable prices.

The want of good landing places is still felt at Auckland, though much has been done to remedy this evil during the last year.

A pilot for the harbour may be obtained outside the North Head.

I am, sir, &c.

DAVID ROUGH, *Harbour Master.*

To the Editor of the Nautical Magazine.

AUTO-BIOGRAPHICAL SKETCHES, *by a Merchant Sailor, illustrative of the State of the British Merchant Service.*

(Continued from page 255.)

ANTWERP during the three weeks I remained there, was particularly interesting from the circumstances connected with the struggle between the Dutch and Belgians. The long summer evenings were all devoted by me to wandering about the city, and seeing its curiosities; my supper was hastily swallowed, a rapid change made in my attire, and although fatigued with the day's hard work, curiosity and a desire to see for myself sent me all over Antwerp and its suburbs. The Sundays also were devoted to the same purpose, and from the cathedral to the suburban chapel, there were few places of worship in Antwerp I did not visit during my stay. The public buildings, particularly the cathedral with its handsome steeple, have been too often, and well described by travellers to require any notice here, the view from the latter, however, in a fine clear day is most magnificent. The city with the citadel, suburbs, and neighbouring villas, is spread out before you,—the broad Scheldt winding its tortuous course towards the sea,—its surface covered with vessels of every size and shape,—the country rich and highly cultivated, without a hill to interrupt the view, which ceases only in the dark obscurity of distance, form objects of pleasing contemplation, while nearer to the city are seen evidences of warfare, telling plainly that the view is not always so peaceful or pleasing.

On the bank of the river, immediately opposite to the city the Dutch were in force, protected by embankments and batteries, their flags displayed at various points, and the sentries plainly seen; the citadel also on the Antwerp side, was in their possession, while all around Antwerp, which was at this time the rendezvous of 17,000 troops, was placed a regular cordon of sentries and guards. All the streets ending towards the

citadel, or river, were rudely fortified, having a ditch dug across their breadth, leaving only space for a single passenger; the earth dug out was placed in the front of the ditch as an embankment, on which was mounted a heavy gun, while in front was placed a strong *chevaux-de-frize*, the whole protected by a sentry and guard. The troops were often in motion, the recruits were constantly exercised; reviews and inspection were frequent, while change of position and quarters was often necessary, as the attack was anticipated from a different direction. The time of my stay however, passed away without actual hostility, and judging from the effect of the former attacks,—the ruined houses, and well filled hospitals, I did not much regret the truce.

The king paid a visit to the docks while I was there, dressed in the uniform of his army, surrounded by a brilliant staff, he appeared extremely complaisant to all who saluted him, and judging from the *vivas* and *vive le roi*s of the populace, he was exceedingly popular; there was a sedateness or melancholy shade on his own countenance, however, which seemed little pleased with “the pomp and circumstance of war.”

In the course of my rambles, one Sunday, I passed the Belgian sentinels, on the side next the citadel, and walked towards that fortification, anxious to see what caused its celebrated character for strength, and had reached about half way between the city and fort, when two file of the Belgian guard came quickly towards me, and marched me to the guard house; the officer questioned me as to my intentions, which I soon satisfied him were innocent enough, and I was dismissed with a warning, and an expression of wonder on his part that they had not fired at me from the citadel. Another evening while wending my way towards the docks from a distant ramble, about midnight, I came bewildered amongst the narrow streets and alleys, and on turning a corner, I came suddenly on a sentry, who, while he challenged, brought his musket to the charge, and thoroughly frightened me. He led me to the guard-house, when the officer believed my simple story, and sent a soldier to direct me to the docks; indeed, on every occasion in which I came in contact with the authorities in Belgium, either civil or military, I was treated with the greatest kindness.

Walking round the Place Verte one Sunday afternoon, after having visited the cathedral, and listened with pleasure to the organ and the numerous singers and performers in the choir, I found myself moving in a different scene; fruit stalls and sweetmeat venders, were placed at intervals, surrounded by groups of happy looking people, itinerant musicians were busy with their instruments, discoursing sounds loud, if not sweet. Soldiers and officers mixing with that familiarity only seen on the continent, were parading about exhibiting their uniforms, and inviting admiration. Passing along, amidst the general crowd, I felt a hand laid on my shoulder, and turning round, a gentleman asked me if I was not the person who had shewn so much attention to Mrs. R—— on the journey from Ostend to Antwerp? I answered in the affirmative, when he said “That lady saw you from the window of the hotel, and wishes to see you.” I found her extremely glad to see me, very grateful for my attention, but disappointed that I had never called on her

before according to promise. Of course I stammered out some excuse, about want of time, but, in reality I fancied my present occupation would not warrant my intruding. She told me that she was the proprietor of a splendid vessel then in Antwerp, which her late husband had commanded during the past voyage, that he had died during the passage home, and that his brother now commanded, the person who had come out in quest of me. She pressed me much to go in the vessel, offering to forward my future intentions, and, I believe seriously intending to do so. I thought a little, wavered in my opinion; but, although inclination prompted me to go, principle said,—you have now formed an engagement with another, and you must not. I therefore respectfully declined. Mrs. R. frequently called alongside the vessel I was in, and I spent some pleasant evenings in her society. I had, however, much reason to rejoice that I did not accept her offer, as I afterwards learned that the vessel, on her outward passage to Rio Janeiro, was wrecked on the coast of Africa, inside the Canaries, and the part of the crew that were saved from the wreck captured by the Arabs.

Although hostilities had not ceased between the Dutch and Belgians, a pacific understanding existed about pilots, who were permitted to pursue their avocations unmolested. A Dutch pilot, therefore, came on board our brig, and took charge, before we left the docks,—those monuments of the stupendous works of Napoleon, who once intended Antwerp for the grand arsenal for building and equipping fleets, which should compete with ours for the sovereignty of the ocean. We reached Flushing after a pleasant trip down that fine river, discharged our river pilot, and embarked a sea pilot, to guide the vessel beyond the numerous sand banks, which almost blockade the entrance of the Scheldt. In the hurry and bustle of making sail, I suppose I was comparatively useless, although I had had some exercise, assisting to loose and furl sails in the dock. Just as we got outside the river, the brig, in light ballast trim, began to jump, with that quick rising and descending movement which is so certain an introducer of sickness to the uninitiated. I began to feel squeamish when the rough voice of my *friend* the mate, called out my name, and ordered me to loose the fore-top-gallant-sail. Away I went getting up in that swaying, rolling, half-terrified manner in which a novice ascends in a sea way, gained the cross-trees, and had just got on the foot-rope to cast loose the gaskets, when I became thoroughly sick, and with one arm round the top-gallant-mast, and my body resting on the yard, I vomited until nothing was left. The men, who were waiting to set the sail, pitied me, called me down, and offered to come up. In the midst of my sickness, however, I felt a determination to succeed, if only to disappoint the mate, who, the men said, had no business to send me aloft at such a time. I succeeded, loosed the sail, and felt even a degree of pride as I called out “sheet home.” Perseverance and the approval of my shipmates, carried me through my noviciate triumphantly. I kept my watch regularly from the first, and before I was a week on board took my regular trick at the wheel.

Three days fair wind, carried us to Elsinore, without our having an opportunity of seeing much of the coasts along which we sailed. until we

approached the Narrows at the Koll lighthouse, when the shore on either side becomes plainly visible and interesting. Cronberg castle on the right hand stands out in bold relief, imposing in its appearance, as the guardian of the pass. Nelson, however, proved its inutility, and modern steam warfare would treat it with contempt. Rounding the castle, the neat, clean, little town of Elsinore becomes visible, and the coast on either side thickly studded with houses and numerous windmills. We anchored in Elsinore to enable the master to go ashore and clear the vessel at the custom-house, certain fees being payable here on all vessels and goods passing, such fees forming the principal revenue of the Danish King.

The seamen forming the crews of the Baltic traders, are still, but were more particularly at the time, I commenced my nautical life, a class of men peculiar to the trade. Brought up in it from boyhood, never going in any other, they had a set of habits and customs of their own with which their master could not interfere. Sailors during the summer months, when the navigation of the Baltic is free from ice, employ their winters, in weaving, farming operations, or in the coasting trade, looking forward to again visiting the Baltic in the spring. Discipline as known in a well regulated merchantman they are totally unacquainted with; smoking their pipes on their watch on deck, making remarks on the orders given to make or shorten sail, criticising the manner in which it was done, leaving the vessel in a harbour when the regular working hour was past, without leave, calling the mate by his christian name, never using the "Sir" to him in reply, were all quite common. They looked on a sailor who made the long southern voyage, as an animal of a different species, viewed him as an outcast, and spoke of him as a "*Southspainer*," namely a smart, careless looking fellow with canvas trowsers, no braces, a blue jacket without vest, his handkerchief carelessly knotted round his neck, the shirt collar open, a tarpaulin hat jauntily placed on the back part of his head, with the ends of the black ribbon which surround it fluttering in the breeze, his whole sea stock consisting of a hammock, and canvas bag, containing the few necessaries he required. Our Baltic man on the contrary is a man having a large chest well filled with decent clothes, generally in a thick double-breasted waistcoat, and large blue jacket, a Scotch cap, worsted cravat, thick worsted stockings, thick fustian continuations, very roomy in what Marryat so happily terms the west end, narrow in the legs, high waistband, supported with braces, and Russian sea boots, wearing the same dress all the year, on the principle of the Russian peasant, who fancies that his sheep-skin keeps out the summer heat as well as the winter cold.

By an universal custom in the Baltic trade, the vessel only supplied the crew with coffee and sugar for breakfast, their supper furnished by the vessel was merely bread and beef. Every sailor, therefore, had a private stock of tea and sugar, which at sea he prepared for himself in his own tin pot. These supplies were obtained at Elsinore, as there the articles were procured free of duty, and the master of a Baltic trader never attempted to go on shore without first getting from the crew a list of the articles they required, for the value of which he reckoned with them at the conclusion of the year, or voyage, if they happened to leave. Tea

and sugar were not the only articles however that the custom of the trade enabled them to procure, and I was surprised when our crew made up their lists, comprising sugar, tea, tobacco, gin or brandy, in quarter-ankers, and cigars and other articles to smuggle ashore when they reached home.

On the present occasion we had a harum-scarum fellow belonging to Yarmouth on board, not a regular Baltic man, who seemed to think these privileges most excellent things, as doubtless all his brethren of the long voyage would; and when the sundry quarter-ankers of spirits belonging to the crew came on board, he seemed particularly desirous to have his into his own keeping. Our skipper, however, acting with great prudence, put them all below in the cabin, telling the crew, they would get them when they got into the Baltic, no doubt he wished to prevent intoxication until the vessel was through the Grounds, or narrow channel amongst banks, opposite to Copenhagen. I do not think he anticipated drunkenness from his own Scotch crew, but the Yarmouth man frightened him, and I must say justly, as he was a thoughtless sailor. The crew however not thinking any reason sufficient for a breach of their usual customs grumbled very much, and I thought at one time they would not have proceeded. Grumble and go they did at last, and when they got their kegs of spirit in the Baltic, they indulged very freely. Surely the Elsinore dealers must have supplied them with a diluted kind of gin, for I have seen that Yarmouth man take the anker up in his hands, and holding the bung hole to his mouth drink as if it was water.

Whenever the weather was at all bad, it was quite a common custom for the men to light the galley fire at any hour of the night, and make a tin pot of tea to comfort them; a look-out on board was never dreamt of in the Baltic, and only when the master (who was a careful man) was himself on deck could he get any one to interest himself in the safety of the vessel. There was no second mate on board, the carpenter who kept regular watch, acting in that capacity. Both he and the mate used to go to sleep when they came on deck, and only the grumbling of the man at the wheel when he deemed his two hours elapsed, roused them up to have it relieved. The cook also kept watch, and when it was his morning watch below, it was my business about 5 A.M. to light the fire, and get the breakfast prepared, the cook being called about 7 A.M. to complete operations. We had regular watch and watch during the passage. A Baltic sailor would consider being kept up during his afternoon watch below, a decided infringement on his rules, so that time passed off easy enough; and I, on excellent terms with my shipmates, found all the anticipated difficulties in my new profession, either over-rated, or, non-existent.

Up to our arrival at Elsinore, our ultimate destination was unknown. There, however, we learned that we were bound to Cronstadt, the port of St. Petersburg, for Baltic sailors know all these matters as soon as the captain, and they are as fully discussed in the fore-castle as the cabin. While we were sailing up the Gulf of Finland, we had continued daylight, at least there was always a bright twilight during the very short summer nights. This circumstance rendered the navigation of this intri-

cate arm of the sea easier and safer than it is in the autumn months. One morning as we were sailing upwards with a fair wind, I was at the wheel, the whole watch besides, fast asleep as usual. I observed ahead of the vessel two poles, on the top of which waved small flags, one pole being on each bow of the brig. Assuring myself that something must be wrong, although I was at the time ignorant of their use, I with difficulty roused the carpenter, who immediately called the skipper. He at once braced sharp up on a wind, and we with difficulty cleared one of the numerous shoals in this inland sea, which these beacons serve to point out. Either the current, or negligent steering, or a wrong course given, had caused our deviation from the proper track. This occurrence at the time scarcely made any impression on me, but I have often since, thought of that and many other narrow escapes from danger. Our passage up the Gulf was cheerful, we had beautiful weather, and were constantly surrounded with passing vessels. We also sailed through the Russian fleet, cruising in the Gulf for their usual summer exercise.

Arriving near the entrance of the Mole, I was surprised at the numerous forms and visits required on board, before we could enter it, although the vessel was in ballast. Our Master however was an old trader, and soon got through, when permission was given for the vessel to enter.

The harbour of Cronstadt is formed by an immense pier of masonry built in the Gulf, close to and communicating with the Island of Cronstadt. The Mole for the merchant shipping is of vast size, and has an entrance similar to our docks, but without gates. The vessels lay in it in tiers, moored to wooden dolphins or posts firmly fixed in the ground. The Mole for the Russian men of war is contiguous to the merchant Mole, divided from it by a pier; the whole line of massive piers forming the outer side of the harbours is covered with heavy guns mounted en barbette, presenting a formidable appearance. Opposite the entrance to the harbour stands another immense fort, built in the Gulf, and also bristling with guns; while a little below Cronstadt on the same side, are immense batteries of solid masonry, having two tier of guns one above the other.

Freights on our arrival were low and difficult to be procured, we had to wait some time, during which we were employed on board in painting and decorating. Time passed swiftly, there was continually occupation for one possessing so much curiosity as myself, and I yet remember with pleasure, how I enjoyed the first visit to Cronstadt. The other boy and myself were always sent in the boat, either with, or for the master, or on shore to the town for some article necessary for the vessel. We used also to go to the wood merchant for spars, planks, or rickers, for which we had to produce a pass called a yerlick, a document given by the custom-house; on which each article of stores must be written by a custom-house officer, as we conveyed it on board, in order that the duty on all might be levied before the vessel sailed. The custom-house officers whose duty it was to search each boat, passing and repassing from the vessels to the town, were located in a hut situated on a floating platform, and placed in the space between two immense beams, which formed a complete barrier

across the Mola, between the vessels and the landing-place. These custom-house officers, as well as the police-men, and Russian sailors and soldiers, were all dressed in uniform; an undress cap, a pepper and salt coloured great coat, dark pantaloons with a narrow red stripe, and invariably a cross belt from which depended a short sword or cutlas; in addition, the custom-house officers at the booms had always a boat-hook in hand, with which they pulled any refractory passer by towards them. Crowded as these two narrow channels always were, it was often amusing to see the scenes that were occurring, particularly about the time the cooks were passing on shore to the cook-house. Skipper and cook were alike subject to their surveillance, and I have often seen the hat of a murmuring master knocked off his head by the same boat-hook which the instant before, had performed the same office for the lid of the cook's saucepan. Whenever the boat was sent for stores, the yerlick was entrusted to me, the master having once shown me how to get it in-dorsed. This distinction in my favour caused a jealousy on the part of my fellow boy, who although conscious of his own inability, still fancied himself my superior from having been a year longer at sea. I soon found out on board ship, in the fore-castle, and as the sequel will show, in the cabin, that knowledge is power, and apart from my own case, I never saw an educated boy join a vessel and behave himself properly, but in a short time he was in a measure respected, and looked up to by his ship-mates.

By the rules of the port, no fires are permitted on board any vessel for any purpose, neither is smoking allowed under a penalty; it is, however, often practised, and the masters are often fined for a contravention of this rule; part of the fine being given to the informing official, renders them interested in detection. A light in the cabin is tolerated under certain restrictions, many of the masters, however, have an apparatus called a *conjurer*, which by means of a spirit lamp, is available for boiling water, frying a chop, or any other small effort in cookery. The principal cookery is always carried on on shore; a long, narrow house being appropriated to that purpose. As the cook is constantly requiring a boat for his own purpose, he is here provided with a small canoe, hollowed out of a piece of fir, about ten feet long, and two and a-half feet broad, with a small pair of sculls; this craft is called a "*turkey*" although I never could determine from what the name was derived. At the time I am writing of, certain rules and regulations were established among the cooks on shore, one being chosen king; always of course an old experienced veteran belonging to some British vessel, of which there are generally about three hundred present, the foreign cooks forming a small part of the whole, are never permitted to govern, although they are forced to abide by the laws established by the majority. As I paid frequent visits to this pandemonium in quest of our own artiste, I had ample opportunity of becoming acquainted with its inmates. One or two bottles of gin were regularly exacted from each cook, before he was permitted to light his fire on his arrival, and the master regularly submitted to the fine. Spirits were obtained by the cooks in any quantity, the butcher and vegetable dealers giving them as much *vokey* as they wanted, in return for their

receiving the daily allowance, short in weight, or inferior in quality. The cooks under such circumstances were not the easiest managed portion of the crew, and I saw on one occasion a company of soldiers required to restore peace amongst them, broken by some infringement of their rules. Every article of food which ought to have been warm, was cool enough ere it reached the vessel, a quarter of a mile distant, through the crowded tiers of vessels or passing praams, and often have I seen the cooks detained half an hour from the passage being blocked up by vessels and lighters, removing from one part of the Mole to another.

Many an amusing scene have I witnessed with cooks and their *lurkeys*, pursuing their course either from, or to their respective vessels, which during three-fourths of the distance lay in the same direction: to see them at dinner time, issuing from their smoky fastness with the saucepans, kettles, kids, and other portions of the dinner equipage, their faces blackened by the smoke of the fires, mixed with the perspiration, from their heated bodies, and the steam of their smoking kettles; to behold them fairly embarked in their frail craft, the majority paddling or sculling onwards, while some more adventurous or lazier member of the body, would erect his jury mast, and with a mat sail steer his *lurkey* with a paddle; then again to hear their quizzing of all and sundry who came near them, Russian and English indiscriminately, laughing at the jokes both spoken and practical, as they told. I never could fancy anything more appropriate to liken them to, at such a time, than a horde of Indian savages issuing from some fastness and hurrying onwards to attack some foe. The cook in Cronstadt became a man of importance among his shipmates; having constant access to the shore, he could bring spirits or other articles for the crew, and having full command of his *lurkey*, he alone could grant permission to any one, wanting to pay an evening visit to some acquaintance on board another vessel. From the rivalry existing amongst themselves, with the crowded state of the Mole, and the more crowded state of the tiers, accidents were continually occurring, and it was always considered a fortunate issue to the cook's passage, when he arrived without spilling the contents of his kettle or saucepan; often we were minus our usual allowance, and not unfrequently kettles and all went to the bottom from a collision between the tiny *lurkey* and some heavier craft. A narration of the cook's adventures during his passage formed always an interesting event at meals. On Sunday afternoon races between the *lurkeys* were frequently got up, for cooks are as tenacious of the character of their craft as the skipper of his vessel, and I have known them positively refuse the *lurkey* first given them on their arrival, as not fast enough for their purpose. These *lurkeys* are kept by parties on shore for hire, a small sum being paid for their use while the vessel remains in harbour.

CAPE LA HAGUE AND CAPE LA HOGUE.—*Extract of a Letter from Mons. C. de Gerville, Hon. F.S.A., &c., &c., communicated by the Council of the British Archaeological Association.*

SINCE my residence in England to the present time, I have observed that all charts call the northern extremity of the coast of the Cotentin "*Cape la Hogue*." The same error may be observed on all the old charts which I saw there, and the Danish charts also contain the same error. But it is time to investigate this mistake, as it may possibly be attended with inconvenience. Here, we are unanimous in calling this point Cape La Hague, and in distinguishing it from Cape La Hogue, which is very near Barfleur, on which Cape there is a good light. Certainly, as the Cape belongs to France we have a right to decide this matter, but as it is a point which might be contested, I will endeavour to establish the truth from official sources. I shall commence with the present time, and afterwards go back a thousand years.

All the French charts, those which are published by the *Depôt de la Guerre*, those of Cassini, published a hundred years ago, those of the diocese of Coutances, which appeared in 1687, agree in calling the north point of this coast Cape La Hague, the extreme of the peninsula whereon the light of Anderville has just been placed.

The registers of the Bishop of Coutances extending back from 1790 to 1251, all agree in calling it the *Deanery of La Hague*, it being termed in the latin of the registers of the thirteenth century *Decanatus de Haga*. This would be sufficient proof, but an established evil will require more than this to eradicate it, so you shall have proof of another kind, and no less conclusive.

In 1026, the Duke of Normandy married Adela, the daughter of Robert, and sister of Henry the First of France, who at her second nuptials, married a Flemish count, and became the mother-in-law of William the Conqueror. A learned benedictine, Don Luc D'Achéry, has preserved in his *Spicilegium*, the dowry of this marriage. Richard presented the Princess Adela as her dowry extensive tracts of ducal domains, and among others the district called *La Hague*, with a sea-port (*pagum qui dicitur Haga cum portu maris*) which is the port of *Omonville-Hague*, still well known and frequented by the inhabitants of Aurigny and its neighbourhood. Thus you see that the name *La Hague* is recognized by our government of the eighteenth and nineteenth centuries by our ecclesiastical government from the reign of St. Louis to the revolution, and by the Dukes of Normandy in 1026, forty years before the conquest of England.

But what is more remarkable still is, that this name was known and probably given to this tract of land by the pirates who gave their name to Normandy, perhaps also by the Saxon pirates, who named these coasts and those of Bessin *Littus Saxonicum*. In the maps of Cassini, and even in those of Mariette, published 159 years ago, appears the famous entrenchment, intended to isolate the promontory of La Hague, con-

taining seven parishes. This entrenchment, on which I wrote a memoir twenty years ago, is known as the *Hague dyke*. It bears this name on the charts of Mariette, Cassini, Cadastre, and on those of the *Depôt de la Guerre*. But whence the Teutonic origin of the name? It evidently originated with the people north of Germany, from whence the ancient Saxons or Danes occupied the promontory of La Hague, under the Carolingian race of kings, perhaps under the Roman emperors. However it may be, the name for at least a thousand years has been officially recognized in the district of the Cotentin.

The proof of a German origin is no less evident. The name of Hague or Hagen is found everywhere on the German coasts from the Hague in Holland (*Haga comitis*), to Copenhagen, the capital of Denmark, and beyond this again on the coasts of the Baltic.

The term Hague signifies wood, *Haga Comitis*: the Haye has the same meaning as Bois-le-Comte. The greater part of the Hague has the appearance of a devastated forest. Our latin titles of the middle ages give the name of Haye to the forests, which have preserved the French name of Haies, as La Haie de Valognes, La Haie Comtesse, La Haie Pesnel,—*in nemoribus, et Haies meis*: see the word Haia in the glossary of Ducange.

I have said that the name of Cape la Hogue instead of that of La Hague has produced other errors, and I will mention two of the most remarkable in the history of the Channel Isles.

In 1121 the ship which embarked the children of Henry the First for England, with 150 illustrious personages of his court, sailed from Barfeur on the 24th November, and struck on a rock so close to the port that the cries of those who perished in the vessel were distinctly heard from the shore. On the following day, the St. Catherine, a fishing boat went out to her from the port at daylight, and found one person only that had survived the disaster, who was a butcher of Rouen named Berold. All contemporaneous historians relate this fact; the details are circumstantially given in Ordericus Vitalis, and all agree in the place of wreck being off Barfeur. And yet all the historians of the Channel Islands persist in stating the rocks of Aurigny as the place of the disaster, simply because they confound La Hague with La Hogue, which latter is really near Barfeur.

In the same way the famous battle off La Hogue in 1692 is referred to as off Cape La Hague. This battle commenced immediately off Cape Barfeur, was continued to the eastward, when James the Second, then in the chateau of Quinéville, witnessed it distinctly from the church of the village, and exclaimed very patriotically, no doubt, but with bad policy, "See how well my Englishmen fight." And yet again, according to the historians of the Channel Islands, it was off Aurigny and the Caskets that this battle took place. But we have lately had an undeniable proof of the locality of the battle. On the 7th March, 1833, the sea having receded in an extraordinary manner, exposed the remains of the hulls of several of the largest vessels of the French fleet, which were cast away and burnt off St. Vaal la Hogue, sufficiently within the bay of La Hogue to escape being taken by the enemy. I have preserved some remains,

and there are more in the town of Valognes, and in several houses of St. Vaal.

If the historians of the Channel Islands are so much at fault on a fact so little remote from the present time, a fact on which there are both English and French official accounts, they are more to be blamed than those of the middle ages.

In my next letter I hope to give you the history of the missions of St. Magloire and of his monument in the Isle Sark, during 1000 years, and I shall add to it if my space permit a curious charter by which Pierre de Preaulx in 1203 gave to the abbey of Val Richer the isle of Escrehou, become since that time a bed of rocks between Jersey and the coast of France, on condition of building a church (*basilicam*) for the daily performance of mass.

C. DE GERVILLE.

*To C. Roach Smith, Esq., Secretary of
the British Archæological Association.*

OREGON.

“He that would win the race must guide his horse,
Obedient to the customs of the course;
Else though unequal'd to the goal he flies,
A meaner than himself shall gain the prize.”

As this question is intimately connected with the navigation of the ocean, the hydrography of the north-west coast of America, maritime traffic, and is, moreover, of national importance, it must be one of considerable interest to the seaman.

The war-cry has again been reiterated in America, and a speech of Mr. Adams has been published, in which he points out to his countrymen that their claim to the Oregon territory is derived—whence? From the circumstance of the master of an American whaler having been the first person to discover the river Columbia! No such thing—but from Holy Writ! It has at least the merit of originality and priority over all the other claims; but we take leave to observe that it is of universal application,—ergo—as good for England as for America. The Senators, however, of the latter, when lacking argument to prove a claim, as in this instance, resort to abuse or bluster—the weapons of the weak—or, adopt, as Mr. Adams has done, some monstrous absurdity in lieu of fact which rests on the sure foundation of truth, and which had it been honestly entertained, would at once have put an end to the claim, as to the question of right: but “Uncle Sam’s obstinacy is unyielding, his creed being:

"Never give up! there are chances and changes,
 Helping the hopeful a hundred to one;
 And through the chaos High Wisdom arranges
 Ever success—if you only hope on.

"Never give up! for the wisest is boldest,
 Knowing that Providence mingles the cup;
 And of all maxims the best—as the oldest—
 Is the true watch-word of 'never give up.'!"

The assumption upon which this Senator rests the claim of the United States to the territory of Oregon, and by extension of the precept to any other that they can master, out-herods all other droll Yankeeisms; for rise as are Jonathan's whimsicalities—strung with strange fancies and burlesque conceits,—there are few, perhaps, of the hundreds which the Press of the States issues to create mirth, that are so far-fetched, or more extravagant, than the noted Senator's origin of his country's claim or right to the disputed land in question. It must, no doubt, have been highly edifying* to the congregated wisdom of the Capital of the West, to have heard the clerk of the House read the several verses of the first chapter of Genesis, *in proof of the Oregon claim*. But, we imagine, if the thing was not altogether intended to ridicule the universal-appropriation-mania, that it will prove as harmless as the indulgence of those persons who take pride in tracing back their ancestral lineage.

Be that, however, as it may, we may all safely acknowledge the embarrassment that the parties would be thrown into, if, by some decree which they could not escape, their *Title Deeds* were demanded in confirmation of their claims to Oregon, or to any other portions of the continent still unoccupied by the white men. But, as far as the forms and usages of civilized countries have been exercised, and reciprocally acknowledged as binding in claims of territorial sovereignty, there can be no doubt whatever that England has the best title, or rather claim according to custom, in which point of view we can alone regard it. As to the apocalyptic documentary evidence which the senator gave as decisive in favor of his country, the British cabinet no doubt will allow that of Washington, all the benefit it may calculate as likely to flow from the revelation.

This claim of England is founded (according to usage from the early periods of maritime discovery) on the well known and recorded circumstance of Sir Francis Drake having been the first discoverer of the north-west coast of America, (as far back as the year 1579,) between the latitudes of 38°, and 48°, and which he named New Albion.

This tract has since been called Oregon, probably from the appellation which the native inhabitants on the banks of the Columbia gave to that river. Its entire extent is included between the latitudes of 42° (which is the boundary line for North California,) and 52°; in an east and west direction, it comprises about ten degrees of longitude.

But Drake did more than discover the land, anchor in one or two of its bays, and refit his vessel; he took *formal possession*, agreeable with custom, (which the Americans, be it observed, have themselves followed.)

* It has been considered as an unbecoming act of levity in a grave Senator.

in the name of his sovereign; anticipating that, at some future day, it might become of use to his country.

We shall not lay any stress upon the farce of the cession by the natives, the deed of conveyance, signed and sealed, &c.; but here, whatever opinion may now be formed of the custom, we find, at least according to the acknowledged power exercised by civilized nations, a *priority* of title over any which the Anglo-Americans can advance; albeit, not so old as the revelation adverted to by the Bible senator in the forum of Washington. It will be recollected that this transaction of our Devonian circumnavigator, occurred *two centuries before the Anglo-Americans became a nation*.*

It seems pretty evident that the British government did not care much about the land on the left bank of the river Columbia, as its occupation by hundreds of the wandering citizens of the Union, was tacitly permitted. These restless spirits—the pioneers of lawless usurpation, have quietly and gradually dropped in; not with the petty sort of curiosity belonging to the Paul Prys of city societies, but with the pre-determined and reckless craving of the Prairie rovers, to appropriate to themselves property which does not belong to them, or their country.

It appears that these hordes of busy wanderers over the “Far West,” have located themselves in the fertile valleys in the vicinity of the river Wallaminette, (a tributary of the Columbia, running from south to north,) whither itinerant preachers of the Gospel had rambled with their families, and formed a nucleus around which the “wallet and staff” gents have since gathered. They have not been idle—at least in their own worldly concerns, whatever they may have done in a spiritual way for the benefit of the legitimate owners of the soil,—as it appears that they now count a town and several villages; and, moreover, are beginning to discuss the propriety of forming a legislative code, and claiming, or declaring their independence!

This practical display of the “go-a-head” principle, which seems to tally with the views of the American government, opens, or ought to open, the eyes of John Bull, who, should it be his will to make the trial, would find these tenants by sufferance, a most obstinate class of mortals to eject. But it is probable that the British cabinet was indifferent about the southern Oregon, as its foresight, perhaps, induced the belief that in the progress of time it would fall into the possession of the Americans. The *sang froid*, however, which these squatters of the States manifest, as if the appropriation of lands which they have no right to, was a matter of course, would have been truly amusing had not the more southern citizens displayed their tact and effrontery in the (very similar) case of Texas.

The valleys of this portion of Oregon are said to be very fertile, and to return abundant crops; the climate is temperate and agreeable; but it has the disadvantage of not possessing a good harbour; which, however, in some measure might be remedied by the construction of artificial ports. But that consideration does not at present enter into the contemplation of

* The reader is referred to the extremely interesting life and adventures of Sir Francis Drake, by John Barrow, Esq., published by Mr. Murray.

the Americans, whose cupidity and grasping policy are not to be satisfied with any thing short of the whole extent of territory, because they choose to consider it as an integral part of their continent! This is the modest ambition of the Young Republic. With as much equity might Spain claim the whole Peninsula; or, to extend the principle, Russia the whole of Europe!

To the minds of honourable men with upright principles of Government, all covert or under-hand dealing is despicable. The masked foe under the guise of a friend, or ally, whether pertaining to an individual or a nation, is a detestable character. History furnishes many instances of such treachery, and hypocrisy. But, however much we may deprecate and condemn the sort of feline sneaking mode of occupancy of lands not belonging to a state, by certain of its citizens, who are adepts in the practice of such a species of robbery, we must acquit the voice of the cabinet of Washington of uttering any ambiguous language, on the Oregon question at least—that language, all will allow, being plain, loud, and undisguised,—but, we do not vouch that it may not be misunderstood. However, the peroration or sum-total of the giant ambition of our doubtful trans-atlantic friends,—that no European nation should be permitted to form settlements upon any portion of the Western Continent, is, as pretty a piece of dogmatism as European ears have been saluted with since the Corsican essayist in universal conquest, discovered the difference between that which *may* be wished, and that which *can* be accomplished. What is the point that a government would act upon with most surety—a presumptive, or a positive? There could be no hesitation in the choice. Well, we have had specimens of Jonathan's skill and indomitable resolution in pushing onward from the confines of his own territory into that of other people's. These are signs of action that are pregnant with meaning. We hear, too, his thoughts expressed in words fully charged with that sort of significance—however unexpected—that is not to be misunderstood: we see, also, his indefatigable exertions in maritime traffic, spread, and still spreading over the bosom of both hemispheres. What then is *his* interest? Reason answers "peace." What says, Ambition and Passion? "Extension of the Republic by all means though war should be a contingency." Peace, therefore, is the *presumptive*, extension of the confederacy the *positive*.

Let Mr. Bull take *his* measures accordingly. We will presently present him with a scheme. The idea, *per se*, is simple; but, its fulfilment with the consequences, great—call it "magnificent," if you will. Some eighteen hundred years ago, the *legions* of the eagles, who harrassed our forefathers into civilization (or rather softened their barbarism,) showed the paramount value of such a scheme in uncultivated lands; but, *we* can do more. Let the *Americans* canal or railroad Darien; we can have, if we please, a shorter and a better route to the East Indies through Canada.

But amidst all these claims, schemes, &c., the proprietors *de jure*, the Red Men, or Indians, are not consulted; they have no voice; in fact, they are not thought of by those noisy Republicans who stickle so much for *their own* liberty and rights. Verily there is a mystery hung over the

origin and history of the primitive inhabitants of the New World, that has altogether eluded the piercing sagacity of the civilized man to penetrate. But the narration of facts and circumstances recorded in their modern history, in connection with the doings of the white man, tells a tale which verifies to the letter the humiliating truth that, "man's inhumanity to man makes countless thousands mourn." The inevitability of their ultimate fate, the imagination can easily anticipate:—to it—the herald thought of reality,—some imperative destiny seems bound up with their existence; some unalterable decree of Providence, that they should fall back, and gradually fade away before the advances of the Caucasian races, until finally, not one solitary being, the descendant of the millions of active souls who for ages, anterior to the withering curse the first foot of the white man stamped upon their sands, had flourished in the wild magnificence of savage grandeur, over the prairies and savannas, and amid the interminable forests of the devoted land, shall be left as a memorial of what once was.

The bare idea is awfully startling, and sinks deep into that immaterial seat,—that Pandora's box of contrarities,—that kaleidoscope of light and shade, and of ever varying colours,—that intangible arena of the metaphysical philosopher's vagaries—the human mind!

The penalty of the transgression of man's first parents has been exemplified up to this day. The fruit of the tree of knowledge has not refined into perfection. Unmindful of the redemption mercifully given to him, his perverse nature makes the penalty an apology for the oppression which he exercises over the more helpless of his kind.

Driven from hill to hill, from river to river, from valley to valley, beyond the mighty stream of the great central aqueous boundary of the white family, into the vast treeless plain of the "Far West," where even *feræ naturæ*, the gift of the "Great Spirit" for the supply of their natural wants, are rifled from them, the unhappy Red Men find no intervals of rest, no security! It is a melancholy picture!—but we can pursue it no farther than to add that, their treatment *by the British* is humane, and generous, even on the shore of the 'Pacific' which is so far removed from the seat of Government.

The war mania in America, although spreading in all directions, we may readily believe from the papers, has not attacked the majority of the commercial inhabitants of the eastern sea-board. They are no doubt desirous of the continuance of peace, and care very little about any future benefit that might arise to the union from the present possession of North Oregon. Prospective advantages which may not be realized for some generations yet to come, when opposed to present interests that may be calculated upon as likely to last out the time of the existing communities of the trading Atlantic States, are cast into the shade by them; self-interest and the "go-a-head" principle, are deities to be worshipped with more devotion than the eastern men are inclined to bestow upon the goddess of Ambition, who is beckoning them towards the strait of Juan de Fuca. In fact, these sensible and humane men have no notion of sacrificing their immediate interests, or of assisting by their countenance in plunging their country into a ruinous war, that, senatorial ambition

should be indulged in the hope of acquiring a strip of land, which, if obtained by such means, would be of little national use for a great many years to come. That point, the result of which in a war struggle is very doubtful, they are willing to leave to their posterity to accomplish; it is their business to look to their present peaceable position, which is the main-spring of their prosperity, and not to risk it to please the insane and reckless desire of a faction.

We are led to this view of the case, from the voice of the wise Bostonians on the question, which, as it is worth retaining, we annex: "Nothing can be more attractive to the taste of the 'Young West,' than the splendid galaxy of patriots and statesmen who generally form the group of a Washington cabinet, and the congregated wisdom, purity, and patriotism, which adorns the halls of Congress.

"Still, in process of time, the charm would not resist the barrier of the rocky mountains; and the 'village Hampden's' would set up for themselves, after Uncle Sam should have paid roundly for building the villages."

Compensation, arbitration, and war are then touched upon, and the voice continues. "Now to suppose that a majority of the American people are ready for the last of these alternatives—or that they will plunge into and support a war for these Siberian Wilds, until the other alternatives are finally and offensively rejected, would be to imagine the case of a nation run mad."

There is little doubt the delirium would be of short duration, and find its cure in the excess of suffering brought upon the nation.

The calamities of a British war are fearfully inappreciable. The means of annoyance possessed by Great Britain are multiplied ten-fold by the agency of steam power; and ours of defence are relatively impaired in the same ratio. Every harbour, river, creek, and inlet would be accessible to their various craft. Our whole sea-board would be lighted up by successive fires—and our commerce nearly annihilated. * * *

"Great Britain, say our vapouring statesmen, will not, dare not, go to war. No doubt she will be extremely reluctant to draw the sword; no doubt a war would prove inconvenient, injurious, and, in so far as it might tend to embroil her with other nations, hazardous to her interests. But the ignorance of those is an object of compassion, who can believe that the sleeping lion will suffer our government to tread on his toes without rousing him to action and to vengeance."

If the bellicose spirits of the union would attend to these remarks of their countrymen, they would understand that the ground of contention was not, to their country, worth a contest with such presumable results; whilst the retention of North Oregon by England, is of vast importance to Canada.

War is a deplorable alternative. It is true that Great Britain is ardently desirous of peace, and in that wish she has a moral advantage over the other claimant of the territory in question; but there is a point in that sentiment of humanity beyond which the *alternative* becomes imperative as a *duty*. Her desire, however, does not arise alone from the sincere and compassionate feeling to spare the people of the west, the

miseries that a state of war would inevitably entail upon them; but also from the equally exalted principle of setting an example of moderation—whilst at the head of commercial, and therefore wealthy Europe, with a might and power second to none, a puissance in arms yet unrivalled, to all the world. There is nothing Utopian in this, whatever of dignified magnanimity may belong to it; it springs, indeed, from the conviction of a sober reflecting people, from a consciousness of right, which tells them that to be just, to be temperate in the plentitude of their vast power and resources, and to avoid by every means consistent with honour, the committal of evil, such as war, is to be great. And, if the renown gained by triumphs during a state of warfare is to minister by the ulterior consequences that succeed such a state, to the happiness of a nation; if that is to constitute one element of its greatness, then Britain is that nation which has attained both; and if no other consideration urged her on to desire and maintain a peace, she might safely, and with dignity repose upon her acquired laurels, regardless of the puny vapourings of the misguided of any power in any part of the world.

But Great Britain has her own interests to engage her attention, whilst endeavouring to maintain a pacific position, and as naturally, too, the interests of those of her sons who have carried her name and her institutions to the northern portion of that continent, the *whole* of which, the rival claimant of Oregon is ambitious of grasping, from Cape Turnagain to the Gulf of Darien.

Now, even in the present already wide spread extent of the republic, it has become a matter of doubt whether such a confederation, composed of *pro* and *anti*-slavery states, a feature in the political and social condition of a people which the system of serfdom or villanage of Europe has little resemblance, would outlive many years; such a condition being an element of discord, and annually threatening the clashing of interests, to say nothing of the mixed community, differences of religion, &c. If, therefore, in its present state disunion be expected, how long would a monstrous federalism, embracing the entire northern continent within its governance, last?

Whatever may be the ultimate fate of Canada,* we will not stop to conjecture; but we must prevent the encroachments of a neighbouring people on lands which eventually will pertain to that province; and whilst we have ample means within our power take especial care that that wily people do not, by "little and little," hem the Canadians, as it were, in a nook.

This last consideration no doubt influences the position which England has assumed, of inflexible determination not to *yield a single rood of Northern Oregon*,† whilst she shows her desire for the continuance of peace by her willingness to cede the Southern Oregon, together with the right of the free navigation of the Columbia, and a conditional loan of a harbour in the southern part of Vancouver's island to the Americans.

* The two Provinces, Upper and Lower are united.

† We have, at least of North Oregon, as Fuller expresses it, "eleven points of the law," i. e., possession.

At present the territory in dispute may appear, from its remote situation, to be of little real value to either country. This may be true as regards the United States, but the occupation of the *northern* portion by British settlers, *without loss of time*, is of the *utmost* consequence to Canada. The sea-board of the great ocean or North Pacific will eventually be of the *greatest* importance to that province; and, of course, as long as the province continues a dependent of the British crown, it will be to the interests of that crown likewise.

Whenever that period arrives that Oregon shall be colonized, and practicable communication by carriage be established thence to the frontier western stations of Canada, the harbours of the former will be thronged with shipping trading to and from China, Polynesia, and the East Indies; thus opening a new route, and a short one as regards England, to those seats of commercial activity; the North Atlantic and the North "Pacific" being brought nearer to each other in point of time, by means of railroads, inland navigation, &c. Unreasonable, therefore, is the demand of America, for the cession of North Oregon, to which she has no more right or title than she has to Siberia; and we, in common with all reflecting persons, are decidedly averse to war, as long as it can consistently with honour be avoided; yet we trust that the British cabinet will never be induced to yield up any portion of that territory, including Vancouver's island. Hitherto the officers of the Hudson's Bay Company have succeeded in preventing the "nomade" herds of Anglo-Americans from locating themselves on the lands *north* of the Columbia. But it *now* becomes a serious question for consideration whether if England does not make strenuous, and we should say *immediate* efforts to settle those lands by encouraging, or even bearing the expense of emigration thither, as the *Southern* Oregon is rapidly peopling, another Texas episode may not take place, and so cost her ten times the amount of treasure to recover these lands, than it would if she sent ten line-of-battle ships freighted with colonists to occupy and defend them.

We appear to have been rather supine on this head, probably because we continued up to the period of the exposition of the Washington cabinet, to entertain a fallacious belief that America would be willing to settle the question by arbitration. It is not, however, too late to commence in right good earnest, and by embracing the initiative settle the question by the *general occupancy of the land* north of the Columbia.

If we are desirous of holding our ground northward of the chain of Canadian lakes, we must form a barrier of detached fortifications westward in the sweep from the head-water and the north pass of the Rocky Mountains. On this line the living current of animated beings would soon begin to flow. But North Oregon should be at once peopled; leaving that to time will not do, for we really have no time to spare from the fulfilment. We must keep the "Yankees" from our *flanks*; we must place the accessible points *between two occupied* provinces connected by a chain of forts. If we do not do so, Oregon, lakes, rivers, swamps, "and all" will eventually be swallowed up in the vortex of unbridled ambition, in the determination of that people to carry a national "hobby" and an individual desire.

The *avowed* ultimate design of the United States is to form *all* portions of the continent under *one* democratic confederacy. Of the European powers, Britain alone is *deeply* interested in the eventuality; and she alone would have reason on her side to check such pernicious and exorbitant ambition.*

"Prevention is better than cure." This proverb has a very extended significance; it may be profitably entertained by governments as by individuals, as the admonition of a duty to be performed comes as forcibly to the one as to the other; the neglect of precaution being found often in the case of either to lead to evils that are difficult of remedy. The voice of the American executive has proclaimed aloud its sentiments with reference to territorial acquisitions;† can we possibly misunderstand them? Our northern possessions towards the west are unprotected, (the Company's forts are scarcely meant for defence, they are posts,) and therefore, in an insecure state. Adverting to the former proposition of colonizing North Oregon speedily, we come to the scheme which points to the readiest way, landward, to effect that desirable end.

To send hundreds of men, women, and children through the waste from Canada to Oregon would perhaps be impracticable. A "grand" road should therefore be made for that purpose from the head navigable waters of Canada across to the North Pass of the Rocky mountains, in the fifty-second degree of latitude. Turn the labour of the convicts to account; send all the able-bodied to the province, and set them to work simultaneously in the east and in the west; build your chain of protecting redoubts or other fortifications as you progress on the *south* side of the line; mark out to the *right* sites for villages also; *give*, not sell, the lands to old soldiers and others who deserve it, and in a few years you will be secure from Texican episodes.

Difficulties, no doubt, there would be throughout, but what obstacle is there when there is *will* and ample means, that the combined ingenuity and perseverance of the scientific man is not capable of surmounting? There is nothing very formidable in the thought of making a continuous

* Should this ambition continue will the democracy outlive the century? It is wonderful that the union has continued so long without some violent rupture; peaceful habits and a peculiarity in the system which places a considerable portion of the powers of government in the hands of the different sections forming the federation might have been the preventives. "The bond of union between the members of the body politic may be said to consist more in a sense of the importance of their union for the common safety of all diffused throughout the whole nation, than from any coercive power in the hands of the general government to compel the obedience of any one of the sections disposed to become refractory. The delicate structure of the federal form of government can be seen from the extreme jealousy with which all questions relating to it are discussed."

With such a combined nation whose system of self-government is so nicely poised, we should imagine compactness to be its safeguard. In any very wide extension there would probably be a preponderance, and consequent danger from one side or other of its extremes.

† It is questionable whether that of the Macedonian madman "exceeded this Polkmania?"

road of six or seven hundred miles in length in the nineteenth century. The records of antiquity tell of greater feats. The Via Julia and other "streets" of the Romans, still traceable—the Chinese wall and canal—and if we cast an eye over the map of this island hundreds of leagues of rail-road will meet its gaze. The polytheists of old boasted of an ideal Vulcan; we have made one, and his progeny are spreading over the world; the steam engine will accomplish the most laborious part of the work in the formation of this *grand chemin* or *chaussée*; it will saw through the largest trees, cut them into lengths, drain pools, drive piles, lift rocks, break stones, and transport them by tons at a time to any given point, in short do almost any thing required.

This grand object once accomplished, the general settlement of North Oregon would become of easier attainment; and we should then be in a condition to meet all contingencies that might arise. Whereas, at present, there is nothing to prevent an irruption of "sympathizers" on their own account, or any demonstration which the hordes of desperate wanderers of the "Far West," may feel disposed to make, in order to gain a footing in these distant and wild tracts.

In Great Britain and Ireland we have a super-abundant population, increasing rapidly; the limited surface of their insular homes will not expand to meet the universal law of the multiplication of the species; and the consequence is that as the demand for labour does not increase with this augmentation, there exists among the toiling poor, a great deal of misery, which, unless the numbers are reduced by emigration, must annually become more oppressive.

The fact of this rapid increase of population, abstractedly considered, gives rise to apprehension in the midst of the general prosperity of the nation. But so far from being an evil, it constitutes an element of the nation's strength. The consequential condition of the indigent individual families of that increase is, however, a social one that calls loudly for the deepest consideration of the executive power, in order that some remedy be applied to it.

The aristocratic by birth or fortune, the prosperous in trade and other pursuits, feel not that soul-depressing pressure arising from want; but have they not hearts to compassionate the sufferings of their fellow-beings, and the desire to relieve them from such a state? Assuredly they have. They have a voice in the councils of their country, let them raise it, for assistance from the treasury seems to be absolutely required in the fulfilment of such an object, which would be at once politic and humane,—for the evil will never cure itself; *that* the census attests. The parties who suffer, if we may so say, from the inevitable decrees of Nature, are, unhappily for themselves, helpless to effect a wholesome change in their condition. In effect Tantalus' cup rests suspended over their heads—they see, in the eye of imagination, millions of acres of land that would afford them relief, lying waste in our colonies; but, as if spell-bound, they have not the power to move towards these tempting prospects! Their lot is cast in the lower grades of that series of rank or condition which the artificial plans of the framers of civilized, nay, savage, societies have established as necessary to social compact. In their case, the denun-

ciation that, man shall live by the sweat of his brow, has been fulfilled to the letter. Where could, or can, a nation's benevolence be applied to a better purpose?

Thousands of persons above the station of the daily-labourer, with small funds, quit this country to settle in the United States; some, from the cheering, but too often misrepresented, accounts of others who have gone before them; many, from the natural desire of joining relatives or friends who, as naturally, wish for their presence. But it is remarkable that, although the majority repent the step; and a few, who have the means left, return disheartened and disappointed; yet, there is no lack of fresh adventurers. What does this imply? that some governing voice is required to counsel, advise and encourage, in the choice.

The human mind is ever ready to exaggerate a contemplated and distant good, wherever, that appears to rise on the horizon of its imagination. But in ninety-nine cases out of a hundred, the reality is found to fall very short of the anticipation. This is strictly applicable to British subjects who cast off their allegiance to the monarchical country of their nativity and their progenitors, to seek in a democratic and incongenial atmosphere, a more easy respiration, a relief from the actual or fancied pressure of their accustomed air, which their feelings lead them to believe was robbing them of their life's breath! Buoyant with hopes, elated with the prospect of success, they effect the change, and find—the charm broken!

The United States may suit the rougher nature of its citizens; but it is not a land flowing with "milk and honey;" it is not the El Dorado represented: those lively garnitures live but in the imagination; they are the flowers of romance; they are the lines held to the imagination of the ardent, the *ignes fatui* that flit in the distance before the path of the wanderer to lead him into repentance and sorrow!

This is not an overdrawn picture. To the mere hand-to-mouth labourer, whose condition cannot well be made worse by a change from a confined position to one which has a wide expansion, it may not perhaps strictly apply; but there are many above his station who have tried the experiment, and come back poverty-stricken, and worn down with care and disappointment.

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes on Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c., by Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Continued from page 233.)

The import trade of Tabasco carried on with the republic is chiefly with Campeche, and the foreign with the United States and the Havana, with a few occasional vessels from Europe.

The exports are chiefly log wood and cocoa; although the fustic is considered of a very good quality it has been but seldom exported. The timber for the purposes of ship building is of a superior quality, probably

not surpassed by that of any other part of the world, besides a number of woods for furniture of beautiful grain, dye woods and medicinal plants which have most likely scarcely been considered worth the trouble of collecting for export, although used occasionally in the country.

There is no state in the republic of Mexico, that has so many advantages in a commercial point of view as Tabasco. The soil is excessively fertile, it produces maize and beans in abundance ; excellent sugar cane, which grows to a great size and height. The cocoa is in great request in other parts of the republic ; the coffee plant has been tried and found to answer exceedingly well, as does also the cotton plant ; besides, the country is intersected by such splendid rivers, that with steam vessels the produce of the State could be brought down for shipment with the greatest facility to the coast. What is wanted is peace, less obstruction to commerce, and laws better administered, which would give an impulse to enterprise and develop the resources of the country ; but unfortunately the same is much wanted in all parts of the republic.

The state of Tabasco is not considered the most favourable to health. A person cannot be too careful in being regular in his habits, and never to keep on clothing at all damp ; exposure to the sun as well as sleeping in the night air is also bad. The mosquito; in these rivers are more numerous, I believe, than in any other part of the world, and in addition, particularly near the bar, swarms of sand flies annoy one after dark, which makes the evening at times almost unbearable. During the night, on three or four occasions, we have been very much annoyed by flights of moths, rather larger than that of the silk worm, and of the same colour : they passed over us in such numbers as to have the appearance of a heavy fall of snow. Very few of them flew as high as forty feet above the water, they all proceeded in the same direction with the land breeze, and were all females full of eggs which fell on our vessel, and as soon as they came in contact with the rigging or fell on deck they burst open and deposited their eggs, and those that were not killed crawled away to any corner and soon died. On one occasion we swept up from our decks upwards of a dozen gallons of them ; the smell from them was very offensive and sour, which took three or four days before we could get clear of.

In going up these rivers in a canoe for any distance, a mosquito curtain is indispensable ; for when the canoe is propelled by poling, which is the case always against the stream unless the breeze is favourable, she has to be kept close into the bushes, when the mosquitos come off in clouds ; the only way of escape is under the mosquito curtain.

The river Chilapa, at its junction with the Tabasco, is by the natives said to be nine leagues from the Frontera by canoe, and in no part is there less than three fathoms water. The banks in most places are clear of shoals, indeed it may be considered that there is nothing to bring a vessel up but what can be seen. It may be as well to remark that the estimated distance by canoe is oftentimes not the actual distance of one place from another on the turns of the river, but the given time required to perform a certain distance in, which will of course depend upon local circumstances, such as strong currents, or where propelling the canoe is difficult, &c.

As the Tabasco takes a sudden turn to the S.W. at the entrance of the Chilapa, a stranger might mistake the latter for the former, their breadth is nearly the same at this place. From the mouth of the Chilapato the entrance of Laguna del Viento is about half a mile, and it is on the larboard hand going up. This lagoon is very large, insomuch that we could not see the land in the S.E. direction, except an island or two; the breadth of the Chilapa at this place is about a quarter of a mile or less, and there are only a few trees on the banks of the river; above, the river gradually contracts in its breadth; at half a league from the mouth, is the entrance of the Arroya de Jaboncillo, (in the rainy season it is joined to the Laguna del Viento), this is navigable for a few leagues up, and has been taken for the Chilapa, but the Jaboncillo runs in a S.E. direction, whereas the Chilapa takes a turn to the S.W. After passing the Arroya, the larboard or eastern shore should be kept aboard, as about a mile farther up are two branches running off from the Chilapa to the S.W.; the lower one being an Arroya, and the upper one is an entrance to a lagoon, into these the current sets strong. The river then makes a turn to the S.E., and from the Laguna to the Coginicuil, about fifteen leagues, there are no more branches; the current is also much less, and throughout the whole distance, with very few exceptions, the banks are covered with lofty trees, which have a beautiful appearance from the number of parasites which hang from the branches; particularly the moss which hangs down in long festoons, as in the Mississippi. In going through the Chilapa, after the first league, the courses are of no service and the topsails can only be of any use where the wind is through the reaches, which are not of any length, the river making short turns.

The Chilapa in its narrowest part is not less than twenty fathoms wide, but the average is about thirty fathoms, and with all its beauties soon looses its effect, as there is no change, being the same thing one day after another, the same narrow confined view, with lofty trees, and only a solitary canoe passing now and then, besides which, the progress in going up the river in a vessel is extremely tedious, the greatest part has to be warped through. In the morning and evening a few birds may be seen, but the greatest part of the day every thing has the stillness of a desert; the silence of the night is only broken by the loud croaking of the bull frog, or in the early part by the chirping of innumerable insects in the woods, or previous to a norther, in addition, the howl of the Cayote; for from the entrance of the Chilapa to within three leagues of the Coginicuil, which is at the first rancho, there is not even a solitary hut. At this place several families reside who are employed in cutting log wood in the adjacent forest, and cultivate a patch of ground to grow maize for their own use, but not sufficient by a great deal for their consumption. The second rancho is within a league of the former, and the third rancho is about fifteen leagues from the mouth of the Chilapa, and one league from the Coginicuil; these ranchos are on the left bank of the river or south side; very little supply can be had or even expected from them; at the third rancho the ground is more cultivated than in the other.

The Chilapa above the Coginicuil is a much broader stream than
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below, the ranchos are frequent, and the ground is cultivated for growing maize, pumpkins, plantains, &c., and in some of them orange and banana trees are planted. Poultry, pigs, and eggs can be purchased, and sometimes fish, but as the latter are plentiful in the river, they can be caught by going early in the morning or in the evening with small hooks near the logs of drift wood which lay along the banks of the river; game is at times plentiful; the best time for shooting is in the morning before the sun is powerful, and up the small rivulets; there are two or three kind of snipe, one as large as a pullet, also curlew, spoon-bill, and a number of others; in the Lagunas, which are not far from the river, are an immense quantity of geese and ducks in the season of the northers, but the former are very difficult to get near, and but seldom shot.

About one and a-half leagues above the Cogenicuil is the Rancho de Magano, which deserves more particularly to be mentioned than any of the others, as being better arranged; there are several huts, or more properly speaking, houses here, built mostly of cane filled in with mud for the walls, and palm leaf roofs, larger than ordinary, situated close to the banks of the river under the shade of some high trees; here many families reside, and are employed in cultivating several acres of ground, cutting logwood and fishing. In going up to Tepititan in a canoe we stopped here for an hour and looked over this establishment; there were about thirty men, women, and children altogether, chiefly of a mixed race between the negro and Indian; most of them (the adults), had been slaves when Mexico was a Spanish colony; the whole of them were clean in their dress, such as it was, as also were the houses; every thing had the appearance of their being in circumstances far above want, but in Tabasco and most parts of Mexico, as labour is plentiful, the industrious have no occasion to suffer from distress. At the rancho they had planted a number of cocoa trees, the first place where we had seen any, except a few at the Frontera. We got a supply of excellent oranges, and were asked to come into their houses to take a tortilla, not as a Spanish compliment, but as a proof of their intentions; when we declined taking any, they sent a quantity to the canoe for our use. The men were at the time preparing their lines with a great number of hooks on each for fishing; they catch fish at times in great quantities, which they salt and send for sale to the different towns; we bought a few from them, the flavour of which was not unlike salted salmon, weighing several pounds each. They also catch a large quantity of Peje Lagarto in the neighbouring lakes; these are cured by thrusting a piece of wood, (a stake), through them, and cooking them over a slow fire, which smokes them at the same time, as they are neither scaled or cleaned, and being very tenacious of life, they are often half cooked before they are dead.

SECOND REPORT OF THE TIDAL HARBOURS COMMISSION.

(Continued from page 240.)

It appears also that a rubble-stone dyke or embankment extends seven miles along the Cheshire side of the river, "on a line the most injudiciously laid out with regard to navigation;" that this dyke, a portion of which is covered at half-tide, is only marked by insignificant perches or beacons; that several vessels have struck on it, some of which have been entirely lost; that the river, from Flint upwards, is neither lighted nor buoyed; that a weir or mill-dam rising eleven feet above the bed of the river, exists just above the city, dams the water up for several miles, and prevents the upward flood of the tide; that loads of stones are thrown into the river to secure the foot of the jetties; and that at Parkgate, twelve miles below Chester, which formerly was one of the principal mail-packet stations between England and Ireland, a dry sand now extends almost across the estuary.

We abstain from comment on such a state of things, and it is only necessary to add, that the Act of Parliament appointed commissioners, selected out of the neighbouring landed proprietors and citizens of Chester, to see that the Dee Company fulfilled their engagements.

On the south coast, at Salcombe, there are neither pilots nor a harbour master. At Dartmouth, a small but deep-water harbour, there is neither buoy nor beacon to mark the shoals, nor a light worthy of the name, while two-thirds of the income are applied to corporation purposes. At Exeter loud complaints are made that the South Devon Railway is carried round the coast, although the inland line would be five miles shorter; that it has materially diminished the estuary of the Exe, excluding the tidal water; that it has cut off from all free communication with the sea the bathing towns of Dawlish and Teignmouth, and that in many parts it is carried even below high-water mark; that the prospects of the fishermen in that neighbourhood are thereby absolutely ruined, and that should a vessel be wrecked there in an on-shore gale, no boat or raft can possibly reach the shore.

On the north-east coast, the river Tyne and port of Newcastle, including North and South Shields, take the lead among the principal coal ports of the kingdom, which, owing to the vast increase in steam navigation, are daily rising into greater importance. Newcastle has shipped upwards of two millions of tons of coal per annum for the last quarter of a century; her foreign trade has risen to half a million tons yearly, and the revenue derived from the river and paid to the City Corporation, who by charter are conservators of the port, amounts to 19,000*l.* a-year, exclusive of 6000*l.* annually levied by the Trinity Board for primage, buoyage, &c. Where all seems so prosperous, it is an ungrateful task to point out that such a state of things may be deceitful; yet so it assuredly will prove to be on the Tyne if the river be much longer abandoned to itself, as, generally speaking, it has been till within the last few years. The improvements proposed by Mr. Rennie thirty years since have, with the exception of a quay at Newcastle, been left unexecuted; the width of the river remains extremely

irregular, in some places the channel being only 60 yards wide ; sharp angles increase the difficulty of navigation ; upwards of 80 acres of sand-bank, dry at low water, still disfigure the bed of the stream ; Newcastle bridge, with its 9 narrow arches, heavy piers and additional starlings, acts almost as a mill-dam ; a loss of five feet range of tide, in the distance of about twice as many miles, takes place between Tyne bar and Newcastle quays ; coal staiths are projected irregularly into the stream ; and no dock accommodation has been provided, while Shields Harbour, the daily resort of hundreds of colliers, is so inconveniently crowded that damage frequently occurs.

Sunderland is indebted less to nature and more to art than the neighbouring port of Newcastle ; here extensive stone piers project into the sea, by the aid of which several feet of water over the bar have been obtained, and the enterprise of the coal-owner and ship-builder, and the skill of the engineer, have been rewarded by a revenue of 16,000*l.* a-year, derived from an extensive home-trade in coals, and a rapidly increasing foreign traffic. This port, however, is capable of much improvement ; the quays are private property, and much out of order ; the moorings were so indifferent, that owing to the pressure of the ice, in the winter of 1841 the whole of the shipping in the harbour broke adrift, and the damage done was estimated at 30,000*l.* ; the foundation of a part of the south pier is so insecure that the scouring of the sea has undermined its foot ; the entrance of the north docks is far from being well placed ; so heavy a swell ranges along the piers, and into the harbour, that the engineer has been obliged to take down a large portion of the middle of the south pier in order to make a beaching place for the swell to expend itself upon ; and a general complaint is made of the want of dock accommodation, affording an easy outlet to the southward in north-easterly winds.

Hartlepool owes its rapid rise chiefly to its southern outlet, the want of which is so much felt at Sunderland. This fortunate position has been in some measure seconded by the Dock and Railway Company, who have now a floating dock of 20 acres, where they can load 5000 tons of coal a-day ; while the entrance is allowed to be one of the most easily accessible of any of the tidal harbours along this coast. The success of this port has induced the formation of a Hartlepool West Harbour Dock, about half a mile to the westward, the works of which are in an advanced state. But as it is hardly to be expected that two rival companies in the same port should agree upon any general plan for improvement, some independent control, free from local bias, seems to be absolutely essential. Complaints are made of ballast and stone being thrown over the cliff and washed into the harbour ; that the bight of the bay is filling up with mud and silt, caused by sluicing out of the Slake, and the fishermen with one voice declare their fishing ground has been thereby destroyed.

Stockton-on-Tees, including Middlesborough, is one of the most thriving of our coal ports. The channel of the river has been contracted and deepened ; the approaches are admirably lighted ; a floating dock of nine acres has recently been opened at Middlesborough ; the traffic

and revenue of the port have doubled within these few years, and in 1845 the Darlington Railway Company leased the whole of the harbour dues, and declared it a free port. All is bustle and activity, and all seems to prosper. Yet even here, on a closer inspection, the want of some control is manifest—the quays are nearly all private, and are falling into the river; the piers of the bridge are only supported by the loads of stone thrown down at their foot; rocks of whinstone impede the upper navigation, and cause damage to the barges; the entrance of the dock at Middlesborough, completed but five years since, is only thirty feet wide; while about 2000 acres of the estuary, have been enclosed, and the corresponding tidal water excluded; and the channel over the bar, which formerly ran out due east, has, in consequence, changed to N.N.E. Great complaints also are made of the want of a harbour of refuge in the neighbourhood, and of a beacon on Redcar rock, upon which vessels are annually wrecked.

Whitby has a revenue of 3,600*l.* a-year, derived from a passing toll on coal borne by shipping, specially imposed “for the improvement of the harbour.” It offers to shipping, in return, a west pier of fine Whitby stone not placed in the best direction, which projects 100 yards beyond the east pier, and causes an eddy at the entrance; a circular head, inviting the run of the sea into the harbour; an entrance one-third too wide; a rocky bar, that might easily be blasted, on which more than one ship has broken her back; a mill-dam that stops the upward flow of the tide; a railway-dam, recently made, which excludes 30,000 cubic yards of water on every spring tide; ballast and the rubbish of the town thrown below high-water mark and behind the west pier; and a dry harbour.

Scarborough, for some unexplained reason, has been denied the passing toll that has been continued to Whitby and Bridlington, immediately adjacent. The limited funds at the disposal of the trustees have been recently applied in deepening the eastern harbour, and in erecting a self-registering tide-gauge at the pier end. This is the first instance, on this part of the coast, of proper attention to the phenomena of the tides, on which most of these harbours are dependent for their existence, and it is an example well worthy of imitation by the more wealthy neighbouring ports.

Bridlington, like Whitby, has enjoyed a passing toll on coals for the last 150 years; like Whitby, too, it offers in return an harbour dry at low water; a north pier, built with public money at a very great cost, yet not even carried out to low water; no quay accommodation; a heavy range of swell along the pier, so that no moorings will hold the vessels; and a pier-end light furnished with a single candle; yet Bridlington bay is the only good shelter in northerly gales on this coast; and in a continuance of such winds, 300 vessels may be seen lying here under shelter of the Smithwick Sand, which helps materially to break the sea, and offers an admirable foundation for a breakwater, the construction of which would supply the great want of this part of the coast, by making a harbour of refuge of Bridlington bay.

Kingston-upon-Hull takes the lead as the first port in the kingdom

for inland trade; while its position with respect to the North Sea has made it the chief outlet of our manufactures to Northern Europe, and raised it to the rank of the third port in the country in foreign traffic. The approaches by the deep but intricate channel of the Humber are admirably buoyed and lighted by the Hull Trinity Board; floating docks to the extent of 23 acres already exist, and 15 acres in addition will soon be opened. The activity at the docks is not surpassed by that of any other port in the kingdom, 75 vessels having lately passed through the Humber Dock lock in a single tide. The tonnage of the vessels that have paid dock dues during the past year amounted to 700,000 tons, and the whole income of the port, derived from tolls on shipping and goods borne by shipping, exceeds 75,000*l.* a-year.

Commercially important as Hull appears to have been in the infancy of British commerce, it was not till 1775, that the old Hull Dock was set on foot; the traffic still increasing, the Humber Dock was begun in 1807; more than twenty years elapsed, during which the trade almost doubled, when the Junction Dock was opened in 1829, but not until Goole had been declared a bonding port. Great as was the increase of accommodation thus afforded, the trade more than kept pace with it; and as it appears, in evidence, for want of dock room ships have been greatly damaged, and some sunk in the harbour from its over-crowded state, being at times so full that vessels could not get in or out for weeks together; and on one occasion, a vessel made a voyage to the Baltic and back, while another ready for sea at the same time was endeavouring to proceed down the harbour. Thus Hull affords a striking instance of the evil of permitting a company levying heavy dues on shipping, to obtain power to give or withhold dock accommodation according to its interests, instead of this power being vested in the Corporation or in Trustees for the public good. The original shares of the Dock Company, on which 250*l.* only have been paid, are now worth 2000*l.*

It is further stated in evidence, that the Dock Company levy tolls on vessels entering the old harbour, although making no use of the docks, and yet refuse to bear their share of the expense of cleansing that harbour, from which they derive a revenue exceeding 2000*l.* a-year; that the Junction Dock sill is laid five feet higher than the Humber Dock in connexion with it, causing great detention and expense to loaded vessels; that the jetties of the Humber Dock have been carried out beyond low-water mark, whereby an irregular line of fore-shore has been made, and the mud allowed to accumulate in large quantities; that the Ferry-boat Dock is full of mud; that very recently vessels have been damaged by grounding upon a bank in the dock basin; and that 100,000 tons of mud, taken from the docks, are annually deposited in the river, in some cases on a flowing tide, and within 160 yards of the face of the town.

Complaints are made, too, that during the last twenty years upwards of 50,000*l.* have been spent by the town in contesting the Dock Company's bills in Parliament; that the old haven is in a highly dangerous state, having banks, piles, and heaps of stone rising 17 feet above the bed of the river, all parties denying their responsibility to cleanse it; that a cranch or hard bank of rubbish from the neighbouring manufactories and ship-

yards is formed at its entrance; that the Hull and Selby railroad, running along the northern shore of the Humber, has interposed a barrier between it and much ground valuable for ship-building, engineering works, and manufacturing purposes; and that, in fact, the whole of the port is without any guardian power.

Grimby, from its position near the entrance of the Humber, will, when the proposed extensive works are carried out, and the projected railways completed, offer great facilities to the trade with the Baltic and Northern Europe; it will be a ready coaling place for steamers, and will probably become the principal resort of the fishing vessels employed on the Dogger bank, as well as on the more distant grounds of the North Sea fishery. This part of the Humber and the neighbouring anchorage of Hawk road offer the only harbour of refuge in easterly gales, from Harwich to the Firth of Forth; and during these winds 300 vessels have taken shelter here at one time. Every interference, therefore, with the set of the tides, or any removal of shingle, which may endanger Spurn Point at the entrance of the river, should be most jealously watched and guarded against.

Great Yarmouth is of importance for its commerce and fisheries; and its roadstead is well known as the most capacious in England, and as a great thoroughfare and shelter for the coasting trade. Yarmouth haven has a depth of 8 feet on the bar at low water, and vessels of from 13 to 14 feet draught enter at ordinary high tide. The registered tonnage of the port is 46,700 tons, and the number of arrivals yearly about 3,000 vessels, the aggregate tonnage of which amounts to 176,828 tons.

The depth of the harbour has been increased three or four feet during the last nine years, and it appears to be capable of much greater improvement. Its revenue in 1836 was 8052*l.*, and in 1845 12,495*l.*, showing an increase of 4442*l.* The total amount of harbour dues collected since the passing of the Act in 1835 amounts to 102,970*l.*, the greater part of which has been expended by the pier-master, under the direction of the Commissioners, without the advice of an engineer; and yet the accommodation of the harbour is insufficient for the trade of the port.

The tide flows thirty miles above Yarmouth by three separate rivers, affording great command of back-water, yet the free entrance to these ample reservoirs has been neglected and impeded, and thus Yarmouth has been deprived of a great portion of the benefit of that back-water, the action of which, it is generally admitted, would still further have improved both the harbour and the bar.

One great impediment to the flow of the tide is the narrowness of Yarmouth bridge, and of the adjoining part of the haven, which occasions in ordinary tides a difference in the height of the water of one foot, and in very high tides of from three to four feet, between the bridge and the pier head.

Norwich, a city containing 62,344 inhabitants, situated in the centre of the county of Norfolk, and distant thirty miles by water from the sea, was constituted a port by the opening of the Lowestoft navigation in 1832. Its exports and imports being large, its citizens had long desired

a direct communication with the sea by the port of Yarmouth; and the river Yare, throughout its whole course from Norwich to its junction with the Breydon water, being of sufficient depth to admit vessels of 200 tons burthen, the Burgh Flats and the narrowness of the Yarmouth bridge were, and still are, the only impediments to that desirable object; but these portions of the navigation were then entrusted to the charge of the corporation of the town of Yarmouth, who refused the citizens of Norwich the desired communication with the sea. Thus thwarted, the citizens of Norwich formed a joint-stock company, and applied to Parliament for access to the sea by Lowestoft; but even in that attempt they were opposed by the corporation of Yarmouth, who expended more than £8000 in Parliamentary opposition to their object.

The communication, however, between Norwich and the sea at Lowestoft was obtained; but having failed to realize the expectations of its projectors, there is again a unanimous desire to have a direct navigation to the sea through Yarmouth: but it is stated that there is still the same opposition to this project on the part of the Yarmouth Haven and Pier Commission, now entrusted with the management of the localities referred to, although it is generally admitted that the deepening of the Burgh Flats and the widening of Yarmouth bridge would not only afford the desired communication, but also tend to the improvement of the harbour and bar at Yarmouth; while, at the same time, the cost of executing the necessary works, to secure these objects, would not greatly exceed the sum mentioned as having been spent in fruitless opposition to the navigation by Lowestoft.

Lowestoft Harbour was opened in 1832, and when the navigation was first completed, vessels drawing 11 feet of water could pass up to Norwich; but a bar has since formed at the entrance of the harbour, and Lake Lothing has considerably silted up, so that, at the present time, vessels of only 5 or 6 feet draught of water can use the navigation.

The works were executed at the large expense of about 150,000*l.*, of which 50,000*l.* was lent by the Exchequer Bill Commissioners, and the annual revenue being insufficient to maintain the works and pay the interest of that loan, the Exchequer Bill Commissioners took possession of the harbour and navigation; and, after retaining it for two years, sold it, with all the powers under the Act, of 1827, for 4,935*l.*

Beccles, on the Waveney, 26 miles above Yarmouth, was constituted a port under the Act of 1831, which sanctioned its direct communication with the sea, by the opening of the Lowestoft navigation. The river was deepened by the funds received from the Yarmouth Haven and pier trust, so as to enable vessels drawing from 7 to 8 feet of water to go up from the sea at Lowestoft to Beccles bridge: but from the silting up of Lowestoft Harbour, only vessels drawing 5 or 6 feet of water are able to go up at present.

It is stated that if St. Olave's bridge were removed from the River Waveney, and the Burgh Flats deepened, sea-borne vessels of much greater draught of water could easily reach Beccles through the port of Yarmouth.

The expense of the Beccles Act of Parliament affords an instance of

the unnecessary waste of money resulting from the existing practice of considering navigation Acts as private ones, for the sum of 1,615*l.* principal and interest has been paid for its passing through Parliament, while only 16*l.* has been applied to the improvement of the navigation of the river, which was the ostensible purpose for which the Act was obtained.

Blakeney and Cley, on the north coast of Norfolk, have a common entrance, which, by a winding course, is distant from the town of Cley 5 $\frac{1}{4}$, and from Blakeney 3 $\frac{1}{2}$ miles. Within the memory of some of the present pilots, 140 coasting vessels have taken refuge in this port during one tide; yet in the place where these vessels lay afloat at low water there is now only a depth of 4 or 5 feet, and the utility of the harbour has consequently been almost destroyed.

It is stated that this evil has been caused by the enclosure at different times of more than 1200 acres of land, over which the tidal waters formerly flowed.

Unfortunately, also, in 1817, Blakeney, by Act of Parliament, became a proprietary harbour, and the merchants and inhabitants, unless they are proprietors, have no power to interfere in its management, or in the regulation of the charges on the shipping; and until legislative authority be given, no such power can be exercised either by the Government or any by other parties.

The port of Wells lies a few miles to the west of Blakeney. The bar of its harbour is dry at low water, but the rise of tide on it at ordinary springs is 21 feet, though at the quay only 12 feet.

The inhabitants struggled for nearly half a century to prevent the enclosure of the tidal lands by the adjoining proprietors, even at the expense of many suits at law; but all these efforts were frustrated, and 846 acres have been enclosed, to the great detriment of the harbour.

The necessity of the supervision of harbours by Government further appears from the fact that, under an Act passed so recently as 1844, the sum of 9,650*l.* has been borrowed, on an assignment of the harbour dues, to erect a quay; and the expenditure of this large amount has been left almost entirely under the control of one of the Commissioners, who acts as secretary, collector, treasurer, paymaster, and superintendent of the steam-tug and of all public works; and who thus has the whole management of the works and finances, without even the check that would be afforded by the assistance of a clerk, or the employment of a practical engineer.

The merchants and inhabitants complain of the heavy burdens imposed on them by such gross mismanagement; but, as in many similar cases, they have no power to interfere or obtain redress, as the Commissioners named in Act, who now permit such mismanagement, and many of whom do not even possess any property in the town, have the power of nominating others to fill up vacancies.

At Harwich, besides the extension of Landguard Point, mentioned in our former Report, it appears that, owing to the continued excavation of cement stone near the coast, the sea has made great inroads in Mill bay to the westward, and at Felixstow to the eastward, and the Admiralty

surveyor has recently reported that the waves are encroaching to a great extent along Landguard East beach, at the rate of five-and-twenty feet a year. Unless some decisive and systematic plan of groyning in order to repel this encroachment be at once adopted, it is impossible to predict what mischief may arise to this valuable harbour.

Harwich also offers an instance of the necessity of again defining the limits of ports, as the Corporation of Ipswich claims by charter, and daily exercises the right of levying anchorage dues upon vessels lying close to the face of the town of Harwich, and manifestly far removed from the natural limit of the port of Ipswich.

It appears from the Parliamentary Returns that the aggregate debt of the several ports of the United Kingdom, exclusive of docks in the Port of London, exceeds 4,000,000*l.* sterling; one-fourth part, therefore, of the whole harbour income of 800,000*l.* a-year must be annually appropriated to pay the interest of this debt, which will consequently materially cripple the means for future improvements. This large sum, although borrowed with the sanction of the Legislature, has been laid out entirely by the several local Boards, without the slightest control being exercised over it either by Parliament or by any other power specially charged to watch over the interests of the public.

Among the numerous cases of the misapplication of harbour funds, to which we have already had occasion to refer, the sum of more than 28,000*l.* expended last year in parliamentary and legal expenses connected with Bills for the improvement of Harbours, seems to your commission to be a most impolitic and unnecessary outlay, and one which might be entirely prevented by the establishment of a Harbour Conservancy Board, such as we have humbly ventured to submit for Your Majesty's consideration.

From the competition already commenced between railroads and the coasting shipping, we fear that unless immediate measures be taken to improve the harbours and navigable rivers of this kingdom, and, where practicable, to lessen the dues, a large portion of the goods which these vessels now carry will soon be conveyed by the railroads rapidly extending to almost every part of the coast. We would, therefore, strongly urge such assistance, not only on economical, but on political, grounds of the highest importance to the maritime interests of the kingdom, as the coasting trade has ever been the best nursery for the hardy race of seamen who have so ably maintained the honour and power of the country.

We alluded, in our First Report, to the obstructions and shoals which so seriously impede and endanger the navigation of the Thames, between Gravesend and London bridge; all the additional information and evidence we have received since that Report was presented fully convince us of the correctness of the opinions we then expressed, and we feel confident that, if the various and frequently conflicting authorities, to whose guardianship the conservancy of this noble river is intrusted, could be induced to co-operate cordially in its improvement, and to carry on their operations jointly on one sound and uniform system, the impediments which now discredit the local administrations and endanger the commerce of the metropolis, might be speedily and cheaply removed. And in

strong corroboration of our own view of this subject, we subjoin the following extract from the Report of a Select Committee of the House of Commons in the year 1836, specially appointed to inquire into the state of the Port of London:—

“That this Committee are of opinion that the various conflicting jurisdictions and claims of the Admiralty, the Trinity House, and the Corporation of the City of London, over the river Thames below the bridges, have had a most injurious effect upon the interests of navigation; that it is desirable they should be consolidated and vested in some one responsible body, and that means should be found to provide for the removal of shoals and obstructions in the bed of the river.”

and we refer to the evidence of Captain Bullock, R.N., of Mr. James Walker, C.E., of the harbour-masters of the Port of London, and of the pilots whom we have examined, which is given in the Appendix, as well as to the detailed Report on the subject by one of the members of this Commission, in which we entirely concur.

All these facts and considerations induce us most earnestly to repeat the recommendation, which we ventured dutifully to submit to Your Majesty in our former Report, that all the tidal harbours in the United Kingdom be placed under the special care of a Board of Conservancy, to be formed under the authority and provisions of an Act of Parliament (of which we annex a Bill), being fully convinced that any less stringent and decisive measures will be found wholly inadequate for the accomplishment of the great national object which Your Majesty has been graciously pleased to direct us to consider and examine.

All which we humbly certify to Your Majesty.

WM. BOWLES, Rear-Admiral, M.P., *Chairman.*

J. J. GORDON BREMER, Captain R.N.

JOSEPH HUME, M.P.

AARON CHAPMAN, M.P.

EDWARD R. RICE, M.P.

THOMAS BARING, M.P.

F. BEAUFORT, Hydrographer.

G. B. AIRY, Astronomer Royal

JOHN WASHINGTON, Captain R.N.

RICHARD GODSON, Q.C. & M.P. Council to the Admiralty.

London, 20th March, 1846.

SEVERN NAVIGATION IMPROVEMENT.

THE improvement of the navigation on the Severn is a subject which has attracted the attention of many influential persons for years, nay, probably for centuries past; the shoals and shallows which so frequently occur in it, offer such serious obstruction to the important traffic of which it is the channel, that in looking at the number and variety of vessels which are frequently to be seen stopped in their course, in many different places, for want of suffi-

cient depth of water to float them onward, one feels surprised that so great an evil should have been tolerated up to the middle of the 19th century. Indeed, if an improvement could have been effected by ordinary skill and enterprise, there is no reason to doubt but it would have been accomplished long ago; but the difficulties to be encountered appeared so great, and the chances of ultimate success so problematical, that engineering skill was put to the stand still, to consider if, by possibility, it could devise a remedy. Certainly, some attempt was made very many years ago to increase the depth of water by forming projecting piers below the shallows, for evidence of these have been found by the parties now employed upon the river; but they could have produced no permanent benefit, as the obstructions are as great now as ever they were, and thus, this attempt only furnishes additional proof of the difficulties of the undertaking. The Severn and its tributaries flowing through the counties of Montgomery, Salop, Worcester, Warwick, and Gloucester, effects the drainage of more than 4000 square miles; and owing to its long course through tracts of marl and soft sandstone, it is charged with a larger amount of sediment than any other river in Europe. So great is the quantity of matter thus constantly accumulating, that, aided by artificial means, much new land has been created as it were; the increase of mud is encouraged by lines of pile and osier, which as the tide retreats retain the sediment upon these; other lines of osier fencing are placed, until the new land is raised to a considerable height. This plan has been practised by Earl Fitzhardinge; but it is obvious that the matter thus washed down from the high lands, must have a tendency to fill up the bed of the river, and hence the shoals which are so great an hindrance to the navigator, and whose removal is the object of the present operations in the river. The Severn Navigation Bill encountered considerable opposition in its progress through Parliament, chiefly from the owners of land, who feared that the construction of weirs would have the effect of checking the escape of water in the river, and thus increase the inundations to which they were already so liable; this, Mr. Walker endeavoured to demonstrate would be the case, but Mr. Cubitt proposed to obviate it by placing the weirs across the river in an oblique direction, thus greatly adding to their length, and preventing any injurious obstruction. The result of this different opinion in two such eminent engineers, upon the minds of the committee was, that a clause was inserted in the bill directing that one weir with its corresponding lock should be completed, and in use for three months before either of the others was commenced, in order that the efficacy of Mr. Cubitt's plan might be tested; this was done, and the result being satisfactory, the others were proceeded with. The Act received the Royal Assent, May 12, 1842. By it, thirty Commissioners chosen by the counties, cities, towns, and canal companies, immediately connected with the Severn were appointed. These Commissioners are empowered to raise a sum of £150,000 by mortgage upon the tolls to be taken after the improvements of the river are completed; their power extends from Gloucester to Stourport, a distance of 42 miles, and this they are to improve and render more navigable by the best means that can be devised, the work to be completed within seven years' of the passing of the Act. The Commissioner for Tewkesbury is W. Dowdeswell, Esq., M.P. The entire work was contracted for by Messrs. Grissel and Peto, the great builders and contractors who are now erecting the new Houses of Parliament. The consulting engineer is Mr. Cubitt, and the engineer in ordinary Mr. Leader Williams. By the terms of the Act every possible precaution has been taken to prevent any injury being sustained by the canal companies, landowners, fishermen, and other parties interested in the Severn. The object sought to be accomplished by the Act is simply this: the water has to be deepened by some means or other, until the consulting engineer is able to certify that there is at all times a

depth of at least six feet. When this is done, and not till then, the toll can be levied. Now, this object is sought to be obtained by a three-fold means; first, by the construction of locks and weirs, next, by artificial embankments, which by narrowing the channel increases the depth of water, and lastly by dredging, that is, removing the deposit and deepening the bed of the river by a process to be hereafter described. Four locks and their accompanying weirs have been constructed, the last of which is at Diglis, about a mile on this side of Worcester bridge; these seem fully to have realized the expectations formed of them, and as stated by Mr. Cubitt have not increased the overflow of water in times of flooding. The artificial embankments are quite completed by Captain Bezley, a gentleman of great experience in this department of Civil Engineering, and whose name is frequently seen in connection with navigation improvements in other parts of the kingdom. The curious and important process of dredging is still going on, and is likely to continue for a considerable time yet. The dredging machine is a large and strongly built boat, containing a revolving chain attached to which are a large number of iron buckets; this revolving chain is put into motion by a steam engine of ten horse power, and as it moves round the buckets (whose rims are of steel, the better to withstand the attrition to which they are subjected) scrape along the bottom, collecting whatever loose matter in the shape of gravel, mud, sand, stone, or other material may be there. The deposit thus brought up falls into a vessel in attendance, and is conveyed to where it may be required. 250,000 tons of deposit have thus been raised, and if all could have been removed by this means, the work would not have been one of more than ordinary difficulty. But it was discovered that some of the shoals for miles in extent were composed of solid rock, upon whose hard surface the buckets of the dredger might have scraped till doomsday, without advancing the work in the slightest degree. Now it was that the genius of the engineer was required, all the usual means having been in vain employed. Mr. G. Edwards, who has spent many years in directing and superintending this and many similar engineering operations, and who has received several medals from different scientific bodies for various mechanical inventions of merit, designed and perfected the plan which has been so successfully employed here. We copy the account of this clever and interesting process from the "*Worcester Journal*," of the 26th of June last.

"BLASTING SHOALS ON THE SEVERN.—At the Institution of Civil Engineers, on Wednesday night, the paper read was by Mr. G. Edwards, member of the Institution of Civil Engineers. It described the method employed for breaking up the shoals in the river Severn, between Stourport and Gloucester. These shoals consist of marl rock, so compact and tough as to resist all attempts to break it up with the stream dredger, or by prize bars, or with a powerful species of subsoil plough. Recourse was therefore had to blasting with gunpowder, and the process of these operations formed the subject of the paper. Messrs. Grissell and Peto were the contractors for the work, and for them Mr. Edwards designed and executed the blasting operations. A series of rafts were moored in a line over the shoal, parallel with the bank of the river. Along the centre of each raft there was an opening, through which wrought iron tubes, $3\frac{1}{2}$ inches diameter, were driven down, at intervals of six feet apart, through the gravel down to the marl; within these tubes the workmen used the chisel-pointed jumper to make the shot holes, to a depth of six feet below the surface. The loose stuff was extracted by an auger. A tool cartridge of canvas well pitched and tallowed, containing three pounds of powder, was lowered through the tube into the hole, which was well rammed with loose marl. The charge was then fired by means of Bickford's fuse. There was generally but little apparent external effect from the shot, except lifting the pipe a few inches, but some-

times a column of water would be driven up through the water to a height of forty or fifty feet. It was found that each shot had loosened a mass of marl of conical or parabolic form, of which the bore hole was the centre, and its bottom the apex, so that four adjoining shots of two parallel lines would leave between them a pyramidal piece of marl, which was removed by the dredging machine with the loose stuff. This operation of blasting was repeated in parallel lines along all the shoals, and the stuff was dredged up at the rate of 200 to 300 tons per day. The cost of blasting was about 1s. 9d. per cubic yard. It was stated that the six principal shoals had all been successfully operated upon, and great credit was given not only to the design, but also to Mr. Edwards for the systematic and complete manner in which he had arranged and conducted the operations."

The Society showed their approbation of Mr. Edwards' abilities by awarding him the Telford Medal for 1845. We may add that many thousand tons of matter have been thus already broken up and raised; that two dredging machines are now regularly employed, and that the works are progressing in the most satisfactory manner. As the tolls empowered by the Act cannot be imposed until there is six feet water from Stourport to Gloucester, every possible exertion is being used by the contractors, Messrs. Grissell and Peto to expedite the completion of the work; two dredging machines have lately been working from 3 a.m. to 9 p.m., indeed, we are informed, one of them No. 1, absolutely raised the surprising quantity of 900 tons! one day last week. A third dredging machine, built by Mr. Bebel, of Gloucester, under the direction of Mr. Edwards, was launched last week, and will very shortly be ready for work. Viewing the magnitude and difficulties of the works we consider it fortunate for the Commissioners that they have been entrusted to such responsible parties as Messrs. Grissell and Peto, who have at their command the means and the talent necessary for anything that may be required to be executed. We are told it is no uncommon circumstance for this firm to have in their employment at one time, on different works, as many as 10,000 men.

NAUTICAL NOTICES.

COVESEA SKERRIES LIGHTHOUSE AND BEACON.—The commissioners of the Northern Lighthouses hereby give notice, that a lighthouse, to be called the "Covesea Skerries Lighthouses," has been built upon the Point of Craighead, in the county of Elgin, the light of which will be exhibited on the night of the 15th of May, 1846, and every night thereafter, from sun-set till sun-rise. And they further give notice, that a beacon has been placed on that part of the Covesea Skerries, called Haliman Scares, which lies off Craighead.

The following is a specification of the lighthouse, and the appearance of the light, by Mr. Alan Stevenson, Engineer to the Commissioners:—

The lighthouse is situated in N. lat. $57^{\circ} 43' 21''$ and W. lon. $3^{\circ} 20' 14''$. By compass it bears from Tarbetness Lighthouse S.E.b.S. $\frac{1}{4}$ S., distant $16\frac{1}{2}$ miles; from Brough Head E b.S. $\frac{1}{4}$ S., distant $5\frac{1}{4}$ miles; from Stotfield Point W.N.W., distant 2 miles; from the Beacon on Haliman's Scares W.S.W. $\frac{1}{4}$ W., distant one mile; and from Scarnose N.W.b.W. $\frac{1}{4}$ W., distant 16 miles.

The Covesea Skerries Light will be known to mariners as a revolving light, which gradually attains its brightest state once every minute, and then as

gradually declines, until to a distant observer it totally disappears. From W.b.N. $\frac{1}{4}$ N. to S.E.b.E. $\frac{1}{4}$ E. the light will be of the natural appearance, but from S.E.b.E. $\frac{1}{4}$ E. to S.E. $\frac{1}{4}$ S. it will be coloured *red*. — The lantern, which is open from W.b.N. $\frac{1}{4}$ N. round to S.E. $\frac{1}{4}$ S. in a northerly direction, is elevated 160 feet above the level of the sea; and the light will be seen at the distance of six leagues, and at lesser distances according to the state of the atmosphere; and to a near observer, in favourable circumstances, the light will not wholly disappear between the intervals of greatest brightness.

The Beacon on Haliman's Scars bears from the lighthouse E.N.E. $\frac{1}{4}$ E. It consists of frame-work of iron, surmounted by a cylindric cage and a cross, and rises to the height of about forty-eight feet above high water. There are steps leading from the rock to the cage, in which a temporary shelter may be found in the event of shipwreck on the rock.

The Commissioners hereby further give notice that, by virtue of a warrant from the Queen in Council, dated 13th September, 1845, the following tolls will be levied in respect of this light, viz. :—

“ For every British vessel, (the same not belonging to Her Majesty, her heirs, and successors, or being navigated wholly in ballast), and for every foreign vessel which, by an Act of Parliament, Order in Council, convention, or treaty, shall be privileged to enter the ports of the United Kingdom of Great Britain and Ireland, upon paying the same duties of tonnage as are paid by British vessels (the same not being vessels navigated wholly in ballast) which shall pass the said lighthouse upon the Point of Covesea, or derive benefit thereby, the toll of one *halfpenny* per ton of the burden of every such vessel, for each time of passing the said lighthouse, or deriving benefit thereby; and double the said toll for every foreign vessel not so privileged.”

By Order of the Board,
 (Signed) C. CUNINGHAM, } *Joint Secretaries.*
 ALEX. CUNINGHAM, }

Edinburgh, 10th April, 1846.

Hydrographic Office, Admiralty, April 18th, 1846.

LITTLE BELT.—*Fixed Light on Rikenæs Point in Alsen Island.*—The Danish government has given notice that a fixed light has been established on Rikenæs Point, on the south side of Alsen Island, which forms the southern entrance of the Little Belt.

The light is seventy-eight feet above the level of the sea, and is visible from the southward between the bearings of W. $\frac{3}{4}$ S. and E.S.E. $\frac{1}{4}$ E. within the distance of three leagues.

Note.—The light vessel usually stationed in the summer months off the extremity of Falsterbo reef was to resume her station as soon as the ice permitted.

Trinity House, London, 8th May, 1846.

DARTMOUTH HARBOUR.—The undermentioned buoys having been placed for the guidance of vessels entering or departing from the harbour of Dartmouth, the following particulars in relation thereto are hereby made public, in compliance with the request of the mayor and town council of that place, viz. :—

A buoy *chequered black and white*, and marked “Cheek Stone” in 3 $\frac{1}{2}$ fathoms water, about twenty-five or thirty fathoms to the S.E. of the rock with the following mark and bearing :—

The Southernmost house at Kingswear touching the Point
 under St. Petrox - - - - - N. $\frac{3}{4}$ W.

A buoy coloured *black*, and marked "Castle Ledge," in four and a-half fathoms, with

St. Petrox church in line with the centre of a grove of trees
on the back Land - - - - - N.N.W.

A conspicuous double-pointed rock off Comb Point, in
line with house on Sladton Beach - - - - - W. $\frac{1}{2}$ S.

A buoy coloured back and white in *circular stripes*, and marked "Home Stone" in seven fathoms, with

Kingswear Old Castle, its breadth open east of the Black-
stone Beach N.E. $\frac{1}{2}$ N.

Stoke Fleming church, its length down the slope of Comb
Point - - - - - W.b.N.

Note.—The foregoing bearings are magnetic, and the depths those of low water spring tides.

By order, J. HERBERT, *Secretary.*

Trinity-house, London, April 2nd, 1845.

CHANNELS IN THE VICINITY OF YARMOUTH.—Notice is hereby given, That in fulfilment of the intention expressed in the advertisement from this house, dated respectively the 30th December and 12th January last; and with the object, as therein stated, of facilitating the navigation into and out of Yarmouth Roads, through the wide and deep water channel between the Scroby and St. Nicholas or Kettle-bottom Sand, commonly called "Hewett's Channel," the St. Nicholas light-vessel has been moved to the position previously occupied by the Red Beacon buoy, at the southern end of St. Nicholas (otherwise Kettle-bottom) Sand, and that the said Red Beacon buoy has been placed about one-third of a mile to the southward of the position from which the said light vessel has been so removed. Also, that the Chequered buoy on the south end of the Scroby Sand has been replaced in precisely the same spot by a Black Beacon Nun buoy of large size.

The St. Nicholas light vessel, as now placed, is moored in four and three-quarter fathoms, with the following marks and bearings, viz. :—

Yarmouth New Church, in line with Victoria Ter-
race N.b.W. $\frac{3}{4}$ W.

The south part of the Grove, touching the north
side of the fence of Nelson's Monument - - - - - N.W. $\frac{3}{4}$ N.

The second house north of Gorlestone south mill,
in line with the inner part of Gorlestone south
pier N.b.W. $\frac{1}{4}$ W.

South Scroby buoy S.E.

Scroby Fork buoy N.E. $\frac{1}{4}$ N.

North St. Nicholas buoy N. $\frac{3}{4}$ E.

North-west Corton buoy W.b.S.

The Red Beacon Buoy, called the South Buoy of St. Nicholas, as now placed, lies in three and a-quarter fathoms, with the following marks and bearings, viz. :—

Yarmouth Old Church, in line with the outer part
of Yarmouth jetty N. b W. $\frac{1}{4}$ W

Gorlestone south mill, in line with the inner part
of Gorlestone South Pier N.W.b.W.

St. Nicholas Light Vessel S.E.

North St. Nicholas buoy N.N.E.

North-west Corton buoy S.b.W

STANFORD CHANNEL.—Notice is also hereby given, that the East Newcome and South Holm Sands having shifted, the East Newcome buoy, (red),

and the South Holm buoy (black), have been moved in a southerly and westerly direction, and now lie nearly two cables' length distant from each other, with fourteen and fifteen feet water between them, and with the following marks and bearings, viz. :—

East Newcome buoy, (Red) lies in two and a-quarter fathoms, with

| | |
|---|-------------------------|
| Lowestoft Low Light House, in line with a high chimney at that place | N. $\frac{1}{2}$ W. |
| Pakefield church, midway between Pakefield mill and a red-tiled house | W.N.W. |
| South Holm buoy | E.S.E. |
| Stanford light vessel | N.b.E. $\frac{3}{4}$ E. |
| Holm Hook buoy | N.E.b.N. |

South Holm buoy (black) lies in two and a-quarter fathoms, with

| | |
|--|-------------------------|
| The chancel end of Lowestoft Church, touching the red-tiled building to the left of the preventive station | N.b.W. $\frac{1}{2}$ W. |
| Pakefield Church, midway between Pakefield mill and a red-tiled house | W.N.W. |
| Stanford light vessel | N.b.E. $\frac{1}{4}$ E. |
| Holm Hook buoy | N.N.E. |

Note.—The foregoing bearings are all by compass, and the depths those of low water spring tides.

By order, J. HERBERT, *Secretary.*

Hydrographic Office, Admiralty, April 24th, 1846.

SOUTH AMERICA.—*Orinoco Floating Light.*—The government of Venezuela has given notice that a *Ponton-faro*, or a vessel carrying a light, has been moored in the *Boca Grande*, or mouth of the river Orinoco. She lies in twenty-eight feet at low water, with Barima Point bearing south.

The light is visible at the distance of eight or nine miles, and the vessel will supply pilots for the river. More particular details will be communicated hereafter.

120, Albany Road, Camberwell, 4th May, 1846.

SHOAL OFF THE ENTRANCE OF RIO JANEIRO.—The ship in which I was, passed directly over a shoal, the position of which, as I do not see it marked on any chart I have examined, I beg here to make known.

Bearing of Sugar Loaf N. 7° E. true, distance about twenty-four miles *Extent*, about 200 yards in diameter. *Bottom*, sand and rock. There were no soundings taken, but I should think there cannot be less than eight fathoms over it.

J. C. HAILE.

The Hydrographer of the Admiralty.

Nautilus Transport, Deptford, May 18th, 1846.

SHOAL AT THE ENTRANCE OF THE RIVER PLATA.—I beg leave to inform you that the *Nautilus* transport on her passage to Monte Video, struck on a sunken rock in the river La Plata, between the Isle of Flores and the Carretas reef; the lighthouse on the S.W. end of Flores bore E.b.S. $\frac{1}{2}$ S., the high land about Bold Point W.b.S. $\frac{1}{2}$ S. The ship passed over, having struck four or five times. Immediately the anchor was let go, and the boat sent away and found seventeen feet water on it, and five and a-half and six fathoms close to it. I believe that the rock is laid down in Spanish charts, and that H.M.S. *Nereid* struck on it many years ago.

W. C. SAUNDERS, *Agent for Transports.*

Captain Beaufort R.N., Hydrographer.

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Extract from the Whalers' Shipping List of 10th March, 1846, published at New Bedford.—Capt Sands, of the ship Benj. Tucker of this port, reports the following:—

“On the passage from the Sandwich Islands to Cape Horn, on the 19th of October, fine clear weather, not expecting to see land, a man from the masthead reported land in sight, which proved to be four small islands lying in the lat. of $21^{\circ} 50' S.$, lon. $150^{\circ} 0' W.$, bearing from Rimutara W.N.W. $\frac{1}{4}$ W., about two degrees from which there is a small island marked on the chart about one degree west. The islands spoken of above contain a circumference of about ten miles, with very high breakers clear round them; the height of the land not being above thirty feet. The above not being laid down in any book or chart in my possession, excepting the small island to the westward, I give them to the public as I found them.

“J. R. SANDS.”

DISASTROUS EFFECTS OF THE ROLLERS AT ST. HELENA.

WE take from the *St. Helena Gazette* of the 7th of March, the following particulars of a hurricane peculiar to the roadstead of that island:—

St. Helena has ever boasted of the safety of its roadstead, and that most justly, as no individual upon the island can remember a solitary instance of a vessel having been wrecked upon its shores. Those who witnessed the scene presented on Tuesday, the 17th instant, alas! will have a different tale to tell. The roadstead, which only the day previous was like a mill pond, was a sea of troubled waters.

During Monday night, the rollers for which St. Helena has ever been celebrated, the cause of which is altogether unaccounted for, began gradually to rise, and on Tuesday had increased to an awful height, like so many rolling mountains, one after another, driving every thing before them. The English schooner *Cornelia*, condemned at this port a short time since, and purchased by Mr. Cole, was the first vessel driven on shore. If the person in charge of this vessel had been left five minutes longer than he was on board, it would have been out of the power of all human aid to have saved his life, as the vessel, some distance from the shore, was buried in the tremendous seas, and ultimately came in upon the beach: in a few moments she was a mass of splinters.

Immediately after the *Cornelia* disappeared, the Brazilian brig, *Descobrador*, (127 tons), brought to this island under the charge of Lieut Meynell, and condemned on the 15th January, 1846, as being fitted for the slave trade, as a prize to H.M. sloop *Star*, lifted her anchors, and was driven by the force of the rollers on to the beach, between the draw-bridge and upper crane; the ship-keeper, Robert Seale, his wife, and two other persons were on board at the time she touched. Sea after sea broke over the vessel, and she fell broadside on to the shore; the larboard shrouds ultimately gave way, and the lives of the poor creatures on board were in imminent danger, not only by the vessel separating fast, and the seas rolling over her, but by the falling of the masts. At this time two persons from on board swam on shore, leaving the ship-keeper, (Seale) and his wife holding on by the rail on the leeward side of the vessel, appealing to the numbers on shore, within hearing of them, for assistance.

The town major endeavoured to convey a rope, by means of a rocket, to the vessel, but from some unforeseen circumstance it failed. Mr. Chatfield, Master's Assistant of H.M. sloop *Flying Fish*, attempted to swim off with a spar attached to a rope, and after arriving alongside the vessel, was taken by the sea under her counter, roller after roller breaking over him, which buried

him for a time, and finally threw him on the beach in an exhausted state. A whaleboat belonging to Mr Rolfe was launched, in hopes of being taken alongside the vessel, but she was no sooner in the water than she was dashed to pieces. At this period an American seaman named Roach, who has been upon the island some time, and is employed as a boatman, most nobly plunged into the sea, and swam to the vessel, which he reached, taking with him a rope, the end of which was secured on shore. Upon gaining the deck, he hauled on board a sufficiency of the rope, and after attaching the end which he took to the side of the vessel, to enable him to regain the shore without depriving Seale of the means of escape, he then tied a rope round Mrs. Seale's body, and immediately plunged into the water, when they were dragged on shore by the spectators, amongst whom were Dr. Twcedale, of H.M. sloop *Prometheus*, and Lieut. Grant, R.A., who plunged in to the assistance of Roach as he approached. The rollers having knocked him, with Mrs. Seale over several times, Mrs. Seale was landed almost senseless. Seale, when he saw his wife was safe, tied the rope round his waist, and was drawn on shore without sustaining any injury. From the time the *Descobrador* touched the rocks to the period of the people being taken out of her, ten minutes could not have elapsed, and within five minutes after, she separated and went to pieces.

Whilst the *Descobrador* was upon her beam ends upon the beach, the schooner, name and nation unknown, captured by H.M. steam sloop *Prometheus*, on the 22nd November, and condemned in the Vice Admiralty Court on 29th December last, parted from her anchors, and as if propelled by steam, ranged herself on the outside of the *Descobrador*. This vessel was partly demolished, having been purchased by Mr. Stewart, at auction.

About twelve o'clock, the Brazilian schooner, *Acquilla*, with another prize, lifted their anchors, and were driven upon the beach in front of the town. The *Acquilla* remained perfect for some time, but the other very soon went to pieces. The *Acquilla* was detained by H.M. sloop *Cygnat*, but the result of the seizure is as yet uncertain, as her case is defended. The vessel that broke adrift with the *Acquilla* was the Brazilian brigantine *St. Domingo*, captured by H.M. steam sloop *Prometheus*, on the 25th December, brought to this island by Mr. Clark, Naval Cadet, and condemned on the 2nd March.

About one o'clock, a tremendous heavy roller broke over the *Rocket* hulk, which was lifted stern uppermost, and disappeared.

About one o'clock, the Brazilian schooner *Enfrazia*, captured by H.M. steam sloop *Prometheus*, on the 25th December, 1845, brought to this island for adjudication by Lieut Pollard, and condemned on the 29th January; and the Brazilian brigantine *Esperanza* captured on the 26th December, 1845, by H.M.S. *Acteon*, and brought to this island by Mr. Lowe, second master, condemned on the 29th January, were buried by a tremendous roller breaking over them, the former disappeared in an instant, having sunk at her anchors; the latter, after her masts went by the board, drifted out to sea a total wreck, and whilst off Munden's Battery, was boarded by some of the merchant vessels' boats, when sails, spars, and other articles were removed. This vessel ultimately drifted out to sea.

The rollers still continuing at an awful height, great fears were entertained for the safety of the English barque *Lavinia*, from Fernando Po, the crew of which vessel, during the night previous, had abandoned her, taking with them their chests and hammocks on board of a merchant vessel lying at anchor out of the influence of the rollers. All communication with the shore and shipping was impossible, as it was dangerous for a boat to approach the landing-place, much less to afford a communication.

About half-past five o'clock in the afternoon, the sea still continuing mountains high, the condemned Brazilian brigantine *Julia*, captured by H.M.S. *Star*, was separated from her companion the *Quatro de Março* and thrown up

by a succession of heavy rollers upon the West Rocks, and in an instant not a particle of her was to be seen. Almost immediately after, the Brazilian brig *Quatro de Março* was, with four anchors down, lifted by the gigantic rollers, and although buried for a time in the sea, was, ultimately, by a heavy wave, lodged on the shore under Patten's Battery, near the West Rocks, the masts having been previously carried away by the force of the waves breaking over her. The *Quatro de Março* was captured by H.M. sloop *Cygnets*, on the 18th December, 1845, and was brought to this island under the charge of Mr. Jones, purser, on the 26th December last, with 540 slaves. The remains of the hull of this vessel was sold on the 26th instant, by public auction for £30.

In addition to the vessels already stated, there were three other condemned slave vessels in the act of being broken up washed ashore.

The most painful part to be recorded of what this day has brought forth, is the loss of three fellow-creatures, who have met with a watery grave. John Maggott, an old and experienced rock fisherman, with James Craig, a shoemaker, and Robert Bath, who went to the rocks under Sugar Loaf, in a boat, for the night, to enjoy the sport of "Bull's-eye fishing," a delicate fish which abounds during the months of January, February, and March. The sea suddenly rising, the poor men could not make their escape.

"The wharf from the lower steps to the draw bridge, together with the Glacis, is almost totally destroyed. The Commissariat Coal Yard, which was erected at a heavy expense in 1834, by General Dallas; also the iron tanks under the verandah upon the wharf, for the supply of water to shipping—totally destroyed. The fortifications at Lemon Valley much injured; and great damage sustained at Rupert's, where the liberated Africans are located. The sea rolled as far as the officer's quarters at Rupert's, and a twenty-four pounder carronade was taken from its platform from the lower Chubb's Battery into the sea. The wind for many days previous to the setting in of the rollers, was from the northward and westward, with close sultry weather. The property lost by individuals, together with the expense of repairing the wharf, coal yard, &c., is estimated at upwards of £20,000."

THE BELLEROPHON AND CALCUTTA.

The late account of two ships of the line being prepared for sea in a short time has produced the following precedent:—Some short since, two seventy-four gun ships, the *Bellerophon* and *Calcutta*, were ordered to be fitted out in as expeditious a manner as possible, for the purpose of ascertaining in how short a time it could be done. They were both ready for sea in less than three days. British sailors must feel proud that they have not degenerated since 1700, as about that time, Daniel Defoe, (a well known name,) in his second letter of his tour through Great Britain, (published in 1714,) in which are set down his journeyings and scings along the sea-coast of Kent, notes the following instance of the remarkable dispatch from which our seamen got a ship at Chatham ready for sea.—"The expedition that has been sometimes used here in fitting out men-of-war is very great, and, as the workmen relate it, 'tis indeed incredible; particularly they told us, that the *Royal Sovereign*, a first rate of 106 guns, was riding at her moorings entirely unrigged, and nothing but her three masts standing, as is usual when a ship is laid up, and that she was completely rigged, all her masts up, her yards put in, her sails bent, anchors and cables on board, and the ship sailed down to Black Stakes in three days, Sir Cloudesley Shovel being then her captain."

RAILWAY GAUGES.—Although the subject of the Railway Gauges has little of a nautical cast in it, the result of the enquiry by the committee appointed to investigate it, may be well recorded here. Our readers will find an interesting discussion of the whole report in the *Railway Gazette*.

CONCLUSIONS.—After a full consideration of all the circumstances that have come before us, and of the deductions we have made from the evidence, we are led to conclude:—

1st.—That as regards the safety, accommodation, and convenience of the passengers, no decided preference is due to either gauge, but that on the broad gauge the motion is generally more easy at high velocities.

2nd.—That in respect of speed, we consider the advantages are with the broad gauge, but we think the public safety would be endangered in employing the greater capabilities of the broad gauge much beyond their present use, except on roads more consolidated, and more substantially and perfectly formed, than those of the existing lines.

3rd.—That in the commercial case of the transport of goods, we believe the narrow gauge to possess the greater convenience and to be the more suited to the general traffic of the country.

4th.—That the broad gauge involves the greater outlay, and that we have not been able to discover either in the maintenance of way, in the cost of locomotive power, or in the other annual expenses, any adequate reduction to compensate for the additional first cost.

NOTES WORTH NOTING.

The eminent Chinese Minister Keying has presented the Seamen's Hospital ship *Dreadnought*, with the sum of 900 dollars (about £190) through Rear Admiral Sir Thomas Cochrane, the Commander-in-Chief on the East India station. All honour to so worthy a foreigner; the eulogies bestowed on him by Sir Henry Pottinger are well bestowed.

The six masts of the Great Britain steamer have been reduced to five, and step on the keel unlike the former. She is now fitted with a propeller of fifteen feet in diameter with four vanes.

The *Whalemens*' Shipping List of New Bedford, dated the 10th March, gives the names of 520 American whalers at work in the Indian and Pacific Oceans, also their tonnage, commanders, and when and where last heard of. They consist of 252 from New Bedford, Dartmouth 1, Falmouth 4, Fairhaven 46, Matapoisset 11, Sippican 5, Wareham 4, Westport 11, Nantucket 72, Edgarton 10, Holms Hole 4, Province Town 25, Plymouth 5, Boston 2, Fall River 7, Free Town 2, Portsmouth 1, Providence 9, Bristol 6, Warren 25, Newport 12, Lynn 3, Salem 2, Somerset 1, Myrtis 18, New London 78, Stonington 26, Sag Harbour 63, Greenport 11, New Suffolk 2, New York 1, Cold Spring 8, Bridgeport 3.

In the Port of Liverpool there are no such persons as *Birmingham*s! [See explanation of the term in our last number, p. 258.]

On the 1st May, the Duke of Wellington attained his 77th year.

Weekly mails are now established between this country and America. Additional vessels have been placed on the Halifax line which is extended to New York and Liverpool every Saturday, for their respective destinations.

On the 7th May, an entertainment was given on board H.M.S. Rodney, at Spithead, by the wardroom officers of that ship; at which the Governor, the Admirals, and the principal officers both naval and military, with their ladies,

and much company were present. All the arrangements are spoken of in glowing terms, and at night the guests were landed by a steam packet which was hired for the purpose.

On the 6th May, the number of vessels that entered the Mersey for Liverpool, was between 60 and 70; a gratifying sight to concerned and unconcerned spectators.

A "Notice to Mariners," from the India House states, that the light vessel in lat. $21^{\circ} 27' N.$, stationed between the patches of Chittagong, would be withdrawn about the 20th April, and that the lighthouse on Kootubdeea island, would be lighted about the beginning of February last. We yet look for the adoption of these important measures being verified, which will no doubt come in due course.

The Atmospheric Railway from Exeter to Teignmouth was opened on the 13th May.

On the afternoon of the 28th March, two very severe shocks of earthquake were experienced at Malta, which extended with equal violence to Sicily, Zante, Corfu, Myteline, Rhodes, Smyrna, and Alexandria. On the 16th April, a third shock was experienced at Malta, and a fourth on the 22nd.

The British ship, Sir Charles Napier, conveyed 35 camels from Tenerife to Valparaiso, in a passage of 84 days, in perfect health and good condition. They are located in South America with a view to naturalize the animal in Bolivia.

It is announced by the *Presse* (French paper) that Lieut.-Col. Passot, Commandant of the Isles of Mayotte and Nos Beh, has taken possession in the name of France of the three small Islands of Nosse Cumba, Nosse Mitson, and Nosse Fali, near the northern entrance of the Mozambique Channel.

Captain Bowen has been presented with a silver breakfast service, by the passengers of the Great Liverpool, for his gallant conduct on the occasion of the wreck of that vessel in the bay of Cape Finisterre, an account of which we gave in our April number. The meeting on the occasion, took place at the Mitre, in Fleet-street. Captain Bowen expressed himself on the occasion, in a manner which shewed his real worth, "He had done no more than any one else in his situation would have done!"

A project is mentioned of establishing a steamboat communication between Liverpool and Para, from whence boats of less dimensions are to ascend the Amazon as far as Bolivia, from whence a railway is to connect it with the port of Arica.

The Shipwrecked Fishermen and Mariners' Benevolent Society's Annual Dinner, took place on the 2nd May, when the subscriptions announced in the course of the evening amounted to £1969.

Pool Harbour, in Warnboro' Sound, has been selected as one of the chief ports of Western Australia. A plan of this harbour will be found in our volume for 1841, and ample description and directions also.

There are 11 steamboats running between London and Westminster bridges, at one penny the trip, making 32 trips in the hour, or 320 trips per diem. Assuming forty as the average number of passengers for each trip, will make a daily total of 15,000 and the return trips being the same, makes about £125 as the daily receipts of these boats. The time occupied by each trip varies from a quarter to half an hour.

It is an extraordinary fact that the thermometer has stood at ten degrees below the freezing point, at Port Royal, in Jamaica, in the course of this last winter, a circumstance most remarkable at a place where the thermometer generally ranges between 80° and 90° .

The want of a light on the S.W. extreme of the coast of Guernsey, has been pointed out by Mr. W. Sadler, the master of the Sir Francis Drake steam packet, for which useful, if not humane recommendation, the sapient

committee on the island, who manage these matters, has in return passed a vote of censure! What will the Trinity House do, and the committee of Lloyds? At least they will not follow the noble example of the island committee, the chairman of which is said to be a retailer of snuff and tobacco!

The arrival of shipping in the port of London, has been so great within the last week, upwards of 100 ships, and most of heavy burden, containing immense cargoes, besides the usual arrivals of steamers with passengers, that some difficulty has been felt to supply revenue officers to meet the demands of the mercantile community.

The passage from Hamburg to London, has just been performed by the General Steam Navigation Company's ship, *Countess of Lonsdale*, in the space of 43 hours. The estimated passage is from 50 to 62 hours, by the table in our volume for 1843, p. 68. From Harwich it would be about half that time.

The *Penelope's* paddle box boat, "carries the whole ship's company," at least, so says the *Times*, and that is a good authority!

We have lately heard of a Steam Packet Company, refusing to give a passage to some unfortunate shipwrecked seamen in the north of England, at a reduced price. In a maritime country like this, these companies should be compelled, for the good of the state, to grant a free passage to distressed shipwrecked seamen.

The English language, it appears, is to be naturalized in the Mauritius, after the 15th July, 1847. It is stated that all proclamations, ordinances, and judicial proceedings are to be made in the English language.

His Royal Highness Prince Albert has graciously signified a deputation, consisting of the Mayor of Liverpool, Lord Sandon, and Sir Howard Douglas, his intention of being present in Liverpool on the 30th and 31st July, for the purpose of laying the foundation stone of a building for a *sailors' home*. We hope every other seaport will follow this example. There should be a sailors' home at all our seaports as we have said long ago.

It is intended to establish forthwith a submarine electric telegraph between France and England, the points of connection being the South Foreland and Cape Grinez or Cape Blancnez; the maximum depth is thirty-seven fathoms, and the gradual sloping of the shores on either side is favourable. A similar communication is spoken of between Holyhead and Dublin, and also between Marseilles and Algiers.

The light vessel off Falsterbo, to mark the extremity of the reef, will be at her station, ice permitting, in the course of this month.

The whaling company of Turk's Island, Bahamas, have commenced operations, and in one month have captured four fine whales.

On the 25th of May, at three P.M., Her Majesty gave birth to a Princess.

The *Ruth*, Newham, of Scarborough, from Messina to Petersburg, was attacked by Moorish pirates off the Riff, (coast of Barbary), on the 30th April, Cape Forcas bearing S.E.b.E. five or six leagues; was abandoned by the crew to save their lives, and it is supposed was afterwards run ashore. H.M.S. *Fantome* has proceeded in search of the pirates.

The Admiralty have ordered that the services of pilots are in future to be remunerated according to the draft of water of the vessels of which they have charge.

The *Syria* arrived at Liverpool from Newfoundland, (sailed 22nd April), reports extensive fields of ice between 59° and 54° W., and 45½° and 46° N.

On Monday the 11th May, Mr. G. H. Macfarlane, master-assistant of H.M.S. *Torch*, jumped overboard from the *Salsette* hulk, at Woolwich, a strong tide running down, and saved the life of a man who had jumped overboard. The man's hands were tied behind his back at the time, as he was in a state of intoxication and disposed to mischief.

LAW.

Masters of ships must be cautious in observing the law as to the issue of lime juice and provisions generally to their crews. Mr. Isaac Paddle, the Master of the *Isabella Blyth*, has been fined £5 for neglecting to serve out lime juice and sugar, at the rate of half-an-ounce of each per day to his crew, they having been on salt provisions for ten days. It appeared to have been entirely the neglect of the master, Messrs. Blyth, the owners of the ship, had provided a sufficient supply for the voyage. A trifling excuse was offered as the reason of this neglect, but without avail. The crew were suffering from scurvy, and the magistrate very properly said he was determined, in all cases, to enforce the penalty where it was incurred. Thus there are some hopes of these cases of scurvy being done away with. They are unheard of in the Royal Navy, and it is neglect of the law which has produced so many of late in our merchant ships. This is the first conviction, and occurred on the 20th of May.

John Brown, (a name very much like Pursers' extraction) was tried at the Central Criminal Court, on Monday, under 7 and 8 Victoria (the Merchant Seamen's Act), for transferring to another person a register-ticket granted to a British seaman. The prosecution was instituted by the Board of Admiralty. Thomas Hartley, an English sailor, got a ticket at the register-office, and took it to the defendant, a crimp, who sold it to a Prussian, named Miller, for 2s., and thus enabled him to ship himself on board the *Tom Tough* as a British seaman, although (oddly enough) he could not at that time speak a word of English! Verdict, "Guilty." Sentence, two months' labour.

A suit for salvage, instituted by Lieut. Pritchard and the officers and crew of *H.M.R.C. Cameleon*, for services rendered to the *Serina*, on the 28th of November last, has been dismissed with costs; the opinion of the court being that the vessel was in a very safe place, and that such a claim should not have been made against a foreign vessel, unless it could have been supported by ample and sufficient evidence.

By an Act of Parliament (7 and 8, George IV., Cap. 75,) every waterman is obliged to have a printed list of fares in his boat, and in case of any dispute if he can not, or will not produce this list, the passenger by the above mentioned Act, is discharged from paying any fare whatever, the waterman being besides liable to a penalty of £5. This cannot be too generally known, as much imposition is practised by watermen on persons embarking in packets.

The master and crew of the late schooner *Helen*, of Sunderland, have been bound over to appear at the Sessions, on a charge of scuttling that vessel. The case is one of wilful destruction, and will be duly investigated. A similar case in the barque *Andromeda*, was heard at the Thames office on the 30th April. In both cases, holes bored with an auger have been found, and done from the inside.

PREVENTION OF SHIPWRECK.—A resident at Bermuda, in a locality commanding an extensive view of the most dangerous part of the island, has addressed the committee of Lloyd's suggesting that an universal plan be adopted by pilot boats to warn inward-bound vessels of their approach to danger, by distinguishing pendants, denoting, "steer north or south," "east or west," "haul off," "down helm," and instances cases where the want of the practice had prevented the otherwise safe arrival of vessels.

RODGER'S ANCHOR.

We have always expressed a favorable opinion of Lieut. Rodger's anchor; in the first instance because we approved of the principle which he has adopted; and subsequently because the correctness of our view of this valuable instrument has been confirmed over and over again by the testimony of officers of the royal navy, as well as of the mercantile marine, whose opinions have been formed upon their daily experience of its working qualities, and, in numerous instances, under the most trying circumstances.

It is therefore with much satisfaction that we find it likely soon to become as general in the Royal Navy as it is already in the merchant service.

A large number have been recently ordered for ships-of-war, varying in weight from 23 to 70 cwt., which are suitable for the different classes, from sloops to our largest sized frigates.

It is not long since we recorded the high estimation in which it is held on board the *Albion*, one of the largest ships in the navy.

This is however another step towards the general adoption, in the naval service, of this important article of a ship's furniture.

And it is doubtless to be attributed to the repeated favorable reports from captains of ships on their return from foreign service. We have been led to the above remarks by the following letters, which have been recently transmitted to the patentee, and will be read with interest by many of our naval friends, who are personally acquainted with the gallant officers whose signatures they bear, and which makes any comment of ours quite unnecessary.

Admiralty, 25th May, 1846.

SIR,—In pursuance of the directions of the Lords Commissioners of the Admiralty, I herewith transmit a copy of a report of the 25th ultimo, from Captain Eden, of Her Majesty's ship *Winchester*, on the bower anchor, on your plan supplied to that ship.

I am, Sir,

Your humble servant,

R. DUNDAS, *Storekeeper General.*

Lieut. Rodger, R.N.
Shawfield Street, King's Road, Chelsea.

Excellent, in Portsmouth Harbour,
26th April, 1846.

Submitted for the information of the Lords Commissioners of the Admiralty.

(Signed) CHAS. OGLE, *Admiral.*

The Secretary of the Admiralty.

H.M. Ship Winchester,
Portsmouth, 25th April, 1846.

SIR,—On paying off Her Majesty's ship *Winchester*, I beg to report upon Rodger's bower anchor.

We have used it on all possible occasions as our working anchor, and have invariably found it to answer remarkably well in every respect.

I have the honor to be, Sir,

Your most obedient humble servant,
CHARLES EDEN, *Captain.*

Admiral Sir Charles Ogle, Bart.
Commander-in-Chief, Portsmouth.

H.M.S. Eurydice, Portsmouth, 7th April, 1846.

SIR,—I have used an anchor of yours, which was supplied me in July 1843, as a bower anchor, since that date, and prefer it to any anchor I ever had before, and have always let it go in preference to the other, whenever there was the least chance of driving, or danger to be apprehended therefrom.

I have the most perfect confidence in its holding properties in any ground, soft or hard, and of its certainty of biting the ground quickly.

I consider the palm of the anchor to present as great, if not a greater surface than the Admiralty anchors, and the centre of that surface to be nearer the end of the fluke, and therefore buried deeper in the ground; for this very reason I do not consider this anchor to break ground easier than others, or so easy as your former anchors.

I am, Sir,

Your very obedient servant,

(Signed) GEO. ELLIOT, *Captain.*

Lieut. Rodger, R.N.

THE SHIPWRECKED FISHERMEN AND MARINER'S BENEVOLENT SOCIETY.

Instituted to assist the Widows and Orphans of Fishermen and Mariners, drowned in pursuit of their calling; and to board, lodge, clothe, and forward to their homes Fishermen, Seamen, and other poor persons Shipwrecked on the coasts of the United Kingdom.

Annual Subscriptions, 2s. 6d., Donations, Ad-libitum.

Office, 26, Bucklersbury, London.

SIR,—The late liberal donation of the *Nautical Magazine* in aid of the funds of the above charity sufficiently assures me of the sympathy you have with the objects the Society have in view. It would, therefore, be a work of supererogation for me to call your *individual* attention to the claims of our Fishermen and Seamen, seeing you so fully respond to them,—but, sir, it may be otherwise with some of the readers of the *Nautical*, many of whom may never have heard of the Society, or but imperfectly understood its merits, and how fully it seeks to carry out that part of the Christian rule which is said to constitute true religion, viz.—“to visit the fatherless and widows in their affliction.” It is, therefore, to your readers, sir, through you, for the reasons before given—that I more properly address myself, feeling some confidence that there are but few hearts among them, who, when they are made acquainted with a channel through which their benevolence may reach our poor Shipwrecked Tars, on whatsoever part of the coast they may be cast, but will impulsively exclaim,

“Shall the poor sailor, wrecked afar from home,
A wand'ring outcast through his country roam?”

or if the remorseless element should have engulfed them, will hasten

“To mellorate the pang, the bitter cry,
The orphan's tear, the widow's lonely sigh.”

The Society, as you are aware, sir, is Patronized by Her Most Gracious Majesty, and His Royal Highness Prince Albert. Vice Patroness and Patrons—Her Majesty the Queen Dowager; H.R.H., the Duchess of Gloucester; His Majesty the King of Prussia, and the Duke of Cambridge.

President, Admiral the Right Hon. Sir George Cockburn, G.C.B., &c.

Vice Presidents:—President for Scotland, the Rt. Hon. the Earl of Had-dington, President for Ireland, Admiral Robert Dudley Oliver, with 22 other noblemen and gentlemen, and a Committee of 36 noblemen and gentlemen zealously engaged in carrying out this truly benevolent work, assisted by gentlemen as agents on every part of the coast, by whose united labours there have been relieved from the formation of the Society in 1839, to March 31st, 1846,

| | |
|--|------|
| Widows of Fishermen and Mariners | 703 |
| Orphans do. do. | 2150 |
| Aged Parents of Drowned do. | 398 |
| Shipwrecked Persons | 9091 |
| Fishermen, Heads of Families, left Destitute from Storms | 568 |

Persons 12,910

The objects of the benevolence of this Institution being a body of men who in this great commercial nation may be truly designated the right arm of the Empire. The Committee of Management have confidence, sir, in appealing through you to the readers of the *Nautical*, and the Public at large, to aid them in carrying out efficiently their work of charity. I subjoin a few cases selected from the operations of the last year, and, with the hope you will kindly give this insertion in your valuable publication.

I remain, &c.,

FRANCIS LEAN, R.N., *Secretary*.

Shipwrecked Persons.

| | £. | s. | d. |
|---|----|----|----|
| By the Yarmouth Auxiliary and Central Society, 6 of the "Dove" of Exeter—Board, Lodging, Clothing, and Passage home | 11 | 12 | 0 |
| Kirkwall Agent, 30 of the "Amazon," "Prince," "Rubicon," and "Norval,"—Ditto, ditto | 38 | 2 | 2 |
| Lerwick Agent, 9 of the "James Lyon," of Dublin,—Do. ditto, ditto | 34 | 17 | 0 |
| Central Society and Leith Agency, 13 of the "Undaunted,"—Ditto, ditto, ditto | 15 | 10 | 0 |
| Central Society and Deal Agency, 12 of the "Dependent,"—Ditto, ditto, ditto | 13 | 1 | 0 |
| Torquay Agent, the Crew of the "Blake,"—Do do, do | 13 | 0 | 0 |
| Eastbourne Agent, the Crew, 33 in No., of a Dutch East Indiaman, wrecked on the Coast of Sussex | 66 | 4 | 8 |
| <i>Widows and Orphans of Fishermen and Mariners Drowned.</i> | | | |
| To 4 Widows, 9 Orphans, and 2 Aged Parents of 6 Men drowned at Dunbar, by the upsetting of the Boat, whilst endeavouring to save the lives of the Crew of a Fishing Boat of Buckhaven | 46 | 0 | 0 |
| Widow, and 3 Orphans of William Evens, drowned off Rattray Head | 10 | 0 | 0 |
| Widow and 5 Orphans of George Jackson, lost in the "Avon," off Wisbeach | 12 | 0 | 0 |
| Widow and 2 Orphans of Joseph Booth, drowned off the Owers Light | 8 | 0 | 0 |
| Widows and 4 Orphans of James and Henderson Ormond, lost in the Jamson of Leaham | 16 | 0 | 0 |
| Widow and 6 orphans of Owen King, drowned whilst fishing | 10 | 0 | 0 |
| 10 widows, 28 orphans, and 4 aged parents of 12 fishermen drowned off Lerwick | 50 | 0 | 0 |
| To the widows and 5 orphans of 2 fishermen, drowned whilst fishing off Rathmullen | 10 | 0 | 0 |
| Widow of James Pengally, fisherman, drowned at Looe | 8 | 0 | 0 |
| Fishermen who suffered by the storm at Wick, in Aug. last | 50 | 0 | 0 |

NEW BOOKS.

DISCOVERIES IN AUSTRALIA, with an account of the Coasts and Rivers explored and surveyed, during the voyage of *H.M.S. Beagle*. In the years 1837 to 1843, &c., by *J. Lort Stokes*, Commander *R.N.* Two volumes. *Boone, London.*

In our last number we briefly announced the appearance of this work : we shall now proceed to give our readers such a condensed view of the *Beagle's* voyage as will form a useful reference hereafter. We find in it the fruits of the joint efforts of her two Commanders *J. C. Wickham* and *J. L. Stokes*, under the former of whom she sailed from England in July 1837, having on board *Lieut. Grey* the present governor of New Zealand, and his companion *Lieut. Lushington*. With *Lieut. Grey's* discoveries and very narrow escapes, every one is well acquainted.

The *Beagle* on her way to Swan River touched at *Tenerife, Bahia*, and the Cape, and left this place to commence her duties at *Roebuck Bay*, on the 4th of January following, not however before *Capt. Wickham* had felt the effects of the climate in an attack of dysentery, which eventually obliged him to relinquish his command.

The *Beagle* made tolerable progress to the north-west coast, where arriving off *Cape Villaret*, an immediate examination of *Roebuck bay* was made in the hopes of finding a river, but without success. Another ill omen occurred here in the accidental wound of the master *Mr. Osborne*, which deprived the *Beagle* of his services, as already related in the journal of that officer, which appeared in our volume for 1841. Rounding *Cape Leveque, King Sound* was explored, and a small river named the *Fitzroy* was found at the head of it which was traced up its course 22 miles. The eastern shores of *King Sound, Collier Bay*, and *Camden Sound* were then successively examined, when as the party were engaged in *Brecknock harbour*, they were suddenly surprised by the appearance of their old companions (*Lieuts. Grey and Lushington*), who had left them at the Cape, and who had wasted all their resources, and nearly all their strength in a fruitless search for a river on the coast along which the *Beagle* had passed ! and had been rewarded only by having crossed the *Glenelg*.

Refitting at *Swan River* after this voyage, which had filled in 300 miles of coast to the chart, the *Beagle* proceeded to sea on the 20th June, 1838, for *Bass strait*, and shaped a course for *Hobart Town*. "To this portion of *Australasia*, (*Van Diemen Land*)," *Capt. Stokes*, observes, "I shall systematically apply the name of *Tasmania* in honor of that adventurous seaman who first added it to the list of European discoveries." We fully concur with *Capt. Stokes* in this conclusion, and would gladly see the clumsy, double jointed appellation of "*Van Diemens Land*," make way for the more graceful, not to say euphonious, name of *Tasmania*, notwithstanding *Van Diemen* was the Governor of *Batavia* when *Tasman* made his discovery. But leaving this matter to the *Tasmanians* we shall follow the *Beagle* to *Hobart Town*, which place she left for *Sydney*, after a mere glimpse at the governor, *Sir John Franklin* on the 19th July. Crossing *Bass strait*, where a strong south-east current was experienced, the *Beagle* arrived in *Port Jackson* on the 24th, where she remained until November to commence operations in that all-important part of her labours, the survey of *Bass strait*, which took place in the middle of November. This strait, its numerous islands and dangers, as also the adjacent harbours, occupied the *Beagle* and her officers until the 9th of March, when she again arrived at *Sydney*. A vast deal of information highly useful to seamen was collected in this voyage. The in-

terval between this and the 21st of May was employed in charting the work, when the *Beagle* proceeded to the northward, visiting Port Stephen on her way to Port Essington. Various contributions were made to the charts of this part of the coast during the passage, and some important and interesting observations, both on the positions of dangers and that extraordinary belt of coral, which while it protects so large a portion of the coast from the fury of the waves of the Pacific, affords security to its navigation.

The *Beagle* arrived at Port Essington on the 17th July, where she found H.M.S., *Britomart*, under the command of Captain Stanley, who had made an interesting tour of the islands of the Arafura Sea, the account of which is preserved in the volumes before us. Some interesting particulars are given of Port Essington, which the *Beagle* leaves on the 25th July, and crossing to Cape Hotham explores Adam Bay, and discovers the Adelaide River, her boats having proceeded up its course about 80 miles in a Southern direction, a river swarming with alligators. Port Essington is again visited by the *Beagle*, and affords Captain Stokes an opportunity of giving us an account of the cruize of the *Britomart* among the Islands of the Arafura Sea. This concludes the first of these volumes. We may take a future opportunity of referring to this interesting account of a place and people of which very little is known.

Pursuing now the operations of the *Beagle*, again the little vessel leaves Port Essington and betakes her to her explorations on the Australian coast, most contiguous to that place. This was on the 4th September, 1839. The discovery of the Victoria River was the reward of this essay; but this was not obtained without a penalty, which the hand of Providence averted from being attended by the death of Commander Stokes. In the performance of his duty—that of obtaining observations for the geographical position of the northern point of the entrance of the river—this officer received a spear, thrown at him by one of the natives, which pierced the breast, but happily in a glancing direction. Being alone he was likewise in danger of his life, from the attack being followed by the natives rushing towards him; but he was happily rescued from them by the timely arrival of Lieut. Emery and a boat's crew, by whom he was safely conveyed on board the *Beagle*.

From the scene of this disaster the *Beagle* proceeded to Swan River, adding, as opportunity offered, to the charts of the coast which she passed. Point Pearce [? Pierce] records the place of this attack.

On the 4th of April, 1840, the *Beagle* again departed from Swan River for the coast, and on her way made a plan of Champion Bay, and a survey of the group called Houtman's Abrolhos, where a variety of relics were found of the Dutch ship *Zewyk*, wrecked there in 1727. The *Beagle* proceeds from hence to Coepang, in Timor, visits Barrow and Tremouille Islands, and in treating of the former, we are happy to see pays a well-merited compliment to the late secretary of the Admiralty, Sir John Barrow; and thence returns to Swan River. Sickness prevented the *Beagle* from pursuing her labours until the 25th of October, when she again left her anchorage for King George Sound, and visited the south-west angle of Australind on her way to Sydney, where she arrived on the 23rd of December. Here Captain Stokes informs us some important changes took place in the *personelle* of the *Beagle*. Her Commander, J. L. Wickham, who had never thoroughly recovered the attack which he had experienced at the commencement of his work, found himself compelled to relinquish his command, and with Lieutenants Emery and Eden, were invalided and returned, leaving the duties of the survey to be carried on by Commander Stokes, who had already taken the principal share of them.

Under her new commander, the *Beagle* left Sydney for Torres Strait, and we find her off Breaksea spit of Sandy Cape, on the 3rd June, 1841; and passing through Endeavour Strait into the Gulf of Carpentaria.

At the head of this extensive gulf, a critical search was made for a river by which to penetrate into the heart of the Australian continent, a search that resulted only in the discovery of the Albert River, a stream navigable about 13 miles for vessels which can cross the bar. Another accident of a similar kind to that which happened on the N.W. coast, occurred here. Mr. Fitzmaurice was seriously wounded in the ankle by the accidental discharge of a gun, which maimed him for life, previous to which, Lieut. Gore had had his hand shattered by the bursting of a gun. Disaster Inlet marks the vicinity of these misfortunes.

The most interesting part of the Gulf having been explored, the *Beagle* proceeded to Port Essington, where she found the *Britomart* from the Arafura Sea. An interesting account of the Arrou Islands is then introduced.

The 15th Sept. finds the *Beagle* again at Coepang in Timor, for the purpose of transmitting her surveys to England; and on the 24th, she again shaped her course for the N.W. coast of Australia, and makes the land southward of Roebuck Bay, and proceeds to Swan River. The question of the settlement of Champion Bay was in agitation at this time, and the services of the *Beagle* were put in requisition to confirm or controvert the character given of it, which had led to the establishment of Australind.

An examination of the coast between Swan River and Cape Leeuwin was then made; and on the 15th March, 1842, we find the *Beagle* again at Sydney, having visited the Derwent on her way. The remainder of her stay in the Australian seas was occupied in adding to the chart of Bass Strait and its shores, until the 18th of February, 1843, when she left Sydney for the Derwent, from whence she sailed for England on the 15th March, and arriving at Woolwich, was paid on the 18th October, 1843.

We have given a meagre outline of the *Beagle's* proceedings, but such only as our limits will allow. It will, however, give a general view of the whole voyage. The work itself must be referred to for those details which interest the general reader, but more especially the seaman, who will find in it abundance of information of that kind, which, if he will attend to, will enable him to navigate his vessel in security. The directions for Bass Strait, accompanied by a neat little chart, are clear and explicit, which, independent of several others it contains, should prove a sufficient claim on the attention of every commander proceeding to Sydney or the Derwent to provide himself with the work.

MONTHLY RECORD OF NAVAL MOVEMENTS.

America, 50, March 1, arr. at San Blas.—*Calliope*, 26, arr. at Van Diemen Land, 18th Dec., 20th sailed for New Zealand; *Carysfort*, 26, touched at Madeira, 7th April on her way to New Zealand; *Canopus*, 74, arr. 14th May at Portsmouth from Halifax.

Daring, 12, on 31st Mar. at Port Royal. *Ferret*, 6, Com. Spriggs, 25th April sailed for Africa from Plymouth; *Fisguard*, 1st Mar. at San Blas.

Pilot, 16, left Aden, 1st April for Trincomalee. *Penelope* steam-frigate, Commodore Jones, arr. 8th May, at Spithead from the coast of Africa. The commodore being very ill, had left Capt. Mansel of the *Actæon*, 26, in command of the station. We lament to add that he expired on the 24th at Hasler. *Penelope*, paid off 20th May.

Raleigh, 50, sailed from Portsmouth 24th May, to join the experimental squadron; *Serpent*, Com. Neville, 23d April, arr. at Portsmouth, with freight. Mr Godson, her paymaster, has been tried by a Court Martial, for drunkenness and dismissed the service; *Scout*, 14, arr. 15 April, at Tenerife.

Talbot, 1 March, at S. Blas; *Vindictive*, 50, arr. 10th April, at Bermuda,

with loss of both quarter-boats and bowsprit, sprung; *Winchester*, stated, in our last as in harbour, has been paid off.

Devonport.—Commissioned, 50, Capt. Sir B. Walker, *Avenger* st., Capt. J. Williams; *Crocodile*, (troop ship) Com. G. Lowe.

Sheerness.—*Dido*, 20, Capt. J. B. Maxwell. *Eurydice* and *Contest* are ready for commission.

Ships in Port—*Canopus* and *Raleigh* at Spithead.

Portsmouth.—*In Harbour*—*Victory*, *Excellent*, *Victoria* and *Albert* yacht, *Comet*, *Nautilus*, *Sea-flower* and *Emerald*.

Plymouth.—*In Harbour*.—*Caledonia*, *Constance*, *Crocodile*, *Avenger*, *Devastation*, *Confiance*, and *Adventure*. *In the Sound*—*Belleisle*, *Favorite*, and *Cyclops*.

The Squadron of Evolution, under command of Commodore Sir F. Collier, C.B., put to sea on the 13th of May, with a strong steady wind from the east. They consisted of *Brilliant* leading, (the *Raleigh* returned to Spithead in the evening), *St. Vincent*, *Vanguard*, *Albion*, *Rodney*, *Trafalgar*, *Queen*, *Superb*, *Terrible*, *Retribution*, *Scourge*, *Gladiator*, *Cyclops*, and *Devastation*.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

CAPTAIN—W. Nevill.

COMMANDERS—E. Tatham (of *Raleigh*, who recently so gallantly distinguished himself in saving a man belonging to the ship from drowning), R. W. Twiss, F. A. Campbell, J. Cannon, W. Prettyman.

LIEUTENANTS—H. Parker, W. H. Hood, F. J. Hornby, Lord J. Browne, F. Egerton, J. E. Parish, J. Corbett, C. G. M'Gregor, C. T. W. G. Cerjat, P. W. Darrell, M. H. M. Munday, S. Osborn.

APPOINTMENTS.

CAPTAINS—O. Stanley, (1844), to *Rattlesnake*—J. Shepherd (1840), *St. Vincent*—The Hon. W. Devereux (1845), to study at the steam-factory, Woolwich, —W. J. Williams (1841), to *Avenger*.

COMMANDERS—C. F. Brown to *Osprey*—R. B. Beechey (add.) to *Tartarus*—R. Moorman (1845), to study at the steam-factory, Woolwich—Sir W. Wiseman, Bart. (1846)—A. Farquhar, and M. Nolloth (1846), to study at the Royal Naval College—P. H. Dyke (1844), to command *Flying Fish*—J. Lunn (1844), to command *Virago*—F. B. Montresor (1843), to command *Cygnets*—F. W. Horton (1844) to command *King-fisher*.

LIEUTENANTS—W. Peel (1844), from *Devastation*, and H. Parker (1844) to *Constance*—Hon. J. W. S. Spencer (1841) from *St. Vincent*, to *Terrible*—H.

Need (1841) from *Terrible*, to *St. Vincent* MASTER—H. Paul acting to *Constance*—R. Mowll to *Dido*—F. F. Taylor, (act.) to *Polyphemus*—J. Tucker to *Avenger*—R. Berrington of *Excellent*, to *St. Vincent*—T. B. Hanham to *Childers*—C. Dickson to *Terrible*.

MIDSHIPMEN—J. Edye, F. G. Meek and P. C. Sward to *Constance*.

NAVAL CADETS—F. M. L. Carter to *Favourite*—T. M. Riddell to *Canopus*—H. B. Phillimore to *Devastation*—A. F. Marescaux to *St. Vincent*—G. G. Bushby to *Hibernia*.

MASTERS' ASSISTANTS—H. C. Sedmond to *Pluto*—T. Campbell to *Rhadamanthus*—W. H. Cumings to *Trafalgar* SURGEONS—G. Mackay, M.D., (1842) to *Avenger*, steam-frigate—A. B. Casfield to *Polyphemus*—I. E. Ring, M.D., to *Constance*.

ASSISTANT SURGEONS—C. Roberts and F. M'Arle to *Pique* and *Hyacinth*—J. N. Derriman, M.D., to *William* and *Mary*, for service of Woolwich Dockyard—J. G. Buchanan to *Constance*.

PAYMASTER AND PURSER—J. Brickwood to *Avenger*.

NAVAL INSTRUCTOR—E. L. Cursham to *Brilliant*.

SECRETARIES—T. Grant, (purser, (1832) to Commodore Sir F. Collier—F. Siddall, (purser, 1839), to Commodore Lord J. Hay, Acting-Superintendent at Woolwich.

CLERKS—J. L. Southey to *Constance*—J. Mottley to *Queen*.

Births.

April 19th, at Knockmullen, Gorey, the lady of Capt. Owen, R.N. of a son.

Marriages.

April 28th, at Greenwich, Mr. T. H. Thompson, to Susanna, daughter of Com. E. Smith, R.N.

Lately in Dublin, Capt. John Adams, R.N., to Elizabeth Hurst, daughter of Henry Ellis of that city.

Deaths.

April 20th, at Nice, Janet, the wife of Rear-Admiral Dundas, M.P.

March 1st, at the Cape of Good Hope, on board H.M.S. *President*, Lieut. W. D. Carroll, at the age of 26, from the effects of a fall.

At Dover, 28th of April, Jane Dalrymple the beloved wife of Capt. Luke Smithett, of H.M. Packet service, and the youngest Daughter of Sir John Hamilton, Aged 37 years.

METEOROLOGICAL REGISTER.

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

From the 21st of April, to the 20th of May, 1846.

| Month Day. | Week Day. | Barometer | | Fahrenheit Thermometer, In the Shade. | | | | Wind. | | | | Weather. | |
|------------|-----------|-----------|--------|---------------------------------------|--------|-----|-----|----------|------|-----------|------|------------|-------------|
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | Tu | In Dec | In Dec | 0 | 0 | 0 | 0 | N | NW | 2 | 2 | bef | 'bc |
| 22 | W. | 29:87 | 29:55 | 48 | 52 | 35 | 54 | E | E | 1 | 3 | bcm | bcm |
| 23 | Th | 29:83 | 29:78 | 48 | 54 | 37 | 55 | NE | NE | 4 | 3 | bc | bc |
| 24 | F. | 29:80 | 29:80 | 47 | 53 | 42 | 54 | E | SW | 1 | 2 | or (1) 2) | bc |
| 25 | S. | 29:91 | 29:89 | 50 | 54 | 40 | 56 | SE | SW | 1 | 1 | bc | bep (3) |
| 26 | Su. | 29:80 | 29:80 | 45 | 45 | 42 | 46 | NE | N | 2 | 4 | or (1) (2) | oprph(3) |
| 27 | M. | 29:87 | 29:90 | 41 | 47 | 34 | 48 | N | NW | 5 | 3 | qbc | bc |
| 28 | T. | 29:90 | 29:86 | 46 | 57 | 39 | 55 | W | W | 1 | 2 | bem | bcm |
| 29 | W. | 30:20 | 30:34 | 52 | 43 | 33 | 53 | NE | SW | 2 | 3 | bc | bcm |
| 30 | Th. | 30:31 | 30:29 | 48 | 56 | 37 | 57 | W | W | 1 | 1 | bcm | bcm |
| 1 | F. | 30:30 | 30:28 | 56 | 57 | 45 | 59 | SW | SW | 1 | 1 | o | o |
| 2 | S. | 30:22 | 30:18 | 54 | 62 | 51 | 63 | W | W | 1 | 1 | o | bcm |
| 3 | Su. | 30:13 | 30:09 | 61 | 67 | 54 | 68 | NE | NE | 1 | 1 | bcm | bcm |
| 4 | M. | 29:88 | 29:80 | 59 | 61 | 52 | 62 | E | E | 4 | 4 | bem | bem |
| 5 | Tu. | 29:71 | 29:63 | 57 | 65 | 47 | 67 | SW | SW | 3 | 2 | bc | bc |
| 6 | W. | 29:54 | 29:52 | 58 | 56 | 49 | 60 | SW | SW | 2 | 2 | bep (2) | bep (3) |
| 7 | Th. | 29:70 | 29:72 | 56 | 62 | 47 | 65 | SW | SW | 2 | 2 | o | bc |
| 8 | F. | 29:86 | 29:92 | 57 | 61 | 48 | 64 | SW | N | 1 | 2 | o | bcm |
| 9 | S. | 30:00 | 29:96 | 61 | 67 | 46 | 68 | S | S | 2 | 3 | bc | bc |
| 10 | Su. | 29:82 | 29:90 | 57 | 65 | 52 | 66 | SW | SW | 3 | 4 | bep (2) | bep (3) |
| 11 | M. | 30:12 | 30:12 | 54 | 61 | 44 | 62 | SW | W | 2 | 2 | bc | bc |
| 12 | T. | 30:01 | 29:93 | 55 | 63 | 39 | 65 | SE | E | 2 | 4 | bc | bc |
| 13 | W. | 29:75 | 29:73 | 60 | 54 | 49 | 61 | NE | NE | 3 | 5 | o | qor (3) (4) |
| 14 | Th. | 29:90 | 29:96 | 52 | 56 | 45 | 57 | NE | NE | 5 | 5 | qbc | qbc |
| 15 | F. | 29:96 | 29:90 | 50 | 58 | 40 | 60 | NE | NE | 5 | 3 | qbc | bc |
| 16 | S. | 29:66 | 29:54 | 52 | 60 | 39 | 61 | NE | SE | 3 | 3 | bc | or (4) |
| 17 | Su. | 29:22 | 29:19 | 53 | 54 | 46 | 56 | SE | S | 3 | 5 | o | qo |
| 18 | M. | 29:06 | 29:02 | 49 | 57 | 42 | 59 | S | SW | 6 | 4 | qor (2) | bc |
| 19 | Tu. | 29:51 | 29:61 | 56 | 57 | 47 | 51 | SW | SW | 6 | 4 | qbcprh (2) | bep 3 |
| 20 | W. | 29:47 | 29:45 | 52 | 58 | 45 | 59 | SW | SW | 6 | 5 | qoprh (2) | qbcprh 3 |

APRIL 1846—Mean height of the Barometer = 29.699 inches; Mean temperature = 49.3 degrees; depth of rain fallen = 29.9 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have received a copy of Sir John Ross's pamphlet written in reply to Sir John Barrow's remarks in his recent work on Arctic voyages, alluded to by Sir John Ross in our March number. It is to be had of all booksellers.

The List of Masters and Mates passed lately is reserved for our next.

Hunt, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

JULY, 1846.

CHARTS OF GALVESTON AND THE COAST OF TEXAS.

IN a communication dated the 8th of January 1844, I adverted to the generally defective character of the charts used on board British vessels voyaging to the ports of Texas.

Arrivals from England, since the date of that communication, have afforded me farther opportunity for noticing the dangerous inaccuracy of these charts.

On the 14th of April, 1844, the brig "*Leviathan*" of Cork, Veale, master, from Liverpool for Galveston, with a general cargo, struck on the North Breakers near the bar. By heaving overboard part of her furniture and cargo, the vessel was freed, but not without sustaining serious damage, her rudder having been unshipped, and her keel injured; leaking badly. She was towed by a steamer to the wharf, where she was moored for discharge of cargo. A survey was called for and ordered, and the repairs deemed essential to her sea-worthiness are now completed.

According to the ship's log-book, and the testimony of the master and mates, at 45 minutes past two o'clock in the morning of the 4th April, the watch was looking out for "lights," (marked on the vessel's chart as being on the point of the island), when the *Leviathan* struck. There are at present *no lights* on Galveston island.

As stated in my letter of the 8th of January, the beacons formerly on the north-east end—for the maintenance of which no stable provision has been made—disappeared in the year 1842, and have not since been replaced.

In addition to that of the "*Leviathan*," I have recently examined three charts, all of which indicate the existence of lights, and give, besides,

sixteen feet as the depth of water on the bar—the real depth being, as I have already mentioned, about 10 feet at low, and 12 feet at high, water.

One of the charts inspected by me shews an error of two degrees in the longitude, and in three others Galveston is called "*San Luis*" Island, and Spanish names unknown, inapplicable, and calculated to mislead, are (doubtless through negligent acquiescence in obsolete authorities), appropriated to various parts of the coast.

It will be well for ship-masters to bear in mind, that, *on making the port at night*, they ought to come to an anchor until day-light. With good ground tackle, no danger need be apprehended, as the holding-ground is excellent, in five fathoms water, along the whole line of coast west of the Sabine. Vessels of heavy draught ought not to approach the bar nearer than six fathoms. Pilots, duly licensed, are constantly on the look-out for ships, and will attend to their signals.

I have, &c.,

(Signed)

WILLIAM KENNEDY.

| COAST OF TEXAS. | Lat. | | | Long. | | |
|---|--------|----|----|-------|----|----|
| | North. | | | West. | | |
| | ° | ' | " | ° | ' | " |
| Mouth of Rio Grande, - - - - - | 25 | 56 | 00 | 97 | 11 | 30 |
| Brazo de Santiago, - - - - - | 26 | 06 | 00 | 97 | 12 | 00 |
| Padre Island trends N $\frac{1}{4}$ E. (true) 38 miles, then N. $\frac{1}{4}$ W. } (true) 53 miles to north end in Corpus Christi, } | 27 | 36 | 50 | 97 | 16 | 05 |
| N.W. end of Mestang Island, 4 feet water, - - - | 27 | 37 | 20 | 97 | 16 | 00 |
| N.E. end of Mestang Island, } Arausis or Capano, } | 27 | 49 | 15 | 97 | 03 | 54 |
| N.W. end of St. Joseph Island, } 8 feet, } | 27 | 53 | 00 | 97 | 03 | 24 |
| N.E. end of St. Joseph Island, } Espiritu Santo, } | 28 | 05 | 00 | 96 | 51 | 44 |
| S.W. end of Matagorda Island, } entrance 3 feet, } | 28 | 05 | 50 | 96 | 51 | 00 |
| N.E. end of Matagorda Island, west part of Pass } Cabello, 11 feet, - - - - - } | 28 | 19 | 24 | 96 | 22 | 05 |
| Decroes Point Peninsula, E Pt. Pass Cabello, } | 28 | 24 | 00 | 96 | 20 | 00 |
| Mouth of Caney Creek, - - - - - | 28 | 38 | 00 | 95 | 57 | 00 |
| Mouth of St. Bernard River, - - - - - | 28 | 51 | 00 | 95 | 49 | 00 |
| Mouth of Brazos River, (Velasco), 9 feet, - - - | 28 | 58 | 00 | 95 | 33 | 00 |
| S.W. end of Galveston Island, (San Louis), - - - | 29 | 02 | 00 | 95 | 22 | 00 |
| * N.E. end of Galveston Island, (Galveston), 12 feet, - | 29 | 18 | 50 | 94 | 48 | 30 |
| Sabine, (west side of entrance), 8 feet, - - - | 29 | 39 | 48 | 93 | 52 | 15 |

* See Nautical Magazine for June, 1840.

C. KEELE.

The entire coast from the Brazo de Santiago to Galveston, is clear and can be approached with safety, to within one and a-half miles, except at the entrances, where the breakers always show. From Galveston to Sabine, the coast is clear for *ten* miles and can be approached within *two* miles in $3\frac{1}{4}$ fathoms. From thence to Sabine the land is very low, and you will not have more than three fathoms water *five* miles from the land.

There is a shoal commencing E.N.E. by compass, distant twenty-two miles from the buoy of Galveston bar, and running nearly due east, for thirty miles, having on it in places seventeen feet water, and there are six or seven fathoms in shore.

Off Pass Cabello the bar is S.b.E. from the N.E. end of Matagorda Island, distant three miles; from thence it runs west to the island, and N.b.E. $\frac{1}{2}$ E. to the Peninsula, forming Matagorda Bay.

There are two beacons here, but, they are not right.

The buoy on Galveston bar is E.b.S. from the beacons on the N.E. end of the Island, distant three miles: it is on the *outer edge* of the bar, in thirteen fathoms of water, and *one hundred yards* to the eastward or southward, or between east and south, you will have four fathoms water. The bar and shoal continue from the buoy S.W.b.S. to a point, from which the first *house* on the sea-beach bears N.W.b.N. (between this point of the shoal and the island, there is a channel with ten fathoms water), and to the northward of the buoy, the shoal is plain to be seen.

The best anchorage is to get the beacons on the N.E. end of the island in line, and run into within *half a mile* of the buoy on the bar, where you will have five fathoms water and good holding ground.

The preceding latitudes and longitudes may be relied upon as correct; they were nearly every one ascertained by me during the last summer, when I ascertained the delineation of the entire coast of Texas, and made harbour charts of Sabine, Galveston and Pass Cabello.

(Signed)

E. W. MOORE.

THE DETERIORATION OF BRITISH SHIPMASTERS.—*Its Reason and Remedy.*

Watergate, Colombo, 27th October, 1845.

DEAR SIR,—I return with my best thanks, the four volumes of the *Nautical Magazine*, which you were kind enough to send for my perusal; and in compliance with your request, that I should write my opinion on the propositions contained in these books for the general improvement of masters and mates of merchant vessels, I have the pleasure to address this letter to you.

It seems to be assumed by most of the writers on this subject, that master-mariners of the present day, do not possess abilities of a corresponding degree with those which marked the character of ship-masters of the olden times, and that many of them are deficient in the necessary knowledge of scientific navigation for the safe conduct of their vessels. In my official intercourse with masters of vessels, I have certainly met with some men, who appeared to me to be unfit to be entrusted with command over their fellow creatures, not being able to command themselves; but I confess, that I never mistrusted their ability to navigate their vessels; on the contrary, I supposed that science had so very much simplified navigation, by the great improvements in nautical,

mathematical, and astronomical instruments, books and charts, that men of very ordinary abilities were enabled *by such aids* to find a ship's place with sufficient practical correctness, and that this was one of the causes of men of an inferior grade to those of former days, being in command of merchant shipping. And further, I believe, that nearly all the vessels wrecked through error in reckoning, had not been lost in consequence of the masters not understanding the use of scientific instruments, but rather from their inattention to those means of safe navigation on which our fathers mainly depended, namely—dead reckoning studied and practised as a science; the use of lead, and, perhaps above all, a good look out. It is all very well that the community should be assured of the proficiency of men who are entrusted with the conveyance of lives and property, to and from all parts of the world; and if it were merely to give the community confidence in ship-masters it is probable no better course of examination could be planned, than one in the knowledge of nautical astronomy and marine surveying. But for my own part, I would prefer to sail the ocean with the ship-master who could navigate me safely to my destination, if his sextants and chronometers were thrown into the sea. Not that I undervalue these instruments in the smallest degree, nor do I consider them to be the cause of wrecks; but I am clearly of opinion, that their common use and their general correctness have brought navigation within the scope of ordinary minds, which minds, not having the advantage at sea of being kept constantly on the stretch like those of our ancestors, who made the perfection of dead reckoning their study, have become negligent of those great safeguards on which former navigators mainly relied. In case I should be met by an opinion which I have frequently heard expressed, that merchants ships were not correctly navigated until chronometers were brought into use, it may be as well to state distinctly, that I am of a very different opinion. But I am prepared to admit that such navigators who were equal to this difficulty, were able men in all the various branches of a master mariner's duty; in their business in port, in the stowage of their cargoes to prevent damage, in the government of their crews, in the management of their vessels in storms at sea, and, in that which is, perhaps, after all, the acme of perfection in a mariner, the working of his ship under-sail in narrow waters. I have not made separate mention of mates of vessels, because I am firmly of opinion, that no man is qualified to be a mate, who is not in all respects, save that of business, on shore, equal to the duties of master.

I would not have it supposed that I object to master mariners being subject to examination, and particularly to enquiries, under properly constituted authorities, into the conduct of all those who have been ship-wrecked; but I am not of opinion that the want of these examinations have occasioned the evil complained of, nor that their enforcement is all that is required to improve the condition of our mariners. For, it is the want of sufficient remuneration to support the respectability of the ship-master's situation in life, that is the main cause of their present condition. If the legislature assumes the power of subjecting nautical men to certain examinations in regard to their professional qualifications, let it at

the same time protect them in their rights and privileges, by fixing a minimum rate of pay, and securing to them the *primage** paid according to ancient usage, by merchants, as gratuity to the master for his care of their laden on his ship; and when merchant vessels are chartered by government, let the pecuniary rewards paid by government, expressly for the master's good conduct, be paid to the master, instead of like *primage* to the ship-owners. It is admitted by good economists that cheap bargains are generally the dearest in the end, and no doubt such is the case with cheap shipmasters. Pay them better and then there will be no longer reason to complain of their inefficiency, with or without examination; but whilst ship-owners are allowed to pocket all those perquisites, expressly provided for the reward of master-mariners, and which those of former years enjoyed, and feel themselves at liberty to consider their engagements not binding with their shipmasters, when their ships make losing voyages, (a reason assigned as sufficient justification for a breach of engagement by a wealthy ship-owner of London,) I repeat that whilst these grinding practices are continued by rich owners of vessels, what is to be expected, but that all the most respectable masters will seek other employment, and none remain (except in the service of a few liberal ship-owners,) but those who are fit for nothing else than to drive ships from port to port, ill-treat their crews, damage their cargoes, and when required, run their vessels on shore. But notwithstanding the picture which I have herein pourtrayed of what might be reasonably expected to ensue from the unrestricted grinding system of a large majority of ship-owners, I am happy to find that a spirited letter in volume 13, from the harbour-master at Ramsgate, (no one man can have a better opportunity of forming a correct judgment on the qualities of our seamen,) that consequences are not quite so bad as might have been expected, and that the mariners of England are still the most efficient in the world.

I remain, dear Sir, yours faithfully,

JAMES SEWART, *Master Attendant.*

To Captain Duncan, of Ship "Sumatra."

MERCENARY SERVITUDE.—*British Seamen in America.*

THAT every man is bound by the laws of nature to serve in defence of his country is a universally acknowledged principle; how far he may be justified in giving his services to a foreign power shall be here inquired into.

It is a consideration replete with interest to the seaman, both to him on the quarter-deck and to him before the mast; and I the more readily

* We have sought in vain for this term in "Lorimer's Letters," and were equally disappointed, as we have been with many others, on reference to the *Penny Cyclopædia*.—Ed.

enter into a brief inquiry as there do appear to be very loose opinions held on the subject by men of all classes.

It will not require deep research. The prevalence of a custom does not necessarily justify its observance or prove it right. There are certain moral obligations which bind, or ought to bind, honourable minds to the performance of public or private duties upon which the question hinges, and these make our path clear from all the embarrassing doubts that sophistical arguments have hitherto given rise to.

The practice of men letting their talents, and personal or physical energies, to a foreign belligerent state is of long standing, it has prevailed for ages, and has been looked upon with rather a lenient eye, as if it were a venial indiscretion.

The most remarkable of the instances recorded in history of mercenary troops being "let out to hire," is to be found in a republic,—that of Switzerland,—and not the least curious part of the circumstance is that of a monarchical government offering so wretched a compliment to the fidelity and loyalty of its people as to employ *foreign republicans* to guard the body of the sovereign ! It is a no less strange anomaly, too, to find these mercenaries—aliens to the soil, unconnected by the ties of birth and citizenship, and bound alone by contract, remaining in the hour of danger faithful to their trust, whilst the allegiance of the monarch's own people gives way in that hour of trial !

The best way it appears to me to proceed, is to select a well-known case that has become a matter of history, as being a legitimate one for our purpose. In so doing offence will be avoided, and the comments made upon it may go to the general question.

Lafayette ! who has not heard of him ? He who is said to have given a "romantic example of devotion to the cause of liberty,"—the chief of the "national guard," the pink of chivalry in the tournaments of revolution—another Bayard, "*sans peur et sans reproche*."

Praise has been bestowed on this celebrated man for declining, and steadily refusing, to move one step farther in the scenes of the French revolution, than his principles justified, or his conscientious opinion of the public good allowed. But who can offer any for his joining the Anglo-Americans ?

In his biography it is observed that in this particular instance, "He presents a singular and romantic example of devotion to the cause of liberty when his own country was not concerned, and his station, his interests, nay, his personal safety were strongly opposed to the sacrifice." In reference to this apparently laudatory passage, it may be remarked that, there was really "nothing singular" in the case ; and that it would have been more consonant with the true state of the facts if "vain-glorious" had been substituted for "romantic ;" and it is evident that had patriotism exerted its warmth in him he had staid at home to watch over the interests of his own country, which so much required the aid of able heads.

Lafayette's conduct in joining the Anglo-Americans in their struggle against the mother country, has been called "generous zeal,"—I should term it the propensity of a revolutionist, I had almost said of a "brigand,"

—mixed up with the usual quantum of hatred to "*perfidè Albion*," which holds even to this day. The Americans had no natural claims upon his exertions, and probably not the least desire for these where directed, being as yet Englishmen, with all their prejudices against the interference of foreigners in their concerns. And, as to his motive being purely disinterested in fighting for the liberty of others to whose country he was an alien, it can only pass as an absurdity. He may have had a motive, or more than one, or he may have had none—impulse alone often drives men into action, and when the game which they had so unaccountably played is over, they are utterly at a loss to assign any clear and distinct reason for having entered into it. The most probable motive was a love of notoriety, or what he thought would be fame, urged on by national dislike of England, and her then arbitrary measures. But this, if it was so, is as unlike—as it is possible for two principles of action to be—the admirable conduct of the virtuous and exalted hero under whose banner he served—"George Washington."

War is horrible enough* when waged by our own country, to those whose duty it is to mingle in it; but what can be said of a foreigner of distinction voluntarily fighting against a nation in other ranks than those of his own state? What is such a man if he receives pecuniary compensation for his services? The world has called him a "mercenary,"—a "hireling,"—one who in all probability commits homicide. There is no evading the question—to all intents and purposes he becomes the unjustifiable slayer of every man he kills in action. If he fights for notoriety or fame he is a savage in his nature; and let either be the motive, deserves to be shot with as little mercy, should he be caught by the people he opposes, as he showed in shooting others who were not his natural enemies. I am fully aware all this may sound very Utopian, and not likely for a long time to come (I will not say never,) to be regarded generally, but that does not negative the truth which the observations contain.

Such an interpretation of the action is the last thing that probably enters the heads of the actors. They would shudder at the very idea of murdering a fellow-creature in cold blood, and dream not that such a construction could by any possibility be put upon the action. On the contrary, it is their boast and glory, and they claim renown for the gallant bearing which they display; and many there are who, if a hint was dropped of the disrepute in which such actors were held, would turn round fiercely and demand satisfaction for injured honour! Morality, however, does not admit palliation for a decided wrong, and there is nothing natural in the action to sanction it; the love of liberty will not serve, though often attempted to be enlisted; the actor may hug the nymph to his breast, but she is too pure to be violated, or to prostitute herself at the shrine of avarice or false glory; licentiousness is often mistaken for her, and is the goddess which the mercenary worships under the

* The reader who may wish to see proofs the most terrible that man can conceive, has only to look over the account of Bonaparte's Italian and Egyptian campaigns.

delusion that she is the chaste divinity. The pirate fights for what he gets, so does the mercenary, and on other points there is but a slight shade of difference between them.

I do not desire to "lump" all in the same category with the unprincipled warriors designated as "common mercenaries," who shaking off the trammels of allegiant duty, step forth cosmopolites and ready servitors to the best bidders for their labour. It is quite possible for an honest intentioned man to be under a delusion for some time, or upon some particular occasion which is embraced without sufficient reflection; and it is equally possible that the world, dazzled by the gallantry of some dashing action which he may perform, expresses its admiration of the act without assenting to the justice of the motive which may have led to the execution of it. But there are numerous cases of educated men having failed in resisting the promptings of self-interest and avarice, by engaging in such occupation solely for the advantages which it offers; either not believing that there is any immorality in so doing, or too weak to resist the temptation of gain, if they do.

During a peace there can be nothing objectionable in a man seeking employment in a foreign country as an officer or otherwise, provided his own government does not require his services; but should the state which he has joined enter into a war with another state, it would be a duty he owed himself to quit its service; and it is scarcely to be doubted that it would also be a duty he owed his own country so to do, for reasons which are obvious enough, and which are binding upon every man, let his station be what it may; unless, indeed, the moral obligations which direct conduct are to be considered altogether worthless.

The employment of mercenaries has given rise to some unpleasant circumstances recorded in the history of the world. During the war of "independence," in America, both parties engaged the services of the Indians, as the natives of that continent are termed; which was scarcely less objectionable than the Spaniard's use of the blood-hound, and perfectly at variance with the principles which govern the civilized man. Lord Chatham inveighed in strong language against this species of inhumanity, but he has been taxed with having resorted to the same means for inflicting vengeance himself! During the short war subsequently waged against the United States, it is well-known that the American ships were principally manned by British seamen. It would have been a difficult matter to have identified each individual as a native born subject of the King of England; and a question might have been raised to neutralize the claim, from the certificate of citizenship with which he was provided; a document which any sailor could buy for four or five dollars. These considerations, perhaps, had as much weight in screening those who were captured, from exemplary punishment, as the feeling of humanity in forgetfulness of their error, or rather their gross dereliction of natural duty.

At the present time, when the Americans appear to be anxious to plunge their country into the horrors of war, the weight of which will assuredly fall more heavily upon them than upon the English, they are almost entirely dependent on the doubtful services of British seamen for

their maritime support ! From the accounts given by the latest writer, (1845), the startling fact appears of about *one hundred thousand* British seamen, including a few northers, being actually employed in American vessels ! This circumstance calls for deep reflection in both nations, but especially in the American, for we can do without the aid of these men.

Should these seamen still cherish a love of their country, and we have heard of a demonstration to that effect which was made lately in the Brazils, they will feel it to be their duty to quit the American service should a rupture unhappily take place, and repair to their own standard. It was not so, I am aware, generally, in the late war ; but time has since worked a great moral change in the minds of our seamen, and there is every reason for believing that the men so employed will not voluntarily serve against their country, though tempted by large offers of pecuniary reward. Should they be forced on board the ships, the contingency may arise, and probably would take place of their rising and overpowering the officers and carrying the vessels away. The seamen of 1846 are very different in point of moral feeling from the seamen of 1814, and this is a fact which those citizens of the confederate states who are given to *fan-faronnade* should ponder upon. A timely proclamation on our side would give a spur to the seamen's good intentions, and encourage them to the proper line of their duty.

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes on Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c., by Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Continued from page 306.)

THE Pescado Largato, is a fish with the head very much like the alligator, and is covered with thick scales of a dirty-brown colour : it is often caught of a yard or more in length, and is in great demand amongst the Indians and lower class of people ; at the capital it is no unusual thing to see a dozen canoes loaded with them for sale, already cooked in the manner as before mentioned.

From the entrance of the Coginicuil to the mouth of the Chilapa, the bearing is N.W. nearly, the distance (in a direct line) is twenty-six miles, and from Coginicuil to the Encrucijada is about S.W. eight miles. At this place, is the head of the river Chilapilla, which takes a N.W. course, and discharges itself into the Tabasco ; its whole length in a direct line is about twenty miles. Above the Encrucijada the Chilapa loses its name and is called the river Tapititan. The current in the Chilapa in the dry season is seldom more than half a mile an hour, being much less than in any other of the main branches of the Tabasco. The Tapititan has a stronger current, but as the Chilapilla, although not so

wide a stream as the Chilapa, takes off a large body of water, it makes the current less below the junction in the latter river ; in the former as the stream is more confined by its banks, its rapidity is a little increased.

The Tapititan has a much finer appearance than the Chilapa or the Tabasco. Below the capital, on the banks are a number of ranchos, both for rearing cattle, and also for cultivation ; the produce is such as grown in general within the tropics—such as maize, beans, sugar-cane, oranges, citrons, bananas, plantains, melons, pumpkins, &c., which grow with scarcely any care taken after being planted ; besides on several ranchos is planted the cocoa-tree. The fish, particularly of a large kind, are more numerous than in the rivers below. Tortoise are also in abundance. Deer and wild hog can be purchased occasionally ; also, armadillos and iguanos, and, although excellent eating, are chiefly made use of by the lower class of people and Indians ; and besides the game already mentioned we have often bought pheasants (as large as turkeys), and chichilacas, about the size of small fowl, neither of which can be surpassed in flavour by any other game.

In proceeding up the Tapititan we saw a number of large ring-tailed monkeys ; during the night they make a loud disagreeable noise, more like the roar of a tiger than anything else. We saw in some trees from eight to ten of them extended on the upper branches of the trees sunning themselves ; an Indian shot one a few days after our return on board from Tapititan, the length of its body was full two and a half feet. There are also a great quantity of coyotes in the woods, (a species of jackall) and appear to go in packs ; they make a most horrid yell shortly before a norther springs up, but these are common in all parts of Mexico.

The town of Tapititan is situated on the left bank of the river of the same name, and is by the river about fourteen leagues above the mouth of the Coginicuil, so far as could be judged by the time it took to go up in a canoe, and is about forty leagues above the Frontera.

I had occasion to go to Tapititan about our cargo, as the person from whom it was bought lived there ; it took twenty-one hours in going up in a small canoe with two men ; the current was running down about three-quarters of a mile per hour. Between the Encrucijada and the town the river is nearly 100 fathoms wide, and opposite the town is fully that, and is said to be deep enough for vessels of any size that can cross Tabasco bar. There was a small schooner from Campeche discharging her cargo, but it is seldom any but very small craft come up to Tapititan. The town is built along the banks of the river in an irregular manner, and of the usual materials, cane and bamboo, mud and adobeys, and is about half a mile long. The population, judging from appearances, is from 1,000 to 1,200, including half breeds and Indians. There are very few pure whites in the place. There is a great quantity of sugar-cane and maize grown, and rum is distilled in this district ; of the latter, there is an immense consumption amongst the Indians.

On our arrival, we found Don Jose Maria Silva (the person I had business with) was chief alcalde, and a person of much influence and

substance in the place. He invited us to his house to take up our quarters, which we accepted; his wife (a Campechean) who was equally hospitable, soon made us feel quite at home.

Don Jose had a very fine estate opposite the town across the river, planted with sugar-cane and maize, on which he had built several small houses and stores, which formed a village; it had a very decent appearance: near it he had a distillery and a carpenters'-shop, &c. for keeping his canoes and craft in repair. He informed me that altogether he had upwards of 500 men, women, and children on his estates; and nearly all except the children were in his debt, more or less, and looked upon as so much property, being slaves without the name. I was informed that though he was severe with those who misbehaved, he was an excellent master; whilst we were taking in the cargo, we had opportunities of seeing that such was the case.

Whilst we were at Tapititan, Don Jose proposed a visit to the ruins of Pabenuque. He said it would take twelve hours to arrive (in his bongo,) at the place where we should have to land, where he would have horses ready for the party to go on, and in six hours with moderate riding we should arrive at the ruins. I was sorry to be obliged to decline the invitation, as it had been previously arranged, that the vessel should go up the Coginicuil and load at the Tumbadero. As the bongo was large and well-fitted up with a cabin in the after end, and had also a cabouse, and hen coop, &c., it would have been quite pleasant if we had gone.

We remained at Tapititan two days, and then returned to the vessel, which lay at anchor in the Chilapa, opposite to the entrance of the Coginicuil.

This river for the first two leagues runs in an easterly direction, (and is narrow throughout,) from thence it turns to the N.E. About two leagues from its entrance is a small stream of water called the Arroyo de Palenceo, it runs to the south, and has only sufficient water for small canoes in the rainy season. About a league above this place is El Pozo Grande; where the river makes a short turn to the S.E., when it again runs towards the N.E., leaving a deep bend in which there is less water. The river at this place is about double its usual width, and sufficient to allow a vessel to turn, which is not practicable in any other place, except near the Tumbadero, and there we had barely room to swing the vessel's bows down, the river being about fifteen fathoms wide. Two leagues above the Pozo Grande, and one league from the Tumbadero, the Arroyo de Jaboncillo takes its rise, it is for about half a league down not more than ten fathoms wide, and in the dry season quite shallow. This arroyo enters the Chilapa near the entrance of the Laguna del Viento, as has been already mentioned.

From the entrance of the Coginicuil to within a mile of the Arroyo de Jaboncillo, the land for some distance back is covered with lofty trees, between which grows a complete thicket of creeping plants and underwood, so interwoven that it is impossible to pass through, excepting where a path has been made by the cattle or deer, (but such is the general feature of the country, at least within some distance of the coast.) In going up this river we had to cut away the branches of trees, as they

hung across the stream in many places, that we had not room to pass between. As the river is so very narrow, and the turns so frequent, the sails are of no utility, besides the height of the trees keeps the wind off so much, that for the most part the vessel is becalmed. To the south and east from the banks of the river, (the last three leagues,) the forest of the coast appears to terminate, and is succeeded by low prairie and marshy land, interspersed with lagunas and streams of water (see map). There are no ranchos in this river, nor does it appear that there ever has been a clearing for the purpose of cultivation, as the trees and bushes grow close down to the waters' edge; there are but few places where a landing can be made, except what has been done by the cattle and the alligators, which are very numerous.

At the Tumbadera, where we loaded, is only a shed for the logwood, which is deposited here from the small craft, and a hut for an Indian and his family who remain here as a watch over it; but it is a most miserable place, as there is no possibility of walking more than fifty yards from the place. The only advantage of loading here is, that it enjoys the full benefit of the sea-breeze, as there are few, or, in a manner of speaking, no trees from N.E. to S.E. and S.W.

In the Coginicuil there is a slight current which in general changes morning and evening, its strength when at the greatest (in the dry season), is not quite half a mile per hour, against which we towed with two boats quite fast. There is also a rise and fall of about three inches; it appears very likely that when it is high water at one end, or at its source, it would be low water at the other end, the land and sea breezes no doubt the cause, acting on the Chicati and other rivers.

About sixty fathoms above the Tumbadera, the river Chicati and the Coginicuil meet, and take their rise from the Arroyo de Maluco; this arroyo runs through a large savannah; an immense quantity of logwood is brought down it from the great logwood districts, and exported from Tabasco; in the rainy season there is sufficient water for the bongos and other craft, some of them carrying upwards of 1000 quintals, to load above and proceed to the Frontera without lightening, but in the dry season, they have to discharge their cargo at about a league above the Tumbadera into small canoes, at which place it is discharged, and re-shipped either in vessels loading there, or in craft for the Frontera. There is not less than 15 feet in the Coginicuil, with the exception of a spot about 30 fathoms above El Pozo Grande, over which there is 10 feet; this shoal place is formed by a few trees, which will soon be destroyed by the worms in the river.

The Chicati, which is a continuation of the Arroyo de Maluco, receives the most of the water discharged from the latter stream; in the dry season the current was about two miles per hour, the river running in a northerly direction, and said to join the Hasumacinta about six leagues down. At the fork of the river it is about sixty fathoms wide, and at a short distance from the Arroyo de Maluco, the water is at least fifteen feet deep, which continues the same for a few miles down. At this distance, there are occasionally a few trees on the banks of the river.

The Arroyo de Maluco joins the river Tapititan about three leagues above the town of the same name, and S.S.E., 6 leagues from the Tumbadera, it enters the logwood forest. In this part it winds its course through low savannahs interspersed with a number of small lagoons, that in the rainy season are overflowed. The country appears to be of the same character ; also, in a S.E. and easterly direction, for several leagues, with scarcely any trees growing, except where the forest begins to show itself.

The general character of most rivers where the land in the vicinity is low and forms alluvial deposits, (which is the case with a great number within the tropics on the American continent), is, that near all points, the water is shoal, and the bends of the river opposite the points is deep in proportion, and that of a reach or part of a river, continues in the same direction for any distance, that the deepest water is in general found at that side where the high trees, (if any), grow close down to the river's bank,—the exceptions are, that where the drift wood accumulates, it must always form a bank of mud or sand around it, and divert the course of the stream.

The greatest quantity of logwood is cut in the dry season, particularly that which is near the coast, and piled up ; as soon as the rivers raise with the floods in the rainy season, the land is intersected by a number of small streams by which the wood is removed in small canoes to a clear place and more elevated, where it is often cleared of the bark ; from thence it is removed in larger craft.

The greatest quantity of logwood, is cut, and land cultivated, by people who are in a state of modified slavery, and women are to be had as domestics under the same system, both in the state of Tabasco and Caxaca, but no doubt the same law exists in other parts of the republic. It happens in this manner, that when a person is employed, the first object, (if they are clear of debt), is to obtain as much money and goods from their employer as they can, and if allowed, often to an extravagant amount ; and instead of endeavouring to pay their debt, they in general get farther into it. By this means the parties are bound to each other. As the laws of Mexico compel the debtor to work out the debt, it is often the case, that if either the man or woman should be a good hand at work, they are induced by their employer to involve themselves so far, that they have not the power of clearing off their account for a length of time, or, perhaps, ever. By this their services are secured, and they are compelled to work at the general rate of wages ; but should either party be desirous of parting, the employer gives a paper stating the amount that is due. With this they look for another master, who has to take up the bill, by paying which, either he or she, (comparatively speaking), becomes that person's property. It is often the case that their value for service can be nearly estimated by the amount of the debt. It is not unusual for a woman to be in debt from 200 to 300 dollars, and a man from 400 to 500, and sometimes a deal more. But as employment is plentiful and food cheap, they could keep out of debt if they chose ; and although they occasionally work hard, it is only by fits and starts. There is a great want of industry and economy amongst them ; those who cut logwood are

mostly paid by the job, and can earn from a dollar to a dollar and a-half per day, and with two days' pay, their family, (those that have them), can be kept upwards of a week. If a man leaves his employer and works for another without having permission so to do, he is liable to be punished by the *alcalde's* orders, and any complaints he may have against his master for ill treatment, or otherwise, by applying to the same authority, are enquired into, and (often) redressed.

General Remarks.—Vessels bound to the Gulf of Mexico should be provided with musquito curtains for the crew—the first cost for the materials in England is comparatively trifling in comparison to the benefit derived from them. At Vera Cruz or Campeche it is not of so much importance, as the vessels lay some distance from the main-land; but in all rivers they are indispensable, as the musquitos and sand flies are a fearful plague. It is very often the case, that when the men are exposed without curtains, their blood gets irritated by the insects' stings, when to sleep is out of the question. Fever than naturally ensues, and their services are lost, often for what is supposed economy, not but that people will at times fall sick, even when every precaution is taken. The curtains we have had have mostly been made of thin calico for the sides and head, the top being of a little stouter cloth; the form like a box or case with the bottom off, the entrance being under the curtain, as the sides are sewn up; the length 6 feet 4 inches, and from 3 feet 6 inches to 4 feet wide, and from 4 feet to 4 feet 6 inches deep; by having steps at each corner, so as to fix a piece of wood across each end, the curtain is hung up without the least trouble, by having a piece of line from the centre of each (yard) or piece of wood. A set of curtains will, of course, last several voyages.

Another great cause of sickness within the tropics, is being exposed to the night air, for, shortly after the sun goes down, a mist gathers over the low land and marshes, increasing in density towards the morning, when the land breeze puts it in motion, and makes the air feel cool and pleasant for a time, after the heat of the first part of the night; but the inhaling of it, and being exposed to its effects, is very dangerous, loaded as it is with miasma—to counteract the effects of which as much as possible, the men should not be allowed to sleep from under cover, besides their musquito curtain. It is a known fact, that vessels anchored in the river, and the houses which are situated along its borders, (particularly at Tampico), have been visited with the fever and ague, when houses situated at the inner part of the town have been quite clear from it.

Another great cause of sickness to foreign seamen is being exposed to the sun and rain, which should be avoided if possible. Many instances have occurred where the crew have been laid up with sickness, chiefly caused by not taking any precaution. As a matter of course, it will unavoidably happen in carrying on the ship's duty that the crew will be exposed. If they are wet, as soon as the duty is over, they should be made to shift themselves, and, before putting on their dry clothes, if they were to take a piece of dry canvas and rub themselves well with it, there would be little danger of getting a cold and probably a fever; a little spirits served out afterwards on such an occasion has also a good effect.

Although an advocate for allowing the crew, particularly in warm climates, a little grog when it may be considered necessary, I am convinced nothing is more dangerous when used to excess, through which, and making use of a large quantity of fruit, may be attributed more sickness than to the insalubrity of the climate.

Awnings may be considered indispensable to ships within the tropics, and when they are up rivers, or in any confined harbour, where the sea breeze cannot be well felt, the want of these is much more experienced; yet small vessels often have no more than sufficient to cover the quarter-deck. The expense of covering her in fore and aft, would be repaid by the protection it would give the vessel; and the comfort it would give the crew, by keeping them from being exposed to the sun, can only be known by those who have experienced what the heat is within the tropics, and particularly in situations as before mentioned.

Before the commencement of a norther, the weather, most invariably, gets oppressively hot, the wind, in most instances, hauling into the south-east quarter, and when near the coast, the outlines of the mountains inland, as well as the high land of the coast, will be clearly defined. It often happens that the S.E. wind dies away, or hauls into the westward, with light variable airs; when such is the case, the north is not far off, and preparations should be made for it, as it often comes on so suddenly, that there is but little time to shorten sail, before it blows a whole gale. On some occasions, it is known that when there is not a cloud to be seen, and every appearance of the weather keeping fine, (independent of the above-mentioned signs,) a change will take place in less than a quarter of an hour, when the whole sky will be overcast with black heavy clouds, and the wind blow so furiously, that a ship can show nothing but close reefed sails, and probably be obliged to heave to. The strongest northers, (as these breezes are called,) are from the N.N.W. When the wind is from the east to north, (about N.N.E.) it is in general less violent. In anchoring off Tampico bar, during the season of the norths, a good buoy and buoy-rope should be ready to bend on to the cable in the event of having to slip it.

AUTO-BIOGRAPHICAL SKETCHES, by a Merchant Sailor, illustrative of the State of the British Merchant Service.

(Continued from page 290.)

The inhabitants of Cronstadt are divided into two grand parties, official and non-official; all the former, through the various classes of soldiers, sailors, police-officers, custom-house officers, post-office authorities, and all others on government pay, have their hair close cut and their beards all shaven, and wear uniform, all alike military in dress and equipment. The non-official class all wear the Russian national dress, a hat, cap, or high velvet bonnet, a long beard flowing and uncut, a long loose robe, bound round the middle by a sash, loose unmentionables, and

large boots reaching well up the leg, and very wide at the top. During the summer months, while the vessels are in the harbour, great numbers of the serfs or slaves to the nobles, come down from the interior under charge of a head man : they are employed on board the vessels stowing the cargoes, under the direction of a stevedore, all their earnings being paid to the agent of the nobleman to whom they belong. In stowing a cargo of hemp or flax, they use immense jack screws for the purpose of compressing it in the hold, and while turning the lever of the screw they invariably sing a plaintive sort of strain, keeping time in their motions. They bring their food with them while so employed, which consists simply of black rye bread and salt, the master of the vessel if he feels inclined giving them sundry glasses of votkey, of which they seem very fond. On board our vessel the cook generally made an extra quantity of soup, which was given to the Russians, and which it was a pleasure to see them enjoy. I have often given them a piece of beef, for which their deeply grateful look was ample recompense. They screw with great force, and unless care be taken to staunchion off the beams against which they get a set, they are apt to break them. It is well known that there was a greedy Scotch skipper of an old schooner, who kept constantly grumbling at his labourers for not screwing sufficiently. The stevedore conscious of doing his best, became irritated, and speaking in Russian to his gang, applied the screws with such force as to break through the bow of the schooner.

When we commenced loading it was my duty to go very early in the morning, soon after four a.m., to get the labourers, and after I had been so employed a few days, it was pleasing to see with what eagerness they tried to come with me, from the kind manner in which they were treated on board. I also landed them in the evening about seven p.m., and enjoyed many such trips, listening to their singing, which they constantly did when they were pleased. It was, however, painful to contemplate these men : brought from great distances in the interior, far from all they held dear, to labour and toil for another without the hope of reward ; they durst not utter a word of complaint, as laws the most stringent are in operation, and punishments the most severe hanging over them. Sometimes amongst these serfs we had some soldiers as labourers, for at that time every officer in the army had the privilege of sending a certain number of his men, according to his rank, to work, the proceeds of whose labour formed part of his pay.

Generally speaking, amongst all the lower order of Russians, a strong dislike to the British existed, which they evinced on every occasion. I believe that this dislike was engendered by the wanton conduct of our seamen when they had it in their power. I was one day pulling ashore in the boat, accompanied by the other boy, when passing a Russian praam, a young scamp splashed us both with water, wantonly enough ; I instantly told my comrade to give way, reached the praam, and had just commenced a merited chastisement, John Bull fashion, with my fists, when I was surrounded by a lot of Russians, who sprung out from the neighbouring barges, and with various weapons gave me a sound drubbing. I was obliged to beat a hasty retreat, glad to escape, but

eager for an opportunity of returning the compliment on the immediate actors. However, none occurred, but a few days afterwards I was witness to a small affray which amply gratified me.

At the general landing-place at Cronstadt there was constantly a crowd of merchant ships' boats, and an accumulation of all sorts of filth, rendered the footing wet and uncomfortable. One platform, however, in the middle of the landing-place was kept afloat, communicating with the shore by nice easy steps; it was guarded by two policemen, and only government boats were allowed to land their passengers there. Even the Russian watermen plying for hire durst not approach the guarded spot, and invariably if we attempted to land our master at that place on a wet day, we were rudely repulsed with the boat-hook of the cerberus of the place, with a Russian epithet sometimes added, sufficiently well known by all Englishmen for its disgusting meaning. At this time the British ship of war, the *Talavera*, was lying at anchor close to the Mole head, and many of the fair inhabitants availed themselves of the opportunity of going on board to visit her, where they were invariably received with politeness. As I was one day lying close to the platform, with many other ships' boats waiting our respective masters, I observed one of the *Talavera's* cutters pulling towards the guarded landing, steered by a midshipman, and containing a party of Russian ladies, who had been visiting the ship. Seeing only the one good landing-place, the middy steered the boat towards it, but no sooner had she touched the platform, than the boat-hooks of both the guardians were advanced, and shoved the cutter backwards into the Mole. Remonstrance would have been unavailing, as neither understood the other's language. All the lookers-on were roused at the insult. But Britain's pride was touched, her representative's blood rushed to his countenance. Telling four of the boat's crew in the bow, to lay in their oars and seize their stretchers, the others were ordered to give way, and no sooner had the boat's bow touched the platform than out jumped the four sailors, who were soon assisted by the remainder of the crew, in giving the two Russians a thorough drubbing, as well as some others who came to their assistance. The cutter was hauled alongside, the ladies landed in safety, and prudently resolving not to await the coming of a reinforcement, the spirited youngster shoved off under three hearty cheers from our party, which were taken up and repeated by every British ship's company as he passed triumphantly through the Mole.

Shortly after the above occurrence, a few of the *Talavera's* men ashore, on liberty, had as usual got intoxicated. I believe they were only larkish, and doing nothing which would have been noticed by the police at home. Here, however, the rules were more stringent, and nothing pleases a Russian more than to overpower a drunken Englishman and take him to the police. Accordingly the unfortunate *Talaveras* were lodged in jail, which was formed from an old hulk, moored close inside the Mole head, on the left hand side, and under charge of an officer's guard of infantry. Some of the party escaped on board, and narrating the circumstance to their shipmates, it was unanimously voted to be gross tyranny, and despising all foreigners, and particularly the b——y *Rossians* as Jack invariably

does, they resolved to liberate their shipmates. For this purpose about twenty of them stole into one of the ship's boats, armed only with sticks or stretchers, either unperceived, or, I rather fancy, connived at by the officer of the deck; and pulling ashore they stormed the guard-house, disarmed the guard, and lashing them to the large carronades which at that place defended the Mole, they liberated their shipmates, gave the never failing three cheers, which always conclude a spree, and went on board in triumph. Whether they ever were punished I cannot say, but their liberty was stopped, and next day the ship removed to another anchorage two miles distant.

The police regulations are extremely stringent, affecting equally the stranger and the Russian. So well were all the regular Baltic sailors aware of this fact, that few of them behaved themselves in such a manner as to become amenable to the laws. The police had always, however, sufficient occupation, particularly on Sunday evening, the great liberty-day for sailors. The moment that the least riot arose, or disorder was created, the offending party was marched off to prison, and the slightest remonstrance immediately led to an application of cold steel, of which the Russian soldiers and gendarmes are on these occasions, by no means sparing. The invariable punishment for drunkenness, was the offender being turned out, on the day following that on which the offence was committed, armed with a long-handled birch-broom to sweep the streets of the town, followed by a soldier, who on the least abatement of labour, reminded the culprit of his duty by a prick from his bayonet. It was always sufficiently ludicrous to see a British tar under such discipline, to hear his muttered curses at Russia, its police laws, and everything in that country, but his own misconduct. But to see, as I have frequently seen, a "free-born American," dressed in his holiday suit, which I "calculate" he had made a special voyage to Liverpool to procure, consisting of a fur cap, long blue surtout, open vest, large shirt-pin, blue trowsers, wide and short, with boots,—to see him in such a situation was most ridiculous. Many an expression of contemptuous indignation would he pour upon the unfortunate Russians and their "tarnation" tyrannical country and laws. Often would he look at his most stoical-looking guardian, with a rage significant of the wish to have him in his own "glorious free country," where he could give him a touch of lynch-law, or a Bowie-knife. The bayonet, however, significantly pointed to the least vulnerable portion of the body, caused the offender to move on, duly using his unprofessional-like implement. Whenever any disturbance takes place amongst the crew of a vessel, the police at once remove the offenders, without asking the master's permission, and if they are at all refractory, they are flogged. A master may at any time on application to the captain of the port, have any portion of his crew removed and punished. This appears almost too much power to delegate to parties not always uninfluenced by passion or spite; but it must be allowed that such a system is much better, much more consistent with order and regularity, much more moral in its results, than the awful state of misrule which exists amongst British seamen at Quebec, or amongst the vile crimps and blackguards of the southern ports of the United States.

The short summer of this part of Russia had passed, and its equally short autumn commenced, ere the master obtained a freight for the brig. During the time we were thus delayed, the rigging was overhauled, set-up, and tarred, and the ship painted, my share of which duties consisted in passing the ball, carrying marlinspikes or spun yarn or grease aloft; then myself and the other boy tarred down the rigging, each taking a mast; afterwards we scraped the top-gallant and top-masts, and finished by assisting in the painting. The duties of a youngster on all occasions aboard ship, are greater than those of a seaman, as the work of the latter ceases when in harbour, at the usual hour; after his work, however, the boy must look after the supper, get the bread barge filled, carry the supper to the fore-castle, for the regular seamen consider it *infra dig.* to do any of these things. If we had time to take our suppers in peace, and carry the kettles and pans back to the cook, we were always soon after called by the mate's gruff voice to go in the boat, either to carry the master ashore, or to some other vessel, or to go to such places and await his coming. Many a night have I, on this and after voyages, waited till the "wee short hour ayont the twal" or later, sometimes ashore, safely deposited on the stern sheets of the boat, or lying about the decks of the vessel where we were waiting. I must say our present master was kind and complaisant in his manner, and not by any means so much addicted to visiting as his neighbours, but still the custom was at the time prevalent, and the quantity of gin consumed on board the Baltic vessels was almost incredible. No relaxation was permitted when we were called in the morning at the usual time, no excuse for not turning-out dare be given, because none would be received, and when the vessel commenced loading we were called even earlier than the men, to take the boat ashore for the labourers. Boys at sea never complain, it is useless, the only answer in all probability would be a rope's ending, and at the time of which I write, the "*fortiter in re*," was always the remedy, the "*suaviter in modo*" never once thought of. It appeared to me that the example was followed, whenever the youth towards whom it was practised, could from situation get a chance of doing so, and from elder apprentices, through the various grades of seaman, second-mate, chief-mate, and skipper, the same abusive language or physical appeal to the feelings, was invariably practised to subordinates.

A large Russian fleet is always fitted out in the spring, and sent to cruise for exercise in the Baltic during the summer, one portion of the fleet wintering at Cronstadt, the other at Revel, a Russian arsenal in the Gulf. Previous to being dismantled, the several divisions of the fleet assemble in the Roads at Cronstadt for inspection. During the time I was there, the fleet was so assembled, at anchor, in two lines; the arrivals and sailings of the various vessels, saluting the admiral, or exercising their guns, caused a continual stir. I often wished I had the value of the gunpowder expended in this manner in Russia, for I have never been in any country since, where the same continued cannonading was carried on. This year, the emperor in person inspected the fleet; whenever he came to Cronstadt, the port-captain's boat pulled through the Mole, and ordered the various vessels to hoist their flags in honor of his coming;

yes, *ordered!* for in this country they do not do these things in the usual way. It certainly was an imposing sight on this occasion, to see the fleet at anchor, in two lines, numbering between forty and fifty vessels, many of them of the line, dressed out in their flags from truck to deck, their yards manned, and each vessel as the emperor passed, saluting. Russian vessels whatever they may be in reality, are in appearance very respectable men-of-war; there is no want of paint or other stores for their decoration, and they must cost something considerable annually. I have seen some of the vessels only commissioned for the summer cruise make a very sorry figure, at equipping, exercising, or dismantling; but some of the vessels which had been some years in commission in the Mediterranean, seemed as sharp in their exercise as any of ours. I have often watched the *Talavera* exercising with these vessels, and must say, she did not always, or in everything, bear the palm.

The emperor, frequently during our stay, visited Cronstadt, inspecting the admiralty, naval cadet school, store-houses, dock-yards, and ships. His appearance on these occasions was always plain, and without parade; dressed in a simple undress uniform, with a cap on his head, and generally a military cloak on; he himself steered his barge through the Mole, invariably returning the salute of every person, even to me was vouchsafed this mark of imperial condescension, as I and my fellow-boy met him on one occasion when we were pulling on board. Dirty and uncouth as my appearance was, I ceased rowing, stood up, and took off my bonnet, which was at once acknowledged. When he was, at a later hour of the day, passing down to his boat at the landing place, he met a few of the dock-yard men, riggers, dirty and besmeared with pitch and tar; they, immediately on seeing him, pulled off their caps, and stood at attention, while, as he passed, he addressed some words to them in a familiar way which made them smile, and when passed they simultaneously cheered him, evidently much pleased with his condescension. On asking a bystander what the emperor had said, he informed me that he had asked them in Russian, "Well, my lads, how are you? How do you get on my children?" Judging from appearances he is very popular amongst his subjects, and certainly mixes with them on many occasions most familiarly. Thinking of what I had read of his character in the books and newspapers of my own country, I expected to see depicted in his countenance evidences of a tyrannical, cruel disposition; on the contrary, I was agreeably surprised to see a handsome, good-humoured, benevolent-looking man.

On Sundays, while the vessel was here, I was always anxious to get on shore. The decks were washed before breakfast, and that meal over, I dressed and landed by the first opportunity. Most of my shipmates waited for dinner, always on Sunday consisting of sea-pie. This nautical delicacy had, however, no charms for me, I was more anxious to gratify my curiosity than my appetite, and even when the latter reminded me that food was wanted, I always could procure bread on shore. At the landing place, a lot of Russian cabmen were to be found waiting, Sunday proving a harvest for them, as well as to many other caterers for public gratification. I am afraid, at first sight, a Russian "Ivostchick"

with his drosky, would suffer in comparison with "Hanson's patent safety," but a trial would do much to place them on an equal footing. I am surprised the Russian drosky has not been introduced into England, where I am sure its novelty, if not its utility, would sufficiently recommend it. It consists of a cushioned seat about three to four feet long, and eighteen inches wide, placed lengthways, on a carriage supported by four very low wheels. A splash board curves from the fore and after end of the seats, over each wheel, (to protect the passengers from the mud), meeting in the middle between the wheels, where it is level, about eighteen inches in length, to form a rest for the sitter's feet. The front of this seat is occupied by the driver; the vehicle only accommodates two passengers. Sometimes the passengers sit facing each other, their respective legs on either side, at other times they sit *a la fourchette*. The Russians are particularly partial to this latter mode, and a single passenger adopting it can see around him much easier, than sitting sideways. The horse is within shafts, always a fine-looking animal, with long flowing tail and mane; over his collar from a wooden bough is suspended a bell; when two horses are used, the second horse is attached to one side of the carriage by traces and a splinter bar, his head being reined outwards, until he is looking almost at right angles to the direction in which he goes, this, from the fine spirited horses they use, gives a dashing appearance to the turn-out. The driver is always dressed in a high velvet cap, long blue cloth robe, reaching to the calf of his leg, tied round the middle with a coloured sash, and the never-failing boots in which every Russian encases his feet. Rustic, as the turn-out may appear, it is comfortable, fast, and easy, and the Russian driver does not suffer by comparison with his London contemporary, in that shrewdness and knowledge of human nature for which the latter is celebrated.

Sailors call every Russian "Jacky Dobra." Why? it might be impossible to determine; while a sailor, in most other parts of the world, called Jack, is by the Russians invariably called "John." The sharp "Isvostchick" is always ready on a Sunday to assist in gratifying Jack's humour, and easing him of his roubles, and it is amusing to see them address the sailors as they land; "John want to go market," "John want to go see girl," as he fancies the market or the dance-house the most likely place of a seaman's resort. The locality of the market is soon discovered on landing, by that peculiar effluvia emitted by Russian tanned leather, of which many of the articles exhibited for sale are composed. Nearing it, you are at once saluted by a host of long-bearded venders,— "John, come here, smutram,* dobra† boots, dobra slippers," and so on, through the many articles he has to sell; he invariably asks double what he intends to take, and many a laughable scene of higgling occurs between the odd-looking seller, and the no less odd purchaser. I frequently patronized the droskies, and spent a considerable portion of the liberty money supplied me by the master, in riding about the place, which I was in this manner enabled to see to a much greater extent; and it is a glorious feeling to be driven about on such a novel conveyance, after being

* Look. † Good.

cooped up on board ship, a sort of slave to every one ; living in a miserable dirty fore-castle, and snubbed by a bearish, tyrannical, ignorant, unfeeling mate.

According to a universal custom in the Baltic trade, before the cargo came on board, the carpenter had built a new residence for the crew, as in Baltic vessels the fore-castle is invariably filled with cargo. This hurricane house is built of inch boards, clincher fashion, about eight feet in length and six in breadth, placed over the quarter hatchway, and just containing as many bunks or cribs as sufficed for one watch of the crew, the one watch turning in as the other turned out. This "Jack Straws House" was, as the old adage has it, "neither wind nor water tight," and more extraordinary, not in any way fastened to the deck. It was prevented shifting about the decks from its being built over the quarter hatchway, the coomings of which acted as a support, to which was added, at sea, a stauncheon between the lee side of the house and the rail. An attempt at keeping either warm or dry in this place was out of the question. Some of the Baltic vessels now have houses permanently built on deck for this purpose, larger and more commodious than the one I mention, but still they are insufficient, and every vessel should be obliged to leave a proper space for the crew below the deck. The construction of a proper place, as a fore-castle for the crews of merchantmen, can never be expected so long as it is left to the cupidity of ship-owners generally, and the government should at once declare that all the space occupied in the accommodation of the crews of merchantmen, should not be included in the measurement for ascertaining the register tonnage.

When the brig was chartered, we soon commenced and finished loading a cargo of flax and hemp, leaving a portion of our ballast to give the vessel sufficient stability with a cargo of such a light nature. As the Russians did every thing connected with the stowage of the cargo, we merely took it on board from the lighters in which it comes down the river. Our skipper, who was an energetic active man, pushed on the work, and we soon proceeded on our homeward passage to a port on the east coast. The season had materially changed since we arrived at Cronstadt, the days were shorter, the nights longer, and occasional gales had set in to remind us of the stormy season having commenced. We had a most protracted passage down the Gulf of Finland, a foul wind, occasionally blowing fresh, and the brig very light and crank from the nature of her lading, frequently required sail to be shortened. We soon got sufficient practice at reefing and furling, and, as a youngster, every time a royal was becketed, or a top-gallant sail furled in the watch, I had to go aloft, even when it was my trick at the wheel, I was sent on this duty, which I used to think somewhat unfair.

There are few passages more intricate than that of the Gulf of Finland, particularly when the weather is thick, and a fresh breeze blowing ; it is a constant scene of tacking and wearing, and the watch never turns in without the caution "stand by for a call," which means sleep with part of your clothes on, and jump up at once.

I used to go to bed tired and wearied, and enjoy my sleep as sound as if in the middle of the Atlantic. A sailor never calculates chances,

or thinks anything about the safety of his vessel, very few officers do, and I can now from experience feel for a master's responsibility in such a passage as we at present had. When we reached the Baltic, which we did in safety, but with some narrow escapes, we had comparatively an easy time. We generally got all our watch in, as the master always endeavoured to tack or reef, or do any duty requiring all hands, when the watch was called. The mate still continued his hostility, or rather the displays of his bad temper towards me. One forenoon, while the brig was kicking about extremely, he ordered me to reeve the signal haliards through the truck at the main royal mast-head. This seemed rather a formidable job for a beginner; however, I proceeded aloft, the men remonstrating with him on his conduct; I was just getting up the royal-mast, when the captain came on deck, and reprimanded the mate severely for sending any one aloft at such a time, and called me down. As, however, I fancied he did so through a dread of my falling, I proceeded, concluded the job, and got down, when I was ordered to unreeve them again and put them below, the master saying they were not required. This little essay, coupled with our frequent reefing and furling, gave me confidence, and I succeeded even beyond my own anticipation.

After three weeks' passage, during which we had an almost constant succession of head winds and bad weather, we reached Elsinore, where we again went through the process of replenishing our stocks of spirits, tea, sugar, beef, and vegetables. We were detained in Elsinore roads three days by a gale of wind blowing right up the Cattegat, and the current being strong up we found it impossible to proceed. During this time I went on shore every day in the boat with the master, which gave me an opportunity of seeing the town of Elsinore, and its various shops and stores for supplying sailors. During our detention in the roads, a skipper of another vessel, an acquaintance of our master came on board to visit him in his little jolly-boat, with a sprit-sail and fore-sail, and two young apprentice boys. He sat all the evening and late in the night, drinking, talking, and smoking, until one o'clock in the morning. At this time it was my anchor watch, the gale had increased in violence, dark murky clouds completely covered the sky, not a star was to be seen, a vivid flash of lightning, would every now and again illumine, for an instant, the scene, followed quickly by a tremendous peal of thunder, and heavy showers of rain, involving it in increased darkness and gloom. A vast number of vessels were in the roads detained by the weather, and most of them were farther out and to leeward of our vessel, amongst others, the vessel commanded by our visitor. He came on deck, and announced his determination to proceed on board his own vessel; I of course called the boys, who were comfortably asleep; his little boat was hauled alongside and got ready. Our master, who was sober, most earnestly endeavoured to persuade him to remain on board all night, I even ventured a remonstrance to the same effect, all however, without avail, his native obstinacy of character, (for I knew him,) was increased by drinking, and he insisted on proceeding. We endeavoured to get him to unstep the mast, and go on board with the oars, he would not,

however, listen to our remonstrance, he got into his boat, loosed the tiny foresail, and vanished from our sight in the dense darkness to leeward.

Morning came, and with it some abatement of the violence of the gale; the fate of the boat and her crew was the first subject of conversation; our master came on deck early, and looked for the boat with the telescope; no boat was, however to be seen, either alongside or at the davits. The mate of the other vessel had remained satisfied all night, knowing where his master was, and making certain that he would not attempt coming on board in the dark in such weather; in the morning he looked at our vessel with the glass, and could not see his boat, he then became uneasy, borrowed a boat from a neighbouring vessel, and pulled up to enquire from us what had become of his master. We were equally anxious and equally at a loss to say; our boat was at once manned, and visited all the vessels to leeward without hearing any tidings; we then went ashore, when a large sailing boat was hired and sent over to the Swedish side to look for the missing party, they returned, however, without any tidings, and the obstinate master and his boys were given up for lost.

During the day the gale moderated fast, and about four P.M. a small boat under a sprit-sail and fore-sail was observed at an immense distance to leeward, working up to windward. Our master at once started, and found his friend and the boys completely drenched and exhausted, cold, comfortless, and hungry. After giving them some refreshment which we took with us, they told us, that they had sailed to leeward, passing the various vessels rapidly, until they found themselves past them all, the boat assisted with the sail having run faster than they calculated; they then furled the foresail, and brought her head to wind, when she filled with a sea, the master's hat and the boys' caps were at once used to bale her out, which they partially accomplished, drifting to leeward all the time. The circumstances in which they were, and the drenching had sobered the master, who managed very prudently to unstep the mast, and lashing the oars and mast together he made them fast to the end of the painter and threw them overboard, when the boat rode comparatively easy under their lee, not shipping more water than they could bale out easily with their caps. They remained in this state drifting to leeward between Hewen Island and the mainland of Sweden during the remainder of this dismal night, and until the gale sufficiently abated during the day, when they attempted to pull to windward; they soon, however, became exhausted, and shipping the mast commenced beating to windward under sail.

Such a severe lesson as this did not, however, check this man's onward progress in dissipation; neither the narrow escape with his own life, nor the awful responsibility he had so nearly incurred of sacrificing the lives of others to his own misconduct, could restrain him; he gradually became a confirmed drunkard, and was dismissed from the command of his vessel; through the influence of his friends he was again appointed, but finally dismissed by the underwriters refusing to insure under his command, and he at last died a miserable victim to increased habits of drinking.

PORT ROYAL—*and its Associations.**(Continued from page 683 of the last volume.)*

WE were about two hours more in action, whilst working out of the bight, and, by which time, our worrying ferrets shrewdly suspecting that it was our intention, as it was our policy, to draw them after us, very wisely put their prows round, when they saw the brig heave to, to hoist boats in. The prayer that they would blindly push their exulting zeal so far as to out-strip their usual discretion, was a futile thought; "pluck," though they certainly possessed, they were not crazy enough to think of such a feat as running us on board.

Our great leviathan of literature has justly remarked, that, where truth is sufficient to fill the mind, fiction is worse than useless. The occurrences and "sayings," though, I fear, rather too minutely detailed, are given honestly, to the best of my remembrance; and I can only say with respect to the action, that, I do not recollect one in which I have participated which embraced so many hours under fire, where more coolness or more downright hard work was displayed or undergone, than in this furious cannonade with the Spanish Flotilla off San Bernardo. The day scene has closed, and night shrouds alike the angry combatants, weary in body, but not subdued in spirit. Smarting under the disappointment, it was resolved to remain where we were, and take the wings of the morning to renew the fight, with some alteration as to plan.

Night comes—and darkness throws its shadows round,
 And curtain'd in, by vapoury veil,
 The land lies hid—and o'er the vault profound
 The star-like worlds in brightest splendour sail,
 And bid us hope!

The watch is set, and all, once more again, is hushed in peace—delighting and delightful peace! If at any time we are ready to greet repose with a hearty welcome, with how much coziness after the fatigues of such an occupation as we had been engaged in, do the feelings of every individual crave, and rejoice at the opportunity, when the passions have sunk into calm, to lay the head down, and silently, sincerely, and gratefully bless God for the mercy extended to him! Then comes

The dream—when weary eyes essay to sleep,
 Flatt'ring the wish the heart had fann'd
 As soothingly lulls the billowy deep,
 A vision pointing to the strand,
 Whispers "hope."

At early dawn we made sail in, again in high spirits. The vapour, however, still wrapped the land in its ample folds. At last, when the broad day-light had spread around, we caught a sight of the scene of action.

Tis morn—aurora with rosy fingers
 The portals ope, and the world awakes!
 Yet hov'ring still, the vision lingers
 Till the bright sun the delusion breaks!
 Alas for hope!

The Ship's Muse.

3 A

There lay the little nook, the sandy beach, the trees ; just lighted up by the slanting rays of the glorious sun, silent and lonely. The "birds had flown !" Our acuteness half suspected as much ; but that incorporeal "Will-o'-the-wisp"—the sybilline necromantic deceiver flashed her light across our mind's eye, and so blinked it ! We turned tail, and, as the soldiers say, "beat our march back ;" and to a very dull tune, the "Dead march in Saul." The remains of the poor fellow who fell, being here consigned to the deep, thus ending where we began.

The "burial at sea" is an impressive, an awful scene. The isolated ship the world of waters, circling around and bounding the sky, nought else, visible save the interminable ocean and the heavens, the vessel herself, like a pole in the eternity of space, seeming to be, as it were, the only solitary thing else in the creation ! If external objects make impressions on the mind, these must have their force, and the more so as there is nothing to distract the attention. The prayers which are addressed to Heaven, for the soul of the departed, whose mortal remains are about to mingle with its parent earth, draw tears from, or rouse feelings in, few of the lookers on, save the immediate connexions of the deceased. But it is far different on ship-board ; there the community being limited, and shut out from the rest of mankind, (often for a long time), and each individual known to the other, there is a bond of brotherhood running through a whole crew, and the loss of one, worthy of respect and esteem, however humble in station, is regretted with true feeling by all.

We subsequently learnt that the Dons had sustained considerable loss in the action, and were glad to escape during the cover of the night ; and what was more important to us, that the Carthagenians had fitted out a brig for the express purpose of capturing us ! We cruised two or three days after our provisions, (except a few bags of bread), had been expended, with the hope of falling in with her, but our usual *luck* attended us to the last. She was captured with ease by the man-of-war, (I think the *Serpent*), sent to relieve us.

I recollect that, on Christmas day, our dinner consisted of a biscuit a-piece, to soften which our kind-hearted commander sent us a present of a bottle or two of claret. It is a fact too, dwell upon it ye who "live at home at ease," that the store-room was diligently swept for the purpose of gathering the stray pease to make a pudding for our most excellent captain ! There was not a soul on board who would not have hungered that he might have had a "belly-full." Think of that ye austere, morose martinets, and unbend if you can. Severity may command obedience, but it will never insure regard.

In rounding Port Royal Point, the little brig dropped her anchor, without a particle of food on board ; and thus terminated our cruize on the Spanish main.

There were many other incidents of a romantic nature which took place, particularly the extraordinary escape of an American gentleman from the prison of Carthagena, who had been seized by the Spaniards when shipwrecked in a schooner, belonging to General Miranda's squadron. But I omit them, having, perhaps, been already too circumstantial and minute in the details given.

On many occasions, after a transaction, it seems easier to find out what we ought to have done, than to perform judiciously at the spur of the moment of action. In one case I am quite convinced that the apprehension of grounding distracted the judgment. What was done, however, was well executed, and creditably sustained; and the issue was the natural consequence of our ignorance of the coast, and did not proceed from any want of skill or intrepidity to prevent its taking so unfortunate a turn. We can now look calmly and dispassionately upon the matter; and having all the circumstances before us, we are the better enabled to reason and offer an opinion for future use, without being taxed, we trust, with presumption, for we consider that it would be

“a base
Abandonment of reason to resign
Our thought;”

And further, the wise ones have said, “he who will not reason is a bigot; he who cannot, is a fool; and he who dares not, is a slave.”

The gun-boats were anchored outside of, but in a line with, the schooners. The plan which we think would have led to a more favourable result, is as follows:—We should have hove the brig to, in the first instance, out of gun-shot, stationed the launch with her carronade, in a position favourable for scouring the beach, and driving off the mounted guard. This effected, the rest of the boats should have made a dash at the gun-vessels; these carried, their guns should have been turned on the other vessels of the enemy, and the brig run in as close as the depth of water would admit, to ply her guns according to the movement of the boats. In this way, it is not improbable, most, if not all the vessels, would have been carried in detail; and if the gun-boats alone had been secured, it would have been preferable to departing without one. The cross fire, and being attacked from two points, would have had the good effect of distracting the attention of the Dons, and have thrown them into confusion, which is “half the battle.” And I am convinced that often, when the “odds” are against us, a vigorous and resolute determination to succeed has, and will ever insure a favourable issue with such foes as we had to contend with.

As it was, our opponents, from previous examples, calculated, no doubt, pretty correctly how the matter would terminate; and feeling confident—not exactly in their strength, which, indeed, was far greater than that of their enemy—but in the safe-guard which our ignorance of their coast gave them. It is probable that had the plan, we now propose, been adopted, it would have disconcerted their previously formed measures of defence; and as they are not quite so fertile in resources upon emergency, as ourselves, perhaps it may not be thought unreasonable, if we express a belief that we should have made a better termination of the affair than we did.

If a letter on service was written on the occasion, it was never published, which ought to have been the case, in justice to those who had done their duty well; for although success did not crown their efforts, they cleared the coast of the enemy’s vessels, and disabled them from

active measures for some time, which was effecting something, and were entitled at least to approbation for that. As for their good conduct in an action against a very superior force, and under adverse circumstances.

“ It is not in mortals to command success, &c.”

The men-of war which visited the continental parts of America generally returned to Jamaica with a vast number of curiosities, such as parrots, parroquets, and other of the *psittacus* tribe, monkeys, marmosettes, tortoises, guanias, racoons, opossums, Curaçoa fowls, doves, herons, crab-catchers, and even bears, sponges, corals, and shells in countless numbers ; all which the naturalists at home would have been delighted to have beheld, and might have possessed themselves of, had there been any thought beyond the mere gratification of the moment, among the multitude of collectors.

I mention this here to show that by some simple regulation, which would not interfere with the duties of the service, naval officers, above all other persons, have it in their power to assist materially the efforts of men of superior mind in advancing science. In our intercourse with the indigenous inhabitants of the coasts of Darien, the only things under the head of curiosities we obtained were the bows and arrows used by the Simeron tribe of Indians. These bows were made from the prickly-pole, which from its growth and foliage seem to be allied, if it does not belong to the family of the palms ; and the flowering stalk of the wild cane served for arrows ; these were barbed with very hard wood, of such firmness that I have seen an arrow penetrate quite through an half-inch deal door. The captain and officers amused themselves in practising at a mark with the arrow, and the former attained great efficiency in the art. A very large white-headed eagle alighted upon the main royal truck ; the captain, with very little deliberation, sent an arrow up, which passed through both its wings. I obtained the rose-fly, at the orange cays, so named from its fragrance. I likewise found the mangrove shell, with its inhabitant molusc, which appeared to me to be in every respect similar to that which fills the conch shell, and is so much prized as a delicate article of food ; it possessed the same horny external appendage as the latter, which serves the double purpose of leg to assist its locomotion, and a hand to forage for food. Whilst strolling about, I picked up what I thought to be a piece of dry stick, of a dark brown colour, and held it in my hand for some time before I discovered that it was endowed with life and motion ; it proved to be the “ Pimenta horse,” a very remarkable insect, about ten inches in length, and the thickness of the little finger ; it was provided with a pair of small fan-like wings, apparently quite out of proportion to its length of body ; it was harmless.

The only person on board of the brig who had a pet was a mid, remarkable for good temper, Tabasco Ben ; he had been shipwrecked in a schooner tender upon the coast of that name, between Campeche and Vera Cruz, in the Mexican sea. He had a little companion which he had brought up, from the Spanish prison, when released. It was one of the prettiest and most agile creatures imaginable,—a very small squirrel,—and so attached to its master that its usual place when disposed to take

a nap, was within the breast of his waistcoat, and which was allowed on account of its extreme cleanliness. We were all greatly amused at its feats of agility, which were performed with a rapidity and fearlessness truly surprising, although its timidity, otherwise, was apparent when any person approached. Notwithstanding the flapping of the fore-and-aft main-sail, it would run up the convex belly with the greatest ease, and, indeed, traverse the whole surface of the sail, sometimes head downwards; and after enjoying its sportful play, spring upon the shoulder of its master, retreat into its nestling-place and poke its tiny nose out, and seemed to court the approbation of the lookers on.

Every body on board the happy brig was delighted with it, as independent of its cleanly habits and innocence it often beguiled the leisure moments during light winds, and afforded pleasure by its playfulness. One would hardly suppose that such an object could be offensive to the eyes or be displeasing to the disposition of any person; but such was the case, for on joining a frigate homeward bound, my worthy messmate received a peremptory order to "get rid of the thing, as it should have no place in her!"

I pretend not to dispute the legitimacy of such an order, but I cannot help thinking under the circumstances of the case, that there was not any real necessity for its enforcement, and I dare say my friend Tabasco felt more keenly on the occasion of parting with the sprightly companion of his exile, than I did when receiving the mandate to "get rid" of my trunks and provide myself with a chest, or they should "forthwith be hove overboard." That any thing "tastily got up," should be an eyesore, is very remarkable, but the inconsistency in the exercise of power is much more so, though nothing extraordinary, yet, as is well known, "When the devil drives we needs must." I beg of the reader not to smile; I mean no personal allusion in adapting the proverb to the occasion; I give it as forcibly implying that, however perplexed and astonished an humble individual may be when power dictates and is unmitigating, whether in trivial or in very serious matters, remonstrance would serve but to overwhelm him with unpleasant consequences, and, therefore, the only alternative left him is resigned compliance. "Facts," it is said' "are stubborn things,"—egad! memory is as tenacious. I was compelled to change my £3 3s. trunks for an old worm-eaten chest of the gunner's wife, (who was on board, as were several other women,) not worth half-a-crown! and after all, the chest occupied nearly as much space as the trunks did, and of course, as far as appearance went, was not so ornamental as black leather and gilt nails were,—but it was a *chest*,—that was enough.

I am no caricaturist, and besides, I have a great dislike to draw the frailties of our nature with broad lines; for although Pope has said that "the proper study of mankind is man," I am of opinion with the saucy mid, who replied to the above quotation when made by an M.D., "then, Doctor, the best *subject* to begin with is, your own dear self!" But the reader, if he entertains the same notion, has only to consider Old Log, of whom we mean to tint a "*spirit-ed*" sketch, as a suppositious being.

" There was an ancient man, and a master bold was he,
 Who'd rather have one glass of grog than twenty cups of tea ;
 With his howl and growl,
 And face so foul—
 Oh ! he would'nt let the demi-john lie idle,
 For he lov'd his glass of grog,
 With his deep-sea line, lead, and log,
 Whack row de dow ! "

I have stated that Old Log was a Yankee, and if Captain Marryat and other wanderers over the "States," have not romanced, the propensity to dram-drinking would seem to be a national one, which grows up with the youth of the individual, and strengthens with his weakness.

It was the wont of our old sinner to roll out of his cot at day-dawn, slip on his trousers and stalk into the gun-room, and as regularly as the day-god arose, to call out, "Steward, the rum-twist." This potion consisted of half a glass of "raw" spirits, mixed with a table-spoonful of moist sugar, which the drinker stated was intended to "brush away the cobwebs," and stimulate his digestion, that being in rather a *weak state* ! The effect was certainly most surprising ; but although I happened to witness it more than once, I scarcely know how to describe the extraordinary scene that followed.

After quaffing the dose, the flabby gross figure of the devotee to the "fire-drink" would stand under the sky-light mocking himself, as it were, with the most extraordinary "wry-faces," swinging his long arms as if they had been a pair of pendulums loaded with dumb-bells, shaking his head, and moving it from side to side, with an easy motion ; his eyes seeming ready to start from their sockets, whilst the blood rushed upwards as though the screw collar of the Inquisition had been applied to his bull-like neck !

It was an awful sight ; and it would have been much more seriously contemplated, but for the droll phiz of the confounding steward, which entirely broke up the web of my fancy, and scattered the philosophical deductions, I was summoning up to nought. The object before me was palpable, though a little obscured, as the tarpaulin had not been entirely removed, the washing of the quarter-deck not being completed, there he stood the victim of a moral and physical revolution, convulsed with agonizing throes of a body-quake !

It was a sad picture, as my uncle Toby would have said—a voluntary immolation of the faculties. It seemed as if the unfortunate being had been spell-bound, and was unable to extricate himself from the power which had breathed the poison of its upas over his whole robust frame, and reduced it to the helplessness of the infant's ! The steward, who was an Irishman, tolerably well educated, being a play-actor by profession, possessed the most extraordinary powers of mimicry, with all the drollery attached to his countrymen ; he stood in a theatrical attitude, with an expression of deep amazement pictured on his countenance, and, as if by an involuntary impulse, went through all the motions of the agonized master, taking care to keep out of his ken, but in such burlesque style

that my inclination to seriousness gave way to risibility, and I was obliged to retreat to save my good manners.

Curiosity, however, induced me to return, just as the crisis of the paroxysms commenced. The throes became more violent, nature seemed to be in the most appalling struggle to rid itself of something in the highest degree oppressive. I felt a little alarmed, fancying the unhappy sufferer had gone crazy; I beckoned the steward, and whispered him to call the doctor. The rascal laughed in my face, and drily replied, "Sir, it's his destiny!" He added, "Och, Sir, be making yourself aisy, he'll have a remission in a jiffy; for what does Quixote say? Destiny, when one door is shut, always leaves another open, as a resource in all calamities." Now, although the rascal's allusion seemed to me monstrously absurd, it made me laugh quite out: the convulsion which seemed to be echoed and re-echoed from the berths around the gun-room, had an astonishing effect on the sufferer, for the moment after, a most startling rumbling sound like the rolling of distant thunder, struck upon the ear. I looked at the tortured "mountain of flesh"—the perspiration rolled in large drops from his forehead, nose, and chin, and apoplexy seemed rapidly supervening. I was so excited, that I had placed my foot inside the door to rush to his assistance, when the confined, pent-up, gas at last found vent up the capacious throat of the sufferer, with an explosion which made the audacious steward exclaim in a subdued tone, with up-turned eyes and hands, "Pro-di-gious, by the powers!" whilst the old struggler complacently muttered to himself—"I guess I'm a dollar better!" and, striding over to his cabin, threw himself down upon his cot.

It has often been remarked that there is but one step between the sublime and the ridiculous. The transition which passed in my mind, from the serious apprehension of apoplexy happening to the drinker, and the laughter that followed, occupied but an instant of time. Dr. Johnson condescended to indite a few lines of poetry* to prove the "step" by sudden contrast of sentiment, in an ideal case; but it occurs repeatedly in action unaccompanied with words.

The reader who happens to be innocent of alcohol will, I trust, have gained a good insight into the operation which its use, and abuse, performs on the viscera, especially in the "membranous conical bag," wherein assimilation and nutrition are carried on; and I entertain a hope that he will be very thankful to me for having mustered resolution

* We here give the lines—from memory—as being a curious composition, we believe extempore, of the very grave and serious writer alluded to:—

Hermit hoar in solemn cell,
 Wasting out life's evening grey;
 Strike thy bosom sage, and tell
 What is bliss, and which the way?
 Thus I spoke—and speaking, sighed,
 Scarce repressed the starting tear,
 When the hermit thus replied
 'Come in, my lad, and drink some beer!'

enough to paint for his edification, the sad effect of dram drinking upon the human constitution. We do not generally approve of such *rum* sketches, but conceive that they may be sometimes pencilled to serve a useful purpose.

EXAMINATION OF MASTERS AND MATES OF THE MERCHANT
SERVICE.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Number of Registrar Ticket. | Name of Examining Board. |
|---------|---|-----------------------|------|-------------------------------------|-----------------------------|--------------------------|
| 1846. | | | | | | |
| Feb. 27 | John W. Lane . | 1 | ... | Isabella Blyth, 443 tons | 327500 | Tr. Ho. London |
| " 27 | Dan. G. Munro | 2 | ... | No you Don't, 36 tons | 357477 | Tr. Ho. London |
| Mar. 6 | John Elliott ... | 2 | 29 | Brack, 217 tons | — | Ma. Bd. S. Shields |
| " 6 | John Bruce ... | 2 | 28 | Granger, 318 tons ... | — | Ma. Bd. S. Shields |
| " 7 | Thomas Ridley | 3 | 43 | ... .. | 4380 | Ma. Bd. S. Shields |
| " 6 | George Lucas ... | 2 | ... | Zenobia, 150 tons. | — | Tr. Ho. Ply. Branch |
| " 9 | B. G. Hunter ... | 1 | ... | Hindustan, 544 tons (as mate.) | 327543 | Tr. Ho. London |
| " 13 | James Barrett . | 2 | ... | Queen, 127 tons | 70928 | Tr. Ho. Ply. Branch |
| " 13 | John Machan ... | 1 | 27 | Britannia, 379 tons... | 76571 | Tr. Ho. Dundee |
| " 16 | Philip LeQuesne | 2 | ... | Courier, 273 tons ... | 327598 | Tr. Ho. London |
| " 20 | R. H. Ratsey ... | 1 | ... | Isle of Wight, 212 tons | 327837 | Tr. Ho. London |
| " 20 | Henry Richards | 2 | ... | Briton, 240 tons | 14974 | Tr. Ho. London |
| " 20 | Charles Smith . | 2 | ... | Typhena, 131 tons ... (as mate) | — | Tr. Ho. London |
| " 20 | R. Sheppard ... | 2 | ... | Cinderella, 357 tons . (as mate) | 19053 | Tr. Ho. London |
| " 19 | D. Stonehouse . | 2 | 39 | Harmony, 238 tons... | — | Ma. Bd. S. Shields |
| " 19 | J. Gowland jun. | 2 | 27 | Granger, 318 tons ... (as mate) | 14087 | Ma. Bd. S. Shields |
| " 23 | Matthew Salt ... | 2 | ... | John & Rebecca, 90 tons. | — | Tr. Ho. Ply. Branch |
| " 23 | William Allen . | 2 | 48 | Duke of Clarence, 229 tons. | — | Ma. Bd. S. Shields |
| " 23 | J. D. Sturrock . | 2 | 21 | Alexander, 324 tons | 247169 | Tr. Ho. Dundee |
| " 27 | Fred. Woolley . | 1 | ... | Eagle, 600 tons | 207718 | Tr. Ho. London |
| " 27 | Robert Close ... | 2 | ... | Olympus, 314 tons ... (as mate.) | — | Tr. Ho. London |
| " 27 | G. P. Armstrong | 3 | ... | Grange, 290 tons ... (as mate.) | 10461 | Tr. Ho. London |
| " 31 | Alex. Lawlan ... | 2 | 24 | Agenoria, 268 tons... | — | Ma. Bd. S. Shields |
| Apr. 2 | Patrick Martin . | 3 | 28 | .. .. | 18897 | Ma. Bd. S. Shields |
| " 3 | Henry Waugh . | 1 | ... | Samarang, 600 tons (as mate.) | 28782 | Tr. Ho. London |

MATES.

| | | | | | | | |
|-------|---------|-------------------|---|----|--|--------|---------------------|
| 1846. | Feb. 27 | Robert Kenny... | 1 | .. | H.M. Stm Sp Ardent (as Quarter Master) | 326149 | Tr. Ho. London |
| | " 27 | Geo. Berry Torr | 2 | .. | Chief Justice Robin- son, 500 tons | 32756 | Tr. Ho. London |
| | " 27 | George Dall | 1 | 22 | Aurora, 136 tons | 64546 | Tr. Ho. Dundee |
| Mar. | 3 | John E. Gammon | 2 | .. | Alert, 394 tons | 204813 | Tr. Ho. London |
| | " 6 | J. Valen. Gilbert | 2 | 23 | Saucy Jack, 165 tons | 50403 | Tr. Ho. Dundee |
| | " 9 | Thomas Bowden | 2 | .. | Queen Victoria, 634 tons (as apprentice) | 327544 | Tr. Ho. London |
| | " 6 | John Deane | 2 | .. | Dahlia, 646 tons | 244011 | Tr. Ho. Ply. Branch |
| | " 6 | Humph. Gilbert | 3 | .. | Dahlia, 646 tons | — | Tr. Ho. Ply. Branch |
| | " 10 | C. G. Crompton | 1 | .. | Meg Merrilies, 314 tons (as apprentice and mate) | 307555 | Tr. Ho. Pts. Branch |
| | " 13 | Nathaniel Wade | 3 | .. | New Jane, 74 tons ... | 77730 | Tr. Ho. Ply. Branch |
| | " 20 | William Imrie .. | 1 | .. | Java, 1175 tons | 307578 | Tr. Ho. Pts. Branch |
| | " 26 | Alfred F. Pearce | 1 | .. | Louisa Munro, 300 tons (as chief mate) | 19723 | Tr. Ho. Pts. Branch |
| | " 27 | John Phillips .. | 3 | .. | Charles Buchan, 130 tons (as master) | 265050 | Tr. Ho. London |

Board of Trade, April 16th, 1846.

We were prevented from publishing in our last number the list of masters and mates who had passed an examination and obtained certificates of qualification, in continuation of the list published in April, owing to the former not having been issued by Lloyd's Register Committee in sufficient time to enable us to do so. We now, however, lay it before our readers, with an anxious desire that this journal should become a faithful record of an interesting experiment, which, we regret, has not yet shown those signs of encouragement that might fairly lead us to hope that it will ultimately prove successful. We again repeat that it is most extraordinary that no returns have been made from the Clyde, knowing as we do, that both at Glasgow and Greenock the utmost exertions were used to establish the regulations issued by the Board of Trade. Upon a careful examination of the lists which have been issued up to this time, the total number of masters and mates who have proved their qualification in the respective classes in which they stand, is as follows, viz:—

| | | | | | | |
|--------------|---------|-------|----|-------|-------|----|
| First Class | Masters | . . . | 27 | Mates | . . . | 9 |
| Second Class | Ditto | . . . | 38 | Ditto | . . . | 7 |
| Third Class | Ditto | . . . | 10 | Ditto | . . . | 6 |
| | | | 75 | | | 22 |

When we consider that the regulations before alluded to came into operation after due notice on the first of November last, we confess that the small number of qualified masters and mates which the above statement exhibits, is not very cheering, and we begin almost to despair of the success of the voluntary system. We have looked in vain for something like encouragement from the ship-owners, but so far as we have been able to ascertain we have not yet heard of a solitary instance of a qualified master or mate having

received an appointment as a reward for his having boldly subjected himself to an ordeal, which we believe is viewed with great repugnance by a vast majority of the present masters of the mercantile marine. It would be premature at this time to speculate upon what other measure it might be desirable to adopt to give greater effect to the system, but we sincerely hope that it will not be entirely abandoned, and that if necessary, some compulsory steps will be taken to secure a preference in the employment of perfectly qualified masters and mates. The subject is one of the greatest possible importance, and it shall receive, as it deserves, all the attention we can bestow upon it.

THE SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.—*James Pengelley.*

SIR,—With reference to the list of cases selected from the minutes of the Society's transactions during the year 1845, under the head of "Widows and Orphans of Fishermen and Mariners drowned," to which you so kindly gave a place in the *Nautical Magazine* for last month, I desire to communicate to you and your readers generally an interesting little slip of the biography of a fisherman whose widow, consequent upon her late husband's character, excited much of the sympathy of the committee of management. The name of this poor man was James Pengelley of Looe in Cornwall, earning his daily bread by daily exposure to the perils incident to his calling; poor in outward circumstances, but rich in gifts of a rare character. I feel assured you will take pleasure in recording those actions which developed the man, for the sake of the example to those he has left behind.

On an application being made to this charity, of which Pengelley was not a member, to afford relief to his widow, these interesting facts were elicited:—that James Pengelley was the pride of his little fishing town; bold, brave, generous, and pious. That he had exhibited those virtues by plunging into the sea on various occasions, and thus rescuing from a watery grave twenty of his fellow men; that he had sustained and put out in the world seven helpless orphans who were at various periods the objects of his generous and noble sympathy; and this sympathy stopped not at the orphan, for every Sunday was this kind-hearted man to be seen carrying a share of his dinner to a destitute old widow, whose only claim on him was her poverty! The last act of this *truly* exemplary character, was the generous effort to save the boats of his neighbours, in which attempt he perished.*

The vicar of his parish, on the following Sunday, pointing to his empty seat in the church, testified that not only was James Pengelley forward in every good work, but that he was always in his place to give praise to Him on whose strength he did them. "James Pengelley was a christian!"

The committee in awarding Widow Pengelley £8, would have gladly recorded their high sense of so noble and so rare a character by a larger

* It is said of him that this was the only time he was ever known to hesitate to expose himself for the good of others.

donation to his relict, had they not feared to give way to their sympathy on remembering that though there were not many Pengelleys, there were the widows and orphans of those whose husbands and fathers had suffered the like fate.

I have every hope that your insertion of this little sketch may be profitable as an example, and may be used to stir up the sympathies of your readers, to aid, both by their purse and their advocacy, a Society whose object it is to succour our hardy seamen when wrecked upon our coasts, and help the widows and the orphans of our fishermen and mariners who, besides the ordinary perils of their calling, are ever found reckless of danger where the life of a fellow creature is exposed, and often lose their own lives in a fruitless attempt to save the lives of others.

T. W. S.

26, *Bucklersbury*, June 22, 1846.

The Society, the name of which is placed at the commencement of the foregoing note, is not unknown to many of our readers; and it is with the object of making it known to all, and to publish its worthy deeds far and wide, that we purpose recording in our monthly numbers a little sketch of some of those worthy individuals for whose relief it has been established. By so doing, we hope to direct attention to the real benefit which the Society is conferring on the State, and thereby to claim for it in every town and hamlet (be it inland or on the coast), where our blue book is found, that general support to which, on every account, it is so justly entitled.—*Ed. N.M.*

SOUTH SEA WHALERS.

SIR,—In your valuable paper of this date, you have an interesting article on the whale fishery of the Americans. I have served with the vessels of that country for a period of nearly six years, and am particularly acquainted with the details of this hazardous occupation. You seem to be surprised that the English whalers should have fallen off, whilst those of the Americans should have increased. A few words will explain it,—the greater cost of fitting out whalers here, the drunkenness, incapacity, and want of energy of the masters and crews. I have known English whalers to be out four years and take 1,300 or 1,400 barrels of oil, and American vessels cruising almost on the same "ground" would probably have captured twice as much. It would not interest you or your readers, were I to enter into the details of the difference in the *modus operandi* of English and American whalers. In the one there is order, obedience, energy, temperance; in the other, generally want of discipline, drunkenness, and incapacity to take whales when they do see them. One need not be surprised at the result. But the object and purport of my addressing you is to give you as near as I can calculate the number of foreigners employed in the American whale trade.* I am practically acquainted with the subject, for I have made it a study. A whale ship manning four boats carries thirty-two hands, and most of them are now fitted out for lowering that number of boats. Out of these, (as an average), one-fifth are English, Irish, or Scotch, one-fifth Western or Cape Verd Islanders, (Portuguese) and three-fifths American seamen. The fleet will not employ quite 20,000 men, for some part of it contains barks, brigs, and even schooners, but I enclose you a printed list of all the whalemens, and you may take it for

* See statement of the number of American whalers in the Pacific in our last notes, p. 325.

granted that every vessel above 300 tons carries thirty-two hands. There are upwards of 11,000 of American seamen in the service, inured to every danger and to the extremes of hardship and toil. These men think lightly of lowering boats after whales on the north-west coast of America, the ship being at the time unable to carry a single reefed topsail.

I have little sympathy for the Americans, for, as a body, I do not believe you could well find a more dishonest people, but their energy in bringing the trade to the pitch it has arrived at, deserves the highest encomium. Ten years since, "Honolulu," the capital of "Oahu," one of the Sandwich Islands, was a small insignificant village; it is now a flourishing town, with streets, dock-yards, and stores, and all this has been done by the American whalemén. The north-west fleet generally recruit at "Maui," (another of the Sandwich Islands), and the merchants at "Oahu" take goods and bills of exchange in return for the supplies which are furnished to the ships through them. Two or three hundred of the whalemén are annually supplied from these islands with everything they require, and the goods and money which they circulate in the island have caused the present prosperity. If ever a war should break out with America, our Government, it is hoped, will pounce upon these whalemén.

From May to the 30th of September, they might find 200 ships at least on the north-west fishing ground, between the parallel of 45° to 52° north latitude, and 145° to 155° west longitude. As a body collected together in a harbour, they would be dangerous; but one single sloop of war would take half a dozen of them easily, as they carry nothing but a few muskets, and an extremely small supply of powder.

Liverpool, June 9th.

Z.

WEATHER PREDICTIONS.

In the *Annuaire* for the present year, presented to the King of the French by the Bureau of Longitudes M. Arago takes occasion, once for all, to dispose of those weather predictions which annually make the circuit of Europe, falsely stamped with his authority. "Engaged," he says, "both by taste and by duty in meteorological studies, I have frequently been led to consider whether it will ever be possible by means of astronomical calculations to determine a year in advance, what in any given place will be the annual temperature, that of each month, the quantity of rain, or the prevailing winds. I have already presented to the readers of the *Annuaire* the results of the enquiries of the natural philosophers and astronomers concerning the influence of the moon and comets on the changes of the weather. These events demonstrate peremptorily that the lunar and cometary influences are scarcely sensible; and therefore that weather-prophecy can never be a branch of astronomy, properly so called. For in fact our satellite and the comets have been at all times considered in meteorology as the preponderating stars. Since those former publications, I have examined the subject in another point of view; I have been enquiring if the labours of men, and events which must always escape our provision, may not have the effect of accidentally and very sensibly modifying climate, as regards temperature, in particular. Already I see that facts will yield me an affirmative answer. I should greatly have preferred to delay the announcement of that result until after the completion of my work; but let me candidly avow, that I have sought to make an occasion for protesting aloud against those predictions which are yearly made in my name at home and abroad. No word has ever issued from my mouth, either in the intimacy of private communication or in my discourses delivered during thirty years—no line has ever been published with my assent, which could authorize the attribution to me of any opinion that it is possible, in the present state

of our knowledge, to foretell with certainty, what the weather will be, a year, a month, a week, nay, I will say a single day, in advance. I trust only that the annoyance which I have experienced at seeing a host of ridiculous predictions published in my name, may not have led me, by a sort of reaction to give exaggerated importance to the cases of disturbance which I have enumerated. At present, I feel entitled to deduce from the sum of my investigations, this capital conclusion:—*Never, whatever may be the progress of the sciences, will the savant, who is conscious and careful of his reputation, speculate on a prediction of the weather.*"

THE EXPERIMENTAL SQUADRON.

The following "plain unvarnished tale," from a "foremast Jack," may be a very fair summary of the results of the trial squadron; at all events it is brief, and we have neither space nor inclination to follow all the details of these trials. At one time a ship sails remarkably well, and beats all her competitors, at another time she is thoroughly beaten by them all, so that a ship's character in 1846 is not what it was in 1845. The following statement of the character of the different ships for 1846 we find in the *Nautical Standard*, a new weekly periodical, brimful of information well suited for nautical readers:—"Sir, as a 'foremast Jack' of some experience, I beg leave to state to you in plain and simple language my opinion relative to the sailing and sea-going qualities of those magnificent ships forming the experimental squadron. Time necessitates me to be brief. The *Superb* has proved herself to be the most weatherly and fastest ship under a press of sail in such weather as we have had. Next to her ranks the *Vanguard*, the *Albion*, *Rodney*, *Queen*, and *Trafalgar* last. She is both leewardly and slow. The *Queen* has lost all her sailing qualities since last summer. The *St. Vincent* is decidedly the most easy ship in a seaway whether as to rolling or pitching. The *Rodney* and *Trafalgar* are comparatively easy. The *Superb* and *Vanguard* roll as they have always done; but for heavy pitching, lee lurches, and weather rolls, the *Albion* bangs them all; so much for the recent alterations. As to what Jack calls the smartest ship, the *Trafalgar* remains "cock of the walk." No matter how unexpectedly the signal may be made to perform any sort of drill, she is always prepared, consequently always first. There is a motto in the British peerage which would suit her admirably, that is, 'Ready, aye ready.' Were the sailing qualities of this ship in accordance with the activity of her crew, she would be the nonpareil of the water. This is, sir, if you will deign to credit it, the plain unvarnished tale of a practical seaman—the naked truth from

A FOREMAST JACK.

At Sea, 28th May.

PIRACY IN THE MEDITERRANEAN.

H.M.S. Fantome, Gibraltar, May 19, 1846.

"In the greatest haste I write you a brief account of a severe chastisement which has been inflicted by H.M. sloop *Fantome*, 16, Commander Sir J. W. Nicholson, Bart., on the Moorish pirates, who have for some time been committing such depredations in the neighbourhood; but I am sorry to say not without casualties among the ship's company of the *Fantome*, a midshipman having been killed, and one of the lieutenants wounded, together with a serjeant of marines, and five seamen and marines. You have already the intelligence of the seizure of a small British merchant brig, named the *Ruth*, (re-

ported in the *Shipping and Mercantile Gazette*, 28th instant), by the pirates, off the coast of Barbary, and the escape of the crew in the boats; and that upon this representation the *Fantome* had left Gibraltar to endeavour to recover the vessel—a portion of the crew proceeding in the sloop of war to point out the locality of the miscreants. It appears that the *Fantome* had little difficulty in finding the brig, and seeing that they would have to fight for her, Captain Nicholson made his dispositions accordingly. He dispatched the master and one party to get the vessel off, and being fired upon by a large force collected on the beach, under the cover of the guns of the sloop, he pushed off the boats to occupy their attention, man-of-war fashion. A lengthened engagement then took place, which lasted until the master had launched the *Ruth*, and had recovered some of her valuable cargo. Captain Nicholson commanded in person, and he and his small party were opposed by a very considerable number of the Moors, who, armed with pistols, guns, and cutlasses, obstinately disputed his landing, and afterwards his advance on the strand, some of them fighting with great bravery. A great many were killed by the crew of the *Fantome*, and a large number must have suffered from the guns of the sloop covering the launching of the ship, for I hear from an eyewitness that nothing could exceed the precision and exactness with which the firing was conducted. From what I can learn, the affair was a very gallant one indeed, and was admirably conducted. The pirates had a great advantage over the *Fantome's* crew in point of arms; their muskets carried twice as far as those of the seamen and marines. To this circumstance is to be ascribed the loss of Mr. Boys the midshipman, who was a gallant and promising young officer, and I am informed is a son of a captain in Her Majesty's navy. He was killed on the return of the boats to the sloop when they had accomplished their task, and under the same circumstances, the first lieutenant, Mr. Sanderson, was severely wounded, together with the colour-serjeant, and four or five of the ship's company. The action took place on the 12th of May, at a point of the north coast of Barbary called 'Treforca, to the eastward of Tetuan, and every officer of the ship was engaged, the doctor and clerk, civil as well as military. The seizure of the brig was one of the most daring acts of piracy that has been committed in the Mediterranean for several years; and when it is considered that it was in the strait and narrow passage of the Mediterranean, by which the merchant vessels mostly pass, the importance of the severe chastisement inflicted by Sir T. Nicholson and his gallant officers and crew, will be duly estimated not only in official but mercantile quarters.

GREENWICH HOSPITAL.—A return of the number of seamen and Royal Marines on the list of out-pensioners of Greenwich Hospital distinguishes those in the receipt of pensions granted for service and those granted for injuries and wounds, as also the names of the ports and places at which the pensions were received, with the number of seamen and Royal Marines of both classes paid at each of the same; stating the situation held by the persons, or the rank of the officers by whom the several pensions were paid. It appears from the document, which extends to fifteen pages, that the out-pensioners of Greenwich Hospital number 13,253, of which 7,754 are seamen, and 5,449 marines. In Great Britain there are 6,386 seamen, and 5,124 marines; in Ireland, 946 seamen, and 234 marines; and abroad, &c., 422 seamen, and 141 marines. The names of the ports and places are given at which the pensions are payable, but the return could not state whether the pensions were granted for services or injuries, as they are granted upon a joint consideration of services rendered and injuries received.

STEAM NAVIGATION.

There is a Government bill in the House of Commons, for the regulation of steam navigation, and for requiring sea-going vessels to carry boats. It contains thirty-one provisions, founded on the preamble, which declares it to be expedient to make further provision for regulating the construction of sea-going steam-vessels, and for preventing the occurrence of accidents, (as far as may be possible,) in steam navigation.

From the 1st of January, sea-going vessels are to carry boats, the tonnage being 200 tons or more; and from that day sea-going vessels, the building of which was commenced after the passing of the present measure, are to be divided by transverse water-tight partitions, so that the fore part of the vessel, as well as the after part, may be separated from the engine-room. The Board of Trade is to grant certificates of the sufficiency and good condition of steam-vessels, and all accidents are to be reported to the board, and the department may appoint inspectors to report thereon. It is provided by one of the provisions, that offences on the high seas are to be deemed to have been committed at the place where the offender is found, or into which he may be brought. The bill is not to extend to Her Majesty's ships of war, nor to any vessel not being a British registered vessel.

ADMIRALTY ORDERS.

Admiralty, May 25, 1846.

Masters of the Royal Navy.—The Lords Commissioners of the Admiralty hereby give notice, that Her Majesty has been graciously pleased to take into consideration the situation of the Masters of the Royal Navy, and by Her order in council of the 19th instant, to direct as follows, viz. :—

That a retirement shall be provided for old and deserving masters.

That a retired list be established, to consist of forty masters, at two rates of retired pay, to be selected from those standing highest on the list of their class who may possess the qualifications hereinafter mentioned, and who may desire to be included in the retirement, viz. :—

First. Twelve shillings and sixpence a day, to such masters not exceeding twenty in number, as shall have actually served afloat in the navy twenty-five years as acting master, and master, or shall have completed that period by service combined with that of assistant master attendant, and master attendant, and shall be fifty-five years of age and upwards, and shall have passed for a line-of-battle ship.

And Secondly. Ten shillings and sixpence a day to such further number of masters as may be required to complete the retired list to forty, provided they shall have served in the above mentioned capacities combined, fifteen years, and shall be fifty-five years of age or upwards.

That such masters as shall not have served afloat as masters in the royal navy six complete years, and are not already in the receipt of higher half-pay, shall not be entitled to any increase of pay beyond five shillings a day, except in cases where it shall appear to the Lords Commissioners of the Admiralty, that inability to serve the prescribed term of six years shall have been caused by wounds, or ill health, arising from the service.

That the masters placed on the retired list, shall rank as, and wear the uniform of, commanders in the royal navy.

And, that time served as master, shall, in future, be considered as time

served as lieutenant, to qualify an officer to receive a commission as commander, under Her Majesty's regulations, art. 2, sec. 4, chap. 3, in the event of any particularly distinguished conduct which in the opinion of the Lords Commissioners of the Admiralty it may be proper to reward by such advancement.

Such masters, therefore, as are desirous of being placed on the retired lists, and may have the necessary qualifications, are hereby desired to send notice of their wish to this office as soon as possible.

By command of their Lordships,

H. CORY.

ANOTHER ACCOUNT OF THE GREAT STORM IN ENGLAND,—*By the Author (a.F.R.S.) of "A Continuation of Puffendorf's Introduction, &c."**

1703.—Just a month before the new king of *Spain's* arrival on the *English* coast, viz., *November* the 26th, O.S., there happened such a dreadful storm as was never known, either in the memory of man, or recorded in history, in reference, at least, to the kingdom of *England*. It began in the W.S.W. about 12 at night, and continued with such violence, till near 6 or 7 the next morning, as caused an universal calamity over the greatest part of the kingdom, not only in the buildings, but especially in the shipping, with the irreparable loss of a great number of seamen, there being of the royal navy only then on the coast of *England*, lost, one second-rate, four third-rates, three fourth-rates, four fifth-rates, and one sixth-rate, and in them above one thousand five hundred seamen; besides what damages and losses were sustained among the merchantmen, and some of the queen's ships on the *Dutch* coast, where the *Vigo* and *Russel* men-of-war were lost, with some transport ships, but most of the men saved.

It is very remarkable, that though not only the *Dutch*, as well as the *English* and *Flemish* nay, even a great part of the *French* coast felt the effects of this most terrible tempest, yet the northern parts of *England* were exempted from the dread of this, in a manner, universal tempest, which had exerted part of its fury even to the very centre of *Germany*.

The parliament, then sitting at *Westminster*, ever since the month of *November* last; and the House of Commons having a few days before voted eight thousand land forces for the Portuguese service, and forty thousand men for the royal navy, were so sensibly touched with this disaster, that they addressed Her Majesty upon this occasion, desiring her to give direction for the speedy repairing of this loss, by building such new ships as should be thought necessary for the sea service; and assured Her Majesty that they would effectually make good, and dispatch with all imaginable speed, the supplies requisite for this, as well as all other necessary purposes.

It was in the same year that Admiral Rooke took *Gibraltar*.

DRY DOCKS.

SIR,—The subject of this paper appearing to me to be of some importance at this moment, I shall make no apology for transmitting to you a few remarks on it.

It has been observed in a professional work that dry docks cannot, probably be constituted where there is an insufficiency of tide. I am of opinion

• Published in 1705, two years after the storm.

that, with the aid of pumps *worked by steam*, docks of this description may be formed any where; for, where we find thirty feet of water at the entrance of a chamber, or recess, could it not be converted into a dry dock, by placing gates at its entrance, and discharging the water by the means of pumps worked by steam?

During the last war much inconvenience was experienced by the navy from the want of dry docks wherein ships might be repaired; at Halifax in Nova Scotia, at the Bermudas, and the refitting harbours on the West India stations,* where the tides are too weak to admit the effecting such with ease.

There was nothing, however, that I am aware of, which prevented the chambers from being converted into docks by closing these with gates,† except the excessive manual labour that would have been required for emptying the enclosed water after the gates were shut and secured. The expense was not, probably, a consideration, as the grant for such a purpose would have been comparatively trifling.

The labour and time required in the entire process of heaving down a large ship to repair an inconsiderable injury—such as a leak near the keel—not to speak of the straining of the hull, are so great that it must appear obvious, some other mode more simple, and less laborious, would be of vast advantage to the service.

If we were to seek in the naval annals for proofs of the misfortunes which have occurred to our ships, from the want of dry docks on foreign stations, to give them a repair sufficient to insure their safety on the voyage homewards, we should find instances enough; but let us take the well known case of H.M.S. *Pique*. Had there been a dry dock at Halifax, or at Bermuda, that ship, so greatly injured by the rocks on which she struck on her return from Quebec, in less than a week might have been effectually repaired, so as to have obviated the necessity of her risking a long, and, in her situation, dangerous passage across the Atlantic.—PROMPTUS.

NAUTICAL NOTICES.

CURRENT OFF CAPE RACE.

Bona Vista, Newfoundland, Feb. 28.

Sir.—The circumstance of the *Hibernia* steamer having been brought up against Cape Race on her homeward voyage in November last, induces me to offer a few observations upon the operation of the current on that part of our coast; as it was evidently the cause of her being drawn so far to the westward of her supposed situation at the time of her meeting with the land.

In a former communication to your committee upon the loss of the transport Harpooner, the sloop-of-war *Comus*, and her Majesty's brig *Little Drake*, &c., at St. Shott's and Cape Pine, I endeavoured to throw some light upon the cause of their, as well as many other shipwrecks, occurring in quick succession about that particular part of the coast, and I have since been not a little gratified at perceiving that the hints then given were deemed of sufficient importance to occupy a conspicuous place in Norie's sailing directions for that part of the coast of Newfoundland: and that since their appearance the

* It appears from the papers that a dry dock is to be formed at Singapore.

† It is probable that great difficulty would be experienced in hanging the gates; perhaps, therefore, "cassons" would be better.

shipwrecks have almost ceased; or, if not altogether ceased, they have not been so frequent as they were before.

In that communication I informed your committee, if I recollect right, for it is many years since, that the frequent shipwrecks occurring at Shott's were occasioned by a strong current setting in to the westward round Cape Race, which was increased by the action thereon of E.N.E., E., and S.E. winds; and that the strength of such action could only be estimated by the knowledge of the length or prevalence of such winds. Personal observation, added to circumstances which have since come to my knowledge, has served to confirm that opinion. To a few of those circumstances and observations it is my present wish particularly to direct the attention of your committee, and also that of the navigators frequenting this coast, or occasionally skirting it in their passage to and from the Gulf of St. Lawrence and the neighbouring colonies.

First, as to the action of the Gulf Stream upon the currents setting along the E. coast of the island.

It is pretty generally admitted by navigators that the western edge of the Gulf Stream of Mexico approaches the eastern edge of the Grand Bank of this island, and from the circumstance, though a rare one, of the Nautilus being cast on shore at Ferryland and in that neighbourhood, after a long continuance of east winds, and never else, I infer that the Gulf Stream must have brought them to the coast, as they are seldom met with westward of the outer or eastern extremity of the Grand Bank.

Presuming from the foregoing circumstance, that the Gulf Stream, by a long continued action of winds from a particular quarter upon its surface, is sometimes propelled towards that part of the coast lying between Cape St. Francis and Cape Race, it is only fair to infer that if it does not reach the coast its pressure on such occasions upon the local current passing along the coast to the south-west and westward must, by circumscribing the surface of that current, add to its velocity, and that consequently, after such long-continued action, vessels approaching the coast from the south and westward must encounter a greater resistance in the force of the local current than if the winds had been variable for the same space of time.

Secondly, masters of fishing vessels frequenting the Grand Bank state, that the current on the bank sets all round the compass within the space of 24 hours; that such has been observed to have been the case in the neighbourhood of the Virgin Rocks, in the latitude of Cape Race, and not more than 60 miles from it, as well as other parts of the bank; hence I infer, that during that portion of the twenty-four hours when it makes to the westward, it must, as a matter of course, tend to increase the velocity of the local current setting with it to the westward.

Thirdly, if any doubt were entertained, or any proof were wanting, as to the direction of the current, after its passing Cape Race, the circumstances of the body of Capt. Baker, of her Majesty's brig Little Drake, having been discovered cast on shore near the Rams or Ramed Islands, on the east side of Placentia bay, and there interred, about 100 miles, or nearly so, from the scene of his unhappy shipwreck, would, I presume, be sufficient to indicate its true course, and to remove all doubt, if any existed, upon the subject.

Fourthly, that the current or eddy spoken of as existing on the Grand Bank in front of the island, must be occasioned by the resistance which the stream from the St. Lawrence meets with on running into the ocean from the Straits of Belle Isle on the north, where it meets with and is checked southwards by the current coming down from the N.E., along the coast of Labrador, and the like resistance of the ocean waters to the stream setting out of the gulf to the S.W. of this island. To acquire a perfect knowledge of this current, as well as the current making along the coast, so as to be able at all times to

make due allowance for its strength and tendency, must be the work of a skilful navigator, a title to which I cannot by any possibility lay claim; nevertheless, the foregoing hints may assist him in arriving at a right conclusion upon the subject; and provided that it ultimately tends to the preservation of life and property, I shall feel more than repaid. Had the *Hibernia* been a vessel under canvas, instead of being propelled rapidly through the water by steam, she would have brought up at St. Shott's, or about Cape Pine, instead of reaching Cape Race. In such a case, I will not even venture to glance at the fearful consequences to her crew and passengers. The admirable presence of mind, cool determined judgment, displayed by her commander at Cape Race, would not, I fear, have been sufficient to bring his vessel off from St. Shott's. Until something has been done to ascertain the true state of the current upon that part of the coast, I would impress upon all commanders approaching Cape Race from the southward and westward, the absolute necessity of making more frequent use of the lead in foggy weather, and not to come within 30 or 35 fathoms of water in passing or rounding Cape Race. A cast or two of the lead about Cape St. Mary, and one or two between that and Cape Race, will enable the navigator to conduct his ship, by observing the foregoing precautions, clear of the dangers of that part of the coast, and counteract the force of the current.

With the hope that the foregoing may ultimately lead to some result beneficial to my fellow men,

I remain, dear sir, very respectfully, your most obedient servant,

WILLIAM SWEETLAND.

To G. R. Robinson, Esq., Chairman of Lloyd's.

LIGHT ON THE PLATEAU DE FOUR.—On the 1st May last, a small red fixed light was substituted for the revolving light on the ledge of rocks called the Plateau du Four, at the entrance of the river Loire, and in lat. $47^{\circ} 17' 53''$ N. and lon. $2^{\circ} 37' 58''$ W.

This small red light will be continued until the tower is raised twenty-three feet higher than it is at present, when a new light will be placed there, revolving in half minute intervals, and visible at the distance of eighteen miles. It is supposed that this will be effected during the present year.

FIXED LIGHT OF PORNIC.—On the 1st July next a small fixed light will be established on Point Noveillard, the westernmost point of the dry harbour of Pornic, in lat. $47^{\circ} 6' 35''$ N. and lon. $2^{\circ} 6' 0''$ W., and it will be visible at the distance of ten miles.

SHOAL OFF CAVALLO—MANILA BAY.

Hong Kong, Victoria, 30th March, 1846.

SIR.—I herewith beg to inform you of the particulars of a shoal not laid down in Horsburgh's late charts, in the entrance of the Bay of Manila, on which the ship *Mermaid*, under the command of Captain Gill, got on. The ship laid there forty-eight hours, by which cause she lost her false keel and received other injury. She was obliged to be hove down in Manila.

May I beg of you to publish the following particulars in your most valuable volume for the guidance of commanders of ships entering that bay, and also for the improvement of the navigation in that sea. A shoal projects out in the southern side of the Island of Cavallo, in the entrance of the Bay of Manila, in a S.E. $\frac{1}{2}$ E., and N.W. $\frac{1}{2}$ W. direction, about three-fourths of a mile in extent. In Horsburgh's late charts, you will see he has 22 fathoms close to that island; that is a great mistake. When I was beating up that

bay a couple of months afterwards, I saw the shoal. It is not much unlike the shape of a tongue. I avoided it. On my calling on my agents, they were agents also for the Mermaid, they informed me of the particulars. I stated to them that I avoided it, for I saw it very plain. Captain Gill is an old hand on that part; he states that he never saw it before.

I have the honour to be, &c.,

J. P. BIALLE,

Commander of the ship "Amherst."

KING'S ISLAND, *Bass Straits*.—Four wrecks have occurred on it since 1835, all from being to the southward of their reckoning. In 1835, Neva, convict ship, on the Neva (Navarine) rock, four miles east of Harbingers, all drowned but five. Second, about the end of 1841, the Isabella, on the south end of the island. Third, in 1843, the Rebecca eight miles south of the N.W. point. Fourth, the Catarqui, emigrant ship, all perished but nine. In the last two cases land was mistaken for Cape Otway.

LAW.

Another case of fine has taken place on the subject of lime-juice. One of the crew of the *Tory* summoned his master, Mr. James Low, for not serving out lime juice and vinegar after the crew had been on salt provisions for ten days. The crew of the *Tory* went on salt provisions on the 4th January, and did not get their legal allowance of lime-juice until the 16th March, when the vessel touched at St. Helena for the purpose of obtaining it. She was from Madras, and went out of her course to do this. There was no case of scurvy, and the master was acknowledged to be a kind and humane man, still he was liable to the penalty. The magistrate considered the case proved, the master was fined £5, and the seaman had £1 for his information.

The master of the barque *Hamlet* was summoned by five of his crew for not serving out lime-juice and sugar to them on the voyage to Sydney and back from London. The master urged that the act imposed the fine for neglecting to serve out sugar and lime-juice; he could not be said to have neglected doing so, as he had no sugar to serve out. This distinction was not admitted; and although he had *made up* for the deficiency by giving the men *more grog*, he was informed by the magistrate that gin and brandy were not lime-juice and sugar, and fined in the mitigated penalty of £25.

THE SCREW PROPELLER.—*Court of Queen's Bench, May 26; Lowe v. Penn.*—This was an action for the infringement of a patent which the plaintiff had taken out for a new and peculiar method of propelling ships by a screw. The case having come on for trial, a verdict was found for the plaintiff. Upon a subsequent occasion a rule was obtained calling upon the plaintiff to show cause why the verdict should not be set aside and a new trial granted, upon the ground that there had not been any infringement of the patent, and that the patent itself was void, as the subject-matter of it was not new. The case having been fully argued upon a former occasion, the court took its time to consider judgment, which was now delivered. Lord Denman stated the general nature of the case, and observed that the plaintiff himself did not contend that the parts of the invention were new, but only that they were placed in a novel combination. Having reviewed and compared all the circumstances of the description as contained in the specification, his lordship observed, that the court was of opinion that the invention, which was the subject of the patent, was not new, and that the rule for a new trial ought to be therefore made absolute.

NOTES WORTH NOTING.

On the 13th May, 1846, the United States, by a proclamation of President Polk, declared war against Mexico, exhorting all good citizens "to support all the measures which may be adopted by the constituted authorities in attaining a speedy, a just, and honourable peace."

The British Association are to hold their next meeting in August, at Southampton.

The climate of Australia is justly extolled as regards health, (but not comfort,) for if it be favourable to human life it is equally so to every description of vermin, large and small, which swarms in that country, both within and without doors.

The *Barham*, a first class Indiaman of 1100 tons, was launched from the dockyard of Mr. Richard Green on the 27th May, in the presence of a large assemblage of company. Another large vessel will shortly be launched from the same dockyard.

The *Cambria* steamer, on the Halifax and Boston line, from England, got on shore on the 2nd May, off Cape Cod, about five miles south of the Highland Light. After being lightened she floated off on the morning of the 5th.

An explosion, by which the principal engineer and three other persons were killed, occurred on board the *Finn M'Coul*, a steam boat, when leaving Garliestown harbour for Liverpool.

A fearful collision between two steamers, (the *Rambler*, from Ireland, and the *Sea Nymph* from Liverpool,) took place on the Mersey on the 25th May, by which fourteen lives were lost.

War on the alligators is to be made in downright earnest; some curious backwoodsman of the States having accidentally discovered that the carcases of these amphibious animals make very good oil! Why should they not? and as free trade is the order of the day, these enemies to all water pilgrims seem likely to have their secret haunts disturbed, instead of themselves making war on every other animal, not excepting man from cows and horses.

The Dutch Government has appointed a new resident governor over all their territory in Borneo, in the person of Mr. A. L. Weddill, who is to reside in a central position, with respect to their dependencies.

The new light at Bermuda is stated to have been lighted for the first time on the 1st of May.

The exportation of salt from the island of Sardinia is likely to become extensive; every possible facility is afforded by the authorities of the island for embarking it, a vessel not requiring to use her own boats.

The barrage of the Nile is proceeding with the utmost rapidity; 15,000 men are employed on it. The Pasha's frigates are employed bringing cargoes of timber from Karamania; these are immediately squared and sent up to the site of the barrage with all speed. Numerous deaths among the workmen daily occur.

A trial of speed took place on the 31st of May, between three of Her Majesty's steam-packets of Dover, the *Garland*, *Onyx*, and *Violet*, the former being of wood, and designed by Mr. O. W. Lang, jun., and built by Messrs. Fletcher and Sons of Limehouse, and the two latter well known iron boats, the fastest ever built by Messrs. Ditchburn and Mare of Blackwall; the dimensions of vessel and engines the same. The *Garland* beat both her competitors hollow, and made the passage from Ostend to Dover in three hours and fifty-five minutes.

The communication with Lima, Valparaiso, and the Intermédios, via Panama, was commenced in May.

Our Baltic traders will observe the station flags of the Russian surveyors now busily employed in the Baltic and Gulf of Finland, notices having been published of operations going forward to the northward and westward of Oesel Island, and on the shores of Esthonia in the Gulf.

The intended tunnel of the South-Eastern Railway under Greenwich park and all the magnificent works that depended thereon are suddenly suspended, a caveat having been placed against the design by the Government, arising from the threatened destruction of the efficiency of the Royal observatory, which would arise from heavy trains moving so near it.

The Directors of the Croydon Railway Company have very handsomely granted the use of three acres of ground contiguous to the Royal Naval School at their New Cross station for the recreation of the pupils.

Nidingen lights, in the Cattogat, are undergoing an improvement, and in the mean time a fixed light has been substituted on the S.E. side of the old tower, sixty-three feet above the level of the sea, and may be seen at the distance of above three leagues.

The northern light dues, coastwise, after the 30th June will be reduced one half; the Trinity light dues remain unchanged; Irish light dues have been reduced 10 per cent.

Her Royal Highness the Duchess of Gloucester, accompanied by the Prince George and the Princess Mary of Cambridge paid an unexpected visit to the Royal School at the Asylum at Greenwich on the 9th of June.

His Imperial Highness the Grand Duke Constantine of Russia arrived at Portsmouth in the Ingermannland on the 9th June.

A submarine electric telegraph is to be laid down at Portsmouth to connect the Admiral's office in the dockyard with the railway terminus at Gosport, with the view of preliminary experiments previous to the communication proposed across the channel, mentioned in our last number.

On the 5th June, in lat. 46° and lon. 54°, icebergs were fallen in with by the Britannia steamer, arrived at Liverpool from Boston.

The Lyra, brig, Parsons, of Sunderland, for Montreal, was fallen in with on the 6th May in lat. 46° lon. 59°, with bow port stove, and nine feet water in her hold, having struck the ice: reported by the Hero, of Quebec.

The passage from Glasgow to Liverpool has been made by the Princess Royal steamer in fifteen hours and a-half, being at the rate of more than fourteen miles an hour. We presume that the Princess had the tide in her favour as long as it lasted.

The Philomel brings some English prisoners home, taken during the last contest in the river Plate, charged with fighting against their own countrymen.

It is stated that Graham shoal in the Mediterranean has subsided, Commander Graves having found thirty fathoms water on it. When surveyed in 1841 there was nine feet on the shoalest part.

One of the prettiest models of naval architecture ever launched from Mr. White's building yard, is a yacht, built for the Emperor of Russia. She was named the Queen Victoria by special permission of Her Majesty. The Grand Duke Constantine has inspected her since her launch.

The *Recruit* has been launched from the yard of Messrs. Ditchburn and Mare, at Blackwall. She is built of iron, and is a gun-brig; and will have, when rigged and completed, an armament of 12 guns. Her length between the perpendiculars is 113ft.; her length of keel for tonnage 94ft. 10in.; her breadth for tonnage is 30ft. 3in.; and her depth in hold, 14ft. 2in.; the burden being 482 tons.

A private letter from an officer of the *Herald*, surveying frigate, Captain Kellett, c.m., in the Pacific, relates the melancholy death of Mr. Edmonstone, the naturalist of the expedition, which took place under the following lament-

able circumstances:—In January last, Mr. Edmonstone; the assistant-surgeon, Mr. Billing; the purser, Mr. Scroggs; the clerk, and others, proceeded on shore in the Bay of Panama, for the purpose of collecting some specimens of birds, plants, &c. When the party returned to the boat, the fowling pieces were laid down in the bottom of it, and among them a loaded musket. A cadet in stepping in trod on the lock of this piece, when by some means or other the gun exploded, and the muzzle being inclined towards the clerk, the ball passed through the fleshy part of his arm, and then entering the back part of Mr. Edmonstone's head, it passed obliquely through, traversing the brain, and killing him on the spot.

The *Garland*, steam-packet, Capt. Smithett, is now performing unprecedented passages on the Dover station. On June 2nd, she left Dover for Calais head to wind, and accomplished the entire distance in one hour and twenty-eight minutes, and returned to Dover on the following day, June 3rd, in one hour and thirty-seven minutes against tide; consequently France, as has been observed, since this speed has been obtained by a Dover mail steam-packet, is nearer to England than Woolwich is to London, by the average speed of river conveyance. Mr. O. Lang, jun., who designed the *Garland*, has been equally successful in the construction of another wooden boat, fitted with Penn's engines for the Woolwich Steam-packet Company, as she has, without exception, proved the fastest packet on the river. She is named the *Dryad*, and in addition to her superior qualities for speed, has an excellent appearance, and is, in every way, creditable to her designer.

The *Rambler* steamer, which our readers will recollect was so recently in contact with the *Sea Nymph* on the Mersey, has met with another and serious disaster; she struck on the North Maiden Rock, off Belfast, on Sunday morning last, and remains, with the rock through her starboard bilge, and fills with the tide; the crew and passengers, the weather being fine, were fortunately saved. This was the first trip of the *Rambler* since being repaired.

On Monday, the 11th May, the ceremony of laying the foundation stone of a new church for the seamen of the port of London, was performed by His Royal Highness Prince Albert, in the presence of a numerous and distinguished assembly. The proposed edifice is to be erected in Dock-street, near the London Docks. The church will contain 800 sittings, wholly free, and the estimated cost of its erection is £9,000, of which £6,000 have been already subscribed. The appointed service was performed by the Bishop of London; and the glass bottle, with its usual contents of coins and medals, having been placed in the allotted cavity, the stone was lowered, and the Prince went through the usual manipulations with the trowel and mallet. His Royal Highness then requested the assembly to give three cheers for the prosperity of this national institution, an appeal which was heartily responded to.

The expedition now ordered from Cork to Fort York, in Hudson's Bay, under Major Crofton, will, on landing, proceed to Fort Garry, and there, probably, take up a fortified position, or occupy the forts, upper and lower, in possession of the Hudson's Bay Company. The line of route from Fort York to Norway House will probably be by Hayes River, Steel Stream, Hill River, Knee and Holy Lake, and Sea River, to Lake Winnipeg, on the north point of which is Norway House. The chief part of the way must be by water, but much intercepted with portages. To conduct an expedition of this kind, with guns, stores, and the requisite equipment will need much energy in the commander, and great individual exertion, for everything must be carried by the hand, and for this purpose, no baggage, public or private, is permitted to be in parcels of more than ninety pounds each. The travelling distance from York to Norway House is about 300 miles, and from Norway House to Red River and Fort Garry about 360 more. The time will probably be fifty

days, for forty days are estimated as the average period by the fur traders themselves. If our readers will cast their eyes on a good map, they will, if military men, instantly see the admirable position selected. If the Polk party will have a war with England, we envy the officers and men of this expedition, for they will early have an opportunity of testing the boasts of the Americans, long before they could even view from the Rocky Mountains their Pisgah, the promised land of Oregon.

NEW BOOKS.

PHILIP MUSGROVE, or *Memoirs of a Church of England Missionary in the North American Colonies.*—Murray.

The memoirs of the "missionary" abound with so many touching anecdotes, in addition to the sketch of those characteristic features of the country and its fashions of which they treat, that they will not fail to command an interest, useful in many points of view. We have selected the following description of a thunder storm, in which the effects of electricity in producing hailstones are well illustrated.

"On my way to visit a school in one of my distant settlements, one very hot and sultry day, about the middle of July, I was riding very leisurely along the road by the side of the river, or rather the lake into which it had extended itself; I had travelled some four or five miles, when I observed two large black masses of clouds rising up very rapidly in the north-west and west, to a great height, although the lower part of them still rested on the horizon. When they had attained their utmost elevation, they began to advance slowly towards each other, evidently bent on mischief. This I knew from the little angry flashes of lightning which at intervals darted from them during their progress. All this time, about half an hour, the stillness of the close and sultry atmosphere was disturbed by the little whirling eddies of wind, which here and there swept the dust from the road, and the dry leaves from about the fences, raising them in spiral gyrations high up into the air. One, indeed, was of a very different and much more violent description; it tore up by the roots a large elm tree within a hundred paces of me, although where I stood I felt not a breath of air. These were indications of a coming conflict which could not be mistaken, and on looking round I perceived that it was not to be confined to the two formidable looking combatants I have mentioned. There were two other masses of cloud coming up at a more rapid rate, one after each of the two former, which they very much resembled. I was by this time not far from a friend's house, and pushed on for shelter before the collision should take place.

"I just got within his doors in time. The wind blew, the lightning flashed, the thunder pealed, and in less than one minute the ground was white with hailstones as large as marbles. Then there was a pause in the tempest, only, however, to commence again with redoubled fury. In a few minutes another of the moving masses of black clouds came up, like some gigantic ship of war, to join in the combat. Slowly and majestically it approached to within point blank range of its antagonist, when crash went the whole of its dreadful artillery at once, and another shower of hailstones of a larger size, which when examined, appeared to have an outer layer of ice a quarter of an inch thick around them, came hurling through the still air with a strange and hissing noise, something like what one hears on approaching a rapid torrent. And now came up the last mass of cloud. The wind instantly rose to a perfect hurricane, the thunder pealed incessantly, flash after flash, with increasing

intensity, followed each other in such quick succession that the whole heavens seemed wrapped in a sheet of livid flame, and the hailstones, enlarged again with another layer of ice, were driven with such violence against the front of the house in which I had taken shelter, as to break not only the glass of the windows but the frames also, and to scatter them in fragments all over the rooms. I measured several of the hailstones which fell last, and found them from five to seven inches in circumference; and I heard afterwards, that a gentleman who lived on an island in the lake, to which the storm was nearly confined, found some that measured nine inches round. The storm, as I have said, was confined within very narrow limits, or the damage would have been very great. So narrow and circumscribed, indeed, were those limits, that when I got home and went into my garden to see, as I anticipated, my ruined hot-bed frames, not a single pane was broken. The storm had not reached my home nor the village where it was situated.

THE GENERAL EAST COAST SIGNALS, &c., by J. Buffham, Master Mariner, Sunderland, 1845, price 1s.

This is a very short and concise system of signals, principally for the use of vessels in the coal and Baltic trades. It consists of only five flags, viz., an ensign, jack, burgee, blue Peter, and a white flag pierced blue. These produce in all, taken one, two, or three together, eighty-five numbers, which are assigned to express this number of signals or sentences. The signals are shown at the mast-head and at the peak, but in general no inconvenience will arise in showing them where best seen. Numbers expressing the latitude, longitude, &c., the letters of the alphabet, and a short vocabulary, are contained in four parts or lists, which are identified by the previous signal, which thus acts as a preparative. The list of ship's numbers being limited to eighty-five, names not found there must be spelled.

By this arrangement, a small, though intelligible and useful code is produced, which has been carried into practice by several masters of ships. Short, however, as it is, we think the author should insert an alphabetical index of every signal made, for the convenience of those who are not already acquainted with the system, which it would therefore tend to make known. We would also suggest to the author, in his next edition, to alter the arrangement of some of his signals, so as to make the simplest signals express the most important significations, a principle by far too little attended to in the construction of codes, as the reader will find more fully set forth in the *U.S. Journal*, 1834. For example, the flag No. 2 denotes "I want to go ashore," a signal obviously adapted in general to tolerably easy circumstances of wind and weather, when it would be no great trouble to hoist three, or even four flags, instead of one. While the signal "I have lost two anchors," which might be made under the worst circumstances is composed of three symbols, viz. 254.

Again, "the leak gains on us," a signal made in absolute distress, requires three symbols, 412, while a sentence which appears to us altogether superfluous, viz., "I think it best to do as you have said," is expressed by two symbols only, 24. The signals, "A man overboard,"—"The ship is on fire,"—"Stranger is suspicious, or an enemy,"—"The ship is in a sinking state,"—"No boats on board, or fit to lower down,"—"Rudder damaged," &c., are not to be found, though among the most important of communications at sea. At the close of his list of signals, part 2, the author has introduced two signals of four symbols; we should recommend him, therefore, to insert the above signals and some others, to be expressed by one or two symbols, and to transpose the less important communications to the four symbols, and we think that the efficiency of his code would thereby be much increased.

LIVONIAN TALES, by the Author of *Letters from the Baltic*.—Murray.

Chaste and pretty, religious as chaste, and sensible as they are pretty, may safely be added to the unassuming title of these pleasant little stories. There is nothing *nautical* in them, but our nautical readers have the same kind of little tender minds to administer to, as readers not nautical have, and they will not regret it if they follow our advice and supply them with the "Livonian Tales."

A SERIES OF DRAWINGS ON STONE by L. Haghe, Esq., Lithographer to the Queen, from paintings by J. M. Gilbert, Esq., of Lymington, Marine Painter to the Royal Southern Yacht Club, illustrative of Her Majesty's visit to Spithead, July 10th, 1845, at the departure of the experimental squadron has been published, consisting of four prints, at the very low price of twelve shillings. A letter-press description accompanies the drawings, but the latter embody the whole talents of both artists. Indeed we know of no more effectual method of securing complete success in a marine picture than the judicious selection of opportunity by the painter in his scenic representation, followed up by the exquisite taste of Haghe in finishing the beauties of nature. Both have been here completely successful in mastering the difficulties of their undertaking, and have produced pictures which cannot fail to be favourites even with nautical men.

NEW AND CORRECTED CHARTS.

Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.

COLONIA SHORE, by Capt. Barral, 1833, price 6d.

NORTH SHORE OF THE RIVER PLATE, by Com. Sullivan, 1844, two sheets, price 2s. each.

BENZERT ROAD AND LAKES, by Com. Graves, 1845, price 1s. 6d.

PORT HAMILTON, Korea Archipelago, by Sir Edward Belcher, 1845, price 1s.

SADDLE GROUP, south-east Islands of the China Sea, by Com. Nolloth, 1842, price 6d.

RIVER MIN, corrected by Capt. Kellett, price 2s.

USHANT TO CAPE FINISTERRE, corrected by the Spanish charts.

MOVEMENTS OF THE ROYAL NAVY IN COMMISSION.

Agincourt, 72, left Hong Kong on March 2. *Acorn*, 16, on March 3, at Rio Negro. *Alarm*, 26, arr. Halifax, May 22; 30th, sailed for St. John's, N. Ardent steam-vessel, June 15, sailed for Mediterranean.

Belleisle, 72, troop-ship, Capt. J. Kingcome, May 22, left Plymouth for Cork on her way to East Indies.

Calypso, 20, left Tenerife for Pacific, April 14. *Collingwood*, 80, at Valparaiso, March 10; at San Blas, April 8. *Canopus*, 84, sailed from Portsmouth, June 11, to join Experimental Squadron.

Dadalus, 20, arrived at Hong Kong, March 4; 11th, sailed for northward. *Devastation*, May 23, touched at Madeira.

Favourite, 18, Com. A. Murray, May 28, left Plymouth for coast of Africa. *Ferret*, 6, arr. Madeira 3d, and sailed 5th May, for Africa. *Fly*, steam vessel, arr. at Portsmouth from Australia, June 19.

Grampus, 50, arr. at Bahia, April .
Hazard, 18, left Hong Kong for Borneo, March 4. *Herald*, 26, at Panama, April 6. *Hermes*, at Bermuda, May 21.
Mutine, 16, arr. at the Cape from Mozambique, March 24.
President, 50, sailed from the Cape for Algoa Bay, April 2. *Philomel*, 6, arr. Plymouth, June 9. *Pique*, at Bermuda, May 25.
Raleigh, 50, sailed from Plymouth to join Experimental Squadron, May 27. *Rose*, at Vera Cruz, May 1. *Ringdove*, arr. at Cape, April 13.
Supphire, 22, left Hong Kong for Chusan, March 14. *Spiteful* steam vessel, left Madras for Trincomalee, March 27. *Sappho*, 16, arr. at Cape from Mozambique, March 23.
Trafalgar, 120, arr. at Plymouth, June 15.
Vixen steam vessel, left Hong Kong for home, March 5. *Vestal*, 26, at Hong Kong, March 30. *Vindictive*, at Bermuda, May 21.
Wolverine, 16, at Hong Kong from the northward, March 30.

SIMON'S TOWN, April 15.—Her Majesty's ship *President*, 50, Capt. W. P. Stanley. Her Majesty's sloop *Sappho*, 16, Capt. R. F. Gambier. Her Majesty's brig *Mutine*, 12, Capt. R. B. Crawford. Her Majesty's steam sloop *Thunderbolt*, Com. G. M. Broke. And Her Majesty's surveying sloop *Fly*, 18, Capt. Francis C. Blackwood. The last named was expected to leave daily on a voyage of survey.

The *Vulture* steam frigate, Capt. M'Dougall; the *Alligator* troop ship, Master Com. King; the *Plover* surveying vessel, Capt. Collinson; and the *Minden* store and hospital ship, were in harbour at Hong Kong on the 30th March.

PORTSMOUTH.—*Victory*, *Excellent*, *Victoria* and *Albert* royal yacht, *Eurydice*, *Contest*, *Seaflower*, *Terrible*, *Fairy*, *Dasher*, *Lightning*, and *Echo*, steam-vessels. In Dock.—*Prince Regent*, *Leander*, *Rifleman*, *Cambrian*, *Penelope*, *Rattlesnake*. In Basin.—*Nelson*, *Edinburgh*, *Amphitrite*, and *Trincomalee*. At Spithead.—*Nautilus*.

PLYMOUTH.—In Harbour.—*Caledonia*, *Constance*, *Crocodile*, *Spartan*, *Philomel*, *Penguin*, *Diligence*, and *Inflexible*, *Torch*, and *Confiance* steam-vessels. In the Sound.—*Trafalgar*, *Avenger*.

PAID OFF.—*Penelope*, at Portsmouth, May 20. At Malta, *Beacon* and *Sydenham*—the former surveying vessel, Com. Graves, who will commission the *Volage* in her stead. *Philomel*, Capt. Sullivan, at Plymouth, June 19.

COMMISSIONED.—*Eurydice*, May 27, Capt. G. Elliott. *Spartan*, 26, June 2, Capt. T. M. C. Symonds. *Contest*, 12, Com. M'Murdo. *Inflexible* steam vessel, Com. J. C. Hoseason, at Plymouth.

The *Hope* brig is to be stationed as a quarantine guard-ship at Falmouth.

The *Ætna* bomb is to be fitted as a floating chapel for seamen at Bristol, having been purchased for that purpose.

The main topmast of the *Dido*, fitting for sea at Sheerness, is fidded on a new plan of Commander Lefevre's for trial.

The French steamer *Gomer*, with Ibrahim Pacha and suite arrived at Portsmouth on the 5th June. The party accompanying his highness consists of Soliman Pacha, Genl. Ibrahim Bey Sidi, M. Cabaret Effendi, first secretary, Capt. Mustapha Effendi, A.D.C., Col. Boufort, and M. Jacobnet, interpreter. Major C. Dickson has also joined the suite to attend as equerry on Ibrahim Pacha during his sojourn in England, having a fluent command of the Egyptian language.

The ship *Clarendon*, Hall, arrived at Falmouth from Belize for Liverpool, was struck by lightning, April 30th, off the Bahamas in the Gulf of Florida: lost mainmast by the deck, mizen topmast, sails, yards, and has damaged stanchions and bulwarks; came in under jury-masts.

RODGER'S ANCHOR.

The following letter from the late commander of the *Prometheus* is so much to the purpose, and that experienced officer is so well known to many of our readers, that no comment of ours will add to the importance of his communication.

London, June 1, 1846.

DEAR SIR,—Having for three years that I commanded H. M. steam vessel *Prometheus*, continually used one of your small palmed anchors, as the working anchor, I have had sufficient experience of its excellence to justify me in stating to you that I consider it very superior to any other anchor I have ever seen tried; its excellent holding qualities were fully tested in the very severe gale of December 1840, when many vessels with the fleet under Sir Robert Stopford in St. George's Bay, Beirout, were driven on shore, or sunk at their anchors.

I am, dear Sir,

Yours very faithfully,

THOMAS SPARK,

Commander R.N.

To Lieut. Rodger, R.N.

EXTRAORDINARY PASSAGE.—We recently mentioned the extraordinary passage of the *Columbus* from Liverpool to Pernambuco, in twenty-one days and seven hours—not only the shortest voyage on record to any Brazilian port, but one of the quickest ever performed by any sailing vessel. Captain Green having favoured us with the following extract from his log, we feel much pleasure in publishing it. The *Columbus* left Liverpool on the 18th December, at 4 P.M., and arrived at Pernambuco on the 9th of January, at 7 A.M.:

| Dates. | Distance of Ob- servation. | Winds. |
|-------------|-------------------------------|--------------------|
| December 19 | — — 116 — — | N.E. to S.W. |
| " 20 | — — 146 — — | N.W. |
| " 21 | — — 173 — — | N.N.W. to N.N.E. |
| " 22 | — — 199 — — | N.N.E.N.W. b. N. |
| " 23 | — — 238 — — | N.W. b. N. to N. |
| " 24 | — — 225 — — | N. to N.E. |
| " 25 | — — 233 — — | N.E. to E.S.E. |
| " 26 | — — 193 — — | E.S.E.E. |
| " 27 | — — 231 — — | E. |
| " 28 | — — 253 — — | E. |
| " 29 | — — 276 — — | E. to E. b. S. |
| " 30 | — — 271 — — | E. b. S. to E.N.E. |
| " 31 | — — 263 — — | E. b. S. |
| January 1 | — — 257 — — | E.S.E. |
| " 2 | — — 175 — — | E. b. S. |
| " 3 | — — 219 — — | E.S.E. |
| " 4 | — — 187 — — | S. |
| " 5 | — — 171 — — | S. b. E. |
| " 6 | — — 174 — — | S.S.E. |
| " 7 | — — 197 — — | S.S.E. |
| " 8 | — — 195 — — | S.E. b. S. |
| Seven hours | — — 59 — — | S.E. |

A LIST OF THE ROYAL CORK YACHT CLUB.

| No. | Vessels. | Port. | Tons. | Owners' Names. | Description |
|-----|------------------------|----------------------|-------|---------------------|-------------|
| 3 | Victoria . . . | Cork . . . | 57 | D. Connor | cutter |
| 7 | Cynthia . . . | Cork . . . | 53 | C. Penrose | " |
| 2 | Thetis . . . | Cork . . . | 43 | The O'Grady | " |
| 14 | Mask . . . | Cork . . . | 24 | S. T. W. French | " |
| 23 | Frisk . . . | Cork . . . | 47 | R. Frankland | " |
| 31 | Ellen . . . | Cork . . . | 16 | R. U. P. Fitzgerald | " |
| 32 | Guerrilla . . . | Plymouth . . . | 44 | H. S. Burton | " |
| 34 | Kathleen . . . | Salcombe . . . | 8 | Lord Kinsale | " |
| 36 | Columbine . . . | Cork . . . | 90 | J. H. Smith Barry | " |
| 38 | Kestrel . . . | Cowes . . . | 202 | Earl of Yarborough | " |
| 42 | Dolphin . . . | Kenmare . . . | 69 | Rev. D. Mahony | " |
| 44 | Brunette . . . | Rosscarberry . . . | 43 | T. Hungerford | " |
| 47 | Colleenogue . . . | Cork . . . | 43 | W. R. V. Lane | " |
| 48 | Experiment . . . | Cork . . . | 5 | P. S. French | " |
| 59 | Caroline . . . | Kilrush . . . | 49 | C. M. Vandeleur | " |
| 67 | Djalma . . . | Cork . . . | 5 | A. Hargrave | " |
| 69 | Comet . . . | Bantry . . . | 60 | Capt. Newburgh | " |
| 70 | Enchantress . . . | Cork . . . | 44 | S. Hodder | " |
| 74 | Cygnets . . . | Kinsale . . . | 19 | R. Lander | " |
| 83 | Gannet . . . | Bantry . . . | 36 | Hon. R. White | " |
| 84 | Petrel . . . | Cork . . . | 27 | W. Beamish | " |
| 96 | Adelaide . . . | Bantry . . . | 42 | R. H. E. White | " |
| 98 | Tickler . . . | Dublin . . . | 15 | E. Smyth | " |
| 99 | Psyche . . . | Courtmarsherry . . . | 27 | H. B. Leslie | " |
| 101 | Petrel . . . | Kenmare . . . | 19 | A. Hutchinison | " |
| 104 | Sylph . . . | Dublin . . . | 19 | R. P. Williams | " |
| 105 | Oberon . . . | Kinsale . . . | 54 | J. C. Kearney | " |
| 106 | Black Bess . . . | Dublin . . . | 19 | G. M. Corseilis | " |
| 110 | Union . . . | Kinsale . . . | 45 | B. Barter | " |
| 111 | Lord Eldon . . . | Cork . . . | 12 | R. Lidwell | " |
| 112 | Edith . . . | Liverpool . . . | 70 | J. C. Ewart | " |
| 113 | Incognita . . . | Barbados . . . | 53 | Lord James Butler | " |
| 114 | Breeze . . . | Bantry . . . | 18 | E. Hutchins | " |
| 117 | Wandering Spirit . . . | Youghal . . . | 140 | Eral of Mountcashel | sch. |
| 118 | Spray . . . | Dublin . . . | 14 | E. Clements | cutter |
| 119 | Giaour . . . | Bantry . . . | 19 | Edward White | " |
| 120 | Flower of Yarrow . . . | Dublin . . . | 183 | Marquis Conyngham | " |
| 122 | Brownsea . . . | Dublin . . . | 33 | David C. Latouche | " |

JULY AND AUGUST REGATTAS.

July 4—Royal Thames Yacht Club, last match of the season, for three prizes, value £120, from Erith to the Chapman Head buoy, and back to Greenwich.

7 and 8—Isle of Man Regatta.

8, 9, and 10—Ostend Regatta, when several cups are to be sailed for by gentlemen's yachts.

17 and 18—Royal Harwich Yacht club Regatta, at Harwich,

18—Royal Mersey Yacht Club Challenge Cup, value 100 guineas, with a Purse of 50 sovs. added; match to come off at Liverpool.

21 and 22—Yarmouth Regatta, when several cups will be sailed for by gentlemen's yachts.

27—Greenwich 69th Annual Regatta.

Aug. 4 and 5—Royal Southern Yacht Club Regatta at Southampton.

11, 12, and 13—Royal Victoria Yacht Club Regatta, at Ryde.

17—Royal Mersey Yacht Club, last club sailing match of the season.

17 and 18—Caernarvon Regatta, when costly cups, &c. will be given for yacht sailing,

26—The Royal Western Yacht Club Regatta, at Plymouth, on this and following days.

27 and 28—Worcester Regatta on the Severn.

WRECKS OF BRITISH SHIPPING.

(Continued from page 221.—cs crew saved, cd crew drowned.)

| Vessels' Names. | Belong to. | Masters. | From. | To. | Where. | When. |
|------------------|----------------|-----------|------------|--------------|---------------|------------|
| Acapulco | 148 Liverpool | Harrison | shipping | Guano | Patagonia | Jan. 19 cs |
| Admiral | Sunderland | — | — | Sligo | NC. Scotland | Mar. 27 cd |
| Anthony Anderson | Liverpool | Eaton | shipping | Guano | Patagonia | Jan. 8 cs |
| Belfast | 151 Liverpool | Clark | Leith | Monte Video | NE Scotland | Mar. 13 d |
| Betsy and Ann | Berwick | Sidney | foundered | 13 miles off | Berwick | Apr. 27 cs |
| Bride | London | Clark | shipping | Guano | Patagonia | Jan. 8 cs |
| Carrara | Leith | Mallier | Newcastle | Genoa | Battery H. | Mar. 24 cs |
| Charlotte | 155 Portsmouth | Locke | shipping | Guano | Patagonia | Jan. 8 cs |
| El. Holmes | Sunderland | Robson | Sunderland | — | L. Groin | Mar. 20 cs |
| Ellz. Heywood | Liverpool | Payne | shipping | Guano | Patagonia | Jan. 8 cs |
| Fr. Spaight | Scarboro' | Patterson | run foul | London | Table Bay | Jan. 7. |
| Gironde | 160 Liverpool | Moon | Liverpool | of | North Sea | Mar. 14 cs |
| Glennalvon | Belfast | Gibbs | shipping | Cuba | Arklew B. | May. 6 cs |
| Harper | Scotland | Harper | shipping | Guano | Patagonia | Jan. 8 cs |
| H. Anderson | — | Scotland | Hull | Constantinpl | Pt. Siculirna | Feb. 28 cs |
| James and Eliza | Southwold | — | London | — | Busey S. | Apr. 26 |
| John | Liverpool | Henry | shipping | Guano | Patagonia | Jan. 8 cs |
| Juno | 165 Greenock | Gibbs | Greenock | St. Johns | 43° N 57' W | Apr. 1 cs |
| Kentville | Liverpool | — | — | — | Tabasco R. | Mar. 14 cs |
| Malay | London | — | condemned | at Port | Desire | Jan. 8 cs |
| Nightingale | Liverpool | Hunter | shipping | Guano | Patagonia | Jan. 8 cs |
| Ocean Queen | — | Oliver | shipping | Guano | Patagonia | Jan. 8 cs |
| Richard | 170 Newcastle | Hopkins | shipping | Guano | Patagonia | Jan. 8 cs |
| Rachel and Mary | — | — | Leith | Oporto | B. of Oporto | Mar. 11 cs |
| Stewarts | Liverpool | Fisher | shipping | Guano | Patagonia | Jan. 8 cs |
| Thos. Leech | — | Slaughter | shipping | Guano | Patagonia | Jan. 8 cs |
| Vestal | — | — | — | — | Vianna | Mar. 5 sd |
| Waterwitch | 175 Leith | steam tug | — | By collision | Frith Forth | Ap. 4 4d |
| William Henry | Liverpool | Stukeley | shipping | Guano | Patagonia | Jan. 8 cs |

DRIFTING WRECKS.

| Wrecks, | When seen | Lat. N. | Lon. W. | Vessel seen by. | Where for or arrived. |
|--------------------|-----------|-------------|---------|-----------------|-----------------------|
| 1 Morland | April 18 | 47° | 21° | Sir P. Peel. | New York. |
| 2 Unknown | May 8 | 36 | 75 | — | — |
| 3 Unknown | May 20 | banks of N. | — | Pearl. | Quebec. |
| 4 Ship or Barque } | May 8 | 33 | 72 | Henrietta. | Liverpool. |

Particulars.—1 Waterlogged and abandoned; mizen-mast gone, sails unbent, cargo sugar and rum. The Resolution for Quebec lying by her, her boats alongside wrecking.

2 Broken in two amidships; about 28 or 30 feet of beam, decks washed off.

3 Masts gone and waterlogged; bowsprit still standing.

4 Dismasted, waterlogged, and abandoned; painted yellow inside, bright masts and bowsprit, and a female figure head painted a light colour.

The Hope of London, timber laden, waterlogged, and abandoned, was picked up and towed to the beach at Graciosa island, at the north point of Lanzarote

15th ult. by some fishing boats. Cargo discharging, and being forwarded to Port Naos in Lanzarote.—*Shipping Gazette.*

[The above notice of the Hope of London, confirms the opinion we expressed respecting this vessel. In our April number we gave four distinct positions in which she had been reported by different vessels. She has obeyed the general tendency of that gyrating influence of the waters of the Atlantic, and as we foretold has drifted on the Canary Islands. It is of importance thus to obtain the name of a wreck whenever seen as she is thus indisputably recognized, and forms by every new position in which she is found fresh argument for reasoning on the currents of the ocean. We beg of our readers in all cases of reporting drifting wrecks to attend to this, and to state also the direction of the wind.—Ed. N.M.]

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

CAPTAINS.—Sir G. G. Otway, Bart., A. S. Hamond, Hon. J. R. Drummond, Sir. F. W. Nicolson.

COMMANDERS.—J. M'D. Smith, E. V. Nott, G. Ogle.

LIEUTENANTS.—T. C. Bruce, R. B. Beale, G. T. Graham, N. S. Sullivan, C. D. B. Kennedy, H. N. Haggard, F. B. Quin, Hon. W. W. Adlington, T. C. R. Gill, H. J. Grant (1842), G. H. Thomas, H. S. Jackson.

MASTER.—T. Hart.

APPOINTMENTS.

ACTING CAPTAIN.—Com. T. Thompson, of *Comus*, to *Curaçoa*, on the Brazilian station.

CAPTAINS.—T. M. C. Symonds (1841), to *Spartan*—J. Shepherd (1840), to *St. Vincent* vice Sir B. Grant—G. Elliott, (1840), to *Eurydice*.

COMMANDERS.—J. C. Hoseason (1844), to *Inflexible*—A. M'Murdo (1843) to *Conest*—F. W. Horton (1844), to *Kingfisher*, vice Brown—A. Farquhar, (1844), to study at *Naval College*—T. P. Le Hardy, (1837) to *Fantome*, vice Sir P. Nicolson, promoted.

LIEUTENANTS.—T. Sibbald (1841) and S. Fowell (add.) to *Atenger*—F. Leigh (1849), G. Pyne (1811) R. C. Whyte and L. Hammet to *Spartan*—J. Corbett to *Excellent*—W. Fitzmaurice, (1802) and R. F. Jewers (1809) to be Knights of Windsor—G. J. Burslem (1838) to study at *Naval College*—W. C. Marshall and R. B. Beale to *Dido*—H. Muller and J. Wainwright (1841) to *Constance*—E. Heatheote (1841), F. Strobe (1842) and J. Hancock to *Eurydice*—G. Marriott

and J. Mends (1836) to *Trafalgar*—T. Brydges (1823) to *Victory*—H. Huggard and H. Croft to *Crocodile*—W. Lane and J. Moore to *Caledonia*—H. Blanckley, G. Fowler, and W. Gordon to *Inflexible*, **MASTERS**—J. R. Pascoe to *Eurydice*—Humphries to *Crocodile*—J. Bodie to *Spartan*—J. Kellock to *Dido*—T. Hart to *Inflexible*.

MATES.—R. Tuffnel to *Constance*—C. Kent to *Spartan*.

SECOND-MASTERS.—N. S. Seabrook to *Eurydice*—M. Richards to *Terrible*—C. Turner to *Spartan*—H. Hutchings to *Ardent*.

ACTING-MASTER.—R. W. Humphries to *Crocodile*.

ASSISTANT-MASTERS.—R. Cleveland and J. Parsons to *Dee*—J. M. Hockley to *Canopus*—J. S. Smith to *Griffon*—T. S. Neill to *Dido*—E. Goss to *Constance* **MIDSHIPMAN.**—H. Baker to *Spartan*—R. B. Oldfield to *Excellent*—G. Walton to *Raleigh*.

NAVAL CADETS.—A. Tabuteau to *Excellent*—T. Powell to *Vanguard*—J. Blackler and J. B. Dodd to *Spartan*—R. B. North to *Crocodile*—A. Daniell to *Queen* **SURGEONS.**—T. Gibson to *Eurydice*—J. Syme to *Dido*—D. King to *Naval Hospital*—J. M'Whinnie to *Hyacinth*.

ASSISTANT-SURGEONS.—H. Crocker to *Ocean*—E. Nicholas to *Victory*—S. Clift to *Samson*—J. Campbell to *Royal Hospital*, Plymouth—C. Ede to *Constance*.

PURSEES and PAYMASTERS.—W. T. Biddlecombe to *Daring*—T. Huskings to *Alarm*—J. Moorman to *Hyacinth*—W. Carragan to *Eurydice*.

CLERKS.—E. A. Amphlett and W. Warburton to *Dido*—W. Wentworth to *Crocodile*.

COAST GUARD.

Appointments—Lieut. H. Warren to Pembroke Dock—Mr. R. Chambers to Robin Hood Bay.

Removals—Lieut. J. Hains to Stone-

house—Lieut. Coleridge to Seaham harbour—Lieut. H. A. Atkinson to Prawle Lieut. J. W. Brown to Portsmouth—Lt. E. Barnard to Littlehampton—Lieut. S. Griffith appointed to Packet service.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

June 7, at Glassell, Aberdeenshire, the lady of Capt. Smith, R.N., of a daughter.

Marriages.

June 2, Com. J. J. M'Cleverty, R.N., to Sophia, widow of the late Com. R. F. Cleveland, R.N.

June 4, at Hammersmith, the Rev. T. F. Bowerbank, vicar of Chiswick, to Catherine, widow of the late Capt. Richard Croker, R.N.

Deaths.

February 8, at Valparaiso, Mr. Joseph Sole, clerk's assistant of H.M. brig *Spy*, aged seventeen years.

February 21, at Monte Video, Angelo Lewis Vanzetti, Esq., master of H.M.S. *Eagle*.

May 28, at Boston, U.S., Eliza, widow of Capt. Davis, and sister of Dr. Outram, R.N., inspector of hospitals and fleets.

June 17, at Kingstown, Mr. John Emerson, master, commanding H.M. packet *Urgent*.

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, 1846.

| Month | Day | Week Day | Barometer | | Fahrenheit Thermometer, | | | | Wind. | | | | Weather. | |
|-------|-----|----------|-------------------------|--------|-------------------------|--------|-----|-----|----------|------|-----------|------|----------|------|
| | | | In Inches and Decimals. | | In the Shade. | | | | Quarter. | | Strength. | | A.M. | P.M. |
| | | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | A.M. | P.M. | A.M. | P.M. | | |
| 21 | Th. | | In Dec | In Dec | o | o | o | o | SE | E | 3 | 3 | | |
| 22 | F. | | 30-15 | 30-17 | 55 | 68 | 45 | 69 | SE | SW | 1 | 1 | bc | bc |
| 23 | S. | | 30-24 | 30-24 | 62 | 64 | 52 | 65 | W | W | 1 | 1 | bc | bc |
| 24 | Su. | | 30-24 | 30-24 | 61 | 68 | 53 | 69 | N | N | 1 | 1 | o | bc |
| 25 | M. | | 30-24 | 30-18 | 60 | 66 | 51 | 67 | NW | NW | 3 | 2 | bm | bc |
| 26 | Tu. | | 30-16 | 30-20 | 57 | 61 | 55 | 63 | NW | NW | 5 | 5 | o | bc |
| 27 | W. | | 30-13 | 30-10 | 56 | 67 | 45 | 68 | NW | NW | 2 | 2 | bc | bc |
| 28 | Th. | | 30-19 | 30-25 | 54 | 62 | 46 | 64 | NE | N | 3 | 4 | b | bc |
| 29 | F. | | 30-36 | 30-34 | 57 | 69 | 47 | 78 | S | S | 1 | 1 | bc | bc |
| 30 | S. | | 30-32 | 30-28 | 59 | 71 | 45 | 73 | SW | S | 1 | 1 | b | bc |
| 31 | Su. | | 30-28 | 30-22 | 64 | 76 | 50 | 76 | NE | E | 1 | 1 | b | b |
| 1 | M. | | 30-21 | 30-21 | 65 | 72 | 50 | 74 | E | E | 2 | 3 | b | b |
| 2 | T. | | 30-25 | 30-25 | 64 | 73 | 51 | 74 | E | E | 2 | 2 | b | b |
| 3 | W. | | 30-26 | 30-26 | 64 | 76 | 50 | 78 | NE | E | 2 | 2 | b | b |
| 4 | Th. | | 30-22 | 30-22 | 69 | 78 | 51 | 79 | NE | E | 1 | 3 | bm | bc |
| 5 | F. | | 30-18 | 30-16 | 70 | 78 | 55 | 79 | NE | E | 2 | 4 | bc | bc |
| 6 | S. | | 30-13 | 30-10 | 70 | 82 | 54 | 83 | NE | SE | 1 | 2 | bm | bc |
| 7 | Su. | | 30-07 | 30-01 | 73 | 85 | 61 | 86 | E | S | 1 | 1 | bm | bc |
| 8 | M. | | 29-06 | 29-06 | 68 | 77 | 63 | 79 | SW | SW | 4 | 3 | bc | bc |
| 9 | Tu. | | 29-83 | 29-81 | 65 | 75 | 55 | 76 | SW | SW | 4 | 4 | b | bc |
| 10 | W. | | 29-98 | 30-01 | 67 | 70 | 55 | 71 | SW | SW | 4 | 4 | o | bc |
| 11 | Th. | | 30-23 | 30-22 | 67 | 78 | 55 | 79 | W | W | 4 | 3 | bc | bc |
| 12 | F. | | 30-27 | 30-25 | 70 | 82 | 59 | 83 | SW | S | 2 | 2 | bc | bc |
| 13 | S. | | 30-20 | 30-16 | 69 | 79 | 57 | 80 | NE | E | 2 | 2 | b | b |
| 14 | Su. | | 30-15 | 30-12 | 69 | 78 | 58 | 78 | E | E | 2 | 3 | b | b |
| 15 | M. | | 30-22 | 30-26 | 68 | 80 | 55 | 81 | NE | E | 2 | 3 | b | b |
| 16 | Tu. | | 30-32 | 30-40 | 73 | 79 | 59 | 80 | NE | NE | 2 | 2 | b | b |
| 17 | W. | | 30-36 | 30-34 | 70 | 79 | 54 | 81 | NE | E | 2 | 4 | b | b |
| 18 | Th. | | 30-26 | 30-24 | 71 | 81 | 57 | 82 | E | E | 3 | 3 | b | b |
| 19 | F. | | 30-15 | 30-11 | 67 | 83 | 59 | 85 | NE | SE | 1 | 1 | bc | bc |
| 20 | S. | | 30-16 | 30-16 | 72 | 83 | 60 | 85 | NE | NE | 2 | 4 | bc | bc |

MAY 1846.—Mean height of the Barometer = 29.925 inches; Mean temperature = 56.6 degrees; depth of rain fallen = 1.61 inches.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

AUGUST, 1846.

ON THE DIP OF THE HORIZON, and *Mirages of the Gulf and River St. Lawrence.* By *William Kelly, M.D., Surgeon, R.N., attached to the Naval Surveying Party on the St. Lawrence.*

EVERY one conversant with nautical astronomy is aware that some uncertainty always attends observations made with the natural horizon, from the varying amount of the *dip* occasioned by terrestrial refraction. The cause of these variations is very obscure. The best authorities seem to regard differences of temperature in the air and water as the sole cause of the irregular density of the lower strata of the atmosphere on which the varieties of the dip depend. It is known that, in general, when the water is warmer than the air, the dip is greater than that given in the tables; and that when the water is colder than the air, the dip is less. But cases occur where the deviations from the tables are found to bear little relation, at least in amount, to the relative temperatures of the air and water. Some other property of the atmosphere must therefore be sought after, by the influence of which the effects of temperature are modified.

One of the most obvious of these properties, and one which is intimately connected with temperature, is the quantity and condition of the watery vapour contained in the air. This had been for a long time looked on as an important agent in the production of terrestrial refraction, although the consideration of it has of late been excluded by astronomers. If we reflect on the different states, as regards dryness or moisture, which may exist in the strata composing the upper regions of the atmosphere, while the lowest only is within the reach of our examination, we need not be surprised that the endeavours to ascertain the effects of

the hygrometric state of the air on the apparent elevation of bodies seen through all these strata, should be productive of uncertain, or even contradictory results. It may be, therefore, wise to neglect it, at present, in the observations on celestial bodies made on land. But the case is very different when we come to inquire into its influence on the dip of the horizon at sea, the variations in which are solely owing to the state of the air nearest the surface.

During the first years of the survey of the St. Lawrence, I had remarked an apparent connexion between the mirages so frequent on that river, and the hygrometric states of the air. My observations are embodied in a paper which was read to the Literary and Historical Society of Quebec, in February, 1832, and published in the third volume of their Transactions. In the summer of the same year, I commenced a series of observations on the dip of the horizon, for the purpose of testing the views contained in that paper, which has been carried on as opportunity offered up to the present year.

The results of these observations were various. For although they generally tended to show that the refraction was more or less influenced by the hygrometric states of the air; and although, in some cases, the departure from the normal dip could only be referred to these states, being contrary to what might be expected from the effects of temperature, yet, in other cases, we found that, with an air drier or moister than usual, the increase or diminution of the dip did not exceed that which, in the ordinary states of the air, would be referred solely to the difference of temperature between it and the water.

As the varieties of the dip, as well as the mirages, are both local effects of terrestrial refraction, so that each may help to elucidate the other; and as the mode in which I have grouped the observations on the dip, is derived from circumstances observed to affect mirages, I shall state these circumstances by way of introduction to the few remarks I have to offer on the dip.

The mirages of the St. Lawrence are of two kinds. In one (the mirage of Arctic regions), the horizon is elevated, the forms of objects distorted, and frequently two, three, or even as many as five images of the same object are seen,* alternately erect and inverted—the lowest always being erect. This kind of mirage is only met when the water is colder than the air. In the other kind of mirage, (the mirage of the desert), the horizon is depressed, distant points of land seem raised into the air, the form of objects is seldom materially changed, there are never more than two images of an object, and when a second is seen, the lower is always inverted, the upper erect. When this kind of mirage is seen, the water is usually warmer than the air.

In the observations which I had an opportunity of making, the influence of a dry or moist state of the air seemed most remarkable in the kind of mirage first noticed. When the air was charged with moisture it often occurred with great intensity, although the temperature of the water was very little below that of the air, while, if the air was dry, we

* See *Nautical Magazine* for June, 1839, vol. viii. page 394.

never saw it unless the difference of temperature was much greater. In most cases, the temperature of the water was as low, or lower, than the dew point of the air.

The mirage with depressed horizon was constantly seen if we had an opportunity of observing distant points of land when the water was warmer than the air. In some such cases we noted it during a wet fog, when the air was apparently charged with moisture. But, occasionally, when the air was calm and very dry, we have seen this form of mirage, although there was no appreciable difference between the temperatures of the air and water.

The occurrence of either form of mirage, and its intensity, seemed to be affected by other circumstances besides the relative temperatures of the air and surface water, and the hygrometric states of the air. Thus they appeared more frequently, and their phenomena were more intense in calms or light winds than in a fresh breeze.* An easterly wind seemed to favour the production of the mirage with elevated horizon, more than a westerly one. It is often seen during calms or light variable winds, that precede winds from the eastward; and it is popularly considered as the harbinger of winds from that quarter.†

The mirage with depressed horizon seems to occur more readily in the morning. All the cases in which it appeared, when there was no difference between the temperature of the water and that of the air, were observed before noon. The mirage with an elevated horizon seems to be formed more readily in the evening, especially towards sunset. Of the few cases which we observed when the temperature of the water was not so low as the dew point of the air, one only was seen before noon, the others towards sunset, and some of them when dew had already begun to be deposited.‡

Both kinds seemed to be formed indifferently either with a clear or a cloudy sky, and I have never been able to remark any connexion between their appearance and the state of the barometer.

Most of these remarks on mirages will apply equally to the results of the observations on the dip. These were made with one of Dr. Woolaston's dip-sectors. The results are deduced from 87 sets, containing in all 376 observations, each observation consisting of two operations, one for ascertaining the upper, and the other for the lower arc. They were made when the vessel was steady, and when the sky was clear

* Still I have seen both forms in fresh breezes, and the mirage with depressed horizon during a strong gale.

† The easterly winds in the St. Lawrence are usually more moist than the west winds; and to this, perhaps, much of their influence in producing the mirage in question may be attributed.

‡ There seems to be a natural tendency to evaporation in the morning, when the air is becoming gradually warmer; and to the deposition of moisture in the evening, as the air becomes cool again. It seems probable that the frequency of the different forms of mirage is connected with these tendencies, or rather with the changes induced in the air by evaporation at one time, or by the deposition of moisture from it at the other.

at the horizon on both sides, as such a state is necessary for distinct observation with the instrument. None of them were made when there was a double horizon, or the least apparent irregularity in its outline in any direction.

The opportunities of observing the dip occurred mostly when our vessel was employed sounding off and on shore, where in some cases we found a considerable variation in the temperature of both air and water, as we approached to the land or receded from it. Although the observations were made when the vessel was farthest out, yet they may have been sometimes affected by these discrepancies of temperature, particularly when the points of the horizon observed were near the shore, which sometimes could not be avoided, either from the shape of the coast, or from the horizon being clear only in that direction. Still any error that might arise in this way is most probably compensated for in the general results.

A review of all the observations shews that the dip was materially affected by the hygrometric states of the air—the greatest elevation of the horizon occurring when the air was moist, and the greatest depression when it was dry. Like the relative temperatures of the air and water, the influence of the hygrometric states of the atmosphere is not constantly observed; but it is very apparent in most of the observations, and can always be recognized in the mean of a considerable number.

When the water was colder than the air, the elevation of the horizon was seldom considerable unless the air was moist, while, in several cases, when the air was dry, the horizon was depressed sometimes considerably, although the temperatures of the air and water were the same, and, in some instances, when the water was even a little colder than the air.*

The force of the winds had the same effect on the dip as on the mirages. Either the elevation or the depression was comparatively greatest in a calm, and least in a breeze. This was often very observable when a set of observations was commenced in a calm, and a breeze happened to spring up before it was finished.

As far as can be judged by the observations on board our vessel, the time of the day also, at which they were made, seemed to have an influence on the amount of the dip. This was very apparent in cases of elevated horizon. In 25 sets taken before noon, the mean difference from the tabular dip was $1' 2''$, while, in 24 sets taken in the afternoon, the mean difference from the tabular dip was $1' 20''$. The differences of temperatures and dew points was almost the same in both cases.†

The greatest elevation of the horizon which we observed, occurred on

* The observed dip exceeded the tabular by more than one minute in seven cases only. In four sets of the seven, the mean temperature of the air was $57^{\circ}.4$, the dew point $48^{\circ}.3$, the temperature of the water 57° , the mean excess of dip was $1' 15''$.

† In the 25 sets taken before noon, the mean temperatures were as follows:—that of the air 51.7° , of the dew point $47^{\circ}.6$, of the surface water $47^{\circ}.6$. In the 24 sets taken in the afternoon, the mean temperatures were—of the air 53° , of the dew point $49^{\circ}.20$, of the surface water $49^{\circ}.16$.

the 17th July, 1832, at 7 P.M. In this case, instead of a dip, the horizon was raised $2' 24''$ above the level of the eye, at a height of 12 feet from the water. The temperature of the air was 50° , of the dew point, $47^\circ.5$, of the surface water, $43^\circ.5$. In this case were combined a moist air, a cold sea, and the hour most favourable to the production of a raised horizon. If the natural horizon was used at that time for ascertaining the altitude of a celestial body, and the ordinary deduction for dip made, the error from this cause alone would amount to $5' 50''$; yet there was nothing in the appearance of the horizon which could lead us to suspect any deviation from its ordinary state.*

I have not sufficient data for ascertaining what effect the time of the day has on the depression of the horizon, as out of 28 sets of observations, which shewed that the horizon was depressed beyond the tabular dip, only five were made in the afternoon.

Some instances of depressed horizon with the water colder than the air occurred near the shore, when, as already remarked, there was no certainty of either the air or the water having the same temperature over any considerable space; but others occurred far from the land, and from banks, where, consequently, we had no reason to suspect the existence of any material difference of temperature in either air or water, within the extent of the horizon. There were but few observations made when the temperature of the water was much higher than that of the air, as it was not a common occurrence at the season when we were most at sea; and as my object was to ascertain the effect produced by the hygrometric state of the air, independent of its temperature, I preferred making these observations when the dryness of the air was well marked, while the difference between its temperature and that of the water was inconsiderable. The greatest amount of dip was observed on the 29th of August, 1845, at 11 A.M. It was $5' 47''$ at a height of 12 ft. 6 in., being $2' 16''$ greater than the tabular. The temperature of the air in this case was 58° , the dew point 39° , the temperature of the water 66° . There were in all 28 sets, consisting of 125 observations, in which the observed dip was greater than the tabular. The mean temperature of the air in these cases was $53^\circ.5$, the dew point $47^\circ.6$, the temperature of the water $52^\circ.6$. The mean excess of dip beyond that given in the tables was $38''$.

I found the observed dip to agree with the tabular in four cases only. In these the mean temperature of the air was $53^\circ.8$, the dew point $47^\circ.4$, the temperature of the water $52^\circ.3$. The low dew point seems to have compensated for the temperature of the water being inferior to that of the air.

A review of all the observations shews that the elevation or depression of the horizon is chiefly influenced by the relative temperatures of the air and surface water; and only in a minor degree, and, perhaps, less regularly, by the hygrometric states of the air. Either elevation or depres-

* We have repeatedly seen the horizon raised to a much greater amount than in the instance here related; but, in such cases, the horizon was so evidently false or double, that no person would think of using it for astronomical purposes.

sion was almost greatest, *ceteris paribus*, in calms. The influence of the time of the day was generally evident ; under similar circumstances of air and water the depression being greatest in the morning, and the elevation greatest in the evening. These remarks, however, can only be taken generally, for our information is not yet by any means so precise as to admit of its application to particular cases.

REMARKS UPON THE NAVIGATION OF THE RIVER MIN.

THE White Dog Group will afford shelter to vessels in the N.E. monsoon ; but by far the best place for making the entrance to the river is from Chang-che-san and Mat-soo-shan. On the west side of the latter, vessels will find shelter in either monsoon ; and as they will have only seven miles to go to reach the bar, they will be better enabled to choose their time.

These islands, viz. the White Dog Group, Mat-soo-shan, Chang-che-san, together with the Sea Dog, form admirable leading marks for making the coast, and are thus described by Captain Kellett :—

The White Dogs.—“The White Dogs, called by the Chinese Pik-kien, consist of two large and one smaller islet. To the N.E. one and a-half mile is a rock upon which the sea breaks. Anchorage for ships of any draught may be had under the western island in the N.E. monsoon ; as the water decreases gradually towards the island, large vessels may approach as convenient, bearing in mind that there is 18 feet rise and fall.”

H.M.S. *Cornwallis* anchored here for five days with strong north-easterly winds, and rode easy. The bearings from her anchorage were as follows :—

| | | |
|---------------------------|---------------------|-----------------|
| West point of N.W. island | N. $\frac{1}{2}$ W. | } in 8 fathoms. |
| Village, | N. N. E. | |
| Smallest island, | E. $\frac{1}{2}$ S. | |

One cable off the western point of Village Bay, on the south side of West Island, is a rock which shews at half tide. The channel between the islands is safe. The S.W. end of West Island is in latitude $25^{\circ} 58' 1''$ N., and in longitude $119^{\circ} 57' E.$ The summit of the island, which is nearly level, is 598 feet above the sea.

Fresh water may be obtained in small quantities.

Vessels bound for the Min should start from here with the ebb tide.

Pilots may be obtained ; but it must be borne in mind that the *Bintang* was run on shore by one of them either from ignorance or wilfulness.

Mat-soo-shan.—Mat-soo-shan lies due north of the western White Dog, and between the two (N. 14° E. from the latter), is the Sea Dog, a precipitous black rock about 60 feet high, with reefs about it : S. 32° W. from it 1.45 mile is a reef with only eight feet over it at low water ; when upon it the summit of Mat-soo-shan bears N. 14° W. Between

the Sea Dog and Mat-soo-shan are two other rocks which are never covered ; and upon the eastern side of Mat-soo-shan is an islet with reefs extending two cables easterly.

Anchorage (as has been observed), will be found in both monsoons on the western side of Mat-soo-shan ; but in the S.W. monsoon vessels must choose such a berth as will enable them to run round the N.W. point of the island and find shelter in the bay upon the north side, in the event of the breeze from that quarter freshening into a gale.

Fresh water can be obtained in both bays.

Chang-che-san.—Chang-che-san lies N.E. three miles from Mat-soo-shan ; on it are two remarkable peaks, the highest is elevated 1030 feet above the sea, and is in latitude $26^{\circ} 14' N.$, and longitude $120^{\circ} 1' 7'' E.$ The bay on the south side of this island affords good shelter in the N.E. monsoon. Vessels entering from the northward may round the south eastern horn of it close, and anchor within the point in six fathoms.

Junks or fishing boats may be had here to communicate with the Min.

Entrance to the River Min.—To the eastward of the north horn of the channel, at the entrance of the river, is a reef which shows only at low water ; the bearings from it are :—Mat-soo-shan Peak N. $54^{\circ} E.$, Sea Dog N. $88^{\circ} E.$, White Dog Peak S. $45\frac{1}{2}^{\circ} E.$, Sand Peak S. $59^{\circ} W.$, Sharp Peak N. $71^{\circ} W.$, and Rees Rock is in line with the southern peak on Square Peak Island.

Rees Rock is low and difficult for a stranger to get hold of, unless from the masthead. There are, however, other leading marks, which, unless the hills are obscured, will form good marks to enable a seaman to ascertain his position. On the north side of the river is a remarkable sharp peak ; and a square (or double peak) on the south ; nearer than the latter Round Island will be seen, and to the southward of it a sharp, sandy peak, bearing about S. $68^{\circ} W.$ This latter is the only peak that can be mistaken for the sharp peak on the north side, and the bearings of the White Dogs will at once obviate the mistake, if referred to.

The channel between the breakers is two miles across at the entrance ; nearly in mid channel is a knoll which at some seasons has only 9 feet over it, and at other periods 13 feet.

The leading mark in, to pass upon the north side of it, is to bring Rees Rock in line with Square Peak, bearing N. $81^{\circ} W.$ At present, however, (1846), the channel south of it has more water, and is to be preferred, the leading mark for which is to bring Rees Rock in one with the first point under and to the right of Square Peak, bearing W.N.W.

Having entered, steer so as to pass one mile north of Rees Rock ; the breakers will show on each side of the channel if it be near low water and there is any swell ; by skirting the northern side the deepest water will be found ; and it is necessary to take great care that the vessel is not set across the channel, as the tide rushes across with great force between the sand banks, the ebb setting to the northward and the flood southerly.

The course from Rees Rock is N. $68^{\circ} W.$, and in going up keep the two islets (called the brothers) on the face of Hoo-keanga in one, which will carry you in mid channel until you are abreast Sharp Peak Point,

when a N.W.b.W. course may be shaped for Temple Point which is upon the north bank of the river, and will be known by the trees and Joss-house upon it.

In the channel without Rees Rock the depth of water is $2\frac{1}{2}$ and 3 fathoms; between Rees Rock and Sharp Peak Point there is a hole with 5 and 6 fathoms where vessels may stop a tide and find tolerable shelter; Sharp Peak Point should not be passed nearer than a cable; the bay west of it is shoal, and under the Peak the two fathoms line extends nearly one mile from the shore.

The mud also extends south-easterly from Hoo-keanga nearly $1\frac{1}{2}$ miles. Vessels beating in this passage must therefore keep the lead going.

From the West Brother the mud extends westerly one mile, and upon its north edge is a patch of rocks which are covered at quarter flood. The West Brother bears from them S. 74° E., and the Temple N. 12° E.

S. 17° W. from the Temple $3\frac{1}{4}$ cables is a knoll with $2\frac{1}{4}$ fathoms on it. Sharp Peak seen over the lower part of Woga Point will place you on it.

From the Temple to Ken-pai man is not quite two miles W.b.S. At the entrance of the passage are two islets; pass between them and keep over towards the south shore to avoid a rock which lies W.b.S. $\frac{1}{2}$ S. from the northern islet. The channel is not quite two cables wide, and should only be attempted at slack tide, as the chow-chow water renders a vessel unmanageable.

To the westward of Ken-pai Point is a rock having 13 feet over it at low water; the bearings upon it are Ken-pai Point N. 66° E., fort on the north shore N. 32° E., ferry-house S. 48° W., highest hill over Ken-pai Point S. 30° E. Ken-Pai Point in one with the north end of Passage Island (the northern islet at the entrance) bearing N. 56° E. will place you south of it, which is the best side to pass, as the channel this side is $1\frac{1}{4}$ cables wide, while between the rock and the tail of the spit to the westward, the distance is only half a cable. Having passed the point keep the southern shore close on board to avoid the middle ground, the channel hereabouts being sometimes under two cables; when abreast of the ferry-house which is $1\frac{1}{2}$ miles above Ken-pai, and on the right or southern bank, edge over to the northern shore, passing Wedge Islet at the cable's length; there are two rocky points above it which are covered at high water, and extend a cable from the embankment.

The rock and sudden turn in the Ken-pai Pass, render the navigation exceedingly awkward; but if vessels wait for the last quarter flood they will be enabled to run up on the northern shore.

Above the ferry-house and the same side of the river is Tree Point, the shore on that side between them being shoal to approach; a half tide rock bears from the Tree Point N. 9° W. $4\frac{1}{2}$ cables, when on it the ferry-house is in the line with Ken-pai Point.

This reach runs S.W.b.S. and N.E.b.N.; at the distance of six miles from Ken-pai, the river narrows again to $3\frac{1}{4}$ cables, the hills rising abruptly on either side.

The town of Min-gan is on the left bank of the river one mile within the strait; the river continues narrow for three miles, and the depth of water being generally above 20 fathoms, vessels, unless with a leading wind, should keep a boat a-head as the tide is apt to set you on either shore. Rather more than half a mile above Min-gan, and on the same side of the river, is an islet crowned with a fort.

At the upper end of the narrows are two islets upon the right bank; in going up leave them upon your port hand, passing close to the northern point of the outside one, which is steep to; but there is a sunken rock, on which the *Spiteful* struck, three-quarters of a cable from its north-western shore. W.N.W. from the island two cables is a shoal patch of nine feet at low water.

Having passed the island, keep along the right bank, gradually hauling up for the Pagoda of So-sing-tah; S. 12° E. from it rather more than two cables is a sunken rock which shows at low water spring tides; to avoid which, round the Pagoda Point close, and come to opposite the sandy bay above the Pagoda. The river is only navigable for vessels three-quarters of a mile above the Pagoda.

There is a sand bank a-half mile to the N.E. of the Pagoda and half a cable from the shore.

The navigation of the river might be greatly facilitated and at a small expense. The following are what appear to me necessary:—

1st. An iron basket high enough to be seen at all times of tide on the reef to the eastward of the north horn at the entrance.

2nd. A buoy on the knoll at the entrance.

3rd. Rees Rock to be raised higher, and a mark on the land under Square Peak (which may easily be made by paint or whitewash), which, brought in line with the rock, will lead vessels through the channel to the southward of the knoll, and obviate the necessity of compass bearings.

RICHARD COLLINSON, *Captain.*

THE BRITISH SEAMAN.

“ True Blue never fades.”

THE late war-like language of America roused the voice of the press of this country to express opinions and sentiments on the present position and condition of the British seaman; and it is gratifying to find that his honest character is generally upheld. If any thing brief and pithy were required of us, as a single compliment to mark our sense of his merits, we might borrow with excellent effect the words of Carr, (applied to

Admiral Sir Sidney Smith), and repeat that he is one—for whom delighted Nature, in the language of our immortal bard—

“—————Might stand up
And say to all the world, this *is* a man !”

It is well known that there are thousands of British seamen serving in American vessels. This fact at the present moment, has caused some anxiety, probably from the circumstance of many of the old English sailors of the war of 1813, fighting in the United States ships against their country.

We confess to entertain but little apprehension of ill consequences arising from that event, should a war occur with America ; any hasty pre-judgment to the contrary would perhaps be an injustice. Taking an enlarged view of present circumstances, we do not think we should be warranted in drawing an unfavourable conclusion from an isolated example of the past of what may take place in the future.

There are several points for consideration which cheer us to look for a propitious issue with respect to the conduct of those British seamen now serving in American vessels, that, were, unfortunately, wanting on the former occasion alluded to. Unhappily, at that period, the navy was the *dread* of the sea-faring man ; at present, we may all rejoice that it is no longer so considered by him.

We have now almost an entire new generation of seamen, whose elementary education, training, and manners*, have undergone some—indeed, we may say great—alteration for the better since the epoch of which we speak. It is not natural, therefore, to conclude that, although the general characteristics remain the same, the feelings of the class have partaken of a corresponding improvement with the ameliorations of their condition, &c., and that there are advances towards a more moral tone of sentiment in them, as in the other grades of society ;† indeed, this appears to be confirmed in three instances, viz. :—at Singapore, at the Brazils, and at New York, at which places, the British seamen shewed that they were sensibly alive to the force of the obligation of the natural allegiance due to their country, by declaring their intention not to serve against it should a war break out. Why then should we mistrust them ? We can only judge justly of them from their opinions and actions, not from what we choose to think, that every liberal mind will assent to ; and it is, even without the consideration of their value to the State, a

* I met lately a young seaman, coming out of a bookseller's shop, with a large bundle of books. I felt so delighted that I could not refrain from exclaiming, “ Well done, Jack—a library ?” “ I am trying hard to form one— all hands desire it—it will do good, sir !” Again, I saw another in a shop purchasing a rosewood dressing-case, complete ! Upon a remark of one of the by-standers about “ altered times,” the youth turned round sharply and asked this question :—“ I should be glad to know *why* a sailor should not have his little comforts as well as other folks ?” “ You are right, my lad,” said I ; “ but don't despise the tar-bucket.” “ Oh ! no fear of that !” What a change— for the better ? Aye ! to be sure. God speed 'em.

† We, of course, are dealing with the general question.

very high gratification to know that they are as a class proverbial for the noble characteristics of generosity, candour, friendship, patriotism, and bravery.

The generosity of a true seaman knows no bounds ;—in him the divine attribute of benevolence is exemplified in all its purity—it is *genuine* ; it is a free and unrestrained feeling of his nature—uncalculating ; it hesitates not, in its application, *to count consequences to self*—it is the lustre of the rough diamond darting forth its rays through an unpolished covering ; and it were a blessing, indeed, to society, if all classes generally were, as free from selfishness as the British sailor. Now, it will be readily admitted, that a man in possession of that virtue is infinitely less liable to the committal of a base action than one whose soul is wrapped up in self.

His candour and sincerity are so universally acknowledged, as scarcely to need a passing remark. No shoreman can possibly surpass him in these characteristics ; if he lacks a little polish, his ingenuousness compensates ; you may rely upon his word ; you can trust him, for he has no disguise ; the thorough Jack wears no mask ; he stands confessed an honest man who disdains to play the hypocrite ; he deserts not his friend in the hour of need ; his actions are above board ; he is unsuspecting, and hence he is oftener sinned against than sinning !

His friendship is exemplified in the fraternal regard he entertains for his *shipmate*, and more especially his *messmate*. You may search in vain throughout the land for a tie which knits the hearts of men with a more *disinterested*, a more *noble* principle ; and, if not peculiar to the seaman, it assuredly is more marked in him, more steady, than in the generality of shoremen. It is one of the most exalted virtues which animate the soul of man—not alone as upholding the bonds of human society, but as being a realization of the holy precept which enjoins us to “love our neighbour as ourself”—it is the second great law ! Look around and observe the working of the passions,—the envy, the hatred, the malice, the detraction, displayed between man and man on the land—in the midst of the boasted refinements of metropolitan society ! And who then could turn round and have the heart, the hardihood, to raise his voice in depreciation of the character of the British seaman possessing those elevated traits which we have endeavoured so imperfectly to describe ?

His patriotism : Who is there with the recollection of the trying scenes through which the seaman passed during the late long and vigorous wars, would deny him its possession ? The retrospect is deeply painful whilst we exult in our successes—whilst we glory in that renown which exalted the greatness of our country. It is a tale of the past, of days gone by, but not forgotten ; and as such, we can venture to touch lightly its truths, without the apprehension of danger arising thereby ;—it is a part of history,—and it becomes a duty not to leave the tar's character incomplete.

Reflect, therefore, on the slavish life the British seaman was doomed to pass—environed around with evils—the bare remembrance of which is soul harrowing, and which were sufficient to rob humanity of every source of

consolation ; which weighed down the soul and kept it prostrate as from the pressure of some monstrous incubus ; which gave no relaxation to toil, no moment for thought ; which harrassed and tortured the mind, and enervated the frame ; which moulded the actions into the working of a mere machine ; which kept imprisoned alike the body and the will ; which threw an impassible barrier between the faint light that hope lit up to cheer the sinking heart, and the fair but distant prospect beyond, of that happy home which he seemed doomed never again to revisit ! Think, think of all those sufferings the British seamen calmly endured. Put your hand to your heart, and say if it was the *iron rule* that bound him down to passive submission ?

If ever any class, if ever any body of men, gave to the admiration of the world, an example of the practical exemplification of patriotism, the deep and soul-felt love of country, it was those devoted beings constituting the pre-eminently glorious strength of the British navy. Go, ask those time-honoured veterans, the last remnants of the hardy sons of Neptune, of whom we are now speaking ; go, ask what gave them patience, what upheld their fortitude in the endurance of the toils, the privations, and the miseries of the long long period they were subjected to them ?

The seaman has his faults, true, but where is the man to be found without them ? Take him "all in all," may we not attribute his peccadilloes rather to the head than the heart ! Are we, whom fortune has befriended, as if spotless, to rise up in judgment against him ? Chamisso says of human vanity, "that it is the quality of our race in which the anchor takes the firmest hold." Alas! for poor human nature!—in that we are all "stone blind!"

"Poor Jack," and his errors ! Why are these so repeatedly made the theme of censure. We venture to say, without the fear of contradiction, that, compare the actions of the class with those of the individuals composing the grades that the seaman springs from, and it will be found that the manly virtues of the "Jacks" are not inferior to those of the other, if they should not be discovered to be superior. Upon the whole, embracing all the disadvantages under which the seaman labours, does his general character not stand higher than we ought to have any reason to expect ? Upon a fair estimate, we think so. A great deal of good sound legislation has been effected for the improvement of the condition of our seamen generally, but the coast railroad mania, unless the Government applies a corrective, will eventually destroy the coasting trade ; and for what ?—For an object certainly of far less national importance than that which, as a consequence, it will annihilate—one of the *best nurseries for seamen*. That point, however, has been so zealously and so ably argued, that we need say no more about it here than to observe, that the mere realization of fortunes to speculative monopolists, whilst the right arm of our power in *defence* of our *homes*, our *altars*, and our *liberties*, is weakened therefrom, is the surest way to commence the downfall of Old England.

Among many other observations we have seen published, is the following on a comparative view of the English and American navies. The writer speaking of the 270 British seamen who quitted the American

ship *Columbia*, and 70 of whom joined H.M.S. *Rodney*, says :—" This circumstance is made a matter of glorification ; and certainly the men who so acted are deserving of high praise, for assuredly they would not receive above half the amount of pay on board H.M.S. *Rodney* than they would have received had they remained on board the Yankee ship of the line. But what are we to think of the policy of a government that thus obliges poor men to pay so heavy a penalty for the indulgence of national and patriotic feelings ?"

The circumstance spoken of has not been contradicted, that we are aware of, and, therefore, believing it to be true, we trust that their Lordships of the Admiralty have marked publicly, in some way or other, the sense they entertain of the merit of the action performed by these fine fellows. Such, we are convinced, would do as much good as an offer of an advance of wages, to encourage the thousands yet remaining in the American ships, to be prompt in returning to their country, should their services be required.

During peace, the British seaman appears to be content with the pay (A.B. 34s. ; O.S. 26s. per month) awarded to him ; at least we may infer so from so many ships being readily manned. But it is highly probable that in the event of a war with America, the Government of this country would be constrained to augment it greatly ; indeed, it would be but just to do so. And in order to encourage voluntary entry into the service, and avoid impressment, which has become so odious in the eyes of the public, and is always so to the seaman, a bounty equal to that which the military recruit will receive, must also be given to the former.

The seaman, like every man whose labour or talent is his capital, may be expected to carry that capital to the best market ; and we find, therefore, that he is not slow in finding out such a market, in common with great numbers of his enterprising countrymen. And although we would be much more pleased to see him serving, even in peaceable times, in the ships of his own country, yet he may not be reproached as committing any very great error in obtaining the best return he can for the exercise of his skill and acquirements. We think it, however, morally wrong for the " mercenary," who is a foreigner, to serve any State during a war, notwithstanding such an action is deemed venial by the world.

A recent traveller in the United States, who writes under the signature of " Rubio," says :—" When we see the rate of seamen's wages in America—fifteen dollars per month—it is no wonder that there is no scarcity of hands to man their ships, for by a late return to Congress it came out that out of 109,000 men and boys employed in the fisheries, rivers, canals, merchant ships, and navy of the United States, 100,000 were foreigners, that is British, and only 9,000 Americans !"

From the same writer, we learn that, by a late act of Congress, flogging has been abolished in all American ships of the navy and of the merchant service,* and that out of 6100 seamen employed in the States navy, only 960 are stated as *native-born* Americans, the rest being prin-

* We have heard this denied.

cipally English, with a few Swedes and Hanseatics ; their pay is fifteen dollars a month, and two additional if not drawing their allowance of rum. This is fully equal to £3. 10s. per month. Without this high rate of wages it would be next to impossible for the secretary of the navy to man the ships.

With this important fact before us, and that British seamen are found *voluntarily* serving in our own men-of-war for *half* the wages given by the Americans to the English seamen who join them, where could be the conscience or the delicacy of the man who should raise his voice in disparagement of our tars ? We should not envy him the qualities of his head or his heart. "Rubio" gives an amusing account of the fanfaronade of our droll transatlantic brothers. He says :—" I found, go where I would, that the universal feeling in America prevails in every state, that they would *lick* us, as they elegantly call it, in about a fortnight ; but, if Great Britain would stand it out a month or two, that would be the extent, when she would fall down upon her knees before the glorious republic, crying " Peccavi ! and yield every thing—Texas, Oregon to 54° 48', annexation of Canada, and pay by instalments the expense of the war ; during the payment of which she would hold Halifax and Bermuda ! This is the feeling all through America." A pretty, considerable, amusing brag of " Uncle Sam's," indeed ! Poor Mr. Bull, no doubt, will wring his hands, and look aghast at such overwhelming news, especially when he is told that the balance of " Uncle Sam's" treasury amounts to the enormous sum of seven and a-half millions of dollars, and the public debt to seventeen millions ditto ! This voice of the democratic citizens, to them so spicy, we can afford to smile at and pity—pity, because in the necromancy of the ambition which has seized them,—like Sisyphus—they are urging the stone upwards that will come down again with fearful force and break their own heads !

A SEAMAN'S FRIEND.

REMARKS ON THE NAVIGATION OF THE GULF OF MEXICO, *with Notes on Tampico, Tucupan, Vera Cruz, Anton Lizardo, and Tabasco, &c., by Mr. P. Masters, Master Mariner, of Liverpool, 1844.*

(Concluded from page 345.)

Documents required from Ships entering any port of the Mexican Republic, and Regulations to be observed.

MANIFEST in triplicate signed by the captain or supercargo, and signed and sealed by the Mexican consul or vice-consul at the port of lading, or for want of a Mexican consul, by the collector of the customs, or by the consul or vice-consul of any friendly power.

The triplicate manifest already referred to, must express in *numbers and writing*, the bales, trusses, cases, barrels, &c., and all other packages

of which the cargo is composed, expressing in general terms the contents of the packages, with *mark, number, and party to whom consigned.* The want of any of these requisites, (even goods coming to "*order,*") will subject the captain or supercargo to a fine of 500 dollars.

No foreign vessel can do the coasting trade, but can proceed from the port of discharge to other ports to load the produce of the country.

Of the three general manifests, two are required to come under *sealed* cover of the Mexican consul or his substitute, directed to the administrator of customs of the port of the republic where the vessel is bound, the remaining copy of the said general manifest coming under the most careful charge of the master or supercargo; such copy must be delivered to the customs within twelve hours after anchoring, and entering the port.

The captain or supercargo is also required to bring under sealed cover, addressed to the administrator of customs, the custom-house cockets or clearance of all and any package of goods shipped, signed, and sealed by the custom-house authorities of the place of lading. (*N.B.*—This has not been carried into effect so far as being under sealed cover).

Immediately that the custom-house boat bearing the national flag, (Mexican), and having on board a custom-house officer, shall present itself, the captain or supercargo (if demanded), shall hand him the two general manifests addressed to the administrator of the customs before referred to, at the same time a note signed by the captain or supercargo, expressing the trunks or other packages of baggage belonging to the passengers there may be on board, (naming the owners), also a note signed by the said captain or supercargo, of the provisions and all stores of all kinds on board appertaining to the vessel. The non-delivery of any of these documents on demand subjects the captain or supercargo, (or the vessel in charge), to a fine of 200 dollars.

In case a vessel taking in a cargo at two or more ports, at each of such ports triplicate manifests and cockets are required, in the same terms as before stated, the same as if the whole cargo had been taken in at one port only.

The captain or supercargo under penalty of 300 dollars, must not permit any person to board the vessel or come along side (the pilot alone excepted) outside the bar, after the visit of the custom-house and health officers, and until the vessel be completely discharged, only the consignee can come on board. (*N.B.*—The consignee can only come on board by permission).

In delivering the cargo each boat or canoe load has to be dispatched from the vessel with a note, mentioning the marks, numbers, and descriptions of packages in her; for each package either above or below the quantity mentioned in the note, the penalty is 25 dollars.

For the omission of any bale, truss, case, barrel, &c., in the general manifest, the fine is equal to the value of the goods *in the port of discharge*, of said package omitted, and if the omission is more than *six packages* the vessel will be confiscated.

The bills of health from the last port of departure are required.

Breaking the seals on the hatches or other places, placed by the cus-

tom-house officers, (if intentional), to be tried for theft, if not, the damage to be decided by the judge according to the circumstances of the case.

The greatest care is necessary in attending to the foregoing instructions, as any omission subjects the captain, supercargo, or vessel, to the before mentioned fines.

Remarks on Freighting or Chartering Vessels for Tampico, &c.

To be able to enter the port of Tampico, no vessel should draw more than $8\frac{1}{2}$ feet water, otherwise a part of the cargo (in general) has to be discharged outside the bar at a very heavy expense, (as is hereafter stated). On engaging to carry freight, stipulations should be made and expressed in the bill of lading, that the said "goods to be taken from the ships' tackles at her anchorage, and lighterage if any outside the bar to be paid for by a general contribution on the whole cargo," otherwise the vessel will be liable to heavy expenses in landing her cargo.

When freight is to be paid in the country, it should be in hard silver dollars, to avoid receiving change, &c., which is difficult to get exchanged, and not suitable for shipment, and should there be spurious dollars, they are recoverable. *N.B.*—On signing bills of lading for money, mention "hard silver dollars," for the same reason.

Before leaving the port of discharge, a bill of health and certificate of having paid the tonnage-duty must be obtained, as they are indispensable in going to a second port of the republic, and should the ship be disabled and have to put into a Mexican port to refit, these documents will be demanded, and if not produced, may cause detention or the duties to be paid again.

In chartering to load at Tabasco, it should be particularly stated, whether the vessel is to receive her cargo at the frontera, or to proceed up the river, for if the latter, there should be an advance of freight. If the cargo is in the Tabasquillo, there should be no more freight allowed; for, with the sea breeze, a vessel can run up from the frontera to the entrance in less than two hours, and if she has to proceed up the river Tabasquillo, she will in general arrive the same day at the place where the log-wood is shipped. There is an advantage in loading up the Tabasquillo as there are no grog shops, the crew can be kept sober, and, in general, as many hands can be had to assist in loading as may be required; but, if the vessel has to proceed up the San Pedro, Hasumacinta, Chilapa, Cojinicuil, or Chilapilla, rivers, the freight should be at least one real per quintal extra, or 11s. 6d. per ton, over and above what would have been paid for loading at the frontera; but no vessel should go up the rivers to load unless in the season of the northers, as the current is so strong, in the rainy season; besides it is almost certain that the crew will fall sick by exposure to the sun and rain. The chief progress will be by warping.

At the frontera and Tabasquillo, the lying days are generally 25 for loading, in the other rivers from 12 to 15, from the time the vessel arrives at the place of taking in the cargo, supposing her to take about 3,600 quintals, or 150 tons.

The following charges are made at the bar of Tampico :—A launch load from the vessel off the bar at the anchorage to inside, is 40 dollars, and if the goods are delivered at the town (Santana de Tamaulipas), it is 70 dollars.

An agreement may be made for delivering packages of a half mule cargo of 200 lbs. each, from the ship outside (as above) for 5 reals each, and to town, 8 reals each.

A launch load of ballast taken outside is 30 dollars.

Passengers pay, in landing from outside the bar in the pilot-boat to inside, 5 dollars each, and to town, 7 each, but being always understood, that there will be sufficient to pay the boat's expenses to town.

For an individual wanting a boat to go to a vessel at anchor outside, 20 dollars, and, if under sail to be agreed on.

Should a vessel be on the bar, either in coming in or going out, warps and anchors are to be carried out free of charge ; but should any thing be lost belonging to the bar establishment, the same shall be paid for by a valuation of the captain of the port.

The stowage of cargo for lightening a vessel at the bar has to pay 2 reals per bale of (Media cargo de Mula), 175 lbs. to 200 lbs. each, but they are obliged to put the same on board again, on the vessel getting inside the bar.

On the occasion of a ship getting aground, for each launch load discharged, 40 dollars, however near she may be to the shore.

Each vessel is entitled to one boat in going in over the bar or going out, but should any more be required, for each extra boat, 30 dollars.

People from the establishment employed on board any ship on the bar, are paid 2 dollars each in the day, and 4 in the night time, the pilot or coxswain receiving double.

Any vessel that the captain wishes to be warped over the bar, an agreement must be made with the person in charge of the establishment to that effect.

It is to be observed that the quantity of goods considered a launch load, depends on the state of the bar, varying from $3\frac{1}{2}$ to 6 tons.

By a law of August 31, 1836, of Congress, article 2nd, the tonnage-duty shall not be demanded from any vessel wrecked on the coast, or forced by stress of weather into any of the ports of the Mexican republic, always justifying the necessity of the case.

Port charges at Tampico for a vessel of 100 tons (de Burgos) or Spanish measurement.

| | dollars. | reals. |
|--|----------|--------|
| Tonnage-duty, 12 reals per ton, | 150 | 0 |
| Pilotage in and out, 8 reals per ton, | 100 | 0 |
| Gratuity to the pilot on all sized vessels, | 6 | 4 |
| Pilotage, 2 dollars per foot, (say 8 feet), | 16 | 0 |
| Survey of hatches, two persons, at 5 dollars each, | 10 | 0 |
| Captain of Port's fees, | 4 | 4 |
| Discharging the cargo, as per agreement with canoc men, say | 40 | 0 |
| Carry forward, | | |
| | 327 | 0 |

| | | dollars. | reals. |
|--|------------------|----------|--------|
| | Brought forward. | 327 | 0 |
| Bill of health, (hospital fees), | . | 10 | 0 |
| British consular fees, | . | 4 | 0 |
| | | <hr/> | |
| | | 341 | 0 |
| Opening and entering of register for the return freight, | 6 | 2 | |
| Sundry expenses, (canoe hire), | 2 | 2 | |
| | | <hr/> | |
| | | 8 | 4 |
| | | <hr/> | |
| | | 349 | 4 |

N.B.—The bill of health (hospital fees), entitles the crew to be sent to the civil hospital when sick, free of charge.

Consignee's Charges.

| | | |
|--|---|-----------|
| Commission on outward freight if recovered in Tampico, | 5 | per cent. |
| Ditto. on disbursements, | 5 | |
| Ditto. on purchase of cargo home, | 5 | |
| Ditto. on freight do. do. | 5 | |

N.B.—The above consignee's charges should be avoided by a clause in the charter party, by allowing the master to draw against the freight sufficient to pay his expenses, and the other charges not to be made even at a sacrifice of taking less freight, by which the amount of charges, &c., will be nearly known previous to the vessel leaving the port of lading.

Port charges at Tabasco when the vessel has discharged at another port, and paid the tonnage-duty.

| | dollars. | reals. |
|--|----------|--------|
| Pilotage in and out for vessels of any size, | 31 | 4 |
| Captain of the Port's fees, | 3 | 0 |
| Baranca or levy fees, | 4 | 0 |
| Sealed paper for opening register, | 7 | 4 |
| | <hr/> | |
| | 46 | 0 |

There is a commission charged on the price of the cargo of 4 per cent., unless an agreement is made to the contrary.

In weighing the cargo at the frontera, the expense is generally divided between the shippers and the ship; say the ship's share from 20 to 25 dollars; but this depends upon the supply of labourers, and quantity shipped.

Wages for men vary from 1 to 1½ dollars per day, provisions not found. Up the river the wages are about a dollar per day. The foregoing remarks were made in 1844.

SOME ACCOUNT OF CAPTAIN MERCATOR COOPER'S VISIT TO JAPAN,
IN THE WHALE SHIP MANHATTAN, OF SAG HARBOUR.—*By C. F.
Winslow, M.D.*

It was about the 1st of April as Captain Cooper was proceeding towards the whaling regions of the northern ocean, that he passed in the neighbourhood of St. Peters, a small island lying a few degrees to the S.E. of Nippon. It is comparatively barren and was supposed to be uninhabited; but being near it Captain Cooper thought he would explore the shore for turtle to afford his ship's company some refreshment. While tracing the shore along he discovered a pinnacle of curious construction which resembled somewhat those he had seen in the China seas. Turning his walks inland, he entered a valley, where he unexpectedly saw at some distance from him, several persons in uncouth dresses, who appeared alarmed at his intrusion and immediately fled to a more secluded part of the valley. He continued his walk and soon came to a hut, where were collected eleven men, whom he afterwards found to be Japanese. As he approached them they came forward and prostrated themselves to the earth before him, and remained on their faces for some time. They were much alarmed and expected to be destroyed; but Captain Cooper, with great kindness, reconciled them to his presence, and learned by signs that they had been shipwrecked on St. Peters many months before. He took them to the shore, pointed to his vessel, and informed them that he would take them to Jeddo if they would entrust themselves to his care. They consented with great joy; and abandoning every thing they had on the island, embarked with him immediately for his ship.

Captain Cooper determined to proceed at once to Jeddo, the capital of the Japanese empire, notwithstanding its well known regulations prohibiting American and other foreign vessels to enter its waters. The Captain had two great and laudable objects in view. The first was to restore the shipwrecked strangers to their homes. The other was to make a strong and favourable impression on the government, in respect to the civilization of the United States, and its friendly disposition to the emperor and people of Japan. How he succeeded in the latter object the sequel will show; and I will make but few remarks, either on the benevolence or boldness of Captain Cooper's resolution, or its ultimate consequences touching the intercourse of the Japanese with other nations. The step decided on, however, has led to some curious and interesting information, relative to this country, whose institutions, and the habits of whose people are but little known to the civilized world.

Captain Cooper left St. Peters, and after sailing a day or two in the direction of Nippon, he descried a huge and shapeless object on the ocean, which proved to be a Japanese ship or "junk," as these vessels are called, wrecked and in a sinking condition. She was from a port on the extreme north of Nippon, with a cargo of pickled salmon, bound for Jeddo. She had been shattered and dismantled some weeks previous, and was drifting about the ocean at the mercy of the winds, and as a gale arose the following day, the captain thinks she must have sunk. From

this ship he took eleven men more, all Japanese, and made sail again for the shores of Nippon. Among the articles taken from the wreck by its officers, were some books and a chart of the principal islands composing the empire of Japan. This chart I shall speak of in detail hereafter, and it is, perhaps, one of the most interesting specimens of geographical art and literature which has ever wandered from the shores of Eastern Asia.

In making the land, our navigator found himself considerably to the north of Jeddo ; but approaching near the coast, he landed in his boat, accompanied by one or two of his passengers. Here, he noticed many of the inhabitants employed in fishing at various distances from land. The natives he met on shore were mostly fishermen, and all appeared to belong to the common or lower classes of society. They seemed intelligent and happy, were pleased with his visit, and made no objection to his landing. From this place he despatched one of his passengers to the emperor, who was at Jeddo, with the intelligence of his intention or wish to enter the harbour of the capital with his ship, for the purpose of landing the men whom he had found under such distressed circumstances, and to obtain water and other necessaries to enable him to proceed on his voyage. He then returned to his ship, and sailing along the coast for many leagues, compared his own charts with the one taken from the wreck. The winds becoming unfavourable, however, he was driven away from the land so far, that after they changed, it took him a week to recover a position near the place where he first landed. He went on shore again, despatched two other messengers to the capital, with the same information that he had previously sent, and the reason of his detention. He sailed again for Jeddo, and the winds proving auspicious, in due time he entered the mouth of the bay, deep within which the city is situated. As he sailed along the passage, a barge met him coming from the city, in command of a person, who, from his rich dress, appeared to be an officer of rank and consequence. This personage informed him that his messengers had arrived at court, and that the emperor had granted him permission to come to Jeddo with his ship. He was, however, directed to anchor under a certain headland for the night, and the next morning was towed up to his anchorage within a furlong of the city.

The ship was immediately visited by a great number of all ranks, from the governor of Jeddo and the high officers attached to the person of the emperor, arrayed in golden and gorgeous tunics, to the lowest menials of the government, clothed in rags. All were filled with an insatiable curiosity to see the strangers and inspect the thousand novelties presented to their view.

Captain Cooper was very soon informed by a native interpreter who had been taught Dutch, and who could speak a few words of English, but who could talk still more intelligibly by signs, that neither he nor his crew would be allowed to go out of the ship, and that if they should attempt it they would be put to death. This fact was communicated by the very significant symbol of drawing a naked sword across the throat. The captain dealt kindly with all, obtained their confidence, and assured them he had no inclination to transgress their laws, but only desired to

make known to the emperor and the great officers of Japan, the kind feelings of himself and of the people of America towards them and their countrymen. The Japanese seamen who had been taken from the desolate island and from the wreck, when parting from their preserver, manifested the warmest affection and gratitude for his kindness. They clung to him and shed many tears. This scene—the reports of the shipwrecked men of the many kindness they had received—and the uniformly prudent and amicable deportment of the American captain, made a very favourable impression on the governor of Jeddo. During his stay, this great dignitary treated him with the most distinguished civility and kindness.

But neither captain nor crew of the Manhattan were allowed to go over her side. Officers were kept on board continually, to prevent any infraction of this regulation, and the more securely to insure its maintenance and prevent all communication with the shore, the ship was surrounded and guarded by three circular barriers of boats. Each circle was about a hundred feet asunder, and the inner one about one hundred from the ship. In the first circle the boats were tied to a hawser so compactly their sides touched each other, and that nothing could pass between or break through them. The sterns of the boats were next the ship, and in these were erected long lances and other steel weapons of various and curious forms, such as are never seen or heard of, among European nations. Sometimes they were covered with lacquered sheaths, at others, they were left to glisten in the sun, apparently for the purpose of informing the foreigners that their application would follow any attempt to pass them. Among these, were mingled flags and banners of various colours and devices. In the middle of this circle, between the Manhattan and the city, was stationed a large junk in which the officers resided, who commanded the guard surrounding the ship. The boats composing the second circle, were not so numerous, and those in the third, were more scattering still; but the number thus employed, was almost bewildering to look upon. They amounted to nearly a thousand, and were all armed and ornamented in a similar manner. It was a scene of the most intense interest and amusement to the Americans, the most of whom had never heard of the strange customs of this secluded and almost unknown people. Magnificent and wonderful a spectacle, however, as this vast array of boats presented during the *day*, decorated with gaudy banners, and with glittering spears of an infinite variety of form,—in the night it was exceeded by a display of lanterns in such countless numbers, and of such shapes and transparencies, as almost to entrance the beholders, and to remind them of the magic in the Arabian Tales.

The character and vigour of the guard stationed about the ship, was at one time accidentally put to the test. The captain wishing to repair one of his boats, attempted to lower it from the cranes into the water, in order to take it over the vessel's side. All the Japanese on board immediately drew their swords. The officer in charge of the deck guard appeared greatly alarmed at the procedure, remonstrated kindly, but with great earnestness, against it, and declared to Captain Cooper that they should be slain if they permitted it, and that his own head would be in danger,

if he persisted in the act. The captain assured the officer that he had no intention to go on shore, and explained to him clearly what his object was. When it was fully understood, great pleasure was manifested by the Japanese officer. He commanded the crew who were managing the boat to leave it, and set a host of his menials to work, who took it into the ship without allowing it to touch the water.

The Manhattan was at anchor in the harbour of Jeddo four days, during which time the captain was supplied by command of the emperor with wood, water, rice, rye in the grain, vegetables of various kinds, and some crockery composed of the lacquered ware of the country. He was recruited with every thing of which he stood in need, and all remuneration was refused. But he was told explicitly never to come again to Japan, for if he did, he would greatly displease the emperor. During these four days, he had many conversations with the governor of Jeddo, and other persons of rank, through their interpreter. In one of these, he was informed by the governor that the only reason why he was allowed to remain in the waters of Japan, was because the emperor felt assured that he could not be a bad hearted foreigner by his having come so far out of his way to bring poor persons to their native country, who were wholly strangers to him. He was told that the emperor thought well of his "heart," and had consequently commanded all his officers to treat him with marked attention, and to supply all his wants.

The day before he left, the emperor sent him his autograph, as the most notable token of his own respect and consideration. It is often said that the greatest men are most careless in their chirography, and in this case the imperial hand would support the truth of the remark, for the autograph, by the size and boldness of its characters, appeared more as if a half-grown chicken had stepped into muddy water and then walked two or three times deliberately over a sheet of coarse paper, than like any other print to which I can imagine a resemblance.

Among the books taken from the wreck was a small one, in form like a note book, filled with figures of various and eccentric forms, and pictures of spears and battle-axes of strange and anomalous patterns. Under each were characters, probably explanatory of the objects, attached to them. Both figure and character were neatly and beautifully executed, and they presented the appearance of having been issued from a press of type copperplate like the plates of astronomical and other scientific works. This little book attracted Captain Cooper's attention, and excited his curiosity to such a degree, that, after noticing similar figures embroidered in gold on the tunics of the high officers, he ventured to inquire their explanation. He then learned that it was a kind of illustration of the heraldry of the empire—a record of the armorial ensigns of the different ranks of officers and the nobility existing in the country. Captain C. allowed me to examine this book, and it appeared to me to be a great curiosity both as a specimen of typographical art, and as giving us information of the numerous grades of Japanese aristocracy, and the insignia by which they may be distinguished.

These figures were wrought always on the back of the officer's tunic, and the weapon which appertained to his rank corresponded with the one

drawn under the ensign in the book alluded to. Each grade of officers commanded a body of men whose weapons were of a particular and given shape, and those weapons were used by no others under an officer of different grade, or wearing a different badge on his tunic.

In a conversation with the Governor, when the latter told our navigator that he must never come to Japan again, Captain Cooper asked him "how he would wish him to act under the same circumstances." The governor was somewhat disconcerted—shrugged his shoulders—and evaded by replying that "he must not come again." Captain Cooper then asked him "if he should leave his countrymen to starve or drown, when it was in his power to take them from another wreck." He intimated that it would please the emperor more for them to be left, than for strangers to visit his dominions. Capt. Cooper told him that he never would see them drown or starve, but should rescue them and feed them; and then enquired what he should do with them. The governor replied; "Carry them to some Dutch port but never come to Japan again." This was all spoken by the governor with mildness, but with firmness also, as if he uttered the imperial will.

The governor of Jeddo is represented to be a grave and elderly looking man, somewhat grey, with a remarkably intelligent and benignant countenance, and of very mild and prepossessing manners. He appeared interested with Capt. Cooper's account of the people and civilization of America; and the latter spared no pains to leave a good impression of the American name and character, especially as a trading people, on the minds of those high officers, whose position might carry them into audience with their sovereign.

The day he left the country the interpreter gave him an open letter, without a signature, written in the Dutch language, with a bold and skilful hand. Mr. Lingren, the clerk in the Consulate, a gentleman learned in many languages of Northern Europe, has translated it, and stated to me the leading ideas contained therein. This document informs the world that the bearer of it has furnished assistance to Japanese sailors in distress, and had brought them to their native land; and then commands all Dutchmen who may encounter him shipwrecked and in want, to afford him similar services. It further declares for the information of Holland and China, the only nations in the world with which they have any commercial treaty, or who are allowed within the waters of the empire, that the persons in the foreign ship had been allowed no communication with the shore, and had been strictly debarred from all knowledge of the commodities or commerce of the country. Furthermore that the foreign ship had been a long time at sea, and had become destitute of wood, water, and provisions, and that the government had furnished the recruits of which she stood in need.

It was early in April, that Capt. Cooper visited Japan; and he represents the climate and appearance of the country to be pleasant and lovely in the extreme. Wherever he inspected the coast, the whole earth teemed with the most luxuriant verdure. Every acre of hill and dale appeared in the highest state of cultivation. Where the eminences were too steep for the agricultural genius of the inhabitants, they were formed into ter-

races, so that for miles together, they presented the appearance of hanging gardens. Numerous white neat looking dwellings studded the whole country. Some of them were so charmingly situated on sloping hill sides, and sequestered amidst the foliage of a fresh and living green that the delighted mariners almost sighed to transplant their homes there,—the spots were so sunny, so inviting, and so peaceful.

The whole appearance of the landscape indicated a dense and industrious population. Around the capital the same signs of culture were exhibited as in the country, further north. The city itself was so filled with trees and foliage, that not houses enough could be distinguished from the ship to indicate with certainty that a city existed, or to allow the circuit of it to be defined. The buildings were white and rather low, and no towers or temples were seen peering above the other edifices.

The harbour of Jeddo presented a maritime population, as numerous and industrious as that which appeared to exist on the land. Vessels of all sorts and sizes, from mere shallops to immense junks, were under sail or at anchor, wherever the eye turned on the bay. Jeddo seemed to be the mart of a prodigious coastwise commerce, and the whole sea was alive with the bustle and activity appertaining to it.

The Japanese, from Captain Cooper's observations, are rather a short race of men, square built and solid, and do not possess Mongolian features to the extent exhibited in the Chinese. They are of a light olive complexion, are intelligent, polite, and educated.

The dresses of the common people, were wide trowsers and a loose garment of blue cotton. Dignitaries and persons of consequence, were clothed in rich silks, profusely embroidered with gold and silken thread of various colours, according to their rank. Some of these personages were so splendidly attired, as to excite great admiration in the foreign visitors. No woollen fabric composed any part of their dress, but of this material, they seemed particularly curious, and examined it with great attention. It seemed a great novelty, and all the small pieces they could obtain, were solicited and taken on shore as objects of curiosity.

But the map, of which I spoke, in the early part of this communication, is perhaps one of the most interesting illustrations of Japanese civilization which has come into our possession. It embraces the Island of Nippon, all the islands south of it, and a small part of Jeddo on the north. It is four feet long and nearly as broad, and, when folded up, resembles a common church music book, handsomely bound in boards.

As will be perceived the islands are projected on an uncommon large scale. The minutest indentations in the coast, with all the trading ports, large and small, are laid down, apparently after accurate surveys. Capt. Cooper found the coast which he followed to be correctly delineated, by his astronomical observations; and his own charts of Nippon, were altogether erroneous. The tracks of the coastwise trade are traced throughout the whole group, from Jeddo to Nagasaki. But the most interesting part of this production, is the topography of the interior of the islands. They are laid out in districts, and all variously coloured, like the states of our republic, in Mitchell's map. The smallest villages are denoted and named. The residence of the governor in each district, and

other public establishments occupying less ground, are also delineated. They are all embraced in inclosures of different shape and colouring, and from the uniformity of these, in appearance and number in every district, we may suppose the administration and government of Japan is conducted with great system. This is in accordance with our previous knowledge of the country. The rivers, even their smallest tributaries, are all traced to their source. The number and extent of these streams are surprising. No country of its size, can be more abundantly watered, than Nippon. The streams are so numerous, that the whole interior has the appearance of being irrigated by countless canals. But they are evidently river channels, and can all be followed from their sources in the valleys, to their junction with each other and their termination in the sea. The public roads are exceedingly numerous, intersecting the whole country from shore to shore, and indicating a vast amount of travel throughout the empire. In several parts, high mountains are laid down in dark colouring. These occur occasionally, in small groups, and occupy but little space. The general appearance of the country is that of bold and lofty hills alternating with great numbers of broad valleys. All pour forth rills and streams which fertilize the earth as they flow along, and afford a thousand advantages and encouragements to an industrious population engaged like the Japanese, in agricultural and commercial arts. The whole empire swarms with towns and hamlets. It is almost impossible to conceive its populousness without an inspection of this map.

On one side of the sheet is a large amount of unintelligible writing, which appears to be explanatory of the figures, characters, roads, &c., delineated in the different districts on the map. If interpreted they might furnish us with much novel information.

This map, with several other articles in Captain Cooper's possession, was accidentally left in his ship by the Japanese. They desired to give him many things which they perceived were interesting to him, but they assured him they would be in danger of losing their heads should the emperor learn that they had furnished strangers with any means of information relative to their country or its institutions. They showed great and real alarm on this subject, and concealed or destroyed many things as they approached Jeddo, which had been about the ship. Captain Cooper took no advantage of their dependent situation, but allowed them to follow their own inclinations in all respects.

Having laid at anchor four days, and replenished his stores of wood, water, &c., he signified his readiness to depart, but the winds were adverse, and it was impossible for him to get to sea. There seemed to be no disposition manifested by the government to force him away, but there was none for him to remain a moment beyond the time when his wants had been satisfied. A head wind and tide presented no impediments to going away from Japan, in the mind of the governor of Jeddo. At his command, the anchor was weighed, and a line of boats was attached to the bows of the ship, so long that they could not be numbered. They were arranged four abreast, proceeded in the greatest order, and were supposed to amount to nearly a thousand. It was an immense train, and

presented a spectacle to the eyes of the seamen, approaching the marvellous. The boats, instead of being propelled by rowing or paddles, were all sculled by a single oar, employed, however, by several men. In this manner the Manhattan was towed twenty miles out to sea, and the officer in charge of the fleet, would have taken her a greater distance, had not further aid been declined. The Japanese then took a courteous leave of our hero, and while the long train of barges wheeled with a slow and graceful motion towards the shore,—the latter spread his sails for the less hospitable regions of Kamschatka and the north-west coast, highly gratified with the result of his adventure among this recluse, but highly civilized people.

AUTO-BIOGRAPHICAL SKETCHES, *by a Merchant Sailor, illustrative of the State of the British Merchant Service.*

(Continued from page 360.)

WE left Elsinore during a lull in the long continued gale, and proceeded down the Cattegat; the wind increased in violence soon after our departure, and remained directly a-head. Neither the gale, nor the fact of its being adverse, caused our skipper to bear up, or run into a Swedish port for shelter. He was a most persevering man, and very careful of the vessel under his command, so far as he was personally concerned. The brig being very light, and, moreover, cranked from a want of a sufficient quantity of ballast, the lee-side of the deck was almost constantly in the water; the sea coming over on various occasions soon penetrated through the hurricane house in which we lived, and, with the few changes of clothes I then had, in anticipation of my not prosecuting the profession, I was almost constantly wet; indeed, as we always, in bad weather, in this navigation, slept with part of our clothes on, ready for a call, we used to turn in wet, and turn out smoking, with the steam arising from our wet clothes and the heat of our bodies. However much such a system may be consonant to the modern hydropathic mania, I cannot easily determine, but certain circumstances in my life will prove that, with me, such treatment, proved the bane instead of the antidote. We had constant exercise reefing and furling, for no sooner did the slightest abatement of the gale take place than the master made sail, which was as regularly shortened as the ever varying gale increased. When blowing very hard, the master himself took the wheel, when mate and all hands went aloft to reef; in this vessel reefing was never a work of much difficulty, as the sails were small, and the yards generally well braced in, and the gear well up before we went aloft. There was no exercise sending down yards, as our main royal, (the only one), set flying, when in, it was becketed to the top-gallant yard, and in these vessels they never think of sending down top-gallant yards. While the gale lasted, and when not actively employed, the watch always remained aft under lee of the top-

gallant rail, to avoid the greater quantity of water which came on board forward.

When we got as far as the coast of Norway, at that part called the Sleeve, the wind increased very much, and although many vessels were constantly bearing up for harbours, our persevering master continued beating down against the gale. Dark as a heavily clouded atmosphere could make the scene, and dismal as the howling of the wind through the rigging rendered it, at 8 P.M., one night in the height of the gale which now came down with terrific squalls, orders were given as the watch was being released, to round in a little of the lee-main and main-topsail braces; these braces led down the after shroud of the fore rigging; all hands except the master and man at the wheel proceeded forward to obey the order. As youngster, it was always my duty on such occasions, to hold on the rope under the pin while the others swayed off with the whole weight of their bodies, to get in a little of the braces, which on such occasions is difficult, from the strain on them. I was thus employed holding on the brace on the present occasion, when the order, "well there, belay," was heard from aft; the men at once scrambled up to windward across the deck, the brig laying over very much, when, just as I (the only person to leeward), was taking the last turn over the pin, a heavy squall struck the vessel, buried her bows into the coming sea, which in one vast mass dashed along the lee side, carrying me along with it, over the lee bulwark. The last thing I remember was a voice faintly heard amidst the elemental strife, crying out, "a man overboard!" Human assistance, however, under the circumstances, was impossible,—the brig's way through the water, under two close reefed topsails, with the courses furled, was very little, and now even less from the force of the squall burying her amongst the water, and I suppose causing her to drift slowly to leeward—the next wave sent me flying on board, when I caught in a sort of convulsive grasp the galley door,*—another plunge into the sea, and another mass of water, sent me flying aft to the man at the wheel, and back again amid ships, where I caught the lashing of a water cask, as usual lashed to a spar alongside the long-boat amid ships. The strength of the squall was now past, the brig partly recovered her wonted position, and several of the crew seeing my situation came to my assistance, carried me down to the cabin, where I was placed face downwards to permit the salt water I had swallowed to discharge itself; this done, and a strong glass of grog administered, (a sailor's never failing cure for every ill), I soon recovered my recollection and strength, deeply grateful for one narrow escape.

The heavy squall now mentioned, and the accident caused by it, made the master resolve to bear up in the morning for a harbour; morning, however, came forth bright and more pleasant than any we had passed for some time, and brought with it a slight cessation of the gale, which altered his determination, and we persevered. During the forenoon the gale gradually decreased, the sea, however, always in that place very

* The galley covering the cooking apparatus is in these vessels placed abaft the main hatchway, and just before the main-mast.

much agitated from strong currents, remained very heavy and irregular, and while the watch off duty, of which I formed a member, were snoozing away, after the fatigues of the night, a sea came on board, struck the house, and sent the contents into the lee-scuppers, whence we fortunately scrambled unhurt from amongst the debris of the house, clothes, beef, bread, and the many unmentionable materials of a sailor's equipment. All was taken with great good humour, a few hasty expletives were addressed to the carpenter who built it, but soon merged in that happy carelessness, if not contentedness, with which sailors in a well regulated vessel always treat such mishaps.

After a long passage of seven weeks from Cronstadt, we reached our port of destination on the east coast of Scotland, where we speedily commenced discharging our cargo preparatory to another voyage to the Baltic. I had now made up my mind to pursue my present occupation, satisfied that there was nothing in it so desperate as I had been led to believe. I accordingly announced my intention to my parents, who soon received the condolence of their friends at the unfortunate choice of a profession I had made, with the additional information that all the money they had spent on my education had just been thrown away, and such is unfortunately the general opinion of the world under similar circumstances.

The mate, so soon as we arrived, took to drinking, was some days unable to come to the vessel, and I was appointed by the master to take an account of the cargo as it was discharged. The discharge was soon accomplished, as the season was fast passing during which the Baltic could be navigated; and taking in ballast we proceeded once more towards Elsinore in quest of another cargo for the brig,—no change took place in the crew; the mate, although very unfit for his situation, was also retained, in consequence of being distantly related to the master, and in pity for his wife and family. Although I had been useful to him in taking an account of the cargo, he still continued as bearish as ever in his conduct to me, this, however, gave me less concern, as I every day got better acquainted with my duty, assisted by the advice of my messmates, with whom I was always on the best of terms, and on many points of dispute, a reference.

A fair wind soon carried us to Elsinore, without any thing occurring worthy of mention; there we embarked the usual stock of necessaries, the men receiving their portion as before. Here, also, we learned that the master had resolved to proceed to Riga in quest of a cargo, which we accordingly did, favoured by fair winds and fine weather. The days were, however, fast shortening, and cold nights, with occasional frost, reminded us of the approach of that season when the free navigation of the Baltic is no longer possible. At the Bolderaa a fortification of some extent, just inside the mouth of the Duna, we passed the usual examination by the custom-house authorities, the hatchways being sealed up as well as the fore-castle, the crew sleeping in the long-boat, or elsewhere as they found it convenient. There was no cargo on board the vessel to warrant such extraordinary vigilance, but it is the law of Russia, and the authorities here appeared, if possible, more strict than they were at Peters-

burg. Immediately on arrival the master proceeded by land to Riga in quest of freight for the brig, while the vessel proceeded up the river in charge of the pilot to the ballast ground some distance below Riga, where we were to discharge our ballast previous to going up to the town.

Once safely moored alongside the ballast wharf, we commenced to discharge ballast, wheeling it some distance from the vessel. During the first day's operation, the master remained absent, the mate having charge, administered spirits to the crew freely, and their own Elsinore stock not being quite exhausted, ere the day was passed, they all began to feel its effects; the mate more intoxicated than any of them, exhibited in bolder relief the prominent malevolent features of his character, during which time I came in for a due share of abuse; as, however, I remained sober, I could see that his treatment of me was mingled with a degree of fear, it may be respect, if such a feeling could, under such circumstances, exist in such a man. Until the ballast is discharged and the vessel searched, the custom-house officers remained on board, the same stiff official, or rather soldier-looking personage, who acted in the same capacity at Cronstadt. I fancied, that this man, who refused to drink, so as to influence his understanding, often looked with a contemptuous sneer at the conduct of the mate and crew; it may have been fancy, but it impressed me much at the time.

The labour of the day ended, we proceeded to supper, which we had scarcely finished ere we heard a great noise proceeding from the cabin, and I soon heard the cook, who figured also in the capacity of steward, calling me "for God's sake to come aft." I accordingly went aft and down into the cabin, where a scene met my view at which I could not tell whether to laugh or be alarmed. Standing erect in the middle of the cabin was the custom-house officer, rage depicted in his countenance, spitting out between his teeth Russian expletives, significant enough, I dare say, had they been understood, his drawn sword in his right hand pointed towards the mate who was half lying, half standing in a crouching attitude, the most abject fear or rather terror depicted on his forbidding countenance, and bawling out alternately for assistance and mercy. At first I scarcely knew how to act, unacquainted with the Russian language, I could not by addressing the officer induce him to desist, while, from his threatening attitude, I was equally afraid to touch him, dreading that my interference might have been mistaken for assistance to the mate. I simply uttered a few deprecatory sentences, which added to the mate's abject appearance, induced a better feeling in the Russian, who sheathed his sword, and, at my request, went on deck, muttering a volume of expletives against the drunken mate and his nation. The cabin was a perfect picture of disorder, the table was upset and broken, lying in one corner amidst the wreck of broken bottles and glasses, one of the state-room doors was shivered to atoms, done, as it afterwards appeared from the cook's evidence, by the mate driving the Russian through it. The cook described the whole quarrel as proceeding from the mate insisting on the Russian drinking with him, which the man, in strict accordance with his duty, refused, common English oaths, uttered by the mate, were followed by the no

less significant expletives of the Russian, words were quickly succeeded by blows, and produced the scene I witnessed when I first came into the cabin. On the succeeding day the master came on board, and soon discovered that a disturbance had taken place; the mate was questioned, who, of course, refused to tell. The cook, also, a participator in the spirits, was silent, the Russian could not sufficiently explain it for want of language, I was appealed to, but from a desire to cause no disturbance in the vessel, I refused to say any thing about it. The master easily knew that the mate was to blame, and the Russian having complained to his superiors, the master was glad to pay a *douceur* to the officer to prevent ultimate proceedings, which, in that country, for such a crime, are serious.

The mate was, of course, severely reprimanded, and after a most penitent submission and many promises of amendment for the future, returned to his duty; we finished discharging the ballast, and proceeded in the vessel to the town, hauling alongside a vessel moored to the quays. The cargo expected being flax, such a quantity of ballast was retained on board as the master deemed necessary to give the vessel sufficient stability. It was now the latter end of October, and, for some time after we arrived, no freight could be procured; many vessels were in the same situation, and the masters began to look gloomy as the prospect of being obliged to pass a winter in Riga became more to be apprehended. The crew were employed in the usual routine, repairing sails, and putting the rigging in order, while the boys, as usual, did all the menial offices, and assisted the cook in administering to the wants of the men.

As at Cronstadt, no cooking was permitted on board, a house within the walls of the town being set apart for the cooking operations of all the various vessels. As cooks generally are, ours was a wet subject, and so frequently intoxicated as to cause infinite trouble to myself, who was generally dispatched to assist him in bringing the pots and kettles on board. I soon got accustomed to his haunts, and could in a few days ferret him out without much difficulty. He generally remained in a maudlin state of intoxication during our stay, and, while so, would do the most absurd things; sometimes, while fancying he was salting the soup, he would be adding pepper, and salt coffee and tea came on board oftener than once; he was also addicted to pilfering while intoxicated; he several times brought on board small articles of furniture from houses he frequented, and, on one occasion, while returning on board late at night, abstracted from the stall, where it was exhibited for sale during the day, a basket of apples, although closely watched by the proprietor and a policeman not far distant. I believe he was, when sober, heartily ashamed of his conduct, but a recurrence to intoxication also brought a recurrence to these habits, which may, (if they have not already done), lead to serious consequences.

As usual, in all Baltic vessels, so soon as the day's labour was finished, the crew went ashore amusing themselves in any way most consonant to their inclinations. One or two continually resorted to the dance houses across the river, where music, drinking, and the fair inhabitants, formed strong inducements to a renewal of the visit. One of our men, a regu-

lar careless good hearted sailor, got so completely enchanted with one of the fair cyprians, as to spend every night in her company, at length, after a Sunday also spent in the same way, he remained during the week. As the vessel was then nearly loaded, he was permitted to remain, he being constantly in a stupid state from drinking, and so infatuated as to render it impossible to keep him on board the vessel. When the brig was ready for sea, the master went for him in the boat, and after safely getting him afloat with the assistance of the police, fancied him quite safe; when about half way, between the shore and the vessel, however, he jumped overboard, and struck out for the object of his desire; he was again captured, and finally secured on board until the vessel sailed. After a few days' sulkiness, he recovered his wonted mirth, and laughed at the many jokes of his shipmates at his expense, as the sequel will shew, I was not on board at the time this occurred, but heard it from my shipmates who came to visit me.

During the beginning of November the weather became very cold, and during the night it was no uncommon thing to see the beams of the forecabin coated with frozen breath and the steam of our bodies as we were sleeping in our hammocks. Either the severe cold or the effects of the former voyage, when I was so constantly wet, must have been insidiously working their onward progress in my constitution, for one night I was seized in an instant with the most acute rheumatic pains in my limbs; my left leg was contracted at the knee joint, until my heels touched my leg, at daylight in the morning I was writhing with pain, and burning with a severe rheumatic fever. The master when informed of my illness, came to see me, and at once saw that medical assistance was necessary. I was immediately dressed by my shipmates, carried on deck, and transported to the hospital for seamen, on the back of one of my companions.

The hospital for seamen in Riga is maintained by a small tax levied on the vessels trading to the place. It is under the superintending management of a committee of merchants, who visit it occasionally. It is situated on the bank of the river opposite to the town, in a house originally inhabited by a family, and now having no other alteration than the low wooden bedsteads in the two principal rooms on the first floor, necessary for the accommodation of the patients, with whom it is generally in summer well filled. A medical gentleman is attached to it, residing in the house. I was nearly calling him a doctor, but a long acquaintance with him proved how little he merited the designation. Where he had studied, or at what university he had been declared a surgeon, I could never learn. He had been a surgeon in the Russian army during the campaign of 1814, when the allies were in France, and caused the abdication of Napoleon. He had there learned a little French, and could in addition speak German and Russian. He was a little prim insignificant looking old man, with a narrow forehead, grey hair, small ferret eyes of some indescribable light mixture, always wore a claret-coloured surtout reaching almost to his heels, a white neckcloth, short trousers and boots. Except when walking the streets, which was rare, I never saw the doctor, (I must from courtesy call him so), without a

long German pipe in his mouth ; he never visited his patients without it. His visits were regularly paid, but only twice a day, and then the formula which his limited knowledge of the English language, (that of most of his patients), enabled him to use, was both laconic and amusing. No matter what the disease was with which the unfortunate was afflicted, the little doctor would enter the room with a minced shuffling step, a most apathetic countenance, and going up to the patient commenced his questions. "Vell, how you do? Hab durst? Hab pain? Show de tongue, ah! very goot." He would then make a remark to his assistant as to the medicine to be given, and pass on to another sufferer, going through exactly the same routine. The assistant was a young, fair-haired, light-eyed, heavy-headed German of seventeen, whose whole desire was to be troubled as little as possible with attention to the inmates of the hospital. He read medical books occasionally, and when he was not eating or sleeping, in both of which accomplishments he was an adept, he hummed on a cracked flute, the very discord produced from which rings in my ears as I think of it. The superintending surgeon, who only visited the hospital when sent for about some extraordinary case, was a highly educated, clever, German physician. Gentlemanly in his manner, and mild in his deportment, giving to the cases on which he was called that care and attention which they merited, and apparently thoroughly understanding his profession.

The household department was managed by a German tradesman and his wife, or rather the wife managed the hospital and her husband; he was a quiet, respectable, good natured man ; she a stout, red-faced, impudent virago, her face deeply marked with the small-pox, and a look of sternness about her, which her character amply warranted. The nurse was a quiet, inoffensive, elderly woman, as plain in appearance as can well be conceived, but as kind hearted as could be. Many a tear of sympathy have I seen the old woman shed for the sufferers, and the benevolence of her character would often beam through a hard-looking countenance as she assisted to make some unfortunate comfortable. There was also an old superannuated nurse a pensioner on the establishment, known as Mother Brown, a Prussian by birth, but long domiciled in Russia. She was a perfect picture of a meddling old crone, poking her face into every corner, and trotting off to the mistress whenever she fancied she had a story against any one.

To this hospital was I carried, and to the care of these people was I consigned, about the middle of November, the winter fast approaching, the vessels about to leave, no money in my pocket, no friend near, unable to speak a word of the language, and suffering dreadfully from pain. In a few words of French, I managed to tell the doctor about my state, he ordered bleeding, without apparently giving the case much attention, and beyond that, for a fortnight, the disease was allowed to take its course, while I was gradually getting weaker, and suffering the most excruciating pain. I saw my shipmates frequently for a few days, the master also visited me, he had got a freight and was hurrying on the loading, as the winter had set in, and ice was forming on the river. The inmates of the hospital, one after another, left it to join their respective

vessels, five only besides myself remaining, when the master brought my chest and hammock, and bade me farewell, as the vessel was being cut through the ice to the mouth of the river. All the vessels had departed, the river was frozen over, passengers were crossing on the ice, the ground was covered with snow to remain one dreary unvarying white prospect during the long winter; and I was an inmate of a public hospital, a destitute seaman, maintained by the British consul on the part of the government, the sum of 1s. 6d. a-day being allowed for that purpose.

I continued getting worse and suffering great pain, without that attention being paid to my case which I fancied it merited, but at that time I was not sufficiently acquainted with the difference between a public hospital and a comfortable home. At length as I was gradually getting worse, bleeding was resolved on from the arm, and locally with leeches. To perform the former operation, an immense man, powerful, but forbidding, came to the hospital, a barber by profession, but as is still common in some parts of the continent performing the minor operations in surgery, which the doctor considered it beneath him to attend to. This man pulled me roughly to a sitting position, and performed the operation just as a butcher would officiate in his calling. The leeches were applied by the deputy sawbones in the evening, eighteen being placed around the knee-joint. While the wounds were kept bleeding by means of warm wet cloths, he went to the surgery with the intention of returning, but I suppose fell asleep, and forgot all about me, or my situation. In the morning I was found in a pool of blood, unable to speak or move, and it was some time ere I became conscious of my position. Powders and draughts had been given me in such quick succession, and to such an extent, that I was satisfied one medicine had not time to operate ere another was administered. The superintending surgeon was sent for to consult on my case; on the hospital surgeon saying something to him, apparently proposing some other remedy, he gave his head that peculiar shake so ominous in medical men, and replied in German something which I fancied meant "it matters not." Seeing the pass to which matters had arrived, I thought of my parents and home, and was vexed that I had not strength to write a last farewell to them; but formed an inward resolution to take no more medicine. From that day I recovered—every powder and draught was destroyed, and in a week I was taking a little rice and milk. Whether the disease had reached the climax, or the refraining from taking medicine, or the strength of a good constitution, saved me, I leave to the learned to determine. I gradually got well, but my leg remained partially contracted during the winter, rendering it necessary for me to walk on two crutches, which I did for four months.

The hospital was, at the time of which I am writing, most miserably conducted, and still, I have reason to believe, remains in the same state. Far too much power was given to the woman who kept the house, and to whose management was intrusted all its internal economy. Clean linen was seldom supplied to the beds except before a visit from the committee of management, of which she had always due notice. I have seen a patient brought in, and placed in the same linen which another had just vacated, of dirty habits, and, it may be, with a nauseous disease.

Although the majority of the inmates were British subjects, neither the doctor, his assistant, nor the mistress could speak English, the system of telegraphing which went on sometimes between the patients and the doctor or nurse, was very amusing. No difference in the quantity of food given to the patients was ever made, a sick man getting exactly the same allowance, as one perfectly healthy as respects the stomach. While the ships remained, as many sailors as felt inclined could visit the hospital every evening, and, on Sundays, it bore more the appearance of a grog shop, than a place for sick. Grog was introduced, tobacco smoked, and, towards evening, sad scenes of confusion were often occurring. I thought, from first appearances, it would be a miserable place to pass some months in, but when the vessels went away and the navigation was closed, there remained few inmates, an Irishman, an Englishman, an American, two Swedes, and myself. So soon as I was able to attend to books, I borrowed them from the doctor, and pursued the study of German, the common language of the inhabitants. I lived on good terms with the doctor, his assistant, and the nurse, I even succeeded in winning the good will of the mistress of the establishment, and became a positive favourite with two adopted daughters she had.

Riga, with its suburbs, is of considerable size, and the second commercial seaport in the Russian empire. Within the fortifications, the houses are irregularly built of brick, stuccoed over, and kept clean; the streets are narrow and irregular. The suburbs are more regularly laid out, having broad streets, and handsome houses, generally constructed of wood, kept well painted, giving them a neat appearance. The city is situated on the left bank of the Dūna, about seven miles from its confluence with the Baltic in Riga Bay. It is surrounded by double walls, and two ditches wide and deep, on all sides except that next the river, which has only one wall, high, however, and of vast thickness, the river being an additional bulwark on that side. The quays are about a mile in length, formed of wood, on the bank of the river, close under the walls. Here all the vessels which have water up the river discharge and load their cargoes. The depth of water which is found in the shallowest part, depends on the season, varying from 8 to 10 feet, the class of vessels frequenting the port are therefore small, although large ones are frequently loaded at the mouth of the river, their cargoes being taken to and fro in large lighters. The principal articles of import into Riga are salt, sugar, and dyewood, the exports similar to St. Petersburg, flax, hemp, wood, iron, spars, feathers, &c. The warehouses in which these various articles are deposited, as they arrive during the winter, are very large and beautifully built. From all that part of Livonia and Courland not immediately adjacent to the rivers, the produce is brought to market during winter on sledges; and it was always an interesting sight to see the long lines of peasants, with their small rough, but hard ponies, and sledges, coming into market, with flax, hemp, or corn. All the supplies produced near the rivers come to market in the spring,—large praams or flat-bottomed shallow craft, an immense length and breadth, and sharp at both ends, are built on the banks of the rivers from the trees growing around the place; they are loaded before the thaw commences in the

spring, the grain or goods being covered with mats. When the ice and snow melts they float and are guided down the stream by a few peasants, who sell the produce to the merchants, the praam to the inhabitants for firewood ; and shouldering their small bundle of curiosities and supplies which they have purchased, with the never failing small axe in their girdle, they march back into the interior, singing as they go, apparently as happy and contented as their more civilized neighbours. With his small axe or *tampar*, as he calls it, a Russian makes and fashions every thing ; it is plane, saw, chisel, and hammer ; and I saw several regiments of soldiers equipped with it in their belt, as they were marching through Riga to Poland. To them, while on active service, it must prove of infinite value, as with the expertness in its use which every Russian possesses, the soldier could soon hut himself in on the field, or cut his way through impediments which might seriously inconvenience others, neither so well equipped nor skilled.

The food of all the working classes, as well as the soldiers and peasants, is principally, if not altogether, black rye-bread and salt ; a little oil or grease is an excellent accompaniment ; the bread is not pure rye, but it appeared to me as if it had chopped straw mixed up with it. It is surprising how much labour they are able to perform on such food, and with how much attention to their religious observances, they partake of it. In the coldest day of winter, when employed in out-door labour, I have invariably seen the Russian uncover his head and cross himself repeatedly before he began to eat, and again cross himself when he finished. Even in their dram shops, where their beloved votkey is to be procured, a small image is invariably stuck up in a corner with a small lamp burning before it, and to this the Russian uncovered constantly turns, and crosses himself, glass in hand, before he swallows its contents. A Russian under the excitement of votkey is most amusing, he is seldom quarrelsome, but dances, sings, and seems on most excellent terms with himself and all near him ; in such moments there appears neither selfishness nor ill feeling in his conduct.

LOG OF THE BRIG CHARLES HEDDLE, OF MAURITIUS, CAPT. FINCK,—
Copied by Capt. Royer, Master Attendant at the Port, and translated by Henry Piddington.—Nautical Time.

In forwarding this very remarkable log to me, Captain Royer, as I have elsewhere stated, observes that, he thought it so singular, that he had taken the trouble to copy it with his own hand. In reply to farther enquiries from me, he states, that Captain Finck is an able and highly respectable seaman, and that his vessel, the *Charles Heddle*, was originally a slaver, and usually employed in the cattle trade between Madagascar and Mauritius, which requires always the fastest sailers. This accounts for her extraordinary success in scudding, which perhaps few vessels could have persisted in so long without imminent risk.

I have translated her log most carefully from the French, a language with which I am perfectly familiar, and I print it at length, that the whole document may be fully before the scientific public.

| H. | K. | F. | Courses. | Winds. | Lee Way | Var. | Friday 21st to Saturday 22nd Feb. 1845. |
|-----|----|----|----------|----------|---------|------|---|
| 15 | 4 | | N.E.b.N. | E.S.E. | | | <p>Horizon very low (<i>tres rapproche</i>), thick weather all round. Heavy sea, smart breeze, under the large sails, pumped every two hours.</p> <p>Sea and wind gradually increasing, vessel labouring greatly, weather squally, and threatening all round, the squalls very heavy. At 9h. 30m. p.m. the main yard went in two in the slings, clued up and furled main top-sail, unbent mainsail, and secured the pieces of the main yard on the booms. In jib and mizen; scudding under the fore sail, fore top-sail, and fore top-mast stay-sail, to wait for daylight; heavy squalls and sea. Down main top-sail yard, and struck top gallant mast. Noon, in close reef fore top-sail. The gale begins to make itself felt; scudding under fore sail, and fore top-sail. Lat. by account 16° 42' S, long. account 57° 45' E.</p> |
| 25 | 4 | | | Variable | | | |
| 35 | 4 | | | to S.E. | | | |
| 45 | 4 | | | | | | |
| 56 | | | | | | | |
| 66 | | | | | | | |
| 77 | | | | | | | |
| 87 | 4 | | | | | | |
| 97 | | | | | | | |
| 107 | | | | | | | |
| 116 | | | | | | | |
| 126 | | | | | | | |
| 16 | 4 | | North. | S.E. | | | |
| 26 | 4 | | | S.S.E. | | | |
| 36 | 4 | | | | | | |
| 46 | 4 | | | | | | |
| 56 | | | | | | | |
| 66 | | | | | | | |
| 77 | | | | | | | |
| 88 | | | | | | | |
| 98 | | | | | | | |
| 108 | | | | | | | |
| 118 | | | | | | | |
| 128 | | | | | | | |

| H | K. | F. | Courses | Wind. | Lee Way. | Var. | Saturday 22nd to Sunday 23rd Feb. 1845. |
|----|-----|----|---------|--------|----------|------|---|
| 1 | *13 | .. | W.N.W. | E.S.E. | | | <p>Very bad weather; frightful sea; blowing very hard with incessant rain; vessel taking in seas over the quarter while scudding under the foresail, and close reefed fore top-sail. Pumped every hour, vessel labouring greatly from the seas which swept over us. At 2 p.m. perceiving that the head rope of the foresail had given way, sent two hands to cut away the earings, and let it come on deck, saved the sail. The fore top mast staysail hal-yards having given way hoisted the sail by a tackle. Gale at its height, scudding right before the wind, as it continually veered round the compass; pumps, attended to; vessel labouring excessively. It being impossible to clue up the fore top-sail without risking severe damage, we resolved to run our chance of what might happen.</p> <p>N.B.—No position is given on this day.—H. P.</p> |
| 2 | 13 | .. | N.W. | S.E. | | | |
| 3 | 12 | .. | N.N.W. | S.S.E. | | | |
| 4 | 11 | .. | North. | South. | | | |
| 5 | 11 | | | | | | |
| 6 | 11 | | | | | | |
| 7 | 12 | | | | | | |
| 8 | 12 | .. | N.N.E. | | | | |
| 9 | 12 | | | | | | |
| 10 | 12 | .. | N.E. | | | | |
| 11 | 12 | | | | | | |
| 12 | 12 | | | | | | |
| 1 | 12 | | | | | | |
| 2 | 12 | .. | E.N.E. | | | | |
| 3 | 12 | .. | East. | | | | |
| 4 | 12 | | | | | | |
| 5 | 12 | | | | | | |
| 6 | 12 | | | | | | |
| 7 | 12 | .. | E.S.E. | | | | |
| 8 | 12 | | | | | | |
| 9 | 12 | | | | | | |
| 10 | 12 | .. | S.E. | | | | |
| 11 | 12 | .. | S.S.E. | | | | |
| 12 | 12 | .. | South. | North. | | | |
| | | | S.W. | N.E. | | | |
| | | | | E.N.E. | | | |
| | | | | East. | | | |
| | | | | E.S.E. | † | | |

* About is marked in the Log.

† These last winds, and courses are so marked in the log. I presume they mean to designate the changes between Noon, and 1 a.m., on the next day, as a memorandum of the gradual veering.

| H. | K. | F. | Courses. | Winds. | Lee Way. | Var. | Sunday 23rd to Monday 24th Feb. 1845 |
|----|----|----|----------|--------|----------|------|--|
| 1 | 12 | .. | S.W. | N.E. | .. | 15 | <p>Weather always the same, with a frightful sea. Shipping from time to time very heavy seas. One filled the whole deck fore and aft with two feet of water; the larboard waist board carried away, much water going down the hatchways and cabin scuttle, though all secured by tarpaulins. 4 P.M. fore top-sail blew away, scudding under bare poles, the new fore top-mast stay-sail giving way, saved it; two men at the helm, vessel labouring greatly, storm always at the same height, wind, veering round the compass from hour to hour, and even in half an hour.*</p> <p>Brought all the crew aft into the cabin to be at hand, closed up the fore-scuttle.</p> <p>N.B.—No position given on this day.—H. P.</p> |
| 2 | 12 | .. | W.S.W. | E.N.E. | | | |
| 3 | 12 | | | | | | |
| 4 | 12 | | | | | | |
| 5 | 12 | | | | | | |
| 6 | 12 | .. | West | East. | | | |
| 7 | 12 | | | | | | |
| 8 | 12 | | | | | | |
| 9 | 12 | .. | W.N.W. | E.S.E. | | | |
| 10 | 10 | .. | N.W. | S.E. | | | |
| 11 | 10 | .. | N.N.W. | S.S.E. | | | |
| 12 | 10 | | | | | | |
| 1 | 10 | | | | | | |
| 2 | 10 | | | | | | |
| 3 | 11 | .. | North | South | | | |
| 4 | 11 | | | | | | |
| 5 | 11 | | | | | | |
| 6 | 11 | .. | N.N.E. | S.S.W. | | | |
| 7 | 11 | .. | N.E. | S.W. | | | |
| 8 | 11 | .. | E.N.E. | W.S.W. | | | |
| 9 | 11 | | | | | | |
| 10 | 11 | | | | | | |
| 11 | 11 | .. | East | West | | | |
| 12 | 11 | | | | | | |

| H. | K. | F. | Courses. | Winds. | Lee Way. | Var. | Monday 24th to Tuesday 25th Feb. 1845. |
|----|----|-----|----------|--------|----------|------|---|
| 1 | 11 | ... | E.S.E. | W.N.W. | ... | 13 | <p>The gale always at the same degree of strength, but the squalls a little heavier, pumps always in hand, vessel making water. All the cabins below wet, the provisions in the great cabin also wet, the vessel making water through every seam in the deck without exception, baled the water out of the cabin by buckets.</p> <p>Shipped several seas which went over all.</p> <p>At two in the morning the vessel broached to, the water two feet deep on the deck. We remained in this dangerous position for about ten minutes, when she righted. We broached to again several times from the speed of the vessel† cleared the scuppers. At 10 shipped a sea in the fore rigging which carried away jib and flying jib booms. Cut away the wreck to clear the bowsprit. Lat. by a doubtful observation 16° 18' S., Long. chronometer 53° 2' 30'' E.</p> |
| 2 | 12 | | | | | | |
| 3 | 12 | | | | | | |
| 4 | 12 | ... | S.E. | N.W. | | | |
| 5 | 12 | | | | | | |
| 6 | 11 | | | | | | |
| 7 | 11 | | | | | | |
| 8 | 11 | ... | S.S.E. | N.N.W. | | | |
| 9 | 11 | ... | South | North | | | |
| 10 | 11 | | | | | | |
| 11 | 11 | | | | | | |
| 12 | 11 | | | | | | |
| 1 | 11 | ... | S.S.W. | N.N.E. | | | |
| 2 | 11 | ... | S.W. | N.E. | | | |
| 3 | 11 | ... | W.S.W. | E.N.E. | | | |
| 4 | 11 | | | | | | |
| 5 | 11 | | | | | | |
| 6 | 11 | ... | West | East | | | |
| 7 | 11 | ... | W.N.W. | E.S.E. | | | |
| 8 | 11 | | | | | | |
| 9 | 11 | ... | N.W. | S.E. | | | |
| 10 | 11 | | | | | | |
| 11 | 11 | ... | N.N.W. | S.S.E. | | | |
| 12 | 11 | | | | | | |

* The expression is "*faisant le tour du compas d'heure en heure et meme une demi heure,*" of which the literal translation would be, "going round the compass from hour to hour and even in half an hour." What is meant is evidently (by the log) that the wind was going round the compass and *changing* every hour or every half hour.

† The words are "*par la vitesse du batiment.*" No doubt the difficulty of steering her is here implied.—H. P.

| H. | K. | F. | Courses. | Winds. | Lee Way. | Var. | Tuesday 25th to Wednesday 26th Feb. 1846. |
|----|----|-----|----------|--------|----------|------|---|
| 1 | 11 | ... | North | South | ... | 20 | <p>The gale always it the same strength without the least intermission, heavy sea and rain. The tiller ropes gave way, changed them, the bolts also of the tiller having given way, drove in preventer ones.</p> <p>P. S. every hour. The trusses of the fore yard, gave way, replaced them scudding under bare poles. The sea frightful, vessel making much water through the deck.</p> <p>Crew worn out with fatigue. The sun appeared indistinctly at noon, whereby we obtained an indifferent latitude and longitude.</p> <p>Latitude by indifferent observation 18° 02' S., Longitude ditto 51° 2' 30'' E.</p> |
| 2 | 11 | ... | N.N.E. | S.S.W. | | | |
| 3 | 11 | ... | | | | | |
| 4 | 10 | ... | N.E. | S.W. | | | |
| 5 | 10 | ... | E.N.E. | W.S.W. | | | |
| 6 | 10 | ... | East | West | | | |
| 7 | 10 | ... | E.S.E. | W.N.W. | | | |
| 8 | 10 | ... | | | | | |
| 9 | 10 | ... | S.E. | N.W. | | | |
| 10 | 10 | ... | S.S.E. | N.N.W. | | | |
| 11 | 10 | ... | South | North | | | |
| 12 | 10 | ... | S.S.W. | N.N.E. | | | |
| 1 | 10 | ... | S.W. | N.E. | | | |
| 2 | 11 | ... | W.S.W. | E.N.E. | | | |
| 3 | 10 | ... | West | East | | | |
| 4 | 10 | ... | W.N.W. | E.S.E. | | | |
| 5 | 10 | ... | N.W. | S.E. | | | |
| 6 | 10 | ... | N.N.W. | S.S.E. | | | |
| 7 | 10 | ... | North | South | | | |
| 8 | 10 | ... | N.N.E. | S.S.W. | | | |
| 9 | 10 | ... | N.E. | S.W. | | | |
| 10 | 10 | ... | E.N.E. | W.S.W. | | | |
| 11 | 10 | ... | East | West | | | |
| 12 | 10 | ... | E.S.E. | W.N.W. | | | |

| H. | K. | F. | Courses. | Winds. | Lee Way. | Var. | Wednesday 26th to Thursday 27th Feb. 1846 |
|----|----|-----|----------|--------|----------|------|--|
| 1 | 10 | ... | S.E. | N.W. | | | <p>The horizon always obscure though sometimes clearing a little, but the squalls and sea always heavy, pumped every hour. Two men at the helm. Always under bare poles. At 10 p.m. clearing up a little, and saw some stars, but the sea and wind always heavy.</p> <p>Bent fore top-mast stay-sail and fore and aft mainsail with two reefs in it. Bent another fore top-mast stay-sail on the fore stay to balance the vessel's sails.*</p> <p>Scudding always according to the veering of the wind.</p> <p>Seeing that we had sustained much damage, and that we were nearer to the Mauritius than to any other place, the captain resolved to return there, not considering the vessel in a state to continue her voyage.</p> <p>Latitude observation 20° 12' S. Longitude chronometer 52° 24' E.</p> |
| 2 | 10 | ... | S.S.E. | N.N.W. | | | |
| 3 | 9 | ... | | | | | |
| 4 | 9 | ... | | | | | |
| 5 | 9 | ... | South | North | | | |
| 6 | 9 | ... | S.S.W. | N.N.E. | | | |
| 7 | 10 | ... | W.S.W. | E.N.E. | | | |
| 8 | 10 | ... | West | East | | | |
| 9 | 10 | ... | N.W. | S.E. | | | |
| 10 | 10 | ... | N.N.W. | S.S.E. | | | |
| 11 | 10 | ... | North | South | | | |
| 12 | 10 | ... | N.N.E. | S.S.W. | | | |
| 1 | 10 | ... | N.E. | S.W. | | | |
| 2 | 10 | ... | E.N.E. | W.S.W. | | | |
| 3 | 10 | ... | East | West | | | |
| 4 | 10 | ... | E.S.E. | W.N.W. | | | |
| 5 | 10 | ... | S.E. | N.W. | | | |
| 6 | 10 | ... | S.S.E. | N.N.W. | | | |
| 7 | 10 | ... | South | North | | | |
| 8 | 10 | ... | S.S.W. | N.N.E. | | | |
| 9 | 10 | ... | S.W. | N.E. | | | |
| 10 | 10 | ... | W.S.W. | E.N.E. | | | |
| 11 | 10 | ... | West | East | | | |
| 12 | 10 | ... | | | | | |

* i. e. When sail should be made, having lost the jib boom.

| H. | K. | F. | Courses. | Winds. | Lee Way. | Lee Way. | Tuesday 27th to Friday 28th Feb. 1845. |
|----|----|-----|----------|----------|----------|----------|---|
| 1 | 7 | ... | S.E. | E.N.E. | ... | ... | The weather becoming fine, bent the fore-sail, and spare fore top-sail, took the main top-sail yard for a main yard, and let the reefs out of the fore and aft main-sail. Fine, and sea smooth with a pleasant breeze. Latitude observation 20° 19' S. Longitude chronometer 24° 29' 28' |
| 2 | 7 | ... | S.S.E. | Variable | | | |
| 3 | 7 | ... | E.S.E. | to N.E. | | | |
| 4 | 7 | | | | | | |
| 5 | 7 | | | | | | |
| 6 | 6 | 4 | | | | | |
| 7 | 6 | 4 | | | | | |
| 8 | 6 | 4 | | | | | |
| 9 | 6 | | | | | | |
| 10 | 6 | | | | | | |
| 11 | 6 | | | | | | |
| 12 | 6 | | | | | | |
| 1 | 6 | | | | | | |
| 2 | 6 | | | | | | |
| 3 | 6 | | | | | | |
| 4 | 6 | | | | | | |
| 5 | 6 | | | | | | |
| 6 | 6 | | | | | | |
| 7 | 6 | | | | | | |
| 8 | 6 | | | | | | |
| 9 | 6 | | | | | | |
| 10 | 6 | | | | | | |
| 11 | 6 | | | | | | |
| 12 | 6 | | | | | | |

I should notice this log separately, but at present, I proceed to print the remaining documents, so as first to adduce from them the general track of the storm, and then take up the peculiar investigations which this log gives rise to.

H. PIDDINGTON.

DESTRUCTION OF A SHIP BY LIGHTNING, AND LOSS OF LIFE.

Plymouth Paper, 28th February, 1846.

The ship *Bayfield*, of Liverpool, was destroyed by lightning while on a voyage from that port to Bonni, near Sierra Leone, the particulars of which calamity have been collected from letters written by Captain Lucas, the master of the unfortunate vessel, to the owners, Tobin and Son, of Liverpool, received on Saturday last, and other sources.

The *Bayfield*, it appears, was about 400 tons burden, and her voyage was favourable till the 25th of November, when she encountered a terrific tornado, accompanied by vivid flashes of lightning and peals of thunder, the vessel being in lat. 7° 50' N, and 17° 30' W., between 250 and 300 miles W.S.W. of Sierra Leone. The master and crew displayed the utmost coolness, and remained on deck at their several posts, ready to act at the instant notice. Such was the state of things till about a quarter past twelve o'clock, when the electric fluid struck the main and mizen-mast head. The shock was fearfully violent. Captain Lucas and the greater part of the crew near him were knocked down in almost an insensible condition, while the lightning passed down the masts into the ship's hold, and, observes the master in his letter, "large splinters and balls of fire were scattered over the deck, fore and aft."

As may be imagined, the vessels timbers trembled under its effect, and some minutes transpired ere the affrighted crew recovered their senses. Still the storm raged with all its previous fury, and in the course of half-an-hour the crew, who were nearly all exhausted by their exertions during the hurricane were paralyzed on hearing the ship was on fire. A rush was made to the boats, and here, perhaps, had it not been for Captain Lucas's self-possession, in endeavouring to calm the fears of those on board, every soul would have perished. Acting under his directions, in the hope of there being some chance of saving the vessel, the after hatches, were removed, when a body of flame instantly shot up some feet above the deck. Water was thrown into the hold and the hatches were immediately replaced, under the supposition that it would have the effect of smothering the fire. Captain Lucas discovering that it was raging immediately over the magazine, and fearing an explosion would momentarily occur, determined on abandoning her. For a few minutes, however, he still remained by, and then finding that the fire had not in the slightest abated, gave the word to launch the boats—a work of considerable difficulty in so fearful a storm, as it required the greatest care to prevent them being dashed to pieces against the vessel's sides. At length they succeeded in getting into the boats and pushed off, and laid to about a mile from her until day-break, by which time she had drifted five miles south-east from where they were laying. Perceiving that the flames had not extended over her so rapidly as they anticipated, and being without provisions of any description, they resolved to return to the burning ship to save all they could from her. They promptly reached her, and, on crawling up the sides on to the deck, found her to be on fire fore and aft. The smoke was rushing from every aperture in dense volumes, and the deck was so hot aft the mainmast, that they were unable to walk over it. To get at the fore hold where the fresh water was stowed, for their subsistence in the boat until they reached land, was utterly impossible, and fancying every moment the ship would explode, they took to the boat once more, unable to save anything in the shape of provision but thirty pounds of bread. They also rescued a compass. During the whole of that day they remained in sight of the flaming vessel, the fire raging with terrific fury. At sunset she appeared to be drifting away, and later in the evening the only thing they could distinguish of her was the bright reflection of the flames in the horizon. It appears, however, that she was seen to blow up by other vessels about two o'clock on the following day. The unfortunate fellows in the boats, after losing view of their illfated craft, steered a course for Sierra Leone, which they succeeded in gaining, after undergoing the most severe sufferings for eight days and nights. As before stated, all they had to live upon was thirty pounds of sea-biscuit-bread, which, divided amongst so many, gave to each poor fellow but a very scanty allowance. The want of water also considerably increased their misery, being close to the line under a tropical sun. When they reached the shore three of the unhappy men had perished from hunger and thirst. Their names were Robert Burns, boatswain, Dennis Sullivan, a carpenter, and William Butler, a seaman. The appearance of the captain and the remainder of his crew on arriving at Sierra Leone was most pitiable, but by proper nourishment and kind attention they speedily recovered. At the direction of the English authorities they were placed on board the *Frankfield* for New Orleans, *en route* to their native country, on board which vessel the letter of Captain Lucas to the owners was written, dated the 12th December.

RODGER'S ANCHOR.

Captain Sullivan has given the result of his experience of Rodger's Small Palmed Anchor, in the following official letter to the Secretary of the Admiralty, confirming all preceding testimony in its favour, and the opinions which we have before now expressed. We need not again repeat them, but we may add that there is more than sufficient evidence recorded in the pages of this work to prove that Lieutenant Rodger's anchor is very far superior to all others.

Admiralty, July 2, 1846.

SIR,—In pursuance of the directions of the Lords Commissioners of the Admiralty, I enclose a copy of a letter from Captain Sullivan, respecting a Small Palmed Anchor of your construction, tried on board Her Majesty's surveying vessel *Philomel*, under his command.

I am, Sir,

Your humble servant,

R. DUNDAS, *Storekeeper General.*

*Lieut. Rodger, R.N.,
Shawfield Street, King's Road, Chelsea.*

June 28th, 1846.

SIR,—In reply to your letter of the 25th instant, I have to inform you, that after having severely tried a Small Palmed Anchor of 15 cwt., on board the *Philomel*,—her established size being 19 cwt.,—I have no hesitation in saying that I consider it so superior to those of the dock-yard construction, that were I to fit out another ship, I should apply to have all her anchors on Lieut. Rodger's plan. It was far superior to our other anchors in every case, except when the bottom consisted of a soft loose mud, in which case it is, I think, only equal to other anchors of a similar weight; but this kind of bottom is seldom met with, and in common muddy bottoms we found it as superior as usual.

I think it right to add, that I should recommend all small vessels, at least that have the Small Palmed Anchor, to be supplied with cables a size larger than the present establishment.

In the *Philomel*, by Lieut. Rodger's advice, I was allowed larger chains, and often found the benefit of them, and yet the anchor, though so much smaller than the establishment, parted the chain on one occasion.

I have the honour to be, &c.,

B. J. SULLIVAN, *Capt. R.N.*

Capt. Hamilton, R.N., &c.

The following letter of Captain Sullivan's, written in the true style and spirit of a thorough seaman, and received by Lieut. Rodger nearly three years ago, exhibits very satisfactorily the great superiority of his Small Palmed Anchors over those of the usual construction. It also shews the kind of data on which the preceding official report of Captain Sullivan is based—embracing as it does, an experience of nearly four years' duration in one of the most tempestuous regions of the world.

*H.M. Ship Philomel, Monte Video,
July 15th, 1843.*

DEAR SIR,—Having now given your anchor a fair trial as I promised you I would do, I have great pleasure in sending you the following report of it.

The anchor weighs 15 cwt., the *Philomel's* established size being 18 cwt. During the last season, at the Falkland Islands, it was used as a working anchor on every occasion, and though we rode out many gales, (and some few of them were storms), *our other bower anchor was never let go* during the six months, except on one occasion when the ship was hove off after running on shore. When we moored it was always with a light stream to the eastward (from which quarter it seldom blows strong), still riding entirely by your anchor, and generally with only three shackles of cable out. It was only on two or three occasions that we veered to four shackles, and on one occasion to five shackles, but at these times it blew furiously. On two occasions, when the bottom was a softer mud than usual, and the ship was riding with three shackles of cable, the wind blowing very strong in the squalls, we found that during the night the anchor had come home a little, perhaps three times the ship's length, but at no other time did it ever start the least. The holding ground is very good, either stiff mud or sand with clay beneath it, and the anchorages are all well sheltered, but still the gales are sometimes very heavy, and accompanied by furious squalls, during which it seemed impossible for the ship to hold on with only three shackles of cable; yet being anxious to try the anchor thoroughly, I would not let go the second anchor, but sometimes dropped a small stream, leaving the cable slack that we might know immediately if she drove at all. On one occasion we anchored under a point of land over which the wind was blowing strong, with a good swell rolling round the point on the broad of the bow. The bank (sand) was so steep that we shoaled from 7 to 5, and then 3 fathoms; the anchor was let go in 6 fathoms, and though under the great disadvantage of such a slope for the anchor to drag down, it brought the ship up dead, with only *eighteen* fathoms of cable out, and though it blew a fresh gale during the day, and we had our yards square and top-gallant yards across all the time, yet we remained there several hours, and had not occasion to give her a fathom more cable, neither did the anchor start. It has been a most useful anchor to us, and while it is quite large enough for the ship, we have the great advantage of working an anchor 3 cwt lighter; and, on one occasion, when the ship was on shore, and we had to carry out a bower anchor and chain with two small gigs, (the only boats with the ship at the time), this was of great importance; besides which, the small palm allowed us to bring the two boats much closer together than we could have done with a common anchor, which was a great advantage.

Having thus done justice to the merits of your anchor, I must now point out where I think it is inferior to the old one; and this is where the holding ground is very soft mud, such as it is in this port, and other parts of the River Plate. On every occasion that it has blown very hard since we have been here, and we have been riding by your anchor, we have brought it home, while, under similar circumstances, our other bower anchor has never started. Were your anchor of equal weight with the other, (which is 19 cwt.), this might not be the case; but it proves that the anchors should be of equal weight with the old ones, to be trust-worthy under every circumstance; or what would perhaps be better, every vessel should have one anchor of the old make (I mean Pering's), and weight, to use under the only circumstance in which I think it can be preferable to yours. Should one of your anchors prove equal to an old one of the *same weight* in very soft mud, which I should

like to see tried, I should then much prefer having one of yours larger than the others, instead of one of the old make, as, in other respects, I think it would be superior.

Believe me, dear Sir,
Yours very truly,
(Signed) B. J. SULLIVAN.

To Lieut. Rodger, R.N.

THE CORAL FISHERY.

From the Athenæum, July 4, 1846.

THERE is no port in the Bay of Naples which presents so bustling a scene at this season of the year as Torre del Greco. Hundreds, I may say thousands, of mariners are now here, assembled from various parts of the coast, dressed out in their rich Phrygian caps and scarlet saashes, ready to start for the coral fishery. At last, the weather begins to brighten—the tempestuous sirocco and the roystering tramontana retire within their caves; and a favourable breeze springing up, soon they “are upon the Mediterranean flote,” in little detachments according to their destination. What lamentations may then be heard amongst mothers, or wives, or sweethearts, who have thronged down to Torre to take a last farewell! But courage!—a mass has been said, or a candle offered to the Madonna; and now to complete the “buoni augurij,” these loving companions throw a handful of sand after the receding bark,—exclaiming “*Possa andare come una nave degli angeli.*” Having lately been in the midst of these scenes, and interested myself in the details of this profitable branch of commerce, I send you what may be called the statistics of the coral fishery.

The coral fishery is a source of more profit than is, perhaps, generally known; and is attended with hardships, the bare thought of which might diminish some of that natural vanity with which the fair one contemplates the glowing ornaments that repose upon and contrast with her white bosom. I was standing on the *marina*, when I witnessed such a scene as I have described—a party of gaily dressed mariners, accompanied by women weeping and wailing as our northern females know not how to do. Their short and simple story was soon learnt; and the particulars I now send you, as the result of my inquiries.

Torre is the principal port in the south of Italy for the vessels engaged in the coral fishery—about 200 vessels setting out from hence every year. They have generally a tonnage of from 7 to 14 tons, and carry from 8 to 12 hands; so that about 2,000 men are engaged in this trade,—and, in case of an emergency, would form a famous *corps de reserve*. They generally consist of the young and hardy and adventurous, or else the wretchedly poor; for it is only the bold spirit of youth, or the extreme misery of the married man, which would send them forth upon this service. For two or three months previous to the commencement of the season, many a wretched mariner leaves his starving family, and, as a last resource, sells himself to the proprietor of one

or other of these barks, receiving a *caparra* (earnest money), with which he returns to his home. This, perhaps, is soon dissipated, and he again returns and receives an addition to his *caparra*; so that, when the time of final departure arrives, it not unfrequently happens that the whole of his scanty pay has been consumed, and the improvident or unhappy rogue has some months of hard labour in prospect, without the hope of another *grano* of compensation. Nor does the proprietor run any risk in making this pre-payment; for as the mariner can make no engagement without presenting his passport perfectly *en reglu*, he is under the surveillance of a vigilant police. The agreement between the parties is made from the month of March to the Feast of San Michael (29th September), for vessels destined for the Barbary coast,—and from March to the Feast of the Madonna del Rosario (October 2), for those whose destination is nearer home. Each man receives from 20 to 40 ducats, according to his age or skill, for the whole voyage; whilst the captain receives from 150 to 400 ducats—reckoning 6 ducats to £1 sterling. These preliminaries being settled, let us imagine them now on full wing,—some for the coast of Barbary, and others for that of Sardinia, or Leghorn, or Civita Vecchia, or the islands of Capri, San Pietro, or Ventotene, near which I have often seen them, hour after hour, and day after day, dragging for the treasures of the vasty deep. On arriving at the port nearest to the spot were they mean to fish, the “*carte*” are sent in to the consul, which they are compelled to take again on return. A *piastre* is paid by each vessel for the magic indorsement of his Eccellenza—another to the druggist, and another to the medical man; whilst the captain, to strengthen his power, and to secure indemnity in case of some of those gentle excesses which bilious captains are sometimes apt to commit, has generally on board some private “*regalo*” for his consul. The next morning perhaps they push out to sea, and commence operations; not to return that evening, or the next, or the next, but to remain at sea for a fortnight or a month at a time, working night and day without intermission. The more humane captains allow half their crews to repose from Ave Maria to midnight, and the other half from midnight to the break of day; others allow only two hours’ repose at a time, whilst some, again, allow no regular time:—“so that,” said a poor mariner to me, “we sleep as we can, either standing, or as we haul in the nets.” Nor do they fare better than they sleep: for the whole time they have nothing—literally nothing—but biscuit and water, whilst the captain, as a privileged person, has his dish of dried beans or haricots boiled. Should they, however, have a run of good luck, and put into port once in fifteen days or so, they are indulged with a feast of macaroni. These privations make it rather rough work, it must be confessed, for a mariner,—especially when it is remembered that it lasts seven months; but if to this be added the brutality of the captains, whose tyranny and cruelty, as I have heard, exceeds any thing that has ever been recounted to me before, we have a combination of sufferings which go far to justify the description given to me of this service by one engaged in it, as being an “*Inferno terrestre*.”

Now let us view them at work. Every vessel carries about 12 *contaj* (a *contajo* being 200 pounds) of hemp to make the nets, which are changed every week. They are about 7 or 10 *palmi* in width, and 100 or 120 *palmi* in length,—worked very loosely, and with large meshes. On being thrown into the sea, the vessel is put before the wind, or else propelled by oars, until these loosely-formed nets have fastened upon a rock. Then comes the tug of war. If they have great good fortune, they will take a piece of 2 or 3 *rotoli* at a haul (a *rotolo* being 33 ounces), though this is a rare occurrence. In its natural state, the coral is either white or red, or even black externally, from the action of the sea. The white is very rare and very precious; comparatively a small quantity being sufficient to make a good voyage,—especially if it be

taken "ingrosso," when it will fetch as high as 100 ducati, or more, the rotolo. The red "a minuto" is not very valuable; but if it is "scelta" and "ingrosso," it can be sold for from 25 up to 60 ducati the rotolo. As a rule, however, the round shaped coral is much more valuable than the tree or the spiral coral.

"Full fathoms five thy father lies;
Of his bones are coral made"—

So sang Ariel; without, I suppose, intending to lay down any rule as to the depth at which coral may be found. Indeed, it is found at all depths, from 12 to 16 palmi up to 150, or even more. At last, arrives the Feast of San Michaele, or of the Madonna del Rosario. As soon as the day dawns, the nets are slackened; no man will work more, even if treasures are in prospect. So, pushing into land, and taking up their "carte," away they set on their return—many as poor as when they departed; some with a few ducats in "sacco," and a new Phrygian cap, or dashing sash, or some article of finery, for the "innamorata,"—all, however, being thoroughly tired out, and injured perhaps in constitution. The cargo being deposited in the "magazzin" of the merchant, is sold out to the retail merchants, who flock in from Naples and elsewhere; and is soon transformed into numerous articles of ornament or superstition—crosses, amulets, necklaces, and bracelets. And now, these mariners have a long repose, till the spring comes round and sends them out again on this odious service,—though there are very few who make two or three consecutive voyages of this nature. Many vessels are lost in the season, owing to their long-continued exposure to all kinds of weather, and to their lying in amongst the coral reefs. However prosperous the voyage, life aboard the vessels "*e la vita d'uno cane*." Yet the service may be regarded as one of the most important in the kingdom of the Two Sicilies, as well for the wealth it annually brings in, as also for the school it offers for training hardy, well-disciplined mariners.

NAUTICAL NOTICES.

Tonnage-Office, Lancaster, June 4, 1846.

PORT OF LANCASTER.—The following has been posted at Lloyd's:—The Commissioners of St George's Quay, Lancaster, do hereby give notice, that, on and after the 10th day of September, 1846, the light on the Island of Walney will revolve in four minutes, shewing a bright light every minute, in place of, as heretofore, one every four and a-half minutes. They also give notice that a stationary Tidal Light, red, will be placed on the south point of the said Island of Walney. These alterations are sanctioned by the Board of the Trinity-house.

By order of the Commissioners,
JOHN WALKER, *Quay-master.*

East India House, London, April 29, 1846.

COAST OF CHITTAGONG.—Notice is hereby given, that the Court of Directors of the East India Company have received intelligence from Calcutta to the effect that the Light Vessel stationed between the Patches on the coast of Chittagong, in lat 21° 27' N., and long. 91° 45' E would be withdrawn on or about the 20th April (instant), and that it was expected that the lighthouse on the Kootubdeea Island would be lighted up in the beginning of the month of February last.

JAMES C. MELVILL, *Secretary.*

Hydrographic Office, Admiralty, June 18, 1846.

BANKS STRAIT, VAN DIEMEN LAND.—*Revolving Light on Swan Island.*—This light, which has been recently established for the purpose of leading through Banks Strait, revolves once in every minute, and then shews a brilliant flash of $2\frac{1}{2}$ seconds in duration.

The tower is 74 feet in height; the upper part of it is painted red, and the lower part white; the lantern stands 101 feet above the level of high water, and the light is visible at the distance of 15 miles.

It bears from Black Reef N.b.W. $\frac{1}{2}$ W. magnetic, 9 miles.
 Cape Barren, S.W.b.S. . . . 24 ...
 Look-out Rock S.E.b.E. . . . 10 ...

Fixed Light on Goose Island.—A light-house on the southern part of this island has been completed, and the light will shortly be exhibited.

From thence the above mentioned light on Swan Island bears S.E. $\frac{1}{2}$ S. magnetic, and is 30 miles distant.

Trinity-house, London, June 26, 1846.

BEACON ON THE BLYTH SAND.—The easternmost or lower beacon on the Blyth Sand, in the river Thames, having been run foul of and struck down, notice thereof is hereby given, and that a buoy coloured *black*, and marked "Blyth," has been laid in $2\frac{1}{2}$ fathoms at low water spring tides, about a cable's length to the N.N.E. of the spot on which the beacon stood, and with the following marks and compass bearings, viz. :—

| | |
|--|-------------------------|
| Pitsey Mill, the length of the Holy Haven Preventive Vessel open to the westward of her, | N. $\frac{1}{2}$ E. |
| Leigh Church, just open to the eastward of the Scar House Jetty, | E.b.N. |
| Chapman Beacon, | E. $\frac{1}{2}$ S. |
| Upper Blyth Beacon, | W.b.N. $\frac{1}{2}$ N. |

By order,

J. HERBERT, *Secretary.*

Hydrographic-Office, Admiralty July 1, 1846.

BERMUDA LIGHT.—On the 1st of May last a Revolving Light was established on the southern part of the Island of Bermuda, in latitude $32^{\circ} 14' N.$, and longitude $64^{\circ} 51' W.$ Every minute it brightens up into a strong glare, which continues for 6 or 8 seconds; and which being 365 feet above the level of the sea, is visible at the distance of 7 or 8 leagues; and from all round the horizon, except between the bearings of N. 64° E. to N. 74° E. where it will be intercepted by high land. Within the distance of 7 miles a faint but permanent light may be seen between the brilliant flashes.

At night or in thick weather it is advisable not to make Bermuda to the northward of $32^{\circ} 8' N.$ latitude, until the light or the land is seen.

In coming from the eastward the light should not be brought to the southward of W.b.S., nor approached at night nearer than six or seven miles.

In coming from the westward the light should not be approached nearer than 12 miles, first unless brought to bear to the northward of N.E.b.E.

A vessel making the light to the southward should haul off immediately, as reefs extend from it to a distance of 16 miles to the northward.

THE ROB ROY—The passage of the *Rob Roy* steam ship, Lieut. Knocker R.N., with a full cargo from Hull to Petersburg, occupied six days and three hours, including the stoppage at Copenhagen. The return from Cronstadt against strong head winds, and including the same stoppage, occupied three hours and a-half less than seven days. The following is from her log:—June 11th, Left Hull at 6 A.M. 14th, Arrived at Copenhagen at 7 A.M. 17th, Reached Cronstadt. 27th, Left Cronstadt at 10 P.M. 28th, Saw a Russian fleet of nine sail of the line off Dago. 30th, Passed three Russian men-of-war and a steamer with the Grand Duke Constantine off Sandhamaur reef. July 1st, Arrived at Copenhagen at 5 A.M., and departed at 11 A.M.; passed riding in the Sound a squadron of Swedish men-of-war, with an admiral's flag, consisting of seven ships, frigates, corvettes, and one steamer, said to be attending on the king of Sweden on his visit to the king of Denmark. July 4th, Arrived at Hull at 6h 25m P.M., with eight passengers and gold bullion of the value of about £80,000.

NOTES WORTH NOTING.

It ought to be known to the commanders of our Merchant shipping that Mr. Saxby of Belle Vue at Ventnor, in the Isle of Wight, has rigged a good flag-staff on his premises, upon a very conspicuous bank, about a cable's length from Ventnor church, eastward, and offers to Lloyd's Committee, and to masters of ships generally, to answer and report any communication made to the shore.

In the heavy thunderstorm which occurred in the beginning of July, a shower of frogs fell from one of the surcharged clouds over the Humber. Several dropped on the decks of vessels navigating the river, and a portion of coast near Killingholme lights received multitudes of them. The fall of fish from clouds in India is no uncommon thing, and are considered to be drawn up in waterspouts from the ocean. The frogs no doubt were subjected to the same process.

On the German railroads there are 296 locomotive engines; of which 194 were manufactured in England, 57 in Germany, 16 in Belgium, and 29 in America.

The custom of making way in Canton, till the Mandarins pass, since the war with this country has rather fallen into desuetude.

The remains of Capt. Taylor's breakwater have at length been removed from Brighton by the African steamer.

The fid fitted in the *Dido* is reported to have been removed in consequence of its inefficiency.

A vessel has arrived in the St. Catharine's Docks from the Havana with nine blocks of marble in addition to the usual cargo of cigars, sugars, mahogany, &c. It is supposed to be the first importation of marble from the West Indies, the foreign supplies of the article being generally from Italian, or other European states.

A Notice to Mariners, dated Hamburgh, June 20th, states that several new buoys have been laid down near the Ossel sand.—See *Shipping Gazette*, June 20th.

A return to Parliament has been made of an interesting nature to merchants and underwriters which states that, the total number of collisions of merchant vessels in the year 1845, amounts to 454, the largest number being 62 in the month of December, and the lowest (15) in July. In the present

year they are Jan. 57, Feb. 30, Mar. 30, April 26, May (to 12th) 7; Total 150. The Hibernia and Lady Sale are reported in the *Shipping Gazette*, 29th June, as having run foul of each other in lat. 42° 6' N., long. 57° W., happily no injury took place, and after remaining about an hour hugging each other they separated for their destinations.

Mr. Wake of Newcastle has been elected Harbour-Master, and Mr. Elliott, Deputy Harbour-Master of Shields harbour.

Three seamen of the Ann Semple at Limerick are stated by a coroner's inquest after a *post-mortem* examination, (having died suddenly), to have died from the effects of drinking the water of the Shannon poisoned by the sewers from the gas works and other sewers.

It is stated that the New Zealand chief Heki is no other than a Tipperary man whose real name is Hickey. He was wrecked on the coast of New Zealand some years ago, taken into the interior, adopted as a son by a chief, tattooed, and married to his daughter, and, on the death of his father-in-law, was chosen as a chief on account of his skill in war.

It is stated that the desertions of seamen at Quebec is as great as ever, and that the registry ticket does not in any way tend to prevent them.

It is said that a screw pile lighthouse, on Mr. Mitchell's principle, has been fixed on in the Narrows of the harbour of Belfast. We have as yet seen no announcement or notice to mariners of its position.

The Margaretta, Pippett, arrived at north Shields on the 1st July, after a passage of 90 days from Patagonia, with scurvy. A case, for the guardians of the law.

A Norwegian schooner, the Betty of Christiania from Bremen, was plundered by Pirates in the North Sea (German Ocean) on the 12th June.

Mr. W. Graham late master of the ship Grange has been sentenced to imprisonment for six months for brutal conduct towards a man of colour named Singleton, and J. Bain, cook of his vessel.

A regular communication by steam has been opened between the Tyne and the Elbe which promises to be serviceable to both rivers.

A pamphlet which has been published from the pen of Captain Plunkett, and draws an unfavourable picture of the difficulty of manning the navy has been fully replied to in the *Naval and Military Gazette*, Nos. 703 and 706, by which it appears we are not quite in so precarious a condition as we are represented to be in.

Another commission consisting of three officers is to be appointed by Government to enquire into the real merits of Captain Warner's invention. Thus this long agitated subject (ever since the days of William the 4th), seems likely to be set at rest, and thus the truth of the long range invisible shell is to be established or refuted. Did ever any one calculate the angle subtended by the length of a ship at the distance of five miles? or the chance per cent of a shot striking a vessel at that distance? Let us hope however, that now the subject is in a fair way of being set at rest, and that no objections on any account whatever will prevent it. Lord Ingestrie has said of it that, sooner or later, the importance of the invention would be felt and understood throughout the country.

In 1814 there was but one steam boat belonging to the British Empire. During thirty years the number has increased to about one thousand British steam-boats which are now navigating every sea.

It is said that a new lighthouse is to be erected on the island of Rosevear at Scilly, and that St. Agnes lighthouse is to be raised thirty feet higher in order that it may be distinctly seen to the eastward of the island.

Another wreck has taken place at Cape Lagulhas.

The Gentoo, Hollis, from Calcutta to Boston, was lost on (Wednesday night before the 1st May), on the same spot where the Duke of Northum-

berland was lost. How many more ships are to be lost on Cape Agulhas before it is qualified for a lighthouse? and how many more lives? Seven of the latter have been added by the loss of the *Gentoo* to the requisite number, whatever that may be!

The *Sphinx* new man-of-war steamer has been fitted with a pair of oscillating engines of 500 horse-power, the largest yet made by Messrs. Ravenhill and Co.

We look upon the *Nautical Standard* as the first naval paper of the day. Its naval news, both at home and from all foreign stations, is most full and complete, while every thing else relating to nautical matters of all kinds, and more especially that all-absorbing subject steam navigation all over the world is amply and carefully treated. It is second to no naval paper, and is one which requires to be known by naval officers to be appreciated and patronized as it deserves.

The *Porcupine*, Capt. Bullock, surveying the entrances of the Thames, extricated an American ship, the *Margaret Forbes* of Boston, from a perilous position, which would, in all probability, have occasioned her loss. This has drawn from the American captain, a letter to our gallant surveyor, in which he tells him, "The kindness shewn to me would command for ever my gratitude were I an Englishman; how much more so when I subscribe myself a stranger, and your obliged servant, CHARLES PRESCOTT."

The *Egmont*, 72, is to be fitted as a coal depôt, on the plan of Capt. Hall, and to be stationed at Spithead, a measure by which much time will be saved in coaling.

The blockade of Vera Cruz by the Naval Forces of the United States has been notified in a document dated the 20th May off Tampico.

The first general meeting of the patrons and others interested in the welfare of the Merchant Seamen's Annuitant Society, has been held at the Hall of Commerce, yesterday, Sir George Larpent in the chair, when resolutions were passed favourable to the society, which has for its object a permanent provision for the families of the commanders, officers, and seamen of the merchant service, upon the plan of the Royal Naval Annuitant Society.

After an unprecedented round of visits in this country, his Highness Ibrahim Pacha took his departure from London, on the 15th July. He embarked on board the *Comet* for conveyance to the *Avenger* at Spithead, and on arriving on board the *Avenger*, proceeded *en route* first to Lisbon, then to Cadiz, Gibraltar, Malta, and Alexandria. Among his munificent donations that of £500 to the Lord Mayor of London for the use of the poor of the metropolis, may be mentioned.

Notwithstanding the abuse of the Custom-house officers, contained in a letter addressed to the *Times*, by a country gentleman, visitors and passengers to and from Folkestone for Boulogne, daily increase.

Steam ships at Hull are increasing daily. A new iron boat with screw propeller called the *Hammonia*, built by Mr. Marshall of South Shields, of 250 tons burthen, and 250 horse-power arrived here last week. She is one of the vessels destined to run between this port and Hamburg, and is the property of a company of gentlemen, we believe of the Jewish persuasion.

THE OREGON TREATY.—It passed the Senate on the 18th ult. by a vote of 41 to 14; only one member of the Upper House of Congress being absent on this important occasion. As soon as the two Governments have exchanged ratifications, the treaty will be made public, together with the proceedings of the Senate in relation to it.

Art. 1.—Fixes the territorial boundary between the United States and Great Britain, West of the Rocky Mountains, on the line of 49 degrees till it reaches Queen Charlotte's Sound, and then through the Straits of Fuca to the ocean, which gives to Great Britain Vancouver's Island.

Art. 2.—Declares the navigation of the Columba river, up to where it strikes the line of 49 degrees, to be free to the Hudson Bay Company during the continuance of its charter.

Art. 3.—The rivers, ports, and harbours, north of 49 degrees, to be free to the commerce of both nations.

Art. 4.—Indemnity for the forts and trading stations of the Hudson's Bay Company, south of 49 degrees, and of the Americans north of the same, if any there be.

Art. 5.—Indemnity for private property of citizens or subjects who may be south or north of 42 degrees, if they wish to retire within their own territory.

NEW BOOKS.

ÉTUDE SUR LA NAVIGATION DES RIVIÈRES À MAREES ET LA CONQUÊTE DES LAIS ET RELAIS DE LEUR EMBOUCHÈRE.—Par M. BOUNICEAU, ancien Elève de l'École Polytechnique, Ingénieur au Corps Royal du Ponts, &c.

WE believe that this is the first work written, exclusively on the above important subject, which has issued from the French press, and a perusal of its pages shews that it owes its origin to the work which preceded it a few years ago by our old correspondent Mr. Brooks, the engineer to the Tyne and Tees, which we reviewed in the *Nautical* of 1841.

M. Bouniceau has given numerous extracts from Mr. Brooks's work, and has generally adopted the opinions of the latter engineer, and we think that, if the former were also to take a practical lesson from Mr. Brooks's *modus operandi* in the Tees and Tyne, he would be enabled to come to quite a different result as to the cost of improving the navigation of the Gironde, Garonne, and Dordogne, the system followed by Mr. Brooks allowing, namely, works of timber, in lieu of parallel dykes of stone, enabling the same result to be obtained at a fourth of the outlay necessary for the latter.

Our author, in his seventh chapter, makes a demonstration against the correctness of Mr. Brooks's designation of some rivers. Thus, the Tagus, Gironde, and Seine, being mentioned as examples of rivers free from bars at their mouths, are objected to as such by M. Bouniceau, notwithstanding the latter gentleman, in another part, actually writes of the Tagus as "having a bar only slightly perceptible," the depth on it being above eight fathoms at low water, while, of the Gironde, he also adds,—"The bank of sand known under the name of the bar of the Gironde, is covered by more than 30 feet (about $5\frac{1}{2}$ English fathoms) at low water; and the Gironde may, properly speaking, be considered as unincumbered with an exterior bar."

The objection to the Seine is better sustained. M. Bouniceau shewing that the same deep water at the mouth is not continuous for any considerable extent of navigation above, and that the channel consists of a series of banks or bars from the right of Point la Hogue to Quillebeuf. In thus properly transferring the Seine to the list of bar rivers, he, nevertheless, makes this example confirm Mr. Brooks's theory by the details of the levels which the current presents at low water. "For example, the flood arrives at Havre at 9h. 57m.; its course is from thence to Quillebeuf, to reach which port the tide has to rise vertically 13ft. 6in. (French), and it takes 3h. 14m. to effect this." There exists, therefore, as proved by the above account, so great a fall or inclination of the low water surface, and consequent long obstruction to entrance of the flood tide, that we need not wonder at the great disparity which the Seine bears to our Thames as regards its navigable capability.

M. Bouniceau is of opinion, that the highly favourable condition of the Thames has been produced by the form which has been given to its channel by successive ancient enclosures of the neighbouring flooded lands, and he proceeds with a comparison of the Medway with the Thames; but, in lieu of the Medway, he may as well take the Seine.

"The Mersey, which has not the form of the Thames, and is contracted between Liverpool and Blackrock, presents in that portion of its channel a depth much greater than is found both above and below. The Thames, on the contrary, whose shores expand gradually as they approach the sea, has a depth which continually increases." We have said little on the Thames and Mersey, we have principally had the object in view of exposing the difference which exists in their configuration and capabilities for navigable purposes. Thus both these rivers are feeble beyond the influence of the tide, and they have at their mouths tides nearly similar. The channel of the Thames is of the best, while that of the Mersey is of the most unfavourable form. The Thames is navigable for 47 miles above its mouth, and the Mersey only for 16 miles. The Thames has 60 feet on its bar, or rather has no bar, while the Mersey has a bar with only 12 feet on it. The Thames has moderate currents, those of the Mersey are violent.

"If such important improvements have arisen to the Thames by contractions of its channel, principally from enclosures for the purpose of reclaiming land, what would be its condition if its course were carefully regulated by the able engineers of England?"

M. Bouniceau warmly supports Mr. Brooks's view in the opposition of the latter to the construction of dams or weirs across tidal rivers, and gives several instances where results have been produced equally injurious to those of which we have unfortunately examples at home; as at Rye, where a noble harbour has been nearly lost by the establishment of dams with flood gates across the channels of the Tillingham, Brede, and Rother, whose ancient unobstructed tidal courses, maintained below Rye, a better harbour than can probably now be procured on the south-eastern coast by an expenditure little short of a million sterling.

"M. Cordier, in his work published in 1828, relates, that before the establishment of the lock at the inner port of Dunkerque, no obstruction was offered to the tide. Twice a-day, says that engineer, it inundated the vast plain of Walteringues, and twice each day it retired. Thus this port was traversed four times a-day by an immense current, which opened the channel, and kept clear the communication with the roadstead. Since the construction of this lock, the natural scour has ceased, the entrance to the port has closed, and the channels to the roadstead are contracted. The same operations took place at Gravelines; the sea there submerged the country and mounted to Saint Omers, where ships frequented; it covered twice a-day a plain of several square leagues. The channel of Gravelines was kept both large and deep, and the creek opened at the foot of the dunes, from Gravelines to Dunkerque by the natural scour, assisted navigation and contributed to the amelioration of those two ports. The locks of Gravelines have, changed this state, the tide has been kept out, the channel is silted up, and, this port, formerly so good, is almost abandoned."

The opinion of the late Mr. H. Palmer, in favour of a dam across the Mersey at Runcorn, and other similar projects objected to by Mr. Brooks, are in like manner reprobated by M. Bouniceau, and the latter refers also to the Dee, (Chester,) for which navigation Mr. Brooks had suggested very opposite engineering views to those of Palmer for the Mersey. M. Bouniceau concludes thus on this subject:—

"It has sometimes been raised as an objection to the opinions of English engineers, that they voluntarily manifest a desire to isolate themselves, say-

ing that they do not form an united corps, and that in separately exercising their profession, as in other vocations, they are under the necessity of developing absolute principles of practice, to thus forming a great reputation, and draw to them an extensive patronage. Without admitting this, we may, at least, make this deduction, and say, that if it be the interest of these engineers to adopt and promulgate absolute engineering principles, it is, at all events, their interest to well select those principles and to indicate only correct applications, so as not to expose themselves to lose that patronage which they may have drawn to them.

"We may then consider the opinion of the engineer Brooks as the expression of a severe conviction, and worthy, on that account, of high consideration, independently of all the reasons which we have already developed, and which give him such great authority."

M. Bouniceau gives plans for the amelioration of several French ports, the discussion of which will form the subject of a future number of the *Nautical Magazine*, and, we believe, will prove of interest to our readers.

NEW AND CORRECTED CHARTS.

Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.

CAPE FINISTERRE to Cape St. Mary's, corrected by the Spanish charts, price 3s. 6d.

PANGOPANGO HARBOUR, (*Navigators' Islands*), 1838, by Capt. C. R. Bethuae, R.N., price 6d.

PORT ST. ANDREW, (*New Brunswick*), 1844, by Capt. W. F. Owen, price 1s. 6d.

BENGAL GULF, sheet v., by Capt. Lloyd, I.N., 1840, price 3s.

MANUKAU HARBOUR, (*New Zealand*), by Mr. Ormby, 1843, price 1s.

CAPE FINISTERRE to Vigo Bay, by Capt. Don Florez, 1835, price 2s.

FERROL to Cape Finisterre, by Capt. Don Florez, 1835, price 2s.

NATUNAS ISLANDS and NIMROD SOUND, corrected.

MOVEMENTS OF THE ROYAL NAVY IN COMMISSION.

Agincourt, 72, Capt. H. Johnstone, left Madras for Penang. *Albatross*, arr. at Portsmouth, June 28.

Daring, 12, Com. Matson, at Port au Prince, June 14. *Dido*, left Plymouth for Cork, July 12.

Endymion, 41, Capt. Lambert, left Barbados for Vera Cruz, June 5.

Griffon, L. Wilmot, touched at Madiera on way to Rio, and sailed June 25.

Haycinth, 18, Com. Scott, arr. at Halifax, June 17.

Lily, 16, Com. Newton, at Sierra Leone, May 29.

Modeste, 18, Com. Watkins, in the Columbia, May 26.

North Star, 26, Capt. Sir J. E. Home, Bart., to leave Sydney for England, Feb. 24.

Pique, 36, Capt. Hon. M. Stopford, arr. at Plymouth from Bermuda, June 23.

Ringdove, 16, Com. Sir W. Hoste, left Cape for Singapore, April 22.

Vixen steam vessel, Com. Giffard, arr. from Penang, March 15.

Vindictive, 50, Capt. Seymour, arr. at Halifax, June 17. *Viper*, Lieut. Gray, arr. St. John's, Newfoundland, June 1.

Collingwood, 80, Capt. Smart, with the flag of Rear-admiral Sir G. Sey-

mour, the Commander-in-Chief of the Pacific, was at Mazatlan, all well, on 8th May. The *Juno*, 26, Capt. Blake, arr. at Mazatlan from England, May 4. A letter says:—"We called at San Blas on 30th April, and finding that the admiral was at Mazatlan, a short distance further up, we left the following day. Our destination is Upper California, for which place we start in about a week or ten days."

PORTSMOUTH.—In harbour.—*Excellent, Victory, Eurydice, Contest, Victoria and Albert, Comet*. At Spithead.—*Constance*.

PLYMOUTH.—In Harbour.—*Caledonia, Inflexible, Adventurer, Diligence, Constance, Raleigh*. In the Sound.—*Dido, Spartan*.

WOOLWICH.—The *Amphion*, 36-gun frigate, fitted according to the plan of Count Rosen, with a 300-horse power screw-propeller, has been taken out of dock. She will be very soon tried, as on the result will depend the completion of the machinery for the steam guard-ships.

COMMISSIONED.—*Bulldog*, Com. G. E. Davies. *Racehorse*, Com. E. Sotheby. *Linnet*, Com. Wood. *Sphinx* steam-vessel, Com. J. B. Cragg. *Columbine*, Com. Booth.

PAID OFF.—*Pique*, at Portsmouth. *Fly*, Capt. Blackwood, at Plymouth.

The *Heroine*, 6, Com. Edmunds, arrived at Ascension in 13 days, from the Bight of Benin, with tidings of the *Flying Fish*, Com. Harris. After a long chase, having run a Spanish slave felucca on shore, and that, on Lieut. Robius (who was in command of her), proceeding to board her, for the purpose of taking her tonnage, the boat in which he was capsized, and, unhappily, he and four of the crew were drowned in the surf. Mr. Simpson, midshipman, together with one man, succeeded in reaching the shore, but were knocked down by some slaves whose release from bondage they were endeavouring to effect, and Mr. Simpson had one of his fingers cut off by them, for the purpose of obtaining a ring which he wore.

PORT ROYAL, Jamaica, June 8.—The greater part of the Squadron is at present to the northward, which is something unusual. *Persian*, 16, Com. Coryton, had no sooner arrived from Bermuda than she returned again, having arrived on the 8th ult. and sailed on the 10th. *During*, 10, Com. Matson, having completed her refit, put to sea on 7th ult., to stretch her rigging, came into harbour on the following day, and sailed on 10th for Bermuda, in company with the *Persian*. She is expected to return shortly. *Pickle*, schooner, Lieut. Barnard, arrived on 19th, in six days, from Carthagena, with a freight of 180,000 dollars. She sailed on the 22nd for Hayti, where all designs against the Spanish part of the island appear to be given up, and it is hoped that some amicable arrangement may be made with the Dominicans. It is even said that overtures have already been made by the latter to that effect. *Vesuvius*, steam-sloop, Com. O'Callaghan, sailed on 6th inst. for Vera Cruz, to which place the *Alarm*, 26, Capt. Frankland, has been dispatched from Halifax. *Viper*, brigantine, Lieut. Grey, is daily expected from Bermuda. *Vindictive*, 50, with the flag of the Commander-in-Chief, at Halifax. *Hyacinth*, 18, Com. F. Scott, is stationed at the Bay of Fundy, protecting the fisheries. *Hermes* steamer, Lieut. Carr, at Bermuda. *Thunder and Lark*, surveying vessels, at the Bahamas; and *Columbia*, surveying steam-vessel, at Newfoundland. Com. W. S. Cooper, R.N., the newly appointed harbour-master, arrived, in the *Clyde*, on 31st ult., and entered on his official duties. A merchant brigantine, the *Telegraph*, from New Orleans, with a general cargo, arrived on 6th inst., and reports having been boarded by a Mexican privateer, with two American vessels in company, as prizes. On their ascertaining that the *Telegraph* was a British vessel she was allowed to go on. In harbour.—*Imaum*, 72, with the broad pendant of Commodore Pring.

SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.

26, *Bucklersbury, London, July 21, 1846.*

SIR,—Your kind interest in the “Shipwrecked Fishermen and Mariners’ Benevolent Society,” as expressed in your note to a little paper, inserted in the *Nautical* last month, entitled “James Pengelley,” leaves me free, without further preface, to give you a sketch from a scene that occurred in the Orkneys, which will practically bring before your readers the usefulness of the Society, as acting by its many agencies from the one centre; and I think the undermentioned extract from a letter addressed to the Honorary Agent of the Society at Kirkwall, will readily commend the Institution to the sympathy of your readers.

North Ronaldsay, Oct. 23, 1845.

“Dear Sir,—I am much gratified by your kind attention to the poor fellows from the Prince of Stockton wrecked here. From the dreadful circumstances of this wreck, the poor crew saved, lost every stitch of clothing, excepting what was on their backs; and these from the cargo of tar breaking, were so completely saturated with the tar as to be useless to them: In fact, the mate, I understand, was quite naked, when he got to the rocks. Captain Nattles, a member of the Society, is equally destitute with the crew, and is now wearing my clothes, so I fear when he reaches town you will have to do the same thing for him also. Again thanking through you your excellent Society.

“I am, &c.,

“ROBERT SCARTH.”

The foregoing letter tells its own tale as to the distress of the crew of the “Prince.” The Kirkwall agent reports about the same time the wrecks of the “Amazon,” “Rubicon,” and “Norval,” the crews of which, with many others during the winter, were all more or less reduced to the same circumstances, and whose hearts were likewise gladdened by the help and succour afforded them through this Benevolent Institution.

I need not, Sir, draw much on your imagination, or on that of your readers, to describe such a scene as the foregoing letter presents. It will in a measure be easy to set before the mind’s eye our poor fellows swimming for their lives amidst the floating wreck, half suffocated by the tar issuing from the bursting casks: All must feel sympathy with such a scene, and those who were the actors in it, and be able to apprehend instinctively what a heart-cheering sound it must have been to those half-drowned and exhausted men to hear the friendly voice of the agent of the Charity, in its name offering to them food, clothing, and shelter, and the promise of forwarding them to their distant homes.

And what heart is there, Sir, that would not rejoice, that there was such succour at hand? and that these poor mariners were spared the further misery of begging their way naked and barefoot to their families? Are there any who would have it so? From those who readily answer in the negative, I feel assured that the necessary and solicited aid will be given to this Society, which has been founded to prevent what their every feeling disowns, both as Christians and as Englishmen.

Every winter brings from the “Orkneys” numerous tales of distress from the many shipwrecks and loss of fishermen and their boats; and all know that the poverty of the neighbourhood precludes its being met by the needed pecuniary help, and this is peculiarly the case on many parts of the coast where shipwrecks are frequent.

I trust then, Sir, through your excellent publication, valued as it is by all Nautical men, that those towns, where few wrecks occur, as well as those inland, will not “shut up their bowels of compassion,” but, by aiding the Parent Society, enable her to extend the blessings of the charity with an even hand, over the extensive coasts of the United Kingdom.

I am, Sir, your most obedient servant,

To the Editor *N. M.*

F. LEAN, R.N., *Secretary.*

PROMOTIONS AND APPOINTMENTS.

Whitehall, July 7th.—The Queen has been pleased to grant letters patent to be passed under the great seal of the United Kingdom, constituting and appointing the Right Hon. George Earl of Auckland, GCB., Vice-Adm. Sir W. Parker, GCB., Rear Adm. J. W. D. Dundas, Capt. M. F. F. Berkeley, Capt. Lord J. Hay, CB., and the Hon. W. F. Cowper, her Majesty's Commissioners for executing the office of High Admiral of the United Kingdom of Great Britain and Ireland, and the dominions, islands, and territories thereunto belonging.

Admiralty, July 4.—The following promotions (in consequence of the engagement at Punta Obligado,) have been confirmed:

Lieutenants to be Commanders—C. Barker, A. J. Woodley, C. S. Norman, G. H. Richards.

Mate to be Lieutenant—F. F. Nicholson, being the only mate engaged in the action.

Mr. G. W. Pickford, Clerk, to be Paymaster and Purser.

Mr. M. C. French, Assistant Surgeon, to be Surgeon, and Mr. J. J. Brown, Acting Second Master to be Master, after they shall have passed the requisite examination.

The following Retirements and Appointments of Masters have taken place, these officers retiring with the rank of Commanders;—*Portsmouth Dockyard*—W. Purdo (1837), Master-attendant, to the retired list; C. Brown (1815) the Assistant-master-attendant, to be Master-attendant; C. P. Bellamy (1824), Assistant-master-attendant. *Royal Clarence Victualling Yard*—Master-attendant J. Town (1812), to the retired list; J. Davies (1839), to be Master-attendant. *Royal William Victualling-yard, Plymouth*—J. Franklin (1813) Master-attendant, to the retired list; J. W. Armstrong (1825) from the Somerset House Department, to be Master-attendant; J. C. Giles, (1826) is appointed to the department at Somerset House. *Woolwich Yard*—N. Timmouth (1801), to the retired list; T. Elson (1824) to be Master-attendant. *Chatham Yard*—F. W. R. Saddler (1810), to the retired list; A. Karley (1814), Assistant, to be Master-attendant; S. G. J. Northcote (1830), from *Albion*, to be Assistant-master-attendant, Devonport; J. Henderson (1822), to be Master-attendant; R. Easto (1814), to be Master-attendant, Sheerness; J. Underwood, of *Queen*, to be Assistant-master-attendant; J. E. Mills, Supernumerary-master of the *Caledonia*, ordinary guard-ship (1829), has been appointed Assistant-master-attendant; H. Davy (1829), of *Caledonia*, to be additional Assistant-master-attendant; J. Brown (1831), to *Caledonia*.

PROMOTIONS.

CAPTAINS—G. E. Patey, P. Justice, E. Carpenter, H. Broadhead, H. Smith, J. Duffill.

COMMODORE Second Class—Capt. Sir T. Herbert, KCB.

COMMANDERS—W. H. Kennedy, C. F. A. Shadwell, Lord F. H. Kerr, W. Morris, H. G. Morris, J. H. Cockburn, F. T. Hankey, W. Peel, H. Eden, W. Pretyman.

LIEUTENANTS—W. Heffell, R. Turner, W. Standbridge, C. Fellowes, H. West, R. Purvis, H. T. Lyon, G. Winthrop, S. Henderson, F. Partridge, R. Beviens, A. Doyle, W. Broad, J. Hughes, G. A. Hire.

MASTER—T. Bowen.

SURGEON—C. Coffey.

PAYMASTER AND PURSER—J. R. Andrews.

APPOINTMENTS.

Rear Adm. S. H. Inglefield, CB., to be Commander-in-Chief in the East Indies.

CAPTAINS—Sir T. Herbert, KCB., to command the S. E. Coast of America—Sir C. Hotham, KCB., to command West Coast of Africa—H. Stewart, CB., to be Acting Superintendent Woolwich Dockyard.

COMMANDERS—W. N. Fowell, (1839) to *Cherokee*—J. B. Cragg to *Sphinx*—W. Ellis (1842) to *Alert*—H. J. Douglas (1845) to *Pantaloone*—J. R. Booth (1829) to *Columbine*.

LIEUTENANTS—C. R. Johnson to command *Comet*—C. G. Rigge (1831) to command *Trident* steam-packet.

MASTER—J. W. Trotter to *William and Mary*—J. Barlow to *Rodney*.

MATE—R. H. Hallows to *Contest*.

SECOND-MASTER—J. Fiddes to *Avenger*.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Portsmouth, the lady of Lieut. Lapidge of a daughter.

At Exmouth, July 13, the lady of A. Waters, Esq., Surgeon R.N., of a daughter.

Marriages.

July 15, at Walmer, R. Ogle, Esq., to Mary, daughter of Capt. Harvey. R.N.

July 14, at Alverstok 3, Capt. F. Warden to Ellen, daughter of the late Vice-Adml. Garret.

Deaths.

Lately at Knockers Knowle, Capt. E. Denman, R.N.

July 10, at Broadstairs, Capt. Cole.

July 13, at Chatham, A. L. Jack, Esq.

Lately on C. Africa, Lieut. J. Carroll.

July 21, the lady of Lieut. Lapidge.

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, 1846.

| Month Day | Week Day. | Barometer | | Fahrenheit | | | | Wind. | | | | Weather. | |
|-----------|-----------|-------------------------|--------|----------------------------|--------|-----|-----|----------|------|-----------|------|----------|------------|
| | | In Inches and Decimals. | | Thermometer, In the Shade. | | | | Quarter. | | Strength. | | A.M. | P.M. |
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | A.M. | P.M. | A.M. | P.M. | | |
| 21 | Su. | 30.24 | 30.18 | 65 | 75 | 62 | 76 | E | E | 3 | 3 | bc | b |
| 22 | M. | 29.99 | 29.87 | 71 | 85 | 58 | 86 | NE | SE | 1 | 3 | bcm | bcmtr (4) |
| 23 | Tu. | 29.62 | 29.64 | 63 | 68 | 60 | 67 | SW | SW | 6 | 4 | qopt 2) | bc |
| 24 | W. | 29.54 | 29.40 | 62 | 64 | 51 | 67 | SW | W | 2 | 2 | op 2) | bc |
| 25 | Th. | 29.53 | 29.59 | 58 | 66 | 51 | 67 | SW | SW | 6 | 5 | qbc | qbct |
| 26 | F. | 29.74 | 29.72 | 63 | 65 | 51 | 66 | SW | SW | 4 | 4 | bc | op (3) (4) |
| 27 | S. | 29.67 | 29.73 | 64 | 68 | 56 | 70 | SW | SW | 3 | 3 | bcp (2) | bc |
| 28 | Su. | 29.90 | 29.88 | 66 | 71 | 53 | 72 | SW | SW | 3 | 4 | o | bc |
| 29 | M. | 29.83 | 29.87 | 65 | 72 | 57 | 74 | SW | SW | 5 | 5 | qbc | qbc |
| 30 | T. | 29.94 | 29.95 | 64 | 71 | 54 | 73 | SW | SW | 6 | 5 | qbc | qbcp (4) |
| 1 | W. | 30.06 | 30.06 | 64 | 68 | 52 | 70 | SW | SW | 4 | 5 | bcm | qbcp (3) |
| 2 | Th. | 30.04 | 30.08 | 65 | 71 | 60 | 72 | SW | SW | 4 | 4 | o | o |
| 3 | F. | 30.21 | 30.22 | 68 | 74 | 62 | 76 | SW | SW | 2 | 2 | bc | bc |
| 4 | S. | 30.19 | 30.13 | 66 | 84 | 58 | 86 | SW | SW | 1 | 1 | b | b |
| 5 | Su. | 29.84 | 29.71 | 79 | 85 | 61 | 91 | SE | SW | 3 | 4 | b | bctr (3) |
| 6 | M. | 29.66 | 29.58 | 63 | 66 | 53 | 67 | SW | SW | 4 | 6 | bcp 2) | qbctp (3) |
| 7 | Tu. | 29.79 | 29.85 | 60 | 64 | 57 | 65 | W | W | 3 | 3 | o | o |
| 8 | W. | 29.88 | 29.86 | 62 | 66 | 54 | 68 | S | S | 2 | 2 | o | od 4) |
| 9 | Th. | 29.71 | 29.67 | 62 | 70 | 57 | 71 | S | S | 2 | 2 | op (2) | op 3) |
| 10 | F. | 29.81 | 29.91 | 60 | 66 | 56 | 68 | SW | N | 2 | 2 | opt 2) | opt 3) |
| 11 | S. | 30.14 | 30.16 | 62 | 67 | 50 | 68 | NW | W | 2 | 2 | bcm | bc |
| 12 | Su. | 30.18 | 30.14 | 63 | 76 | 52 | 77 | W | W | 2 | 3 | bc | b |
| 13 | M. | 30.10 | 30.04 | 67 | 81 | 55 | 82 | SE | S | 1 | 1 | bm | bm |
| 14 | Tu. | 29.74 | 29.76 | 73 | 79 | 60 | 80 | SW | S | 4 | 4 | bc | b |
| 15 | W. | 26.96 | 29.96 | 67 | 75 | 57 | 76 | W | SW | 4 | 2 | bcm | bc |
| 16 | Th. | 29.80 | 29.68 | 68 | 70 | 60 | 71 | SW | SW | 5 | 5 | qo | qop (4) |
| 17 | F. | 29.45 | 29.49 | 64 | 69 | 58 | 71 | SW | SW | 5 | 4 | pbc | bc |
| 18 | S. | 29.38 | 29.34 | 59 | 71 | 55 | 72 | SW | SW | 8 | 8 | qor (2) | qbc |
| 19 | Su. | 29.66 | 29.78 | 62 | 71 | 52 | 72 | SW | SW | 6 | 4 | qbcr (1) | bc |
| 20 | M. | 29.94 | 30.00 | 64 | 72 | 56 | 73 | W | W | 3 | 2 | bc | bc |

JUNE 1846.—Mean height of the Barometer 30.043 = inches; Mean temperature = 66.4 degrees; depth of rain fallen = 0.67 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The papers on "Passages across the Atlantic," and the "Gulf Stream and its branches," reached us too late for our present number. They shall appear in our next.

Hunt, Printer, 3, New Church Street, Edgware Road.

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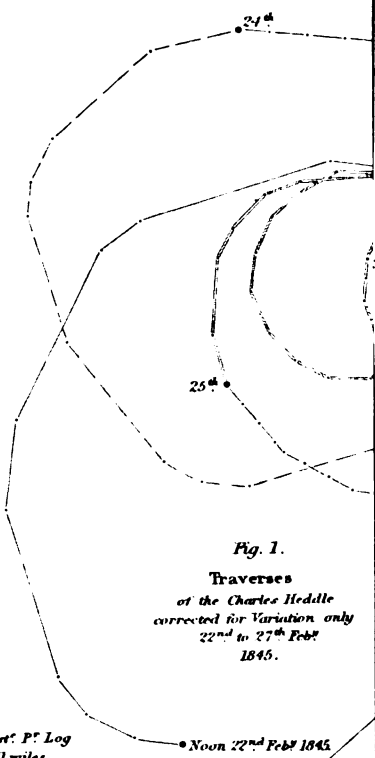


Fig. 1.

Traverses
of the Charles Heddle
corrected for Variation only
22nd to 27th Feb^r
1845.

Course & Dist. P. Log
N. 42° E. 113 miles
Scale 50' to an inch.

• Noon 22nd Feb 1845

Fig. 3.

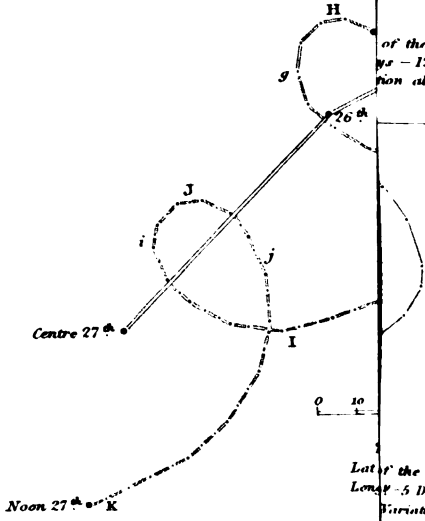


Fig. 4.

of the winds in time
Long 5 Days.
Variation allowed 14 Points.

Lat of the winds in time
Long 5 Days.
Variation allowed 11 P.

0 10

THE
NAUTICAL MAGAZINE

AND

Nabal Chronicle.

SEPTEMBER, 1846.

EAST INDIA NAVIGATION.—*Great Circle Sailing.*

11, *Ebenezer Place, Limehouse,*
August 14, 1846.

SIR.—On my last outward voyage towards China in the ship “Surge,” under my command, I made the direct passage by Java Head, but from adverse winds after passing through the Strait of Sunda, I was obliged to go through the Strait of Banca. (I may as well observe here that on a former voyage, passing through the latter strait in the *Brantomebury*, I got aground on the mud flat to the westward of the Second Point, where 6 to 11 fathoms is marked on the chart; the Second Point bore S.S.E. $\frac{1}{4}$ E., and the Double or White Rock on the Banca side of the strait E.b.N.,) Only anchoring once, and having reached the northern end of the strait in the evening, I shaped a course to clear the Toojoo, or Seven Islands, with Batacarang point bearing S.S.W. I steered N.N.E., and next morning the Seven Islands bore right ahead on that course which led me to think them wrongly laid down, and I determined to prove their positions on my chart,—Horsburgh’s chart of Banca 1833. Having several chronometers on board, one of them had gone at mean time all the voyage out, and agreed with Christmas Island, Java Head, and the other intermediate positions to Lucepara Island, as also with the several islands in the China Sea, north of the equator, and in my route to Hong-Kong.

The day being favorable I took a set of sights A.M. and P.M., having passed west of the islands at noon, proving the latitude to be correct;

but the islands laid down at least 11 miles too far east, which confirms the observations made by Capt. Lestock Nelson in 1798, and Mr. Fulton in 1821, in opposition to the situation of the islands, stated in the text of Horsburgh's Directory, published 1843, and I make no doubt the other islands in the neighbourhood partake of the same error. When the eastern extremity of the islands bore N.E., and the south-western island S. $\frac{3}{4}$ E. (ship's head north,) I made the longitude $105^{\circ} 11' 30''$ E., which places the centre of the group in $105^{\circ} 14' E.$; Kerrigan places it in $105^{\circ} 24'$; Raper has not the islands in his tables; Horsburgh has the centre of Pooloo Toojuo in $105^{\circ} 25' 30''$ in the chart, and the Requisite Tables in $105^{\circ} 24' 4''$. This being the second time I passed the islands, and found them wrongly laid down, induces me to hand you the foregoing, whether it may be of use or not.

On reference to your volume 1844, page 24, a case of great circle sailing is submitted to you by J. G., in which there appears to me a mistake that has been overlooked by J. G. and Lieut. Raper, viz. the course at lat. 51° , which is put down as N. $83^{\circ} 57' E.$, in place of S. $83^{\circ} 57' E.$, produces $122^{\circ} 8'$ instead of $106^{\circ} 36'$, but by using $96^{\circ} 3'$ as a course from 51° , the result turns out the same, $106^{\circ} 36'$ as the longitude of maximum separation by Lieut. Raper's method. I find by spherical trigonometry that the great circle reaches lat. $51^{\circ} 15' 30'' S.$, $7^{\circ} 46' E.$ of longitude 140° , or in long. $132^{\circ} 14'$, where the course is east; and reaching lat. $51^{\circ} 15\frac{1}{2}' S.$, is a proof that the course at lat. $51^{\circ} S.$ is south of east, because the perpendicular falls between the two places wrought from, whereas in the great circle from Cape Horn to St. Helena the course is N. $75^{\circ} E.$, as the perpendicular falls to the west of Cape Horn, $17^{\circ} 55'$ nearly, in lat. $51^{\circ} 17' 38'' S.$, which is the first point to work from for the several positions in latitude and longitude on the circle.

In conclusion, I send you the courses and distance on the great circle from Scilly to Bermuda, as a proof of how correct it may be wrought out.

| Lat. of Scilly | $49^{\circ} 53' 36''$ N. | Long. $6^{\circ} 20' 38''$ W. | Course, | Distance. |
|----------------|--------------------------|-------------------------------|-------------------------------|-----------|
| 1st position | 49 51 10 | - " 10 00 00 | - west, nearly, | 141-36 |
| 2nd ... | 49 36 40 | - " 15 00 00 | - S. $85^{\circ} 43' 35''$ W. | 194-45 |
| 3rd ... | 49 8 54 | - " 20 00 00 | - 81 59 55 | - 197-24 |
| 4th ... | 48 27 22 | - " 25 00 00 | - 78 7 50 | - 201-85 |
| 5th ... | 47 31 15 | - " 30 00 00 | - 74 23 10 | - 208-48 |
| 6th ... | 46 19 31 | - " 35 00 00 | - 70 42 00 | - 216-98 |
| 7th ... | 44 50 46 | - " 40 00 00 | - 67 5 4 | - 227-93 |
| 8th ... | 43 2 22 | - " 45 00 00 | - 63 33 30 | - 241-31 |
| 9th ... | 40 55 25 | - " 50 00 00 | - 60 8 50 | - 257-01 |
| 10th ... | 38 24 45 | - " 55 00 00 | - 56 52 22 | - 275-65 |
| 11th ... | 35 29 9 | - " 60 00 00 | - 53 46 20 | - 297-12 |
| 12th ... | 32 21 25 | - " 64 39 10 | - 56 56 45 | - 297-94 |

St. David's Head, Bermuda. Distance on great circle, 2757-32

Distance by Mercator, 2813-20

Saved, 55-88

The distance by spherical trigonometry is 2757·3 miles, agreeing with that sailed on the great circle by Parallel, Middle latitude, and Mercator sailings.

In the above case, the perpendicular falls outside of Scilly, $0^{\circ} 33' 32''$, in longitude, $6^{\circ} 54' 10''$ W., and latitude, $49^{\circ} 53' 41\cdot36''$ N., the highest latitude on that great circle. I believe the West India Royal Mail packets run on this track homewards from Bermuda, if not, they ought to avail themselves of it when practicable.

I am, &c.,

JOHN BURNETT.

To the Editor N.M.

THE MARINE BAROMETER AND THE WEATHER.

SINCE the invention of the barometer, it has excited the attention of so many scientific men, and so many of their remarks upon it are already extant, that I fear it would be wasting time to say anything more regarding its properties or utility. If, however, the little I have to say be found useful even to one person in command of a vessel, the purpose for which this is written will be accomplished.

If there is any thing in nature that will assist us in studying the barometer, it is the approach of daylight, yet it does not appear to have come under the notice of many. The various philosophical works I have read are equally silent upon the subject. In a long treatise or chapter on twilight in an astronomical work by no less a person than Herschel, I sought with a fruitless result for some information on the subject. The only writer I have found whose attention it appears to have arrested is Capt. Fitzroy, who tells us in the "*Beagle's Voyages*," p. 285, vol. ii., "When the first streaks of light appeared close to the horizon, and the sun's rising was preceded by a glow of faint red, not extending far, a fine day succeeded, whether the sky were then overcast or clear; but if the first gleam of light appeared high above the horizon, behind clouds, and there was much red, not only near the sun, but visible on clouds near the zenith, wind, if not rain, was sure to follow." This is the sum of all that I have read upon the matter, and it may perhaps not be improper to extend it. Whenever the coming in of the morn can be observed, if light first appears below the altitude of 5° or 6° , very fine weather may be depended on, at least until sun-set. If any clouds are in the direction of sun-rise, they will be in small fragments of cumulus, in figures of islands, castles, churches, &c., slowly changing their shape, and nearly stationary. Sometimes however, the largest cumulus prevails, resembling large broken stacks of wool.

If there be an overcast aloft it will be of thin light stuff, that generally retires or disappears soon after sun-rise, with a clear expanse, stars in and near the zenith will remain visible long after you lose sight of those below the altitude of 15° or 20° , and in this appearance consult the barometer, it will be high let the wind you have be blowing in what-

ever direction it may, land, ships, and all objects will be seen at an immense distance. If you should be within the tropics, you may observe the zenith cirro-cumulus slowly changing its formation to that branch of cirro-stratus, the mackerel sky; and again rechanging, it may be hours in this manner; its motion, if any, will be in a contrary direction to the wind generally.

When day dawns at about the altitude of 20° or upwards, large black clouds, shaded red as the sun rises, or if smoky and bronzed, wind and rain will follow before next sun-rise, and you have a sinking barometer. If you are in the southern hemisphere, northerly or N.E. will be the direction, but mostly in the eastern boards; and, in this instance the glass may be rising. If near land, it will be effected in the following form, (after many years observation): in the northern part of the North Island of New Zealand, N., or N.N.E., from the North Cape to the Bay of Plenty; Bay of Plenty to Cooks Strait, E.N.E. to E.S.E. through the strait S.E.; Cooks Strait to Foveaux Strait, east generally, or at Banks Peninsula S.E., through Foveaux Strait S.E., which may be expected every new and full moon in summer in the southern ocean, though not at all times of long duration.

When day dawns above 20° , strong breezes may be looked for, or will be blowing. If mackerel sky prevail over head, with long horizontal lines of cirro-stratus above the altitude of daybreak, their edges being hard and well defined, an increasing breeze will terminate the day; but if the horizontal lines are below the altitude of dawn, their edges will be less hard and defined, and any increase of wind seldom follows.

Always rest assured that, the higher day dawns the heavier the gale; and with sufficient clearance of clouds, stars in the zenith will be lost sight of before those at a low altitude. However strange this may appear, careful and constant observation will soon render it simple and clear.

If, however, no dawn can be observed as in cloudy weather, the horizon being everywhere closed in with dense masses of dark dirty-looking grey and black cumulo-stratus, or more properly speaking, compact bodies of nimbus, the gale is approaching, your barometer is on the decline, or is down, and its rate of depression is about 1-10th per hour; a good barometer giving you at least sixteen hours' notice. I have known some men quite offended with the barometer because the gale did follow its immediate descent.

In looking over the account of the hurricane at Antigua, in August 1835, as given by Lieut. B. Gravelink of the Dutch Royal Navy, p. 131, Ethiopic Directory, he informs us that, "On the morning of that day in which this hurricane happened, the sun rose as beautifully as ever, a clear expanse and a gentle breeze gave reason for expecting fine weather."

Here I must beg leave to offer some remarks, and if they differ from the above account, which they will do, they are written with good feeling and respect due to a man of talent, and a valuable member of society, and I trust I shall be warranted in so doing, by giving such notices of the weather in all climes, that will enable an observer to be prepared at least a few hours beforehand for the destructive operation.

There could have been no better appearance than having a clear expanse for taking a careful observation of those notifiers of the weather which nature at all times sets up before us.

Indications of hurricane, or storm, may be observed by the first show of light appearing directly overhead, and with the clear expanse above-mentioned, it is probable that stars of less than the second magnitude will not be visible to the naked eye during the whole night, if the elemental eruption is to take place in day time as above stated, at all events they will disappear soon after midnight, stars of the first class that are visible will be ill-defined in their edges, because it is evident they will be seen through a thick dry atmosphere, although it may be cloudless. If it be perfectly clear to the eastward, as in the aforementioned account, the sun may rise clear (that is of clouds,) and bright, but not beautiful; it will rise with an angry aspect, and of pale brassy, or fiery brightness, with an aspect denoting, in accordance with the first coming of light all that subsequently followed on that day, and these forewarnings of nature are as sure and simple on those occasions as her operations are dreadful and destructive.

It is, however, greatly to be regretted, that, in the account given by so able a person as Lieut. Gravelink, that no mention whatever is made of the barometer, as it generally indicates those violent changes in a descent of 1-10th of an inch per hour, for at least five or six hours previous, and had notice been taken of the indications of a good barometer, some guidance for the coming of another hurricane might have been obtained. Barometers will generally be found to have descended their full depression at least three or four hours before the storm sets in, and will often rise when the gale is at its height, because when the gale is at its greatest weight or force at the earth's surface, the air at an altitude of one to two miles from the earth's surface is restoring its equilibrium. The observations on the barometer made by the Hon. J. C. Lees, chief justice of Nassau, are worthy the attention of all traders in that part of the world, and the following remarks, when he tells us that the barometer "stands highest when the wind is N.E., and falls lowest when it is N.W." Upon careful observation this will be found to be precisely the working of the instrument in the whole South Pacific, southward of 30°, including New Zealand, Van Diemen Land, and New South Wales. The honorable gentleman further adds, "when during the hurricane months, the barometer falls much and rapidly, preparations ought to be made for rough weather;" but in continuation he does not inform us what constitutes, "much and rapidly," because time, the only thing by which we can properly mark its progress is not taken into account; pay due notice to its rate of depression, and something like a correct data may be obtained to secure us from some of the destruction at a subsequent period.

I have remarked upon the east coast of New Zealand, the indications with the N.E. gale will be 30·70, or something thereabouts; but on the western coast a gale of the same force and direction, the indication will be 29·90, or nearly so. The only observer of such variation of indications, that I have met with to accord with me in this remark, was Mr.

Parker, master of H.M.S. *Hazard*. The question will now arise whether it would be reasonable to infer that the barometer is under the influence of local attraction ?

It will, however, be found to descend with rain in both the North and South Pacific unless near the equator.

In the sea of Kamschatka, and its neighbourhood, the fogs wonderfully depress the mercury, although there may be a continuation of light winds.

In Bennett's "Voyage round the World," the same thing is mentioned, and I think Capt. Beechey in his "Voyage in the Blossom," makes the same remark; but it will chiefly be found in those depressions occasioned by dense atmosphere, that the fall is very gradually.

In p. 375, sec. 8, of the Ethiopic Directory, some account is given of a heavy N.W. gale at the Cape of Good Hope, "It continued" says the account "several days, drove several ships on shore, &c., barometer being at 29·5, which is rather high for a gale of that nature, its direction being N.W., and if its depression during the gale was not below the statement of 29·5, some local cause may probably be assigned. However, the account as it stands, is wholly destitute of any information for the guidance of mariners. Shortly after rounding Cape Horn, from the westward, I was greatly surprised to see 30·38 indicated with a gale at north, in lat. 44° S., long. 49° W., and not being near any known land. Its depression during thirty-six hours being only to 30·34, the gale veering to N.E., and finally S.b.E. In this instance the barometer standing so high with the wind at north, was rather a contrary working of the mercury, as the north wind in southern climes tends always to its descent.

But although the high column created my surprise, I was in full expectation of the gale and its weight, as daylight broke the preceding morning at a lofty altitude, the display of clouds, in and near the zenith, being the corroid, cirrus proper, the cirro-stratus, in its long horizontal lines, with hard and well defined edges, for these are Nature's grand, and certain notifiers, or forewarners of her terrific and destructive performances, and to such I would call the attention of mariners, let the barometer stand and work how it may.

In Beagle's voyages mention is made, that all barometers do not act alike, founded of course by observing that some fall lower than others, even says the writer to tenths, to which might be added they are not equally effected by the change of weather, although they should be so. Of two that were suspended in our main cabin, it was always observed that No. 1, a barometer by Stebbing of Portsmouth, and No. 2, maker, Charles Jones, Liverpool, never acted alike, unless in a long continuance of fine weather. No. 1 rose sooner after a gale than No. 2, and its depression was slower; No. 2, not only descended quicker, but lower, and it rose slower, and in the moderating of a gale of four or six hours, what may be termed a lull, No. 2 would remain unmoved, whereas No. 1 would run up a tenth, or more; the descent of No. 2, was generally two-tenths lower, and four or six hours quicker than No. 1; and this was invariably the case, either at sea or in harbour. In meeting three vessels

after a gale in which No. 1 indicated 28·28, the three barometers in the different vessels marked 28·05, being rather more than two-tenths lower. In point of value it is probable that No. 1 cost at the maker's something more than No. 2, as it was by far the most sightly article; but in the intrinsic worth to the mariner No. 2 was worth a ship load of No. 1.

J. M. GILL, *Master*.

THE MARIA SOMES' HURRICANE OF MARCH 1846.

In the "Military Intelligence" of the *Naval and Military Gazette*, we find the following account of a serious disaster which befel the Maria Somes on her way home from Calcutta.

30th.—We lament to learn that the Maria Somes, which took a portion of the 90th from Ceylon, experienced a severe gale off the Isle of France, in which she lost her rudder, and was dismasted. The hatches were battened down, and many fine soldiers perished from suffocation. The following details are from the *Calcutta Englishman*:—"We are writing with a full knowledge of the facts, for a copy of the log of the Maria Somes is in Calcutta and before us, and its perusal is positively appalling. The ship had on board exclusive of crew and passengers, 7 officers, 286 men, 16 women and 18 children on their arrival at the Mauritius, so that altogether there must have been fully 400 souls, and it is indubitable, that they were all for nearly three days on the very verge of destruction by foundering. This alone, and that upwards of 300 of the gallant 90th should have been exposed at the same time to the sufferings of the storm and the horrors of a slaver's hold for such a time, is frightful. The following are detached and abridged extracts from the log:—

"At three, p. m., on the 17th March, a terrific gale burst on the ship, throwing her completely on her beam ends. She righted a little, but the hurricane returned with redoubled fury. The three topmasts went almost immediately, their wrecks hanging and beating for a great part of the night. By the following morning, there was five feet water in the well, and so severe was the hurricane and sea, that the men were frequently washed from the pumps. During this time, the hatches were closely battened down,—the troops suffocating from want of air. The after hatch was opened and watched by a party of men to keep the coverings down when necessary. This (the 28th) was a dreadful day, the ship lying in the trough of the sea, which was clearing the decks of everything, while the hurricane was blowing the boats and everything else to pieces. No provisions or water could be procured during the day, and the reports from the lower deck were dreadful—many dying from suffocation. The quarter-galleries were washed away, and the sea was making a clean breach through the cuddy, where the whole of the passengers and females were assembled, expecting every hour to be their last, all the younger part of the crew paralyzed with fear, and not more than five or six men could be found to exert themselves.

"During the night the hurricane moderated a little—spread two hammocks and another tarpaulin in the mizen rigging to keep the ship to: the hurricane still so violent, that it required three strong men to carry a hammock, rolled up, into the mizen rigging. On the 29th, the hurricane still continued—pumps continually at work, but always five feet water. Cut away the main-

mast. *On opening the hatches, found that one serjeant, seven men, one woman, and five children, had been, lamentable to state, suffocated. Many even in the cuddy in a dying state of exhaustion.* Found the rudder also gone. In the course of the 30th, the captain and chief mate were severely injured, and four soldiers and a sailor had their legs and thighs broken in assisting on deck; several severe accidents also happened amongst the troops.

"We must not omit that the brave fellows of the 90th were, in fact, the saviours of the ship, by their unwearied exertions at the pumps, though they, like every one on board, had to bear up against hunger and thirst, as well as the exhaustion and horrors of three dreadful days and nights. At the close of the gale, the ship was a floating wreck, swept clear of everything, with only the disabled fore and mizen masts standing, and yet 1,250 miles from the Mauritius."

Now, we may say, that we had hoped that such cases as these were gone by—left to stand in the page of history, as so many proofs of our ignorance, in former days, of the nature of hurricanes; and the lives that had been thereby sacrificed, apparently as essential and absolutely necessary before the subject was understood and mastered,—in the same manner as the lives that are required to be lost by wrecks before a lighthouse is built to prevent them, such as that *intended* for the Cape, and those for Bass Straits, and many other places. We had flattered ourselves that the exertions of the "hurricaneists" had been more successful,—that the injunctions of Redfield, Reid,* Piddington, and Thom, had been received and followed more extensively in the *Merchant Service* than the foregoing account would lead us to hope. Indeed, we have ourselves almost risked the displeasure of our readers by repeating their *tiresome* theory, and shewing how easily a ship, when she is overtaken by a hurricane, can find her way out of it when she has sea room, provided the captain has looked into and understood it. Nay, we were the more encouraged to adopt this conclusion, from having recorded in the pages of the *Nautical*, the opinions of some among our merchant captains of the value of a knowledge of that theory which they had turned to a good account. But this knowledge, we regret to find, does not appear to have reached the commander of the *Maria Somes*, or why should she have been three days (perhaps more), within the influence of this hurricane, with all the miserable consequences attending such a situation,—a crowded ship with hatches battened down, soldiers and sailors suffering with broken limbs, and others suffocated to death. Such a state of things, we say, should not be, and in a transport too, conveying troops for Government.

We trust that the log of the *Maria Somes* will appear in print; the real state of the weather and the direction and veering of the wind, should be made known, with the courses and the conduct of the ship, in order that it may be seen that the *Maria Somes* did, or did not, every thing that should have been done to make her way out of the limits of this storm. It is not long since it was insisted by Government that the transports and ships employed to carry troops and public stores should be

* We believe that Colonel Reid's Volume is supplied to the ships of the Royal Navy.

fitted with Harris's lightning conductors;* and surely if the protection of ships from lightning be worth insisting on, the knowledge of a simple mode of escaping a hurricane should be also an event which may be attended with equally disastrous effects.

We had prepared the above remarks when the extract from the *Calcutta Englishman*, from which the foregoing was copied into the *Naval and Military Gazette*, reached us from Calcutta. The extract is as follows, giving, with the part which we have already quoted from the *Gazette*, the following further information, which confirms our suspicions that no attempt was made by the *Maria Somes* to escape from the hurricane, *because the theory was unknown to her commander*.

"We copied on Saturday, in our shipping report from the *Cerneen*, a notice of the distress of the transport No. 24, the *Maria Somes* from Colombo to England, in the Mauritius hurricane of March, and our readers will have remarked that *fourteen* individuals were suffocated by the close confinement of so large a number of persons below, with all the hatches necessarily closed. This is dreadful enough, but there is more to be known, which we trust, will excite the attention of those in authority both here and in England. We premise that we do not attribute *blame* to any one, and least of all to the Captain, who undoubtedly exerted himself to the utmost, but who, most unfortunately, as little knew how to avoid the awful danger before him, as the Captains of the days of Anson's squadron knew how to prevent the scurvy on board their ships.

These disjointed extracts and abridgements, will enable our readers, whether landsmen or seamen, to form a full idea of what must have been the danger, and sufferings; but how will they be startled to learn that it is undoubted, not only that the whole might have been avoided with at most the inconvenience of an ordinary gale of wind, but that, moreover, that nothing was so easy as to *have made a fair wind of this awful tempest!* and in doing so, to have scudded out of all danger, run *round* the storm, and have gained at least two or three hundred miles on the route home. We are writing, as we said, with the log before us, and the fact is unquestionable, (for there are many more logs of this storm also in Calcutta) that the storm was a hurricane rotatory, and progressive, and turning as all the hurricanes do in the Southern hemisphere. Now, the *Maria Somes*, from midnight of the 26th, to 3 P.M. of the 27th March, which is 15 hours, ran, with her barometer at 28.50, and the winds varied from the westward and W.N.W., 50 miles down to the S. S.W., the very course and distance to plunge her into the centre of the hurricane; which allowing for its probable progression, she would just reach on that course; and from the state of the barometer, on the 26th it could not be much more than 80 or 100 miles from her. Any one of our readers who wish to understand this, may do so by striking a circle, which they may suppose to be of 160 or 200 miles in diameter, and marking the circumference of it with a few arrow-heads to shew the wind, which, being in the southern hemisphere, must be placed from left to right, or *with* the hours on the face of a watch. This will be a storm-circle. A dot at the top, about the place of XII o'clock, will be the *Maria Somes'* position on the northern verge of a hurricane, with a westerly wind, and as the circle is moving forward to the

* Is this done? or is it that merely chains are provided! the old system, the danger and inefficiency of which Mr. Harris has pointed out.

west, or left hand, also it will at once be seen, how 50 miles run to the S.S. W., takes her into the very centre of it.

So much for running into it. Now for making a fair wind of it. Suppose her to have ran off E.N.E., or East with her westerly winds, till she raised her barometer to 29·20 or 30, which she would quickly have done. She might then have hauled gradually to the south, for she would have *certainly* found the winds becoming N. Westerly, Northerly, N. Easterly, and in the end Easterly, so that a run of about 300 miles at most, of which only 150 would have been *altogether* out of her course, would have brought her round to the southward of the storm, and given her both it and the trade wind to speed her on the direct route! Nothing can be more simple, and we are only writing now from Mr. Thom's book, which we lately noticed, and Mr. Piddington's Horn Book of Storms, with its transparent cards to guide our eye, before us.

We repeat that there is no more blame to be attached to Capt. Williams in this case, or to such commanders of ships as have not the advantage of being acquainted with this new and beautiful science of Storms, than to our captains before the days of Cook, for the ravages of the scurvy, or to those of Sir Cloudesley Shovel's fleet for the error in longitude which wrecked them on the Scilly Islands before chronometers were known; but a fearful responsibility *does* attach to those, who, knowing that such knowledge exists and is being worked out with care and energy by competent hands, will not only not turn aside to seek it for themselves, or stoop from their fancied superiority of knowledge to aid the research, but will positively *impede* it! by the direct or indirect refusal of information; and this, we blush to say, has been done again and again in Calcutta. We have learnt, that on the publication in this country of the details of the loss of the *Briton* and *Runnymede* in the Journal of the Asiatic Society, which, so honourably to itself, is giving every support to the new science, a copy of the article relating to it was sent in a pamphlet form to the Lords of the Admiralty, pointing out how completely it demonstrated the imminent risk to which the troops were in that case also exposed, from the commanders of the ships running headlong into the gale, through ignorance of the Law of Storms, and urging upon them the propriety of an order through the proper department that every troop-ship should be provided with the works relating to it. If this reaches Lord Ellenborough, as we trust it will, he is not the man to pass it by, and very earnestly do we pray that it may be taken up. It is perfectly heart-sickening to think, that when a regiment of gallant fellows is sent out on foreign service, or perhaps has for twenty years braved the risks of the climate and battle, they are to be needlessly exposed (we had nearly said wantonly) to death by foundering at sea,* shipwreck on savage coasts,† and now suffocation with the horrors of the Black hole or a slaver's hold; when the expense of a few shillings would enable any captain who can work his day's work, in nine cases out of ten, to avoid all danger! We have recently seen a letter from Mr. Redfield of New York, in which he says, "I am convinced that two-thirds of all the losses and damage at sea, arise from inattention to the Law of Storms;" and thus we are not writing from mere supposition, but upon the very best authority.—*Englishman*, June 1st.

We need make no further comment on the above, but we may add, that the subject has been taken up, as it should be long ago, by the Admiralty, and it remains for merchants and owners of our merchant ship-

* The *Golconda* in the China Sea in 1840, with Head Quarters and 300 of the 37th Madras N. I. on board.—*Jour. As. Scot.* vol. x.

† *Briton* and *Runnymede* on the Andaman Islands.—*Jour. As. Soc.* vol. xiv.

ping to enjoin attention to it on the part of their commanders. For our part, we consider no one an efficient commander who has not a knowledge of it.

LOG OF THE BRIG CHARLES HEDDLE, OF MAURITIUS, CAPT. FINCK,—
Copied by Capt. Royer, Master-Attendant at the Port, and translated by Henry Piddington.—Nautical Time.

Continued from page 431.

So many interesting questions must arise in the mind of every seaman, and of every scientific man, though not a seaman, in examining this log and the diagrams which I have given in Plate V.* that I have thought it proper to devote a separate section to their consideration. They would almost, indeed, afford materials for a separate memoir.

And first let me say, that, writing alike for the seaman and landsman, I shall endeavour to make myself quite clearly understood by the latter, and may thus at times appear prolix, or ostentatious of professional knowledge; but as this detail is necessary to a thorough understanding of the subject by all, I cannot dispense with it.

The points for consideration then, are—

1. The accuracy of the Charles Heddle's log as a whole, and in its parts.
2. The nature and strength of the current she experienced.
3. The construction of the diagrams in Plate V. from the log.
4. The sizes and probable forms of the vortices round which she scudded on different days, and her distance from the centres.

1. *The accuracy of the Charles Heddle's Log*, may certainly, I think, be taken as being as great as the circumstances would allow. Captain Finck is known at the Mauritius as an experienced and a careful seaman; and to this indeed his log bears full testimony; but there are many circumstances which (on board a merchant ship particularly) would unavoidably induce a less degree of accuracy than on board a man-of-war in like circumstances; and taking it that she was steered as correctly as a vessel could be steered in such weather, and perhaps even from her fine qualities as a sailer *better* than some men-of-war, the first question in the mind of a sailor is—"Yes; but how often was the log hove in such weather?" We should reply to this, first, that in the hands of many (young) officers, in such weather, and when running from 10 to 13 knots, the common log is *as* liable to error even if it was hove, as the guess of the experienced seaman. We have all known a young, or a careless officer report a ship going nine, when she was going 10 knots, and especially at night, when it is not easy for the person heaving the log to have one eye, and a hand to the line, and the other to the holder

* This appears in our present number, another being required for the completion of this subject.—Ed.

of the glass, who is often half asleep ; or, on the other hand, that a fault in paying out the line too fast, or want of quickness at the glass or line may give eleven knots when ten or ten and a-half are the truth ; and in fact most seamen heaving the log really make their own allowance for any deficiency or excess they may suppose from any cause, and mark the run accordingly. I speak here of the common log only, and not of the patent ones, which are doubtless far more correct. But in the end, one error of our guess or measurement by log corrects the other, and we may, I think, fairly say that, though doubtless in such a hurricane of five days' duration the log was not hove with any regularity, and especially during the night, yet *the average of any day's run* is not far from the truth as to distance ? The latitudes as given are the next consideration, and here I think we may fairly reject the latitudes, and, consequently, the longitudes, given on the 25th and 26th, for it is difficult to suppose between the "frightful sea," (a literal translation), the motion of the vessel, the mere glimpses of the sun obtained in such weather, and often, if any horizon is seen, the difficulty of knowing if it be the true one, that any correct observation could be obtained. For the same reasons, also, the hurricane still continuing, I should attach so little faith to the observation of the 26th, that I have preferred rejecting them both, and taking the two positions of noon on the 22nd and noon 27th as fixed and well ascertained points, by which to estimate the *average* current experienced for the whole five days ; and I think every seaman will agree with me, that this is the safest course as to probability, and consequent approximation to the truth.

2. *The nature and strength of the Current she experienced.*

When the Charles Heddle's log is worked for the whole five days with simply the allowance for variation,* she will be found to have made good, as noted on the diagram Fig. 1, a course of *North 42' E.*, distance 111', in the five days from November 22nd to November 27th ; but by her chronometer and observations she had really made good, as in diagram Fig. II, a course of *South 55° W.* 366'. So that she must during the five days have experienced a current of *S. 52° W.* 476 miles! or in

* There is considerable uncertainty as to the variation in this tract between Bourbon, the Mauritius and the coast of Madagascar. On this last coast it is marked in Norie's Tables, ed. of 1844, which I take to be from the latest authorities, as 16° westerly at Foul Point, latitude 17½° S.; and as 21° westerly at Fort Dauphin, in latitude 25° S.; and at Mauritius as 14° 20' W., but we do not know how late this is, and if the variation is increasing or diminishing; and I have not access to any very late works on charts. I have thus allowed 1½ points for the first three days, and 1¾ points for the last two. This may be slightly erroneous, but we do not know any thing as to what may have been errors of steerage, misplacing of compasses, and local variation, and ½ of a point more or less for a day or two would not make any difference in this kind of circle sailing, as I have satisfied myself by working over the logs of 23rd and 24th with 1½ point variation, when the result for the two days was only three miles south and four east of that given by the variation used, which is quite insignificant either as to general results or the projections of the chart and diagrams.

round numbers, (which would require 480 miles,) four miles per hour for the 120 hours, or five days, of the hurricane. I have already explained why I should reject wholly the observations on the intermediate days, and this compels us to take the whole as a general average, being without any positive knowledge as to whether its force or direction was different on different days. It is clear that if the direction was at all different, the force of the current must have been greater, as the distance taken is the straight line between the points, and any deviation from that must make a greater distance. In as far then as *rate* is concerned, we have (supposing the run to be on the whole correctly estimated) taken the lowest.

3. *The construction of the Diagrams in Plate V. from the log.*

The seaman will easily understand these (and I hope appreciate the tedious labour they cost), but writing for the meteorologist, and general reader also, I must explain that fig. I. is simply the courses and distances of the log corrected for variation, and laid down on a plane chart.

For Fig. II. every *separate* course and distance was first worked as for a traverse, and then to it was applied the average current of S. 55° W. four miles per hour, for the number of hours of run on that course, and this corrected course and distance, taken as being the true one, was then laid down; and the result of all these produces from point to point of the five days' scudding, the singular set of spirals shewn in the diagram!* And these are in all probability not far from the average truth, as we shall now shew.

The size and probable form of the vortices round which the Charles Heddle scudded.

There are three kinds of calculations to be made as to the size of the vortices. The first is to take the number of turns made in the *whole* five days against the *whole* distance run by log, and taking this as representing the sum of the peripheries of so many circles as there are turns, the result divided by the number of turns will give the *average* size of the circles, and consequently from their diameters the *average* distance from the centre at which the brig scudded.

The *second* is to consider each *separate* turn or circle made according to the log, with the number of hours employed, and distance run in making it, and to use this to determine the probable diameter of the circle sailed round; and the *last*, which will perhaps assist us in forming a notion of the shape of the vortices, to take each *half* circle only to calculate from in the same way. I shall shew the result of each of these calculations, premising that I take the circle or half circle to be completed at the nearest time and distance to which the log allows us to calculate it.

First, it appears then that from November 22nd to November 27th, the Charles Heddle completed as follows:—

* The points marked with dates on the diagram are the positions of the vessel at noon each day; and are those taken for the same days on the general chart also.

| | 1st Turn in | 24 hours, | running | 387 Miles. |
|-----------|-------------|---------------------------------|---------|--------------------------|
| | 1 | " 38 " | " " | 426 " |
| | 1 | " 23 " | " " | 243 " |
| | 1 | " 17 " | " " | 167 " |
| | 1 | " 15 " | " " | 150 " |
| Sums, | 5 | turns in 117 hours, | " " | 1373 Miles. |
| Means are | 1 | turn in 23 $\frac{2}{3}$ hours, | " " | 274 $\frac{2}{3}$ Miles. |

The *average* circle then was $274\frac{2}{3}$, or say 275 miles in circumference, which would give not quite 90 miles of diameter, and the brig's average distance from the centre, being the half of this, at about 45 miles.

Again, five turns of the circle are 160 points, which, in 117 hours, are 1 point and three-quarters in an hour, and the 1373 miles divided by 160 are 8.6 miles of distance for each course, or chord of each arc. Taking every separate turn we have,

| | Diameter. | Distance from the centre. |
|--|-----------|------------------------------|
| 1st Turn, 387 Miles of circumference, or | 123.3 | 61.6 |
| 2nd " 426 " | 135.5 | 67.7 |
| 3rd " 243 " | 77.3 | 38.7 |
| 4th " 167 " | 53.2 | 26.6 |
| 5th " 150 " | 47.7 | 23.8 |
| | 437.0 | 218.4 |
| Average, | 44.6 | 44.6 |

Taking every separate *half* turn, which is suggested by the evident tendency of the spirals, and choosing from the log each half circle from W.N.W. to E.N.E. by compass,* and from E.N.E. to W.N.W. again, we have first,

| | Hours. | Miles. | Circle of | Mean. | Diam. | Distance from the centre. |
|--------------------------|------------------|------------------|--------------|-------|-------|---------------------------------|
| 1st turn 22nd | 1st half circle. | 14 | 167 | 334 | 395 | 125.5 |
| | 2nd | 19 | 228 | 456 | | |
| 2. 23rd | 1st | 12 | 127 | 254 | 373 | 119. |
| | 2nd | 19 $\frac{1}{2}$ | 246 | 492 | | |
| 3. { 24th and 25th | 1st | 9 $\frac{1}{2}$ | 103 | 206 | 214 | 68. |
| | 2nd | 11 | 111 | 222 | | |
| 4. { 25th and 26th | 1st | 6 | 60 | 120 | 160 | 51. |
| | 2nd | 11 | 100 | 200 | | |
| 5. | 1st | 5 $\frac{1}{2}$ | 55 | 110 | 135 | 43. |
| | 2nd | 8 | 80 | 160 | | |
| | | | | | 204.2 | |

Averaging, 41.

This table gives us then the daily and the average diameters of the

* About, or W. $\frac{1}{2}$ N. and E. $\frac{1}{2}$ S. true course, on an average.

circle sailed round on different days from north to south, or thereabouts. The following is the result when we begin with the time (8 P.M. 22d,) at which the vessel was running about north (N.N.E. by compass) and is thus a measurement from east to west ; or at right angles to the preceding one.

| | Hours. | Circle of | Diameter. | Dist. from centre. |
|-----------|----------------------------------|-----------|-----------|--------------------|
| 1st Turn, | 1st half circle. 17 — 204 | 406 | 129.2 | 64.6 |
| | 2nd ... 18 — 202 | | | |
| 2nd ... | 1st ... 19 — 213 | 361.5 | 115.0 | 57.5 |
| | 2nd ... 13 $\frac{1}{2}$ — 148.5 | | | |
| 3rd .. | 1st ... 11 — 112 | 193 | 61.4 | 30.7 |
| | 2nd ... 8 — 81 | | | |
| 4th ... | 1st ... 10 — 96 | 156 | 49.6 | 24.8 |
| | 2nd ... 6 — 60 | | | |
| 5th ... | 1st ... 8 — 80 | 160 | 50.0 | 25.0 |
| | 2nd ... 8 — *80 | | | |
| | | | | 202.6 |

The above averages, it will be noted, are derived from the run by log.

There is a third average to be derived from the *measurement*, on the diagram, of the distance between the parallels nearest to the longest, or vertical, or north and south diameters of each spiral on Fig. II. which are those nearest the meridians. The transverse (minor) or east and west axes of the spirals, or those bounded by the nearest courses to the meridians *appear at first sight* to be reduced by the effect of the current, and the longer (major) axes also appear reduced by the crossings of the old track from the same cause, but the letters *A* to *B*, *B* to *C*, &c., and *a* to *b*, *b* to *c*, &c. will show the measurements taken, the first being near the meridional, the last near the horizontal distances. Measurements of these parallels are also taken, as in the former case, twice for each circle to obtain a fair average, and are for the vertical axes.

| | | Mean Diam. | Mean dist. from centre. |
|-----|------------------------------|------------|-------------------------|
| 1st | 1st <i>A</i> to <i>B</i> 112 | 110 | 55 |
| | 2nd <i>B</i> to <i>C</i> 107 | | |
| 2nd | 1st <i>C</i> to <i>D</i> 85 | 123.5 | 61.7 |
| | 2nd <i>D</i> to <i>E</i> 162 | | |
| 3rd | 1st <i>E</i> to <i>F</i> 77 | 75 | 37.5 |
| | 2nd <i>F</i> to <i>G</i> 73 | | |
| 4th | 1st <i>G</i> to <i>H</i> 45 | 54.5 | 27.2 |
| | 2nd <i>H</i> to <i>I</i> 64 | | |
| 5th | 1st <i>I</i> to <i>J</i> 47 | 54 | 27 |
| | 2nd <i>J</i> to <i>K</i> 61 | | |

Mean. 41.7

When the same kind of measurement is taken between the extreme *meridians* of the spirals, or from east to west, the results are as follows :—

• This is incomplete : the log of the 25th closing, as before noted, at a west course, and the weather becoming fine ; I have therefore *supposed* the latter half of the circle.

| | | Mean Diameter. | Mean distance from the centre. |
|-----------|--|----------------|--------------------------------|
| 1st Turn, | $\left. \begin{array}{l} a \text{ to } b \ 92 \\ b \text{ to } c \ 182 \end{array} \right\}$ | ... 137 ... | 68.5 |
| 2nd ... | $\left. \begin{array}{l} c \text{ to } d \ 89 \\ d \text{ to } e \ 146 \end{array} \right\}$ | ... 117.5 ... | 58.7 |
| 3rd ... | $\left. \begin{array}{l} e \text{ to } f \ 33 \\ f \text{ to } g \ 77 \end{array} \right\}$ | ... 55 ... | 25.0 |
| 4th ... | $\left. \begin{array}{l} g \text{ to } h \ 35 \\ h \text{ to } i \ 72 \end{array} \right\}$ | ... 53.5 ... | 26.7 |
| 5th ... | $\left. \begin{array}{l} i \text{ to } j \ 28 \\ j \text{ to } k \ \bullet \end{array} \right\}$ | | |
| | | | 178.9 |
| | | | 44.7 |

It is evident here that the second half circle is affected by the current which in the run during the first half is against the vessel, diminishing the breadth of the circle, and in the second half is in favour of, and increases it; making thus double the difference. The average, however, singularly agrees with the others, as will appear in the following general table.

The following is the result of these various modes of estimating the diameters of the Circles, and the average distances from the centre during each revolution sailed by the Charles Heddle.

| Re- volu- tion Date. Com- plet- ed. | By separate turns Avera- ge. | | Log By half turns. W.N.W. to E.S.E. | | Log By half turns, North to South. | | Diagram with correction for current, Fig. II. | | | |
|--|------------------------------------|----------------------|---|-----------------------|--|-----------------------|--|------|-----------------------------------|------|
| | Diam. | Dist from centre. | Diam. | Dist. from centre. | Diam. | Dist. from centre. | By Meridional axes of spirals. | | By Horizontal axes of spirals. | |
| 1st | 123 | 61.7 | 125.5 | 62.7 | 129.2 | 64.6 | 110. | 55. | 137. | 68.5 |
| 2nd | 135 | 67.7 | 119.0 | 59.5 | 125.0 | 57.5 | 123.5 | 61.7 | 117.5 | 58.7 |
| 3rd | 77.3 | 38.7 | 68.0 | 34.0 | 61.4 | 30.7 | 75. | 37.5 | 55.0 | 25.0 |
| 4th | 53.2 | 26.6 | 51.0 | 25.5 | 49.6 | 24.8 | 54.5 | 27.2 | 53.5 | 26.7 |
| 5th | 47.7 | 23.8 | 43.0 | 22.5 | 50.0 | 25.0 | 54. | 27. | Imperfect | |
| Mean Average distance from cen- tre, | 44.6 | | 41.0 | | 40.5 | | 41.7 | | 44.7 | |

Mean of the whole by log is 42.0 Mean of the first two
by chart 43.2 † days by log is 62.8

by chart is 60.9

Mean of the last 3 days
by log is 27.9

by chart is 28.2

* Incomplete, and the blank cannot be supplied here.

† By the whole distance run (p. 724) and number of turns, the average distance from the centre on the whole five days is 45 miles.

We arrive so near to the same results by all these different modes of calculation, that we can entertain no reasonable doubt that they are not far from the truth, as shewn by the original data, and that the vessel made in round numbers:—

1. In the first two days, circles of about 125 miles in diameter, and was sailing round at an average distance of $61\frac{1}{2}$ miles from their centre, the greatest distance being 68 and the least $57\frac{1}{2}$ miles.

2. That for the last three days she was sailing round in circles of about 56 miles in diameter, and consequently at a distance of 28 miles from the centre, the greatest distance being 39 miles, and the least 25.

[The importance of this subject to seamen generally has induced us to print the foregoing entire from Mr. Piddington's Thirteenth Memoir on the Law of Storms in India; but its extent, and the length to which some other articles run in this number, oblige us to defer the remainder for our next number. This we prefer to curtailing the calculations of the author, which we look on as highly curious and valuable, carrying conviction to the mind, if that were still necessary, not only of the revolving nature of these storms, but how easy it would be to find a fair wind in them, and run out of their influence. To Mr. Piddington, seamen are much indebted for the unwearied attention with which he has discussed and explained this storm, as well as the rest contained in his Memoirs.—Ed. N.M.]

NAUTICAL SKETCHES.—No. III.

At a bustling period of our Naval History, the regulations with respect to promotion were not fixed as they subsequently were, and are to be found at this day. Many men who were not regularly brought up in the service, or indeed to a sea-life, were received and advanced either from their private interests, or from some display of their courage or abilities; and our fleets were sometimes encumbered with volunteers of the aristocratic class, who knowing nothing of the duties pertaining to a ship, were more likely to be in the way than to be serviceable in action. However the spirit that led them on may be admired, others embraced the profession early, and from their interest rose rapidly.

The Admiral, George Legge, Lord Dartmouth, entered the navy in the year 1665, with Admiral Sir Edward Spragge, who was his maternal uncle, at the age of seventeen years; and we find that in the short period of two years he was promoted to the command of the Pembroke; having however, in that short interval participated in the actions fought against the Dutch Fleets.

At the present day, such a circumstance would not be tolerated; and it is a matter for surprise that even at the period it occurred, it should have been allowed; for independent of the glaring favouritism, the authorities must have been sensible that a youth of two years' experience, even in maritime warfare of the most active description, could not be qualified for the command of a man-of-war.

That the young captain had a martial spirit and active mind may be
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inferred from the circumstance of his qualifying himself, during the peace which followed the obstinate battles with the Dutch, as an engineer-officer. Strange enough according to our modern notions, we find him in the year 1669, succeeding his father in the command of an independent company of soldiers ! He did not, however, abandon his station in the sea service, as, in 1671, he received an appointment as captain of the *Fairfax*.

There have been instances in our days of very young men having been promoted to the command of men-of-war, but they certainly must have had more experience than Captain Legge could have gained in his two years, in the routine of duty. However, by the existing regulations, and which have been in force for some years, lieutenants are obliged to serve afloat for two years, and commanders for one, before becoming eligible for advancement. It is a very proper rule, and has been strictly adhered to.

In 1672 Captain Legge commanded the *Royal Catharine*, and distinguished himself in the battle with the Dutch off Solebay; his ship was greatly shattered, and he received several wounds. In 1667 we find him Lieutenant-General of the Ordnance, and colonel of a regiment of foot. In 1682 he was created a Peer; and the next year, he, as Admiral, was sent to destroy the fort and mole at Tangiers in Africa; that place being then in the possession of England; for which service he received £10,000 from the king. The policy of giving up that position was long regretted, but the possession of Gibraltar subsequently obtained by the skill of Admiral Sir George Rooke, has done away with the regret.

On the accession of James the Second, we find him holding the following posts; situations that would be considered extraordinary at the present time, if held by an Admiral:—"He was at once master of the horse to the King, general of the ordnance, constable of the Tower of London, captain of an independent company of foot, and one of the privy council."

The historian gives this sketch of the Admiral's conduct under very trying circumstances:—"He preserved the affection and confidence of his master to the last, and yet he was so far from giving into the King's fatal inclinations to popery and arbitrary government, that he opposed all councils looking either way, with much firmness and freedom, though he took care to restrain all his remonstrances within the just bounds of decency and duty."

When the Prince of Orange made his descent on the English coast, Lord Dartmouth commanded the Royal fleet, but he was driven back to Portsmouth by stress of weather. After the revolution he submitted to the government, but being suspected, was confined to the Tower. He died in October 1691, at the age of forty-four.

Very unlooked for events sometimes turn up during the career of public officers, which even their most sanguine wishes never allow them to anticipate. These serve to show young men, that, by perseverance and good conduct, their own exertions may ultimately lead to that advancement which the want of interest gives them little hopes of reaching.

Sir John Berry, who ultimately became Rear Admiral of England, was a clergyman's son, whose loyalty during the civil war, not only wrecked his fortune and his prospects, but consigned him to abject poverty, distress, and death! He was the rector of Knoweston near Ilfracombe, and had a large family.

His son John after serving a few years in the Merchant Service, was made boatswain of the *Swallow* ketch, under Captain Insam. His vessel in company with two frigates (which were lost) encountered a hurricane in the straits of Florida; she cut away her masts, and, after repairing at Campeche, reached Jamaica. Whilst in port, it is said that the governor Sir Thomas Modiford, being his countryman, promoted Mr. Berry to the rank of lieutenant into the *Swallow*. If the governor had the power at that time, it has since been discontinued.

A curious story is told of Lieutenant Berry having taken upon himself the command of the *Swallow*, when she was about to engage a piratical vessel in one of the anchorages at St. Domingo; the captain it is said making a speech to his crew, instead of dashing at once upon the rover.

The pirate was captured and carried to Jamaica. Some colour is given to this statement, as it appears the lieutenant was tried by court martial, and was not only acquitted but promoted to the rank of captain.

He did good service afterwards, and appears to have been an excellent seaman; fearless, and successful. His death was remarkable, and the mystery attending it has never been cleared up. Having been sent from London to Portsmouth in 1691, to superintend the paying off of some ships; whilst on board executing this duty, he was suddenly taken ill, and conveyed on shore, where he soon expired. By a *post-mortem* examination, it was found that the Admiral had been poisoned!

Parallel cases to that of Sir John Berry's good fortune may probably be found among the multitude of officers who figured in the late wars, but they are perhaps rare.

We are so much (wisely) in the dark with respect to our "fate" or "destiny"—words meaning no more, in a general sense, than the occurring circumstances in our passage through life, that, however much a man's own conduct may lead to success, it is usual to attribute such to "good-luck"; and the contrary, is ascribed to his "fate" or "bad-luck." How often do we hear the expression—"Oh it was his doom!" &c. This is a sort of predestination. The superintending hand of Providence most admit, but how it acts is not permitted for man to know. The poet says—

"God gives to every man
The virtue, understanding, temper, taste,
That lifts him into life, and lets him fall
Just in the niche he was ordained to fall."

We find another singular turn of fortune arising out of the civil war, in the instance of Admiral Sir John Kempthorne, of Widscombe, in Devon. His father a royalist, having quitted the profession of the law

to serve as a lieutenant of the King's horse, his prospects were entirely ruined. His son John, it appears, went to sea in the Merchant Service, and whilst master of a ship happened to be captured by a Spanish man-of-war, whose captain was a Knight of Malta, after a very gallant resistance.

A remarkable circumstance is mentioned as having occurred in this action. The English seaman, having expended all his shot, bethought him of some bags of dollars which he had on board, and which he considered would be better employed in annoying than in enriching the enemy, so the Spaniard was well plied with silver, which so cut up his rigging that had not an unlucky shot from him disabled the English ship, she would have escaped. This was truly paying the Spaniards with their own coin. The sequel is extremely gratifying. The Spanish officer treated Captain Kemplhorne with great kindness, and eventually sent him to England. How strangely circumstances sometimes turn out; how the scenes shift as time progresses, and how often are personal incidents reversed or transferred from one to the other of two actors on the stage in life's drama! Who is there that does not love a generous action, and admire the man whose feelings of gratitude for some act of kindness never die? Let every one reflect on the pleasing effect arising from the exercise of the courtesies and kindness which it is in his power to bestow, and he would never say unnecessarily one offensive word, or perform a single uncivil act that may have the opposite tendency. It so happened that, some years after the event we have stated, the Knight of Malta was taken by Commodore Ven, and sent to England as a prisoner, where he was confined in the Tower of London. The opportunity was not lost to our captain, who, as soon as he heard of the circumstance, not only returned the personal civilities and acts of kindness he had received from the generous Spaniard, but, as he had done towards him, obtained his release, and at his own expense furnished him with every thing necessary for his return to his own country.

This was assuredly a very pleasing episode in the career of our seaman, and must have been gratifying to his feelings, for the liberal heart does not like to be out done, as there is equal delight in returning as in receiving favours. It has been remarked that, in some way or other a generous action never yet went unrewarded; indeed, if we look to cause and effect, which necessarily arise and follow, in moral as in physical nature, such would amount to a truism, for the consciousness of having performed a good action is of itself a glorious reward.

Whether the captain's introduction and subsequently success in the navy may have immediately sprung from the events mentioned, we have no means of determining; but it is not impossible that he owed his entry into the public services at least to these. Soon after the "restoration" he was appointed to the rank of captain and commanded the noted ship the *Mary Rose* of 48 guns. In this frigate he fought a desperate action with an Algerine squadron; and displayed his courage and professional merit very conspicuously in the Dutch wars. In 1666, he hoisted his flag, and was knighted.

The Admiral had a son who when only twenty-three years of age

was a captain in the navy, and greatly distinguished himself in the *King's Fisher* of 46 guns, but was unfortunately slain, or rather died after having been desperately wounded, in action with an Algerine squadron. In those days, there was, comparatively speaking, but a small list of junior, or indeed, of any other class of officer in the King's service; and the time being stirring, it was necessary to dispense with the regular servitude by gradation of promotion, so that a man who had never been in the State service would be raised at once to the rank of captain in it; and we find that some who served as admirals in it, subsequently assumed the captain's office, and so with lieutenants also.

Various opinions have been formed as to the conduct of naval officers serving under the Parliament, and during Cromwell's "Protectorship." Can any circumstance absolve an officer from the obligations attached to his oath of allegiance? Blake's notion appears, at least, to have been honestly given. "It was a seaman's business to keep foreigners from fooling us." The patriotism may be gathered from his expression that, "he would as freely venture his life to save the king, as ever he did to serve the parliament." One thing is very remarkable, that, although the naval officer takes the oath of allegiance to the sovereign, his commission, or warrant, is subscribed to by the admiralty, whilst that of the military officer is subscribed to by the sovereign. A British admiral holds not only a very high post, but one that is of the greatest importance to the welfare of the country as a maritime state. In such a case as that of King James the Second, when one of the leading points in the succession of the crown was attempted to be disregarded, would it have been an imperative duty in an admiral, or a commander-in-chief of any of our fleets, to have remained faithful to his oath of allegiance, supposing it to have been taken, or would he be justified in disregarding it? His position would be a most painful one; but happily such a trial is not very likely to occur again, at least, not in our day.

The command of a man-of-war was formerly not only intrusted to land officers, but that of a squadron, or a fleet. Such men as the Duke of York, (James the Second), Monk, Blake, Dean, &c., have been chiefs; but, in these cases, until familiarity gave them the notion of naval evolutions, they must have been dependent upon the professional knowledge of the seamen-admirals who served under them. The necessity for thrusting a landsman upon our seamen, seems more than questionable, a proof of which has been given in the case of the Earl Warwick's fleet, where the seamen, regardless of consequences, turned the new chief on shore with little ceremony. The Parliament, however, was exceedingly puzzled, and, in truth, its jealousy was natural enough to the position of affairs at that critical conjuncture. The deference which is generally paid to high rank and title, no doubt, had its weight; but there is always danger to be apprehended in the appointment of a chief not regularly bred to the profession he is placed in to command, for, stubbornness of disposition, or unbending pride, coupled with ignorance of the acquirements necessary for playing his part well, may sadly mar any efforts made to uphold the honour of the State.

It cannot be supposed that the landsmen of those days possessed a

higher courage than the experienced, or indeed other, sea officers. The pensioner De Witte, when he thought proper to take sovereign command of the Dutch fleet, displayed certainly an extreme degree of pertinacity and obstinate resolution, very much to be admired, to wrest the palm out of the hands of the British tars; but no men of any nation could possibly have exerted their bravery and skill (we trust we are justified by the results in saying—except their opponents), to a greater degree than did the famous Van Tromps and De Ruyters; and De Witte, after personally satisfying himself, honestly declared, that “Englishmen may be killed, and English ships burnt, but that English courage was invincible!” This was a panegyric offered as a homage due from a truly brave people to their puissant opponents, and is alike honourable to both parties. The *habilité* and *tactique* of our more mercurial neighbours, and now good friends, with all their chivalrous bravery, and patriotic enthusiasm, have shone to more advantage in land battles than in those on the ocean—clever, skilful, and resolute, their home is not on the deep; it may be that Nature never designed them to be seamen.

In our day, the only instance that I have heard of a military officer quitting the land service for a sea life, was that of the late Capt, Curran, (I believe that was his name), who, after having attained the grade of major, joined the navy, and, whilst serving as a lieutenant on the African station, succeeded to the command of a sloop of war.

Henry, Duke of Grafton, born in the year 1663, was the son of King Charles the Second, of, “merry memory,” and entered the navy under Admiral Sir John Berry, at the age of seventeen years. We are not to be surprised, all things considered, at the rapid advancement of this favoured youth. Nevertheless, it sounds rather strange to hear that a lad of eighteen held the post of one of the *elder* brethren of the Trinity House! But that was out-done by his appointment to the honorary and dignified station of Vice-Admiral of England, before he had reached his twentieth year! A “restoration” to power, like a wet sponge, wipes off all traces of consequences arising from former arbitrary acts; but it cannot obliterate the stamp on the public mind of the necessity for a due regard to decency, which may have been, or may still be outraged. Things have been better managed since the inemorable year of 1688, though, to be sure, occasionally, some return to old practices have appeared; at present we come much nearer perfection.

The noble sea officer we are speaking of, the same year he became Vice-Admiral of England, commanded the *Grafton* of 74 guns, as a captain, and in the very same month of the same year, (April 1683), he was advanced to the rank of Admiral and Commander-in-Chief of His Majesty’s fleet in the narrow seas! This was pretty quick ascent up the (in his own case,) “accommodation” ladder. The gallant old admirals of the day—the Montagues, Lawsons, Kempthornes, Ayscoughs, &c., probably looked a “little blue” upon these doings, but then most of them had been commonwealth men, and were too wise to unmind themselves, taking the old “saw” as a consolation—“what can’t be cured, must be endured.”

Being a Protestant, the young Duke was one of the first to join the

standard of the Prince of Orange, when his kingly uncle James was dreaming about the celebration of the mass.

At the untoward battle off Beachy Head, we find him still captain of the *Grafton*; but he was not long after cut off by an unlucky shot at the siege of Cork, and died like a Briton.

Though the Second Charles paid attention to his navy, having a good monitor in his brother, who was undoubtedly a capital Lord High Admiral, as well as a fighting Commander-in-Chief, there appears to have been a dearth of experienced men brought up and actually serving in the fleet, when we learn how quickly officers were raised to posts of command, thus:—Sir John Ashby, in four years after he received his commission as a lieutenant, was made an admiral. The Bantry Bay skirmish, for it can scarcely be called a battle, as it gave him his knightship, so it probably led to his promotion to the flag. He shared in the battle of La Hogue, on the 19th of May, 1692, which cleverly balanced the “short-weight” affair off Beachy, two years before, and which led to the *triumviri* in the command of the fleet—and again tried two years after; but it was soon found that among seamen joint commands did not answer. In 1693, Sir John closed his short but meritorious career: he was a general of marines.

We have an instance of so noble a spirit in one of the old and distinguished admirals of those days (1702), that, though known to all who have read the naval history of this country, cannot be too often repeated, it is so admirable.

When Queen Anne succeeded to the crown, Admiral the Earl of Pembroke was the Lord High Admiral of England. The queen having been united to the Prince of Denmark, she was desirous that he should fill the post held by the Earl; this was accordingly accomplished, but as gently as possible, a large pension being offered to the latter, as a sort of anodyne, if it should not prove curative, in healing any ebullition of pride or disgust, which might have supervened in the mind of the gallant peer.

Her Majesty, or, more probably, her advisers, no doubt had judged of the man from the pretty general traits with which the nature of the species seems to be endowed, or to acquire; but the Court had yet to learn that, there was one being at least among the frequenters of the royal palaces, who had a spirit too pure to be tempted by gold to part with his freedom of mind, or his integrity of principle. To the proposition of the grant, his lordship answered, “with great generosity and public spirit,” that, “however convenient it might be for his private interest, yet the accepting such a pension was inconsistent with his principles; and, therefore, since he could not have the honour of serving his country in person, he would endeavour to do it by his example.” Here is a noble man indeed!

It is a happy consideration that we of the present day, live in a more honourable, and wholesome political atmosphere, than our predecessors did in times past. The superior officers of the sea service are no longer liable to be sacrificed, or made the scape-goats of party, or to satisfy popular clamour, or to become answerable for the blunders of the minister, or for contradictory orders introduced into their instructions.

Such displays, which were of frequent occurrence during former periods, cannot be dwelt upon without the feeling of indignation being roused, as they involved inexcusable exhibitions of the meanness of spirit of men then in power, and the want of that upright integrity of principle among the rulers of a great nation, which would scorn the moral cowardice of fixing their own delinquencies upon the innocent, to shield themselves from odium.

But the mischief, and evil consequences to individuals at the time, were greatly increased by the demon of faction, and the weakness as well as the malignity of party writers, whose discreditable conduct was not content with the perversion of truth to suit their own views at the moment, but must embody their calumnies in historical annals to go down the stream of time to amaze posterity!

Among the veracious noticers of passing events is to be found a prelate, who diverted such talents as he possessed in recording every idle tale he heard, to the prejudice of men who were very far his superiors, in their several stations, to what he was in his; and who, instead of attending to ecclesiastical affairs which was his province, mixed himself up with the political *fracas* of the period; and, he was as much governed by party prejudices as the most ultra-whig or tory was, who attached himself to faction, to the scandal of his holy office, and as much to the dismay of his friends as to the indignation of those assailed.

Among other brave officers whom the above prelate assailed was, Admiral Sir George Rooke, who placed Gibraltar in the hands of England. Some censure had been cast on the admiral during a debate in the House of Lords, in the year 1740; the Duke of Argyle rose up and said: "As for what has been mentioned in relation to Admiral Rooke, we know, my Lords, the history from which it was taken. It is a story of Bishop Burnet's, in his 'History of his Own Times,' and those who have sat in this house with that prelate, must know, he was a very credulous weak man. I remember him, my lords in this house, and I likewise remember that my Lord Halifax, my Lord Summers, and his other friends in the house, were always in a terror when he rose up to speak, lest he should injure their cause by some blunder. With regard to what he says against Admiral Rooke, I know I have heard it from those that were present, that the greater part of it is a downright lie. The bishop, it is well known, was no friend of that admiral, and, therefore, he easily gave credit, as he generally did in like cases, to every malicious story he heard against him."

The navy, as a body, is much indebted to Dr. Campbell, the historian of its deeds, for rescuing the fair fame of some of its exalted characters, from the aspersions of party writers; and the memory of the champion of its noble exertions, ought to be held by it, in high veneration, whatever may be thought of his style; and some memorial expressive of that feeling should be established in commemoration of the good he did.

AUTO-BIOGRAPHICAL SKETCHES, by a Merchant Sailor, illustrative of the State of the British Merchant Service.

Continued from page 427.

THE inhabitants of Riga and its suburbs, are of a mixed description; the tradesmen, merchants, medical men, and many of the workmen, are of German extraction, speaking that language, although Russian subjects; the government men, and all connected with public departments, and the soldiers are Russian; while the domestic servants, labourers, and some of the small shopkeepers are Lettish, or belonging to the Province of Livonia, speaking their own language, quite different to the Russian. Three languages are thus common in Riga, and many of the respectable inhabitants understand all three, indeed, it is necessary in order to communicate with the different classes, with all of whom they occasionally come in contact.

Throughout the empire the laws as between superiors and inferiors are very strict and severe. The most absolute control exists on the part of master and mistress over servants, and the least dereliction of duty is instantly punished by the offended party personally, or the servant is sent to the nearest police station, with a request to have a certain punishment inflicted. The residence of every person in the empire is recorded in the police books, and any change of residence, or of domestics, must be immediately entered at the police office. While seated one day, during the winter, at the window of the hospital which overlooked the main road across the river, on the ice I observed a very fine equipage; sledge, horse, and driver, being all of the finest kind, the occupant, a lady, dressed in the first fashion, wrapped up in the richest furs, they had ascended the bank from the river in safety, but, while descending the bank at a quick pace, and, at the same time, turning into the street, the light sledge overturned, rolling the lady some distance in the snow. She soon recovered herself, uttering a volley of execrations at the unfortunate driver, and pulling off one of her boots, she belaboured the poor fellow with it, about the head, until she felt tired, he all the time standing still with the reins of the horse in his hand, which he had never quitted, receiving the blows with the greatest apparent nonchalance.

During summer the river is crossed by a wooden floating bridge, composed of a series of platforms placed between a double line of immense piles, well driven into the ground. It is about seven hundred yards in length, and about twelve in breadth; just as the ice sets in in winter it is removed, the piles alone remaining until the ice becomes thick, when they are extracted.

About the new year, an interesting religious ceremony takes place on the ice. The dignitaries of the Russo-Greek church, the national church of the country, march down in procession from the church to the river where they bless the water. They are followed by immense multitudes, principally of the lower orders, who crowd around the hole on the

ice. The place chosen is over a shallow part of the river, otherwise the ice could not bear the immense crowd assembled. When the blessing is pronounced, there is an immediate rush to the hole to get some of the water as soon after the ceremony as possible. It seems to have some indescribable value in the eyes of the poor devotees, who, I am afraid, in this, as well as other parts of the observances, look more to the creature than to the Creator. The Russian population belong invariably to the Greek church, while the German and Livonian population are mostly of the Lutheran religion. As in other parts of Germany, these latter classes consider the first part of Sunday the only one necessary to be devoted to religious observances; the afternoon is always spent in amusement, parties of pleasure, dancing, singing, or card playing. At all times, however, whether at public places of amusement, or in private houses, while there is a greater degree of mirth and jollity, and happy enjoyment, than there is in England, there is a total absence of drinking to excess, bad language, or quarrelling.

What appeared at first the prospect of a miserable, dreary, uncomfortable, winter, proved, in the end, a most interesting, and, in many ways, an agreeable residence. I became sufficiently acquainted with the language to converse in it, got acquainted with some respectable families, and in one, enjoyed many of the comforts of a home. While recollection remains, it would be difficult to forget the purely disinterested attention of that happy family, in whose pleasant society I beguiled many a dreary winter day.

An ice-boat proved a source of great amusement to us. The American was carpenter enough to put together the wooden work, myself and comrade made the sails, while from funds supplied me from home, I procured the materials and iron work. The whole affair was simple. The main frame was two pieces of wood in the shape of a cross, under the end of either arm was placed a curved iron triangularly-shaped, about a foot in height, while the third iron was placed under the rudder at the end of the main piece, the rudder irons being placed the reverse way, so that the whole weight of the boat and frame rested on it abaft. Upon this frame we bolted a construction something like a boat, with seats; she was cutter-rigged, and went very fast, especially with the wind abeam, she worked to windward well, and before we got sufficiently acquainted, threw some of us out with considerable violence, when in stays, from the quickness with which she turned, the moment the rudder was moved. This boat proved not only a source of amusement to us, but to the inhabitants, who used to come down to the river in numbers to see our cruising.

After being four months an inmate of the hospital, I was enabled to walk with the assistance of a stick, my leg remaining crooked and weak, and the doctor telling me I would never be able again to go to sea. In the midst of the enjoyment of a life so novel to me, the thought of not again pursuing my favorite occupation, caused me much regret, as well as the prospect of being deprived of the wonted use of my legs. I was advised by some friends to whom I used to divulge my feelings, to try a doctor residing in the town, celebrated as most successful in his practice,

while at the same time he was somewhat shunned, as exceedingly bold in his plans, and daring in their execution, possessing at the same time certain peculiarities of character amounting to eccentricity. As it was impossible to consult him while remaining in the hospital, I removed to lodgings in town, assured by the old sangrado of the hospital, that I might save myself the trouble, as I would not get better.

Shortly after eight in the morning, I found myself in the hall of the residence of the eccentric physician, amidst a motley group of poor people, to whom I found he administered advice and medicines gratis, at certain hours in the morning. While waiting the doctor's coming, he happened to cross the hall to another room, his eye caught mine, he saw I was a different sort of patient to the numbers around me, he beckoned me to him, and on my reaching the place where he stood, he ushered me into his drawing-room. He was a tall, powerful, well-built man, with a fine intellectual head, an eye whose glance instantly fixed the attention, sparkling, and with that quick ever-changing appearance which gave evidence of his eccentricity: he was habited in a dressing gown and slippers. He motioned me to a seat, while a man was shewn into the room, carrying with him a pair of new boots, which he brought to the doctor to try on, and retired to the door, where he awaited the trial, in silence. The doctor essayed inserting his foot into one of them, but after some severe straining, without success, his face flushed, he commenced a volley of German oaths at the poor bootmaker, and threw the boots at his head, with all his force, telling him to go to a certain well-known, but not to be named old gentleman below. I almost trembled to think I was to commit myself to the hands of such an apparently passionate professor, when he turned to me, and said in good English "Well, what do you want? I see you are an Englishman, I like your countrymen; What can I do for you?" All this was said in a hurried, but decided tone. I at once told him my story, shewed him my knee, for which he ordered an embrocation, giving me, at the same time, a prescription for medicine. He said I might thank my stars I had left the hospital, where I had remained far too long. In two months from the time I pursued the advice of the mad doctor, as he was called, I felt almost as strong as ever, and, unless undressed, it requires a nice eye to discover anything unusual in the once crooked leg.

About the time I applied to the doctor, and while thinking long and anxiously about the future, resolved not to go home unsuccessful, although I constantly had pressing letters to return, I became acquainted with a young Russian already engaged in business. After some time, and many consultations, I entered into an agreement to join him in business, wrote home that I was to settle in Russia; and apparently the prospect of success was bright and pleasing. Little, however, do we poor mortals think of the inscrutable ways of that Divine Providence which is so wisely governing all things, as little did I fancy that, in a few weeks, I should once more be afloat in pursuit of my former occupation.

This young friend had, after a long acquaintance, just been betrothed to an accomplished young lady—as is the custom in that country, the be-

trothal is a religious ceremony, taking place in the church, the lady being afterwards called bride. After the ceremony took place, they went and visited their friends together, as is the custom in this country, after marriage; he had returned from paying the last of these visits, when he came to see me. His conversation was, of course, of his betrothed,—her good qualities—his happiness—the prospect of its being soon added to by marriage—our promised success in business, and such agreeable topics, when he left, little thinking it was to be the last time. Next morning I was sent for, I found him ill, the family doctor attending him. Some inward inflammation had attacked him, and he was already suffering pain. At his request, I remained with him. From what I have since seen, I am convinced the medical man mistook the complaint, he gradually but quickly grew worse, his conversation being always about his bride. The second day he became still worse, suffering much pain, his father and mother came to see him, and passed the greater portion of the night in one of the churches praying for the son's restoration to health. He passed a miserable night, and, in the morning, his end was evidently fast approaching. He expressed a great desire to see his betrothed; she, it appears, was as anxious to see him, which the punctilio of an old aunt, with whom she resided, had hitherto prevented. On that morning, accompanied by her aunt, the afflicted lady came to see him, when, just as she had reached the next room to her intended husband, a shriek from his mother announced the spirit's departure from this world. I, at the time had just removed him from a warm bath, for he insisted on my doing everything for him, and seemed displeased if any other person came near him. Overpowered as I was at the loss of my friend, the sufferings of those around forced me to attend to them. Supported by his mother, in the next room, lay the fainting bride, hysterical sobs now and again bursting forth, with an effort which shook the whole frame. Returning consciousness was announced by a thrilling scream; rising, she rushed into the room where the body lay, and, clasping it in her embrace, uttered a volume of endearing sentences; until exhausted by the effort, she again became hysterical, clinging to the body with unnatural energy.

Some time elapsed before the disconsolate bride could be removed to her own residence, attended by her aunt and the mother of the departed. As it is the custom for the most intimate male acquaintances of the deceased to dress the body, I assisted in this, not very pleasant, occupation. In that country the bodies of both male and female are dressed in their gayest attire, so was his body enveloped in a ball dress, even to the white vest, and white kid gloves on the hands. When so dressed it was laid on a bier, about four feet from the ground, having a succession of steps gradually descending to the floor of the room; on these steps were placed flowers of the most gaudy kind, in pots, and amongst them four large silver chandeliers, in which candles were kept burning during the night. It was also the custom for the young companions and acquaintances of the same sex to assemble every evening for the purpose of watching near the body. I was present amongst from fifteen to twenty young men every evening while the body remained; they all occupied the room

next that in which the body was deposited; and most surprising to me, amused themselves in playing cards until long past midnight, supper and wine forming a part of the entertainment. The brother of the deceased, an officer in the Russian army, soon came, and nightly attended these young watchers, seeing that their wants were attended to, and urging them to enjoyment. I expressed my wonder to him that he could so pass the time, under the afflicting circumstances; but, with tears in his eyes, he informed me it was a custom, so universal, that it must be attended to.

While the body of the departed so remains exhibited in the room of the house, every one has the privilege of entering the house, and viewing it, as well as when it is removed to the church, which is done the evening previous to the interment. It is placed in the principal aisle before the altar, with candles burning—the top of the coffin being removed, and the body exposed to view. Preparations for the funeral being completed, we went to the church, the young companions of the deceased as chief mourners. The poor bride had announced her intention of being present, and also came in a carriage attended by her aunt and female relatives. She was supported into the church, being unable to walk from excess of grief, and exhaustion arising from the sleepless nights she had passed since the bridegroom's death. The funeral service performed, and an oration pronounced by the clergyman, the coffin was deposited in a hearse, followed on foot by the chief mourners, the others in coaches. At the churchyard, (a beautiful spot in the suburbs of the town, adorned with trees and flowers), the scene became painfully interesting; we carried the body in the coffin to the grave, and there deposited it, in its last resting place, amidst the plaintive music of a band, employed for the occasion; the comfortless bride, was led by her friends to the side of the grave, having on her arm a basket of flowers, which she strewed over the body, interrupted in these last mournful attentions to the betrothed by reiterated sobs and tears. The whole scene was to me intensely interesting, but painfully so; the principal friend I had made in a strange land, thus snatched away in the prime of life, from worldly prospects so bright, and apparently so secure, my hopes cut off ere they had time to bud, and a lesson taught me of the uncertainty of this world's happiness, which induced me to say with the preacher,—“all is vanity.”

Spring had once more arrived, the days were longer, the temperature increased, the snow began to melt, and the breaking up of the ice on the river, already rotten in many places, daily expected. To guard against the overflowing of the banks, the double gates of the entrance to the town, on the side next the river, had been shut, the space between them filled with a mixture of mud and straw to resist the force of the water, which, on some occasions, rose to a considerable height on the walls. This year the anxiously expected event took place on the morning of a Saturday, the weekly market day. Many people were crossing on the ice, when it began to move and crack: they were soon seen flying for safety to either bank, when, in a few hours from the first announcement, the scene became awfully grand, and, from the walls of the town, where it could be viewed in safety, an interesting spectacle. The flood from

the interior came rushing down, separating the ice into large pieces which were hurled onwards against each other, crashing as they met with a noise like thunder; the river rose, until in a few hours it covered the quays, and continued carrying onwards to the ocean its masses of ice, and volume of waters for some days. At length it fell, the ice disappeared, and the vessels, already awaiting the event, soon came up the river from the bay where they had been some time in expectation.

My leg, restored almost to its former strength, now no longer formed any obstacle to my pursuing my former occupation, on which I had resolved from the moment my hopes were destroyed by the death of my friend. I put on the jacket once more, and hearing that a man had left a vessel which was loading down the river, I applied to the skipper, by whom I was at once engaged, and forthwith joined the vessel.

The vessel I now joined was a large, lumbering, unwieldy, box of a brig, about 300 tons by the old measurement, but I should think nearly 400 by the new method. She was a regular collier, between Shields and London, except in the summer, when she performed an occasional foreign voyage. Every thing on board was different to any thing I had formerly seen, the system pursued was that prevailing in the coal trade, and although I gained much useful knowledge while I belonged to her, it was rather a rough ordeal. There were only nine persons on board as a crew, including master and mate; the former was a regular specimen of the genus skipper, who, in these vessels, may one voyage flourish as master, and the next figure as cook, nothing very unusual. He was a man past the prime of life, with a colour in his face indicative of potations strong and deep; he sported large bushy whiskers, and chewed tobacco. He was without education, without even an ordinary knowledge of the simplest form of navigating a vessel, while his manners and language was exactly on a par with the common sailor. The mate was a little insignificant looking, but pompous man, without education; but fond of boasting of his knowledge; his favourite expression being either respecting his reckoning, his guesses, or his accounts, that they came out exactly "to a T." The two taken together, as master and mate, were amusing in their way, sometimes they were on the best terms, using the kindest appellations to each other, parading the opposite sides of the deck, smoking each a long clay pipe, and telling stories; at other times, they were using the most taunting expressions, abusing each other, and swearing roundly. The carpenter, the only respectable man on board the vessel, had always previously been in large vessels in the Indian trade, but having had a bad fever, from the effects of which he was suffering, after his arrival in England, the doctor recommended him to try a voyage to a colder climate; hence his engagement in the collier. The remainder of the crew were apprentices, the oldest figuring in the capacity of second mate, but living with the crew. The vessel herself was old, and bore evidences of having been built before the modern improvements in naval architecture. She had no bulwarks forward of the fore rigging, merely occasional planks amidships; this plan was said to be adopted to permit the sea free egress when it came on board. Instead of the modern fashioned convenient coppers, covered in with a comfort-

able house, for cooking, she had merely an open fire-place, standing uncovered on deck, having a crane swinging to and fro, from which was suspended an immense iron pot, the only means of cooking, except the large iron kettle and frying pan, which belonged to the cabin department, and the tin pots of the crew, which were private property. By some private law existing in these vessels, I was informed when I joined, that the last man shipped always acted as cook, at which regulation I demurred, declaring that I would only spoil every meal from my ignorance; but it was only on giving up my grog for the passage that I induced one of the others to take the job. Our living was, however, so simple, that little knowledge was required to superintend the cooking, consisting of boiled beef and potatoes one day, and boiled beef and pudding, technically called *duff*, the other; the cook helping himself to as much meat as he wanted; each man boiling his own tin pot with tea or coffee, as he had a private stock for his breakfast and supper. Beyond the regular articles mentioned above, the cook would not cook anything else; and I recollect being much amused at an instance which occurred during the passage. In the North Sea we spoke a fisherman who came alongside, and gave us a lot of fish in exchange for gin given by the master. The fish were at once divided amongst the crew, the cabin share being cleaned by the youngest apprentice who was cabin boy, the share of the others being cleaned by each individual as he received them. When supper time came, the skipper came to the fire-place with the fish and the frying-pan, and himself cooked the cabin portion; he then held up the frying-pan above his head, calling out, "who speaks first for the pan," which was forthwith seized by one of the crew, and in succession passed to the others.

The cargo loaded was entirely deals, the fore-castle also being filled until we had barely room to crawl in and lie down. The deck was also loaded up to the top of the bulwarks, a spar being lashed between the fore and main rigging on either side, to prevent our falling overboard. Proceedings, while we were loading, enabled me to judge of what was likely to occur on the passage, and I was not disappointed. We started for Bristol, and proceeded down the Baltic with beautiful fair weather, and by accident, more than any calculation, groped our way to Bornholm, and the entrance to the Grounds or narrow passage leading to Elsinore, between reefs on the one side and sand banks on the other. We were running for this passage on a beautiful clear morning, with a fine fair wind, all our steering sails being set, and the brig going as fast as she would, about seven knots. Two pilot boats had called alongside, and offered their services. The skipper, however, elated at his success hitherto, or at the prospect of a carouse at Elsinore, who was, moreover, under the exciting influence of grog, and pacing the deals on the quarter-deck, in his shirt sleeves, with the spy-glass under his arm, indignantly refused them both, adding some insulting epithets to the last one who offered his services.

Many vessels were also proceeding downwards, but all of them seemed to haul more towards the Zetland side than we did. Some of them even hailed us, waving to come more towards that shore. On this being pointed

out to the elated skipper, he merely replied with an oath, he knew as much about it as they did. We were followed in the course we had adopted by another collier brig, which was evidently playing at follow my leader with us, and our skipper was confirmed in his course by the brig coming up. Proceeding onwards we soon saw the bottom through the clear water, and the carpenter ventured aft to tell the master so; he was told with an oath that he knew nothing about it, and the skipper added, "The old b——h must either go or knock her bottom out." Scarcely were the words uttered 'ere hurl went the old brig, rolling on the immense stones on the bottom, making the masts quiver and shake, as if they would fall, the hitherto valiant master and several of the crew falling with a crash on their faces. Fortunately the stones at the bottom were moveable and thus lessened the shock, or we must have lost the masts, as it was, she became fast enough, running herself fifteen inches out of the water, having that quantity of inches less water alongside than she drew. All was instantly noise, confusion, and uproar; the skipper's oaths were now changed to "For God's sake do something"; what that something was he did not seem very clearly to know. The studding-sail booms cracked short off by the yard-arms, one person let go a sheet, another a brace or halyards; in short, the brig presented as nice a picture of confusion as could well be imagined.

The shock once over, we turned to observe our follower, who was about a mile astern when we struck. Although he must have seen the accident, he seemed to take no notice, as he afterwards alleged, fancying we had shortened sail, although we were neither lying to the wind nor current, and evidently had not deliberately shortened sail. On he came, his crew on the forecastle apparently wondering why we had stopped, until crash he also went, about fifty yards from where we were. The two skippers soon got together, consulted about the scrape, d——d everything but their own incapacity and ignorance, and, without even trying to get the vessels off with their own crews, at once started for the little town of Dragoe, where they agreed with a person to take the vessels off and place them in the proper channel for £100 each. They soon came on board, followed by a galliot and a number of people, who commenced putting our deck load into the galliot, while some of them took our starboard bower anchor into a shore boat, and laid it out astern, with the stream hawser fast to it. The deck load once removed, the hawser was brought to the capstan, and the brig hove off, afterwards warped into the fair way, where we were anchored safely, the deck load replaced, and our skipper once more in the position his ignorance made him depart from, minus £100; which, and the expense of docking the vessel on her return, *was no doubt paid by the underwriters, that body of men who, to encourage their own trade, wink at such proceedings, and oppose themselves to all improvement.*

Shortly after we were fairly anchored, and the salvors departed with an order on the agent at Elsinore for their money, the skipper sent for me. He told me that he had seen I could keep sober, that, therefore, he intended intrusting me to make some purchases for him in Elsinore next day; that for that purpose I was to accompany him on shore. At the

same time I received a list of the articles required, and would get the money at the agent's office when we went ashore. This appeared to me an extraordinary proceeding. However, I kept my own counsel, resolved to watch proceedings, as I could scarcely divine why I was chosen for such an office, which he himself ought to have performed. Next day we reached Elsinore early, and came to an anchor. The boat being lowered, two boys and myself accompanying the master, we called alongside the brig which had been ashore beside us, and the master of her also accompanied us on shore. The two boys and the boat were left at the landing place while I went to the office with the skipper, got the money, and started off to make the purchases, an interesting occupation, leading me through the various stores, and giving me a good view of the pretty little town of Elsinore. After some hours I returned to the boat, where I waited during the day; at dusk the skipper came down, evidently intoxicated, and said he would not go on board to-night, but that we should return for him in the morning. As a few hours were amply sufficient to do all the business of the vessel, it was evident to me that he had made up his mind to have a spree, as it is called, as some consolation after his misfortune, and for that reason had asked me to buy the articles required. Arrived on board I compared notes with the carpenter, who informed me that the crew were all drunk, having obtained grog from a bum-boat, to whom they had given clothes in exchange. As may be supposed, no watch was kept, the vessel was left to chance, as she had been during her passage down the Baltic, the mate invariably going to sleep whenever he came on deck, and remaining so during his watch.

In the morning I again went ashore to bring the master on board. We remained waiting until about 10 A.M., when we observed our brig under-way, and standing right in towards the entrance of the harbour. She was already close in, and a few minutes longer on the same course would have fixed her on shore, when she was put about, evidently in a confused manner, and stood out into the roadstead. On asking the carpenter who was on board, he told me, that after getting up, breakfasting, and smoking their pipes, a shore boat came alongside, from which the crew obtained a quantity of gin in exchange for clothes, the mate setting the example, parting with the only good clothes which they had to go on shore with on their arrival in England. The effects of the gin on the mate and the crew soon became evident; the former ordered the brig to be got under way, which, after much confusion and noise, was accomplished, the anchor being the heaviest part of the work; in weighing which, they were assisted by a patent windlass, and without which, indeed, it could not have been accomplished. Once under canvas, the mate declared he would take her close in to meet the master, and was recklessly running the vessel on shore, when the carpenter (having tried remonstrance in vain), seized the wheel from the drunken mate, and, putting the helm down, brought the brig round, and saved her from farther disaster. The approach of the brig had either been reported to the master, or he had accidentally seen it, as he soon afterwards came down to the boat, evidently not sober. We went on board, hoisted in the boat, and proceeded downwards on our passage, amidst a war of words between the

master and mate. Language was exchanged which I should be sorry to repeat, and both proved themselves equally expert and accustomed to the use of a style of expression which is best understood by the term *Billingsgate*. Some slight degree of prudence—I had almost called it common sense—on the part of the master, prevailed. He ordered the helm to be put up, and we returned to Elsinore roads, where we remained at anchor until the following morning, to permit all the intoxicated to become sober.

Every thing in the management of the vessel at sea was differently conducted to any thing I had yet seen in my short nautical career. No attention was paid to the steering, the binnacle lamp was either out, or in such a neglected state the principal part of the night, as to prevent the compass being seen. Whoever was on deck, supposed to be in charge of the watch, invariably went to sleep, and only awoke when the half-awake man at the wheel fancied his two hours had expired, and made a noise to discover what time it was. The ascertaining the time from the master's watch, which hung up in the cabin, was an amusing process; the drawer of the cabin table was first searched for the tinder box and matches; sometimes it could not be found, then a farther delay would arise from bad matches, or an indifferent flint, or damp tinder; the hour once ascertained, the light was put out, and, if it happened to be one of the boys, he would, if he perceived the master sound asleep, creep towards his state-room, and abstract a handful of cabin biscuits from a bag which he kept for his own especial use, and which he considered safe under his bed. We had no royals, and only topmast, and lower and main-top-gallant studding sails. Whenever the topsails were reefed, the first thing to be done was to send the top-gallant studding sail booms off the top-sail yard, and put them in the topmast rigging; this always proved a tedious job, and, oftener than once, I have seen the master irritated at the delay, go aloft, with a gasket, and belabour some of the unfortunate boys who happened to displease him. If he was called at night for any necessary duty, tacking or reefing, he was always in a dreadfully bad humour, and used both oaths and blows very liberally.

We had no rigging on the jib-boom, except a traveller, to which the jib-stay was fast; there were neither foot-ropes, guys, back-ropes, nor martingale stay; a heel rope was, however, constantly kept rove, and whenever the jib was taken in, the boom was invariably eased in, and the jib stowed on the stay-sail netting. I feel confident the reckoning kept by the master was mere guess work. I suppose he could in a very ordinary way get a meridian altitude, and compute the latitude within a few miles. The mate knew nothing about it, for I discovered on one of the few days on which he brought his quadrant on deck, that he could not read off the number of degrees and minutes, even supposing the observation to have been correctly taken. We groped our way into the North Sea, with the assistance of other vessels, and seeing the land occasionally, a fair wind in a few days carried us onwards until the master deemed it time to stop. He gave us to understand we had been steering for the North Foreland, but as no land or other object made its appearance, he resolved to lay to. In this state we remained two nights and a day; on

the morning of the second day, we saw a fishing smack, to whom we made signals of a wish to communicate; the master of her came on board, and our skipper invited him down to the cabin, where the fisherman soon communicated our whereabouts. Instead of the North Foreland, we were close to the Yorkshire coast, and soon after saw the Dudgeon light-vessel. So soon as the well known object came in view, our skipper's face was redolent with smiles, "Richard was himself again." All his doubt and hesitation vanished, the word of command was given in a tone confident and decided, he paced the decks on the quarter-deck with a firmer tread, and nothing could well form a stronger contrast to the hesitating, doubtful-looking, skipper, while navigating by reckoning, than the decided, unhesitating, and pushing coaster in his proper vocation.

SAILORS' HOMES.

WE should do injustice to the inhabitants and to the authorities of Liverpool, and be unfaithful to our own sentiments, were we to omit some special notice of the ceremony which has just been performed in that great seat of maritime commerce. It is not the *eclat* of the pageant, alike honourable to the spirit and to the liberality of the leaders of the town, which attracts our applause,—it is the cause which has given origin to the ceremony, that, in our estimation, ennobles the town through future ages. The Shipowners and Merchants of Liverpool have placed themselves on a proud eminence before the nation, in showing how truly they can estimate, and how nobly they can combine to alleviate the degrading neglect of the British sailor. The mercantile classes of Liverpool were not the first to suggest the inappreciable boon to the mercantile marine of Sailors' Homes; but readily appreciating the value of the Institution formed by Capt. Elliott, R.N., in the port of London, they have nobly flung their energies and their wealth into the cause, and have given the first great irresistible impulse to what must henceforth be a triumphant national movement. All honour is due to the perspicacity, to the self-devotion, and to the untiring zeal of Capt. Elliott, in showing how these invaluable institutions should be reared and conducted, and what inestimable advantages could be drawn by a moderate outlay and economical management, from a well-ordered, self-supporting establishment; it redounds to the fame of the prominent men of Liverpool, that they should so truly appreciate, and so enthusiastically adopt the suggestion of so patriotic, so philanthropic, a leader.

The Shipping and Mercantile classes of Liverpool may be said to have placed themselves in the van in this great cause of maritime reform, for they have given the example of combination of their classes, to effect what has now become a necessity in every great trading port. Even London will be driven into the wake of Liverpool; for London can claim no share in the honour of Capt. Elliott's primitive establishment; and the port of London, if it would not sink into the contempt of every judicious friend of the mercantile marine, must have many, many Sailors' Homes. But great bodies proverbially move slowly; and we are quite prepared to see some other of our leading ports catching, before London, the enthusiasm which will arise from the influential example of Liverpool.

We shall now have the long desired and much needed Homes for Sailors in every busy port of the kingdom; and the earliest promoters will win for themselves the largest share of public approbation. We speak of a certain

enthusiasm as being called for in the rearing of Sailors' Homes, but it was only needed on the entrance upon an untried experiment, when nothing was certain but the outlay of money; doubt and pecuniary risk have been swept away by the success of the enthusiastic precursors. To found a Sailors' Home now involves no jeopardy of funds; it may be regarded in the light of a legitimate remunerative joint-stock investment. Judicious economy in outlay and prudential management may always insure a fair interest on the capital expended, as certainly as in any other commercial establishment. It is not asked, by the erection of Sailors' Homes, to confer a charity on mercantile sailors; they will pay for every thing they consume and use; and the founders of these inns will have to give them nothing but security and good treatment.

In the dens the seamen are now driven to frequent, they pay extravagantly for every thing they have; but they cannot purchase what the Sailors' Home will furnish to them gratuitously—security of person and of property, with kind and watchful treatment. The charge made to the sailor will cover the cost of his maintenance, and a reasonable allowance for lodging will pay interest on the outlay for building and furniture, including the cost of management. If these establishments of Sailors' Homes were to require, like hospitals, the constant support of charitable contributions, we should despair of their sufficient extension and of their permanent endurance. There is nothing analogous to an eleemosynary institution in a Sailor's Home; nor will there be anything gratuitously bestowed upon the inmate but safety and care. But, on the contrary, it must be borne in mind by both contributors of funds and by managers, that, though remunerative, these investments are not to be made profitable; they are to return on the capital laid out nothing more than the current interest of money. In this forbearance will lie the patriotism and the philanthropy of the founders and supporters of Sailors' Homes.

We applaud, in a single instance, the magnificent display recently made by the wealthy port of Liverpool on the occasion of founding a Sailors' Home; but we do not cite it as an example to be followed. That occasion called for some extraordinary demonstration to give an *eclat* to a new work to be embraced by the maritime community throughout the kingdom; and no place so able and so apt to make a striking *debut* in the glorious enterprise, as the great and opulent town of Liverpool. But the show of Liverpool on this first public foundation must not be imitated by minor, or even by larger, ports in carrying out the important work which is now recognised as necessary, and demonstrated to be practicable without donation or pecuniary sacrifice. To meet the wants of the mercantile marine, these secure and orderly houses for the boarding and lodging of sailors on shore must be established in every great trading port; but to make them efficiently subservient to their object, rigid economy must preside over the construction and management of every Sailors' Home. The buildings must ensure convenience, comfort, and security to the inmates, which can be effected apart from all attempts at show and ornament; and it must be borne in mind by the promoters that all needless expenditure will throw an unnecessary burden on the sailor. The primary aim in all these establishments must be to furnish to the seamen, good treatment and sufficient accommodation, so cheaply as to leave no ground for the orderly and well-conducted man to make his temporary abode in preference among the thievish and dissolute denizens of private lodging-houses. They who undertake the superintendence of Sailors' Homes must set out with the determination to make the houses under their guidance, in every respect more advantageous and more attractive to the sailor, than the disorderly dens to which he has hitherto been compelled to resort. Men of respectability in the several ports must take upon themselves the sanction and supervision of these public lodging-houses; to guard against abuse, and to maintain economy and order. And

well will the time they devote to this beneficent office be repaid; for they will see growing under their care an improved order of seamen.

We can conceive no course of action, either legislative or spontaneous, from which such mighty benefits to this commercial nation may be made to flow, as from the universal establishment and judicious management of Sailors' Homes; they are to be made the instruments, if wisely administered, of a regeneration of character of the British seaman; they will imbue him with feelings of self-respect; they may be made conducive to his professional advancement; they will save him from moral contamination; and, by estranging him from the allurements of dissipation and vice, they will preserve him longer an efficient member of his calling. By the encouragement which these establishments, in connection with Savings' Banks, will hold out to engender habits of economy and prudence, the sailor may be taught to provide from his own resources against the pressure of casualties and of infirmity. That these happy results on a large scale may be wrought out from a judicious conduct of this great modern institution of Sailors' Homes, we have not the smallest doubt. They will produce no sudden change—their good fruits will mature slowly; they will scarcely reclaim the already corrupt and vitiated; but their constant tendency will be to circumscribe the sources of contamination, and to preserve in his integrity and usefulness the fine manly British seaman.

We say to the leading men of every sea port, lose no time in following the noble example of Liverpool in founding Sailors' Homes; keeping always in mind, that the modesty of your establishments, seconded by good management, will go very far to secure their lasting utility.

[We so entirely agree with the foregoing views of the *Shipping Gazette*, and we have so frequently laid down the same doctrine in years gone by, that we readily transfer it to our own pages, in the hopes, that now so excellent a beginning has been made by Liverpool, the example will be followed in all parts of this country where ships and seamen are to be found.—Ed. N.M.]

On Friday, the 31st July, the foundation stone of a Sailor's Home was laid at Liverpool by His Royal Highness Prince Albert.

The institution will be called the "Liverpool Sailors' Home, Registry, and Savings' Bank," and its general object is to provide "Jack" a safeguard against the many evils and corrupting influences to which his kind heart, inexperienced and joyous nature, expose him when temporarily on shore. Its establishment was first suggested at a public meeting at Liverpool in 1841, and by 1844 all the plans had been matured and site obtained. At a public meeting held in that year, and attended by the first men in Liverpool, the whole arrangements were made. The objects of the institution are thus explained by the founders:—

"The immediate objects of the institution shall be to provide for the seamen frequenting the port of Liverpool, board, lodging, and medical attendance, at a moderate charge; to protect them from imposition and extortion, and encourage them to husband their hard-earned wages; to promote their moral, intellectual, and professional improvement; and to afford them the opportunity of receiving religious instruction. A reading-room, library, and savings' bank shall be attached to the institution, and, with the view of securing to the able and well-conducted seaman a rate of wages proportionate to his merits, a registry of character shall be kept. Among the ulterior objects in contemplation are schools, for sea apprentices, and the sons of seamen,

with special regard to the case of children who have lost one or both their parents."

In a very short time the patronage of Her Majesty was obtained, and donations were made to the institution to the amount of £15,000. The annual subscriptions soon reached £300. Temporary premises were opened in Bath Street, and, by the end of 1845, no fewer than 3,332 sailors had registered themselves—a convincing proof that such an institution was necessary. The building itself, if it at all resembles the plan we have seen, will be one of the most elegant in the country. It is in the Elizabethan style, and admirably adapted, both within and without, to the objects for which it will be erected.

THE MERCHANT NAVIES OF FRANCE AND ENGLAND.

At the moment when the principal Chambers of Commerce of the kingdom are forming an association which proposes to itself "the extension of navigation by the development of the maritime relations of the ports," it is not uninteresting to sum up, in a few words, the situation of our merchant navy in comparison with that of Great Britain. We shall borrow the statistics which establish on one side the superiority of the English navy, and on the other the inferiority of the French, from the official comments published by the Governments of the two countries, and recently republished in a pamphlet entitled *Progress of the Commercial Navigation of England*.

It follows, from these documents, that in the year 1820, the effective of the English merchant navy amounted to 25,374 vessels, measuring 2,648,593 tons, and in 1844 to 31,320 vessels, measuring 3,637,231 tons.

Has there been an analagous progress in France? Very far from it! Instead of an increase, as in England, there is a deplorable decrease, at least the following figures prove as much. Thus, in 1827, the effective of our merchant navy was 14,322 vessels, measuring 692,125 tons, and in 1844, 13,679 vessels, measuring 634,637 tons. We ought to add, that out of this number of 13,679 vessels, 8,900 measured less than 30 tons (!), 2,852 measure from 99 to 300 tons, and 219 from 300 to 600 tons. There are, definitively, only 652 vessels capable of navigation on a large scale, and amongst all these ships there is not one measuring 700 tons, whilst England every day despatches vessels of 1,290 tons burden and upwards. This superiority of the English navy is no less evidently disclosed in the coasting navigation. Thus, in 1841, the French coasting trade conveyed, exclusive of the coasting fishery, 2,424, 246 tons of merchandise, a traffic which employed 79,483 loaded vessels; or, to speak more exactly, which occasioned an equal number of passages from one port of the kingdom to another. If to this number we add that of passages on the coast, which amounted to 31,768 vessels, representing a tonnage of nearly 705,000, there is found, as the entire movement in the coasting trade in 1841, a general total of 111,251 vessels and 3,128,802, tons, worked by a naval *personnel*, which, always taking account of the passages repeated by the same vessels, represents the service of crews amounting in number to 434,896 men. At the same period, that is to say, in 1841, the coasting trade of Great Britain was nearly five times more considerable than ours; it amounted, for one of the two movements alone—coming and going—to 11,318,000 tons, and the passages, which had been 275,000, had employed more than 800,000 men as crews; and at least an equal number are employed either in loading, or in the preservation of the merchandise.

This state of things has not changed since 1841, at all events, not to our advantage. The French coasting trade has remained nearly stationary, while that of Great Britain has increased. It is true that the majority of the trans-

ports effected by our coasters present, from one year to another, very few variations. We allude to woods, materials, salt, wines, and brandies, grain and meal, coal, iron and manure, which forms in weight three-fourths of the cargoes of our coasting vessels.

As to the steam navy, the *ensemble* of the movement of our navigation (entrances and departures together) amounts on the average to 6,545 boats (or voyages), with cargoes, giving a total of 750,000 tons, whilst in England the effective of the steamers employed in the transport of merchandise is 13 or 14 times higher than in France.

The coasting fishery shows, on its side, the same inferiority with regard to England. The official tables give, on an average, 6,431 boats, navigated by 27,286 men, but, on deducting the unable ones, only 22,000 men can be reckoned, whilst on the English coasts the population engaged in the small fisheries amounts to more than 150,000 individuals. It is true that the English coasts are more extensive than our own; but in an equal space, they do not the less offer double the number of fishermen. It is true that our great fisheries offer more resources, but that branch of navigation is very far from being ameliorated; and, for the last seven years, it presents a reduction of about one-fourth.

These various statistical facts afford a material proof of the inferiority of our merchant navy. The inferiority of our "military" (war) navy is an indisputable fact. Thus, therefore, in every respect, our navigation is incapable of entering into competition with the English.

It appertains to the Chambers of Commerce to seek out the most proper means of raising the state of our navy. We do not doubt the success of their efforts, convinced as we are, not only of the goodness of their cause, but of that want of reform which makes itself felt on all sides, and which will, we hope, lend a fresh impulse to the Conservative policy.—*La Presse*.

EXAMINATION OF MASTERS AND MATES OF THE MERCHANT SERVICE.

Continued from p. 362.

We were not enabled to include in our last number the accompanying list of 13 masters and 6 mates who have obtained certificates of qualification, under the regulations of the Board of Trade, for encouraging the voluntary system, from not having received it in time for publication.

It gives, however, the names of those individuals who have been examined up to nearly the end of the month of June, and we understand that no further list has since been issued.

The Committee for managing the affairs of Lloyd's Register of British and Foreign Shipping, acting with a laudable desire to promote this object as much as possible, have inserted in the appendix to the Register Book, issued on the 1st July, this year, a complete list of all the masters and mates who had been previously examined and obtained certificates of qualification, thus bringing into one view all those parties whose names we have, from time to time, placed before our readers. The aggregate number of masters, (exclusive of those now named), who have been qualified, appear to be 75, and of mates only 22. What number may have presented themselves for examination, we have not the means of knowing. We have not either heard

whether any of these qualified officers have, as yet, received the benefit of any appointment as the reward for their boldly submitting to the ordeal of this new state of things.

We still view the subject as one of paramount importance, and we trust that, by keeping it alive, and thus drawing the attention to it of all classes engaged in the advancement of our mercantile marine, we shall have the satisfaction of seeing our humble efforts, sooner or later, crowned by the success of the plan.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Number of Register Ticket. | Name of Examining Board. |
|---------|---|-----------------------|------|-----------------------------------|----------------------------|--------------------------|
| 1846. | | | | | | |
| April 9 | Wm. Harrison | 2 | 25 | Stamfordham, 236 tns | ... | Ma Bd. S. Shields |
| " 29 | Samuel Peckh | 2 | 35 | Juvena, 311 tons (as mate.) | 21485 | Tr. Ho. London |
| " 29 | W. Davy Gray | 2 | 24 | Orator, 325 tons (as mate.) | 15445 | Tr. Ho. London |
| May 8 | Fran. Stewart | 2 | 26 | Arun, 309 tons (as mate.) | ... | Tr. Ho. London |
| " 16 | Thos. C. Beach | 2 | 32 | Graham, 402 tons | 324155 | Tr. Ho. London |
| " 18 | Wm. Bowery | 2 | 26 | Elizabeth, 231 tons | ... | Ma. Bd. S. Shields |
| " 19 | Chas. S. Fergus | 1 | " | ..... | ... | Pilot Bd. Glasgow |
| " 26 | A Robertson | 2 | 46 | Hydrabad, 694 tons | ... | Tr. Ho. London |
| June 9 | Rd. Wilson, jr. | 2 | " | Blackett and Ridley 213 tons | ... | Ma. Bd. S. Shields |
| " 8 | J. W. Johnson | 2 | 28 | Corsair, 250 tons (as mate.) | 329004 | Tr. Ho. London |
| " 8 | Francis Telfer | 2 | 27 | Satellite, 300 tons | ... | Tr. Ho. London |
| " 15 | G. D. Harris | 2 | 67 | Vanguard, 346 tons (as mate.) | 6959 | Tr. Ho. London |
| " 17 | W. S. Johnson | 2 | 29 | Woolsington, 287 tns | ... | Tr. Ho. London |

MATES.

| | | | | | | |
|----------|-----------------|---|-----|--|--------|---------------------|
| 1846. | | | | | | |
| April 21 | Edward Moyes | 2 | 23 | Racer, 59 tons | 72541 | Tr. Ho. Ply. Branch |
| " 27 | R. L. Cleveland | 1 | 22 | Orlando, 344 tons (as second mate.) | 17506 | Tr. Ho. Pts. Branch |
| May 4 | David Hean | 2 | 23 | Elgin | 235543 | Tr. Ho. Dundee |
| June 1 | R. Stephenson | 2 | 36 | Graham, 402 tons | 327400 | Tr. Ho. London |
| " 11 | J. W. Roy | 2 | ... | Duke of Bronte, 424 tons | 343620 | Tr. Ho. London |
| " 18 | A. H. Acheson | 2 | 21 | Blenheim, 700 tons (as ordinary seaman) | 238051 | Tr. Ho. Pts. Branch |

Board of Trade, June 24, 1846.

ISTHMUS OF PANAMA.—The French government is busily at work on the canal, and the report of the engineer has been received, which is interesting and valuable. Most decidedly it declares for the practicability of the scheme. It recommends that one end of the canal shall be at Vaca de Monte, some few miles to the west of Panama, by the valley of the Rio Chagres.

The depth to be about seven yards, the width at the bottom about twenty yards, and at the top forty-five. The total length of the canal would be about seventy-six and a half kilometres, the expense 125,000,000 francs, or thereabouts. An immense tunnel would be necessary.

The advantage of cutting through this neck of land would be incalculable; and as its cost would be less than many a railway, it is to be hoped that either England or France, or the United States, or the three together, will before long, confer that advantage to the world. The best plan would be to receive proposals for nations engaged in commerce to participate in that great work, which might be undertaken jointly, and a *pro rata* of the cost divided equally among all the powers desirous of using it. All the republics of North and South America, Russia, Belgium, Holland, and other countries would use the canal; and the twenty-four millions of dollars required for its completion could be so divided by a board of commissioners as to make the share of each very light.—*Honduras Observer*.

PASSAGES OF CLIPPERS FROM CHINA TO BOMBAY IN 1845.

| From China. | Vessels. | At Bombay. | Days. |
|-----------------|-------------------|----------------|-------|
| 12th January, | Black Dog, | 21st February, | 40 |
| 26th do. | Island Queen, | 13th March, | 46 |
| 18th February, | Zoe, | 14th April, | 45 |
| 6th March, | Anonyma, | 22nd do. | 47 |
| 19th do. | Antelope, | 5th May, | 47 |
| 30th do. | Sidney, | 6th June, | 37 |
| 23rd April, | Denia, | 12th do. | 49 |
| 4th May, | Mor, | 1st July, | 57 |
| 22nd do. | Anna Eliza, | 20th do. | 59 |
| 12th June, | Sir H. Compton, | 11th August, | 60 |
| 13th do. | Kelpie, | 4th do. | 52 |
| 27th do. | Frolic, | 17th do. | 51 |
| 9th July | Lanrick | 3rd September, | 55 |
| 15th do. | Ardaseer, | 23rd do. | 70 |
| 15th do. | City of Shiraz, | Lost, | ... |
| 14th August, | Island Queen, | 25th November, | 103 |
| 30th do. | Anonyma, | 5th do. | 67 |
| 27th September, | Gem, | 25th do. | 59 |
| 28th do. | Denia, | 28th do. | 61 |
| 5th October, | Antelope, | 29th do. | 55 |
| 12th do. | Will o' the Wisp, | 7th December, | 56 |
| 29th do. | Morr, | 6th do. | 38 |
| 6th November, | Sidney, | 18th do. | 42 |
| 17th do. | Frolic, | 22nd do. | 35 |
| 6th December, | Anna Eliza, | 16th January, | 41 |
| 10th do. | Sir H. Compton, | 16th do. | 37 |

PASSAGES OF CLIPPERS FROM BOMBAY TO CHINA IN 1845.

| From Bombay. | Vessels. | At China. | Days. |
|-----------------|-----------------|-----------------|-------|
| 4th January, | Antelope, | 9th March. | 64 |
| 6th February, | Anna Eliza, | 19th April. | 72 |
| 16th do. | Mor, | 21st do. | 64 |
| 5th March, | Corevra, | 14th May. | 71 |
| 17th do. | Sir H. Compton, | 12th do. | 56 |
| 10th April, | Island Queen, | 28th do. | 49 |
| 6th May, | City of Shiraz, | 9th June. | 34 |
| 8th do. | Frolic, | 13th do. | 36 |
| 13th do. | Anonyma, | 20th do. | 38 |
| 17th do. | Black Dog, | 26th do. | 40 |
| 18th do. | Ardaseer, | 26th do. | 39 |
| 28th June. | Denia, | 29th July. | 31 |
| 18th July, | Sidney, | 6th September. | 50 |
| 27th do. | Antelope, | 1st do. | 36 |
| 7th August, | Mor, | 6th do. | 30 |
| 11th September, | Anna Eliza, | 29th October, | 48 |
| 13th do. | Frolic, | 27th do. | 44 |
| 16th do. | Sir H. Compton, | 7th November, | 52 |
| 20th do. | Lanrick, | 24th October, | 34 |
| 11th October, | Zoe, | 18th February.* | ... |
| 17th November, | Pantaloan, | 22nd do. | ... |
| 30th do. | Anonyma, | 11th do. † | 73 |
| 7th December, | Island Queen, | 6th March. ‡ | 89 |
| 7th do | Ardaseer, | 3rd February. | 58 |
| 22nd do. | Mor, | 24th do. | 64 |

PASSAGES OF THE PENINSULAR AND ORIENTAL COMPANY'S STEAMERS.

| Steamers. From Galle to Hongkong. | Galle. | Penang. | Penang. | Singapore. | Singapore. | Hongkong | Days. |
|---|-----------|------------|------------|------------|------------|-----------|-------|
| | Departure | Arrivals. | Departure | Arrivals. | Departure | Arrivals. | |
| Lady Mary Wood | July 27 | Aug. 2 | Aug. 2 | Aug. 4 | Aug. 6 | Aug. 13 | 17 |
| Braganza | Aug. 27 | Sept. 3 | Sept. 3 | Sept. 5 | Sept. 7 | Sept. 14 | 18 |
| Lady Mary Wood | Sept. 27 | Oct. 4 | Oct. 4 | Oct. 6 | Oct. 8 | Oct. 16 | 18 |
| Braganza | Oct. 30 | Nov. 5 | Nov. 5 | Nov. 7 | Nov. 9 | Nov. 18 | 20 |
| Lady Mary Wood | Nov. 30 | Dec. 7 | Dec. 7 | Dec. 9 | Dec. 11 | Dec. 23 | 23 |
| Braganza | Dec. 30 | Jan. 7 | Jan. 7 | Jan. 9 | Jan. 11 | Jan. 20 | 21 |
| From Hongkong to Galle. | Hongkong | Singapore. | Singapore. | Penang. | Penang. | Galle. | Days. |
| | Departure | Arrivals. | Departure | Arrivals. | Departure | Arrivals | |
| Lady Mary Wood | Sept. 1 | Sept. 8 | Sept. 10 | Sept. 12 | Sept. 12 | Sept. 19 | 19 |
| Braganza | Oct. 1 | Oct. 8 | Oct. 10 | Oct. 12 | Oct. 12 | Oct. 19 | 19 |
| Lady Mary Wood | Nov. 1 | Nov. 7 | Nov. 9 | Nov. 11 | Nov. 11 | Nov. 17 | 17 |
| Braganza | Dec. 1 | Dec. 8 | Dec. 10 | Dec. 12 | Dec. 12 | Dec. 19 | 19 |
| Lady Mary Wood | Jan. 1 | Jan. 8 | Jan. 10 | Jan. 12 | Jan. 12 | Jan. 18 | 17 |
| Braganza | Feb. 1 | Feb. 8 | Feb. 10 | Feb. 12 | Feb. 12 | Feb. 18 | 17 |

* From Manila. † At Woosung. ‡ At Woosung.

DRIFTING WRECKS.

| Wrecks. | When seen. | Lat.N. | Long.W. | Vessel seen by. | Where for or arrived |
|-----------------|------------|--------|---------|------------------|----------------------|
| 1 Dion, brig | May 22 | 30° | 74° | Clara | New Orleans |
| 2 Unknown | Jan. 17 | 57 | 17 | Arvum | New York |
| 3 ——— ley | June 24 | 47 | 14 | Ethelred | Downs |
| 4 Micuela | June 21 | 30 | 75 | Corinth | Cowes |
| 5 Ship | June 21 | 48 | 18 | Rankin | Liverpool |
| 6 Unknown | June 4 | 43 | 59 | Margaret | St. John's, N.B. |
| 7 El. Atkinson | May 7 | 46 | 66 | Heart of Oak | Pr. Ed. Island |
| 8 Abbey Francis | June 19 | 41 | 40 | Grace | Liverpool |
| 9 Catherine | June 23 | 47.4 | 14.7 | Marcellus | Margate |
| 10 Ship | May 30 | 37 | 73 | Lady of the Lake | Glasgow |
| 11 Unknown | July 9 | 47.1 | 8 | Eliza | Falnmouth |
| 12 Barque | | 38 | 69 | Rapid | Yarmouth |
| 13 Alexander | May 18 | 46.5 | 16 | Abandoned | |
| 14 Agenoria | July 25 | 59 | 11 | Numa | St. Petersburg |
| 15 Low brig | July 26 | 32 | 69 | Phœnix | New London |

Particulars.—1. Dion, a Spanish brig from Havana for Majorca, run foul of by Clara.

2. Ship, about 500 tons, coppered, bottom up.

3. The last words of her name only left "of Halifax," former washed out; painted ports, flush deck, main and mizen masts gone; about a month waterlogged; master of Ethelred, Mr. Bradford.

4. An American, of Portland, water-logged and dismasted.

5. About 500 tons; hull only left; her timbers about two feet above water.

6. About 200 tons; painted ports, counter painted blue, copper bottom, apparently New Brunswick build.

7. Waterlogged and abandoned.

8. Laden with sugar in cases; masts gone, 10 feet water in the hold; vessel of Providence.

9. Catherine of Halifax; waterlogged, fore and main masts standing, mizen mast gone by deck.

10. About 8 tons; waterlogged and abandoned, with poop and top-gallant forecastle; the three masts gone about eight feet above deck, painted ports; master of Lady of the Lake, Fitz Morris.

11. A vessel about 700 tons, made out "Halifax" on her stern, with a "C" preceding the word thereon; fore-mast and bowsprit were standing. This account corresponds with No. 3 so closely, that we may safely consider the two as relating to the same vessel, the two positions shewing her to have drifted 250 miles on a course about east in the interval of 15 days, or about 16 miles per day, and this in the very thickest part of our bottle track, all going after each other direct to the coast of France across the bay. This wreck, by the way, shews the drift to extend some feet below the surface.

12. Masts and bulwarks gone, bowsprit standing; "Quebec" on her stern.

13. Of Yarmouth; masts cut away; crew saved by Royal William, and landed at Quebec.

15. Long low decked brig, dismasted, full of water, decks washed away, coppered, two narrow white streaks; not very old.

CURRENTS OF THE OCEAN.—Another remarkable instance of the well-known tendency of the waters of the Atlantic to drift to the eastward has been illustrated by the following. On the 6th of July last, a jib-boom belonging to H.M.S. *Vindictive*, (the name being by dockyard custom carved on it,) was picked up by Edward Collins off the Horse Rock, Courtmasherry Bay, near Kinsale, Ireland. Being reported to the Admiralty, Admiral Austen whose flag is flying in the *Vindictive*, on the north American station, was applied to by letter from their Lordship's secretary "to know whether a jib-boom belonging to H.M.S. *Vindictive* had been lost since his flag was hoisted on board." The reply dated, 2nd August following, stated, that during a gale of wind on the 11th of November, 1845, one was washed out of the chains in lat. 38° 29' N., long. 60° 40' W. St. Davids Head, Bermuda, bearing S. 27° W., 414 miles. It has thus taken the course nearly of No. 97 on the chart in our volume for 1843, having gone a little to the southward of it.

THE LIGHTHOUSE SYSTEM ILLUSTRATED.

A return, in connection with Lighthouses, for the year 1844, has been made to the House of Commons. We have no room for lengthy extracts—but there are three items which appear to us to throw a "shining light" on the shameful principle of taxation which is resorted to; and those items are as follows:—

| Lights. | Revenue. | Maintenance. | Surplus. |
|----------------------------|--------------------|------------------|--------------------|
| Tynemouth (one lighthouse) | £4293 19 7 | £919 0 3 | £3,374 19 4 |
| Spurn (two lighthouses) | 12,268 0 2 | 1,419 5 3 | 10,848 14 11 |
| Skerries (one lighthouse) | 17,749 18 0 | 3,343 16 1 | 14,406 1 11 |
| Total, | 34,311 17 9 | 5,682 1 7 | 28,629 16 2 |

Surely, to permit a tax to be levied on shipping, or on merchandise indirectly through shipping—to the extent of £34,311, when it appears that the amount absolutely required has been only £5,682, is one of the most monstrous evidences of legislative consideration for the interests of the British marine that the genius of wrongheadedness, either in this or any other age or country, could by possibility have exhibited.

H.M.S. SHEARWATER.—*Extract of a letter dated Largs, July 16, 1846.*—On the 28th May, Mr. Michael Duncan, late Mate of this vessel, started about 2 P.M., in a sailing boat, from Largs to Rothsay, (not a ship's boat,) with a seaman, named Charles Wells, and the evening being squally, we concluded they had wisely determined on not attempting to return at night. Finding they were not visible in the morning of the 29th I communicated at Rothsay, and learnt they had made a start at 10 P.M.; and no doubt on opening out (Bagany Point) the eastern point of Rothsay Bay, they soon found the sea too much for them, and being ballasted with shingle, no doubt also the boat sunk, for neither they nor boat have been heard of since. Mr. Duncan was a very fine smart young officer, about twenty-five years of age, one of the

senior mates of the Navy, and brother to the poor fellow that lost the Solway, West India Mail Steamer. Being anxious to return to his leave was, most likely, what prompted his attempt to cross the Firth in such a night. The poor fellow is lamented by us all; he has left a poor widowed mother, (widow of an old commander) in very sad affliction for his loss.

EDUCATION OF APPRENTICES.

Copy of a Circular Letter to the Superintendents of the several Dockyards.

Admiralty, June 27, 1846.

MY LORDS, being of opinion, with a view to the promotion of greater emulation among the apprentices educated in the dockyard schools, that a general system of reward and punishment should be established in them, are pleased to direct:—

1. That the Inspector of the Greenwich Schools be requested to undertake the duty of making an annual tour of inspection of the dockyard schools, for purpose of examining into, and reporting on their condition; and that, at such annual examination, a certain number of prizes, to be hereafter determined by their Lordships, on the recommendation of the Inspector, be distributed among such apprentices as may appear to him and to the school committee to be the most deserving of such rewards.

2. That in cases of grave misconduct, or of repeated neglect and disobedience, the Admirals and Captains-Superintendent of the several yards, on the recommendation of the school committee, be authorized (in addition to such minor punishment as they may deem it necessary to resort to), to mulct any apprentice, who may be guilty of such misconduct, of time and pay for any period not exceeding one month, or to order such apprentice to work extra hours without extra pay; but in all cases of such extraordinary punishment, a special report is to be made to their Lordships, specifying the nature of the offence, and the degree of punishment inflicted; and, if, notwithstanding such punishment, any apprentice should prove incorrigible, and by his bad example endanger the order and discipline of the school, the Superintendent is to make a report accordingly to their Lordships, who will decide whether it may not be for the general good that such apprentice should be discharged from the service.

3 My Lords are also of opinion that it is essential to the good of the service, that a certain limited number of such apprentices as may display extraordinary ability, should receive a more scientific education than that which they can obtain in the ordinary dockyard schools, and they therefore direct that the Inspector of the dockyard schools shall, at his annual examination, select a certain number of such of the apprentices as shall have completed the fourth year of their servitude, for such superior instruction during the three remaining years of their servitude, in the following proportion for each yard:—

| | | | | | |
|-----------------------|---|---|---|-------|-------------|
| Portsmouth, | . | . | . | 2 | every year. |
| Devonport | . | . | . | 2 | " |
| Chatham | . | . | . | 1 | " |
| Sheerness | . | . | . | 1 | " |
| Pembroke | . | . | . | 1 | " |
| Woolwich and Deptford | . | . | . | 1 | " |
| | | | | <hr/> | |
| Total | | | | 8 | |

4. That the selection is to be made with reference to comparative talent and proficiency, coupled with good conduct, of which a certificate from the superior shipwright officers and schoolmaster must be produced; and that, in order to obtain greater security that the most deserving of the candidates shall be selected, the Inspector shall, after the general examination, set apart for re-examination of such of the apprentices qualified for selection (that is, who shall have completed the fourth year of servitude), as may appear to him to have displayed superior ability and proficiency; and that, on the result of this re-examination, which is to be held in the presence of the school committee, the final selection is to depend; but that no apprentice is to be so selected until he shall pass, to the satisfaction of the Inspector, an examination in arithmetic, in the three first books of Euclid, and in algebra to quadratic equations; and a discretion is nevertheless to be exercised by the Inspector as to the qualification of the candidate for selection, notwithstanding that he be the best of the school.

5. That in the case of Woolwich and Deptford yards, from which combined, one apprentice only is to be annually selected; the general annual examinations of the two schools are to be held separately, but that the apprentices chosen for re-examination, for the purpose of selection, are to be examined together in the presence of the school committees of the two yards.

6. That if in any school none of the apprentices should, in the opinion of the Inspector, be qualified for selection, the next best qualified unselected apprentice is to be selected from some other yard; and that, with a view to this contingency, the Inspector is to note the names of the candidates best qualified after those on whom the selection may have fallen.

7. That the apprentices so selected from the several yards (unless their parents or guardians should object, in which case the next best qualified apprentice is to be chosen) are to be removed to a separate school in Portsmouth yard, to be called the Mathematical School, in which they are to be instructed during the three remaining years of their apprenticeship, by the professor of mathematics, and the mathematical assistant of the Royal Naval College, in the higher principles of pure and mixed mathematics, as applied to practical purposes, and by the superior shipwright officers of the yard in the theory of the science of Naval Architecture; but that they are, notwithstanding, to be employed like the other apprentices of the yard in learning the practical part of their profession, in the actual building and laying off of ships; and the professor of mathematics and the master shipwright, in concurrence with the Inspector, are to draw up and transmit through the Rear-Admiral Superintendent a detailed scheme of instruction and employment, for the consideration of their Lordships.

8. That the professor of mathematics, being a clergymen, or if it should be incompatible with his other duties, the chaplain of the yard, be required to attend to the moral and religious education of the apprentices in the mathematical school, and that the Inspector is to report specially on the state of the school in these respects at his annual examination, as well as with respect to the proficiency of the scholars in scientific attainments.

9. That the apprentices belonging to the mathematical school be required to attend the lectures on chemical and experimental philosophy now given to the officers of the yard.

10. That as the pay of apprentices when removed from their parents or guardians is insufficient to provide for their maintenance, those selected for instruction in the mathematical school are to be victualled at the public expense, under such arrangements as may hereafter be determined, and they are to be lodged within the dockyard, in the building of which a portion is at present appropriated to the dockyard school.

11. That the Rear-Admiral Superintendent be directed to call on the master

shipwright to select from among the unmarried officers, some competent person to have charge of the discipline of the mathematical school, within the limits of which, apartments are to be provided for him, in which he is to reside.

12. That, subject to the above general regulations, the Rear-Admiral Superintendent is to consult with the professor of mathematics of the Royal Naval College, and the master shipwright of the yard, and to submit to their Lordships, for their consideration, the details of such further regulations as may appear to be required for the proper management and discipline of the school.

13. That it is to be distinctly understood that the apprentices to be selected for instruction in the mathematical school are to have no further claim to promotion to the higher grades of their profession than that which, it must be presumed, superior scientific attainments and professional skill will necessarily give them; and it is, therefore, essential that their instruction in the practical operations in ship-building should be as much attended to as its theory and science. And in order that the prospect of promotion to the higher grades may still be open to those apprentices who may not have had the good fortune to be selected for instruction in the mathematical school at Portsmouth, but may subsequently recommend themselves to the favorable opinion of their officers by their good conduct, skill, and professional attainments, my Lords have purposely limited the pupils to be taught in the mathematical school to such a number as, it is estimated, will be sufficient to fill one-half only of the vacancies which occur in such superior grades on the average of years, leaving the remaining half to be filled by selections from among the shipwrights educated in the ordinary schools of the dockyards.

By command of their Lordships,

H. CORRY.

The Board of Naval Construction.—Mr. James Bennet, one of the members of the late School of Naval Architecture, foreman of Portsmouth Dockyard, and master of the School for the Apprentices, has been appointed Secretary to this Board.

THE GREAT EXPERIMENT OF AN AUXILIARY STEAM POWER TO A MAN-OF-WAR FRIGATE.

The *Amphion* steam frigate, built at Woolwich dockyard, and fitted with Mr. Smith's screw-propeller, and engines designed by Count Rosen, and constructed and fitted by Miller and Ravenhill, engineers, Blackwall, proceeded down the river on Thursday, at ten minutes before six o'clock a.m., to try her engines and speed. Some time previous to that early hour Captain Superintendent Houston Stewart, c.b., of Her Majesty's dockyard, Woolwich; Capt. Price, Capt. Halstead; Capt. Thornton, of the Oriental Company; Capt. Schwabe, of the Russian Navy; Com. Smith, Mr. Lloyd, chief engineer of Her Majesty's dockyard, Woolwich; Count Rosen, the inventor, and Messrs. Miller and Ravenhill, manufacturers of the engines, embarked in this fine vessel to witness her capabilities. On leaving her moorings, it was considered advisable to proceed at a moderate rate, and she performed the first four miles in 35 minutes, the engines making 46 revolutions per minute. The *Lightning* steam-vessel, Master-Commander Petley, left Woolwich at the same time for the purpose of shewing the respective speed of both vessels. When opposite Purfleet, Massey's log was thrown overboard, one on the starboard and one on the larboard side of the *Amphion*, and, after remaining an hour in the water, gave a speed of 6.2 knots per hour. The *Lightning* steam-

vessel was then signalled to come up and proceed at full speed, which she did, and a greater quantity of steam being obtained in the *Amphion*, she accomplished 6.7 knots during the next hour, making 2,682 revolutions in that period, or nearly 48 revolutions per minute, working remarkably smoothly and easily, although the engines were, in a manner, tried for the first time; the trial in the basin at Woolwich having merely been made to ascertain if they fitted correctly.

At seven minutes past nine o'clock the *Lightning* hoisted her signal, to denote her number when opposite Sheerness, and at that time the *Amphion* was about the eighth of a mile astern, making excellent progress, and exceeding the most sanguine expectations of the designer of her engines and the constructors, who would not guarantee a greater speed than five knots per hour, owing to the small comparative power of the engines, 300-horse-power to a frigate of 36 guns, built for a sailing vessel, although subsequently adapted for a screw-propeller. The speed was maintained nearly throughout the entire distance of her outward trip to the south-west reach, beyond the lighthouse on the Maplin Sands. At 35 minutes past 12 o'clock the *Amphion* turned round in the short space of five minutes on her progress back to Woolwich, answering her helm with the greatest nicety, and, in the face of a very strong breeze which had set in, made admirable progress. The engines having become smoother, the number of revolutions reached 49, and, in some instances, 50, per minute, without heating in the least degree, and in scarcely any instance have we witnessed more perfectly adjusted or better working engines. The great advantage of Count Rosen's engines are, that they will be upwards of two feet under water, calculating the upper part of the boilers as the highest elevation. The engines are apparently on the locomotive principle, and the action of the pistons horizontal instead of perpendicular, as is almost invariably the case in steam-vessels with paddle-wheels. The diameter of the screw propeller of the *Amphion* is 14 feet. She is the largest vessel yet tried on this principle, and the result has been so satisfactory, as to place it beyond doubt that the screw-propeller will ultimately become universal for war-steamers. The speed to-day cannot be considered a fair criterion of the velocity that may be obtained, as the *Amphion* was only immersed about 16 feet 10 inches, but will, when ready for sea, be nearer 21 feet, and, consequently, give the screw-propeller a far better purchase and greater velocity. The engines are more compact, and occupy much less room than the engines where paddle-boxes are used; and the weight of the screw propeller being only about three tons, is far less than the ponderous wheels requisite for vessels of great magnitude. The *Amphion* passed Gravesend on her return at ten minutes before six o'clock, and shortly after having loosened one of the joints of her feed pipe, the steam was allowed to escape, as it would have taken about an hour to mend it, and she was towed by the *Lightning* to Greenhithe, where she anchored for the night, her depth of draught of water preventing her further progress up the river during the ebb tide. This simple occurrence does not in any way detract from the principle of the machinery and general performance during the day, which gave entire satisfaction, Captain Superintendent Houston Stewart, and the party who went down the river in the *Amphion*, returned at 20 minutes past six o'clock from Greenhithe to Woolwich.

SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.

It is highly gratifying to find gentlemen supporting the claims of this Society, on different parts of the coast. That there are many portions of it

deficient of life-boats is unfortunately too true. Thus we find the Society's agents at Londonderry busy in the good work, and the editor of the *Londonderry Sentinel* at his post, addressing his readers in favor of a memorial in its behalf. He has our best wishes for his success, when he says:—

“There appears elsewhere in our columns a copy of a memorial on behalf of this valuable society, emanating from the officers of the Portrush and Port-stewart Auxiliary. The awful catalogue of casualties at sea, which it has been our painful duty to submit to our readers during the last two or three weeks, supplies abundant evidence of the necessity for such an institution. There are no classes of individuals whose lives are so frequently placed in circumstances of peril, as fishermen and sailors, and many a tragic scene has occurred on our own immediate coast, by which large numbers of helpless persons have been reduced from a state of comparative comfort to wretchedness and destitution. Scarcely a winter passes that numbers of fishermen do not perish off the wild shores of Antrim, Derry, or Donegal, leaving large families unprovided for, and many a gallant bark has been dashed to pieces, its crew losing their lives on this iron-bound coast. Considerations of humanity should, therefore, prompt all who are blessed with the means of doing so, to aid an institution which befriends the widow and orphans of the shipwrecked fisherman and mariner, while these two classes themselves are in an especial manner called upon to support it, as it is their families that become the recipients of its bounty. We have been informed by an officer of the Society that the memorial above referred to is to be transmitted to the several London Companies, which derive a large yearly rental from this county, and to the landed gentry of the district generally; and our philanthropic informant acquaints us that he has already received a very cheering letter from Mr. Green, the agent to the Hon. the Irish Society, assuring him that the memorial shall have his best recommendation, and that he will have great gratification in obtaining from the Society additional means to enable the Auxiliary to carry out its proposed objects. The design of procuring a life-boat for our northern coast is most judicious and praiseworthy. It is more important to save the life of the head of a family than to be possessed of sufficient means to maintain it after his death; and as great numbers of lives were saved by means of life-boats during the late gales, we are persuaded that this project will be regarded as peculiarly valuable.”

SUNDERLAND.—*Blasting of the White Shell Rocks.*—These rocks, which are situated about 500 feet to the eastward of the south pier, have long been a source of great danger to shipping frequenting the port, and the consideration of the damage that would inevitably happen to a vessel striking upon them, has caused many ships that were intended to enter here, to run for other ports on the coast. The channel of the navigation on leaving the north pier takes a south-easterly direction, and ships, on proceeding to sea, when overtaken with a north-easterly gale, had very little chance of escaping the hidden danger of the White Shell rocks. Many vessels have, from running foul of these rocks, been put back and delayed from proceeding on their intended voyage, to the great loss of the owners, from delay, and to the underwriters from the damage sustained, and frequently to the disappointment of the merchant by detention.

To remove these evils, the commissioners who are intrusted with the improvement of this port, have long had their attention directed to the adoption of means for increasing the depth of water on these rocks; and particularly from the additional depth of water now obtained on the bar; this object is rendered more essentially necessary, at least to effect an equal level with

the water at the bar, which could only be done by reducing the rock, and so lessen or remove the danger to vessels which may happen to be driven so as to pass over them.

Taking advantage of the favourable state of the weather and sea, the Commissioners directed T. Meek, Esq., the present talented engineer, to make an examination of the rocks, which was done by means of the diving bell. On surveying their form and nature, he satisfied himself of the practicability of their being blasted with gunpowder, and their most dangerous part removed. The surface was found to consist of ridges of pseudo magnesian limestone, running in an easterly direction.

The highest projecting ridges laid a short distance south of the channel, and at low water spring tides were not more than two feet six inches below the surface of the water. This was considered to be the most dangerous point, and was selected for the commencement of the removal operations. The first blast was fired by Richford's fusee, with a charge of three pounds of gunpowder, by means of which about six tons of rock were loosened and displaced; it was afterwards raised to the surface by means of the diving bell. Two more blasts have since been made, by which this portion of the rock is completely broken up and demolished, and on being levelled, a depth of five feet water at low spring ebb has been obtained.

Another projecting ridge, not so dangerous as the former, has also been lowered and broken up; and it is expected that the fragments will, by the winter gales and consequent strong seas, be carried away to the southward and scattered, so as not to be attended with any danger. The operations are still progressing, and should the weather continue favourable, we hope to have it in our power to congratulate the shipping interest of Sunderland on the great improvement caused to the navigation, so essential to the prosperity of the port, by the lowering of the White Shell Rocks, at least, three feet below their former level.—*Sunderland Herald*.

THE NEW ATLANTIC STEAM LINE.—The keel of the first steamer of this line, destined to run between New York, Cowes, and Bremen, has already been laid in New York. The *Evening Post* of that city says, "The dimensions and the power of the machinery of the steam-ship being built for the Ocean Steam Navigation Company, the keel of which was laid on Tuesday last, are as follows:—

Length of keel, 220 feet; length over all, 220 feet; width of beam, 39 feet; depth of hold, 42 feet 6 inches; depth from the poop deck, 31 feet; tonnage 1,750 tons; power of engines, 1,000 horses; cylinder, 72 inches; stroke, 10 feet. Her cabin and second cabin will be fitted up in the most magnificent, and, at the same time, staunch manner, with ample room for two hundred first-class and one-hundred second-class passengers. She is to be commanded, we understand, by Capt. Hewitt, the present captain of the packet ship *Utica*.—*Liverpool Albion*.

EXPERIMENTS WITH SHOT ON IRON STEAMERS.—Some remarkable results have been produced by the shot practice from the *Excellent* on the *Ruby* iron steamer, ordered by the Admiralty to be experimented upon, in order to test what resistance the iron hull of a ship would offer to shot; and it is expected that the Admiralty will, in consequence, stop the building of iron steamers, and other vessels for the present. The shots which struck the *Ruby* not only penetrated the sides first struck, but, in several instances, passed through the other side, carrying with it whole plates of iron. In action this would risk

the total loss of a vessel, for on heeling over to leeward such a body of water must rush in that she would inevitably sink with all on board. A representation of this important result has been made to the Admiralty, and should further experiments prove that serious risk will be occasioned to iron vessels of war when exposed to the chance of being struck by heavy shot, it is doubtful if the Board will not abolish them as men-of-war.—*Times*.

NAUTICAL NOTICE.

British Consulate, July 24th.

NOTICE to Masters of Ships bound to Brest.—A vessel was recently fired at three times in consequence of neglecting to heave to when hailed by the guard-ship. To prevent this recurring it is necessary that the following regulation, common to all French military ports, should be strictly attended to:—

Regulations referred to.—All ships entering Brest Roads are to steer for the guard-ship, which is the outermost anchored ship, and is known by her having a white and blue broad pendant at her fore, and by her having jury topmasts.

The ship coming in is hailed from the guard-ship, and told where to anchor. A yellow flag is sent on board, and must be kept flying until the vessel is released from quarantine by an officer of the Board of Health, whose boat comes off from Brest as soon as possible.

LAW CASES.

LIME JUICE FOR SEAMEN.—Mr William Finch, the master of the *Eden*, who has been several times at this Court, and fined for neglecting to supply his crew with lime-juice and sugar, appeared before Mr. Ballantine to answer the claims of two seamen, named William Jones and John Gray, who claimed the respective sums of £6. 19s., and £15. 14s. 6d., for services on board, on a voyage from Liverpool to Sierra Leone and London. The case of Jones was first gone into. The master had stopped £2 from his wages in consequence of his being sick in Yawry Bay, Sierra Leone, and £2 more for quitting the ship without leave, in London. For these sums, and also for £2. 10s., which the seamen claimed as damages under the Merchant Seamen's Act, for being deprived of his wages, without just cause, and detained here 24 days, the summons was taken out. Mr. Finch maintained that the man's illness was brought on by his own indiscretion, but failed to establish that fact, and Mr. Ballantine said the man had a right to be cured at the expense of the ship, and made an order on the defendant for the payment of £2; but as regarded the other claims he refused to make any order, and said that no seaman had a right to quit a ship after it was moored without the permission of the master, and that if he did so he forfeited a month's pay. The second case was a novel one. The complainant, a man of colour, who was cook of the ship, had a quarrel with the master who wounded him, and left him behind in Africa, and it was now contended by Mr. Framley, on the part of Gray, that as he was compelled to abandon the vessel by the master, he was entitled to the whole of his wages. Mr. Ballantine said the contract had not

been completed, and he could make no order in the case. The seaman had his remedy in the Court of Admiralty, to which tribunal Mr. Framley said he should apply.

Mr. Field was also charged with unlawfully neglecting to serve out lime-juice and sugar at the rate of half an ounce to each of the crew, on the 19th of June, after they had been consuming salt provisions for ten days. The defence set up was, that during a storm on the outward voyage, a stone bottle containing lime-juice was knocked down and broken, and the whole of its contents wasted. The master made an effort to obtain a fresh supply, both at St. Christopher and Nevis, but was unable to do so, and, during the whole of the homeward voyage, the men were deprived of the antiseptics to which they were entitled. Hagle alleged that he was attacked with scurvy for want of the lime-juice, which the mate denied, and said that there was not a man in the ship laid up a minute. Mr. Ballantine said that the act was imperative, and the master was bound to "provide and keep lime or lemon-juice," and should find a safe depository for the bottle. The master had incurred a penalty of £5 for each and every default, but only one day was named in the summons. He fined the defendant £5 and costs, and expressed his surprise that no lime-juice could be obtained at the two islands where the ship touched at.

CAUTION TO MASTERS OF SHIPS.—*Conviction under the Act for the Consolidation of the Laws relating to Merchant Seamen, and for keeping a Register of Seamen.*—Mr. John Harvey, master of the ship *Hope* of Liverpool, was fined £5 by Alderman Gibbs, for having neglected to deliver, or cause to be delivered, to the Collector of the Customs, the agreement entered into with the crew, specifying the wages of the seamen, the quantity of provisions to be received by them, and the capacity in which the vessel was to be employed. The solicitor to the Admiralty attended for the prosecution, and Mr. Brown, of Walbrook, solicitor, for the defence, who would have had the information quashed on legal grounds, but for the interference of the defendant, who insisted that the case should be decided on its merits only. It was so decided, and the defendant in consequence was fined ten pounds, which, on the application of Mr. Brown, was reduced to five pounds, which the defendant paid.

NEW BOOKS.

SALE'S BRIGADE IN AFGHANISTAN, with an Account of the Seizure and Defence of Jellalabad. By the Rev. G. R. Gleig, M.A.

This interesting little account of the military proceedings in Afghanistan has the great recommendation of coming from the pen of the principal chaplain to the forces, who, with a knowledge (and experience, we might almost add), of military operations, has availed himself of the M.S. journals of officers engaged in that ever memorable campaign, besides those friendly communications of officers that have been made to him. With these materials he has preserved, in a compendious form, a record of bravery, endurance, and steady discipline, which cannot fail in exciting the deepest interest.

LETTERS FROM MADRAS DURING THE YEARS 1836-1839. By a Lady.—Murray.

These letters abound in tales of Indian manners, customs, and prejudices, and give a good insight to the character of the people, along with the practice of forming native schools.

LLOYD'S BOOK.—*Masters and Mates.*—This valuable record of the characters of British shipping has just been published for the year 1846-47. It contains particulars of 11,128 vessels; of which 5,863 are classed A.; 891, *Æ.; 2,027, Æ.; 396, E.; 3, I.; and 2,018 have no character assigned to them. There are besides, 480 vessels classed by the Liverpool Committee; and there are also 14 iron steam-vessels and 24 iron sailing vessels on the register, of which 7 steam and 14 sailing vessels are classed A. 1.—the remainder being unclassified. At the end of the "Book" is given "a list of all the masters and mates in the merchant service who have voluntarily passed an examination, and obtained certificates of examination, under the regulations of the Board of Trade;" and the meagreness of the list fully proves the inefficacy of the voluntary principle—only 75 masters and 22 mates figuring in the catalogue. Of the 75 masters, 52 have been examined by the Marine Board of South Shields, and one by the Trinity House of Newcastle, the remainder having passed at London, Plymouth, Portsmouth, and Dundee.

Mrs. Taylor has just published a Planisphere of the Fixed Stars, accompanied by a book of directions, containing various illustrations and explanatory problems, with a short sketch of Astronomy which we can confidently recommend to our readers.

NEW AND CORRECTED CHARTS.

Published by the Admiralty, and sold by R. B. Bate, 21, Poultry.

CAPE FERBAT to Cape Carbon, from French surveys, price 2s.

MAYUMBA, MALEMBA, AND BLACK POINT BAYS, by Commander Hay, 1845, price 6d.

MALLOODOO BAY, corrected by Lieut. C. Pasco, and Mr. Elliott, master, R.N., in 1845, price 6d.

SKERRY ISLANDS, by Capt. Beechy and Com. Robinson, 1835 and 1845, price 1s. 6d.

MOVEMENTS OF THE ROYAL NAVY IN COMMISSION.

AT HOME.

DEVONPORT.—July 30, sailed *Dido*, 18, Capt. J. B. Maxwell, for Cork. August 2, *Raleigh*, 50, moved into the Sound. August 4, *Eurydice* and *Constance*, arr. from Portsmouth, August 9, sailed *Raleigh*, 50, Com. Sir T. Herbert; *Constance*, 50, Capt. Sir B. Walker; *Spartan*, 26, Capt. T. M. C. Symonds; and *Eurydice*, 26, Capt. G. Elliott, to join Experimental Squadron; *Inflexible* st. v., Com. J. C. Hoseason, sailed for Cape; 16th, arr. *Contest*, 12, Com. M'Murdo, from Portsmouth. In Harbour.—*Caledonia*, *Alban*, *Diligence*, *Confiance*. In the Sound.—*Contest*.

PORTSMOUTH.—July 28, arr. the *Mutine* from the Cape; *Eurydice* moved out of harbour. August 1, *Eurydice* and *Constance* sailed for Plymouth; arr. *Athol* from Bermuda with military invalids; 3rd, *Contest* moved to Spithead; 13th, arr. *Columbine* from Sheerness; 20th, Her Majesty, Prince Albert, and some members of the royal family and suite, embarked in the *Victoria* and *Albert* yacht, on Tuesday morning, and proceeded to Torbay, Plymouth, and Falmouth; the *Fairy* and *Black Eagle* accompanied the yacht. 19th, arr. the *America*, 50, Capt. Gordon, from South America with freight; 21st, arr. the *North Star*, 26, Capt. Sir E. Home, from New Zealand. Ships in Port.—*Columbine* at Spithead; *Victory*, *Excellent*, *America*, *Gladiator*, and *Athol*, in harbour.

GREEK PIRATES.—A Smyrna letter, dated July 31, states, that, on the 19th of July, 1846, two boats, manned by thirty-two pirates, landed at Nicero, near Rhodes, attacked the magazines of the island, and carried off all the valuables they contained. They also boarded a craft belonging to Yacopo Nicolaide, whom they ill-treated and also despoiled of his property. The pirates then took their booty to Nicaria, below Scio, and there disposed of it. By more recent accounts, the pirates have been seen near Patmos. The volumes of the *Nautical Magazine* for 1844-5, shew that robbery is the rule, and not the exception in the Archipelago.

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

COMMANDERS—G. Williams, C. L. Hockin.

LIEUTENANTS—L. R. Reynolds, W. C. De Vere, R. O. Sargent, C. Wake.

SURGEON—A. Murray.

PAYMASTERS AND PURSERS—E. Robins and F. Cole.

APPOINTMENTS.

CAPTAINS—A. Lowe (1846) to study at the steam factory, Woolwich—W. H. Henderson to *Sidon*—J. Couch (1834) to out-pension Greenwich Hospital—E. A. Frankland (1835) to study steam machinery at Woolwich.

COMMANDERS—W. Morris and E. Ommaney (1840) to study at Naval College—G. H. Wood (1846) to command *Hound*—E. Tatham (1846) to *Raleigh*—L. S. Tindal (1831) to *Grecian*.

LIEUTENANTS—Gartiner to *Sidon*—H. T. Lyon (1846) and M. Kerr to *Columbine*—J. B. Willoughby (1841) to *Cherokee*—J. Tyssen (1832) *Mohawk*—J. Harper (1815) to *Minos*—C. B. Strong and F. Heathcote (1840) to *Constance*—J. M. Boyd (1841) to *Winchester*—B. G. Rowles to *Avenger*—J. Hughes (1846) to *Inflexible*—W. Addington (1846) *Spartan*—R. N. Williams and G. Goldfinch (1825) to *Caledonia*—J. Rawstorne (1815) to *Victory*—J. A. Paynter (1841) to command *Royalist*—A. Darby to command *Pigmy*—E. F. Roberts (1841) to study steam machinery at Woolwich—W. G. Standbridge to *Hound*—J. H. Furneaux (1845), W. F. Parkinson (1842), E. F. Clarke (1841) to *Contest*—J. Dayman to *Rattlesnake*—F. J. Partridge (1846) to *Superb*—G. B. B. Collier, (1844) to be flag to Adml Sir C. Ogle, Bart.—J. Elwin (1814) to Packet Service—H. Croft (1841) to *Crocodile*—H. Fisher (1815) to Portsmouth Ordinary—J. C. D. Hay (1844) to *Vestal*—N. Vansittart (1842) *Agincourt*—G. S. Taylor (1841)

to *Bulldog*—C. B. Kennedy to *Hibernia*.

MASTERS—T. Brown acting to *Recruit*—J. W. Trotter (1797) add. to *William and Mary*—J. C. Barlow to the *Royal Yacht*—W. H. Thompson to *Albion*—G. Biddlecombe to *St. Vincent*—J. F. Rees (1811) to *Brilliant*—J. A. Cameron, act. to *Columbine*—W. W. Dillion to *Bulldog*—H. D. Burney to *Alban*—J. Ayles to command *Rhadamanthus*—H. Thomas to *Trafalgar*—C. Pope to *Queen*—J. Brown and H. Davey to *Caledonia*—H. Webb to *Trident*

MATES—W. G. Douglas to *Inflexible*—R. Shedden to *St. Vincent*—W. G. Douglas, D. Herbert, and G. C. Lloyd to *Victoria and Albert*—C. O. B. Hall to *Columbine*—E. A. Porcher to *Royal William* for rank only—H. Harvey to *Excellent*—E. A. Biackett and H. J. Blomfield to the Royal Naval College.

MASTER-ASSISTANTS—T. H. Julian and R. Mumford to *Actæon*—R. Friend to *Columbine*—W. G. Aldrich to *Gladiator*—J. H. Cook, G. W. Burchell, C. F. Rickett, and P. E. Moss to *Caledonia*—W. E. Warren to *Hound*—W. Long to *Dasher*—A. Forrester to *Trident*—P. Todd and H. Goldsmith *Victory*—J. G. Morgan to *Tartarus*—G. A. F. Wilson to *Raleigh*—G. C. Compton to *Contest*—E. Chatsworth to *Lucifer*—Hocley to *Canopus*.

SECOND-MASTERS—H. Crane to *Medusa*—H. Martin to *Lucifer*—E. Maunder to *Crocodile*—A. O. West to *Eurydice*—B. Simpson to *Linnet*—G. A. Stab to *Trident*

MIDSHIPMEN—G. Temple and J. W. Jervis *St. Vincent*—C. O. Hall to *Excellent*—Pockford to *Rodney*—R. Twisden to *Eurydice*—Baker to *Spartan*—R. Craig to *Dido*—W. Sainsbury to *Victory*—W. E. Chorlton to *Scourge*—N. G. Spencer to *Victory*—D. C. O. Slaughter to *Excellent*.

NAVAL CADETS—St Clair to *Spartan*—G. T. Drake to *Eurydice*—G. W. Carter to *Contest*—H. Harden to *Eurydice*

S. Babington to *Avenger*—J. Ousley to *Contest*—W. Cornwall to *Constance*—Baillie to *Trafalgar*—G. R. Thomas to *Hound*.

SURGEONS—J. Sloan to *Tortoise*—W. D. Kerr to *Hound*—J. Read to *Actæon*—C. Coffey to *Recruit*—T. J. Graham to *Pantaloon*—R. Carroenter to *Sealark*—R. Barnard to *Contest*—J. Campbell to *Columbine*.

ASSISTANT-SURGEON—W. Fegen to *Vernon*—A. Batwell to *Penguin*—G. E. Nicholas to *Bulldog*—C. L. Lester to *Recruit*—A. Jackson to *Raleigh*—C. Grier to *Cherokee*—J. Forbes to *Mohawk*—J. Campbell to *Actæon*—G. Lillies, J. King, J. Slight, J. Murray, F. Blake, and H. Loney to *Devastation*—G. Brewster and G. Freeman to *Vindictive*—A. Lillie to *Pantaloon*—J. Pickthorn to *Contest*—A. Jackson to *Columbine*—D. Coulter, J. Henderson, and J. S. Davidson to *Agincourt*.

PAYMASTERS AND PURSERS—R. Goddard to *Victory*—G. Wise to *Recruit*—W. Reeve to *Imaum*—M. Scot to *Columbine*—C. F. Turner to *Bulldog*—W.

Brown to *Caledonia*—W. Hickman to *Pantaloon*.

CHAPLAIN—Rev. H. W. Taylor to *Trafalgar*.

NAVAL INSTRUCTOR—F. W. Bouter to *Eurydice*.

CLERKS—C. E. Coleman to *Crescent*—H. C. Poole to *Contest*—J. Burlace to *Nautilus*—J. Bowden to *Actæon*—J. T. Rivalton to *Cherokee*—T. S. Heywood to *Mohawk*—J. G. Messum to *Cyclops*.

COAST GUARD.

Appointments—Lieut. Cross to command Axmouth station—Lieut. Dennehey to Ballymacair station—Com. C. J. Postle to be Inspecting Commander—Lieut. Finucane and Mr. C. J. Pegus to command stations.

Removals—Lieuts Millet to Arklow, Alexander to Cushendale, Patrick to Carricktergus, Harris to Paling, Macnevin to Ballyraughan, Goslin to Barna, Atkinson to Haddocks, and M'Donnell to Prawle—Mr. Eddington to Arran island station.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

July 26, at Troon, Ayrshire, the lady of Com. J. Maynard, R.N., of a son.

July 26, at Whiggill Hall, Goole, the lady of Capt. Sir J. C. Ross, R.N., of a daughter.

The lady of Lieut. E. Von Donop, of a son.

July 28, at Swift Villa, near Alverstoke, Hants, the lady of Lieut. David Welch, R.N., of a daughter.

August 2, at Graham Street, Eaton Square, the wife of G. Roberts, Esq., Surgeon, R.N., of a son.

Marriages.

August 18, at Stony Middleton, Derby, Lieut. Frederick Holland, R.N., to Anne, fifth daughter of Lord and Lady Denman.

July 29th, at St. George's, Hanover Square, Capt. Sir R. Grant, R.N., to Lydia, widow of J. Lambert, Esq., of Fowlers Hawkhurst, Kent.

July 18, at St. Pancras Church, J. Reid, Esq., R.N., to Mary Ann Elizabeth, youngest daughter of the late Capt. G. C. Stovin, R.N.

July 20, at Kimpton, Herts, Capt. the Hon. S. W. Grey, R.N., CB., to Barbara Charlotte, daughter of the Rev. P. Sullivan.

July 15, at Sheerness, C. P. Bellamy, Esq., R.N., to Mary, relict of J. Bouch, Esq., of Liverpool.

July 16, at Bath, Lieut. Lipscomb, R.N., to Mary, eldest daughter of the late Dansey Dansey, Esq. of Brincep Court, Herefordshire.

Deaths.

Rear Admiral of the Blue, Reuben Caillaud Mangin, died at Kingstown, Bath, on the 20th instant, after a long and protracted illness, in the 66th year of his age.

Rear-Admiral of the Red, the Hon. William Le Poer Trench, died from disease of the heart, on the 16th instant, at Ballinasloe, at the age of 76.

July 27, drowned, Mr. A. John, son of Capt. D. Campbell, R.N., of Barbrick, Argyllshire.

July 31, at Thornloe, Worcester, Mary Wigley, the wife of Capt. Hastings, R.N.

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, 1846.

| Month Day | Week Day | Barometer In Inches and Decimals. | | Fahrenheit Thermometer In the Shade. | | | | Wind. | | | | Weather. | |
|-----------|----------|---|--------|--|--------|-----|-----|----------|------|-----------|------|-------------|------------|
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | | | | | | | A.M. | P.M. | A.M. | P.M. | | |
| 21 | Tu. | 29.94 | 29.90 | 67 | 72 | 56 | 72 | SW | SW | 5 | 5 | qbc | bc |
| 22 | W. | 29.93 | 29.97 | 65 | 74 | 57 | 75 | W | W | 5 | 4 | qbc | bc |
| 23 | Th. | 29.93 | 29.89 | 66 | 75 | 56 | 77 | SW | SW | 3 | 3 | bc | bc |
| 24 | F. | 29.84 | 29.88 | 69 | 63 | 61 | 75 | SW | SW | 2 | 2 | o | or (3) |
| 25 | S. | 30.01 | 30.05 | 59 | 69 | 52 | 70 | W | W | 2 | 4 | bc | bc |
| 26 | Su. | 30.20 | 30.22 | 63 | 73 | 50 | 74 | W | W | 3 | 3 | bc | bc |
| 27 | M. | 30.23 | 30.23 | 62 | 74 | 59 | 75 | SW | SW | 2 | 2 | bcd (2) | o |
| 28 | T. | 30.28 | 30.24 | 72 | 80 | 65 | 81 | SW | W | 1 | 1 | o | bc |
| 29 | W. | 30.14 | 30.10 | 71 | 81 | 59 | 83 | SE | E | 2 | 2 | bc | bc |
| 30 | Th. | 30.02 | 30.06 | 75 | 83 | 62 | 84 | E | E | 3 | 4 | b | b |
| 31 | F. | 30.02 | 29.98 | 74 | 85 | 64 | 86 | NE | E | 4 | 4 | bc | bcm |
| 1 | S. | 29.80 | 29.75 | 75 | 85 | 65 | 86 | NE | E | 4 | 4 | bc | bc (hr 3) |
| 2 | Su. | 29.80 | 29.82 | 68 | 73 | 64 | 74 | S | S | 2 | 2 | bef (hr 2) | bc |
| 3 | M. | 29.84 | 29.90 | 65 | 72 | 57 | 73 | SE | SW | 3 | 3 | bcp (2) | bc |
| 4 | Tu. | 30.00 | 30.00 | 67 | 75 | 55 | 76 | S | S | 2 | 2 | bep (2) | bc |
| 5 | W. | 29.96 | 29.92 | 63 | 72 | 62 | 74 | E | E | 1 | 1 | otlr 1) (2) | bc |
| 6 | Th. | 29.92 | 29.90 | 70 | 82 | 63 | 83 | N | NE | 3 | 4 | o | bcm |
| 7 | F. | 26.80 | 29.74 | 68 | 76 | 63 | 77 | SW | S | 1 | 1 | o | bc |
| 8 | S. | 29.78 | 29.80 | 67 | 71 | 61 | 73 | S | S | 1 | 1 | bc | bc |
| 9 | Su. | 29.92 | 29.98 | 66 | 71 | 58 | 72 | SW | SW | 3 | 3 | bc | bc |
| 10 | M. | 30.09 | 30.09 | 64 | 68 | 58 | 70 | SW | SW | 2 | 2 | o | o |
| 11 | Tu. | 30.10 | 30.11 | 65 | 72 | 57 | 73 | SW | SW | 3 | 3 | bc | bc |
| 12 | W. | 30.12 | 30.12 | 62 | 68 | 57 | 69 | SW | NW | 3 | 3 | or (1) | bc |
| 13 | Th. | 29.83 | 29.71 | 66 | 64 | 55 | 67 | SW | W | 3 | 4 | o | bep (3) |
| 14 | F. | 29.94 | 29.98 | 56 | 66 | 48 | 68 | NW | SW | 3 | 2 | bm | b |
| 15 | S. | 29.80 | 29.72 | 65 | 75 | 54 | 76 | S | S | 2 | 2 | b | ber (4) |
| 16 | Su. | 29.85 | 29.87 | 63 | 69 | 53 | 71 | SW | SW | 2 | 1 | b | bc |
| 17 | M. | 29.92 | 29.88 | 66 | 69 | 54 | 70 | SW | SW | 1 | 1 | o | o |
| 18 | Tu. | 29.64 | 29.62 | 59 | 65 | 56 | 66 | SW | SW | 2 | 2 | bcp 1) | bc (3) (4) |
| 19 | W. | 29.64 | 29.71 | 63 | 67 | 55 | 68 | W | W | 4 | 4 | o | bcp (3) |
| 20 | Th. | 29.88 | 29.84 | 63 | 63 | 55 | 65 | W | NW | 2 | 2 | bcm | or (3) (4) |

JULY 1846.—Mean height of the Barometer 29.931 = inches; Mean temperature = 66.0 degrees; depth of rain fallen = 1.74 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have received the Paper on the "Navigation of the Amazons." It will appear in our next.

The Calcutta paper has reached us; also the parts of the Physical Atlas.

We have received Sir John Ross' Pamphlet, alluded to in our March number; want of space prevents us from looking into it at present.

Mr. Leighton's packet lies for him at Mr. Bates', 21, Poultry.

Errata.—Page 419 line 3, *for ge read we*; p. 420 l. 9, *for carelessness read carelessness*, p. 421, l. 16, *for officers read officer*; p. 488, age of Mr. G. D. Harris, *for 67 read 27*; p. 488, col. number of register ticket of Mr. S. Peech, *for 21485 read 21486*; and of Mr. Gray *for 15445 read 15455*.

Vol. for 1845, p. 303, l. 19, from bottom, *for properly read popularly regarded*. p. 306, l. 12 from top, *for the place of deposition, read the plane of deposition*; p. 306, l. 15, insert "it" between generated and must; thus, still as it chiefly spreads by the nascent vapour forcing upwards that which was previously generated, *it must always be more dense near its source*; p. 309, l. 4, *for has rather a tendency, read had rather a tendency*.

Hunt, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Nabal Chronicle.

OCTOBER, 1846.

THE MOUTH OF THE AMAZONS.

SIR.—Touching at a Brazil port the other day I accidentally heard of another boat's crew, to be added to the many previous lives lost at Point Salinas, the pilot station at the mouth of the Amazons; and having had myself not long ago, nearly occasion to deplore the same misfortune, I think that captains of ships should be warned of the great hazard incurred by despatching a boat there to procure a pilot; and that your pages are the most likely to bring the subject to their notice.

The vessel I allude to, or to which the boat belonged, was an English schooner, a small vessel and with few hands; so that the captain and boy were all that were left of a crew after the unfortunate event took place.

In my own case I anchored with the pilots' houses bearing S.b.E., and sent the chief mate on shore with four hands in order to procure a pilot. They returned at midnight much exhausted, and having the object of their mission unaccomplished. They effected a landing with much difficulty, but not near the station; and in returning through the surf shipped a sea, and nearly swamped the boat, and had she not been a very lively one and fitted with air-tight lockers, she must have gone down. Before I would again risk a boat I should weigh and proceed for the river, following Captain Richardson's directions, but I could hardly recommend them to a stranger.

The pilot signals mentioned by Lieutenant Stopford in the *Nautical Magazine* are still in requisition; his, Captains Wellesley and Richardson's remarks on the river are clear and concise. I consider Salinas rather a difficult landfall to hit, but the remark that a small white house

will be seen (appearing like a speck) with a "red streak" behind it, is most graphic, and is exactly as it makes. The existence of a tower on Point Astasia, which has so often been doubted, is certain, it being for half an hour distinctly visible to us: it is a low quadrangular building with apparently a thatched roof, but when a ship is near enough to make out this she is in dangerous soundings, and ought immediately to haul off. Ours shoaled suddenly to $4\frac{1}{2}$ fathoms, varying nearly 2 fathoms every alternate cast.

The pilot having to collect his boat's crew from the country, does not come off immediately on a ship making her appearance; ours came on board twenty hours after bringing up. The Salinas pilots are ignorant and unskilful, they never take a ship down the river. A captain would therefore require to look after them, and if underway at night, the lead-line to be hove occasionally; a fortunate cast of it saved us from running on a bank, the pilot imagining he was in the fairway and steering a course accordingly.

Norie's chart of the river, though universally used by all traders is not entirely correct; but a French man-of-war brig has lately made an excellent survey of it, and discovered a passage through the Pozo, the shallowest soundings 9 fathoms. I could not ascertain the bearings of any objects to "Guy" a ship through this channel, and, indeed from the uniform appearance of the land they would be of little use to a stranger. Lieut. Stopford remarks that most of the losses that have occurred at the mouth of the Amazons, have taken place here. I should recommend a ship, should she unfortunately run past Salinas and fall to leeward of the Braganza, to anchor and send her boat to sound a passage; but a Brazilian, who resides in the neighbourhood, a man advanced in years, and in easy circumstances, is generally philanthropic enough to board a vessel when he perceives she has got on the Pozo, and to conduct her to Para. He has been the means, I am informed, of averting many losses. A ship is deemed fortunate to get up the river without the loss of an anchor; this I am inclined to attribute more to the injudicious method of weighing than to either the nature of the bottom or swell, for instead of canting the ship with the yards and head sails, only topsails and top-gallant sails are set in the face of a strong trade, which with the heavy swell, brings an altogether unnecessary strain on the cable, provided the ship has come to in a proper berth.

At Para merchant ships ought to moor very close in, or immense difficulty will be experienced in getting the lighters backwards and forwards; exertions ought to be used to have them discharged before 2 P.M., as during twenty-one days' stay in the river, the rain commenced daily in torrents about that time, accompanied by the most magnificent lightning.

The inhabitants of Para, who are extremely hospitable, more so than I have found them in the other Brazilian cities, esteem it a very healthy place; there Europeans attain a great age. The enormous falls of rain serve to cool the atmosphere, and prevent the waters from stagnating, which they otherwise would do, owing to the flatness of the country; but the mighty Amazon never inundates its verdant banks, but flows on in

silent majesty, undisturbed by the outpouring of the clouds, or the swelling of its tributary streams. My eyes have wandered over many fair portions both of the Old and New Worlds, but never did they rest on such a rich soil, such luxuriant vegetation, and such inviting prospects; industry alone is wanting to bring forth its latent treasures. To steam it is that we must look in order to make us acquainted with its "inner waters." It strikes the mind of a Briton, with melancholy and regret, that so few of his country's flags wave over these placid waters, and that her energies and enterprize should be expended on arid islands and distant climes, when such a magnificent country is lying in fallow, the Atlantic only intervening: the "stripes and stars," the "tricolours," and the "white and blue" flags of Portugal even are more numerous; and "Jonathan" now rules the roost, where, a few years back "John Bull" held the sweep. Francis Orellano, who, in 1540, when dispatched by Pizarro to obtain provisions, outstripped his orders, and impelled by the spirit of enterprize, had first the honour to explore the Amazon from the Rio Napio to its estuary; at a time, too, when the fever of discovery was at its highest, when the pulse of adventure throbbed strongest; and haughty Spain, inflamed by her recent conquest of Peru, was eagerly and energetically pushing her discoveries and extending her sway in the New World, could never have dreamt that three centuries would have elapsed, and no change taken place in these "fairy scenes and favoured lands," and not a trace should remain of his aggrandizing countrymen, for whom he had performed his arduous voyage. Vincent Pinçon, neither, when he beheld with astonishment the immense quantity of water pouring into the sea, and judged correctly that it must have flowed through a continent of vast extent, could have imagined that his discovery would have been so long neglected. Para has not yet recovered the heavy shock it sustained from the Revolution, and English establishments, then broken up, have not again been formed; but its position, both in a commercial and political point of view, is admirable, from its being the only seaport on the largest river in the world, the only emporium for the increasing wants of the vast and imperfectly known countries washed by its tributaries.

The other entrance to the Amazon is subject to a strong "perioroca," or bore every full and change. The contracted policy of the Brazilian government forbids ships of any nation whatever, except their own, from ascending the river above Para, at once checking enterprize, impeding commerce, and constraining to lie rotting on the banks, untold quantities of the country's produce, such as cocoa, anatto, and castanos, &c., indigenous and growing wild; a very small proportion of which is brought down to Para, and there exchanged for gunpowder and salt. The voyage* undertaken by the Indians to procure salt alone, sometimes exceeds six months, with their decks in a constant wash with the water, being so deeply laden they experience difficulties on approaching the falls, sometimes having to land their cargo, and carry both it and the canoes across the country, and also launch them on the other side in deep

* The first voyage down the Amazons to Para from Ramon in Bolivia by the Madera river, and return to that place, with a cargo, has been just effected. It occupied a year and six months.

water. These Indians, many of whom dwell on the river, reminded me much of the Chinese in their amphibious habits, though the latter are much better boatmen, and their canoes resemble in construction the dingies of the river Hoogly.

I believe it was only through Prince de Joinville's alliance with the Brazilian Court that permission was granted to the French to survey the river, the benefit of which they are inclined to keep to themselves, as one of their merchant vessels when I was there, had a chart drawn from it on board, but would not allow it to be inspected, the captain stating that he had procured it as a great favor, and on condition that it was not to be shown. Another vessel of the French marine is looked for to go over the previous survey. Speaking of charts it is generally believed in the Brazils, and I think with truth, that the land from St. Rocque to the Amazon is laid down too far to the northward on the present ones; and I have been assured by some captains that their observations have placed the ship on *terra firma*, when in reality a moderate distance off shore. I have coasted along a considerable extent of the Brazil shores, and assuming Captain King's longitude of Rio as correct, (but I cannot positively assert so from personal observation) the chronometers have always put the ship from ten to twelve miles to the eastward of her true position.

Should the tide answer in the morning, it will be found much the best time to leave Para, as the wind, then blowing off the southern bank leads ships down the river. This remark is also applicable to leaving Point Saipée, as it enables you to get clear of the banks, &c., with good daylight. The Para pilots who take the ships down the river, are much more skilful than their Salinas brethren. Ours carried the ship over the Outer and Small shoals as laid down in Norie's chart, (the Outer there marked as breakers,) the shallowest soundings 5 fathoms; I believe them to be no way dangerous. He left us immediately afterwards.

The American traders never make Salinas, but stand on till they shoal their water on the banks of St. Rozas, "about ship," and stretch across for the Tioca banks, or Small shoal; their soundings again indicating their approach, they know where they are and steer a S.W.b.S. course for the river; they never carry pilots.

After crossing the Equator, and steering north, I was surprised to carry $8\frac{1}{2}$ fathoms as far as 20' north, as much deeper water is laid down in the chart of 1828, and shews how rapidly the water is shoaling, and corroborative of "Lyell's" statement in his "Principles of Geology," that one of the greatest deposits now in progress is taking place here.

It is a stigma on the provincial government of Para, that no lighthouse has yet been erected at the mouth of this river. Large sums have been subscribed from time to time, and more than sufficient for the purpose, but, strange to say, they have always been applied to some object totally foreign to that for which they were collected, or vanished in some unaccountable manner. The subject, however, is still under discussion, and if they would employ Mr. Gordon to erect one of his cast-metal lighthouses here, an immense benefit would be conferred on the shipping frequenting the river, and a man would then have an idea where his ship was going when underway at night in a four-knot current.

I believe Salinas was spoken of as the site for a lighthouse. This would only serve for a landfall, and could be no mark for rounding the banks at the entrance of the river, from which it is distant about 40 miles; moreover, Salinas lies in a bight, not situated on a promontary. The N.W. spit of the Braganza bank appears to me as the most advantageous position on which a lighthouse could be placed; ships could then go into its latitude, and run down upon it with more confidence through the night than they can at present through the day, as the breakers, which are now the only mark for entering the river, are found very difficult to pick up on account of the great glare of the sun, thus serving by day, as well as by night, as a most useful mark. Ships, in bringing it to bear south, distant about half to three-quarters of a mile, would then be directly in the fair way, and haul up to S.W. $\frac{1}{2}$ S. right up the river. They would then not be under the necessity of sighting Salinas, detained waiting for their pilots, nor risking their men in procuring them. It would undoubtedly be a hazardous undertaking, attended with much danger and fatigue, and under a broiling sun, with the S.E. trade blowing almost constantly a fresh gale; and at the same time, when accomplished a noble triumph of art, and I am unacquainted with any locality where "a ruddy gem of changeful light," is more required, "like Bethlem's star, to guide and save."

Having a friend, a well known officer in the Brazilian navy, who lately commanded one of his Imperial Majesty's steamers on that river, I have written to him soliciting any remarks on it; and also to an Englishman, settled in the country, and master of a native craft, for the same, and which, should I be fortunate enough to obtain, will transmit to you, and doubt not they will make up for the barrenness of my own.

At Para, as well as at all other Brazil Ports, ships arriving even in ballast (either from foreign or coasting) are required to produce a sealed manifest under a penalty of 500 milreis equal to £50 sterling; in the first instance from the Brazilian consul, in the 2nd from the custom-house at the port of departure. I unwittingly incurred this penalty, but through the influence of my consignee it was mitigated to 100 milreis, equal to £10. As this fact is not generally known to masters and brokers connected with the trade, the knowledge of it cannot be too widely disseminated.

No vessel meeting with an accident should, if avoidable, bear up for Para, as a refitting port, the common articles of ship chandlery being barely procurable; Maranham or the West Indies are much to be preferred.

F. C.

[In the second volume of this work, will be found the remarks of Captain Wellesley alluded to by our correspondent. They are also to be found in Purdy's Memoir for the South Atlantic. We have not seen the French survey of the river to which he alludes, and we believe the best chart of the entrance is that published by the Admiralty.—Ed.]

NAUTICAL EDUCATION.

London, September, 1846.

SIR.—I fully participate in the regret expressed at page at 369 of your July number, that there should be so small a number of “masters and mates who have proved their qualification in their respective classes,” since the regulations were issued by the Board of Trade; and, when I consider the great importance of efficiency on the part of those officers who are entrusted with valuable ships and cargoes, and the still more valuable lives of crew and passengers, I cannot but think it incumbent upon every one who has the slightest acquaintance with the above important considerations, to add his mite of information and advice for the purpose of procuring throughout our vast commercial navy, a body of efficient and well educated officers. I do not conceive that so great an end will be attained merely by the regulations for the examination of masters and mates, though they appear to have a direct tendency in favour of the interests of shipowners. An evident reluctance exists to pass the ordeal, either in the general incapacity of officers, or in the supineness of owners, who would consult their own advantage and that of the country at large, in bestowing marks of favour on those who have proved themselves worthy of confidence by passing the required examination.

If, as is stated at p. 369, “no appointment has yet taken place” in consequence of proved efficiency, an indirect premium is given to ignorance; and merit, as is too often the case, reaps no reward. Can it, for a moment be supposed that the system of examination will be long a “voluntary” one, if no advantages are to be derived by it from those who have the rewards at their disposal; I mean the shipowners.

If an end is put to the voluntary system by the circumstances above stated, it behoves the government, for the protection of lives and property, to adopt such compulsory measures as will ensure a proper degree of professional knowledge, in the Merchant Service, as well as in the Royal Navy.

I shall now proceed to offer a few remarks on the subject of the education of youths intended for a naval life, and I sincerely and humbly hope they may not be unattended with due effect, in gradually obtaining a body of well educated and efficient officers, who may be a credit and honor to their country, and in whom confidence may be placed by all parties connected with ships either as crew, or passengers, or as the proprietors of valuable cargoes.

There can be no doubt that, ultimately, those officers who prove their proficiency will obtain a just reward; but, as your paper in the July number goes at once to show how small a number is at present to be found, either willing or capable of undergoing an examination, some means should be adopted to increase the number and fill the service with well informed men. This, I conceive, under any circumstances, or under any regulations, must be a work of time; and, I see no better method for obtaining the object in view, than by improving the system of education of youths who intend “following the sea” as their profession. The

education they receive at present, is, in the generality of cases, one of a common description, and without reference to future pursuits: they arrive at a certain age, they are sanctioned by their parents to choose a profession; they select a naval life, interest is made to procure ships for them, and, without possessing any other information than that to be obtained in the generality of schools, they enter upon the duties of their calling. It may be urged that they will have opportunities to attain a theoretical as well as a practical knowledge, and that it is better that the theory and practice should go hand-in-hand, the one tending to elucidate the other. Such an argument appears cogent at first sight, but is there any real foundation for it? Is it not notorious that most of our merchant vessels go to sea with so small a complement of hands, as to be barely sufficient for the nautical duties on board, even in circumstances of favourable breezes and fine weather? In cases of difficulty the greatest misfortunes but too often happen for want of an efficient crew and able commanders. Now, if I am right in my opinion on this point, I would ask what time, even if the inclination exists, can be found by a youth, to study such subjects as will render him a skilful navigator? A remedy is attempted by procuring instruction for them, between the voyages; but when we consider that, during those intervals, they are most probably engaged in visiting their friends and enjoying some recreation after long confinement on board, there can be but little time left for the prosecution of study. An awful array of hieroglyphics in the shape of Nautical Tables and Nautical Almanac presents itself to their view, and unless their determination and inclination are great, they endeavour to escape what they deem an odious and difficult task. In other professions we find that a youth has, generally, an instructor at his elbow, and in such cases it may fairly be admitted that theory and practice aid each other. Do we find such an instructor on board a merchant vessel? The commander has an abundance of duties, and I greatly question whether he devotes any portion of time really and truly to the instruction of youngsters and apprentices; they must get their knowledge as they can, and the result may be easily surmised, as indeed it is too well known,—an imperfect and slender knowledge of that which immediately concerns their own advancement, and the safety of the crew, passengers, and cargo.

My object, Sir, in addressing you is, for the purpose of impressing on the public, through your very useful publication, the stern necessity that exists for leading youths gradually to a thorough attainment of the requisite knowledge of their profession: if, in the course of their education they are introduced to the elementary principles of geometry, plane and spherical trigonometry, navigation, and nautical astronomy, they have an opportunity of discovering that these studies, or, at least a portion of them, amply sufficient for their purpose, are by no means so difficult, and so appalling as the names and first appearances would induce them to suppose. They would have an instructor, able and willing, it is presumed, to remove all difficulties: they would gradually imbibe a taste for the subject, and they would then go to sea with such a foundation laid, as would induce them to continue the studies that had lost the power of exciting dread. On such a foundation might be raised a superstructure

that would inevitably lead to the greatest advantages, both to themselves and the public. The theory and practice then might indeed, be continued, as a knowledge of the former would have already been gained sufficient to induce a farther prosecution of the study.

I have known more than one youth who had been two or three voyages to distant parts of the world, and yet unable to work a "day's work," and without the slightest knowledge of the application of logarithms to the science of navigation. To them Nautical Tables and Almanac were a perfect mystery, and likely to remain so.

It is my firm persuasion that, in but too many instances, one officer is entirely dependant on another. There are but few, in the Merchant Service, who possess a thorough knowledge of navigation, the want of it proceeding from a faulty and deficient education prior to their entrance into the service. To use the mildest terms, I should say that for the officers of the Merchant Service of so great a commercial nation as Great Britain, to be deficient in knowledge, reflects but little credit on this country, and *argues little for the good sense of shipowners.*

Should the remarks that I have made to you, on this all important subject, be attended with only a slight amelioration of the system of education for a naval life, I shall humbly hope that I have fulfilled a portion of my duty towards my country.

I cannot close my letter to you without animadverting on and regretting the decision arrived at by the Admiralty, a few years ago, in abolishing the establishment of the Royal Naval College, in Portsmouth dockyard. A variety of reasons was assigned for such a decision: it was said to be found almost impossible to provide a sufficiency of ships for the pupils at the expiration of their course of study, and especially to promote them after their six years of service, and passing their examination, &c. I conceive that such difficulties, if they really existed, might have been obviated. A simple remedy might have been found in keeping a larger number of ships in commission fully manned. To keep the right arm of our strength ready for action would have entailed a greater expense on the country, but such an increased expenditure would have been opposed less than any other, as all men of common understanding must know that in consideration of the increase, the rapid increase of foreign navies, our own safety and security depend almost entirely on a fully manned and efficient channel fleet. Neither must we forget that to preserve peace, the greatest of all blessings, we must at all times show a bold front, and a fitness for war, when such a scourge becomes a matter of necessity. Our calculating friends on the western side of the Atlantic were not a little influenced, I suspect, in the settlement of the "Oregon Question," by being made aware of our state of preparation, in case of rupture. This is perhaps somewhat irrelevant. To return then to our consideration of the system that obtained at the Royal Naval College.

The students there went through a regular course of study; they were examined previously to their entrance into the establishment, and a strong stimulus to study existed in the plan of allowing their proficiency to diminish their time of service at sea, prior to their passing for lieute-

nants' commission. Manifest superiority in a student entitled him to his commission as soon as he had completed his service, and had passed his examination; a matter of little difficulty to one who had at the Royal Naval College, received the gold medal for his assiduity and proficiency. I have no doubt that many of the brightest ornaments of the Service were originally educated at that establishment.

It appears somewhat strange and anomalous that the greatest naval power in the world should have no college for the education of the intended members of its service. The expense of it, formerly was, within a mere trifle, (some £300 or £400 per annum,) borne by the annual payments of the students: these charges varied according to the rank of the fathers in the Service, being increased for the sons of civilians, and reduced to a small sum for the sons of widows and officers disabled or killed in the service of their country. That such an establishment should have been abolished must not only be a source of deep regret; but, it is also a discredit to the country. The saving of a very few thousands per annum, ought not to have weighed in the balance against the great advantages to be derived from their expenditure in so vital a service as that of the Royal Navy.

It is much to be wondered at, that so few schools exist in the kingdom, where especial attention is devoted to the instruction of youths in navigation, &c., with the view of preparing them for a fit and proper discharge of their duties, when we see that our Government have abolished their only college for the education of the officers of the navy.

It is much to be hoped, as, I am sure, it is much wished, that the establishment should be replaced on its former footing, such alterations being made as former experience proved to be necessary. It would act as a bright example for the Merchant Service, and would go far to convince shipowners and the captains of vessels of the necessity and propriety of establishing a school or schools for a similar purpose, that of laying the foundation of sound professional knowledge, and of securing the public, as far as human means will permit, against a recurrence of the fatal losses both to lives and property, that have too often, of late, come under our notice.

A WELL-WISHER TO THE SERVICE.

To the Editor N.M.

PROPOSED BREAKWATER AT PORTLAND.

THE circumstance of Her Majesty and Prince Albert having just done us the honor to anchor in the royal yacht within the boundary line of the proposed breakwater, has again directed our attention to the necessity of the construction of a central harbour of refuge in Portland Roads; a measure called for, not only by humanity, but by the deepest and most

important interests of naval and commercial England. The strength of Cherbourg, we personally know, is still increasing. *Verbum sat.*

As a correspondent of the *British Press*, on the 22nd of August, anticipated, the First Report of the Select Committee of the House of Commons on Shipwrecks, was issued on the 21st. It recommends the immediate attention of government to the construction of harbours of refuge, but offers no decided opinion as to the use of the floating breakwater, although it suggests that such national works, when constructed, should possess the advantage of having powerful batteries.

Our central position in the British channel must of necessity be passed from the Atlantic and Baltic, and intermediate points, and *vice versâ*, so that its relative advantages, as a national rendezvous, for the navy and mercantile marine, would be far superior to those of a less critical station.

Above all, however, it would fully counterpoise the strength accruing to France from her celebrated works at Cherbourg; and would form (according to the admired plan of the late Mr. John Harvey,) the best and safest harbour in the kingdom, comprising an area of four square miles!

Cherbourg bears by compass from—

| | |
|--|-----------------------------------|
| Portsmouth, | S.W. $\frac{1}{2}$ W. 29 leagues. |
| Portland Roads, | S.S.E. 21 do. |
| Ditto, the entrance of Plymouth Sound, | S.E. $\frac{1}{2}$ S. 36 do. |

The completion of Portland harbour in such a locality, would, in after ages, redound to the credit of its promoters; and loyalty, patriotism, and (allow us to add,) *Weymouthism*, must indicate that its name should be "Victoria Harbour;" fraught with all the elements of power and greatness—indestructible and braving for ever

"The raging tempest and the rising waves."

We shall follow up this interesting and all-important subject, by subjoining the following extracts relative to it from the able practical remarks of the late Mr. George Bush :—

Portland Roads is already an asylum harbour of importance, and doubtless it is so during certain winds. By the construction of the proposed breakwater, it would become an asylum harbour unequalled in every respect in the kingdom. The south-easterly winds to which the roadstead is at present exposed, "rise rapidly and blow strongly," and this wind driving in the sea between St. Alban's Head and the Shambles, renders Portland Roads a place of considerable danger to vessels riding there at anchor. To protect the roadstead in the south-east quarter, it is proposed to erect a breakwater, and thereby render the anchorage sheltered on all points of the compass.

The soundings are unaltered since their survey was made. I am of opinion that the position of the breakwater laid down is the most advantageous and desirable.

The direction and extent of the breakwater have been variously determined. By commencing at Folly pier, but little anchorage would be

gained in comparison with the Nore Point; the breakwater would be extended into deep water, and in consequence of the receding of the shore from the Nore Point, the breakwater must be carried out a quarter of a mile from Folly Pier, to obtain the shelter already afforded at the Nore Point. From its prominent position and from economical reasons, the Nore Point seems to be the most desirable place to commence the breakwater.

It appears to me that a breakwater of less extent than two miles and a half would afford ample protection to a very considerable fleet of shipping, the more so, because the advantages of the roadstead, in point of depth of water, shelter, good anchorage, and scarcely any tide or current, would enable vessels to ride closer together than is generally prudent in places less favourably circumstanced in these respects. In a work of such great importance, I have yielded to the general opinion of extending this breakwater, two and a-half miles; first, as a protection to the town and harbour of Weymouth and Melcombe Regis, and, secondly, because the effects will become known in its progress, and the precise extent to which it should be carried will thus be ascertained beyond all doubt.

Commencing at the Nore Point, I propose to extend the breakwater two and a-half miles in a direction north-east by east a quarter east by compass; a secure and safe roadstead will then be formed of four square miles in extent, for vessels of the largest class, where they may ride at anchor, in four or ten fathoms of water, at all times of the tide; the average depth of water throughout the four square miles being about eight fathoms at low water. The entrance to the roadstead, between the extremity of the breakwater and the Kingstead Cliff, will be about two miles and a-half, and between the North Point and the end of the breakwater, will be afforded about two miles in width of working ground for vessels of the largest class, at all times of the tide.

The breakwater, at a quarter of a mile from the Nore Point, will reach eight fathoms, and will gradually increase into eleven fathoms of water at its extremity: the whole to be raised to the level of ordinary high-water mark.

It has been proposed that a cant or turn be made in the breakwater at its extremity, towards the roadstead, with a view to throw off the swell towards Redcliff Point; but, if it be carried out only two miles, the extremity will be land-locked by St. Alban's Head from the south-eastward.

The probable effects of the breakwater, when completed is an important consideration. Since the smallest piers or moles produce surprising effects upon the coast and their vicinity, it might be supposed that so large an artificial reef would produce effects proportionally great, upon the harbour, as well as the bay of Weymouth.

There is scarcely a spot upon the shores of the ocean, which is not undergoing some change. The sea is receding by the accumulation of mud, sand, or shingle, upon some coasts, whilst others cannot resist its encroachments. Near the embouchures of rivers, traversing alluvial districts, the sea is found to recede; and where the sea breaks upon shores

of the same soil, its encroachments are rapid; the soil thus removed, forming either shoals, banks, or deposits, in bays or sheltered places, where the sea in its turn has to recede. Thus, the bay becomes in process of time a projecting land, and the headland or promontory is wasted away. Instances of this kind are common upon the southern and eastern coasts of England, and upon the opposite shores of the continent. These changes are aided or impeded by winds, tides, and freshes or backwaters; and artificial obstructions opposed to these agents must tend to increase or diminish their effects, and aid or impede the operations wrought through the medium of their agency.

It cannot be questioned that some changes will result from the construction of the breakwater, and which I shall endeavour to estimate; but they will be found to be unimportant from the favoured circumstances of Weymouth bay.

It appears from a review of facts, that, in Weymouth bay, the rise of tide rarely exceeds eight feet, that there is only the Wey stream falling into the bay, that the only backwaters influenced by the tide are those of the Eastfleet and Weymouth harbours, that there is scarcely any mud or sand upon the shores of the bay, and that although the breakwater will extend one half across the bay, it will leave an opening of two miles and a-half in width to fill the roadstead of four square miles within the breakwater, the Eastfleet, the Roads, and Weymouth. It cannot, therefore, be expected, that, where the tide of current is almost imperceptible, and where there is no mud or sand to be disturbed, the bay can be injured by the construction of a reef raised to high-water mark: but, on the contrary, as far as the effects can be anticipated, they tend rather to the benefit of the roadsteads and the harbour of Weymouth.

The flood tide sets from the Bill of Portland, in the direction of White Nose, to St. Alban's Head, which causes an eddy in the Weymouth bay, and at length sets towards the Portland roads and Eastfleet in one current, and towards Weymouth roads and harbour in another. These currents, I have already stated, are scarcely perceptible. The ebb tides flowing from Eastfleet and Weymouth harbours again meet towards the centre of the bay and flow towards the Portland Bill into the channel tide. The existence of the breakwater will, in a small degree, confine the first of the flood and the last of the ebb, and thus cause a perceptible tide in the entrance to the roadsteads of Portland and Weymouth, which would be advantageous to the shipping in the opinion of competent judges. The small increase of the tide will in fact, be confined to the Weymouth side of the bay to the advantage of that port; for, since the tidal water is pure and free from earthy matter, it will carry nothing into the harbour by the flood, whilst the ebb tide will tend to carry away such matter proceeding from the harbour, without the possibility of its entering the Portland roads; for the same argument will equally apply to the set of tide into Eastfleet.

It has been proposed to leave an opening between the breakwater and the Portland island, which, for the foregoing reasons, I cannot recommend.

Should the island of Portland be made a depôt for recruits, or prison-

ers in the time of war, the existence of the breakwater, ensuring a safe station for the navy, would favour such a project.

The practicability of the proposed undertaking cannot be doubted, from the Plymouth breakwater having been completed under more difficult circumstances.

The qualities of the proposed asylum harbour may be summed up in the following words. That it affords four square miles of good anchorage for the largest class of shipping; that it is well defended from the violence of the wind and sea; that vessels can enter or depart at all times of tide, with all winds, if they can carry canvas, day or night; that the entrance is sufficiently capacious to permit line-of-battle ships to work in or out under canvas; that the bottom is entirely free from rocks or shoals; that the anchorage is of the best description; that vessels may ride end on with one anchor from the small set of tide; that vessels will fetch out in one tack into the channel, with the wind blowing in, and which cannot be said of any roadstead in the channel.

Where is the harbour that possesses these requisite qualities? There are certainly none such in England. Milford haven, Plymouth, and Portsmouth, compared with Portland, at once show the superiority of the latter, and which is well known to experienced seamen, acquainted with those ports.

The advantageous position of Portland, in the very centre of the Channel, is to be considered. From Portsmouth to Plymouth there is no place of refuge for vessels during violent gales of wind. There are tide harbours which will admit a certain class of vessels during violent gales of wind. There are tide harbours which will admit a certain class of vessels at particular time of tide; but the danger of entering them between stone piers in a heavy surf, is great, and can only be attempted with any degree of safety by masters well acquainted with the localities. The shipping intelligence, after a gale of wind, is a melancholy proof of this fact.

The importance of the proposed undertaking to the naval and commercial shipping of this country, cannot be doubted, and it is surprising that, whilst enormous sums of money have been expended upon tide harbours in the channel, Portland roads have been unnoticed, or, at least, neglected.

The demolition of Dunkirk and the various expeditions fitted out by England during the war to destroy French harbours in the Channel, prove the importance of those harbours to the French navy and privateers. The French, well aware of the disadvantage of having no naval station in the British Channel, which has been termed "the highway for all the riches of the earth," have directed their attention to the completion of the Cherbourg roadstead and works since the peace. That harbour has been rendered by art capable of containing sixty sail of the line, and docks are constructed to hold the like number; arsenals, yards, and all the convenience of a dockyard are there afforded, and forts, mounting 250 guns, have been formed to protect the roadstead. It may be said, that the existence of such a naval station, in the centre of the British Channel, being about fifty-six miles due south by compass from Portland, is of little consequence, as England can maintain her superiority on

the sea, as she has done, against the united power of Europe. But at what sacrifice to human life and property was this superiority maintained? In spite of our Channel cruisers, and the destruction of French harbours, how much wealth was taken away by the enemy? The insurance rates upon our foreign and coasting traders at that period will afford ample proof. In the event of war, a greater sacrifice of life and property will be requisite to obtain the like superiority, for the system of naval warfare will be changed. France has improved all her channel ports, and more especially Cherbourg, because she is well aware of the necessity of channel harbours for her steam privateers in time of war. The following observations will, in some degree, show the importance of Cherbourg, and the necessity for a naval station at Portland, which is the only place between Plymouth and Spithead capable of being made a station of consequence.

A fleet cruising off Cherbourg could put into Portland, and victual and water, and return to its station the following day; but, if it put into Plymouth or Spithead, it would occupy several days, supposing that the wind was favourable for its going and returning. A fleet watching off Cherbourg must run for Plymouth in an easterly gale, and for Spithead in a westerly gale: work out with a strong south-west wind it could not off Plymouth, nor could it return thence to its station with an easterly wind abated; with a strong westerly wind it could not return from Spithead, and with a strong easterly wind it could not (should the tides fall out late and early), be off Cherbourg in less than twenty-four hours. Under all these circumstances, ships could run into Portland harbour, and regain their station in a few hours.

Should the French fleet move out of Cherbourg, intelligence of the same could not be carried to Plymouth with a westerly wind, nor to Spithead with an easterly wind, but with either winds intelligence could be carried to Portland by signal.

If the British fleet were at Plymouth or Spithead, or if a portion of the fleet were at each of these places, the Cherbourg fleet would be out of reach, before intelligence of its movements could be carried to Plymouth or Portsmouth, or before the English fleet could combine; but, if the British fleet were at Portland, it could be out in a few hours, as a vessel in mid-channel could give the intelligence by signal in a few minutes. Ships will always maintain their station longer in gales of wind, when they have a safe and accessible harbour under their lee.

Hence the importance of Portland as a naval station, which would give England a political and positive advantage upon the sea, which she does not possess at present.

The existence of an asylum harbour in the centre of the Channel, would be of the utmost importance to the commercial shipping of this country. As a refuge from the storm and the enemy, it would become the great rendezvous for outward-bound vessels waiting for passengers, fresh provisions, mails, &c., in preference to Spithead, where they are detained for weeks by contrary winds.

Its important situation is well known to naval and mercantile officers, and competent military officers can advise how the roadstead can be protected by batteries on either side the bay.

It must not be supposed that I have too strongly advocated, in my report, this great national work; being convinced of the facts herein stated, my object has been to place them, as far as I am able, in a clear and conspicuous light; and those gentlemen of the committee who, from their nautical experience, are familiar with the subject, will judge whether I have over-rated the natural advantages of the roadstead, or pictured the probable benefits of the breakwater in exaggerated colours.

The breakwater may be constructed without prejudice to public or private interest, and its advantages claim alike the attention of Government and of the British ship-owners; for the want of an accessible and capacious asylum harbour in the centre of the channel (where it is fifty miles wide) has long been lamented by distinguished officers and intelligent seamen.

PLAN FOR QUICK STAYING OR WEARING.

Liverpool, March, 30th, 1846.

SIR.—Being a constant reader of your valuable publication, I beg to submit to your notice a simple plan, for wearing or staying a ship in a shorter space than by the ordinary method. I have tried it with wonderful success in the straits of Magellan, and I think, were it generally adopted it would be the means of saving many a ship from a lee shore, or worse fate, especially when they have canvas enough set to stay, and doubtful of room to wear. It consists merely in having a stout line made fast to the end of the jib-boom, and leading along outside to the waist or quarter, to the end of which is attached a conical canvas bag, capable of containing any quantity of water, according to the size of the ship, or depth of water she may draw; and, for example, suppose a ship in thick weather and blowing hard, makes the land, *sooner than expected*, (which is I am sorry to say too frequently the case) she has not canvas enough set to stay, and would lose too much ground if wore, then by this simple method she might wear in quite as short space as she would stay.

There is not the least trouble attending it, for by having a line bent on to the end of the bag, one man may haul it on board; and the expense of making it would be, a few yards of No. 1 canvas, as any *sailor-man* who can use his palm and needle may manufacture it; and what trouble is there in having a studding-sail halyard, or tack, bent on to the end of the jib-boom and led along to the quarter, to be ready for any emergency.

The first time it occurred to me was in the straits of Magellan; and the first time I tried it, was leaving Kempe harbour (on the Terra del Fuego side,) and just getting clear of two islands (Dos Hermanos) it came on suddenly to blow hard from the N.W., and having a poor offing, found it necessary to stay, but finding she would not come round I immediately bent on several swabs, and an old canvas draw-bucket to a line that was towing alongside from the jib-boom end, (having been obliged to use it in towing out of the harbour.) I then ordered the helm to be put up, and so great was the check given to the ship, that she was round,

before we could get the yards trimmed. I ever afterwards adopted the plan in the vicinity of land and never found it to fail my expectations.

It may also be used with effect in getting underway and wishing to cant, in a manner, that if canvas were set it would be dangerous.

I remain, &c.,

G. M.

Nelson Street, Great George Square.

[Our Correspondent has sent us a sketch with his letter, but, as the article in question may be described as a large canvas extinguisher with a wide mouth, it is unnecessary to illustrate it with a cut. His description is lucid enough without it, but we may add, that the mouth of the extinguisher or bag should be fastened to the rope which it is intended to haul on, by at least four good strong lines attached by way of nettles, so that it may spread fairly by being hauled on and resisted by the action of the water. We recommend it to the attention of our naval officers. But there are more purposes than wearing or tacking to which it may be applied. A machine of this kind dropped from the spritsail yard of a ship becalmed, and hauled on by a rope led to the quarter, would at once turn her broadside to any desired direction. Again, why may not two of them be employed in the same manner, and both being hauled on, there is at once the means of getting way on a ship in a calm, which on many an occasion has been desired. To do this effectually, they should be dropped from the spritsail yard-arms, hauled on by the ropes leading in-board at the quarters, and be lifted out of the water when they are aft, and roused forward again clear of the water in going forward, a process which can be effected readily enough by the rope fast to the pointed end of the bag. Perhaps the mouth of the bag might be kept open, when in use, by a couple of stretchers crossing each other on an axis passing through their middle and opening at right angles, and closing into one when not in use. A well managed arrangement of this process is well worthy of trial in both of these important conditions of a ship. It has the recommendation of being inexpensive and easily made on board. In our opinion it would be attended with success, and our seamen are the right hands to try it.—*Ed. N.M.*]

LOG OF THE BRIG CHARLES HEDDLE, OF MAURITIUS, CAPT. FINCK,—
Copied by Capt. Royer, Master-Attendant at the Port, and translated by Henry Piddington.—Nautical Time.

Concluded from page 465.

It appeared to me also interesting to know for how many hours during these five days each wind blew; so as to obtain an idea of what the total *resultant curve of the winds* was, independent of the run of the ship. I explain these terms. By the total *resultant* of the winds is meant in meteorology the calculating each separate wind during the number of hours it blows in a given time, its direction being, in nautical language, a course, and the time or number of hours a distance; the strength being

always supposed the same (or this may also be used), and all these courses and distances (direction and time), may make a traverse table, of which, as usual, one course and distance is the result. Thus, if in 24 hours we have 9 hours of N.E. and 15 of S.W. wind, the resultant is 6 of S.W. wind; or the whole atmosphere of the place may be supposed to have moved for six hours to the N.E., if the strength of the two winds was always equal. This is the *resultant* of the wind. If, instead of the traverse table we project the directions of the wind for courses, and the hours it blew for distances, we shall have a line of some kind, which, in this case, is a curve, and this is the *resultant curve* of the wind. Now, in the run of a vessel scudding under bare poles, her run per hour may be supposed to be an indication of the strength of the wind, but then, the course and distance shewn by log becomes the resultant, indicating from which quarter also the resultant wind blew, and this, as shewn already, is the N. 42° E. by the log. Fig. 1. It is true that the vessel being always carried to the S.W. by the current shewn beyond doubt to have existed, this result is not so valuable as it might have been, had no current existed, but it nevertheless has appeared to me to be one worth investigating, as giving an average of winds as prevailing along the track and close to the centre of the storm for the whole five days.

This summary then, is as follows, beginning with the log of the 22nd, 23rd, which is at noon 22nd by Nautical time, and ending at noon 27th. The winds being given by compass are corrected for 1½ point of westerly variation, to enable the reader to compare the curve with Figs. 1 and 2.

| Winds. | Per log hours. | Corrected for Var. | Traverse. | | | |
|--------------------------|-------------------|-----------------------|-----------|------|------|--------|
| | | | N. | S. | E. | W. |
| North* | 8 | N.b.W.½W. | 7.7 | ... | ... | 2.3 |
| N.N.E. | 4 | N.½E. | 4.0 | ... | 0.4 | ... |
| N.E. | 4 | N.N.E.½E. | 3.5 | ... | 1.9 | ... |
| E.N.E. | 10 | N.E.½E. | 6.3 | ... | 7.7 | ... |
| East. | 7 | E.b.N.½N. | 2.0 | ... | 6.7 | ... |
| E.S.E. | 4 | E.½S. | ... | 0.4 | 4.0 | ... |
| S.E. | 6 | S.E. b E ½ F. | ... | 2.8 | 5.3 | ... |
| S.S.E. | 10 | S.E.½S. | ... | 7.7 | 6.3 | ... |
| South, | 11 | S.b.E.½E. | ... | 10.5 | 3.2 | ... |
| S.S.W. | 7 | S.½W. | ... | 7.0 | ... | 0.7 |
| S.W. | 8 | S.S.W.½W. | ... | 7.1 | ... | 3.8 |
| W.S.W. | 7 | S.W.½W. | ... | 4.4 | ... | 5.4 |
| West, | 9 | W.b.S.½S. | ... | 2.6 | ... | 8.6 |
| W.N.W. | 10 | W.½N. | 1.0 | ... | ... | 10.0 |
| N.W. | 8 | N.W.b.W.½W. | 7.1 | ... | ... | 3.8 |
| N.N.W. | 7 | N.W.½N. | 5.4 | ... | ... | 4.4 |
| 120 hours, or five days. | | | 37.0 | 42.5 | 35.5 | 39.0 |
| | | | | 37.0 | | 35.5 |
| | | | South, | 5.5 | | 3.5 W. |

* Nautical men will notice that the vessel is always marked as changing her NO. 10.—VOL. XV.

Which gives us the resultant wind south 32° W. 6.5 (hours) in 120th or $\frac{2}{3}$ of the whole time or run, and as the run was in all 137 miles, this would give 74.4 miles, calculated in distance.

Now the course and distance made, corrected for variation shewn by the log is N. 42° E. 111; that shewn by the average wind is, S. 32° W. for 6.5 hour, or N. 32° E. 74.4, the difference being occasioned by the varying *distances* made in the different times, arising from the varying strength of the wind, and the effect of the current. The result is always of great interest, for it proves that the vessel, to counteract the current, was obliged to run for one-tenth of the whole time, or ten hours *extra* in the S.W. by W. winds (S. 55° W.), and thus though it does not prove that the wind *was* less strong on the one side (the N.W. side) of the storm circle than on the other, it shows that the current *must* have existed to a great extent.

The resultant curve made by the average of these different winds for the whole five days is also worth attention, and I have projected it in Fig. 3. taking the hours for distances. If this, and Fig. 4. (which are on a larger scale than the other diagrams) be considered attentively with them, we may, I think, without presumption say that, as they are the only *Maps of the winds* in such a hurricane yet traced out, so it will, I fear, be long before we obtain such another.

Its form is also that which theoretically we should say it would assume: for if we suppose a vortex of air of any size moving through the air (like a dust whirlwind) we should imagine it to be liable to be *flattened* in on the foremost, and elongated on the following side, and this ours evidently is. If we suppose that the vortex is not one of independent atoms of air moving forward, but of atoms in their usual places to which a rotatory motion was successively given, like the undulatory movements of particles of water, the same flattening might still occur, though to a smaller degree, and in a different part of the circle.

A somewhat different curve would be shewn by the number of hours of wind in the five days, with the distance run to each, as shewing the *strength* of the wind; the vessel being for the whole time under bare poles.* The resultant of this which is projected at Fig. 4. will be that of the three elements, direction, time, and force, and it will also be *the average of all the curves* of Fig. 1. The table is as follows, and I allow for it the same variation, $1\frac{1}{2}$ point, as in Fig. 3. the $\frac{1}{4}$ of a point more allowed during the last two days in the log making, as before shewn, no difference worth noting.

course *two* points. I suppose she was steered as long as possible with the wind veering a little on the quarter, and then the gradual alteration taken as an average, as is often done in cases of squalls of long duration, obliging a ship to bear up. At p. 724 it will have been noted that $1\frac{1}{2}$ point per hour is the average change.

* And her resistance operating on a large scale like the counter-spring or weight, and friction of an anemometer.

Table of the distances run with each wind.

| | Winds per log. | Hours. | Corrected for Var. | Distance run with that wind. |
|----|-------------------|--------|-------------------------------|---------------------------------|
| 12 | North. | 8 | ... N.b.W. $\frac{1}{2}$ W. | ... 85 |
| 13 | N.N.E. | 4 | ... N. $\frac{1}{2}$ E. | ... 40 |
| 14 | N.E. | 4 | ... N.N.E. $\frac{1}{4}$ E | ... 43 |
| 15 | E.N.E. | 10 | ... N.E. $\frac{1}{2}$ E | ... 111 |
| 16 | East, | 7 | ... E.b.N. $\frac{1}{2}$ N. | ... 87 |
| 1 | E.S.E. | 4 | ... E $\frac{1}{2}$ S. | ... 57 |
| 2 | S.E. | 6 | ... S E b.E. $\frac{1}{2}$ E. | ... 65 |
| 3 | S.S.E. | 10 | ... S.E. $\frac{1}{4}$ S. | ... 94 |
| 4 | South, | 11 | ... S.b.E. $\frac{1}{4}$ E. | ... 109 |
| 5 | S.S.W. | 7 | ... S. $\frac{1}{2}$ W. | ... 77 |
| 6 | S.W. | 8 | ... S S.W. $\frac{1}{2}$ W. | ... 89 |
| 7 | W.S.W. | 7 | ... S.W. $\frac{1}{2}$ W. | ... 75 |
| 8 | West, | 9 | ... W.b.S. $\frac{1}{2}$ S. | ... 100 |
| 9 | W.N.W. | 10 | ... W. $\frac{1}{2}$ N | ... 101 |
| 10 | N.W. | 8 | ... N.W.b.W. $\frac{1}{2}$ W. | ... 88 |
| 11 | N.N.W. | 7 | ... N.W. $\frac{1}{2}$ N. | ... 71 |

There are farther considerations arising out of these results. We are much puzzled when we consider a vortex of air simply as whirling round and without any progressive motion, to say whether there would be a centrifugal or a centripetal tendency? or, a mere circular one, throughout? or even centrifugal at the circumference and centripetal towards the centre?

The laws of physics would certainly indicate a centrifugal force, and we usually suppose then an attraction to counterbalance this; or, again, the mind reverts to the apparently well observed and attested accounts of water spouts and whirlwinds, which all seem to lean to the fact of these small vortices, at least, having rather a centripetal than a centrifugal force; that is, a particle of air or dust in the neighbourhood would be drawn farther and farther inwards. Our present result is evidently to shew this sort of incurving, and the diameter of the storm was a decreasing one!

* The consideration of Fig. 3, in this point of view, leads I think to a practical result of some, or perhaps much importance; I consider it thus,

We see clearly that from X to Y in Fig. 3, and from *x* to *y* in Fig. 4: the whole tendency of the winds was to form a *converging* spiral, and not a *diverging* one, or in other words, a circle of which the wind-arrows would turn inwardly and not outwardly.* Now we can have no manner of doubt, I think, that this storm was one of those which, as I have previously shewn, is really the case (See Journal, Vol. IX. Coringa hurricane) was contracting in its progress, and not dilating as many do.

Is it then the case that, when the storm contracts, the wind forms a converging spiral, and *E CONTRA* if it is a dilating storm, the spiral is a diverging one? We are induced to think this highly probable, and apart from the great interest of it to the meteorologist, if we find it to be the case, it becomes of high importance to the accuracy of our inves-

* Our figure approaches to the volute of an Ionic capital.

tigations, and, moreover, to the practical application of the Law of Storms for the purposes of the Mariner; and it is so from the influence which it has on the true bearing of the centre.

An example will best shew this.

If we suppose a contracting storm, *i.e.* one which has a tendency to *diminish* in size as it proceeds, of 320 miles in circumference, each arc from point to point of the compass of such a circle will have a chord of something less than ten miles; across which we may suppose a scudding ship to run with one wind till it suddenly or gradually changes to another. But according to the hypothesis that the contracting storms are composed of winds converging to the centre, and not of arcs of a complete circle, we may suppose that each of these thirty-two winds and the corresponding chords of their arcs, which are the ship's courses, are also, not perpendiculars to a radius from the common centre, like true tangents, but to the radii from a *succession of centres*, which are disposed round the common centre; in a word, that *they* converge inwardly also, like the wind-arrows on our charts.

In the Northern hemisphere they will probably converge inwardly to the left. In the Southern hemisphere to the right? How *much* do they converge is the next question? for its reply will give us this datum. *The allowance we should make to ascertain the true bearing of the centre in projecting, and even in estimating its position at sea.*

It may be possible to estimate this: approximately at least.

Let us take our circle of 320 miles, and consider the chords of the wind arcs in a *true* circle as forming a polygon of 32 sides, or points.

Now, in our Fig. 3, the amount of incurving at the two points is about seven miles for an average circle, say, of forty-five miles.

The diameter of our circle of 320 miles is (in round numbers always) 102 miles, so that, at this rate of incurving, we may say that the total would be in the same proportion, sixteen; *i.e.* 45 : 7 : 102 : 16.

Now sixteen for 32 points is exactly half a mile for each point, and the chord of each arc of one point is 10-5. An incurving of half a mile in such an arc would give about 5°, or say, half a point.

In the circle of 200 miles in diameter, on which a ship would only be at 100 miles from the centre (at which time in our Bay of Bengal and China Sea hurricanes, a storm is usually fully and unequivocally manifest) the whole incurving would be thirty miles; let us say thirty-two, or a mile for each point.

Now, the incurving of a mile to each point would make a difference on each arc of about 3° only in the direction of the chord, or say a quarter of a point: so that here it would not make much difference. But we may suppose that the incurving is double what we have here assumed, or even more;* and then the difference as to the bearing of the centre might be a point, *i.e.* a vessel in the Northern hemisphere with a hurricane commencing at east, would have the centre bearing, not south but S.b.E. from her; and if we suppose this on a circle of 320 miles circum-

* Is the rate of veering of the winds (in this case, see p. 724, 1¼ point per hour), any index to the amount of incurving?

ference as before, this would for our purposes, in protracting the winds and ship's place for the centre, make it rather more than ten miles to the eastward of its situation if there was no incurving; and, if we again estimated this centre by the cross bearing from the winds of another ship on the eastern edge of the same circle, having the wind at south, and the centre supposed to bear (without allowance for incurving) west, it would really bear *with* this allowance of the incurving W.b.S., and the position found by these allowances for the incurving winds would be fourteen miles to the S.E. of that shown without it!

I think this may often account for many of the discrepancies we have found in reconciling the ship's positions, winds, and bearings of the centre. At present it is of course a mere theory, but the fact on which it is based, viz. the average incurving tendency of the winds in the Charles Heddle's storm seems fairly enough elicited, and to call for close attention.

Like all theories it will serve us as a torch, and a partial guide for the present, and we must wait for more facts to show if it be well founded.*

If (for the sake of hypothesis only) we admit this incurving of the winds, it follows that there may be also, not a single incurving of the same rate throughout the whole breadth of the storm, but that the incurving may be much more excessive, and amount to two or three points when the centre is nearly approached, and even be *so violent at the centre as to prevent ships drifting out of it?* just like the vortex of a whirlpool or a tide eddy, which last we know will often give a boat's crew a heavy pull, or a ship much trouble, before they get out of them. Does it not seem that we have here the explanation of how some ships, as in the case of the *Runnimede* and *Briton* in my last memoir, may be blown and drifted round and round, without drifting *out* of the fatal centre, which we should look for them, nautically, to do, and which other ships there is no doubt really do. An excessive incurving of the winds towards the centre, like the wind-arrows at the centres of Figs. 3 and 4 is one, and one very likely method of accounting for vessels remaining in this hopeless state, and moreover it may assist us in supposing how some dismal losses have occurred whilst other ships in company have escaped. It adds also a most powerful argument, if any were wanting, for every precaution to avoid the centres,—and for every one who can contribute to these researches to do so.

It is possible that at some periods of a storm, the state of it may be such that there is a centrifugal tendency at the circumference, and an incurving or centripetal tendency near the centre, and that at some point in the whole zone of the storm the winds are blowing in a true circle? All this is matter of high interest to us, and for future careful research. I have perhaps been prolix in this section, but if I have been

* I may notice here, that in my third memoir, *Journal As. Society*, vol. ix. p. 1047, in noticing the anomaly of the *George and Mary's* leg, I have suggested theoretically that the storm *might* have divided. We have since abundant proof, that this frequently occurs in the bay of Bengal, as seen in succeeding memoirs.

so, I trust it will be attributed to my anxious desire to urge the subject on the minds of others, and to elicit their views as well as my own.

Conclusion.—Every man, and every set of men, who are pursuing the investigation of any great question, are apt to overrate its importance; and, perhaps I shall only excite a smile when I say, that *the day will yet come when ships will be sent out to investigate the nature and course of storms and hurricanes*, as they are now sent out to reach the poles or to survey pestilential coasts, or on any other scientific service; and it is to be hoped that England will in this, as in every other nautical investigation, take the lead, and that without waiting till some astounding misfortune shall force the investigation upon us. Nothing indeed can more clearly shew how this may, with a well appointed and managed vessel be done in perfect safety, than the experiment which the foregoing pages detail; performed by mere chance, by a fast sailing colonial brig, manned only as a bullock trader, but capably officered, and developing for the seaman and meteorologist a view of what we may almost call the *internal* phenomena of the winds and waves in a hurricane,—and these as mathematically proved as the nature of things will allow,—which we could scarcely have hoped ever to have obtained. The importance of the questions which arise when storms are considered in any of their relations, in war or in peace, to a great Naval and Commercial Nation, and to mankind in general, cannot, I think, now be doubted.*

NAUTICAL SKETCHES.—No. IV.

AMONG other officers of the 17th century who rose rapidly to the flag, was, Sir John Harman, who was promoted to the rank of Rear Admiral when “scarcely twelve months had elapsed since he first became a commander,” and Sir William Berkley, who was promoted to be Rear-Admiral of the Red squadron, when he was only twenty-six years of age.

Sir Christopher Myngs, in the year 1662, was promoted to be captain of the *Centurion*; in 1664, he became, in rapid succession, captain of the *Gloucester*, *Portland*, and *Royal Oak*, and advanced to the rank of Vice-Admiral of the Channel fleet, under Prince Rupert. In our day the opposite course has been observed, and an officer reaches his flag only when he is an old man, and his energies nearly worn out. Independent of the rules which govern promotion, a concurrence of circumstances led to this; and the only plan by which it can in any degree be remedied is, that of reducing the lists, and not exceeding a certain number on each:

* While correcting this page for the press, we received an account in the newspapers of the dismal catastrophe of the loss of the emigrant ship *Cataragui*, at the entrance of Bass' Straits, in which 414 souls have perished in the prime of life! This vessel was evidently on the northern side of the rotatory gale, and swept, in all human probability, by the storm wave, as in the analogous cases in the British Channel, far to the eastward of any supposed possible drift.

this no doubt will be carried into execution. Sir John Narborough received his first commission as lieutenant in 1664; in nine years after (1673) we find him Rear-Admiral of the Red.

It appears evident that the power of advancing an officer from the subordinate grades to the rank of Admiral, was, in those days exercised apparently without control; but whether it was held as a prerogative of the crown, and delegated to the office of Lord High Admiral, or was a licence granted by special order in council, or embodied as a rule in the regulations of the navy, or executed according to the exigencies of the service, without regard to any existing law, I have no means of determining.

The subject is one of some importance to the navy as it is at present constituted; and a renewal of the power after lying so long dormant, or in the language of the law—in “abeyance,” may have an unexpected effect. It may not be altogether uninteresting if we venture a few observations on a question of so much consequence.

We may infer that formerly, the power was exercised more from necessity than from just expediency. The navy required expert and clever leading men, and as the number of officers of the higher grade was very few, and there was a constant demand for those who possessed qualities suited to the activity of the times, the authorities were constrained to follow no sort of regularity with respect to promotions. The very reverse is now the case, we have a super-abundance of officers of every grade, a consequence arising evidently from a very protracted war, and the necessity of acting justly by those who devoted their lives in defence of the country.

Thirty years of peace has enabled the authorities to reduce the overgrown lists; but still as our empire is so widely spread over the world, the employment of the navy has been unprecedentedly extended, and the reduction of the lists not to the extent commensurate with the wish of the nation, or those who rule. The necessity for the revival of the power is, therefore, clearly not imperative. What would then be the object to be gained—that merit might reap the highest reward?

We may start off by uttering a truism, “men are men,” they have one and all what is called feelings, and the officer, especially, nice feelings, easily wounded. We must study human nature; blind acting leads but to mischief,—these points are worthy of the deepest attention.

The practice was exercised in the 18th century, but it appears to have given rise to great dissatisfaction. The case of Admiral George Churchill may be cited as an instance of the ill effect arising from its adoption. In the battle off Cape La Hogue, as a captain he commanded the *St. Andrew*, a second rate, and “performed as good service as any officer in the fleet.” Soon after that memorable victory over the French fleet, “Colonel Aylmer,” being a junior captain, on the list, to Captain Churchill, was promoted to the rank of Rear-Admiral. What was the result? Why that of Capt. Churchill retiring into private life in disgust.

The naval historian, Campbell, says: “I shall not take upon me to censure this part of his conduct; though I must say, that I think it would

be a very difficult task to justify it; since every man is bound to serve his country whether he be rewarded or not; and, therefore, every resignation of this sort is usually attributed to a narrow and selfish spirit, though it is not impossible it may spring from a nobler principle; however, it is better certainly for an officer to avoid all those steps in his conduct that are liable to such sinister interpretations."

The peroration is valuable advice no doubt; but at the present day people seem to think that they are only naturally bound to defend their country from foreign foe; but seamen believe that it is but just to be rewarded for their services in aggressive war.

It would be inflicting a wrong on individuals if it were otherwise, unless every man took his turn to fight the battles of his country at home and abroad; but, as such an arrangement, for very obvious reasons, can never be put in practice, those who qualify themselves, and expose their lives in warfare, should be well rewarded for the sacrifices they make in the defence of their countrymen, who, "live at home at ease," and run no such risks.

Although Capt. Churchill retired, it is probable, as a high-minded man, had his country required his services, he would have been found ready. The sequel of the gallant admiral's career is so curious, as showing what strange whims fortune takes that I must needs repeat it here.

In 1669 he was appointed one of the Lords of the Admiralty, and, upon the accession of Queen Anne, one of the council to her consort, Prince George of Denmark, who was the Lord High Admiral. But that was not all; he was promoted to be Admiral of the Blue; which, by placing him above Admiral Aylmer, the same who had formerly stepped over his head, had the very same effect upon him, as that step had had on Capt. Churchill, for he immediately quitted the service, and remained several years unemployed. All officers feel the effect, but the aristocratic by birth or fortune, more poignantly than the man who has no other dependence than the service; for necessity, like a soothing mother, softens down the depression. Under such a circumstance, a man's pride—his self-love, is wounded, and all those passed over feel as if some stain was left upon them in the transfer of the junior over their heads; that is human nature.

We have another case in Captain Sir James Wishart, and Captain Whetstone; the latter of whom, being a junior officer to the former, was promoted to be Rear Admiral over his head. The "steam" of the knight's wrath was up as a matter of course; and, as a matter of course also, he sought the aid of his friends in power in remonstrance. Men in authority very generally were pertinaciously stubborn in yielding a point; it, to them, looked like a defeat by a lesser force, truth and justice, however, are incapable of hesitation, simply because free from the possibility of error; but the power that does a wrong, and corrects it gains a triumph,—a triumph of the most boastful kind—a triumph over self. That is a principle of our nature too; would that it were always followed.

Sir George Rooke by his firmness, got the matter settled satisfactorily, and Sir James Wishart was placed in his proper station above Admiral Whetstone.

Admiral Vernon was passed over; he was not the man to submit to that slight with a very good grace; it was *said* to have been an error, and as such corrected. It is probable that there is something more in this incident than has yet ever been published. However, the *fortunate*, but still unfortunate, veteran, ultimately received his *quietus*, and has left naval men a lesson for study.

I profess not to see the advantages that would arise to the country by the revival of the exercise of this power,* with reference to the advancement of any captain to the flag; I think it would be none to the service; but on the contrary create a great deal of jealousy and unpleasant feeling among the senior officers. The sort of merit upon which the power would be exercised relates to personal bravery, an award for some dashing action, which demands marked reward, acting with a two-fold effect, an individual recompense and a general stimulant. Now, courage is an innate virtue, or quality, in Englishmen; and fearlessness is a characteristic of British seamen of all grades generally; honorary distinctions are, therefore, best suited for meeting such displays whenever these happen to be conspicuous, because, when impartially awarded, they do not create jealousies, and can do no violence to long established order; whereas, the promotion of a junior captain over the heads of many of his seniors, would be a jar to long usage, and appear any thing but fair towards those whose only misfortune is that of not being placed in the same position for the display of courage as the successful officer. Such are, also, the feelings of human nature. Besides, there is this contingency, which may be taken as a strong objection; it may happen that the author of a dashing action or exploit possesses no other professional merit; would you place a man so constituted in the command of a squadron or fleet, merely because he has performed a gallant action, which most, at least, of his brother officers would have achieved had they been in his stead? Honorary distinction would meet such a case.

In war time, a good plan would be to establish a fund, to be called "The gallant service reward." We have in peace a "Good Service Fund," why not the other in war? Prize money, it is true, has been given as an encouragement, but it is a lottery; and those who have the hardest knocks often get the least in a pecuniary way.

Honorary titles, which cost little or nothing, are held in estimation by most persons, and would, perhaps, become more advantageous to the state, if backed, in special cases, by a pecuniary grant. In some instances this has been attended to by Parliament.

Leaving aside selfishness, it is in human nature to be emulated to duty by encouragement; it gives warmth to the heart, expands the feelings, raises the spirits, and makes a man "equal to himself;" which, neglect certainly will never do. A man is proud of being thought well of, and noticed by those in authority, and it will spur him on to excel, the more

* A power in the Admiralty to promote any master of the navy (after a qualified time), to the rank of commander, at once; and any second lieutenant to the rank of first, and any first lieutenant to the rank of captain, (after the regulated time as observed in the army), in the marine corps, for conspicuous gallantry or abilities, would, no doubt, give every satisfaction, to the parties.

especially, where there is high feeling, that the award of his merit will not give pain to another.

There are, generally Admirals upon the list, enough for selection; and any captain of eminent abilities and courage, may be chosen to hoist his pendant as a Commodore, taking care to select the rest of junior standing to him, for the performance of any particular service. Considering the great number of captains on the list, there would be but very little difference in such an arrangement; for it is not alone a point of delicacy to be attended to, but one of policy as well as of justice; indeed, however strong the necessity for strict obedience to any call upon those who serve their country, it has been the practice of the "Powers that be," to pay a deference to the feelings of the higher officers of the service. This has been rarely departed from in our days; and, unquestionably, it is a condescension not lost by the strictness of its observance. I need scarcely advert to an instance in the late war to show the ill effect which a departure from its fulfilments causes. Sir Home Popham was, no doubt, an officer of varied talent, and much experience; but his selection as captain of the fleet, at Copenhagen, assuredly did not "sit well on the stomachs" of the Keats, the Hood, &c., first-rate in a nautical way; and by St. George! (our tutelary) it was not a trifle that would, that could, have made such sterling hearts "heave and set!" Assuredly a British officer is not alone to be valued for his professional skill; high feeling, that noble integrity of mind which is capable of comprehending the meaning of the word—honor! and never deviating from its dictates, stamps an equal value upon his character; and on no occasion should those exalted principles be trifled with, much less outraged. What is his motto?

"Set honour in one eye, and death in the other,
And I will look on both indifferently:
For, let the Gods so speed me, as I love
The name of honour more than I fear death."

In modern times, the profession of advancement comes to a stop, for an indefinite time, at the captains' list; arrived at that point, there is a stand still, as far as the mounting the ladder of Fortune; but even after that, the spell is not entirely broken; but I need not say more on a subject so trite.

The privilege adverted to, (with reference to the alteration upon particular occasions of rise by seniority to the flag,) has always been exercised in the grades below, and has not lost its vigour. But there has been a much more equitable distribution of reward, with reference to advancement among the junior officers, and assuredly a marked earnestness in fostering merit.

With respect to the older officers of the commanders' and lieutenants' lists, there appears to be two antagonist principles in opposition to justice, who has more of truth than of persuasion in her voice,—overgrown lists, and financial blindness—all national Plutus are blind. However, there is an end to all things. Time, who is, de-facto,—perpetual motion, like a torrent's flood, is driving the whole of the veterans, with their gray hairs, and the "Thanks of Parliament," as ballast, away to that "bourne whence no traveller returns;" and, to many, very many, it will

be a happy release! But, the last shout will still be for their country and their noble profession—with this prayer, “That the high spirit of the captains may never be tampered with, as those of the commanders and the lieutenants (perhaps unavoidably) have been.”

THE MARIA SOAMES' HURRICANE.

London, September 2, 1846.

SIR,—In your useful publication for the present month, after describing the series of disasters which happened to the *Maria Soames* in the hurricane to which she was so nearly becoming a victim, you regret that the injunctions which were to be found in Redfield, Reid, Piddington, and Thom, and in your own pages, had not been more successful; as they would have taught her how to find her way out of the storm, and thus have saved the valuable lives which were sacrificed to ignorance. You then adopt a couple of pages from some writer in India, who, with the ship's log-book before him, stating what had taken place, very coolly gives *ex post facto* directions for what ought to have been done by her commander, in order not only to escape the impending tempest but to have actually converted it into a fair wind, which would have placed her 150 miles in advance on her voyage.

Now, Sir, I am acquainted with most of the writings of those authors respecting the “Law of Storms,” and I have read most of what has appeared in your own pages thereon; and though quite willing to admit that there is a singular rotatory action accompanying the movements of some storms, yet there is one point on which I and all to whom I have spoken on the subject, are still entirely ignorant, but which is absolutely essential, if any use is to be made of all that has been sung and said by those gentlemen.

That point is, the means of knowing *on what quarter of the storm circle the vessel is impinging*. And if you will be so good as to give us, either from your own resources, or from some of the many writers you have occasionally quoted and eulogised, a plain practical rule for that purpose, you will do your brother seamen a real service, and you will make me a ready

CONVERT.

Our correspondent has proposed to us in a very few words a very important question. It is one, however, the answer to which is so simple, as not to require that we should call to our aid any of those works which he mentions, and to which we alluded when we condemned the management of the *Maria Soames* in our last number. We will, therefore, answer him as briefly as we can according to our view of the theory which has been propounded by the authors of those works, and we shall refer him to them occasionally, that he may see the authority for the statements we shall make. And moreover we shall address ourselves at

once to him as a seaman directly, and not indirectly in the third person, as by that means our observations may find their way home to other seamen who may have been hitherto as incredulous as himself on these matters.

We understand you then to inquire in the event of your being overtaken by a hurricane, "What are the means of knowing on what quarter of the storm circle the vessel is impinging?" We tell you that the direction and change of the wind will afford you the desired means. In fact, to use a homely phrase, the whole thing lies in a nutshell. So if we are really to expound the law to you we must begin at the beginning.

First, then, all observation has established beyond any question that the storms or hurricanes of which we are speaking, are huge whirlwinds; immense turning storms, as Piddington calls them, varying in their size and expanding sometimes to as much as a thousand miles in diameter;* the wind forming them, rushing with amazing velocity (terrific it is well known to be) round a focus.

Secondly, it has been established by observation also, that the direction of the wind which forms these whirlwinds is opposite in opposite hemispheres—that is, that the wind as it rushes round its focus in the northern hemisphere blows from east to west round by north; and in the southern hemisphere that it blows from east to west round by south. Singular as this fact may appear to you, it is one that is established by all the investigations that have been made by the authors we have mentioned, and it is one of the principal elements that enables a seaman to answer the very natural question which you have advanced.

Thirdly, it has been also established, that the entire whirlwind while the wind of it is blowing furiously † round its focus, forming as it were a vortex in the atmosphere, progresses or travels along generally from the east to the west; in some parts of the world to the northward, and in others to the southward of west, at a rate varying from three or four to twenty ‡ miles an hour.

These three are the principal distinctive features of the hurricane, but there is another very important fact which belongs to the subject and which we must not omit, for it will enhance the importance of your barometer. It is

Fourthly, your barometer § will indicate the approach of a hurricane. The mercury will fall gradually from the outer limit of the whirlwind, as the focus approaches where it will be at least an inch lower, sometimes more, and it will rise again to its former height as the focus increases its distance, but its rising may not be so gradual as its descent.

There are, besides the foregoing, other indications of the approach of a hurricane at the particular season of the year in which they visit cer-

* Piddington's "Notes on the Law of Storms," p. 35.

† About a hundred miles in an hour is considered to be the velocity of the wind in a hurricane.—"An Inquiry into the Nature and Course of Storms." &c. By Alex. Thom, p. 14.

‡ Ibid. p. 14.

§ On this subject see "An Attempt to develop the Law of Storms; by Lieut.-Col. W. Reid, R.E., p. 517. Also, Piddington, p. 35. Thom, p. 218.

tain localities, such as the veering of the wind from its usual quarter, the appearance of the sea and sky, the former being cross and confused and the latter close and sultry, perhaps with heavy dark clouds, perhaps gloomy, but the foregoing are the main principles and are sufficient for our present purpose. We will now apply them to answer your question.

You will perceive then, on considering the second of the above principles, that if you are in *north latitude* the hurricane wind will be from the east on the *north side* of the storm circle, and if you are in *south latitude* the opposite will take place, you will find the wind from the east on the *south side* of it. In both cases you may readily complete the circle in your mind: in the first case, of *north latitude* on the *south side* of the storm circle, you will have the wind from west, and in south latitude on the north side of the circle you will also have the wind from west. Now all this will be much more intelligible to you with a compass before you. Therefore lay off a *magnetic** meridian on your chart and complete the compass points roughly by hand if you like with a pencil and describe a circle round them.† We will suppose you were on board the *Maria Soames* and south of the line when she got into her hurricane, therefore mark on the circle a few arrow heads pointing from left to right to represent the direction of the wind. Your magnetic north will now shew the wind as coming from the west; and if we suppose a straight line drawn as a tangent to your circle at right angles to each point of your compass, to be an arrow passing from left to right, it will shew the direction of the wind on referring it to your compass; and the point of the compass to which it is at right angles, will shew the direction of the focus of the whirlwind from you. Thus then is your question answered.

By referring to the last number of this work, you will see that the *Maria Soames* had the first wind of her hurricane from the west. The focus must, therefore, have been south of her; it was afterwards W.N.W., and the focus must then have been S.S.W. of her, this change affording in itself a sufficient indication that the focus was passing to the westward, and that you were in the northern quarter of the storm. This at once shews you how wrong it was, on the part of the commander of the *Maria Soames*, to run down to the southward, and on a S.W. course, too, as if to overtake the focus itself! What she should have done was to have got away to the eastward and S.E., which she had fair enough wind for; but, perhaps, her captain did not like to run away from his course. But, with respect to what a ship should do when she is overtaken by a hurricane, that involves several important considera-

* The magnetic meridian, because the direction of the wind is referred to the compass.

† Colonel Reid and Mr. Piddington have proposed a piece of horn with the circular direction of the wind described on it, and the latter gentleman has well illustrated its use in his "Hornbook." But, although it is particularly well adapted for the intended purpose, and we might refer the seaman to his hornbook, still we prefer giving him principles that he may work for himself and reason on what he is doing. Besides, hornbooks may not be at hand and a knowledge of the principles, when once obtained, always is.—Ed.

tions, depending on how the focus bears from her, the direction in which it is passing, and the course she is steering. These would take us beyond our limits, and may be as well reserved for another number.

We have answered your question here, and we hope to make a real "Convert" of you before we leave the subject. But if we have made ourselves understood, you will have seen the truth of our answer, in the instance of the Maria Soames.

AUTO-BIOGRAPHICAL SKETCHES, by a Merchant Sailor, illustrative of the State of the British Merchant Service.

Continued from page 483.

WE continued our passage along the coast amongst the various banks, with the usual number of anchorages to await tide; in all the management, during the period, the master evinced a perfect knowledge of his business, and devoted his time and attention strictly to it. The mate and crew were also much more attentive, they were evidently more at home in the coasting duties; the anchor watches were strictly kept; the mate called at the time necessary for getting underway, and I never saw an instance of neglect of look out on the part of any of the men. When called by the mate to get the vessel underway, the crew jumped out of their hammocks, rushed on deck, and seizing the favorite handspikes, placed them in the favorite holes in the windlass, according to the celerity with which one got up before another. This done, they returned below, lighted their pipes, smoked while dressing, and in ten minutes from the first call were on deck ready for heaving in the chain.

We had adverse winds and squally unsettled weather, protracting our passage very much, and causing us to anchor frequently. We remained a day in the Downs, were obliged to anchor under Dungeness, and repair our sails which were split; again in Torbay, to avoid a strong southwester, and finally were driven into Falmouth for some days to avoid a gale, before we ultimately reached Bristol, our port of destination. There was nothing in the weather we encountered to prevent a well equipped and well managed vessel keeping at sea, by which means our passage might have been made in much less time, but the owner was notoriously grasping, and never kept his vessel in a properly equipped state. On this passage that parsimonious plan must have cost him something in pilotage, port-charges, extra wages, and other expenses contingent on our going into harbours, and protracting the passage.

When the Bristol pilot took charge he brought his own helmsman, and also got a boat well manned in King roads. We went up very quickly in the strength of a strong flood tide, and were very suddenly, and surprisingly sucked as it were into the Avon, under the two topsails and staysails; the pilot backing and filling our clumsy tub of a vessel up the narrow river, between very high mud banks, in the most beautiful and seamanlike manner; the crew only attended the braces.

Arriving at Bristol, I was once again at liberty, the cargo being discharged by lumpers. The master pressed me very much to accompany him on another voyage to America. I had, however, seen quite enough of his management, and resolved to go to London to look for another vessel. On the day on which we were paid our wages, the carpenter said, "We will ask the master into a public house to pay us, and give him some porter." I was amazed at the bare idea; however the invitation was given, and accepted with the utmost apparent willingness, as if it was only a matter of course. When paid, pipes, tobacco, and grog were introduced, and we set some hours smoking and drinking; the master cracking his joke, and enjoying the fun as much as any of the crew.

Arrived in London, I became desirous of going in the southern trade, and, for this purpose, was introduced to the chief mate of a Liverpool brig lying in the London Dock, bound to Bermuda, with goods and government stores for the dockyard. At this time it was the custom for the crew to be engaged when the vessel began to load, the crew taking in the cargo, and fitting the vessel for sea. This custom is now entirely gone, lumpers loading the cargo, and riggers equipping the vessel. I found the system on board this craft different to any thing I had hitherto seen, and certainly strongly contrasted with the collier; the mate wore a clean white shirt, was always addressed with the formal "Mr.," and invariably replied to with the addition of "Sir." The mate engaged all the crew without the captain's sanction, indeed, I was some days on board before I saw him. Even then I only saw him on the quay; he never came on board; he appeared a gentlemanly, mild spoken, quiet man, accompanied always by his wife, a lady-like person. The sequel will show how far his character corresponded with first appearances.

The three or four weeks, during which we were equipping, passed away without much occurring worthy of mention. I found the chief mate a very consistent christian, an excellent sailor, very attentive to his duty, and kind, although firm in his conduct to the crew. The second mate was an old servant in the owners' employ, an ignorant, brawling, disagreeable, overbearing fellow, always inclined to play the bully. The carpenter, a fine, respectable, old Scotchman of great experience, a most excellent tradesman, and a good man. The seamen were a careless, rollicking, jolly set, such as sailors generally are, altogether different from the sort of men I had formerly been amongst; much cleaner in their personal habits, and smarter in the performance of their duty; were respectful to their superiors, and particular in relieving each other on duty.

When the cargo was loaded the master came on board to sign our Advance Notes, and enter the crew on the Muster Roll. One was summoned into the cabin after another; at last my turn came, and I went below with a considerable degree of fear, having heard so much of the severity of discipline on board vessels in the Southern trade, and particularly in Liverpool vessels. I found the captain seated at the table, and the chief mate standing close to him: the former at once asked me my name, place of birth, time I had been at sea, the description of vessel, and then abruptly said, "Well, now, can you steer?" I hesitated a little,

not knowing whether steering as I had been accustomed, would be steering as done on board these vessels. However, I replied, "I have been accustomed to do so.—" "With a tiller or wheel?" "With both." "Can you heave the lead?" "I have tried it." "Name the marks and dips on the lead line."—I did so. "Can you pass an earing?"—"I have done so before." "How do you pass your turns?" I told him. He then said, "I think you have run away from home;" I assured him I had not. He then gave me a long lecture about my future conduct, evidently from the impression that I was some wild unmanageable youth who had deserted home.

Once loaded, the pilot came on board, the crew were got on board with difficulty, most of them intoxicated; a steamer took the brig in tow, and we proceeded to Deptford, where we anchored to get a magazine built to contain gunpowder. We got to Deptford late at night, several of the crew never on deck, and the mate wisely allowing them to remain below until they got sober. Next morning about five o'clock, to my amazement, as well as the mate's, the master came alongside in a wherry, and ordered the crew to be called; it was generally a slow turn out, and several of them could not come, from the effects of liquor: the master himself went and called them, and not succeeding, he got a knife, and going below into the fore-castle, cut them all down, that is the lanyards of their hammocks, causing them to fall with considerable violence, and rousing them from their drunken lethargy, the master all the time swearing at them and threatening all sorts and degrees of punishment. Once on deck and all hands mustered, the lecture was again gone over, threatenings of punishment, enforced by oaths forming a principal part, winding up with notice that we should never know when he might be expected to visit us, and that he would be found a sharp hand. All this tended to frighten me in no small degree, and I began to wish myself well out of the craft. The rubicon was however past, and I resolved to take my chance.

Our lading being completed we embarked three passengers, two ladies and one gentleman, as well as the master's wife, who determined to go the voyage with her husband. Nothing particular was observed in the master's conduct until we arrived in the Downs, when the pilot left the vessel. It was late when we arrived, and as soon as the sails were furled, the anchor watch was chosen and set, two men in each watch. Myself and a French Canadian had the first watch, and having received our orders from the chief mate, we went forward and he went below. My watch-mate, an old sailor, said, "It is a fine evening; it is perfect nonsense having two hands on deck, you will keep the first hour and I will keep the second;" he accordingly went below, where he had been about five minutes when I heard a voice from aft, hailing, "Forward, there!" I was somewhat surprised: again the hail was repeated, "Forward, there!" I then recognized the skipper's voice, called to my watch-mate to come up, I answered with the usual, "Sir;" when the watch was ordered aft. Aft I accordingly went, followed by my watch-mate. On arriving at the front of the half poop, we found the captain, with his hands resting on the poop-rail, leaning forward towards

us ; he abruptly called out, on our approaching, " Who are you ? " We each called out our names ; he then pushed his head close to each of ours alternately, his eyes staring with a degree of wildness, at each of us for some seconds, he then said, " Well, what are you on deck for ? " my companion answered, " To keep anchor watch. " " What do you mean ? " asks Jemmy, for by that name he was already known among the men. " To watch whether the vessel drives. " " How do you find that out ? " — " By the lead and the bearing of the lights. " " How do the lights bear ? " My companion was fairly puzzled, but went aft to the binnacle to see. We then got a long lecture on care and attention to duty, with the additional information that we would find him a tight hand. This scene over, the master went below, we fancied we would now have a quiet watch. In ten minutes, however, the same hail was heard, exactly the same cycle of questions and answers gone through, and, as our ship-mates told us, the same system was kept up during the night, the skipper all the time evidently under the influence of brandy and water. His conduct caused a few remarks, but it was by some thought to be merely an extra glass on parting from the country ; by all he was concluded to be a queer fellow, and the result was looked forward to with anxiety.

Next morning we got under way and worked out of the Downs, the watches were chosen, the master selecting me for his watch. Up to this time I had not been at the wheel ; coming down the river the pilot had turned two men away for bad steering, and I, afraid of being treated in the same way, had hitherto avoided going there. When the watches were chosen and the men gone forward again, the master sent for me, desired me to take the wheel, and after watching me for some time, praised my steering, and calling the mate, desired him to lend me a quadrant and allow me to use the log-slate for the purpose of keeping a journal. From this time the master was always excited from drinking ; he could always walk and speak, but there was a wildness in his eyes and irregularity in his conduct, evincing the state he continued in from too much stimulus. He even quarrelled with the passengers, and so far was the difference carried that they dined at different times : his conduct towards them was very reprehensible, and had the gentleman carried the matter into a court, he could doubtless have had redress. On leaving soundings at the entrance of the Channel we encountered a very heavy gale. The brig having too much weight below, made very bad weather, rolling fearfully, our spars and water casks broke adrift on deck, and were secured with great difficulty. This gale proved to us that the master was not much of a seaman ; he seemed puzzled what to do ; fortunately he permitted the mate to take charge, who after considerable labour brought things to something like order and regularity.

After dinner the master was always much excited, especially just after dark ; he would run forward every ten minutes, enjoining a good look out for ridges, rocks, or islands, which existed only in his own fevered imagination. His address, on these occasions, was generally, " Now, men, keep a good look out, " describing what he expected to see. Every time he came forward he would go and lean over the rail on the fore-castle, and so remain peering into the dark distance for a few minutes ; he would then

hurry aft, again to repeat the same course of conduct in a short time. It was evident that he either could not or did not keep any reckoning, the mate keeping the chronometer going, and working the sights, all the time. However, the master was always very gentlemanly in his conduct and conversation, with the exception of the swearing, at which he was quite *au fait*. The crew, therefore, were amused more than annoyed at his vagaries; and as he never interfered with the mate's management, the vessel was conducted with a due regard to discipline. He would keep running about the deck all night, and about 5 A.M. would lay down and sleep on the hen-coops, for an hour or two; he then went below, and in the forenoon began the usual course of extravagant conduct caused by increased stimulants.

On arriving at Bermuda (which we did from the mate's reckoning), and getting rid of the passengers, the master became if possible more excited. He began to look thin, could not eat his breakfast, and soon after leaving Bermuda, his appetite entirely failed; he could no longer shave, delirium tremens attacked him, and he was more insane than usual, presenting a most miserable appearance. During the passage I remained a favourite with him, and the mate caused me to compare reckoning with his every day. With the exception of the second mate's bullying conduct, we were all very comfortable in the forecabin, and many a spare hour of the watch below was spent in my reading to my watchmates, who would, in return, mend my clothes, to enable me to have time to read. We had plenty of liberty on Sundays, which was generally used in walking about the beautiful islands, viewing the many objects so new and interesting to me. The stalactite caves were frequently visited objects of great interest, and I feel certain I saw more of the islands than the master or mate did. The latter, indeed, could not leave the vessel in consequence of the master's conduct. As I formerly mentioned, the mate was a very serious man, and having permission, on leaving England, to read prayers on Sunday, this had been done on the passage out; the master was very much opposed to it, and the second mate more so; every thing the latter could do to show his contempt was done. Prayers at sea had always been read shortly after 10 A.M., the duty of the vessel not interfering. After getting into harbour, the second mate determined to prevent that being done, by keeping all hands employed, according to the usual custom in Liverpool vessels in the West India trade, at that time. He accordingly, the first Sunday after our arrival, called the crew at daylight—the chief mate was not on deck, and would, if he could, have opposed it. The second mate had, however, secured the master's acquiescence, and that was sufficient. We holystoned decks, on our knees, with hard stones and sand, until breakfast time; we then commenced washing down, scrubbed ship outside, one party went for water in the long-boat, while another hoisted up the pinnace alongside and scrubbed her bottom; by noon we had finished, the second mate regretting that there was nothing else to do. We had scarcely retired to the forecabin for the purpose of cleaning ourselves before the steward came forward to call us to prayers in the cabin. The crew at once refused to go. The chief mate came forward, and calling me up, asked me if I had also re-

fused. I said I had, as I considered it too inconsistent to go on our knees, on the morning of the Sunday to do unnecessary work, and immediately afterwards to do so in prayer. He admitted the inconsistency, and said it should never occur again. He, accordingly made a strong remonstrance to the captain, seconded, I believe, by his wife, a very amiable woman, and henceforth, on board the brig, there was no holystoning or scrubbing on Sunday, in fact the decks were generally washed on Saturday night.

ON FINDING THE LATITUDE AT SEA.

11, *Acre Terrace, Stoke, Devonport, Sept, 8, 1846.*

SIR.—The correctness with which the Latitude at Sea may be found by the altitudes of two bright stars taken at the same instant, during twilight, or when the horizon is well defined, must be known to most of your nautical readers; but the necessary calculation being considered as a long and tedious operation, has prevented many from profiting by it, in order to obtain the latitude.

I beg leave to enclose a plan, by which that important element in position may be found independent of any watch or chronometer; following the rules given by Capt. Sumner in his work, "To find the position of a ship at sea."

Should you deem it worthy a place in your valuable Magazine, I shall feel obliged by your inserting it, for the information of our nautical friends.

I am, &c.,

To the Editor *N.M.*

J. BURDWOOD, *Master R.N.*

To find the Latitude by the Altitudes of Two Stars, observed at the same instant.

1st.—Take from the Nautical Almanac the right ascensions and declinations of the two stars for the day of the month, or the nearest to it. With the *true* altitude of one of the stars, its declination, and a latitude (the degree next *less* than the supposed latitude), find the stars' hour angle, or distance from the meridian, which, put under the stars' right ascension; *add*, if the stars be west of the meridian; *subtract*, if east, adding, if necessary, 24 hours to the upper line, the sum or difference will be sidereal time, call this *A*.

With the same altitude, declination, and a latitude a degree *greater* than the last used, find sidereal time; call this *A'*. Make a similar calculation for the other star; call the sidereal times *B* and *B'*.

Turn the sidereal times into degrees and minutes. Construct a Mercator's chart for the parallels of latitude used (50° and 51°), and lay off the sidereal times *A* and *B* (in degrees and minutes) on the chart on the parallel of 50° , and those of *A'* and *B'*, on the parallel of 51° , as if they were longitude. Draw a line through *A A'* and *B B'*, their intersection will be the true latitude.

N.B.—It is not absolutely necessary to construct a chart, as any, on Mercator's projection containing the parallels of latitude used, will answer the purpose; merely placing the sidereal time (in degrees and minutes) in pencil, on the degrees of longitude.

Example—Aug. 13th, 1846, being between 50° and 51° north latitude, the *true* altitudes of the fixed stars Arcturus and Altair, observed at the same instant, were

Arcturus W. of Meridian.

| | | |
|-----------|-------|------------------|
| True alt. | . . . | 33 10 28 |
| R. A. | . . . | 14 8 40 in time. |
| Declin | . . . | 19 59 13 N. |

| | | | | | |
|------------------|-------|---|-------------|------------|---|
| | ° ' " | | ° ' " | | ° ' " |
| Lat. 50 0 0 N. | } | h. m. s. | 51 0 0 N. | } | h. m. s. |
| Dec. 19 59 13 N. | | 4 7 14 H. ∠ | 19 59 13 N. | | 4 6 16 H. ∠ |
| T. A. 33 10 28 | | 14 8 40 R. A. | 33 10 28 | | 14 8 40 R. A. |
| Sid. time. | | 18 15 54 | | Sid. time. | 18 14 56 |
| | | <hr style="width: 50%; margin: 0 auto;"/> | | | <hr style="width: 50%; margin: 0 auto;"/> |
| | | 273 58 40 = A. | | | 273 44 = A'. |

Altair E. of Meridian.

| | | |
|-----------|-------|-------------------|
| True Alt. | . . . | 44 19 52 |
| Dec. | . . . | 19 43 20 in time. |
| Declin. | . . . | 8 28 15 N. |

| | | | | | |
|-----------------|-------|---|------------|------------|---|
| | ° ' " | | ° ' " | | ° ' " |
| Lat. 50 0 0 N. | } | h. m. s. | 51 0 0 N. | } | h. m. s. |
| Dec. 8 28 15 N. | | 1 31 21 H. ∠ | 8 28 15 N. | | 1 20 40 H. ∠ |
| T. A. 44 19 52 | | 19 43 20 R. A. | 44 19 52 | | 19 43 20 R. A. |
| Sid. time. | | 18 11 59 | | Sid. time. | 18 22 40 |
| | | <hr style="width: 50%; margin: 0 auto;"/> | | | <hr style="width: 50%; margin: 0 auto;"/> |
| | | 272 59 45 = B. | | | 275 40 = B'. |

It will be observed that, the preceding being merely the calculation of four hour angles, and the operation for each nearly similar, its simplicity may recommend it to the attention of the careful navigator, anxious to obtain his latitude, especially when approaching the English Channel; to small vessels, having no chronometer, it will be found exceedingly useful. Several bright stars east and west of the meridian are often seen in the twilight, when their altitudes from the distinctness of the horizon, might be correctly measured.

The above will also answer for two planets, or a planet or star. The former, by changing its position in the heavens, will require a small correction for its right ascension, and declination; but a ship must be several degrees out in her longitude, to affect materially the latitude found by this method.

ANNUAL REPORT OF THE GENERAL SHIPOWNERS' SOCIETY.

THE annual meeting of this Society took place (August 12th), at the Hall of Commerce, George Frederick Young, Esq., in the chair. There were also present Aaron Chapman, Esq., M.P., Lord George Bentinck, M.P. (who addressed the meeting at great length), Nathaniel Gould, Esq., R. A. Gray, Esq., — Mangles, Esq., J. Somes, Esq., H. Buckle, Esq., &c. We submit the annual report of the Committee, which was read by the secretary :—

“ Since the presentation of the last annual report, important changes in the commercial policy of the country have engrossed the attention of parliament and the public. To these changes from their bearing on the interests of British navigation, it will be the duty of your committee in this report to advert; but before entering on any consideration of a topic embracing general principles, still the subject of eager controversy, and on which it cannot be denied that wide differences of opinion prevail, even among shipowners, it may be more convenient that they should dispose of matters of detail, by communicating such information as they deem it requisite to convey on the several points to which, during the past year, their labours have been specifically directed.

“ The increasing frequency and fatal consequences of collisions at sea, render it an imperative duty that every practicable precaution should be taken to guard against their occurrence. The attention of your committee has been anxiously directed to the question, and they are of opinion, that the rules sanctioned by the Trinity Corporation for the ‘Navigation of Steam Vessels,’ are well calculated to prevent these disasters; but although they have been largely circulated by the Trinity Corporation, they do not appear to be sufficiently known to shipowners and masters. To assist in their more extensive promulgation, your committee append a copy of them to this report.

“ Your committee have under their consideration a variety of projects proposed with the same objects for signals at night, several of which are ingenious; and it has been suggested that the exhibition of night signals in particular localities, should be rendered compulsory on all vessels. Of this your committee cannot approve, and in the voluntary adoption of any such signals, it cannot be too constantly borne in mind, that simplicity and uniformity are indispensable, or the very means resorted to for the prevention of accident, would, in all probability, become the cause of additional mischief.

“ The alteration made in the mode of admeasuring ships of tonnage, by the act 5 and 6 Wm. IV., c. 56, has given rise to a serious hardship to the owners of ships frequenting docks. Although from a return presented to parliament, it would appear that the tonnage of the country in the aggregate has not been augmented by that alteration, there is no doubt that this general result is produced by a very unequal operation on vessels of different classes. The tonnage of sharply constructed and small vessels is diminished by the change, but that of large ships engaged in the foreign trade is very generally and considerably increased, and as it is this latter description of ships that almost exclusively discharge their cargoes in docks, and the dock and other tonnage rates have undergone no diminution in consideration of the increase of their tonnage under the act, the consequence has been an increase of charge to the owners of ships of that description, amounting in many instances to 25 per cent. The reasons which led to the amended mode of computation, founded on a calculation of internal cubical capacity, do not appear to bear on the question of dock accommodation; and the increase of charge is consequently a hardship aggravated by the fact that it is escaped by fully built foreign ships, which, if measured when loaded, under the 22nd

section of the act, 6 and 7 Victoria, c. 84, are not by that method of admeasurement increased in tonnage. As the most practicable mode of relief consistent with the principles of the law, your committee suggested to the Board of Trade to introduce a clause into the act of last session, 'for consolidating the laws relating to the Customs,' to the effect of excluding from the calculation of tonnage—all poops, as well as the portion of the decks above the continuation of the line of the upper deck, in ships having raised quarter-decks; but the bill being intended for the purpose of consolidation alone, it was not deemed advisable to make therein any alteration of existing laws. The question, however, will not, on fitting occasion, fail to engage the renewed attention of your committee.

"Having received authentic information, that in reply to an application to the honourable Board of Customs, the commissioners had given it as their opinion, that under the legal construction of the 63d section of one of the consolidation acts just referred to (8 and 9 Victoria, c. 86, 'for the general regulation of the customs'), foreign vessels with their cargoes were admissible to entry in this country, *direct from the whale fisheries*, and that, such importations were consequently in actual contemplation; your committee lost no time in presenting to the Board of Trade a remonstrance against so unexpected and alarming an innovation on the principle of the navigation laws. Their lordships immediately submitted the question to the law officers of the crown, and it was satisfactory to find, that, although the loose and inadvertent wording of the act had given rise to an opinion that such entries had, however, unintentionally, been legalized, the opinion was erroneous, and the prohibition remains in force.

"The importance of emigration to the interest of shipowners is obvious, and has led to many inquiries connected with the subject. Among them representations were received by your committee, tending to show that the plan heretofore extensively adopted, and known as the Bounty System, was in principle objectionable, and had practically operated very injuriously to the shipping interest. To those representations your committee gave their impartial consideration, and being of opinion that it was on all accounts most consistent and advantageous that any engagement for conveyance of emigrants for the government, should be made by the shipowner directly with the department superintending emigration, they addressed a letter to the right honourable the secretary of state for the colonial department, explaining their views upon the subject, and expressing a hope that in any general plan of future emigration the service might be carried on under the direct management of the government, instead of by the Bounty System. To this application Mr. Gladstone replied—'That there were no circumstances at present before Her Majesty's government which would urge them to a practical consideration of that question; and that the government could not undertake to pledge itself in the abstract to any one rule of proceeding, but must be guided by the circumstances and the wants of the different colonies to which emigration may be proceeding.' This reply was not very satisfactory, but it is to be hoped that the attention of the authorities having been called to the evils of the practice, it will not be revived.

"Connected with the same subject, your committee may state, that, having received communications pointing out the inequality of emigrants being permitted to embark in foreign ships, without those ships being submitted to the survey, to which, under the operation of the system of classification in Lloyd's register of shipping, British ships engaged in similar employments are actually subjected; they made application to the Land and Emigration Commissioners, recommending that for the greater safety and protection of passengers, all ships intended for the conveyance of emigrants from any port in the United Kingdom, should be required to be classed in Lloyd's register book; and that no ship be-

low the second description of the first class, designated by the diphthong *Æ*, should be allowed to receive passengers on board. The commissioners have since made arrangements which, though not fully adopting the regulation submitted to them, will, your committee have no doubt, through the co-operation of the committee of Lloyd's register of shipping, materially check the evil complained of.

“ A case of grievous hardship on shipowners has arisen out of one of the provisions of the Merchant Seamen's Act. By the third clause of that act it is required, that in the case of ships proceeding beyond the seas, the agreement with seamen shall be in the form set forth in schedule A annexed to the act, in which form the names of subscribing parties are directed to be written at full length. By the fifty-third clause, the ship's agreement, indentures, and assignments of apprentice-ship and register tickets, are required to be deposited with the collector of the customs, on arrival at any port in a British colony, at which a ship may trade; and under this latter provision, the articles of agreement of a number of ships have been placed in the hands of the collector of customs at the Cape of Good Hope. That functionary, finding that the subscribing parties, instead of writing their Christian names at full length, have in many cases signed in their accustomed manner, by abbreviating (as 'Jas.' for James, or 'Thos.' for Thomas), has not scrupled himself to lodge informations in all such cases as for a breach of the law, which views being confirmed by the Justices in that colony, convictions have followed; penalties amounting in some cases, even under a mitigation, to nearly £100, have been enforced, and one half of the penalty, constituting in the aggregate a large sum, has been pocketed by the collector. Comment on such a transaction cannot be necessary. It has inflicted vexatious practical wrong, reduced a high and responsible officer to the position of a common informer; impaired, consequently, public confidence in the exercise of his functions, and lowered the dignity of the office itself. But it affords a strong justification of the jealousy with which your committee have always opposed the multiplication of minute regulations in acts of parliament, because such regulations can only be enforced by penalties, applicable equally to breaches of a technical requirement as to infractions of the intention of the law, and exposing shipowners to vexatious and serious loss. Your committee have felt it their duty to forward to the government a strong representation of their views of the impropriety of the conduct of the officer in question, but although they have every reason to believe it is not attempted to be defended, they have not yet had the satisfaction of receiving any intimation that it has been visited with the reprehension of his superiors; and they fear he is still left to practice injustice with impunity, under colour of law. Your committee have, however, considered it advisable to print and circulate a caution to shipmasters on the subject, as well as on the necessity of strict adherence to the letter of the provisions of the eighteenth clause of the same act, requiring shipowners to provide their ships with a specified quantity of medicines, lime or lemon juice, and sugar; and the masters to supply the same to their crews.

“ It is highly satisfactory to your Committee to learn that the scale of victualling which they recommended has met with general approval. They therefore now with confidence invite shipowners to adopt it in their agreements with seamen, and having had copies printed for circulation, members of the society may be gratuitously supplied with them on application at the office.

“ The state of the Merchant Seamen's Fund, and of the law under which the contributions of the seamen to that fund are levied and distributed, was the subject of inquiry by a committee of the House of Commons during the last session of parliament. In furtherance of the report of that committee, it has been the desire of the government to amend the present law by making

more extended and efficient provision for effecting its benevolent objects. Your Committee have been in communication with the Board of Trade on the subject, but as no practical measure has yet been matured, and it is not now probable that any step will be taken in the matter during the present session, it is unnecessary to enter at present on details of this question. Your Committee, however, calculate with confidence on the concurrence of the shipping interest, in the assurances they have not hesitated to convey to the government, that the shipowners will be ready, under equitable arrangements, cheerfully to co-operate in the relief and support of the aged or disabled seaman, by any reasonable assistance in aid of his own efforts for that purpose.

“Your Committee regret that another year has passed without any measure being introduced for the long expected amendment of the pilotage laws. They have again remonstrated with the government on the delay, and disappointed as they feel that the evils so long complained of, proved, and admitted, still remain unredressed, they will not relax their efforts to obtain a remedy.

“In reference to the pilotage of the river Hooghly, adverted to in a former report, your Committee have, after a full consideration by a sub-committee, submitted to the Court of Directors of the Hon. East India Company, many suggestions for the amendment of the regulations, and they have reason to hope, that those regulations will, in consequence, be modified, and the system improved.

“No step has yet been taken on the subject of light, to which attention was drawn by your Committee in their last report. The state of public business during the present parliamentary session, may probably account for the comprehensive report of the select committee of the House of Commons thereon, which was presented before the close of last session, having hitherto passed unnoticed.

“The attention of your Committee having been directed to two bills recently brought before parliament, one for “the regulation of steam navigation, and requiring seagoing vessels to carry boats,” and the other, for “consolidating and amending the laws relating to wreck and salvage,” they lost no time in calling the attention of shipowners at the different outports, and the principal steam-packet companies to these measures. Your Committee have also held correspondence and personal communication with the Board of Trade and the Lords Commissioners of the Admiralty thereon, by both which departments the most considerate attention was given to their representations. These measures are still in progress, and it is satisfactory to find that the intervention of your Committee has led to the abandonment of some of the most objectionable provisions in the bills, and to the modification of others.

“They have likewise had under their consideration ‘the legal quays (London) bill,’ now before parliament, in which amendment has been made in compliance with their suggestions, and an additional lien for freight on goods after being landed, has been obtained for the shipowner.

“At the opening of the present session of parliament, on the introduction of a proposition for a further and material reduction of the discriminating duty between colonial and foreign timber; your Committee, continuing to regard every approximation to equality of duty on that article as fraught with injury to British shipping, considered it incumbent on them to petition the House of Commons to refuse its sanction to the proposed measure. The presentation of this petition by the Hon. H. Liddell, gave rise to severe remarks by the first minister of the crown, who, in entire misapprehension of the real facts, expressed himself on that occasion as ‘ashamed of the shipowners,’ and was followed by the presentation of several petitions from shipowners at outports, intimating adverse opinions, and disclaiming the authority

of the Committee to speak on their behalf. In consequence of these proceedings, your Committee at its next meeting came to the following resolution:—

“That from the recorded sentiments of the great body of shipowners throughout the United Kingdom on the principle of discriminating duties on timber, expressed on every occasion on which the subject has been submitted to parliamentary consideration, and emphatically reiterated by the shipowners of almost every port in Great Britain when it was last discussed on the tariff of 1842; this Committee considers itself to have been fully justified in concluding that those by whom the reduction of duty to 25s. per load made by the tariff, was denounced as ruinous to British shipping, would concur with them in opposing the further reduction to 15s. per load now proposed. That they pretend not to account for the inconsistency apparent in the prayer of the petitions presented to the government and parliament in 1842, by the shipowners of certain ports, and that of petitions now presented from the same ports in favour of the measure proposed by government, but disclaiming, on their own part, all undue assumption of authority, and still more strongly all intentional misrepresentations, they can perceive no cause for either shame or regret at the course they have, in the exercise of their unbiassed judgment, adopted. And, adhering to their opinions, until their correctness be refuted, they can only regret that the first minister of the crown should have thrown on them such unfounded and ungenerous reflections.’ And a petition to that effect was accordingly presented to the House of Commons.

“Your Committee have no desire to revive discussion on these differences, but it would be an unworthy suppression of fact, if they were not to repeat, that Sir Robert Peel misunderstood the bearing of their original petition on the particular measure he had introduced, and that he was consequently led under erroneous conceptions of the effects of that measure, to use terms in respect to the Committee, which they cannot think he would, under better information, have employed.

“The necessity for limiting this report, and of not omitting reference to the great and comprehensive question adverted to in its commencement, precludes your Committee from more than a simple allusion to their further operations. They may, however, enumerate among the subjects that have engaged their attention, the act ‘for the protection of seamen entering on board merchant ships’ (8 and 9 Victoria, c. 116). The order in council for regulating the examination of masters and mates in the merchant service, voluntarily offering themselves for that purpose. The customs regulation for permitting the re-entry of unexpended bread stuffs exported under bond as ships stores; with many others varying in importance, but sufficient to prove beyond question, the urgent necessity for such an organization as that which this society offers, as a point of reference and concentration for the protection of the interests of British navigation.

“It now only remains for your Committee to refer to the momentous changes which appear to have stamped on the future commercial policy of the empire a new character; and to consider how far the interests of navigation may be affected by those changes. Hitherto the leading principle of the commercial policy of Great Britain has been protective. Parliament has now decided that protection as a principle shall be abandoned. Whether the special circumstances connected with navigation will induce the continuance of maritime commerce as an exception to the general rule, is a problem yet remaining to be solved. The public importance of the question demands, that its merits should be fully understood, and the deep interest of shipowners in its solution, seems to render it imperative, that, at this critical period, it should be placed by our committee in a right position before the public.

“ As a member of the great community of the empire, the shipowner advances no claim to special or peculiar privileges ; he has no right to demand, on abstract grounds, exemption from any burthen to which other interests are subjected, or any immunity from which they are excluded ; if they be protected his right to protection is coequal with theirs ; if they sustain the pressure of foreign competition, he must make up his mind to meet it also. All this, however, is true, only so long as he is permitted freely to pursue like others his own interest in his own way, unfettered by any restrictions from which other interests are exempt. But, if for objects of supposed national benefit, conferring on him no separate or special advantage, the State imposes on him burthens and restrictions of a heavily disqualifying nature, common justice would prescribe that up to the point to which the proved disqualification extends, he should be protected from the competition of those who are free from his burthens ; and common sense will determine, that unless so protected, he must sink in the struggle of such competition. Now this exactly is the case of the British shipowner. By the Registry Laws he is restricted to the use of ships probably the most costly in the world. By the Navigation Laws he is compelled to employ exclusively, the highest paid and most expensively fed seamen—those of native birth. By a variety of laws and regulations deemed by the legislature essential to some common interest, or some general duty, he is impeded, taxed, and prevented from conducting his pursuits in the manner most conducive to his own interests. The effect of all this on his expenses must be self-evident. It has been established argumentatively, statistically, before committees of inquiry, by parliamentary returns, by proof upon proof, defying refutation. It has been demonstrated by the most conclusive of all evidence—that of experience.

“ Your Committee have no desire to revive by-gone controversies, but the annual records of their proceedings bear continual testimony to the practical effects that have followed in every instance, in which the experiment has been tried, of placing British shipping in a position of unprotected competition with the ships of foreign nations. They have before asserted, and they again repeat, because at this moment the fact cannot be too extensively known nor too forcibly impressed, that in every case in which discriminating duties on imports have been withdrawn, and British ships have been left to compete, without protection, with the shipping of foreign states possessing a mercantile marine, the navigation of those states has greatly advanced, while our own has absolutely declined ; or, if from increasing commerce, increased demand for tonnage has arisen, it has partaken in a very inadequate degree of the benefit of the increase, which has fallen chiefly into the hands of the foreign shipowner. The degree in which this effect will take place will of course vary with the relative disproportion in expense of building, equipping, and navigating ships, between British tonnage and that of different foreign nations ; but it is perfectly indisputable that under his present disqualifying burthens the British shipowner can compete with none. If then the principles of free trade are attempted to be further applied to British navigation, the ground must both in common justice and in ordinary policy be based on the removal of the restrictions under which the shipowner labours, before the competition which free trade would introduce be permitted. On those great and vital questions which a repeal of the navigation laws would involve, comprehending in the nursery for seamen provided by our mercantile navy, considerations of high state policy, as connected with national security, it would ill become your Committee in this place to comment. These may be considered to belong rather to the statesman than to an association of shipowners ; but they cannot conceal from themselves that the current of public feeling is at the present moment so forcibly directed into the channels of free trade, that

the laws which Adam Smith emphatically approved, and which Mr. Huskinson approached with reverence, may not always be secure of equal respect.

"It is consolatory to have observed that, in reply to a question from the late Chancellor of the Exchequer, Lord John Russell, in a recent discussion on the sugar duties, declared that '*he did not propose in any respect to alter the existing navigation laws.*' Still, in the signs of the times your Committee perceive abundant reason for shipowners being prepared, and the fittest and surest preparation will be found to consist, in being thoroughly acquainted with their own position, and in standing for the defence of that position on those grounds alone which cannot be assailed without an infraction of the first principles of common justice. On this justice then would the Committee rely, and its maintenance, notwithstanding the shock given by recent events to unanimity of opinion, they still feel that shipowners may make common cause. It would be unworthy of your Committee to affect to conceal that which their successive records abundantly testify, that their own opinions have always been favourable to moderate and just protection to all interests. In the support of this principle they have been actuated by no selfish desire to promote class interests at the expense of those of the community at large, but have been prompted solely by the conviction that in its maintenance the interests of all would be most effectually advanced. If the general policy of the country is to be changed, they ask not now that for their own sakes they shall constitute an exception. But what they demand is, even-handed justice. That justice which by Sir R. Peel was promised to the agriculturists on the repeal of the corn laws, and by Lord J. Russell to the colonists on the alteration of the sugar duties; namely, that freedom of production shall at least go hand in hand with freedom of competition. In the maintenance of this demand they feel that they may with confidence appeal to shipowners throughout the country, whatever difference of opinion they may entertain on the controverted questions of free trade and protection. The struggle on these questions has unfortunately produced many and most injurious schisms. But your Committee can perceive no reason why the shipping interest should not now re-unite on the common ground of defence of a general interest on principles common to all. They ask, therefore, the renewal of co-operation on the part of those who, during recent contests, have dissented from the course they have considered it their duty to pursue, inviting them to join the society in the endeavour to free maritime commerce from injurious and vexatious restraints—to relieve it from unnecessary and burdensome charges; and thus to enable it the better to sustain the competition to which it is already exposed—while by confiding to the legislature the decision of principles of policy, but inflexibly maintaining that of protection *from* the State, proportioned to disqualification imposed *by* the State, they will violate no equity, advance no selfish claim, and leave in unrestrained exercise the differing opinions of those who are engaged in one common and most important branch of British National commerce."

THE MARLBOROUGH EAST INDIAMAN.—This is the most glorious specimen of a British Merchantman that ever sailed out of the East India Docks. Renowned as the East India Company were for the size and beauty of the ships built for their carrying trade to India and China, they never possessed a vessel approaching to the Marlborough in symmetry, strength, extent and character of accommodation; the size, the number, and the arrangement of her cabins, the novel method of ventilation, the introduction of warm, shower, and slipper baths, are likewise features that place her immeasurably above all her predecessors, and render her pre-eminent among contemporary vessels. Messrs. T. and W. Smith, the celebrated Newcastle builders have surpassed

themselves in this noble model of naval architecture. We perceive that the command of the vessel has been entrusted to Captain Webb, a gentleman who enjoys a high reputation, both as a seaman and commander, of which no better evidence can be offered than the fact of his selection for such a trust, and the preference given to the vessel by the many persons who have engaged passages in her.

A PROBLEM FOR NAVIGATORS TO SOLVE.

Bovisand, Sept. 2, 1846.

SIR,—There is a high mountain peak on Queen Ann's Cape, Greenland, in lat. 67° N., and long. 53° W.

There is another near Dyer's Cape, on the opposite side of Davis' Straits, in lat. 67° N., and long. 61° W. Now, if these peaks be visible from each other, a steamer may steer from the one to the other, either upon a *compass course*, or by steering *by the eye*, on a straight line from one peak to the other.

1st.—What is the compass course and distance ?

2d.—What the course by the eye at starting, and what would be the distance.

3d.—If a compass were placed on the summit of each peak, What would be the respective bearings, assuming the compasses to be perfectly correct, devoid of all local attraction, and that there was no variation of the compass at these capes ?

It is presumed some of your readers may give a popular solution of this problem—“*pour eclairer les autres.*”

I am, &c.,

WILLIAM WALKER.

To the Editor N.M.

NAUTICAL NOTICES.

THE PASS THROUGH TORRES STRAITS.

His Excellency the Governor of New South Wales desires to make it known to all masters of vessels proceeding from Sydney to Torres Straits, that it is intended to forward, by the *Enchantress*, for the purpose of being placed on Booby Island, a further quantity of bread, fresh water, meat, and spirits, as a provision for shipwrecked seamen, who may seek a refuge on that island; and his Excellency earnestly invites masters who may visit Booby Island, after having successfully passed the Straits, to make, from time to time, such additions to the store which was originally established by Captain Blackwood, of the royal navy, as may suffice to keep up a constant supply of provisions on the island. Directions for finding the provisions will be left at the place called the “Post Office,” on Booby Island.—*Sydney Government Gazette*, May 1.

PASSAGE OF THE HEROINE THROUGH TORRES STRAITS.—We have before been indebted to Captain Mackenzie for intelligence concerning Torres Straits, and it appears that, during his last passage hence to Port Essington and Batavia, he pursued an entirely new route, having steered from Raines Islet direct for Cape York. The following is an extract from the log-book :—

“Aug. 5.—At 7h. 45m. A.M., made the Great Barrier Reef, extreme bear-

ing N.; hauled up to weather it, in doing which carried away the fore royal and topgallant mast. At 9h. 33m., abreast of the eastern extreme; kept away for Raines' Islet, the beacon visible from the masthead 12 miles.

At noon, strong breezes and cloudy; and at 1 P.M., hove to under Raines Islet, and sent a boat ashore to leave a letter in the Post-office, stating that I had called at the wreck of the Coringa packet, and taken the three remaining men, sails, &c., from her. At 2 P.M., bore away W.b.S. and passed the first sandbank to the westward of Raines Islet at 2h. 30m. P.M., then steered W.b.N. At 3h. 30m., passed a reef just above water, not laid down in Blackwood's chart, and at 4h. 45m., passed close to another reef, also not laid down; a sandbank N.W.b.W., three or four miles. Steered north-westward, and at 5h. 30m., came to an anchor under the sandbank in 17 fathoms.

Throughout the night fresh breezes and clear weather. At 8 A.M., weighed and steered N.W., direct for Cape York; at 10, passed over an extent of rocky bottom with deep water; at 10h. 30m., saw a reef ahead, which we passed at its southern edge, and, at 11, saw an extensive reef to the northward and W.S.W. From the north reef there appeared to be a long shoal patch, but not breaking.

At noon, passed a sandbank on its south side, and, at 12h. 30m., saw the islands and banks adjacent to Cairncross, bearing W.S.W. At 2 P.M., sighted Arnold Island, to the north-westward, and three sandbanks to the north-eastward. At 5 P.M., passed to the northward of the reef marked X Y in Blackwood's chart, the Albany rock W.N.W.

At 6 rounded the Albany Rock, and at 7 passed Cape York; took in the studding sails and hauled up for Possession Island, and at 8h. 30m. came to an anchor under it in 5 fathoms. During this night fresh breezes and clear weather; and 6 A.M. weighed and found both flukes of the anchor were gone; made sail and steered W.S.W. for Wallis Island, carrying no bottom at 7 fathoms.

At 7 A.M., whilst setting the topmast and lower studding sails, the vessel struck with great force on a sunken patch, and immediately heeled over almost gunwale under to port; took in all the small sails, but the ship still striking heavily and forging ahead; finding deep water under the bows, and the vessel hanging by the stern, moved all the guns, water casks, and stock forward, and made all sail. The vessel was then rolling and grinding heavily on the rocks, but eventually slipped off with a heavy lurch; sounded the pumps, and stood on our course.

This danger is not visible from the masthead, owing to the muddy colour of the water in Endeavour Straits, although there are only nine or ten feet of water on it. The bearings from it are:—Entrance Island, N.N.W.; Whale Island, E. northerly; and Possession Island, N.E.b.E. The passage was effected from Raine Islet to Albany Rock in thirteen hours; and Captain Mackenzie states that the course is seven or eight miles broad after passing the first sandbank W. of Raines Islet, and the two reefs westward of the sandbank bear W.½N., visible from the topmast head when you are abreast of the bank. A speedy and safe passage may be effected by taking that route, as there are several sandbanks midway under which a vessel may anchor during the night. At Raines Islet the cocoa-nut trees planted by Captain Mackenzie during his former voyage were growing very fast, and the goats had three young ones. The tank was full of water, and the beacon seemed to stand the weather very well. When Captain Mackenzie visited Chilcott's Island, he planted several cocoa nuts on it, and also on the western island of the Trecosses. Near the former he found very good anchorage under the reef, with ten fathoms and fine sand, sheltered from N.N.E. to S.W., and apparently a range of deep water soundings extending between the two.—*Sydney, April 1.*

The following letter from the commander of the *Enchantress* relates to the loss of the *Heroine*, as reported in the *Nautical Standard*:—

Sir,—I avail myself of the first opportunity of transmitting to you the following brief account of the wreck of the *Heroine*:—

On the 24th of April last, while passing through that most dreadful place, Torres Straits, I saw one of the most frightful shipwrecks ever beheld or heard of. I sailed from Sydney on the 9th of April, in company with the barque *Sapphire*, Capt. Millar, and the schooner *Heroine*, Capt. Mackenzie. We rounded Beraksea Spit on the 21st, having determined to pass through the inner passage; we then had a good run, keeping company during the time, and showing lights to each other. On the 24th, when near the Gloucester Islands, the schooner *Heroine* suddenly struck upon a sunken reef, about 1 A.M. I was not more than two cables' length from her at the time. We put the helm down, and ran to the northward: the *Sapphire* did the same. About ten minutes after it occurred I saw their light, bearing due south, and then it immediately disappeared.

We then ran up and spoke the barque, telling Capt. Millar how the schooner bore when I last saw her; and we both agreed to run down to her; but on doing so, nothing of her could be seen. We then agreed to keep off and on until daylight, when I found we were close on the edge of a reef; and as we had previously thrown the topsail to the mast, the schooner had no way on her, so could not tack or wear the ship, but were compelled to run along its edge to give the ship steerage way, and expecting to strike every instant. We showed a light to the barque to warn her of the unexpected danger; but it was too late, for she had also got on the reef. A few moments after, as daylight dawned, I saw her situation, and also from my fore-topmast head I saw the schooner *Heroine's* main-topmast about ten feet above water;—she had struck, and sunk in deep water. A small cutter, about ten tons, which she had been towing astern from Sydney, with the intention of taking her to port Essington, we then saw full of people, and a white piece of cloth flying as a signal of distress. They were then drifting on the reefs on the opposite side. We hoisted out our boat immediately, and sent two men with four oars to their assistance; but finding them not likely to get up to us, we tacked and ran in between the reefs, passed them, wore ship, and got the boat alongside, on the other tack.

About 8 A.M. we got them on board; two Europeans, six Malay women, five natives of Port Essington (New South Wales), 13 Malay men; 26 persons in all saved in the boats. Eight persons met a watery grave (Europeans four), Mr. and Mrs. Earl, two Roman Catholic priests (on a mission to Port Essington), a little girl, a Chinaman, and two Malays. During the time we were standing in for the boat Capt. Mackenzie was picked up by the *Sapphire*, in a very exhausted state, having been in the water six hours, and only supporting himself with a small piece of wood, about two feet long, called a fid; having also, as stated by himself, supported his little girl on one arm for one hour; but at last, finding it dead, was compelled to let it go to the bottom. The *Sapphire* soon got off the reef again with no injury. The unfortunate *Heroine* was well provided with boats. She had three hanging on her quarters, which were ready to be lowered immediately; but the shock was so sudden and unexpected, that there was not time even to do it before she was no more. Those that we received on board were merely in their night dresses, and without shoes or hats, &c.

On the 3rd of May we took on board, from one of the islands of Sir Everard Homes' group, Mr. Ray, late mate of the *Heroine*, and 12 Malays, who had been left there to collect *beche de mer* on the voyage previous; and on the 5th Capt. Mackenzie came from the barque, as we then parted company; so we had then 38 persons in all saved. Thirteen I left at Port

Essington, together with Mr. Confatoniare, a Roman Catholic priest, who was in the boat; 13 at Timor, under the Dutch Government; and ordered to leave the others in Java, but afterwards landed them in Bally, as wished by them, and forwarded from there to Sourabaya, to which place they belong.

I have the honour, &c.,

RICHARD ESSENHIGH,

Master of the Schooner *Enchantress*.

VOLCANO IN THE RED SEA.—The morning of the 14th July was ushered in with very cloudy weather, the atmosphere close and oppressive, but nothing that would indicate the approach of so severe a squall as we experienced. About 10 o'clock observed a thick mass of black clouds extending along the horizon from N.W. to S.W. Then came a most vivid flash of lightning, followed by a distant, though peculiarly distinct sound of thunder.

We were passing the Zebayer Islands at the time, when just after the first flash of lightning, we observed the island marked on the chart as Saddle Island, lat. $15^{\circ} 07' N.$ lon. $42^{\circ} 12' E.$ smoking. The smoke issuing from its summit in a narrow spiral thread, at this time it bore N.N.E. from us, distant about three miles; we were steering N.W. b.N. Shortly afterwards the smoke issued forth in a dense sulphurous-looking cloud; the squall burst upon us and it was shut out from view.

The Zebayer Islands are all of volcanic origin, but there is neither record nor tradition of their having been in active operation. Jibble Teer, in lat. $15^{\circ} 32' N.$ lon. $41^{\circ} 55' E.$, was observed to be smoking when visited by the officers of the *Benares* during the survey of the Red Sea, but never since; there is a tradition among the Arab pilots of its having been on fire some fifty years ago; it bears the name of Jibble Dookhan among many of them, viz.—“Hill of Smoke!” it certainly has the appearance of having been in active operation at a much later period than the Zebayer Islands.

I dwell on this subject as I consider it of great importance to the navigation of the Red Sea. These islands are right in the track of vessels proceeding up and down. The smoke was seen for fully the space of half an hour, when it was concealed from view by the very thick weather, and again an hour afterwards when it partially cleared up. The weather continued very unsettled, with heavy squalls till midnight.—*Extract of a Letter.*

CAPTURE OF GREEK PIRATES, Sept 1846.—Letters from Malta, dated Sept. 11, 1846, state that the *Impartial de Smyrne* reports the capture of four pirate boats with sixty men, by Lieut. Lyons (son of the English Ambassador at Athens), near the island of Stanchio, with the boats of H.M.'s brig *Syren*. For the satisfaction of the owners and crews of merchantmen, we trust that a full account of this exploit will be published.

LOSS OF THE OSPREY, 12, one of the Experimental Brigs, Commander Patten.

Various reports have been in circulation during the past week of the loss of the *Osprey*, Commander Patten, designed by Mr. Blake, late master shipwright of Portsmouth Dockyard, and one of the experimental 12-gun brigs, built and commissioned in September 1844. Although no dispatches have been received at the Admiralty of the unfortunate termination of the services of this beautiful brig, there is no reason to question the following account taken from the *New Zealander* of March 28.

“It is with the deepest regret we have to announce the loss of this beautiful brig of war, mounting 12 guns, on the western coast, about 18 miles to

the northward of Hokianga, on Wednesday, the 11th instant, about three o'clock in the afternoon. On Tuesday, the 10th instant, the *Osprey* made the western coast, and was enabled to take an observation, which proved that she was in the latitude of Hokianga; but the weather coming on thick and hazy, she kept off the land until the evening, when it cleared away. She then stood in, fired two guns to announce to the pilot at Hokianga that she was off the harbour, and again stood to sea for the night. On the following morning, on nearing the coast, a high southern headland, similar to Hokianga, was seen, with what was presumed to be the pilot's house; but which, subsequently, proved to be a white spot on the cliff. Soon afterwards, perceiving a red flag run up, it was confidently anticipated that it was the entrance of the Hokianga, and the brig stood on, over the surf, bringing the northern and southern heads in one. After crossing the breakers, which were judged to be the three of Hokianga, the vessel touched ground; but it was thought that she was just merely on the bar, over which she would soon forge; but almost immediately she struck again, with increased violence, and a succession of shocks brought the alarming conviction that she was ashore; and that it was not the entrance to Hokianga, but that of Haere-kino, or False Hokianga. The guns were instantly hove overboard, and the masts cut away, which falling, with the sails set towards the shore, dragged the vessel still higher on the beach. On the tide receding, the vessel being about half way between high and low water mark, the officers and crew were enabled to land about two o'clock on Thursday morning, with their small arms and some dry ammunition, which had been fortunately saved on deck, the greater part having been thrown overboard. The vessel stands upright on her keel, in the sand, and is but slightly injured, the heel of the keel only being knocked away. The stores are being landed, and the crew are assisted by 150 natives, who are well disposed, and behave very friendly and peaceably. Two of them had been caught pilfering, and had been taken into custody. After the stores are all taken out of the *Osprey*, there is no hope of her floating, without a number of empty casks to raise her, or of hauling her off. The shore on that part of the western coast is extremely shallow for a long distance outwards, with a heavy surf and breakers continually rolling in, even when the wind is off the land; so that no vessel of proper size and power could approach with safety sufficiently near to render the *Osprey* efficient assistance in hauling off. This untoward circumstance has arisen, it appears, from mistaking the headlands; and likewise, from being misled, by the hoisting of the red flag, similar to the practice at the true Hokianga, to apprise vessels that there is sufficient water for them on the bar. From information we have received, we learn that this little harbour of Haere-kino is precisely a miniature of Hokianga, and the principal native chief has adopted the plan of the pilot at the latter place, to announce high water to the smaller vessels that may approach this settlement. We consider that some measures should be taken to prevent the future recurrence of similar disasters to larger vessels. The harbour of Hokianga itself, although a bar harbour, can be approached and entered with proper precautions; therefore the accident should not, in any degree, tend to the detracting of it. If some wooden beacon, or some other landmark, was erected at Haere-kino, and public notice was given, the access to Hokianga would be more easily ascertained, and the strand of Haere-kino more certainly avoided. The *Aurora*, schooner, of Hokianga, is employed to convey the stores of the *Osprey* to that port, and the *Adelaide*, brig, has sailed from here, to take them on board for their ultimate destination. Her Majesty's ship *Racehorse* likewise sailed on Thursday morning, for the Bay of Islands, to be in communication with the officers and crew of the *Osprey*."

HER MAJESTYS SHIPS, STATIONS, &c.

We copy the following comprehensive account of the Movements of Her Majesty's Navy, from that excellent and well-informed Journal the *Nautical Standard*, of Saturday Sept. 19, 1846.

THE CHANNEL FLEET—Commander-in-Chief Vice-Admiral Sir W. Parker, flag on board the *Hibernia*. Second in command, Commodore Sir F. A. Collier, K.C.B., K.C.H., pendant on board the *St. Vincent*. Third in command, Commodore J. J. Gordon Bremer, K.C.B., K.C.H.,

| | Guns. | Commanders. | Men. | Built | Tons. | Designers. |
|-------------------|-------|---------------|-------|-------|--------|------------|
| St Vincent . . . | 120 | J. Shepherd | 951 | 1815 | 2,612 | Roberts. |
| Trafalgar . . . | 120 | J. B. Nott | 951 | 1841 | 2,694 | |
| Queen . . . | 110 | Sir H. Leeke | 871 | 1830 | 3,103 | Symonds. |
| Hibernia . . . | 104 | P. Richards | 850 | 1804 | 2,530 | Henslow. |
| Rodney . . . | 92 | E. Collier | 796 | 1833 | 2,625 | Seppings. |
| Albion . . . | 90 | N. Lockyer | 796 | 1843 | 3,009 | Symonds. |
| Canopus . . . | 84 | F. Moresby | 735 | 1794 | 2,257 | Sane |
| Vanguard . . . | 80 | H. Willes | 735 | 1842 | 2,589 | Symonds. |
| Superb . . . | 80 | A. L. Corry | 735 | 1835 | 2,589 | Symonds. |
| Eurydice . . . | 26 | G. Elliot | 240 | 1843 | 908 | Elliot |
| Spartan . . . | 26 | T. E. Symonds | 240 | 1841 | 918 | Symonds. |
| | 954 | | 8140 | | 26,788 | |
| Steamers— | | | | h.p. | | |
| Terrible . . . | 20 | W. Ramsay | 280 | 800 | 1,847 | Lang |
| Retribution . . . | 10 | Lushington | 240 | 800 | 1,641 | Symonds. |
| Avenger . . . | 10 | W. Williams | 240 | 650 | 1,444 | “ |
| Gladiator . . . | 8 | J. Robb | 195 | 430 | 1,190 | “ |
| Cyclops . . . | 6 | Lapidge | 160 | 320 | 1,106 | “ |
| Scourge . . . | 2 | Caffin | 110 | 420 | 1,124 | “ |
| Rattler . . . | 5 | Smith | 160 | 200 | 888 | “ |
| Polyphemus . . . | 4 | M. Cleverty | 100 | 200 | 800 | “ |
| | 1019 | | 9,685 | 3,820 | 36,828 | |

The *St. Vincent*, *Trafalgar*, and *Queen*, have 111 supernumerary Royal Marines each, and the two-deckers have 91 supernumerary marines each, to make up their complements. They are now fully manned, according to the assigned scale of complements—*Canopus* has relieved the *Trafalgar* at Lisbon—*Terrible* and *Retribution*, having landed the Rifle corps at Gibraltar, are seeking the squadron—*Avenger* is at Malta, waiting the event of the court martial; *Gladiator* is conveying troops to Scotland, and also the *Scourge*.

PORTSMOUTH.—Commander-in-Chief, Admiral Sir Charles Ogle, Bart.—Second in Command, Rear-Admiral Hyde Parker, c.b., Superintendent of the Dockyard.

Steam Vessels—The *Victoria and Albert* yacht, 430 h.p., complement 102, Capt. Lord A. Fitzclarence, g.c.b., ready for service—*Fairy*, str. tender, 120 h.p., comp. 22, attending on Her Majesty, and has taken the Prince to Southampton once or twice during the week—*Black Eagle*, Admiralty steam yacht, Master Commander Cook, returned to Woolwich—*Gladiator*, frigate, Capt. Robb, embarked a company and a half of the 74th regt., and on Friday week sailed for Dundee. She is then to proceed to Aberdeen to embark a

detachment of the 87th—*Bulldog*, 6, sloop, 530 h.p., comp. 160, Commander Davis, arrived from Chatham on Saturday. Some delay has taken place in the repairs of her engines, and she was stopped from leaving the port by electric telegraph, until her machinery was examined by the contractor. She was to have left yesterday for Devonport, to be paid advance, taking all the officers and supernumeraries at Portsmouth waiting a passage to the channel fleet. She will embark those waiting at Devonport also, and with them proceed with dispatches to Vice Admiral Sir W. Parker, whom she will most probably find at Cadiz, whither the fleet was ordered to water previously to their return to Cork and Spithead. It is said she is to proceed to the Cape, to relieve the *Thunderbolt*—*Comet*, tender, 80 h.p., comp. 28, Lieut.-Com. C. R. Johnstone, is gone to Cork, with money sent down by the Treasury for the distressed Irish—*Bee*, 10 h.p., *Rocket*, 10 h.p., tenders, *Echo*, tug, 140 h.p.

Sailing Vessels—*Victory*, 104, comp. 685, Capt. Pasco, flag-ship of Rear-Admiral Parker, in harbour, with a few guns on board for saluting—*Excellent*, three-decker, gunnery ship, comp. 700, Capt. Chads, c.b., stationed for instruction, in harbour—*Recruit*, 12, comp. 110, Com. Adolphus Slade, at Spithead, having had her defects completed at the dockyard, has been paid advance, and sailed yesterday for Plymouth. She wants a dozen petty officers—*Nautilus*, 10, comp. 60, Lieut. Com. M'Donnell, has resumed her service of protecting the fisheries at Brighton—*Raven*, cutter, Lieut. Com. Stephens, sailed late on Friday evening on her return to Sheerness, taking supernumeraries and passengers for that port and Chatham—*Fanny*, Master Com. Allen, proceeded to Southampton on Monday, with the Commander-in-chief—*Emerald*, Second-Master Com. Beach—*Mercury*, tender, Second-Master Com. Scarlett.

Not in Commission.

Sailing Vessels—Advanced Ships—*Britannia*, 120; *Neptune*, 120; *Nelson*, 120; *Camperdown*, 104; *Powerful*, 84; *Vengeance*, 84; *Bellerophon*, 78; *Pembroke*, 72; *Hastings*, 72; *Carnatic*, 72.

Winchester, 50, is ordered to be brought forward for commissioning.

Steam Vessels—The *Penelope*, frigate, 650 h.p., preparing for commissioning, is all ready for service—*Centaaur*, frigate, 540 h.p., 1269 tons, fitting for the pendant.

Steam Guard-ship—The *Ajax*, 74, is progressing fast towards completion for a steam guard-ship for this port, and will, we are informed, be undocked at Cowes next spring tide. She will have the following armament:—one 56-pounder 85 cwt., and two 8-inch mortars of 65 cwt. each, on the quarter deck; one 56-pounder of 85 cwt., on the fore-castle; twenty-six 32-pounders of 42 cwt. each, on the upper deck; and twenty-six 42-pounders of 66 cwt. each, on the lower deck. Total, 56 heavy guns.

DEVONPORT.—Commander-in-Chief Admiral Sir John West, k.c.b.—Second in Command, Rear-Admiral Sir Samuel Pym, k.c.b., Superintendent of the Dockyard.

Steam Vessels—The *Lightning*, Admiralty steam tender, Master Com. Petley, has been in attendance on the Lords of the Admiralty. She went up the Tamer on Wednesday and got aground, and their Lordships were obliged to return in the boats—*Bulldog*, sloop is hourly expected from Portsmouth—*Rhadamanthus*, transport, Master Com. Ayles, arrived on Friday, with the remainder of the 5th regt., from Cork. She embarked the last detachment of the 55th and returned—*Dee*, transport, Master Com. Driver, after having some defects in her boilers made good, left for the Shannon, with the *Madagascar*—*Confiance*, tug, 100 h.p., Second-Master Com. Jagoe, *Hamoaze*—*Swallow*, from Woolwich, put in here on Thursday morning,

with Mr. Mills and party on board who navigated the *Conflict* to the river. She took in a supply of coals, and is to proceed to Cork, to be employed in carrying provisions.

Sailing Vessels—*Caledonia*, 120, comp. 730, Capt. Dixon, bearing the flag of the Admiral-Superintendent, in Hamoaze; the morning and evening gun is fired from her, and all salutes. She is fully manned and ready for sea—*America*, 50, comp. 500, Capt. the Hon. John Gordon, will be complete on the 28th, and will then proceed to the Mediterranean—*Hound*, 8, comp. 80, Com. Wood, left for Ascension on the 11th—*Express*, 6, packet-brig, Lieut. Com. James, was towed out of Hamoaze on Tuesday morning, by the *Confiance*, steam-tug, and sailed direct for Falmouth, to take out the mail to Brazil—*Muduguscar*, 44, store-ship, comp. 50, Master Com. Burney, having had her fittings completed at Devonport, was paid advance on Tuesday morning at Devonport, after which she was towed out of harbour by the *Dee*, steam-vessel, which vessel accompanied the *Madagascar* to the Shannon. The complement of the frigate is 50 officers and men, but a party of seamen from the *Caledonia* and ten riggers from the dockyard have proceeded in the *Madagascar*, to assist in navigating her and in laying down her moorings. The master will receive the usual allowance for the charge of stores, in addition to his pay—*Netley* and *Sylph*, tenders to the guardship.

Not in Commission.

Advanced Ships—*Royal William*, 120; *St. George*, 120; *Royal Adelaide*, 104; *Nile*, 92; *Clarence*, 84; *Calcutta*, 84; *Bombay*, 84; *Foudroyant*, 78; *Indus*, 78; *Implacable*, 72—10 sail. *Impregnable*, 104, and *Kent*, 72, also ready.

His Imperial Majesty's Russian corvette, *Abo*, arrived here from Naples, on the 11th inst., bound to Cronstadt, has been since detained by light contrary winds. During her detention Capt. Nordmann and other officers attached to her, had visited the Port Admiral, Sir John West, Admiral-Superintendent Sir Samuel Pym, and other heads of departments. In company with the Russian Consul, Mr. Luscombe, the following gentlemen attended the ball given on Monday night in aid of the Female Orphan Asylum at Stoke, which was under the patronage of the Earl of Auckland, viz—Captain Nordmann, aid-de-camp to His Imperial Majesty the Emperor of all the Russias; Captain Rudner, Lieut. Golovin, Lieut. Corosackoff, Baron Luvenstern, and Count Aprafin, officers of the *Abo*. The same gentlemen have been conducted over Her Majesty's dockyard by Sir William Symonds, the Surveyor to the Navy.

FALMOUTH. *Brazil Packet Sailing Brigs*—The following are also under the orders of the Commander-in-chief at Devonport. They embark the mails for the Brazils at Falmouth, and land them there on their return, when they come to Devonport to refit, comp. 44:—*Crane*, 6, Lieut. Com. J. A. Lewis, ready at Falmouth to proceed to Brazil—*Express*, 6, Lieut. Com. James, has arrived from Plymouth, having had her defects made good—*Seagull*, 6, Lieut. Com. Dicken, sailed June 9, for Madeira and Brazils—*Penguin*, 6, Lieut. Com. Leslie, Rio—*Peterel*, 6, Lieut. Com. Creser, is expected from Rio—*Swift*, 6, Lieut. Com. Douglas, at Falmouth.

THE NORE.—Commander-in-Chief, Vice-Admiral Sir Edward Durnford King, Knt., K.C.B.—Superintendent of Sheerness Dockyard, Captain Arthur, C.B.

SHEERNESS—*Steam Vessels*—The *Wildfire*, 75 h.p., comp. 23, Second-Master Com. Brockman, tender to the Port Admiral—*African*, tug, 80 h.p., comp. 23. Master Com. King.

Sailing Vessels—The *Ocean*, 46 guns, comp. 432, port guard ship, Capt. Arthur, C.B., with the Port Admiral's flag—*Raven*, cutter, Lieut. Com.

Stephen, conveying seamen and marines of the *North Star*, from Chatham to Portsmouth, to proceed to Norwich afterwards.

Not in Commission.

Steam Vessels—*Dragon*, frigate, 560 h.p., quite ready for commission—*Birkenhead*, iron frigate, 560 h.p., ready for commission.

Sailing Vessels—Advanced Ships—*Howe*, 120; *Waterloo*, 120; *London*, 92; *Monarch*, 84; *Asia*, 84; *Ganges*, 84; *Achilles*, 76; *Revenge*, 76; *Hawke*, 72; *Hercules*, 72—10 sail—*Formidable*, 84, is being prepared for commission.

The Sardinian frigate, *L'Aurora*, arrived here on Saturday from Hull, and has proceeded to Woolwich.

CHATHAM.—Captain Sir Thomas Bourchier, K.C.B. (1827), Superintendent of the Dockyard.

Steam Vessel—*Fearless*, tug, 76 h.p.

Sailing Vessel—The *Poictiers*, line-of-battle ship, pendant of the Superintendent, complement 327.

Not in Commission.

Sailing Vessels—Advanced Ships—The *Cumberland*, 70—*Southampton*, 50, at Chatham, is coppered for ordinary service, and is nearly completed, and will be put out of dock into ordinary the next spring tides—*Meander*, 44, fitted for commissioning, at Chatham, is getting her gun-carriages and shot on board—*Mutine*, 12, gun-brig, lately paid off, fitting for sea, is fast progressing towards completion; she is reported to be ready for the pendant on the 25th inst—*Sinbad*, lighter, Follet, master, sailed from Chatham on Tuesday with stores for Woolwich yard. The *Rochester*, lighter, Sedgwick, master, arrived at Chatham on the 12th inst., with stores from Plymouth.

WOOLWICH.—Commodore Houston Stewart, C.B., Acting Superintendent of the Dockyard.

Steam Vessels—*Black Eagle*, Admiralty yacht, 260 h.p., comp. 48, Master Com. Cook, arrived from Portsmouth, and on Tuesday took the Duke of Wellington and the Marquis of Anglesea to Sheerness and Chatham—*Lightning*, tender, 100 h.p., comp. 30, Master Com. Petley, is at Devonport, waiting on the Lords of the Admiralty—*Sidon*, frigate, 56, comp. 200, Capt. W. H. Henderson (Sir C. Napier's design), was tried down the river again on Thursday, from Deptford. She must have been sadly out of trim, for whilst under steam she had a very awkward list. She is at Woolwich to be completed in her fittings. She is about 30 petty officers and seamen short of her full complement of 200, which no doubt she will get immediately she reaches one of the western ports. A melancholy accident occurred on the *Sidon* coming to anchor: one scaman had his hand completely torn off, and his arm and body much injured: and another had two fingers from one hand completely severed. Both were taken to the hospital, and it is feared the consequences will be fatal to one, if not both—*Sphinx*, new sloop, 500 h.p., comp. 145, Com. Cragg, fitting for sea, is still in the hands of the engineers, and it is uncertain when she will be completed. She is 60 petty officers and seamen short of her complement of 160, which she can well afford to be—*Garland*, packet, comp. 120 Master Com. Smithcott, is ordered to be at Ostend on the 20th inst., to meet Lieut. Waghorn, R.N., who is expected to arrive there on that day with the overland mail from India, *via* Trieste, Germany, Belgium, &c.—*Swallow*, under the command of Mr. Bryant, master of the *Monkey*, left for the river Shannon, and embarked 40 of the men who brought round the *Conflict* to Woolwich at the same time for Portsmouth, with 20 of the men who brought round the *Conflict* to this naval depot—*Acheron*, Lieut. Com. Aplin, was undocked on Monday.

Sailing Vessels.—The *William and Mary* yacht, comp. 61, Com. Smith.

—*Perseus*, comp. 27, Lieut.-Com. W. Greet, off the Tower.—*Athol* troop-ship, Mas.-Com. Pearce, was towed from Deptford on Tuesday morning. Every exertion is to be used to make good her defects. They will be repaired in three or four days, and she will then embark a company of artillery for Bermuda.—*Diligence*, dockyard transport, Martin, master, and the *Falmouth*, lighter, Baker, master, are ordered to proceed from Woolwich to Devonport, at which place they are to embark stores for Malta. It is rather unusual to send a lighter so far; the *Falmouth*, however, has seen better service, for she was employed as a bomb-vessel at the siege of Algiers.

Not in Commission.

Steam Vessels.—The *Amphion*, 36 guns, 300 h.p., auxiliary screw, is receiving her sea weights. She is ordered to be brought forward for immediate commission.—*Eclair* has been taken into dock, to be fitted for commission.—*Conflict* and *Grappler*, sloops, are lying in the river, off Woolwich.—The *Geysier* and *Medea* sloops are in the basin—The *Monkey* tug, and the *Vixen* sloop, are in dock.

Sailing Vessels.—The *Hebe*, frigate, at Woolwich, is hauled alongside the wharf, and every exertion is being made to fit her to receive a portion of the Royal Marines who have lately occupied a part of the Royal Artillery Barracks, which is now wanted in consequence of the additions recently made to that corps.—The *Sardinian*, corvette, is here from Sheerness.

DEPTFORD.—Captain-Superintendent Sir John Hill, Kt., of the Dockyard and Victualling yard.

Steam Vessels.—The *Sidon*, frigate, Capt. W. H. Henderson, has proceeded to Woolwich, to be completed in her fittings.

Not in Commission.

La Hogue, fitting at blackwall as a 74-gun steam guard-ship, is ordered here to have her screw propeller fitted—The *Odin*, frigate, 560 h.p., is in the East India Docks to have her machinery fitted by Messrs. Fairbairn and Co.—*Termagant*, 600 h.p., screw steam-frigate, is to be completed for launching before the end of December; Messrs. Seaward and Capel will have the machinery ready by that time—*Rifleman*, gun-vessel, in charge of Mr. Flinn, master of the *Victory*, 104, has arrived in the East India Docks from Portsmouth, to have her screw machinery fitted by Miller and Ravenhill—The *Growler*, sloop, is to be repaired in dock—*Conflict*, sloop, is ordered to be brought up the river to this port, and will be taken into the same dock as the *Growler*, to be fitted with her screw propeller.

PEMBROKE.—Captain-Superintendent Gordon Falcon, of the Dockyard and Packet Service.

Royal Sovereign, yacht, broad pendant of the Captain-Superintendent—*Encounter*, screw steam-sloop, designed by Mr. Fincham; jury gear is to be sent from Devonport, with which she is to be rigged, and then she is to be navigated to the Thames.

COAST OF IRELAND.—Commander-in-Chief Rear-Admiral Sir Hugh Pigot, Knt., C.B., & C.B., particular Service.

Steam Vessels.—*Myrmidon* iron, 150 h.p., comp. 43, Lieut. Com. Jenkins, flag of Sir H. Pigot—*Stromboli*, 280 h.p., sloop, comp. 145, Com. Fisher, has conveyed a cargo of Indian corn meal to Tarbert; she is on her return to Cork, where she is to await orders—*Tartarus*, Capt. Wolfe, at Cork—*Pluto*, 100 h.p., comp. 42, Lieut. Com. Lane, gone to Limerick with Indian corn meal, is ordered to return to Cork—*Alban*, transport, 100 h.p., comp. 46, Master Com. Burney, conveying provisions to Limerick—*Rhadamanthus*, transport, 200 h.p., comp. 50, Master Com. Aylen, exchanging the 5th regiment, for Devonport, for the 55th—*Dee*, transport, 200 h.p., comp. 60, Master Com. Driver, accompanying the *Madagascar* store ship to the Shannon.

HOME, SURVEYING, and PARTICULAR SERVICE.

Steam Vessels—*Surveying*—*Porcupine*, Capt. Bullock, surveying at the mouth of the Thames—*Blazer*, 120 h.p., Capt. Washington, at Harwich—*Fire Fly*, 220 h.p., Capt., Beechey, Irish Channel, to proceed to survey the Swilly Rocks, at Menai Straits—*Shearwater*, 160 h.p., Com. C. G. Robinson, coast of Scotland—*Dasher*, 100 h.p., Com. Sherringham, Isle of Wight, has been refitting at Portsmouth, and making good detects; she resumed her surveying duties in the Solent—*Tartarus*, 130 h.p., comp. 67, Capt. Wolfe, Limerick—*Lucifer*, 180 h.p., comp. 59, Com. Frazer, surveying between Wexford and Waterford, the Salcees—*Torch*, iron vessel, 150 h.p., comp. 48, Lieut. Com. Mapleton, at Greenock, to protect the deep sea fishing on the coast—*Cuckoo*, 100 h.p., comp. 40, Lieut. Com. Parks, protecting the fisheries on the coast of Scotland.

Sailing Vessels—*Sparrow*, ketch, Com. Otter, Hebrides—*Sylvia*, Lieut. Com. Warren, tender to *Sea Flower*, has returned from Portsmouth, to the Channel Islands—*Mastiff*, Master Com. Thomas; and *Woodlark* tender—*Speedwell*, tender to *Blazer*, Harwich.

Arctic Expedition—*Erebus*, Capt. Sir John Franklyn, Capt. James, Act. Com., and the *Terror*, Capt. Crozier, fitted with screw propellers, for cutting through the ice.

MEDITERRANEAN STATION—Commander-in-Chief Vice-Admiral Sir William Parker, Bart., G.C.B. Superintendent of Malta Dockyard, Rear-Admiral Sir Lucius Curtis, Bart. Malta, Sept. 3.

The Commander-in-Chief, Vice-Admiral Sir William Parker, Bart. G.C.B., is still absent with his flag-ship, the *Hibernia*, 104, Capt. Richards, C.B., He may be looked for at Malta about the middle of this month.

Steam Vessels—*Virago*, sloop, 300 h.p., Capt. Lunn, at Gibraltar, Aug. 27. —*Avenger*, frigate, Capt. W. J. Williams, arr. at Malta on the 25th ult. from Alexandria, waiting the result of the court martial—*Hecla*, sloop, 200 h.p., Com. Starmer, is to start for Tripoli, to convey the newly appointed British Consul General, G. W. Crowe, Esq, as soon as the court martial on her engineers, which has so long been talked of, will be over—*Phoenix*, screw sloop, 240 h.p., Com. Dennis, Gibraltar—*Ardent*, 200 h.p., Lieut. Com. Spong, at Malta, arrived on the 25th from the Ionian Islands with the mails; in consequence of a break down of the *Trident*, she left for Alexandria with Lieut. Waghorn, on the 31st ult. —*Flamer*, 120 h.p., Lieut. Com. Lavie, left Malta for Marseilles on the 28th—*Jackall*, 150 h.p., Lieut. Com. Pasco, Athens—*Meteor*, 100 h.p., Lieut. Com. Butler, Corfu—*Volcano*, 190 h.p., Lieut. Com. Crang, Malta —*Bloodhound*, 150 h.p., Lieut. Com. Phillips, at Constantinople—*Locust*, 100 horse power, Lieut. Power, is cruising off the island—*Spitfire*, 150 h.p., Lieut. Com. Macdonald, arr. 31st from Marseilles—*Trident*, Lieut. Com. Rigge, arrived here from England, on the 29th ult., but in such a miserable state that she was unable to proceed to Trieste. Off Gibraltar, the *Trident* narrowly escaped being shipwrecked, and was towed in by the *Phoenix*—*Wee Pet*, 20 h.p., tug, Master Com. Duncan, Malta.

Sailing Vessels—*Hibernia*, 104, flag ship, Capt. Peter Richards, C.B., cruising with the channel fleet at Lisbon—*Ceylon*, 2, receiving ship, flag of Admiral-Superintendent, harbour—*Inconstant*, 36, Capt. C. Freemantle, Beyrout—*Tyne*, 28, Capt. Glasscock, arrived at Malta on the evening of the 27th, from Corfu. The captain has to attend the court martial to try the engineers of the *Hecla*. She will remain at Malta until the arrival of the *Spartan*, 26, Capt. T. E. Symonds, to relieve her, when she will proceed to England to be paid off—*Amazon*, 19, Capt. J. Stopford, has arrived from Athens. Her captain will form one of the court martial, to assemble on the 7th—*Siren*, 16, Com. Edgell, has left for Smyrna, to relieve the *Hurlequin*—

Fantome, 16, Com. Le Hardy, returned to Malta from Tunis on the 29th—*Harlequin*, 14, Com. Curry, arrived at Malta, Aug. 28, from Vourla—*Bonetta*, Com. Brock, surveying in the Levant, arrived at the Piræus of Athens, on the 3rd ult., from a cruise in the Archipelago—*Beacon*, surveying vessel, Com. Graves, in harbour—*Research*, tender to the *Beacon*, Lieut. Com. Spratt, on survey of the East, and of the Negropont, commenced by Com. Graves.

The Court Martial—All the ships, the captains of which are to assist at the court martial on the engineers of the *Hecla* (which will assemble on Monday next on board the *Ceylon*), have arrived.

WEST INDIES, HALIFAX, AND NORTH AMERICA—Commander-in-chief, Vice-Admiral Sir F. W. Austen, k.c.b.—Second in Command, Commodore King.

Steam Vessels—*Vesuvius*, sloop, 240 h.p., Com. O'Callaghan, at Halifax from Vera Cruz on the 14th ult.—*Hermes*, sloop, 100 h.p., Lieut. Com. Carr, Bermuda; to be relieved by the *Alecto*, from the Brazils, at Antigua, July 28. *Gleaner*, tug, 130, Bermuda.

On the Lakes—*Mohawk*, 60, h.p., Com. Fowell, Lake Ontario, was paid off and commissioned by Lieut. Tyssen, July 1—*Minos*, has been commissioned by Lieut. Harper, for service—*Cherokee*, 200 h.p., was commissioned by Com. Fowell, late of the *Mohawk*, July 1.

Surveying—*Columbia*, 100 h.p., Lieut. Com. Shortland, placed at the disposal of his Excellency the Lieut. Governor of Newfoundland.

Sailing Vessels—*Vindictive*, 50, Capt. M. Seymour, k.c.b., with the flag of the Commander-in-chief, was lying at Halifax, all well on the 22nd July—*Imaum*, receiving ship, Jamaica, pendant of Commodore—*Endymion*, 44, Capt. Lambert, Vera Cruz, from Barbadoes, July 2—*Belleisle*, troop ship, Capt. Kingcome, arrived at Quebec from Halifax on the 18th August: she is to return to Spithead with invalids and stores—*Alarm*, 26, Capt. G. C. Frankland, sailed for Vera Cruz, from Newfoundland, July 19—*Hyacinth*, 18, Com. F. Scott, the Gulf of St. Lawrence—*Rose*, 18, Com. Pelly, at Vera Cruz, collecting specie preparatory to leaving the station, has been detained some time longer in the Gulf of Mexico—*Persian*, 16, Com. Coryton, relieved the *Alarm* at Newfoundland, July 19—*Electra*, 14, Com. Maitland, on her passage to Vera Cruz, sailed from Port Royal, July 21—*Daring*, 12, Com. Matson, left Port Royal, July 21, on her passage to Vera Cruz—*Pickle*, 4, schooner, Lieut. Com. Jolly (acting), Jamaica—*Viper*, 4, Lieut. Com. Gray, arrived at New Brunswick on the 15th June, from Bermuda, to attend to the fishing interests in the Bay of Fundy, especially around the Island of Grand Manan, and to see that the provisions of the act 8th Vic. cap. 50, are duly enforced—*Crocodile*, 8 troop ship, Com. Lowe, gone to Hudson's Bay with troops, from Cork, will return to Spithead as soon as she has landed them at their destination.

Surveying—*Thunder*, Com. Barnett, sailed for Bermuda, July 14—*Lark*, tender, Lieut. Com. G. B. Lawrance, Nassau.

EAST INDIES.—Commander-in-Chief.—Rear Admiral Sir T. J. Cochrane, Knt., c.b., appointed Jan. 1842, to be succeeded by Rear Admiral Inglefield. Second in command, Commodore Sir H. M. Blackwood, Bart.

Steam Vessels—*Vulture*, frigate 470 h.p. Capt. Macdougall, Hong-kong, May 25—*Driver*, sloop, 80 h.p. Com. C. O. Hayes, New Zealand, is ordered home peremptorily, to be relieved by *Inflexible*, from Plymouth—*Inflexible*, sloop, Com. Hoseason, arrived at Madeira on the 16th ult. from Plymouth, en route to the Cape of Good Hope and the East Indies. She put in merely to land letters. A letter from her says, "We have had a beautiful trip, the weather having been fine, and the passengers cheerful and in good order. We

have steamed all the way, in consequence of light winds, and I think we stand a fair chance of reaching the Cape with some coals to spare in our bunkers. I like my ship very much: our accommodation is superb." After landing her letters the *Inflexible* proceeded on her course for the Cape direct. *Spileful*, sloop, 280 h.p. Com. Maitland, Trincomalee, ordered home, left Moulmein for Penang, May 12.

Sailing Vessels—*Agincourt*, 72, Capt. Hope Johnstone, Penang, June 4. and was about to proceed to Singapore, to wait the arrival of and to be relieved by the *Vernon*, 50, and to proceed to Sarawak, to chastise the pirates,—*Fox*, 42, Com. Sir H. M. Blackwood, Bart. arrived at Madras from Trincomalee, July 14, ordered to Aden—*Castor*, 36, Capt. Graham, c.b. New Zealand, ordered home, to be relieved by the *Melampus*—*Calliope*, 26, Capt. E. Stanley, left Hobart Town, 20th Dec.—*North Star*, 26, Capt. Sir J. E. Home, Bart. left Sydney for the Cape and England, Feb. 24, to be paid off at Chatham. She was at St. Helena, from the Cape of Good Hope, June 24th, and sailed from Fayal on the 11th August, arrived at Portsmouth—*Vestul*, 26, Capt. Talbot, Hong-kong, 23rd June, and was to start about the 1st July for Chusan—*Iris*, 26, Capt. Mundy, Penang, from Calcutta, June 4—*Dædalus*, 20, Capt. M'Quhae, Hong-kong, from Fochowfoo—*Wolf*, 18, Com. Gordon, sailed from Shanghai for Chusan, April 20—*Hazard*, 18, Com. Egerton, left Hong-kong for Borneo and England, March 4, arrived at Singapore from Penang, and sailed prior to the 2nd of June for Sarawak, to protect British interests in that quarter—*Racehorse*, 18, Capt. E. J. Hay, c.b. to be succeeded by Com. Southey, at New Zealand, assisting the *Osprey*—*Cruizer*, 16, Com. Maclean, Madras for Moulmein, May 1, and arrived May 11—*Pilot*, 16, Com. Wilson, to be relieved by the *Grecian*, left Madras for Moulmein, July 20; she was commissioned in July 1843—*Ringdove*, 16, Com. Sir W. Hoste, on her passage to relieve the *Wolverine*, left the Cape April 21, for Borneo—*Wolverine*, 16, Com. Clifford, com. Jan. 1842, arr. at Shanghai from Amoy, April 20—*Scout*, 14, Com. Loring at the Cape, June 10, from Sheerness, left Plymouth March 29—*Childers*, 12, comp. 110, Com. Pitman, on her passage, left Spithead on the 9th May with a mail to the Cape of Good Hope and Australia, arrived at Bahia the 9th of June, and sailed on the 15th—*Osprey*, 12, Com. Patten, wrecked at New Zealand—*Espigle*, 12, Com. Thompson, left Amoy for Foo-chow-foo, April 5—*Royalist*, 10, Com. Ogle, to be succeeded by Lieut. Paynter, of the *Agincourt*, arrived at Singapore from Sarawak, May 20, com. Aug. 1842.

Surveying—*Samarang*, 26, Capt. Sir Edward Belcher, arrived at Singapore from Sarawak on the 20th of May, and was there on the 2nd of June, under orders to sail in a week for England; com. 1843—*Plover*, Capt. Collinson, com. Nov. 1841, left Hong-kong for England, to be paid off, April 3—*Bramble*, 10, Lieut. Com. Yule, tender, left Sydney 24th Dec. for Moreton Bay, com. to be dated from Oct. last—*Young Hebe*, Lieut. Com. Bate, Chusan, com. Nov. 1841.

Store Ships, &c.—*Minden*, Hong-kong; *Alligator* hospital ship, Hong-kong; *Sapphire*, troop-ship, Master-Com. Pittock, at Hong-kong, from Chusan, May 25.

SOUTH-EAST COAST OF AMERICA—Commander-in-Chief Rear-Admiral Samuel Hood Ingfield, c.b., to be succeeded by Commodore Sir Thomas Herbert, κ c.b.

Steam Vessels—*Gorgon*, frigate, 320 h.p., Capt. Sir William Hotham, κ c.b., to be succeeded by Com. Crouch, arr. at Monte Video from the Parana, June 12; to be detained if required—*Firebrand*, frigate, 450 h.p., Capt. Hope, c.b., arr. at Monte Video, from the Parana, June 12, ordered to Spithead; to be detained if required—*Devastation*, sloop, 320 h.p., Com. Crouch, arr. at

Bahia, June 17, 20 days from Madeira, on her passage, to relieve the *Gorgon*, and then to proceed on the coast of Africa—*Alecto*, sloop, 220 h.p., Com. Austen, to proceed to the West Indies to relieve the *Hermes*, arr. at Monte Video June 29, from the Parana, where she had been engaged with the batteries—*Lizard*, 150 h.p., Lieut. Com. Tylden, Parana—*Harpy*, 150 h.p., Lieut. Com. B. Proctor, Parana.

Sailing Vessels—*Vernon*, 50, flag-ship, Capt. Fitzgerald, off Monte Video, to proceed to Singapore with the Admiral, and to be flag-ship on the East India station; to go to the Cape first—*Raleigh*, 50, Commodore Sir T. Herbert, left the Channel fleet Aug. 27th, for Monte Video—*Eagle*, 50, Capt. H. B. Martin, c.v., ordered to the West India station; to be detained if required; Monte Video, June 6—*Melampus*, 42, Capt. J. N. Campbell, c.v. Buenos Ayres; to be detained—*Curacoa*, 20, Capt. Broughton, blockading at Buenos Ayres, ordered to Spithead, but to be detained if required—*Comus*, 18, Com. Thompson, up the Parana, to cruise on the north coast of Brazil—*Acorn*, 16, Com. Bingham, up the Parana; ordered to the East Indies, to relieve the *Pilot*—*Racer*, 16, Com. Reed, blockading Maldonado, ordered home to be paid off; to be detained if required—*Dolphin*, 3, brigantine, Com. Levinge, to be employed as a packet between Rio and Monte Video—*Satellite*, 18, Com. Rowley, blockading at Colonia, ordered home to be paid off; to be detained if required—*Grecian*, 16, Com. Montgomery, Rio—*Spider*, 6, packet, Lieut. Com. Pym, carrying mails, ordered home to be paid off—*Griffon*, 3, brigantine, Lieut. Com. Wilmot, on her passage from Devonport to Rio, arr. at Tenerife; she is to be employed with the *Dolphin* in carrying mails from Rio to Monte Video.

PACIFIC STATION—Commander in Chief, Rear-Admiral Sir G. F. Seymour, Knt. G.C.H.

Steam Vessels—*Samson*, frigate, 450 h.p., Capt. Henderson, on her passage from Devonport, arrived at Valparaiso, May 19, 88 days from Portsmouth, having touched at Madeira, remained on the 7th July—*Cormorant*, sloop, 280 h.p., Com. Gordon, com. April, 1842, was at San Juan Del Fuca, in May—*Salamander*, sloop, 200 h.p., Capt. Hammond, com. June, 1842, at Papieti, time up, ordered home to be paid off. She goes to Callao, first to repair her boilers, as her present ones are in a bad state.

Sailing Vessels—*Collingwood*, 80, flag ship, Capt. Smart, K.H., was all well at San Blas, June 13—*America*, 60, Capt. the Hon. John Gordon, brother of the Earl of Aberdeen, comp. 500, arrived at Valparaiso, April 20, from Mazatlan, and sailed for Rio and England on the 25th, arrived at Rio, May 20, left 23rd, and arrived at Spithead, August 19; at Devonport repairing defects—*Grampus*, 50, comp. 500, Capt. Martin, from Devonport, sailed from Valparaiso for Callao on the 28th June, there to wait the arrival of the European mails, due on the 7th July; and after receiving her despatches, she put to sea on the 11th, to join the Admiral, whose "whereabouts" every one seemed to be ignorant of—*Fisgard*, 42, comp. 320, Capt. Duntze, left San Blas in March, direct for Vancouver's Island—*Talbot*, 26, Capt. Sir T. R. Thompson, Bart., com. April, 1842, time up, at Mazatlan. A letter says, "Our ship is the next for England; we sail from this place on the 15th (June), with a freight of specie for Valparaiso, en route"—*Junco*, 26, comp. 240, Capt. Blake, has been dispatched to California—*Carysfort*, 26, comp. 240, Capt. Seymour, on her passage from Portsmouth, via Cape and Sydney, arrived at Madeira, April 7—*Calypso*, 20, Capt. Worth, on her passage, left Plymouth 8th March, and Tenerife, April 14, arrived at Rio, May 19, and left for Valparaiso, May 27—*Duphne*, 18, Capt. Onslow, arrived at Valparaiso, from Coquimbo, May 1, and remained there July—*Modeste*, 18, Capt. Baillie, to be superseded on promotion, by Com. T. V. Watkins, on detached

duty, was in the river Columbia in April—*Frolic*, 16, Com. C. B. Hamilton, com. Nov. 1842, was at Mazatlan, from California, and was expected at Valparaiso 'the latter end of May—*Spy*, 3, Lieut. Com. Woolridge, was at San Blas, June 13—*Nereus*, store depot at Valparaiso, Master Commander Bateman.

Surveying—*Herald*, 26, Capt. Kellett, c.b., *Pandora*, 6, Lieut. Com. Wood, her tender, by last advices, were surveying on the southern coast of Vancouver's Island.

Foreign—The United States squadron were supposed (with the exception of the frigate Constitution) to be off the coast of Oregon and California. The latter vessel had proceeded homeward, her timbers, it is said, being in a decayed state. There was a French corvette at Callao.

CAPE OF GOOD HOPE—Commander in Chief, Rear-Admiral Dacres.

Steam Vessel—*Thunderbolt*, sloop, 280 h.p., Lieut. Com. Belgrave, acting (Com. Boyle not having yet joined), arrived at Simons Bay; was there June 24.

Sailing Vessels—*President*, 50, Capt. Stanley, flag ship of Rear-Admiral Dacres, Simons Bay—*Cleopatra*, 26, Capt. Wywill, cruising in the Mozambique station—*Conway*, 26, Capt. Kelly, at the Mauritius—*Suppho*, 16, Com. Gambier, Mauritius, left Simons Bay on the 20th May, with provisions and stores for the *Conway*—*Snake*, 12, Com. Brown, arrived in Simons Bay, June 10, from Chatham—*Helena*, 16, Com. Sir C. Ricketts, Bart., Mozambique, ordered to Spithead—*Carysfort*, 26, Capt. Scymour, on her way to New Zealand, with the new governor on board, arrived at Simons Bay, May 31, and sailed June 16—*Scout*, 14, Com. Loring, arrived at Simons Bay on the 10th June. She left Plymouth on the 29th March, and is on her way to the East India station, to relieve the *Wolf*, 16, Com. Gordon.

WEST COAST OF AFRICA—Senior Officer, Commodore Sir Charles Hotham, k.c.b., expected from South America—Capt. George Mansel, is now acting.

Steam Vessels—*Devastation*, sloop, 420, h.p., comp. 145, expected from Monte Video with the broad pendant of the Commodore, was at Bahia, June 17—*Hydra*, sloop, 240 h.p., Com. Young, at Ascension, July 6, bound to Gallinas—*Styx*, sloop, 280 h.p., Com. Chads, St. Helena—*Hecate*, sloop, 240 h.p., Com. West, at Ascension—*Prometheus*, sloop, 200 h.p., Com. Hay—*Albert*, 70 h.p., lent to the Colonial Government—*Cacique*, small steamer, lately captured by the *Penelope*, taking provisions to the vessels in the Bights, Ascension.

Surveying—*Avon*, 170 h.p., Com. Denham, at the bar of Benin, April 9.

Sailing Vessels—*Acteon*, 26, Capt. George Mansel, acting senior officer, at Ascension, July 6—*Nimrod*, 20, Com. Dacres, at Gallinas, ordered to the Cape—*Larne*, 18, Com. Brisbane, Benguela—*Favourite*, 13, Com. Murray, on her passage from Devonport, Tenerife, left June 8, for Ascension—*Lily*, 16, Com. Newton, arrived at Trade Town, March 4—*Wasp*, Com. S. Usher, Bight of Benin—*Bittern*, 16, sloop, Com. Hope, left Ascension, June, down the coast—*Wanderer*, 12, Com. Somerville, Gallinas—*Flying Fish*, 12, Com. Dyke, Loango, May 4—*Kingfisher*, 12, Com. Horton, to supersede Brown, arrived at St. Helena, July 12, for water—*Contest* 12, comp. 110, Com. M'Murdo, left Plymouth, Aug 13, on her passage—*Waterwitch*, 10, Com. Birch, arrived at St. Helena, June 12, and left next day for the west coast—*Pantaloan*, 10, Com. H. J. Douglas, in the Bight of Benin—*Espoir*, 10, Com. Hand, Ascension, arrived at St. Helena from Ascension, June 21—*Sealark*, 10, Com. Gooch, Ascension, July 6—*Rolla*, 10, Com. Simpson, Ascension, June 23—*Rapid*, 10, Com. Gallway, from Devonport, at Gallinas—*Ferret*, 8, Com. Sprigg, Ascension, June 23, from Plymouth—*Star*, 6, Com. Hockin, vice Dunlop, deceased—*Alert*, 6, sloop, Com. W. Ellis, off Shebar, May 6.

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

CAPTAINS—A. Forbes, W. Shippard
RETIRED COMMANDER—W. Wood, to
the List of 1816.

LIEUTENANT—G. Parker.

SURGEONS—O. T. Miller, J. Forbes
J. Findlay.

APPOINTMENTS.

CAPTAINS—Sir T. Bourchier, KCB., to
be superintendent of Chatham dockyard,
v. Shirreff, term of service expired—A.
Milne (1839) to be flag to Adml. Sir C.
Ogle, and to command *St. Vincent*—F.
E. Loch (1844) superintendent of quaran-
tine station at Standgate creek, re-ap-
pointed to that command—Sir J. G.
Sinclair, Bart., (1814) add. to *Victory* to
superintend packet service at Southamp-
ton.

COMMANDERS—F. W. P. Bouverie
(1842) to study at steam factory, Wool-
wich H. Goold (1832) to *Ocean*.

LIEUTENANTS—C. B. Stockdale (1812)
J. Dewar (1812), and J. Bowie (1840) to
Ocean—C. Haydon (1810), and T. Stro-
ver (1812) to *Poitiers*—W. C. Coffin
(1841), and R. Wilcox (1842) to *Recruit*
—J. A. Hodgskin (1841), S. Shore (1842)
to *Devastation*—A. R. Dunlap (1842) to
Sidon—D. R. B. Mapleton (1837) to
Torch—H. A. Norman (1841) and C. B.
Bayly (1841) *Devastation*—G. Parker to
Hibernia—C. R. Bamber (1837) to *Victory*
—C. F. Hillyer (1842) to *Amazon*—
C. Hoffmeister (1841) to *Hecla*—H. W.
Hire (1841) to *Tyne*—W. Horton (1844)
to *Queen*—T. H. Molyneaux to *Spartan*
—E. W. Sanders (1840) to *Bulldog*—C.
W. Hallet (1841) to *Hound*—J. B. West
and W. Wood to *America*—J. S. Mann
to *Rodney*.

MASTERS—R. Stokes to *America*—W.
H. White to *Gladiator*—W. J. W. Bur-

ney to command *Madagascar*—J. Saun-
ders to *Sidon*.

MATE—H. Hervey to *America*.

SECOND-MASTERS—T. W. Sullivan to
Victoria and *Albert*—W. F. Hains to
Acheron—A. Ballister to *Devastation*.

MIDSHIPMEN—G. Whiting to flag-
ship at Sheerness—C. Forbeto *William*
and *Mary*—J. W. Newport to *Eurydice*.
—G. H. Mansell to *Gladiator*—H. F.
May to *Espiegle*—T. Weston to *Sidon*
—W. Sainsbury to *Victory*—G. Murray
to *Trafalgar*—R. Bateman, J. Veitch,
and G. Parker to *Excellent*.

NAVAL CADETS—F. W. Nundi to *Vic-
tory*—M. Costello to *Virago*.

MASTER-ASSISTANTS—P. Denneby to
Bulldog—J. M. Pridham to *Recruit*—H.
Goldsmith to *Hound*—E. W. Grant to
Caledonia.

SURGEONS.—P. M'Lean to be surgeon
superintendent in charge of convicts in
Tory to New South Wales—J. B. Burns
to *Dido*—H. Morris to *Elizabeth* and
Henry—O. T. Miller to *Vesuvius*.

ASSISTANT-SURGEONS—W. T. Dom-
ville and G. Roberts to *Excellent*—W.
Evans to *Vindictive*—A. Armstrong and
C. R. R. Preston to *Caledonia*—A. Clark
to *Victory*—H. O'Hagan to *Acheron*.

PAYMASTER and FURSER—W. Clat-
worthy to *Redwing*.

CHAPLAIN—Rev. G. W. Garron to
Imaum.

CLERKS—A. Whitehouse to *Madag-
ascar*—F. Lucas to *Devastation*—Z.
Slaney to *Acheron*.

COAST GUARD.

Capt. A. Ellice to be Comptroller of
the Coast Guard.

Appointments—Lieuts. J. B. Kooystra
and A. M. Shairp to be chief officers.

Removals—Lieut. C. Bayly to South-
ampton Water—Lieut. J. Elwin to pac-
ket service—Lieut. P. Inskip to Port-
winkle.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Bristol, Aug. 24, the lady of Capt.
H. Stroud, RN. of a daughter.

At Stonehouse, Sept. 14th, the lady of
Lieut. Veitch, RN. of a son.

Aug. 25, Eaton Place, the lady of Capt.
Gladstone, RN. MF.

Marriages.

At Malvern, Sept. 5, Lieut. Col Eyre,
J. Crabbe, KN. to Harriet Louisa, widow
of the late Vice-Admiral Hollis.

At Devonport, Sept. 2, Charles James
Crittwell, Esq. to Elizabeth Anne, the
daughter of Capt. Sanders, RN.

At Keswick, the Rev. B. Dwarris, to Georgiana, daughter of the late Capt. J. Ponsonby, **an**.

Deaths.

At Devonport, Aug. 22, Commander H. Maingay, aged 60.
Retired Commander E. Harley, aged 71.

Lately, Retired Commander J. Cook.
Retired, Captain Charles Tyler
At Dartmouth, Aug. 28, F. Whitney, Esq. **R.N.** This officer was Master of H. M.S. Spartiate, at the battle of Trafalgar Aug. 30, at Dartmouth, Richard G. Wills, aged 35.
Near Romsey, Hants, Elizabeth, wife of Cpat. W. B. Suckling, **an**,

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, 1846.

| Month Day. | Week Day. | Barometer In Inches and Decimals. | | | | Fahrenheit Thermometer In the Shade. | | | | Wind. | | | | Weather. | |
|------------|-----------|---|--------|--------|--------|--|--------|------|------|----------|------|-----------|------|----------|------|
| | | 9 A.M. | | 3 P.M. | | 9 A.M. | 3 P.M. | Min | Max | Quarter. | | Strength. | | A.M. | P.M. |
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | 9 A.M. | P.M. | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. | | |
| | | In Dec | In Dec | o | o | o | o | | | | | | | | |
| 21 | F. | 29.80 | 29.88 | 62 | 66 | 58 | 68 | N | N | 3 | 4 | or (1) | bc | | |
| 22 | S. | 30.04 | 30.08 | 64 | 69 | 56 | 70 | NE | N | 2 | 3 | bc | bc | | |
| 23 | Su. | 30.13 | 30.17 | 64 | 67 | 54 | 69 | NW | NW | 1 | 1 | bcm | o | | |
| 24 | M. | 30.18 | 30.22 | 63 | 67 | 59 | 68 | NE | NE | 2 | 2 | o | o | | |
| 25 | Tu. | 30.25 | 30.24 | 62 | 67 | 59 | 68 | NE | NE | 4 | 3 | bc | o | | |
| 26 | W. | 30.20 | 30.13 | 62 | 69 | 55 | 70 | NE | N | 3 | 3 | bc | bc | | |
| 27 | Th. | 30.06 | 30.02 | 69 | 74 | 55 | 76 | N | E | 3 | 3 | bc | bc | | |
| 28 | F. | 30.00 | 29.99 | 68 | 76 | 55 | 77 | E | NE | 2 | 4 | bc | bc | | |
| 29 | S. | 29.98 | 30.00 | 67 | 64 | 59 | 68 | NE | NE | 2 | 4 | bc | b | | |
| 30 | Su. | 30.16 | 30.19 | 63 | 67 | 55 | 68 | N | N | 2 | 2 | bc | b | | |
| 31 | M. | 30.23 | 30.20 | 60 | 74 | 53 | 75 | W | W | 1 | 2 | bc | bcm | | |
| 1 | Tu. | 30.27 | 30.30 | 59 | 66 | 57 | 67 | NE | NE | 3 | 4 | o | o | | |
| 2 | W. | 30.34 | 30.34 | 60 | 71 | 54 | 72 | NE | NE | 2 | 2 | b | b | | |
| 3 | Th. | 30.32 | 30.30 | 58 | 71 | 49 | 71 | N | N | 1 | 1 | b | b | | |
| 4 | F. | 30.28 | 30.24 | 58 | 72 | 50 | 73 | NE | E | 2 | 3 | b | bc | | |
| 5 | S. | 30.20 | 30.17 | 65 | 74 | 55 | 75 | NE | NE | 2 | 1 | bcf | b | | |
| 6 | Su. | 30.04 | 30.32 | 66 | 74 | 59 | 83 | E | E | 1 | 1 | bct | bct | | |
| 7 | M. | 29.98 | 29.99 | 63 | 78 | 55 | 79 | NE | W | 1 | 2 | bm | o | | |
| 8 | Tu. | 29.99 | 30.02 | 65 | 74 | 55 | 75 | SW | SW | 3 | 2 | bc | bcm | | |
| 9 | W. | 30.08 | 30.34 | 62 | 71 | 55 | 72 | NE | NE | 2 | 2 | bf | bc | | |
| 10 | Th. | 30.13 | 30.35 | 65 | 72 | 55 | 73 | NE | NE | 4 | 4 | o | o | | |
| 11 | F. | 30.45 | 30.41 | 68 | 73 | 56 | 74 | NE | NE | 2 | 2 | bc | bc | | |
| 12 | S. | 30.45 | 30.45 | 64 | 74 | 54 | 76 | NE | NE | 2 | 2 | bc | bc | | |
| 13 | Su. | 30.42 | 30.38 | 60 | 68 | 53 | 69 | NE | NE | 3 | 3 | bc | bc | | |
| 14 | M. | 30.32 | 30.30 | 63 | 69 | 57 | 70 | NE | NE | 2 | 3 | bc | bc | | |
| 15 | Tu. | 30.30 | 30.23 | 62 | 70 | 53 | 71 | SW | NW | 1 | 2 | bcm | bcm | | |
| 16 | W. | 30.27 | 30.25 | 64 | 75 | 54 | 76 | W | S | 1 | 1 | bcm | bm | | |
| 17 | Th. | 30.11 | 30.00 | 59 | 75 | 53 | 76 | W | W | 2 | 2 | bcm | bcm | | |
| 18 | F. | 29.96 | 29.94 | 59 | 66 | 53 | 67 | N | NE | 2 | 2 | bc | bc | | |
| 19 | S. | 29.82 | 29.72 | 55 | 67 | 44 | 68 | SE | SE | 1 | 3 | bcm | bc | | |
| 20 | Su. | 29.57 | 29.53 | 56 | 66 | 45 | 67 | NE | NE | 2 | 3 | b | b | | |

August 1846.—Mean height of the Barometer 29.954 Inches; Mean temperature = 64.5 degrees; depth of rain fallen = 5.21 inches.

The Great Britain left Liverpool on the 22nd inst. for New York, and in the night ran ou shore in Dundrum Bay, Ireland, where she will remain until the next spring tides. No reason has been assigned for the accident.

Hunt, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

NOVEMBER, 1846.

NEW ZEALAND HYDROGRAPHY.—*Extract from the Remarks of H.M.S. North Star, Capt. Sir E. Home, Bart., R.N.*

On the first of August the *North Star* sailed for Auckland, New Zealand, where she anchored on the 10th, the winds were from N. to S., by the W., and once S.b.E.; S.W., W., and N.W., were the prevailing winds. The first three days the weather was fine, after which there was a succession of strong gales and fresh breezes, with squalls and rain, and fine weather. On the 4th the breeze being light at S.b.E. with fine weather, it shifted to S. and S.W., and came on to blow; and on the 5th blew hard, shifting to S., and returning to S.W., moderating at W., W.N.W., and N., with light airs and fine weather.

On the 6th and 7th it blew hard, coming on from N., when it was fine; shifting to N.W., and increasing at W. and W.S.W., and S.W.; after which it moderated, but strong breezes from the same quarters continued until sheltered by the land. The barometer had fallen gradually from 29·97 on the 1st until noon on the 3rd, when it was 29·62; it then rose during the 4th, and at 8 A.M. on the 5th, stood at 30 inches, and fell by noon on the day following to 29·60, and then continued to rise gradually to 30·12 by 8 A.M. upon the 10th. The thermometer between the 1st and 12th ranged between 54° and 67°.

On the morning of the 8th we were off the Three Kings, a group of high barren rugged rocks of different sizes; having rounded the northern extremity of the island, the water was smooth, and the weather very fine. After rounding the North Cape at 1 P.M. a course was shaped for Cape Brett E.S.E.; the land of North Cape is high, sloping off on the inside to a long low neck of land forming the north extreme of Doubtless Bay. Cape Brett is a barren high pointed headland with a small island off it by which it may be known. This Cape was passed at 9 A.M., and the

group of islands called, the Poor Knights at 2 A.M. They are rugged islands of moderate height. At daylight passed between the Hen and Chickens and Bream Head, the first a most remarkable group of islands, as the latter is a headland, high and rugged in the extreme; large fragments of basaltic rock piled up in most fantastic forms, which vary their appearance as the ship passes them. This done, the Great and Little Barrier Islands open, and a low flat-topped rock is to be looked for ahead. Off Bream Head and the islands Poor Knights and Hen and Chickens, the greatest abundance of the finest bream, or snapper, with other fish, are to be caught with hook and line.

The space between Bream Head and Cape Rodney is a bay of considerable depth, the land at the back hilly and like the rest which we had passed, clothed with trees to the top. The Great Barrier Island is rather high, and is remarkable for its copper ore. Cape Rodney is of moderate height and considerable extent, terminating in a bluff, within which at a distance of about ten miles there is a harbour, called Motu-ka-ka, which is said to be good. Passing on towards the harbour of Waitemata at the entrance to which the town of Auckland is situated, we passed between the island of Tiri-tiri Matanghi and the point Wangapara. The island is low and covered with brush wood; the point is moderately high, with rocks off the north side off it, which were breaking; the passage is very good, we worked through, the wind S.W. The island of Ranguitoto had been for some time visible, and cannot be mistaken; it is to be known by two points which stand upon each side of the peak which forms the apex of the mountain, and have the same appearance which ever way they are viewed. Under this island there is good anchorage all round; a signal station will now be seen upon the top of a remarkable hill, called Mount Victoria, which is left on the starboard hand, passing to the left of a red buoy which is placed upon a rock, over which there is six feet water. Having passed which, the port of Waitemata opens; the north head is rounded at about a quarter of a mile to avoid a sandy spit, which extends easterly.

A remarkable rock in form of, and called, the Bastion, is seen, from which extends a rocky ledge in a north direction one mile; a standing beacon is placed upon the outer extreme, and a black buoy is inshore of it, avoiding which there is a good working passage of 7 fathoms up to the town, in which depth, or from 5 to 10 fathoms anchor, the church bearing south, the Bastion rock E. $\frac{1}{2}$ S., the holding ground is very good. Moor with open hawse to S.W. The tide runs about three knots per hour. Wind from S.W. or N.E., with squalls and rain, prevails during the day, falling light or calm towards sunset, and coming on again most commonly about 10 A.M.; the harbour of Waitemata is capable of containing 300 large vessels.

The town of Auckland is built on the south side of this strait. At the upper part of the harbour, it was at first proposed to place the town, but the shoal water near the land, and the distance which it would be necessary for vessels to be brought from sea, was a sufficient objection. Above the harbour is an extensive piece of water, very shallow; near the middle of it is a rock called the Boat rock, which, at a little distance

exactly resembles a boat; it is about fifteen feet long and four above the surface at high water; this rock is usually covered with cormorants. Near the centre of the gorge, in the narrowest part, opening into this basin, are the remains of a small island about thirty feet high, having bushes on the top, called the Centinel: it is composed of a sort of soft sandstone and clay; off which there is very good fishing with hook and line. It is about two miles and a half from the head, the opening between which is about one mile and a half. This is sheltered to the east by the southern part of the main land and the island of Koreha; the island of Waihekeh being eastward of it some distance further out.

The North Head is a round hill of moderate height, from the base of which rises another hill round and high, Mount Victoria, upon which is the signal station; behind which, in the distance is to be seen the summit of Rangitoto. These two hills are upon a peninsula, which like the greater part of this country where it is not forest land, is covered with fern. From these hills the land continues of a regular form, and of moderate height for some distance round the north side of the harbour, bare of trees, and having a cliff of light brown sandstone, the strata horizontal and well defined. The South Head is lower than the North, it is a precipice, and is of the same formation as the rest. This harbour is broken into numerous bays, the surface of the land undulates in moderate hills and slopes: in one of these bays upon the south side, about half way between the South Head and the Centinel rock is the town of Auckland, it is called Commercial bay; it is separated from Official bay by Britomart Point, upon which are the barracks, and south of that the church is built, a brick-building unfinished.

In Official bay are the principal government officers' allotments, where they reside. Upon the ground above is the government house, a long low building of wood upon a brick foundation. A stream of water rush from this bay into the sea; the stream is small, but a convenient watering place might be made there with little trouble. There is no landing place, and shoal water extends to a considerable distance, so that a boat cannot come close up to the beach excepting at high water. A ship lately sailed out of the harbour laden with coals, which the inhabitants stood in need of, because there was no means of landing them in any moderate length of time. The various bays eastward are all occupied by different settlers; that next eastward of Official bay is called Mechanic bay, here is a ropewalk of some extent, the property of three brothers, who make cordage from the New Zealand hemp, that which is prepared by the natives being much the best; the demand is greater than their power to supply, and although we wanted rope there was none on hand for sale.

These bays have sandy beaches, the rocks projecting from the points which form them some distance into the water, flowering shrubs overhang the precipices which form these points; the land between them rises with a gradual slope to the level ground, which forms the face of the country, it is here entirely covered with fern, upon which and the grass which grows under it the cattle thrive exceedingly. At the back of the town stands Mount Eden, the town itself standing in the county of Eden, the family name of the Earl of Auckland; this mountain with others in its

neighbourhood is of volcanic origin, as is the island of Ranguitoto, and probably the whole country. These hills were formerly fortified places and are nearly all encircled near the summit with a succession of trenches, many of great depth, giving the appearance of terraces, as many as five or six, one below the other. Mount Eden has a large deep crater in its centre, and is very remarkable as a native fortification. The hills rise abruptly from the plain, are steep, and of considerable height; are well formed for strong holds and places of defence in a country filled with warlike tribes. Masses and blocks of scoria of immense size cover the ground near these mountains, and are excellent for building. From the harbour there is no appearance of cultivated land, except a few small neat gardens, in and near the town. The prospect is not, however, sterile, but has the appearance of Down land.

In the neighbourhood of Auckland, but not further south, are forests of the *Dammara Australis*, or Kawri trees, particularly about Manakau harbour, westward; and up a creek in the basin, above the Centinel Rock, upon the right hand side, at some distance there is a forest of considerable size; some of the trees were measured, which, at four feet from the ground, would square 3 feet 8 inches, 3 feet 6, and 3 feet 7, perfectly erect and smooth for 40 and 50 feet below the branches; trees squaring 2 feet 7½ were common, but there are no remarkably large trees in this forest. Kawri gum streams copiously from the stumps of the trees, which have been felled, covering the stump with an appearance like wax, and hardening in the air; this gum is also to be found in large lumps in places where the trees are now no longer to be found. At a little distance below the surface of the ground, it is collected by the natives and sold to speculators who have lately commenced a trade with it to England. The population of the county of Eden, parish of Waitemata in the years 1843-4 in an area of 24 square miles, was

| | | | |
|------------------|-------|---------|-------|
| Europeans males, | 1506, | females | 1016 |
| Natives | “ | 350 | “ 250 |
| | — | | — |
| Total | 1856 | “ | 1266 |

The troops now in New Zealand consist of detachments from the 80th and 96th regiments; at Auckland there is a major, captain, subaltern, an assistant-surgeon, and 130 men of the former regiment; and at Wellington in Cooks' Strait there was a captain, subaltern, and 65 men of the latter regiment; the principal tribe of natives in this part of the island is called the Waikato tribe under a chief, one of the most sagacious and powerful in New Zealand, called Te-where-where, or red red.* Christianity is fast spreading amongst the tribes of natives, the custom of tatooing the face for which the New Zealander is most remarkable, is discontinued by those who have been converted, the use of European

* When the father of this chief died, his body was wrapped in a red blanket previous to interment, the first blanket of that colour that had been seen, his son took the name in consequence.

arms and clothing with other customs of the civilized world are rapidly increasing amongst them. Those who have been converted are for the greater part Protestants of the Church of England, or of the Wesleyan.

The use of the native mat made of the fibres of the *Phormium Tenax* is giving way to the European blanket, to which has been attributed the increase of disease and death among them, causing complaints in the chest, so that the proportion of deaths is about three times greater than the births.

With respect to the time at which New Zealand was first peopled, there are chiefs who can trace their ancestry back sixteen generations. The common tradition is, that a tribe having been frequently beaten by another tribe with which they were at war, left an island called Hawaiki in ten canoes, to seek a new country. In one of the canoes, called Te-Arawa, was a chief called Te-mate-ka-pua, he first touched at Wangapa-rava, between Auckland and the Bay of Islands, it touched at Haurua, (the Little Barrier,) Aotea (the Great Barrier,) Morhau or Cape Colville, at Ahuahu, one of the islands off Mercury bay, and thence to Kati-kati, at which place they found some other natives, who had arrived before them in a canoe called Tai-nue. In this canoe came the ancestors of Te-where-where. In consequence of this they went next to Tau-ranga, thence to Waihi, and lastly to Maketu, where they hauled up their canoe, being determined to remain there. It is in the Bay of Plenty. From thence they spread to Rotorua and Taupo in the interior where their descendants now reside. The principal divisions of the tribe at present go by the names of Ngatiwakane, Rewera, and Taupo; the two latter being the names of the large lakes by which they live, the former the name of one of their ancestors. The tribes together are called Nga-Tamriki-ot-Arawa, or the children of the Arawa, the name of the canoe, in which their tribe first came to the country. The argument used by the natives of Maketu to prove their right to Maketu and of Motiti, (the Flat Island of Cook,) is that as a green stone ear-drop belonging to Te Matuapua their ancestor, who came over in the canoe Arawa was still in the possession of one of their chiefs, named Te Heukew, the land near which their ancestors first landed should be theirs.

The ear-drop is known in New Zealand as a jewel of great value, and is called kau-kau-matua, which means "first floated over," kau-kau being to swim, and matua meaning first.

The time of year at which they landed was in December or January, for the tree called Pou-ta-kawa, was then in flower. It is the *Metrosiderus Floridus* of Linnæus, and bears a beautiful scarlet flower. When first seen from the canoe, one of the natives threw away his kura or head dress which was made of red feathers, to substitute the flower in its place, which kura was afterwards picked up by a woman who had landed from another canoe, who took it to her companions, they knowing the ornament and its owner, were by it informed that the canoe Arawa had arrived. In the Arawa came also dogs, kumera, and taro, the two latter their principal articles of food. Dr. Shortland, from whom I have received the above information, informs me that the name of the place,

Hawiki, is by leaving out the k, exactly the same name as that of the island upon which Captain Cook was killed, and that it is extremely common, in some of the Polynesian dialects, to leave out the k, whilst others preserve it.

The *North Star* remained at Auckland from the 10th of August to the 14th, during which time the winds were from W. and W.S.W., E., and N.E. The dip of the needle was found to be $68^{\circ} 19'$, in the garden of the harbour-master in Official bay. The barometer, which had been gradually rising for three days previous to our arrival at Auckland, attained its greatest height on the day after, standing at noon at 30.18. It then fell as gradually, and when she sailed upon the 14th, stood at 8 P.M., at 29.94., the range of the thermometer, in the mean time, between the 10th and 14th, was from 54° to 66° . We arrived at Wellington upon the 31st of August. In this passage the winds were from N.E., and S.E., calm, N.W., W., N.E., S.E., S.W., S., N.W., S.W., and S.E., S., S.W., and S., N.E., N.W., N., E., and N. The first three days after sailing were fine, with light airs and calms, but from that time to the end of the passage, a succession of strong breezes and gales of wind, with thick cloudy weather and rain, particularly off the East Cape, the worst weather being from the S.S.E.

Port Nicholson is a large harbour of an oval form, the depth of water from 7 to 15 fathoms, mud. It is surrounded with very high land covered with trees. There are numerous gullies down which the wind rushes with great violence, rendering it extremely dangerous for boats. The prevailing winds in this harbour are, as in Cooks Straits, from N.N.W. to S.S.E.

The entrance is formed by two heads, the eastern is called Peucarrow, and the western Sinclairs Head; between Sinclairs Head and the entrance is a long reef of rocks which extend eastward two-thirds of the passage across. There are two passages, the western is called Chaffers, which should not be attempted by a stranger. The eastern or main passage is safe, using common caution, the dangers being all above water. The depth in the eastern passage is from 7 to 10 fathoms, and until after the heads have been passed. From a little rugged island which is left on the starboard hand, a bank extends a quarter of a mile with 4 fathoms water; a small rock called the Pyramid is left on the port hand, from which a small bank also extends about a cable's length. Point Jouningham is to be rounded upon the port hand at a convenient distance; the anchorage is in what is called Lampton harbour off Thorndon flat, the latter point bearing east, and the centre of a large island, called Soames Island, bearing N.E. The best watering place is at the heads of the harbour near the custom-house, on the Te-Aro flat. This town stands upon the beach, for the most part it is very straggling, and extends from the Te-Aro to Thorndon flats, a distance of about two miles. A shallow, but rapid river, called the Hut, flows into the N.E. part of the harbour. The tide in the harbour is scarcely perceptible; at the entrance it sets N.E. and S.W. $1\frac{1}{2}$ knots.

Vessels have been known to mistake Pallisser bay for Port Nicholson, the wind blowing in they have been unable to work out, and have been

lost. The ship remained at Port Nicholson from the 31st of August until the 5th of October, during which time the winds blew alternately from N.W. and N.N.W., S.E., and S.S.E., varying occasionally to the cardinal points and E.S.E.; the barometer ranged between 29.26 and 30.08; the thermometer from 64° to 50°.

On the 5th of October the ship sailed for Cooks Straits. In rounding Cape Tera-whiti, the islands of Maua and Capiti are seen ahead; the first is a table-land of moderate height, bare of trees, with anchorage on its eastern side. The ship anchored under this island in the afternoon of the same day, in 5 fathoms water, sand, and mud, Broken Head bearing N.N.E. $\frac{1}{2}$ E. four miles, and the extremes of the island of Maua, W. $\frac{1}{4}$ N. and N.W. one mile. The tide here sets through the strait, the flood 3 knots 2 fathoms, the ebb 2 knots 6 fathoms per hour. On the 7th, she moved to the anchorage off the island of Kapiti, which is distant from that of Maua about 18 miles. Midway between the islands, the depth is 33 fathoms, dark sand. Kapiti is high and thickly wooded; upon the eastern side are three islands, the anchorage is between the northern and southern ones; they are used as whaling stations. The bearings are extremes of Kapiti from S.E.b.E. $\frac{1}{2}$ E. to N.b.W. Evans island, N.W., Maua island, S.b.E., the depth 17 fathoms. It is exposed to the N. Easterly winds, but the fetch is not great, the coast extending eastwards of these islands, from cape Tera-white to cape Egmont, forms a curve N.N.W., and S.S.E., at a distance from them of about seven miles.

Between Maua and the main the tide runs 2 $\frac{1}{2}$ knots, and between the main and Kapiti 3 knots, it runs in the direction of Cooks Strait; at the anchorage on the day of full moon it was high water at 9h. 30m. the force of tide one mile and a half per hour. On the opposite shore to the island of Kapiti is the Pah of Waikani, in no way remarkable, except for its church, and the progress of Christianity, which the natives have here made under the judicious care of the Rev. Mr. Hadfield, a clergyman of the church of England. The church is built of timber, the sides of bark, the length is 70 feet, the width 36, and the height inside 31 feet; it is well floored; and has nothing striking in its exterior appearance, but the simplicity of the ornaments and native taste which has been displayed within the building would render it creditable to any nation. It was designed and built by the natives of the Pah: the ridge pole is one piece of timber, which is supported at equal distances from the ends by the uprights; the sides are supported by trees, having the slabs cut off, the flat side within forming a pilaster, the rafters and *purlins* are the same, all that is required to support and strengthen the building is shown: the timber is coloured with red ocre and white, the colours chiefly used by the natives of New Zealand; and laid on in the most elegant and intricate scrolls, for which they are remarkable. The spaces in the walls between the pilasters are filled with reeds, black and yellow, which is done by wrapping a riband of flax spirally round the reed, and holding it in the smoke over a fire, the part not protected by the leaf is permanently blackened. It would require some power of description to do justice to this church. The timber used in the construction of this

building is of the tree called totara. The tree which forms the ridge pole is from its size of great value to the natives, being fit to make their largest sized canoe. It was a present from the neighbouring tribe at Otaki, who had been for many years their most inveterate enemies.

Mr. Hadfield had for some time resided alternate weeks with the two tribes, and when those of Otaki found the purpose for which the building was intended, they cut the tree, dubbed it into its present form, and took it to Waikani as an offering of peace, which peace has ever since continued. There are schools in this Pah for children and adults, which do Mr. Hadfield the highest honour. Whiti (a native son of Rere,* an old man, chief of the Pah,) was a monitor at the Sunday school; there was not less than 350 persons, mostly adults; many were aged men. The school was composed of both sexes, and all ages. It is divided into seven classes taught by natives, one to each class; they take places by challenging; he who does not know the word or question, giving place to him who does. Mr. Hadfield resides with them in the Pah. Here it is not unfrequent to see a child hearing its grandfather say his catechism.

The principal Pahs here are Otaki westward, Wakani, where we were, and Porirua. Te-Rauparah, the most intelligent and powerful chief of the southern parts of New Zealand, is the chief of the first, and Rangiaeta is the principal chief of the latter, which is a considerable whaling station, a short distance eastward. The tribes here are numerous, well armed, and well disposed; but aware of their power.

On the 9th of October we sailed for Nelson. In crossing the strait when Cape Tera Whiti bore S.S.W., and was in one with the east extreme of Maua Island, Gibraltar rock bore N.E. $\frac{3}{4}$ N., and the extremes of Kapiti N. $\frac{1}{2}$ W. and N. $\frac{3}{4}$ E.; the extremes of Maua W.S.W. and S. S.W.; the patent log was put over. Stephens Island appears at the extreme entrance to Blind bay; when the centre of this island bore S.W. b.S., the distance run was forty-one miles. At the bottom of this lies Nelson haven. The anchorage is in 7 fathoms sand and mud, with the east point of a small island called Pepins island which is left open on the port hand coming in N.E., and the Company's flag-staff, which is on the high ground, in the town of Nelson S.S.E. $\frac{1}{4}$ E. Outside the haven the distance from the town measured by sound two miles and fifty-six yards. This haven is formed by a natural breakwater, or bank of boulder stones, two miles in length. The entrance to it is very narrow, and at all times dangerous to enter or depart from excepting at slack water, the force of the tide being at the springs eight, and at neaps six knots per hour. The anchorage outside the haven is considered to be perfectly safe. The winds very seldom blowing home into the bay, but the finest and mildest weather prevails there, when the very reverse is found outside. The distance from Stephens Island to the town of Nelson is about sixty miles, and the space between Stephens Island and the Point of Massacre bay is about the same.

The *North Star* left Nelson on the 14th, and returned to Wellington on the 16th. The winds in Cooks Straits were from leaving Port Nicholson to our arrival at Nelson, from the S.E. principally, varying occasion-

* Reve-Ta-whanga-wha-nga.

ally to E. and S. In Blind bay it was calm nearly the whole of the time we remained there, and returning from thence to Port Nicholson it was N.N.E. and N.E., light, and the weather fine. The barometer had been regular from the day we left Port Nicholson, when it had risen to 30·16, until our arrival at Nelson, when it stood at 30·07; during our stay there it fell from that to 29·97, at which it remained stationary for thirty-six hours, and then continued to fall from 8 A.M. on the 13th (29·97) to 8 P.M. on the 16th, at noon of which day it had fallen to 29·07. We were at that time off the entrance to Port Nicholson. It was not my intention to have gone in, but as the mercury was lower than I had yet seen it, I did not pass the port, and anchored; making every preparation for bad weather. At 8 that evening it stood at 28·97, and began to rise: during the time that the mercury was stationary, when in Blind bay between the evening of the 11th and the morning of the 13th, the weather was calm and very fine, and between that time and the evening of the 16th, when the barometer had fallen to the lowest the same light breezes and fine weather continued, the winds from N.E., and N.N.E., and N.N.W.; for the greater part of the 16th it was calm and fine, a light air from E. and S.E., which shifted in the evening to N.W., clouding over, and towards midnight became squally. It rose on the 17th to 29·10 with strong breezes and squalls, which continued until the evening of the 19th, when it blew a gale from N.W., which moderated into a fresh breeze from that quarter, and fine weather by noon of the following day. At noon of the 19th, it had risen gradually to 29·28, and noon of the 20th had fallen again to 29·07. As the weather which attended this extraordinary fall of the mercury was by no means equal to what might have been expected, I delayed our departure no longer, and upon that day, 20th, sailed for Akaroa, Banks Peninsula. The thermometer ranged between sailing from Port Nicholson until our return to it from 48° to 65°, and when in Blind bay from 55° to 64°.

Leaving Port Nicholson on the 20th of October arrived at Akaroa on the 24th, the weather was fine, and the winds light and moderate from south, S.W. and S.S.W.; there were occasionally squalls, and showers of rain; for twelve hours it was calm, the barometer during the four days rose gradually from 29·07 to 29·85, and the thermometer ranged between 51° and 60°. Running along the eastern part of Banks Peninsula, the entrance to the harbour of Akaroa may be known by a ledge of large flat black rocks which are off the northern part of the entrance. From the entrance to the anchorage is a clear passage of about five miles, from a mile to a mile and a half wide, and in one part about one-third of the way up, not more than three-quarters of a mile. There is no anchorage for the first two miles within the entrance, being open to the sea, the bottom rocky, and the water from 15 to 20 fathoms deep.

The anchorage is with the Government flag-staff S.E.b.E., and the extreme of a remarkable promontory at the upper part of the harbour N.W. $\frac{1}{4}$ N., the depth 4 fathoms mud. Wood here is most abundant, and water is to be found in large and rapid streams in several places, particularly one which runs past the house of the Government resident. It must be rafted; no other supplies except a few vegetables are to be

obtained here. Fish and cray fish are plentiful, the land all round this harbour which is perfectly land-locked, is very high and thickly covered with timber.

The tide is scarcely perceptible: the wind blows generally in or out of the harbour; a reef extends for half a mile from the southern head in an easterly direction, to seaward the sea breaks over it. It is necessary to be prepared for squalls of wind which may be expected from the high land at entering or leaving the place. There are plenty of pigeons to be shot here in the woods, but great care should be taken not to go alone, or to separate from the party, for there is nothing easier than to be lost in the thick high forest, and few things more difficult than to find the way out again. The natives here are few in number, and very well disposed. Southward of the Lookers-on, or Cape Campbell, the number of natives on the middle island do not exceed 2000.

In the seven days that the ship remained at Akaroa, the barometer ranged between 30.08 and 29.35, the thermometer from 49° to 64°, the winds were variable and moderate from N.E., N.N.E. and N., S.E., S.W., W., and W.S.W., the weather fine, but cloudy. The dip of the needle by five sets of observations 66° 30'. Akaroa is remarkable for being the scene of a horrible transaction which took place in the year 1831, in which the master of the English brig "Elizabeth" was deeply implicated. A history of that event is given in the *Nautical Magazine*, for the year 1834. I had on board the *North Star* when at anchor off Kapiti a native, son of the principal chief of the Pah at Waikanai, who accompanied me to Port Nicholson. His name is William, or Werime Whiti, who was an actor in the tragedy; his account of it as given to me through the translation of Mr. George Clark, junior, a protector of Aborigines, is subjoined, and may be depended upon: I was present when it was taken down as he spoke.

"Captain Stewart came to Kapiti in a vessel called the *Elizabeth*, John Cowell, a young man was also on board as supercargo. They came ashore at Waikanai, and Rauparaha who was there, proposed, that the vessel should convey him and a body of men to Wangaroa, (Akaroa,) in order to surprise a tribe with whom he was at war. The captain and Cowell consented to this arrangement, and in return were to receive a cargo of flax. Rauparaha accordingly embarked, accompanied by upwards of one hundred men from three different tribes, the narrator himself being one of the party. The third day after leaving Kapiti they anchored at Wangaroa (Akaroa). They (the natives) kept close on board. Cowell went on shore, and learning that the chief Te-mahi-haranni was some distance up the country, he dispatched messengers to him, inviting him to come and see the ship, and the muskets, double barrel guns, &c., that he had brought for him. On the third day Te-mahi-haranni arrived, and suspecting no evil, set out with his wife and daughter, a child of about ten or twelve years of age, and four canoes, containing upwards of twenty men to visit the vessel. Te-mahi-haranni were handed up the side and introduced into the cabin, where Rauparaha was waiting to greet him. The words of salutation addressed by Rauparaha to his victim were

to this effect, 'Welcome, welcome, welcome, my son, come and bear the might of my vengenes'. He was then handcuffed and secured in the cabin. In the mean time the rest of the natives had secured the four canoes with their crews. They were not killed, but detained prisoners on board. The same evening as soon as it was dark the whole party, some in the canoes they had captured, and some in the ship's boats, proceeded to the Pah, on shore. Landing by stealth, they surprised the inhabitants, and a general massacre took place, and upwards of two hundred individuals were slaughtered. The Europeans did not take an active part in the massacre, but they seized upon the affrighted and fugitive women, using them as victims of their lust.

"The work of blood being finished they burnt the houses, destroyed the cultivations, &c., and then prepared a number of native ovens, and cooked forty of the bodies of the slain. With these they proceeded on board, and weighed anchor to return. In the mean time Te-mahi-haranni, in order to save his daughter from falling into the hands of his relentless foes, watched his opportunity, and hung her in the cabin. When the brig arrived at Otaki, Te-mahi-haranni and his wife were conveyed on shore by Rauparaha who was there joined by Raugiliaita, and these poor unfortunates were then killed and eaten. The crews of the canoes who had been taken were detained on shore, became slaves, bound as prisoners. About thirty tons of flax, and that of inferior quality, was put on board by Rauparaha, and, when the captain remonstrated, he was indirectly advised to take himself off, Rauparaha remarking that, in prospect of payment, he (Mr. Stewart) would act as basely towards himself and people.

Whiti adds "that he with nineteen others of the tribe to which he belongs, joined ten of Puahas tribe from Cloudy bay; there were four Pahs at Akaroa, which they attacked, the people were flax-dressing at the time and quite unprepared, they killed all and burnt the huts. The Pahs were on the beach; that on the promontory, was deserted, the people being engaged about their flax. A few old people only were there, they picked out the stoutest, those in best condition to eat, the rest were left. The ovens were made in the Pah near the harbour's mouth on the north side: when arrived at Otaki, the chief Te-mahi-haranni was hung up by his feet, and his throat was cut, they drinking his blood;"—but this Whiti did not see.

The end of this story is said to be that, the wretch, Stewart, when off Cape Horn on his passage to England in the Elizabeth, it then blowing a heavy gale of wind from S.W., the people being at dinner, the captain with the man at the helm being the only persons upon deck, a sea pooped her, washed him against the quick work, and injured him internally. He put his hand to his side, and said, "I am done for," he staggered down the companion-ladder, and died two days afterwards of the injury, neither the man at the helm, nor any other thing was hurt.

The *North Star* left Akaroa on the 1st of November, and anchored off Auckland on the 10th following. During this passage she had for the first four days strong gales and fresh breezes, with squalls from the S.W., W., and W.N.W., after which it was fine, with light and mode-

rate breezes from the same quarters; the barometer ranging between 29·30 and 30·07, the thermometer from 53° to 68°. Upon the 15th she sailed for Sydney, where she arrived on the 27th, the weather throughout which was fine with moderate breezes, occasionally fresh. In this passage the barometer rose to 30·15, and two days after fell to 29·78, the weather changing from light breezes from E.S.E. and hazy, to fresh and strong breezes from N.b.W. and S.b.E.; at which change it rose rapidly to 30·10, the thermometer in the mean time ranged from 71° to 69°.

On the 9th of December the ship again sailed for New Zealand. Between our arrival at Sydney, and departure from it, nothing remarkable took place, excepting the occurrence of what is there called a "brick fielder." I felt the effects of two. They are by no means to be overlooked. The barometer ranged during our stay from 29·55 to 30·18, and the thermometer from 67° to 80°, seldom falling below 70° in the night. The morning of the 30th November had been oppressively hot and calm. Upon a sudden, about noon, the S.W. was clouded with dust, and in a few seconds it blew extremely hard from that quarter, the dust so thick as to equal one of the thickest London fogs; the land over which the wind passes is, in dry weather, thickly covered with this dust, which is the colour of brick-dust. No boat could pull against it, and ships in the harbour drove; the barometer had continued to fall gradually from 8 A.M. of the 29th until noon on the day following, by 8 P.M. to 30·05, and so continued until the 4th, when for the next four days with little apparent cause by change of weather, it varied, on the 4th from 29·86 at 8 A.M. to 29·55 in the evening. It rose by noon on the 5th to 29·83, and by 8 o'clock the next morning had fallen to 29·68; at 8 in the evening it was 29·84, and 8 next morning 29·70; by 8 o'clock on the 7th it had risen to 30·15, and so continued. The wind during the time S.W. and W., as above stated.

The *North Star*, sailed on the 9th of December for Auckland, from whence she proceeded to Port Nicholson, Nelson, and touching again at Wellington returned by Cooks Strait to Sydney. In this repetition of our former visit little new presented itself. The season was, however, different, the winds were as follows:—for the first six days from N.E., N.N.E., N., once S.b.E., and once N.b.W., being then in latitude 35° 13' S., and longitude 164° 0' E.; the wind shifted to S.W. and S.E., and S.S.W., then to S.E.; and so remained for the next three days, then to S.W., W., and S.W., at which last it blew a gale for twelve hours.

Excepting this gale the weather was fine and the winds light or moderately strong all the way. The range of the barometer during the passage was from 29·74, to 30·08. The thermometer between 64° and 74°. She remained at Auckland from the 23rd of December to the 18th of January, 1844, during which time the winds were from S.W., W.S.W., W., S., and S.W.; the S.W. and S.S.W., prevailing for thirteen days, then N., E.N.E., E., N.E., N., calm, W.N.W., W., S.W., S.S.W., S., S.S.E., E.S.E., S., E., E.N.E., N.E., S.W., S., S.S.W., S.S.E., S., S.S.W., and S.W., the breezes moderate for the most part, generally fresh towards noon, sometimes calm, the weather fine; and here

when it is fine it is most beautifully so; the dews at night are extremely heavy. The barometer in this period rose to 30·28, and fell to 29·65, this was on the 10th of January; the mercury stood on the 8th at noon at 30·25. At noon on the 8th at 30·13, and then fell gradually until 8 P.M. on the 10th, when it was 29·65, and then rose as gradually as it had fallen, being at 8 A.M. on the 12th 29·88, and at the same hour on the 13th 30·03. In this time between the 8th and 13th, there was no perceptible interruption to the fine weather, excepting that on the 10th about noon and afterwards, the breeze was unusually fresh, and in the evening there was rain. The thermometer rose to 76° and fell to 60°.

[Some excellent directions for Auckland will be found in our June number from the harbour master, Capt. David Rough.—Ed.]

ON THE STORM WAVES AND STORM CURRENTS OF HURRICANES.

Observations invited by H. Piddington.

THERE appears no doubt, from the investigations made of late years by Mr. Redfield in the Western hemisphere, by Colonel Reid in the Eastern and Western, and by Mr. Piddington and Dr. Thom, in the Eastern hemisphere, that the tropical hurricanes are always circular storms, revolving on an axis or centre, and, at the same time, moving forward, and that many storms *without* the tropics, in the Atlantic, Pacific, Indian, and Great Southern Oceans, are also progressive and rotatory, but as embracing circles of very large diameters, the variations of their winds, though subject to the same laws, are less marked than the smaller but more furious storms of the tropics.

It has also been distinctly shewn by the researches of Colonel Reid and Mr. Piddington, that these hurricanes within and near the tropics generate two kinds of currents, which have been designated as the storm *wave* and the storm *currents*; and they are thus described by Mr. Piddington in his *Horn Book of Storms for the Indian and China Seas*,* Page 22, second edition.

“ I have before spoken of the ‘ storm waves’ and ‘ storm currents’ as elements of danger or safety in these storms, according as the mariner may be situated or manage. They are at all events elements which he should carefully take into account when estimating his position at these times. The following is from the conclusion to my eighth memoir, *Journal Asiatic Society*, vol. xii., and will, I hope, fully explain what is meant by these terms. It relates to the storm on the Coromandel coast of October 1842, but the principles are the same every where, and the mariner will find no difficulty in applying them.

“ I must not omit, also, to point out an important practical lesson for the navigator on the Coromandel coast, which should not be omitted, and it is this : Those who have studied this subject, and are acquainted with

* Published by Ostell and Co., Calcutta, and Allen and Co., London.

the publications of Reid and Redfield relative to the storms of the Western hemisphere, and with my own, relative to those of the Eastern hemisphere, are well aware of the abundant evidence which exists, (and there is much more yet unpublished), to prove the existence of 'storm waves' and 'storm currents.'

"To those, however, who are not fully acquainted with the subject, I may say, that the 'storm wave' is a mass of water of greater or less diameter according to the storm, raised above the usual level of the ocean by the diminished atmospheric pressure, and, perhaps, other causes, and driven bodily along with the storm or before it, and when it reaches bays or river mouths, or other confined situations, causing by its further rise when contracting, dreadful inundations; but upon open coasts rarely so, or not in so great a degree, as it can there spread out quickly and find its level.* The 'storm currents' may be briefly described as circular streams on the circumferences of rotatory storms, and of these also we have evidence enough for the mariner at all times to admit, and be on his guard against the possibility of, or even the great probability of them.

"We have thus in every storm two sets of forces (currents) independent of that of the wind, acting upon a ship; the one carrying her bodily onward on the track of the storm, and the other drifting her round the periphery of that part of the storm circle in which she may be.

"Taking, as the simplest case, and one nearly that of Madras roads, a storm travelling from east to west, and striking upon a coast running north and south, its centre passing over Pondicherry, we should have then, for all ships in the offing, one current, the 'storm wave' carrying them directly on shore, with greater or less velocity, as they were nearer or farther from the centre; and other currents, the 'storm currents' varying in their direction according to the situation of each ship in the storm circle, but always agreeing pretty nearly with the direction of the wind.

"The current of the storm wave then is setting due west, but that of the storm current west, on the north side of the storm circle, and due east on its south side; south on its western edge, and north on its eastern side, and so on in all the intermediate directions; and a ship putting to sea from Madras roads in our supposed case, will be carried right towards the shore by the storm wave, and to the south-westward also by the storm current; but if putting to sea from any place to the southward of Pondicherry, she would be carried one way by the storm wave, and the opposite one, or partly so, (to the S.E., E., or N.E.,) by the storm current, so that as to mere westing, the effect of one would probably neutralize that of the other. The case of a ship on the northern half of the storm, where both forces are against her, should, however, be borne seriously in mind by the seaman. It was probably the cause of the indraught which wrecked the ships which were lost in this storm, and of some of the others finding themselves in much shoaler water than from

* The deep sea wave, also, (the *flot de fond* of the French writers), no doubt, assists the inundation; but as there is not a surface cause, I do not allude to it.

their run, they might reasonably have supposed. Captain Biden's suggestion in the port orders, to keep a due attention to the lead in these cases, is then founded, not only on merely sound nautical experience, but upon good scientific grounds also. To neglect the lead is a positive act of barratry or folly, for in these storms it is impossible to estimate the true distance from the coast by any other means, and the three forces, the storm wave, storm current, and the drift occasioned by the wind, would form a complex problem in fine weather. The seaman will not fail to recollect how much influence the storm wave may have upon his position in places where, as in the British channel,* a storm coming from the westward, brings with it a vast mass of water from a great ocean like the Atlantic, so that with a southerly or south-westerly gale, he finds himself set far to the eastward by some hitherto unknown but fatal current: and I trust, that when I say that, if we can obtain documents, we may trace out accurately the laws of these dangerous complications, I shall add another claim to the assistance of every right-minded seaman, and of every friend of humanity.

"I may add here, that Col. Reid mentions the case of a ship which found that the effect of our West India hurricane was wholly to neutralize the gulf stream! I have certainly ascertained that the storms at the Sand Heads are preceded and accompanied by a heavy set from the eastward, which sweeps over them at from 3 to 5 knots an hour; and in the China Sea there is abundant evidence to prove that in the great tyfoons from the E.N.E. coming in from the Northern Pacific, and sweeping the south coasts of China with an easterly hurricane, as well as in those of which the tracks cross the middle of the sea, storm currents of extraordinary strength, varying from 50 to 100 miles, or more, in twenty-four hours are experienced."

It is desired to collect observations during the autumnal and winter gales from Lisbon to the coast of Ireland, or in soundings, and in the Channel, to ascertain whether the serious elements of danger pointed out in the conclusion of this extract does really exist, and it should be borne in mind that it is not in every storm that it may be found, but perhaps only in those which are truly rotatory, and of small extent; the larger ones or those coming from a great distance, having perhaps too great an extent or travelling at too slow a rate on their progress to induce any very marked effect, unless their centres pass near the point of observation. Nevertheless *all* storms should be carefully observed, and, if good evidence of the danger is obtained, but in a single instance in a season, a great step will have been made towards the solution of the problem.

The fact of ships both men of war and merchantmen, most ably commanded, and ably managed, being hove to in the evening with their positions well ascertained, in a westerly gale in soundings, or in the

* I allude here, it will be perceived, to the two recent and harrowing catastrophes of the *Reliance* and *Conqueror*. In both these cases, the gale being westerly, the vessels were on the southern half of the storm circles, and had thus both the storm wave and storm current carrying them far to the eastward of their reckoning.

Channel, and finding themselves in the morning from 50 to 80 or more miles farther to the eastward, than the largest and most careful allowances for leeway drift and tides would make them, and of their being thereby nearly thrown, or wrecked on the Scilly Islands, or the coasts of France or Ireland, is familiar to every Channel sailor and pilot, and the well known indraught on the coast of Portugal, and along the north coast of Spain, when a north-easterly gale is blowing out of the Channel is equally so to Mediterranean traders.

The tides, or some unknown indraught, or the heave of the sea, or the ship's being over leewardly is supposed to be the cause, and the danger being escaped for that time, it operates merely as a caution to the individuals, and the instances not being collected *die out*, and are lost with them, and to nautical science.

The extraordinary rise of tides in ports and rivers from the Land's End to St. Petersburg, and from Lisbon to Ushant, is another familiar fact, and is possibly an effect not merely of the holding back of the tide, and "heaping up" of the water by a heavy gale, but also of the storm wave or storm current as above described.

The following suggestions, then, are offered as indicating specially what is desired, and the precautions to be taken.

1.—The ship's place should, on the approach of any bad weather, be ascertained with the utmost accuracy, and sights for chronometers and latitudes, as of the moon, stars, &c., should be watched for, as late as possible, so as to fix together with the sounding, or bearings, if any, the position as accurately as can be done.

2.—The measurement of the run or drift should also be made with the utmost care, and the log frequently and carefully attended to by an experienced officer.

3.—The drift, when lying to, should be most carefully measured by the usual mode of a leeway semicircle on the taffrail, and in the day also, if it can be done, by throwing overboard something as a mark, and setting it by compass as long as it can be seen. This may often be accomplished in gales unaccompanied by rain, and even, in the intervals of squalls, unless the weather be too thick. This and the patent log together, will probably give very accurate results.*

When the most accurate account possible has been kept of the vessel's run or drift, it will easily be found at the termination of the gale, that is at the next observation by which the ship's place is truly ascertained, how much her time differs from her supposed place, and from this we should then have to deduct allowance for the tides, (which should also be noted in the log according to the experience of the observer), to know correctly what we have to set down as the storm wave or storm current. If this extra drift be in the track of the storm, we may suppose it to be the storm wave. If it is in the direction of the wind, as say 48 miles to the south-west of observation after a 24 hours north-easterly gale, it may then be fairly set down to the storm current.

Steamers should also keep a careful account of their way, and attend

* The *estimate* should be noted by the side of the result of the experiment.

most scrupulously to the accuracy of their compasses and every other circumstance which can affect the exact determination of the calculated and actual places of the vessel at the close of the gale.

Upon arrival in any ports enquiries should be made amongst the merchantmen who may have been in any bad weather about the same dates, and their reports or logs carefully copied and examined, and deficiencies as carefully filled up as possible, by enquiries from the master. Large East Indiamen, for instance, are generally most ably navigated with plenty of instruments on board, and their positions accurately determined. The first class merchant steamers, also, and many smaller merchant vessels; and the mere existence of the storm, to such and such a latitude, is often a datum of importance.

Electrical phenomena, also, should be carefully noted, if occurring before, during, or after a storm.

These observations, as obtained, will be placed in the hands of competent and scientific seamen, and the results published for general information. Communications from private individuals may be addressed to the Secretary of the Admiralty in England, and, in India, to Mr. H. Piddington, Calcutta, personally, or, through the Secretary, to the Government of India in the Home Department, if not, at that Presidency.

Attention is directed for the obtaining of substitutes to Captain Sumners' method, published in the *Nautical Magazine* for 1844, by Lieut. Raper, R.N., the latitude, even though an approximate one, being always of importance.

HENRY PIDDINGTON.

Calcutta, June 25, 1846.

THE LOSS OF THE GREAT LIVERPOOL.

WE have reprinted to-day the report of the committee on the loss of the steamer the *Great Liverpool*, but we must not allow it to pass without a few remarks. We are too deeply interested in India in the safety of these vessels, not to consider with attention such a misfortune, and the means taken to prevent the like in future.

There can be apparently no question, from the evidence adduced, that the compasses were correct, and that the error in position was owing to an indraught. The report is deficient in some respects, such as not giving the amount of inset experienced by the *Pacha*, or that by the *Tweed*, as also this last vessel's position when she experienced her "perfect hurricane," and the state of the different vessels' barometers; but of the main fact, there can be no doubt, *i. e.* that a strong inset or current was experienced about the north extremity of the coast of Spain, particularly to the northward of the Berlings, which are 210 miles to the south of Cape Finisterre.

It seems extraordinary that none of the court (or of the witnesses apparently) should have alluded to the probability, and more than probability, of this inset being neither more nor less than a "storm wave or storm current;" and we shall shew before we have done, that, on account of this omission, one of the rules laid down in the resolutions of the

Peninsular and Oriental Company for the future guidance of their vessels, is not only insufficient, but dangerous.

These two sources of danger are very distinctly pointed out by Colonel Reid, whose book should be familiar enough at home by this time one should suppose, and by Mr. Piddington, in this country, who has specially urged this very danger on the attention of those who are approaching the British Channel, or any latitudes in which the Atlantic gales are felt. We copy brief extracts from both works.

After alluding to the efforts of diminished atmospheric pressure, &c., Colonel Reid says, p. 523, 2d edition :—

“If a revolving power, like whirlwind, were the only one exerted, it might be expected that the level of the water would be diminished (depressed) at the centre of the vortex, though heaped up towards the verge of the storm. But it may be possible that a wave of a round or oval form, moving onward like a tidal wave, but at the rate of the storm’s progress, may accompany the storm in its course, and that its height may depend on the degree of atmospheric pressure, modified by the revolving power of the wind. The impulse in the direction of the storm’s course being giving and maintained for a few hundred miles, currents very similar to the ordinary currents of the tidal wave might be created ; so that, if the effect produced by such wave is added to the spring-tides, it might assist in causing those inundations in flat lands which often occur in violent storms. It will, therefore, be very desirable to note the height to which the tides rise on the leeward side of islands, particularly those lying at a distance from, and uninfluenced by, continents.

After the storm of September 1839, Mr. Hurst, of the brigantine *Queen Victoria*, (whose place is marked in the chart), found the current of the Gulf stream neutralized ; and the same commander, on another occasion, found the current running to the westward, a fact corroborated, by other printed statements at the time.

“The storm of 1839, when crossing the Gulf stream, was probably five hundred miles in diameter, and a diminished pressure, amounting to a fifteenth part of the atmosphere, at the centre of a moving circle of this extent, seems adequate either to arrest or to accelerate existing currents, or create new ones.

“The width of the Bay of Bengal, contracting gradually, does not much exceed half the circumference of the greatest storms on the 20th degree of north latitude, so that an attendant wave, during a great hurricane coming from the south, might be expected to deluge the low countries at the mouths of the Ganges.”

Mr. Piddington, in his *Horn Book of Storms*, after explaining in detail, and by a forcible example for Madras road, how the storm *wave* at the centre of a hurricane, and the storm *current* at or towards the circumference of one, sometimes (according to the track on which the storm is moving) operate both one way, or against each other, the first being of course the dangerous side, says distinctly and earnestly, p. 23, 2d edition:—

“The seaman will not fail to recollect how much influence the storm wave may have upon his position in places where, as in the British

Channel,* a storm coming from the westward, brings with it a vast mass of water from a great ocean like the Atlantic, so that, with a southerly or south-westerly gale, he finds himself set far to the eastward by some hitherto unknown but fatal current: and I trust, that when I say, that, if we can obtain documents, we may trace out accurately the laws of these dangerous complications, I shall add another claim to the assistance of right-minded seamen, and of every friend to humanity.

“I may add here, that Col. Reid mentions the case of a ship which found that the effect of one West India hurricane was wholly to neutralise the Gulf stream! I have certainly ascertained that the storms at the Sand heads are preceded and accompanied by a heavy set from the eastward, which sweeps over them at from 3 to 5 knots an hour; and in the China Sea there is abundant evidence to prove that in the great tyfoons from the E.N.E. coming in the Northern Pacific, and sweeping the south coasts of China with an easterly hurricane, as well as in those of which the tracks cross the middle of the sea, storm currents of extraordinary strength, varying from 50 to 100 miles or more in the 24 hours, are experienced.”

This is clear enough to arrest the attention of intelligent seamen, we hope, though this last work is, doubtless, like all colonial publications, but little known at home. The memoir lately published of the *Charles Heddle's Storms* in the *Journal of the Asiatic Society* shews a storm wave of *four miles an hour for five days successively!* in the Southern Indian Ocean. We now proceed to shew the error, and possibly the mischief, of the rule laid down by the Peninsular and Oriental Steam Navigation Company; no doubt, by the advices of their Committee, and, no doubt, also, as we shall presently show, without in the least adverting to the knowledge and cautions which the *Law of Storms* so abundantly furnishes.

We stop here, however, a moment to answer an objection which we know has been made, namely, that in some storms these currents are felt, and in others not. The reply is simple, *first*, they *are* experienced much oftener than is known, and being thought to be only “excessive drift,” are not noticed unless *very* great, or in opposite directions; and *next*, which is a most important part of the matter, they appear, like the winds to be of great force at and near the centres of circular storms, but to lose this rapidly as the distance increases from the centre; so that, while one ship is carried a wonderful distance by the storm wave and storm current, and her nearness to the centre, all being against her, another at a greater distance, and on a different side of the circle, experiences very little of this fatal current.

The rule given by the Directors of the Peninsular and Oriental Company is, that, at night and in thick weather, twenty miles berth is to be allowed to Cape Finisterre.

* I allude here, it will be perceived, to the two recent and harrowing catastrophes of the *Reliance* and *Conqueror*. In both these cases the gale being westerly, the vessels were on the southern half of the storm circle, and had thus both the storm wave and storm current carrying them far to the eastward of their reckoning.

Now, putting aside temptation to "turn the corner sharp," and supposing fully twenty miles to be always allowed, we shall show that instances may arise in which this is only half enough!

The great storms of the Atlantic are, there is no doubt, very often, if not always, revolving storms of 500 to 1000 miles in diameter, and travelling from the track of the Gulf stream past the Bermudas and Azores to the coast of Spain and Portugal, the Bay of Biscay, the Channel, or the Northern Ocean. They sometimes preserve their full size, and then *appear* to be gales blowing in nearly one direction only,—that is, veering but very slowly, and sometimes contract in size, when their duration is shorter.

When the first case happens, there is probably little or no storm wave, or currents on the exterior borders of the storm; but as it approaches or passes over a spot, these may be felt moderately and even strongly. In the case of the Great Liverpool, if we take it that the westerly to the S.S. Westerly gales were the eastern and southern quadrants of an Atlantic revolving gale, and the insets the currents, her case is clear enough; but we are told that, in future, a berth of twenty miles is to be given to Cape Finisterre. In ordinary cases, of a moderate current, this may be enough, but taking the case where the centre of a storm passes near, and to the northward of that point, the storm wave and storm currents together may induce a set of at least three miles an hour. We will put it at two only, and allow the steamer to have run up from a sight of the Berlings. It is clear that to put her twenty miles wrong she needs only ten hours run in this westerly set, the ten hours of an ordinary night in those latitudes, and (here lies the mischief) the commanders may think that they fully take precaution enough if they give the Cape the twenty miles required. If the currents should unfortunately run stronger, or the thick weather lengthen out the nights, or render bearings or distance uncertain or impossible, the chances of another misfortune are much augmented.

Our view, then, is, that the rule laid down by the Peninsular and Oriental Company should rather have stood thus:—

"And the Board further direct that the ships of the Company, on the voyage between England and Gibraltar, both outwards and homewards, and especially with reference to the extraordinary inset noted above, and the possibility that, in cases where the focus of a revolving storm from the Atlantic may be passing near Cape Finisterre, this dangerous inset may be much augmented, strictly enjoin, that, when passing this point and the latitude of Ushant, if southerly, south-westerly, or westerly gales prevail, or have recently prevailed, and especially if the barometer should have fallen, that a wide berth of from thirty to forty miles or more may be given in the night and in thick weather."

We submit with all deference that this rule comes much nearer to the present state of nautical science than the one given. We are aware that experienced seamen usually say, and we believe the "Directories," and "Pilots" also, that when a north-easterly storm is blowing out of the chops of the Channel and Bay of Biscay, there is a strong current along the coast of Portugal and round Cape Finisterre. If there is also a

westerly gale, this would be exactly a storm current, such as the authors we have quoted infer to exist, and Mr. Redfield, indeed, inclines to think with Professor Dove of Berlin, that *all* winds and currents blow in circuits; and certainly there is much to confirm these views. At all events, nothing should be risked for want of a trifling precaution, which, for two or three steamers, in the course of a year, may cost an hour or two more steaming, by making rather a wider circuit past these dangerous points. This theory of the storm wave and storm currents is the only one, too, we think, which will fully account for the tremendous catastrophe of the loss of H.M.S. *Apollo*, and her convoy of 69 ships, in 1804, on the coast of Portugal. She crossed a revolving storm, and was set far to the eastward of her reckoning by the storm wave.—*Calcutta Paper*.

AUTO-BIOGRAPHICAL SKETCHES, *by a Merchant Sailor, illustrative of the State of the British Merchant Service.*

Continued from page 539.

WHILE recording the occurrences on board the brig, I cannot omit mentioning a piece of my own misconduct, which caused me great mental pain at the time, but which had very beneficial effects on my future life. While we were reefing the main-top sail during the gale already mentioned on the outward passage, I was at the weather-ear and astride on the yard, outside the lift, the studding-sail boom being triced up to the top-sail tie; while hauling up the sail the brig gave a tremendous roll to windward, making everything shake, and bruising me very seriously, from the heel-lashing of the boom giving way. The bruise caused me long and severe pain, and no attention being paid to it by the master, I had been for some time previous to our arrival at Bermuda off duty, and as the only means of alleviating the pain and preventing further inflammation, I had tasted nothing but bread and water, I was consequently very weak; but soon, by the doctor's assistance got well, after getting to St. George's harbour, where the part of our cargo for the merchants' account was discharged. Before going to Ireland to discharge the Government portion of the cargo, I had resumed my duty, although weak, and not able to take my grog, which was regularly issued on board the craft every day, on the passage, and an extra quantity in harbour. On arriving at Ireland I went one Sunday, accompanied by two shipmates, out of the dockyard to see the island, and as we were returning before the gates closed, my shipmates met a soldier, an old acquaintance, and from the same little village in England. The meeting could not pass without adjoining to the canteen, where we found a large party assembled; the time passed off quickly, and sundry glasses of New England rum were consumed; I, after much solicitation, taking two glasses. Whether it was my weak state of health, or the strength of the liquor, or its bad and extra intoxicating and stupifying properties, I cannot determine; suffice it to say, I soon began to feel its

effects, and as it was getting dark, I urged my shipmates to go on board. A soldier, with whom we were sitting, informed us the gates were shut, but, by way of favour, said he would give us the password, which he did, I suppose, considering the matter a good joke. Away we went, as bold and confident as possible, at the idea of possessing the *open sesame*. On nearing the gate the sentry challenged, when we replied according to the instruction given us; the sentry, however, smiled, and, shaking his head, put his musket across the doorway, and said we could not enter. My recollection was fast leaving me from the effects of the rum. We consulted together, and one fellow remembered that a small opening had been made in a distant part of the dockyard wall, for the purpose of permitting the convicts employed in building operations to wheel the stones procured near the opening into the yard. Although distant about a mile and a-half, we remembered there was no sentry placed at it, and set out at once to make the circuit of the wall until we should come to it. I was really so far gone that they had difficulty in getting me to walk; they then carried me alternately until they got tired, when coming to one of the wheelbarrows used by the convicts, they placed me in "Punch's coach," as they termed it, and wheeled me along towards the opening. The whole scene must have proved amusing to any bystanders, if such there were; the bare recollection of the figure I must have cut, haunted my mind for years afterwards. Trundled along by my willing and kind-hearted shipmates, we all got into the dockyard, but, on nearing the vessel, they saw the master walking the deck, although past midnight; and as they knew that I was a favourite with him, and would be additionally humiliated should he be aware of my condition, they set me down in the middle of the yard, in the barrow, amongst some large blocks of stone which were being hewn. They got on board unobserved by the master, although the sentry who was placed close to the brig, challenged them; they jumped on board, as they were aware that scarcely a single soldier then at Bermuda could see from the effects of ophthalmia, which they had contracted in Canada, whence they had recently come. About four o'clock in the morning, I awoke to recollection, and found myself lying in a wet clayey mud, my old friend the wheelbarrow on one side, and a huge stone on the other, my cheek and head covered with the tenacious clay, my hat nowhere visible, and a headache of such an acute kind, as was a sufficient physical punishment for my misdeeds. The mental wound was, however, deeper, and less easily healed. From that instant I resolved not to taste spirits, and during eight subsequent years, through many a varying professional scene, and changing clime, through sickness and health, I firmly adhered to my resolution. I have been called spoony, milksop, and fool, for refusing my grog, I have been taunted with my refusal on many a wet night when shivering with cold, but the remembrance of that scene in Bermuda never for a moment permitted the wish to rise to return to even taking my allowance.

After discharging the cargo, and taking in ballast, the master resolved to proceed to Charlestown, South Carolina, for a freight. Before we got ready the season had advanced considerably, October had arrived with its succession of gales and unsettled weather; and from the master's

conduct and increased habits of drinking, it was no pleasant prospect to those of the crew who thought about it. There were, however, few of them who cared anything about it; sailors seldom calculate chances, or trouble themselves with the future, and it must be extraordinary circumstances, indeed, that can put them out of their usual course of conduct. The master was now frequently attacked with delirium, and many an inconsistency could be observed in his conduct. We encountered very stormy weather, indeed, we had a succession of adverse gales, the brig being in light ballast trim, and a high wall-sided craft, made bad weather, and tumbled and kicked about amazingly, going to leeward as fast as she went a-head. During the height of one of these gales, orders were given to send down top-gallant yards. The second mate and myself went up aloft, I wanted him to make fast a down-haul to the yard to steady it before slacking the parel lashing, as from the lifts being seized to the rigging at the mast-head, the yard required to be hoisted up to the mast head before the lift could be got off the yard-arm. In his usual blustering style, he condemned the plan, said it was all nonsense, and the yard would come down easy enough. Just as I expected, either from the fearful rolling of the vessel, under a close reefed main-topsail, or the jerking of the braces by the men attending them, when they began to sway up the yard, the parel lashing which had been eased off, gave way altogether, and then ensued a scene not easily described. The yard kept thumping about from side to side, shaking the mast, causing confusion, and rendering our situation dangerous in the extreme. The second mate kept roaring out for help, the mate was calling to the men to assist us, and Jemmy, who was on deck, bawling out, "D—n your eyes, if you will send the yard down that way, cut away the stays, and let it come down square." After a vast amount of trouble, and shouting and swearing, it was got down safely, to the great risk of injury however to those engaged in the work, from the obstinacy and ignorance of the second mate. Many a valuable life is, from the same and such like causes, sacrificed; but where there was no skipper to direct, the whole affair was mismanaged.

After three weeks of a constant succession of gales of foul wind, we had reached the outer edge of the Gulf stream, where the current caused an indescribably short, but deep sea, which caused the old brig, then under double reefed topsails, to plunge very heavily. It was just past four bells in the afternoon watch, the cabin dinner was placed on the table, I was at the wheel, when after an extra plunge into a sea, I heard a crash amongst the dishes, the whole of which had gone flying to leeward off the table. Jemmy came running on deck, and aft to the binnacle, when he burst out with "What the d—l are you doing with the ship, sir?" as he always liked and wished a prompt reply, I quickly said, "I am trying to steer her, sir." "You are not, sir," roars out the skipper, "by ——, sir, you are driving piles with her." Had it been any of the other men the affair would not have ended so quietly, he went below, where the plates had been replaced on the cabin table. Only a few minutes elapsed when, as if determined to annoy our chief, the brig gave another sudden plunge, and again the crash of crockery succeeded

the shock. Again came the master, followed by the mate, to whom he went on venting his rage on ship, wind, and helmsman, every thing in fact, was sworn at but his own want of patience and reason; "By Heavens, sir, I cannot rest day or night in this d—d craft." The mate quietly replied "She will not answer her helm, she has too little way through the water." "I don't care, sir, keep her away south-west, 'till the sea fall." Although almost exactly the contrary course to what we wished to pursue, discipline prevailed over the mate, he called the watch, squared away the yards, and south-west the vessel was steered, not, however, till the sea fell, but until another, and I suppose a stronger dose of brandy sent Master Jemmy to bed, when the brig was brought to the wind on her old course. "Keep her south-west 'till the sea fall," however, became a by-word amongst the men, which they never forgot to apply, on all future similar demonstrations on the master's part.

After the fourth week, we neared the coast until we got into ten fathoms water, when the master invariably ordered the vessel to be put about, and stood out to sea, declaring his belief that she was not safe nearer the land, although on that coast it is very difficult to see it in that depth of water. After a fortnight's cruize in this way, when the patience of the mate was exhausted, and the men's fast going, from the evident incapacity and ridiculous conduct of the master, the weather moderated one evening, and standing in just before dark, the low coast was seen, and a building, evidently a light-house. Contrary to the mate's opinion, however, both the skipper and his wife (who I never knew to interfere before on any occasion,) both averred it was a sail, the latter even declaring that, if she was a sailor, she could name the sails the vessel had set without ascertaining positively, or taking any proper bearings. The night set in very dark and cloudy, no light was seen, the vessel was put about and ordered to be kept standing off. The wind however, veered, so as to permit the brig to lay along the land. The water was tolerably smooth, and all sail set to a light breeze. During the middle watch, the mate (to whose watch I had been shifted) kept the lead constantly going, about 1 A.M., he had seven fathoms, and not five minutes afterwards during my wheel, bump went the vessel on a bank, which afterwards proved to be the dangerous shoals off Cape Roman. The night was very dark, the season late in November, with the little swell which then existed she struck very heavy, and close aft; from hitting the rudder occasionally the wheel kept spinning round every now and again, in such a way as to render it dangerous to hold it, I consequently let it go, and stood by it. Only a few seconds elapsed before Jemmy came hurrying up, and placing his hands on the poop rail, he looked upwards at the sails, and cried out, "Ay! Ay! there she is at last, hard and fast, by——." He then went down into the cabin, where the steward, whom I begged to go down and prevent him drinking, found him with the brandy bottle in his hand, drinking out of the bottle. He soon came on deck, followed by his wife and all hands, the mate meanwhile had been trying to get the vessel off by backing the sails, but not knowing how the banks might run, he desisted, hauled up the courses, and clued down the

topsails, hauling out the reef tackles. The mate then burned several blue lights, as signals to any vessel that might have been near, none however answered them. He at once began with the crew to clear away the long boat, got tackles on the stays and yards to get her out, while the master's wife most nobly called the cook and steward, and assisted them to pack up provisions for the boats. This done, she came on deck, and the excitement of preparation over she burst into tears, while her stupidly intoxicated husband was parading about the front of the poop, pretending the vessel was in stays, and roaring out "Why the d——I don't you fill that main topsail." This he kept reiterating at intervals, then he would turn to his wife, and say, "Now, my dear Jane, do go below, you'll cause me to do something desperate if you don't." What the desperate act he contemplated was, or for what reason he said so, I never discovered. She replied as firmly as her situation enabled her, "I will not go below, I will have a chance for my life with the others."

While the skipper was raving about the deck, the crew were speculating on the chances of saving their lives. Some put on their best clothes, others took a stock of tobacco, all made up their minds to lose their clothes and wages, at length one fellow said, "Well, I don't see the use of being miserable, we may as well have a blow out, I say cook, get the galley fire under way, and let's cook that pig" (a well grown animal which had been killed the previous day for cabin use). The proposal was applauded by all hands, and when ready, we finished the porker, the only fresh meat we had tasted since we left Bermuda. The master excited by additional libations, every now and again, would with new and additional imprecations, call the crew to fill the main top-sail, while the mate would quietly desire us not to mind him, as he evidently did not know what he was about. At length the mate went aft, and very quietly said to him, "Really, Capt. M., instead of swearing in that manner, you should be thankful that Divine Providence has hitherto preserved you," "D—— you and——— too" (indignantly replied Jemmy) "you've one way of going to Heaven, and I've another, I expect to get there as soon as you."

The night fortunately remained with little wind, although dark, and in the morning shortly after daylight, much to our joy the brig floated off the bank, the tide very fortunately having been out, when she struck. We saw the coast, the mate took charge, and steering along towards the entrance of Charlestown, we got a pilot on board, and after waiting tide, got safely into the harbour next day. When the news-boat came on board, the master who was staggering about the poop dirty, unshaven since we left Bermuda, haggard in his appearance, and his eye rolling about with a vacant sort of stare, in a most peremptory manner told the person who wanted to know his consignee, and get letters, "To go to the d——I out of the ship." His wife and the mate coaxed him below; however, next day he removed on shore, to lodgings under the doctor's care, where he remained until the vessel was loaded and ready for sea, the mate chartering the vessel, and transacting the necessary business. No report was made of the vessel being on shore, nor any examination of the damage sustained instituted. The consequences of this neglect developed themselves

on the homeward passage, and taught me an excellent lesson on the many misfortunes that arise at sea, from misconduct and incapacity.

Before we hauled into the wharf we were visited by the Custom-house boat, and then by the police boat of this free and enlightened Republic. Amongst our crew shipped in London, we had a young mulatto, born in London of free parents, a fine high spirited, well educated youth, remarkably well liked by all his shipmates, and very steady and regular in his habits. On this young man did these harpies seize, and without a fault, without a cause, other than the barbarian laws of a nation calling themselves free, hurry him from amongst his indignant shipmates, from under the protection of his national flag, against the remonstrances of the crew and the offered bond of the mate, to the common jail, where he was thrust amongst common malefactors, and fed, I should rather say starved, upon jail allowance, until the vessel was ready to leave that miscalled land of freedom. I hold it perfectly competent for any people to make and enforce laws for their own protection, and if any one should be found stirring up the slaves to insurrection, or intriguing with them, be he white or black, he should be amenable to punishment; I would even go farther, and allow the existence of a law to prevent any free person of colour leaving the vessel in which he may come;—but that a free born British subject, without fault or crime, simply because he has a shade of colour, or a curl of hair, should be treated like a felon, is an indelible disgrace to the nation that permits it. Tell me not of freedom, where such tyranny exists; name not liberty where it is not; equality, where colour alone constitutes a difference, where man is deprived of his humanity, and degraded amongst the brutes,—where laws exist which the civilized world would blush to know, much more to act upon, where in the house of God even, amongst all denominations of professing christians, an unholy separation is maintained between the coloured and the white, where human beings are bred for sale, without remorse;—will it be believed that this vile system still exists at the present day,—that a body of men calling themselves followers of our Saviour, who preached peace and goodwill to all men,—who call themselves his successors in the holy ministry, in the dissemination of those pure and heavenly doctrines he inculcated,—that such men have now, at this present time, meeting together in a misnamed evangelical alliance, sanctioned this horrible system of slavery, by a resolution containing a shameful compromise—it is too monstrous to be submitted to in silence.

NAUTICAL SKETCHES.—No. V.

The Soldier Admiral Monk. The Commonwealth battles at Sea, &c.

“Whatever makes the past, the distant, or the future predominate over the present, advances us in the dignity of thinking beings.”

JOHNSON.

SKETCHES of our old sea commanders, must, necessarily, as the rope-maker would say, be “twice laid stuff,” but they may be useful to refresh

the memory. They are offered as mere outlines, with here and there a dash of colouring to give them consistency.

There is nothing more difficult to a writer, even to the profoundest historian, than that of drawing the characters, and deciding on the motives of those men who make a figure in troublesome times. Every one professes to be impartial, yet how few are found entirely free from bias? The difficulty will be apparent if we only reflect on the inconsistency of human nature, and the very opposite opinions formed on one subject by different men.

Of the principles which guide men at a revolutionary crisis, opinions are divided, and ever will be. The people who are generally made to feel the weight of misery which springs from misrule, and of the anarchy engendered in its correction, may exclaim to no purpose, in the words of Seneca: "*Nec morbum ferre possumus nec remedium,*"—We can neither bear the disease nor the remedy,—as in the case of the Stuart and his parliament, Faction and Fanaticism were intent on matters in which the voice of a suffering community was entirely unheard. But, whatever may be thought of King Charles' proceedings, posterity has decided that the putting him to death was a regicidal act for which there was no manner of excuse. We have only, however, to deal with those who thought it to be their duty to side with the democratic party, and who figured on the ocean.

The obstinacy displayed in the contests between the English and Dutch fleets for the supremacy of the Ocean is unparalleled in History. There are no battles fought at sea, on a large scale, with which they can be compared for the determined and stubborn resolution to obtain the mastery. If we seek in the annals of warfare for an instance of persevering resistance which bears any analogy to the spirit of the contending parties, we shall find it, perhaps, in the siege of Jerusalem by the Romans under Titus, where the Jews, now shorn of their puissance and high station among the nations of the earth, gave examples of their pertinacious valour that may be equalled, but probably have never been surpassed.

The man who sits down and reads the heart-stirring, exciting, and deeply impressive narrative of the facts detailing this memorable event, and can rise up without feelings of horror at the miseries which ruthless war entails upon a country, and without a wish that the minds of princes and their advisers would be directed entirely to the means of preserving peace, is not to be envied. I am not Utopian enough to fancy that a nation is to endure injustice tamely, but contend that war should not be embraced upon light grounds, or for a cause foreign to the honour or interests of a nation, as has been the case repeatedly.

Opinions vary as to the force of allegiance to bind a sworn servant of the crown to his master under any circumstances.* Events which bring about the displays of human passions have varied much, and have been commented upon in different ways, according to the turn of mind of the writers, rather perhaps, than from strictly impartial views.

* There is no evading the sacredness of an oath. Englishmen, it is to be hoped, will never again be put to the test.

The decisions of posterity, however, may generally be regarded as carrying more weight with them than the opinions offered by contemporary witnesses of the scenes enacted. How different in comparison is the justification now considered of the revolution which deprived King Charles of his life, and that of 1688 which drove his son from the throne: in like manner, too, the view taken of that which cost Louis the XVI. his head, and the less bloody episode that sent Charles the X. into exile. In the retrospect of the History of England and of France, there seems a sort of "fatality", as it is called, attending the houses of Stuart and of Bourbon; they appear to have been unsuited to the genius of the respective people over whom they ruled; and however much the violent events which attended the career of some of the members of those families, may be deplored, the results nevertheless offer grave lessons to potentates, and to the governed. The latter may learn from the effects which follow these violences, that whatever cause a people may have to complain of, the dictates of humanity can never be outraged with impunity. In the less bloody transfer of power, in the second instances alluded to, both nations appear to have been gainers; with the French, this is especially so, as a wiser sovereign than their present ruler, never held the sceptre of Charlemagne.

Of the men placed in command of the English fleets, or who were conspicuous in command, some as is well known were not seamen. At the present day it would be deemed an act little short of insanity to introduce into the navy landsmen, or soldiers as commanders-in-chief, and would create such a revolution in the feelings of our tars as would make the welkin ring again with their disapprobation. During the period of commotion of which we are speaking, there was, however, a reason for such an anomalous proceeding,—the Parliament's mistrust of the naval officers; yet the authorities could not do without their aid. The least refractory were retained as practical guides to the new chiefs upon the element where they had yet to learn experience.

Posterity seems disposed to acquit the superior naval officers, none of whom were participators in the death of the sovereign, of any very grave offence in serving their country after that sadly tragical event. In the case of others, was it their duty to obey the orders of the Lord High Admiral, from whom they received their authority, or, recollecting their sworn allegiance to the crown, resist the former, and serve the latter? The answer to such a question I must leave to others.

The Parliament, notwithstanding that the seamen were well affected towards the king, by a little *finesserie*, placed the command of the fleet in the hands of one of their party; and the seamen were, probably, calmed by being regularly paid, which was what they had been seldom accustomed to; but it appears that, whatever dislike they may have felt to the treatment of their sovereign, they were soon led to act against his interests. Yet, singular enough, on the Earl of Warwick, who had commanded them, being superceded by Colonel Rainsborough, they mutinied, and unceremoniously put the soldier on shore, declaring it to be their intention to run the fleet over to Holland, and there receive the Duke of York as their Admiral. This spirit of loyalty greatly alarmed the parliament, but it did not avert the doom of the unhappy monarch.

The fleet (17 ships) sailed for Holland, dropping a vessel off Calais to receive the Prince of Wales, afterwards Charles the Second.

We find a remarkable instance of the unsettled state of men's minds at this conjuncture; an inconsistency which serves to show the little principle that influences the actions of individuals who figure in the early stages of such political struggles. Admiral Batten, an avowed revolutionist took a very anti-British mode of showing his zeal for the Parliament. The Queen of England arriving on the coast in a Dutch man-of-war, she was chased into Burlington Bay by the admiral. On her taking up her quarters in a house of that town, the valiant republican so battered it with his shot, as to force the unhappy lady to seek safety from his balls in the open fields! But the strangest part of this democrat's conduct, though not the most reprehensible, was that of his subsequently deserting the new cause he had espoused, and voluntarily giving up the ship (*Constant Warwick*,) in which his flag was flying, to the Prince of Wales at Calais, who, by way of security (instead of *battering* him under hatches,) for his future good behaviour, conferred upon him the honor of knighthood. It does not appear what became of the inconstant and unmannerly being.*

The loyal fleet did nothing, when a good opportunity offered for rescuing the king from Carisbrook castle in the Isle of Wight. Prince Rupert, the king's nephew, took command of those that were left; for some had returned to the Parliament service; and, as is well known commenced cruising independently upon the high seas.

These untoward events probably induced the usurpers of power to place the command of the fleet in the hands of landmen, in whom they had confidence; such as Monk, Blake, Popham, Dean, &c. Some of these actors in the drama of reality, played their parts devotedly, and have since had their names placed in the roll of fame, among the legitimate claimers to the high rank of British Admiral. Full credit was carried to their account, but the real seamen were prompters at their elbows. That is a point which, though historians have lost sight of, we are not disposed to allow to pass without notice.

Among those noted characters, we may just glance at General Monk, (subsequently Earl of Albemarle,) who, as a Devonshire young gentleman began his martial practice by heartily caning the Sheriff of Exeter, for having played the villain to his father. This incident drove him to the sea service as a volunteer; but he quitted it in a short time and turned soldier. Of his land services I shall not speak; in the Scotch affair, however, Dr. Campbell charges him with deserting his principles that he might gratify his ambition. Certainly, if, as thought, Monk, was a loyalist in heart and feeling, he showed it in a very strange way by ruining the spirit of the Scots, who were the Stuarts' best friends. Yet it must be allowed that ultimately he brought things to a very quiet pass in the north.

At the age of forty-five years, on the death of Popham, he obtained

* There were two captains of his name who were subsequently killed in action.

the command of the fleet conjointly with Dean, and on the 2d June, 1653, he fought the renowned Dutch Admiral Van Tromp,* and after two days excessive exertion he claimed the victory over the sturdy Hollander. The English had 95 men-of-war, and 3 fire ships; the Dutch 98, and 6 fire ships. Blake, however, on the second day's argument dropped in with 18 ships. The fight was most gallantly, indeed stubbornly, maintained on both sides; we lost no ships; the enemy had 6 sunk, 2 blown up, and 11 captured. It was in this year that Cromwell turned out with an armed force, the representatives in parliament, a gentle hint to explain that the time was arrived to throw off the mask; and that in future he was to be "master of the ceremonies." We have nothing to do with "Old Ironsides;" but he was undoubtedly a "great fact," and according to the opinion of posterity, as great a hypocrite. One thing, however, he is to be admired for, it is a single pearl in the midst of much paste,—his support of the honor of the British flag.

The inhuman refinement in the art of war of using fire-ships in fleets at sea, has long since been discontinued; although they were employed during the last French war against the enemy's ships at anchor, it was with a view solely to the destruction of their hulls, and not to burn the crews to death; a practice suited only to the uninformed and brutal minds of savages. So far humanity triumphed as we progressed; but who can forget the catamaran essays, the "infernal machines," that were to blow up hundreds of beings mutilated into the air? I would fain draw the veil, but there are two reasons for giving a few words more. The minister who patronized these things, an amiable man of the most brilliant talents, but of cold temperament, left a debt (the *true* dead weight,†) for posterity to liquidate. Some of the patriots of the present day see nothing in that, but are eternally lamenting over the half-pay given to those who defended the country from the enemy,—encouraging sounds to stimulate them to exertion on future occasions.

We hear rumours of machines for entirely destroying a whole fleet. Are we retrograding, as old age into dotage, in the feeling of humanity, the chief divine attribute of man? If we are again to be cursed with a war, rather let us fight our enemy manfully, fairly, and as mercifully as can be, if we are to claim to be civilized beings, and not after the cowardly fashion of the murderer or the pirate. Sophistry may brazen it out by false assumptions, but it will never convince our brave seamen that such modes of destruction are justifiable; and we are sure that, at the present day, no minister with one spark to create warmth in his bosom, but would denounce them with indignation. In fact it is an insult to the reflecting people of an age so improved in general feeling, to propose such terrible inventions.

In the desperate actions spoken of, Dean, the co-commander, was slain, literally cut in twain by a chain-shot, then a new invention; so that the soldier-admiral had alone to bear the overpowering praises of his masters.

* The pensioner De Witte is said to have had the chief command.

† We have placed the "saddle on the right horse" for the benefit of the patriots.

The activity and vigilance exercised at this time by the navy was admirable; indeed the *esprit-de-corps* on both sides was very remarkable. A few weeks after, that is, on the 29th July, there was a partial engagement with the same antagonist. Our fleet had been blockading the Dutch ships in the Texel, and whilst Tromp was endeavouring to unite his vessels with those of De Witte,* before showing front, he was well cannonaded by Monk until night; during which, by a skilful evolution, the Dutchman, however, effected his purpose, and moreover got to windward of the English fleet.

Monk had a hazardous game to play, as the Flemish banks were to be dreaded; for these were more formidable, with an onshore wind, than were the enemy's ships. On the 31st the fleets met, and engaged with their wonted fury; the engagement lasted eight hours, and is reported to have been the most stubborn that had been fought during the war. The fire ships of the Dutch created great confusion, and Admiral Lawson's ship was so much scorched that that gallant seaman had to shift his flag into another vessel. The redoubtable seaman, Admiral Martin Hoppertz Van Tromp here met his destiny,† and the victory gained by Monk and his gallant seconds was complete, the Dutch retreating into their ports in a very shattered condition, having lost 26 ships, whilst our loss amounted to two only. De Witte when before the States-general, is reported to have exclaimed after the battle of the 2nd of June, "Though I am in the presence of my Lords and Masters, I am sure, nay, I must say it, *the English are our Masters*, and of course are the masters of the sea!"

The frame of mind in which Monk went to work in order to settle the question of who should rule at sea, may be gathered from the fact reported by the historians of his having ordered no quarter to be given or taken! Whether he was honest enough to hoist the "bloody flag," so as to give his enemy intimation of his humane intention does not appear; but it does appear to the honour of the truly brave seamen under him, that they even in the height of the furious contest, and when excitement was at the full, could not act against their naturally generous disposition, and in defiance of this brutal order, saved some hundreds of the Hollanders from perishing in the waves, when their vessels were sinking. And this, let me exultingly say, was a greater victory, than their courage gained for the sea-soldier Monk.

We of the present day imagine the bloody flag to have been exclusively the emblem of the pirates; and we may hope for the honour of human nature that it is and ever has been so, and that there must be some misinformation in the account related by the historian. If, however there should be any truth in it, it will serve to show the deep demoralization, which a revolutionary spirit infuses into the minds of men, even in those of the higher station of life, and that, abused as seamen have been, and are, generally, they possess a high tone of moral feeling, not surpassed by those who are called "their betters."

* Another account says De Ruyter's squadron.

† He left a son who was worthy of him.

THE ENGLISH IN BORNEO.

Despatches have been received at the Admiralty from Rear-Admiral Sir Thomas Cochrane, C.B. addressed to the Secretary of the Admiralty, of which the following are abstracts :—

Spiteful, off the City of Brune, Borneo Proper, July 9, 1846.

Sir,—I request you will inform my Lords Commissioners of the Admiralty that, for the reason assigned in a separate despatch, I determined with a competent force to ascend to the city of Brune, and call upon the Sultan for an explanation of his conduct with regard to the atrocities attributed to him.

Neither the *Dædalus* nor *Pluto* having joined me from Hong Kong, I made the necessary dispositions of the force at my command, as more fully detailed in the accompanying programme.

While the arrangements for the expedition were in progress, I, accompanied by Mr. Brooke, reconnoitred the isle of Cherimon, and found that although there was one battery of five guns established on it, and four guns on Pulo Coin Arrang admirably placed for enfilading the approach over the bar, which lies immediately in front of and close to them. They were, however, not perfected, and both islands were abandoned; and as I had no distinct authority for considering that these batteries were intended to act hostilely towards us, I in no manner interfered with them, either by spiking or otherwise injuring the guns.

On my return on board, I received a letter from the Sultan, of which the accompanying is a translation, having attached to it the seals of Pangeran Muda Mahomed, legitimate son of the late Sultan, and that of Pangeran Moumcin, in addition to his own. These seals Mr. Brooke believed to be forgeries; the letter, however, neither prohibited an approach by an armed force, nor threatened resistance if it did so.

On the 7th instant, I hoisted my flag on board this ship, commanded by Commander William Maitland, and taking in tow the *Hazard* and *Royalist*, and preceded by the *Phlegethon*, ascended the river to Cherimon; but it was not till yesterday morning I was enabled to overcome the difficulties of the bar, and was then obliged to leave the *Hazard* aground upon it.

Having my whole available force collected, I proceeded towards the city, which lies about nine miles up a very picturesque river. The *Phlegethon* led, for the purpose of sounding its intricate approaches, having in tow the gun-boats; the *Spiteful* followed, towing the *Royalist*; and, astern of her, the boats intended for landing the seamen and marines.

On approaching Pulo Bungore, five forts opened to view, admirably placed for denying a passage beyond them.

Shortly after we were discovered, the fifth battery fired a gun, and within a few minutes the largest hoisted a flag, which Mr. Brooke informed me was the flag of our friend, Muda Hassin, who had been murdered; and we were in doubt whether this was not intended as an intimation that we should be received as friends. We were not, however, left long in suspense upon this subject, as the moment the *Phlegethon* had passed the narrows, the battery commenced a spirited fire, which was promptly returned. The gun-boats, commanded by Captain Mundy, of the *Iris*, and assisted by Lieutenant G. E. Patey, First Lieutenant of the *Agincourt*, with rapidity cast off from the steamer, formed in a line, and opened their fire, and so soon as the enemy's fire had slackened, pushed for the shore, and gallantly mounted the steep ascent to the fort, but whence the garrison retreated precipitately, leaving the Sultan's flag to be hauled down by the assailants.

Being anxious to proceed to the city, and finish my operations against a

before dark, I only gave Captain Mundy time to spike the guns and throw them over the walls, and blow up the magazine, when I proceeded to my main object.

Having given the people their dinners, I again wayed, and no sooner did the ships open the point, than the batteries commenced a sharp and extremely well directed fire, and at the same time a play of musketry from the woods on our right, and to which the *Spiteful* was obliged to submit without retaliation. The critical situation in which she was placed (with the beach but a few yards beyond her paddle-boxes, the *Royalist* in tow, and the boats filled with the whole of the landing force), required the utmost silence and attention to prevent the whole being thrown on shore. But the *Phlegethon* very promptly returned the fire from her own guns, which, with the battery of field pieces placed round her bows, and the admirable fire from the brigade of rockets planted upon her bridge (both field pieces and rockets under the immediate command of Lieutenant Paynter), together with the now rapid progress of the whole force directly up the river, so astonished and dismayed the enemy, that they fled before the steamers could reach their works, or the storming party carry out the service intended for it. As quickly as possible the landing was effected, and the marines, under Captain Hawkins, immediately took possession of the heights which command the town.

The battery, *fleur d'eau*, was found to consist of eight brass and two iron guns, from sixty-eight to nine pounders, as more particularly detailed in the accompanying schedule. The one upon the heights immediately above it, of four guns, nine and six pounders, and four more upon another height, commanding the latter, and one hundred yards in the rear of it. The whole are now in the course of embarkation.

I much regret to add, that this service was not accomplished without loss, two men being killed, and seven wounded; and the *Phlegethon* received several shots through her hull, and other damages in her paddle-box, cooking boilers, &c., and which are now in course of repair.

So soon as the preliminary arrangements were made for the security of the city, I despatched Captain Mundy, with the gun-boats, to destroy the five forts we had passed, and which he effected the same evening, having disabled seventeen iron, and brought away three brass guns.

The Sultan, I am informed, has fled into the interior with a large body of men, and many guns. I am now preparing a force to send in pursuit of him, so soon as I have accurate information of his place of retreat.

The gratifying duty now devolves on me of assuring their lordships of the zeal and devotion to the service of every individual I had the honour to have under my command.

The despatch mentions in high terms the conduct of Lieutenants Patey and Paynter, Captain Hawkins, Master I. E. Elliott, Mr. R. L. Ross, commander of the H. E. L. C. steamer *Phlegethon*, and concludes.

The Sultan's letter referred to commences—

Rear-Admiral and Commander-in-Chief, Compliments, &c.:—

This letter is from Sultan Omar Ali Saffudee, who is sitting upon the throne of the kingdom of Borneo and its dependencies, together with the under-mentioned nobilities belonging to the said kingdom, (enumerating a number of uncouth names),—

And expresses their happiness in learning the arrival of Mr. Brooke, and particulars of a ship that had lately come to Borneo, on board of which Si Japper had gone and made lying representations of the Sultaa to his captain.

In the arrangements for carrying out the service on which the squadron were about to be employed, the landing party comprised the marines and

small arm men of her Majesty's squadron :—Total number of bayonets, 600.

The life boats of the squadron, to land the marines and small arm men, gave a total of 13 boats, 26 boat-keepers, 386 marines, and small arm men.

Field pieces, mortar, and rocket battery—Total, seven guns, 108 men.

In ships' boats, a total of five field pieces and seven rockets.

In gun boats, a total of seven guns, 99 men.

The marines under the immediate command of Captain Hawkins.

The whole of the seamen, small arm men, field piece and rocket parties, under the command of Captain Johnson, assisted by Commander Egerton.

The field piece and rocket brigade under the immediate command of Lieut. Paynter, assisted by Lieut. Heath.

The gun-boats under the Command of Captain Mundy, assisted by Lieut. Patey.

Dr. Reid superintended the medical department.

Dr. Anderson attended the *Agincourt's* seamen.

Lieut. Hankey, of the *Hazard*, beachmaster.

The whole under the orders of the Commander-in-Chief.

The return of ordnance taken in the ports on the River Brune, specifies a total of 19 brass guns, 19 iron guns—38.

All these guns were mounted, and in five of the batteries a quantity of ammunition of all kinds found in the magazine. This was destroyed, and the guns spiked, several thrown down the precipice, and the buildings burnt.

The list of killed and wounded at the attack on the fort of Brune, Borneo Proper, on the 8th of July, 1846, enumerates—

Agincourt—John Lillie, seamen, killed; Walter Power, seamen, severely wounded (arm since amputated); John Gomerson, seamen, slightly wounded on face and leg; Robert Doharty, seamen, slightly wounded in arm; John Lensar, seamen, slightly wounded on thigh.

Phlegethon—William Kind, carpenter, severely on face; Kala Chand, cook, severely wounded (since dead); Baboo, cook, slightly wounded on arm; Moon Chally, stoker, slightly wounded on thigh.

Marines—None.

Spiteful, River Brune, Borneo Proper, July 20, 1846.

Sir,—Having received such information as to the retreat of the Sultan as to hold out some hope of his capture, I directed Captain Mundy to take under his command, in addition to the gun-boats, 150 marines, and a detachment of seamen, small arm men and rocket party, and to proceed in the direction pointed out to him in pursuit of his Highness.

I have the honour to inclose a letter I have received from Capt. Mundy, narrating his proceedings during a period of six days, and although the object of our pursuit has escaped us, it has offered an opportunity for the display of further zeal and cheerful obedience on the part of the officers and men, in a situation altogether novel to them; and afforded a gratifying proof of what their conduct would have been had their exertions been rewarded by the presence of an enemy.

I have the honour, &c.,

THOMAS COCHBANE,

Rear Admiral and Commander-in-Chief.

The guns on the islands of Cherimon and Coin Arrang, alluded to in my letter of the 9th inst. have since that date been sunk in deep water, and the batteries razed to the ground.

T. C.

The Secretary of the Admiralty, London.

We give extracts from a consideration of the other details in Captain Mundy's letter.

H. C. S. Phlegethon, off the City of Borneo, July 19, 1846.

Sir,—I have to acquaint your Excellency, that on the morning of the 10th instant, I moved up the river Borneo, with the force which you did me the honour to place under my command; the strength of which, including the gun-boat division, I herewith annex.

Having understood from your Excellency that it was the intention of Mr. Brooke to accompany the expedition, the main object of which was to endeavour to penetrate into the interior as far as the village of Damuan, distant about thirty miles from the city, where it was reported the Sultan had fixed his head quarters, and with a body of 500 men was determined to make a stand, I consulted her Majesty's agent as to the best mode of carrying out your orders; and he coinciding in my opinion, that as rapid a march as possible should be made towards the Damuan district, I decided on carrying this plan into effect as soon as we could discover a place of disembarkation.

As your Excellency accompanied the expedition ten miles up the river, I shall commence my report from that time.

The boats, nineteen in number, containing nearly 500 men, on parting company with your Excellency, at 10 A.M., continued to ascend the river for half a mile, when they turned abruptly into a small creek on the left bank, which the native guides assured Mr. Brooke led to a village called Kabirun Battoo, where Hadji Assim, an adopted son of the Sultan, and one of the principal enemies of civilization, had retreated the day before the capture of the city.

After paddling and tracking the boats for three hours through intricate windings, with mangrove swamps on either hand, and overhanging trees level with the water's edge, affording constant work for our pioneers, and, owing to the rapid current, presenting considerable difficulty to the advance, particularly of the paddle-box boats laden with the detachment of Royal Marines, we finally gained a landing place, the depth of water admitting the division of boats of the greatest draught to maintain their situation.

Having disembarked the party, we commenced our march without loss of time.

The details of the march are very interesting. Mr. Brooke accompanied them. They found a village—Kabirun Battoo—deserted, though full of valuable property. The strictest discipline was observed, and not an article allowed to be touched on the march. Further on, a battery was discovered covered in the jungle and dismounted. At 3 P.M., they commenced their march towards Damuan, amidst rain, swamp, and knee-deep in mud. In the end they were obliged to give up the advance that way and retire to Kabirun, where they bivouacked for the night amongst mosquitoes and torrents of rain. The next day, July 11, another attempt was vainly made to get at the Sultan's retreat by another route: they returned to the ships at Borneo, having before they left destroyed all the magazines, ammunition and property belonging to the hostile chief Hadji Assim, and conveyed the brass ordnance, which were Spanish guns of great beauty, into the boats. Captain Mundy proceeds:—

On getting clear of the creek I had the pleasure of finding your Excellency in the main branch of the river, and I trust I may be allowed to express the gratification experienced by Mr. Brooke and myself at your consideration in bringing up the *Phlegethon* to assist our return, and also how gratified I felt at your approval of my proceedings, and at your giving me orders to prosecute the original plan by the other route, should Mr. Brooke's information obtained at Kabirun receive further confirmation.

On our arrival at the capital, the result of the inquiries made on the subject were so decidedly favourable, as to induce Mr. Brooke to request that your

Excellency would give directions for the expeditionary force to make a second attempt by the new route ; and having received your orders to this effect, I started again from Brune, at 6h. 30m. A.M. on the 13th, giving the people the previous day (Sunday) to rest.

The detachment of marines carried 60 rounds in their cartouche-boxes, the small arm party 30 rounds, with 100 rounds of spare ammunition for each bayonet in the boats. Four day's provisions were issued to each, two being cooked and carried in the haversacks.

On leaving the city, instead of proceeding several miles up the river, as on the former occasion, we took the first large branch on the left bank, not a mile distant from the shipping, and continued ascending that stream in a south-westerly direction, with occasionally only four feet at low water till noon, when we entered the Damuan river, and half an hour afterwards pushed into a creek of a similar character to that leading to Kabirun, but more difficult of access, as was proved by the launch being unable to make any progress. At 1 P.M. the leading and smaller boats effected a landing at a place which, we were informed by some natives taken from their canoes, was called Palihoug, and that a road led thence direct to Damuan, distant a march of twelve hours. A closer inspection, however, showed us that a morass, rendered impassable by the continued heavy rain of the last week, lay between us and the higher jungle ground.

At this unpleasant juncture of affairs Mr. Brooke was assured that, by retracing our steps into the Damuan river, and then ascending it for a few miles, we should find another creek leading to the village of Malbout, which village was on the road to Damuan, and through which the force must have passed had it been able to prosecute the journey by land from Palihoug.

The boats were retraced, another creek ascended, and at 4h. 30m after being ten hours at the paddles, a swamp, called the quay of Malbout reached, Capt. Munday here doubts the fidelity of his guides.

The country, so far as the eye could trace, was one sheet of water, terminating in a jungle, the nearest angle of which might be a quarter of a mile distant. To this point I determined to direct our steps; and, accompanied by Mr. Brooke, with a guard of forty marines under Lieutenant Mansell, and by Lieutenant Vansittart, whom you kindly allowed to act as my aide-de-camp, we pushed on rapidly in the hope of discovering firm ground for the force to encamp on. The march, as usual, was knee deep, but, on entering the jungle, we discovered a tolerable path with a gentle rise, and half an hour's walk brought us to the promised village, which, with the exception of a few individuals, was entirely abandoned.

I despatched Lieut. Vansittart to the boats to desire that the marines and the seamen of the marching party should be landed forthwith, and endeavour to get up before dark, leaving such of the gun-boats as had been able to penetrate the labyrinth of the creek to guard the provisions and spare ammunition. At this time the rain fell heavily, but the houses were fortunately waterproof; and being, moreover, built on piles, moderate shelter was afforded to the detachments as they arrived; and by 7 P.M., all the force was collected, and I received a report from Lieut. Patey that the gun-boat division was all right.

Having detained some of the natives with a promise that their property should be protected if they would guide us to the Sultan's retreat, we enlisted three into our service, who appeared desirous of accepting the terms. These men assured Mr. Brooke that the Sultan, with a large body-guard, had passed up the river Damuan a week ago, and that he had blocked up the passage after him. I observed, however, that as we advanced, the number of the

Sultan's fighting-men, as given by the guides, was rapidly diminishing, and, instead of 500, they were now reduced to half.

From the time occupied, and rate of progress, I imagine that, at this place, (Malbout), we were about 20 miles in a south-westerly direction from the capital, and amidst a race called Kadyans; they appeared a quiet, inoffensive people, and far less savage in appearance than the Dyaks at Kanowitt.

The next morning (the 14th), the rain cleared up, and the march was recommenced.

A mile's tramp in the jungle brought us to the village of Tanjong, where we found a white flag suspended from the roof of the largest building, but the women and children, and the greater part of the inhabitants had fled. Here we learned that all these spots of higher and cultivated land were termed islands by the natives; they were covered with fruit and cocoa-nut trees, and many shrubs and creepers of great freshness and beauty, and the general character of the country, as we advanced, was decidedly improving.

Rigorous orders had been given to respect the property as we passed through the different villages, which was well observed, and we continued our march alternately, through swamp and jungle, blazing the paths in every direction to secure our distinguishing the road back, should the guides desert us.

At 10h. 30m. we came suddenly upon a larger building than any we had hitherto seen, erected close to a running stream, at the foot of a high and well-wooded bank. The house was evidently new, and, on examination found to be lately inhabited.

A strict search for ammunition and arms was instituted, and two shields were shortly discovered, the largest of which, five feet long, ornamented with gilt, and having an imperial crown on the top, supported by two lions, (not badly executed), was immediately recognised by Mr. Brooke as belonging to the Sultan, the sword-bearer having carried it before him at the reception given to your Excellency last year at the capital.

The usual quantity of arms, &c., were found, and several mats of great beauty, about thirty feet in length and ten feet wide, with furniture to correspond, the whole arrangement of the interior giving evidence that the Sultan had lately been a tenant, with the Pangerans who accompanied him in his flight. Observing that no injury was done to private property, several of the natives here joined us, offering their services as guides, and assuring Mr. Brooke that the Sultan had only moved across the river, about two miles distant, to another house more difficult of access.

They pushed on without loss of time; arrived at the river with the bridge three feet under water. A new bridge was made with trees by Lieut. Heath, assisted by volunteers from all ranks. On crossing the river the march was through a swampy jungle.

At last, on gaining the open country, we found ourselves directly in face of a large and isolated building, standing on piles, with a rivulet 10 feet broad passing in its rear, and the whole country round completely flooded. A glance at the desolated appearance of the place showed us at once that no enemy was there to oppose us. It had been evacuated probably the day before by the Sultan and his followers; magazines of powder, ammunition for guns of different calibre, and cartridges admirably made for musketry, were found in considerable quantity, and one brass swivel gun of small dimensions; but the greater part of the valuable property had been carried off. Having destroyed the powder, and well reconnoitred the swamp and jungle around, I directed Lieut. Heath to expend his damp rockets on the building, which was then fired and burnt to the waters' edge, which service concluded, we recrossed the river with our whole force, and after a march of seven hours from leaving Malbout, encamped on the rising ground by the new house, in which was found the Sultan's shield. The rain had set in as usual in torrents at 3

P.M., and, there being only shelter for half the force, the remainder bivouacked under bamboo sheds erected by themselves; during the whole night there was no cessation of the rain, no wind, and myriads of musquitoes.

On the next morning, Wednesday, July 15, we commenced our march at an early hour to return to Malbout, a decision which Mr. Brooke and myself had come to in consequence of the whole of our guides who were acquainted with this part of the country having left us, and it was, therefore, impossible to obtain further intelligence of the Sultan's movements. As the rear guard passed out into the swamp the Sultan's house was fired, and with the adjoining building and all the property, burnt to the ground.

The force then returned through Malbout, and reached the main stream, where his Excellency was looking out for them, the Sultan having completely eluded them. Capt. Mundy adds:—

During the six days occupied in the double expedition, I had no complaint of straggling or misconduct; and though the enemy offered no opposition to our advance, I hope I may be excused for bearing testimony to the cheerfulness of all under the discouraging circumstances of continued marching in jungle and swamps, knee deep, with heavy rains during the whole period, constantly wet to the skin, and rest at night impossible.

I was much indebted to Capt. Hawkins, commanding the detachment of Royal Marines, for his exertions during the march, and to Lieutenants Matthew, Heath, and Newland, who commanded divisions of seamen, and to Lieut. Vansittart, my aide-de-camp.

Mr. Reeves, and Mr. Quin, mates of *Agincourt* and *Royalist*, were attentive to their duties.

I was highly satisfied with the zeal and intelligence of Lieut. Patey, in immediate command of the gunboats, and he was cheerfully assisted by Lieutenants Norcock, Dunbar, and Morgan, and by Mr. Loane and Mr. Sullivan, second masters of the *Agincourt* and *Iris*.

Mr. Brooke, throughout the march, showed the greatest anxiety to spare the houses and property unconnected with the Sultan.

The following despatches from the Commander-in-Chief, Rear Admiral Cochrane, give an account of the reason of the foregoing proceedings:—

Agincourt, off the River Brune, Borneo Proper, July 20, 1846.

Sir,—Referring to my letter of the 30th May last, relative to Borneo, I have the honour to acquaint you, for the information of the Lords Commissioners of the Admiralty, that on my arrival at Singapore, I received from Captain Sir Edward Belcher, of the *Samarang*, the accompanying narrative of events that had occurred on that part of the Bornean coast he had recently visited, and which, more or less, bear upon the disastrous events that have taken place in the capital.

On my arrival at Sarawak, on the 24th ultimo, and meeting Mr. Brooke, I learned from him that subsequent reports to those already transmitted to their lordships led him to believe that his first information had not been exaggerated. Under these circumstances, I invited Mr. Brooke (and he readily accepted the invitation) to accompany me to the seat of government, for the purpose of assisting in the investigation of the outrages alleged to have been committed.

We arrived off Navarro Island, at the entrance of Brune River, on the 4th instant, and it was not long before we were visited by some fishermen belonging to the city, from whom we learned with regret that the reality had gone far beyond the report; that Rajah Muda Hassim, one of his sons, Pangeran Bedurudeen, seven brothers, one sister, and other relations, and about a similar number of other persons had been put to death at the same time. Subsequently, two of the remaining princes were sacrificed, upon it being

ascertained that the person named Japper (alluded to by Mr. Brooke in his letter enclosed in my despatch, No. 95, of the 30th of May, as having just fled to him to bring information of the transaction) was known to have departed leaving in existence, of that family, only two brothers, and the son and heir of the Rajah, who were protected by the most powerful remaining Pangeran, named Moumein, who, although son-in-law of the Sultan, disapproved of the deed, but confined his interference to the protection of those parties.

The cause of this sudden change of conduct on the part of the Sultan (who, their lordships are already aware, is a very weak as well as ill-conditioned character,) was the fate that attended Pangeran Usop, whom, their lordships will remember, I, at the Sultan's request, last year attacked and drove from the city, and who was subsequently taken and put to death by Bedurudeen, in consequence of an attack he made upon it after my departure. It would appear that the Sultan's reputed son, a man of worthless character, Pangeran Hassim, had married Usop's daughter, and partaking of his father-in-law's hostility to the English, and disposition to piracy, as well as deeply resenting his fall, and exercising the very great influence he had over the mind of the Sultan, he, in conjunction with a very clever and artful man named Hadgi Samoad, at last brought his Highness to consent to this deed of revenge.

Our informants further stated, that as soon as this crime had been perpetrated, the Sultan began to place the river and city in a state of defence, and Commander Egerton, of the *Hazard*, corroborated the statement that a trap had been laid for him to get him to the city, and, as alleged by the informants, with the view of putting him to death.

Under all the foregoing circumstances, and those considerations alluded to in my letter, No. 95, before referred to, there did not appear to me the shadow of a doubt as to my right, with reference to those principles which govern European states under similar circumstances, to proceed with an armed force, and demand an explanation of these hostile deeds; and, acting upon this conviction, the result is communicated to their lordships in my letter of the 9th instant, No. 113.

On our arrival at the city, we found it entirely deserted by the inhabitants; those fled who felt they were compromised, and the remainder, no doubt, from apprehension of being confounded with them.

By means, however, of Japper, we managed to open a communication with those friendly to us: and the following day I was visited by Pangeran Moumein, Pangeran Baher, and Pangeran Muda Mahomed, and had a long interview with them on that occasion. Their story was nearly to the same effect, and in unison with that which had already reached us.

The future then became the most interesting subject for discussion. The Sultan had fled, and they were, in fact, without a government. I invited them to come to some determination as to the course they would pursue for the well-being of their country, but they appeared to be entirely paralyzed.

The Commander-in-Chief in vain tries to induce them to form a government. Every man of weight and intelligence had been destroyed.

In the meantime, the people had recovered from their panic, and returned to the town.

The ineffectual pursuit of the Sultan, as before detailed, then ensued.

Finally, having remained eleven days at the city without any prospect of securing a definite and satisfactory arrangement, it became a matter for consideration as to the next best course to be adopted that would hold out any hope of my leaving the city, and those friendly to the English, even in a temporary state of security; and Mr. Brooke concurred with me in thinking that the effect might be good were I to address a sort of proclamation to the chief persons actually in the place, to be given to the Sultan on his return, detail-

ing the whole of the proceedings that had taken place between us during the last twelve months, pointing out the unprincipled and dishonest conduct of the Sultan—showing how entirely he and they were at my mercy—yet still holding out the olive branch to him, but declaring my determination to act with the extreme of vigour should he ever again evince hostility to Great Britain.

This was done, and the Commander-in-Chief sailed for China, leaving Borneo to Capt. Mundy as his charge. The *Iris* and *Hazard* will remain on the coast as long as circumstances may render necessary.

EXAMINATION OF MASTERS AND MATES IN THE MERCHANT SERVICE.

Continued from page 488.

WE are at length enabled to lay before our readers another List of Masters and Mates in the Merchant Service, who have passed an examination, and obtained Certificates of Qualification on the voluntary system under the regulations issued by the Board of Trade, which came into operation on the 1st of November, 1845. This list has just been published by the Board of Trade, and reprinted and extensively circulated by the Committee for Lloyd's Registry of British and Foreign Shipping.

We had almost begun to despair of seeing another list, knowing as we do that there still exists a very great unwillingness on the part of many able and talented masters, men of considerable experience, to subject themselves to the uncertain judgment of local authorities, who, for the most part, although *apparently selected* to constitute local boards, have obtained their appointments by dint of interest, and have not, at least many of them, been at sea for many years. We are the more pleased, therefore, to see in the list before us, that a larger portion than usual, have been examined at the Trinity-house, in London, away from all local influence. This list shews that for the appointment of master the following number in each class has succeeded,

| | | | | |
|--------------|---|---|---|----|
| First Class | . | . | . | 10 |
| Second ditto | . | . | . | 20 |
| Third ditto | . | . | . | 5 |
| | | | | 35 |

And for that of mate as follows, viz.

| | | | | |
|--------------|---|---|---|---|
| First Class | . | . | . | 1 |
| Second ditto | . | . | . | 4 |
| Third ditto | . | . | . | 1 |
| | | | | 6 |

As connected with the progress of this important measure, for so it really must prove in the end, it cannot fail to be also satisfactory to our readers to see the number examined on the occasion at each port. It is as follows:—

| | | | | |
|----------------------------------|---|---|---|------------|
| Trinity House, London | . | . | . | 21 |
| Marine Board, South Shields | . | . | . | 10 |
| Dundee | . | . | . | 2 |
| Trinity House, Portsmouth Branch | . | . | . | 2 |
| | | | | Masters 35 |

| | |
|---------------------------------|---|
| Trinity House, London | 3 |
| “ Plymouth Branch | 1 |
| “ Newcastle | 1 |
| “ Leith | 1 |
| | 6 |
| Mates | 6 |

Here again it is observable that notwithstanding the urgency with which the adoption of a system of some sort or another, was pressed upon the consideration of Government from Glasgow, and other parts in that immediate vicinity, no progress whatever has been made in that quarter in the advancement of the system sanctioned by the Government, in spite of a very considerable opposition which was offered to it elsewhere, though entirely voluntary. Too much praise cannot therefore be given, not only to those boards, which have held out encouragement to deserving individuals to profit by the system, partial as it seems, but to those deserving masters and mates who have thus proved their qualifications, most of them, we are much gratified to see, for the higher and most distinguished berths in their profession. It is only due to these talented persons, that their fitness for the discharge of important duties should be made known as far, and as wide as possible.

We regret that we are not yet enabled to shew, from any authentic source, that the *qualified* masters and mates, have received such appointments as their claims seem to entitle them to look for. Perhaps this, in some measure, depends upon themselves, their natural modesty preventing them from making a display of what may appear to them to be an undue demonstration of their just claims.

We find, upon inquiry, that “certificates of the classification of merchant ships” are issued annually to a very great extent, and that these certificates prove to be of the greatest possible benefit to shipowners, especially in foreign ports, where possibly there may not be a register book, and, if there be one, its use is necessarily limited, and access cannot, without leave, be had to it. In these certificates, we understand, the masters’ names are always inserted. Why, then, should they not also serve the double purpose of benefiting the master as well as the shipowner?

The suggestion is offered in the same spirit and with the same feeling in which we have been most anxious to give encouragement to a system, which, however defective it may be, may still, if persevered in, be the means of protecting life and property to a great extent, and of bringing into notice, deservedly, men of distinguished talent and ability. To make our suggestions practically useful, and we do it with all respect to Lloyd’s Register Committee, we would recommend all the masters and mates who may be appointed to ships surveyed for classification in Lloyd’s Register, to produce their certificates of qualification to the surveyors. The surveyors should then, in making their reports of survey, mention the fact, and name the class for which the officer in each case may have proved his qualification. This, we have no doubt, would be sanctioned by Lloyd’s Register Committee, who, for example, by inserting in their certificates the captain’s name thus, William Taylor, * * would give him a distinction as an officer qualified for the second class, which he has a right to claim, and it might stimulate others to follow their good example.

A List of all the Masters and Mates in the Merchant Service who have voluntarily passed an examination, and obtained Certificates of Quali-

cation for the class against each assigned, under the regulations issued by the Board of Trade, since the 26th June last.

MASTERS.

| Date. | Name of Party who has received the Certificate. | Class of Certificate. | Age. | Present or last previous Service. | Number of Register Ticket. | Name of Examining Board. |
|---------|---|-----------------------|------|--|----------------------------|--------------------------|
| 1846. | | | | | | |
| June 25 | William Taylor | 2nd | 26 | Tyne, 210 tons | ... | Ma. Bd. S. Shields |
| July 4 | Osman, F. A. Edwards | 1st | " | Macedon 529 tons (as chief mate) | 8697 | Tr. Ho. London |
| " 6 | Thos. S. Scott | 1st | " | Isabella Blyth, 443 tons (as mate.) | 325349 | Tr. Ho. London |
| " 9 | Chas. A. Niven | 2nd | " | Sylph, 491 tons (as mate) | 27175 | Tr. Ho. London |
| " 13 | Thos. J. Russell | 1st | " | Anna Robertson, 317 tons | 345509 | Tr. Ho. London |
| " 30 | George Train | 3rd | " | Bradford, 195 tons | ... | Ma. Bd. S. Shields |
| Aug. 6 | John Williams | 1st | " | Chelydra, 350 tons | ... | Tr. Ho. London |
| " 10 | Alexander John Weynton | 1st | " | Australasian Packet, 180 tons (as mate) | 327399 | Tr. Ho. London |
| " 6 | Wm. Holmes | 2nd | " | Catherine Greene, 350 tons (as mate.) | 1302 | Tr. Ho. London |
| " 11 | Wm. Johnson | 2nd | " | Courier, 289 tons (as mate) | 176533 | Ma. Bd. S. Shields |
| " 10 | David Arkley | 1st | " | Nile, 287 tons | 70509 | Tr. Ho. Dundee |
| " 20 | George Gibb | 3rd | 36 | Grantham, 227 tons | ... | Ma. Bd. S. Shields |
| " 24 | Richardson Wild | 2nd | " | Buctouch, 284 tons | ... | Tr. Ho. London |
| " 25 | Henry Down | 1st | " | Bombay, 1,400 tons (as mate) | ... | Tr. Ho. London |
| " 26 | Alex. Whyte | 2nd | 29 | Oregon, 928 tons (as mate) | 118659 | Tr. Ho. Dundee |
| " 27 | Joseph Tracy | 1st | " | Severn (as chief officer) | 336518 | T. Ho. Pts. Brnch |
| " 27 | Charles Barker | 2nd | 29 | Vigilant, 226 tons | .. | Ma. Bd. S. Shields |
| Sept. 3 | Thomas Foster | 2nd | 30 | Hopewell, 268 tons | ... | Ma. Bd. S. Shields |
| " 4 | William Harvey | 1st | 27 | Sarah Fleming, 324 tons (as mate) | .. | Ma. Bd. S. Shields |
| " 9 | James Cooper | 1st | " | Cowlitz, 400 tons (as mate) | ... | Tr. Ho. London |
| " 12 | John Fletcher | 3rd | 38 | Brothers, 155 tons (as mate) | .. | Ma. Bd. S. Shields |
| " 17 | Francis J. Marsh | 2nd | " | Lady Mary Wood, 650 tons (as mate) | 207730 | Tr. Ho. London |
| " 17 | Henry P. P. Bouchier | 2nd | " | Lord Wm. Bentinck, 1800 tons (as mate) | 346545 | Tr. Ho. London |
| " 21 | William J. Sturley | 2nd | " | Earl of Leicester, 147 tons (as mate) | 274390 | Tr. Ho. London |
| " 24 | Robert Hosking | 2nd | " | Robert, 274 tons (as mate) | 2749 | Tr. Ho. London |
| " 29 | Joseph Millar | 2nd | " | Napoleon, 233 tons | 345940 | Tr. Ho. London |
| " 29 | Henry White | 2nd | " | Tory, 483 tons (as chief officer) | 29979 | Tr. Ho. Pts. Brnch |
| Oct. 1 | Wm. C. Turner | 2nd | " | Oriental Queen, 645 tons (as mate) | 326635 | Tr. Ho. London |
| " 3 | J. Cunningham | 3rd | 37 | Columbia, 229 tons | ... | Ma. Bd. S. Shields |
| " 5 | John Osman | 2nd | " | Diadem, 184 tons | ... | Tr. Ho. London |
| " 5 | Matthew Butterwick | 2nd | " | Stratford, 344 tons (as mate) | 25654 | Tr. Ho. London |

| | | | | | |
|---------|-----------------------|--------|--|--------|---------------------|
| Oct. 7 | John Work | 3rd 34 | Duke of Clarence, 229 tons | ... | Ma. Bd. S. Shields |
| " | 8 J. Douglas Mowat | 2nd | Walker, 353 tons (<i>as matr</i>) | 14845 | Tr. Ho. London |
| " | 8 Edwin Hellyer | 2nd | Kallibokka, 380 tons (<i>as matr</i>) | 1444 | Tr. Ho. London |
| " | 8 Wm. S. Hoyte | 2nd | Queen, 1307 tons (<i>as apprentice</i>) | 33489 | Tr. Ho. London |
| MATES. | | | | | |
| 1846. | | | | | |
| July 23 | David Napier | 2nd | ..... | ... | Tr. Ho. Newcastle |
| Aug. 6 | William Gilks | 2nd | Isabella Blyth, 443 ts | 17591 | Tr. Ho. London |
| " | 4 Henry Callard | 2nd | H.M.S. <i>Fly</i> (<i>an able seaman</i>) | 338404 | Tr. Ho. Ply. Branch |
| Sept. 1 | Edwin Cross | 3rd | Hope, 163 tons | 33958 | Tr. Ho. London |
| " | 17 Henry B. Ella | 2nd | Gil Blas, 145 tons | 104620 | Tr. Ho. London |
| Oct. 7 | Robert Menzies | 1st | ..... | ... | Tr. Ho. Leth |

Board of Trade, Oct. 12, 1846.

THE PLUTO'S HURRICANE.

WE have been favoured with a copy of the "*Overland Friend of China*," in which we find an account of the Hon. Company's steam ship *Pluto*, having encountered a typhoon, in which she has been so severely treated as to have nearly been lost. We are informed, however, that she has since repaired damages at Hongkong. Now, in our opinion, all this might have been avoided had the *Pluto*, on Sunday evening, when she found her barometer falling, put her head to the N.E. instead of hauling up S.b.E., as we find in the log; a course which took her into the very focus of the storm. Here she had a lull of an hour, and then the second part of it from the S.W. Entering the focus with the gale from the east, and leaving it with the gale from S.W., shews clearly that she must have passed very near to its centre. Whereas had she stood away to the N.E. on the first notice given by her barometer falling, it is clear she would have avoided the worst of it, and might have avoided it altogether, as we are told the hurricane was not of great diameter "about a hundred miles." It is also clear that it was travelling from S.E. to N.W. which would have rendered it still easier for the *Pluto* to have escaped it. We perceive that Piddington in his *Horn Book*, says of the hurricanes of the China Sea:—"In June the tracks are from east to west. In July the tracks are to the north-westward." We have said before now, and we again repeat, that the commander of a ship who is not acquainted with the theory of storms only knows half his business.

"Left Hong Kong in the H.C. steamer *Pluto*, on the 27th June 1846, at 6 A.M.—the wind at E.S.E., fine clear weather and steady breezes. At noon Paps bore E.N.E. $\frac{1}{2}$ mile; barometer 30.0; 3 P.M., breeze increasing; midnight, fresh gales; carried away main gaff, lowered the sail, and cleared the wreck.

On Sunday the 28th at noon, observed in latitude 19° 49' N., hauled up S.b.E., fine weather, with a fresh wind, at sunset observed the barometer fall

one-tenth 29·90, furling the fore-topsail; at 8h. moderate and cloudy; at midnight squally, barometer 29·68, carried away the main gaff, took the sail in, double reefed the fore sail, and stowed the jibs, split the fore staysail, hauled it down, and stowed the foresail.

29th June.—3 A.M., gale still increasing, cutter on the weather side washed away, carrying the davits, sponging house, and rail with her; at 5 A.M., paddle-boxes and sponging houses fore and aft washed away with a very heavy sea; at 9h. 30m. tiller carried away, lashed the rudder hard a-lee, which was working very much; sea and wind increasing more and more; barometer falling very fast; jib and staysail blown out of the gasket to ribands; at 11h. 20m. A.M., blowing a perfect typhoon with a tremendous heavy sea; foremast went, carrying with it topmast, topsail-yard, fore-yard, &c.; typhoon at such a pitch thought it quite impossible for the ship to live in it; water increased to 4 feet in the engine room, engines scarcely moving; shipping very heavy seas fore and aft; gig went that was lashed forward, also forge, hen-coops, galley, &c. In endeavouring to cut away the stump of the foremast several people washed from forward aft; ship completely buried; seas washing right over her. During the typhoon could not see for wind and spray, even for the shortest distance. Barometer, 27th June, at 10 A.M. 30. 28th June, at 8 A.M., 29·26, 11h. 29·00, 12h. 28·66, 12h. 10m. P.M., 29·55, 1h. 27·55, 1h. 40m. 27·65, 2h. 10m. 27·70, 4h. 20m. 27·96, 5h. 40m. 28·22; blowing tremendously hard, with a frightful sea; at 12h. 25m. typhoon lulled, which gave us time to clear the wreck of the mast and yards from the paddle-wheels, cut them away, hove every thing overboard that was on the decks, and cleared them of all lumber, also threw a quantity of coal overboard to relieve the ship; at 1h. wind chopped round to S.W., and commenced blowing if possible harder than before, with a tremendous heavy cross sea; vessel riding through it very beautifully; at 1h. 40m. barometer began to rise, and continued rising during the night, but still blowing a hurricane; at 9h. 30m. funnel carried away, taking the rail with it, and forcing the steam chest from its place, which left a large opening in the deck; sea having a complete breach down below, rendering the safety of the ship doubtful; obliged to put out fires; let the ship drift; wind still blowing from S.W.; put tarpaulins in the main rigging to try to keep her to the wind, but all blown to ribands.

30th June.—At 2 A.M. wind abated a little, but not yet able to shew any sail to it; pumped the ship out, got a spare sail covered over the steam chest to keep the sea from breaking down below; at 8h. 20m. rudder carried away, leaving us at the mercy of winds and waves, without any thing to steer by, or steam to go ahead with; obliged to let her drift; providentially wind was from S.W., ship heading E b.S., drifting bodily to leeward, making about a N.N.E. course; at noon observed, in 20° 00' N., long. 112° 37' E., Grand Ladrone N.N.E. $\frac{1}{2}$ E. 137 miles; found the ship make water abaft, obliged to keep the pumps going; got a spar over the stern, and prepared it with a few additional boards to act as a rudder; carried this away in less than half an hour, leaving us as helpless as before.

1st July.—Sea fortunately abating, we were enabled to get up and ship a spare rudder that we had on board; even this did not act, it not being fitted with a drop rudder, without which it had little or no command over the steering of the ship.

2nd July.—In the morning spoke the Anna Eliza, from China to Bombay; at 11 A.M. observed the land N.N.E.; at noon Asses Ears bore N.b.E. about 14 miles; at 4 P.M. about 10 miles; at 9h. closing the island of Tac-tamsee; ship drifting rapidly towards the breakers, but the wind freshening a little, enabled us to weather them.

3rd July.—At 1h. 30m. A.M., Hongkong ——— drifted considerably to the eastward by the current during the night; weather fine, wind light and vari-

able; at daylight entered the Lamma Passage; 5h. 40m. close to eastern end of Little Hongkong; at 6h. broke off suddenly from the wind, the tide having caught the vessel on the port bow; in all sail immediately; being too close to wear round, touched the rocks on the point, which, starting the rivets of the bottom plates in the foremost water-tight compartment, caused the vessel to settle down by the head, thus becoming firmly fixed before she could be hove off by stern anchor, which was immediately run out. An officer went to Hongkong to report situation of the ship to senior naval officer. H.M.S. *Vestal* and *Young Hebe* arrived to our assistance with the greatest dispatch.

Remarks of the Editor of the "Friend of China."

We have been favoured with particulars, and a copy of the *Pluto's* log, from which it appears that the storm was quite terrific. It also appears that the ship left the harbour very deeply laden, having four months provisions on board, being filled with coals below, with an additional quantity on deck.

The first indication of an approaching storm occurred on Sunday evening the 28th, when the barometer, then standing at 30 inches, suddenly fell one-tenth of an inch, and at 4 o'clock in the morning of Monday the 29th, the storm appears to have set in from the eastward with violence, increasing in fury until a little after noon, when it suddenly lulled, the barometer having fallen in the mean time the almost unprecedented extent of $2\frac{1}{2}$ inches nearly, viz. to 27.55.

During this eight hours' exposure to the fury of the elements, the ship, although from her peculiar construction and buoyancy, she is represented to have behaved remarkably well, nevertheless suffered very considerably, the violence of the typhoon and the resistless impetuosity of the waves bearing every thing before them; successively carrying away every sail, and almost every spar, and the boats; the seas sweeping over the decks, and carrying off all that was moveable, and much that was fixed; injuring several of the crew, and also Mr. Neblett the chief officer, (who received several severe cuts, and contusions on the head), and finally pouring into the engine room, and stopping the engines.

The lull continued for something less than an hour, and, during the cessation, every exertion was used to clear the wreck, the engines being got to work, and the ship pumped dry. During the whole of this time the barometer remained about 27.35.

At 1 o'clock the second part of the typhoon came on, as was expected, but from the south-west, the wind increasing in violence up to about 6 o'clock, when its fury appeared to have attained its maximum. The destruction of whatever had been left after the first typhoon, seems now to have been completed, in the 12 or 13 hours during which the second storm raged; hatches, bulwarks, and gratings, being carried away like so many straws, and, at last, the funnel and steam pipe, the fastenings of which had been previously loosened and drawn. The chasm which the fall of the chimney, and consequent removal of the steam chest, caused in the centre of the deck, reduced the ship to a truly critical situation, which was not lessened when subsequently the standing and sliding rudders were carried away, leaving the ship a perfectly unmanageable log on the water.

Most providentially the extreme violence of the typhoon had by this time in some degree abated, or it is more than probable, no one would have been left to tell the tale, and the fate of the *Pluto* might have been shrouded in the same impenetrable mystery as that of the *President*.

Capt. Airey, and his officers, by whom he was ably seconded, however, appear to have availed themselves of every expedient that the most perfect skill could suggest to bring the shattered hull into port, and had nearly succeeded

in doing this, having, by means of a temporary rudder, contrived to drift in two days about 150 miles; but on coming near the land the standing and sliding rudders being lost, the temporary rudder was found insufficient in power, for a vessel of her great length to contend against the currents and heavy squalls, during one of which, early on Friday morning the 3rd instant, she went on the rocks as before noticed, when almost within the desired haven. Lieut. Airey immediately despatched Mr. Hayden, one of his officers, to Capt. Talbot of H.M.S. *Vestal*, the senior naval officer at this place, who promptly got his fine frigate underway, and accompanied by the *Young Hebe*, surveying vessel, was within a few hours at the scene of action using every exertion to get the *Pluto* afloat. We are sorry to say that up to a late hour on Monday night their exertions had not been attended with success, but it was hoped that on the following day the tide would rise sufficiently high to allow of her being dragged from off the rock which has pierced her bows. We shall be happy to hear that this is the case, as, notwithstanding the damage to her upper works and bows, her hull, in other respects, is sound and the machinery uninjured.

Upon a consideration of the phenomena attending this typhoon, the attention is at once arrested by the extraordinary fall of the barometer, from which the intensity of the typhoon, may be estimated. The mercury fell so suddenly that for a time it was imagined the instrument had received some damage. Colonel Reid, in his *Essay on Storms*, quotes 28.20 in. as the lowest range of the barometer during a typhoon in the China Sea, and 28 inches as the lowest range during a West India Hurricane. Two instances however are on record, and it is believed the only two, in which the range is even lower than in the recent typhoon. Both cases are recorded by Horsburgh, the one on the coast of Japan, bar. 27 in., the other in the neighbourhood of the Bashee Islands, bar. 27.50. Every reliance may be placed upon the barometrical observations made on this occasion, as they were taken with great precision and accuracy by Mr. Dearlow, Surgeon of the *Pluto*.

The next point worthy of observation, is the remarkable lull of nearly an hour's continuance, between the two typhoons, giving considerable weight to the already tolerably well established theory of Colonel Reid as to the rotatory direction of Storms. On this view the gyrations would appear to have been from E. to W., whilst the direct or onward motion of the typhoon or whirlwind was from S.E. to N.W., or obliquely to the ship's course. On this view of the subject, the first contact of the ship with the outer and northern edge of the typhoon found the wind at east, this part of the vortex passing over the ship in about eight hours from first to last, then came the remarkable lull when it was perfectly calm, the ship being then in the very centre of the vortex, next came the second contact with the typhoon, striking the ship at S.W. and from the effect of which she did not fully get clear for about 12 hours; although it is to be observed that the *concentrated* force of the typhoon, both before and after passing its centre, seemed to be condensed as it were, with accumulated force, into a space of about two hours on each occasion.

The typhoon is thought to have been local, and of limited extent only, the diameter not being greater probably than 100 miles. There were several other ships, unfortunately, overtaken by it. We understand the harbour-master is endeavouring to collect their logs, with a view to determine its direction and extent. This will also serve to prove how far Col. Reid's theory is applicable, which, as a scientific question, is one of considerable interest and importance. We trust that gentleman will favour us with the result of his inquiries.

CAPT. BECHER'S MARINE ARTIFICIAL HORIZON.

*Royal Naval College, Portsmouth,
August 25, 1846.*

SIR.—I take the liberty to forward for your inspection the following observations and their results, taken by me at the above place with your horizon. As some of them are taken under somewhat unfavourable circumstances, the sun not being perfectly clear, I beg to state that, in my opinion, the horizon will answer all the purposes for which it was intended, and upon being appointed to a ship, I intend to give it a further trial in those places where mariners consider it to be attended with great difficulties. I remain, &c.

T. SULLIVAN,
Naval Instructor.

To the Editor N.M.

| Date. | Error of Chronometer. | | | Mean time of observations as shewn by Chronometer. | | | Mean altitude | Number of sights. | Lat. | | | Long. | | | | |
|---------|-----------------------|----|-----------|--|----|------|---------------|-------------------|----------|---|---|-------|----------|---|---|---|
| | h | m. | s. | h. | m. | s. | | | ° | ' | " | ° | ' | " | ° | ' |
| Aug. 21 | 0 | 17 | 37 slow | 0 | 46 | 54 | 49 23 33 | 3 | 50 50 20 | | | | | | | |
| | | | | 0 | 12 | 11 | 50 50 20 | 3 | 50 50 30 | | | | | | | |
| " 22 | 0 | 17 | 38.5 slow | 11 | 9 | 54 | 49 59 5 | 1 | 50 48 56 | | | | | | | |
| — | — | — | | 11 | 28 | 15 | 50 35 3 | 3 | 50 48 6 | | | | | | | |
| — | — | — | | 3 | 4 | 25.3 | 34 18 45 | 3 | | | | | 1 7 45 W | | | |
| — | — | — | | 3 | 37 | 36.7 | 29 27 57 | 3 | | | | | 1 6 00 | | | |
| — | — | — | | 4 | 4 | 44 | 25 20 39 | 5 | | | | | 1 5 30 | | | |
| — | — | — | | 4 | 48 | 52.5 | 18 27 15 | 2 | | | | | 1 5 00 | | | |
| — | — | — | | 5 | 24 | 58.6 | 12 46 8 | 5 | | | | | 1 5 00 | | | |
| — | — | — | | 5 | 33 | 51.7 | 11 22 55 | 3 | | | | | 1 5 25 | | | |

Index error = 2' 7" minus.

THE SHIPWRECKED FISHERMEN AND MARINERS' BENEVOLENT SOCIETY.

26, *Bucklersbury*, 21st October, 1846.

SIR.—It cannot but be a matter of interest to the friends of this valuable Institution to know something of the detail of the work, which, is being carried on with the help of their kind benefactions. I therefore, Sir, take advantage of your pages to inform the supporters of the Charity, and with the hope of exciting others to become so, that from the late stormy weather the call for help from our poor shipwrecked fellow countrymen has been loud; already, since the 21st ultimo, the crews of 84 vessels have been forwarded to their homes from London and the outports, having been taken up more or less naked and destitute,—at one place (*Lerwick*), for the crews of two vessels alone, there was expended nearly £60; the agent stating there were other wrecks, with further demands. This only embraces the numbers already reported to this office.

The agent at *Liverpool*, without definitely reporting number, writes that shipwrecked men are pouring in upon him every day. As yet, since the 21st ult only eight widows have applied for relief for themselves and their orphans, but the number of wrecks which have been reported from abroad gives every reason to fear there are many more.

It is cheering, however, to record that the Board, in their work of Charity, are not without sympathy,—gentlemen in various places are putting their shoulders to the wheel. At Gravesend a meeting took place on the 14th inst., consisting of some of the most influential gentry of the neighbourhood, when they formed themselves into a Branch Society, in aid of the good cause. At Port Stewart, near Coleraine, our most benevolent and active friend of the Charity, Col. Cairnes, Treasurer, aided by Sir Robert Bateson, the Secretary, and the members of the Branch Committee have been most indefatigable in soliciting aid to the funds from the Companies having lands in Ireland;—the following Companies have liberally responded, viz. Clothworkers 5 guineas, Drapers £5, Ironmongers £5, Salters £5; and they have great hopes of finding favor with the others. Devonport also has joined itself, and with it a Mayor for President of the Branch which they have established, have come forward to the work; Lieut. Wells, R.N. and John Beer, Esq., Solicitor, having taken upon themselves the post of Honorary Secretaries. The Glasgow and Liverpool Royal Steam Packet Company have most liberally granted the request of the Committee of Management for a free passage for Shipwrecked Seamen bearing the Society's pass, by their boats. Also the Directors of the Gravesend Steam Boat Companies have done the same, and there can be but little doubt that the Steam Boat Companies which have been applied to will also unite in the work of charity. Indeed, it would be rash to suppose that a body of men, who under Providence, have been the means of placing and maintaining England in the high rank among the nations of the world, which she now holds, could appeal to the sympathies of a British public in vain for relief, when shipwreck has rendered them destitute, or left their wives and children—widows and orphans.

The nationality of the cause must give confidence, that this truly national Society will be so supported as to enable those who conduct it to open their hands wider, not only to the Shipwrecked Mariner, but to the widows and orphans of such as may meet their death from the element which they so fearlessly brave.

I add a list of numbers relieved since the establishment of the Society in 1839 to 31st March, viz.

| | |
|--|--------|
| Widows | 703 |
| Orphans | 2150 |
| Aged Parents | 398 |
| Shipwrecked Persons | 9091 |
| Fishermen, heads of families left destitute by storms... | 568 |
| | 12,910 |

I remain, &c.,

To the Editor N.M.

F. W. LEAN, R.N.

NAUTICAL NOTICES.

Hydrographic Office, September 24, 1846.

BALTIC.—*Gothland South West Light.*—On the 1st of October next, a revolving light will be established on Refsudden Point, or the south-west extremity of the island of Gothland, in lat. 56° 56' N., and long. 18° 9' E.

The light will continue bright for half a minute, and will then be eclipsed for an interval of a minute and a half.

The lantern is 36 feet high, and the light 166 feet above the level of the sea, so that it may be seen at the distance of 17 miles.

Hydrographic Office, September 29, 1846.

COAST OF PORTUGAL.—*Alteration of the Peniche Light*—Information has been received by Her Majesty's Government, that, on the 16th of this month, the revolving light of Peniche, on the coast of Portugal, was converted into a fixed light, with the object of enabling seamen to distinguish it from the revolving light of the Berling Islands, and from the projected revolving light which is in course of construction on Cape St. Vincent.

Trinity House, London, Oct. 7, 1846.

LIGHT NEAR THE HELWICKS SAND off the Worms Head, in the Bristol Channel.—A floating vessel having, in fulfilment of the intention expressed in the advertisement from this house, dated the 2nd ult., been placed at her intended station off the west end of the Helwicks Sand, on Thursday the 1st. inst., notice thereof is hereby given; and that a bright revolving light was exhibited on board the same on the evening of the said day, and will be continued every night from sunset to sunrise.

This vessel is moored in 13 fathoms at low water spring tides, and in the position indicated by the following marks and compass bearings, viz. :—

| | |
|---|------------------------------|
| Oswich Point, just open of Porth Eimon Point, bearing | E. b. S. $\frac{3}{4}$ S. |
| Rossilly Parsonage House, just open of Worms Island. | E. b. N. $\frac{1}{4}$ N. |
| Caldy Lighthouse, | N. N. W. $\frac{3}{4}$ W. |
| Worms Head, | N. E. b. E. $\frac{3}{4}$ E. |

By order,

J. HERBERT, *Secretary.*

SIGNALS AT ST. MICHAELS, AZORES.

The following signals to ships have been established at St. Michaels, Azores.

1.—*A red flag.*—Vessels at anchor should immediately weigh on account of the weather.

2.—*A white flag.*—Vessels in sight may safely make for the anchorage.

3.—*A red flag with white border.*—Vessels must not send their boats on shore, landing being dangerous.

The signals will be made at the flag-staff on Custom-house Quay, Ponta Delgada.

107, Richmondston, Liverpool, Oct. 6, 1846.

SHOAL NEAR THE EQUATOR.—Sir,—As all communications relative to nautical affairs are widely diffused, and meet with proper comment in your Magazine, I beg to transmit you an account of the "Cæsar breakers," considered doubtful, witnessed by myself and crew of the brig "Mary," of this port from Africa.

On the night of the 4th of July last, at 7 P. M., fresh breeze, ship running 6 knots, saw breakers on the larboard bow, distance a quarter of a mile, strong current setting towards them, wore ship and stood along them; when first seen, they bore per compass N. W. b. N., and seemed to be a long ledge of rocks in a crescent shape; at 3 A. M., the following morning, saw the south-east end of the reef on the starboard bow; a strong breeze coming on prevented us making any further examination; the man, in heaving the lead, struck it upon a hard rock, but had no bottom the second cast.

There can be no doubt of the existence of this reef, and so convinced were

the crew, that they stood ready to clear away the long boat, neither was it any optical delusion from effect of current or phosphorescence of the sea.

As they are in the longitude of vessels crossing the equator, it is surprising they have not been reported; by good sights at noon, with chronometer and computation of distance run, their position, when seen, was lat. $3^{\circ} 07' N.$, long. $24^{\circ} 14' W.$

I remain, &c.,

To the Editor *N.M.*

CHAS. PRYCE, *Supercargo.*

[Want of space prevents us from remarking on this important communication.—Ed. *N.M.*]

11, *Ebenezer Place*, Sept. 16, 1846.

DEAR SIR.—On referring to my original notes and the chart of Banca Straits, I find I have made a mistake in copying the bearings of the Toojoo islands, which should be S.E. and S. $\frac{3}{4}$ E., in place of N.E. and S. $\frac{3}{4}$ E., for the position of the ship at the time of observation. This does not affect the longitude I have given as the true position of these islands. If you will correct them in your next number I shall feel obliged.

I beg to hand you annexed a memorandum, which I request you will insert. My reason for making this request is, that Capt. MacDougall having given me a knowledge of working out the positions as given to every fifth meridian, I wish it to be known that it was by his method I worked them. There being no work extant, I believe, that gives the position in longitude to the nearest degree, which is certainly an improvement.

Capt. MacDougall has an intention of publishing it with many other useful tables for both naval and merchant service officers.

I remain, &c.,

JOHN BENNETT.

Errata.

Page. Line.
 449 5th, for Brantomcbury, read Bronbornebury.
 450 6th, for N.E., read S.E.
 450 Bottom, the last course, for $56^{\circ} 56' 45'$, read $50^{\circ} 56' 45''$.

N.B.—The positions in lat. and long. from Scilly to Bermuda are worked out by Capt. MacDougall's method. J. B.

DURATION OF LIFE AMONG PROFESSIONAL MEN.—This was by Dr. Guy, and the conclusions at which he arrived were as follows. The meaning of the table is, that a man, for instance, who has attained 26 years of age, has a chance of living, if in the army, to 65.27 years; if in the navy, to 67.63 years, and so on—

| Age. | Army. | Navy. | Clergy. | Law. | Physic. | Learned Professions. | Fine Arts. | Literature and Science. | | Trade and Commerce. |
|---------------|-------|-------|---------|-------|---------|----------------------|------------|-------------------------|----------|---------------------|
| | | | | | | | | English. | Foreign. | |
| 26 & upwards. | 65.27 | 67.63 | 68.81 | 66.20 | 65.36 | 67.70 | 64.42 | 66.49 | 62.72 | 68.11 |
| 31 | 67.07 | 68.46 | 60.49 | 68.14 | 67.31 | 68.86 | 65.96 | 67.55 | 66.72 | 68.74 |
| 41 | 68.97 | 70.01 | 71.82 | 70.20 | 70.23 | 71.24 | 68.21 | 69.16 | 68.42 | 71.01 |
| 51 | 71.58 | 72.62 | 74.78 | 72.78 | 72.95 | 73.62 | 71.15 | 72.10 | 71.44 | 72.32 |

(Continued from page 390.—cs crew saved, cd crew drowned.)

| Vessels' Names. | Belong to. | Masters. | From. | To. | Where. | When. |
|-------------------|-----------------|-----------|--------------|---------------|-----------------|--------------|
| Active | 177 London | Renan | | | Coringa | July 16, |
| Apollo | Dundee | Walker | Dundee | Montreal | 48° N. 42' W. | Sept. 24, cs |
| Ann | Halifax | Berwick | Havana | Quebec | Pr. Ed. Id. | May 16, cs |
| Ann Jeffrey | 180 | Carter | Quebec | Liverpool | 47° N. 30' W. | Sept. cs |
| Blackaller | | | | | Algoa Bay | |
| Borneo | | O'Donnell | Quebec | Limerick | Belle I. Str. | July 9, cs |
| Brilliant | London | Stormer | Cork | Quebec | G. St. Lawrence | May 12, 2d |
| Brothers | St. Andrews | | passed | abandoned | 46° N. 37' W. | Sept. 24, |
| Chieftain | 185 S. Shields | Stebbin | Invkthg | Petersburg | off Ferro | " 23, cs |
| Clifton | Newcastle | | | | 47° N. 41' W. | " 23, |
| Cromwell | | | Quebec | Liverpool | 47° N. 28' W. | Oct. 4, |
| Cushia Macree | | | Quebec | Liverpool | 47° N. 37' W. | Sept. 22, cs |
| C. W. E. R. | | | Halifax | Demerara | 35° N. 54' W. | Aug. 30, cs |
| Druid | 190 | | Bristol | Quebec | 46° N. 32' W. | May 6, cs |
| Dalmarnock | Alloa | | passed | abandoned | by Endymion | Sept. 26, |
| Eben | | Peeble | Liverpool | New Orleans | D. H. S. Cay | Aug. 27, |
| Elizabeth | Whitehaven | Mossop | Richboto | Port Cawl | Pr. Ed. Id. | July 30, |
| Eilen | Liverpool | Clare | | | Cranes | March 31, |
| Emperor | 195 | | | | 45° N. 53' W. | Sept. 21, |
| England | | Thompson | Quebec | Liverpool | 44° N. 40' W. | " cs |
| Erin | | Conway | Liverpool | Quebec | by fire | July 19, cs |
| Fortitude | Lynn | | passed aban | doned in | 46° N. 37' W. | Sept. 23, |
| George Anson | | | | | Tabasco | |
| George Canning | 200 Liverpool | Harvey | Kingston I. | Cuba | Indian Cays | Sept. 1, cs |
| Gov. Halkett | Bristol | Hillman | | | Patagonia | April 28, cs |
| Great Britain | Bristol | Hosken | Liverpool | New York | Dundrum B. | Sept. 22, cs |
| Greenwood | Ipswich | Harvey | sprung leak | foundered | off Dudgeon | Oct. 9, cs |
| Heroine | | M'Kenzie | Sydney | P. Essington | Torres Strs. | April 26 8d |
| I. and M. Sinnott | 205 | Connor | Tralee | Quebec | abandoned | Sept. 20, |
| Isabella | Sunderland | Fenton | Sunderland | St. John | N. Rondisha | " 6 cs |
| Jim Crow | | | | | Algoa bay | |
| John Cree | | Goodyear | Calcutta | Liverpool | St. Jago | June 16, cs |
| John Henry | | | Mirimichl | Halifax | Pr. Ed. Id. | " 20, cs |
| John Lloyd | | | Archangel | foundered | off Tory Id. | Sept. 21, |
| Kate | Galway | | passed aban | doned by the | Trial | " 25, |
| Kingston | Dublin | | passed disma | sted and aban | doned on | " 23, |
| Lady Raffles | | Kirk | Saguenay | London | 46° N. 50' W. | " 21, cs |
| Lanark | | Frith | Quebec | Liverpool | abandoned | " 21, |
| Lord J. Russell | 215 London | | Cowes | Quebec | 46° N. 38' W. | " 29, |
| Louisa | Waterford | | Quebec | Waterford | abandoned | " 22, cs |
| Mary | Newcastle | | passed | abandoned | 46° N. 48' W. | " 22, |
| Mary Ann | Yarmouth | | St. John | Glasgow | abandoned | " 22, |
| Mary Ann | Halifax | Edwards | | | C. Ray | July 28, cs |
| Mary Stewart | 220 London | | | | P. Melo | June 18, 1d |
| Martha | Holyhead | Acorn | Holyhead | abandoned | 45° N. 80' W. | Sept. 20, |
| Motland | | | | | 47° N. 21' W. | April 18, |
| New Brunswick | Hull | | passed aban | doned in | 47° N. 35' W. | Sept. 27, |
| Ocean Queen | | | | | Gr. Cayman | |
| Oriental | 225 | Lowther | Calcutta | London | Juggernaut | Aug. 6, 2d |
| Pekin | Glasgow | M'Conoch | Glasgow | Quebec | Lance Valle | May 10, cs |
| Pomona | St. John | | St. John NB | | 46° N. 41' W. | Sept. 22, cs |
| Port packet | Lynn | Playford | London | Antwerp | Long sand | " 15, cs |
| Prince George | | Miller | | | Australia | April 13, cs |
| Queen Pomare | 230 St. John B. | | Liverpool | St. John | 43° N. 61' W. | Sept. 20, |
| Rapid | London | | Jamaica | by the | G. Cayman | June 21, |
| Rapid | Yarmouth | | crew saved | Samuel | off Spurn | Sept. 23, |
| Retrieve | | Scott | Shields | London | off Spurn | Aug. 19, cs |
| Samson | | | Neath | Exeter | C. Cornwall | June 1, cs |
| Sarah | 235 | Stewart | England | Quebec | Louisbrg Ch. | May 18, cs |
| Sea Nymph | St. John B. | | | abandoned | 45° N. 37' W. | Sept. 29, |
| Sirion | Yarmouth | | Nova Scotia | | 47° N. 46' W. | " 21, |
| Sisters | NBrunswick | | St. Johns | | 47° N. 46' W. | " 21, |
| Spring | S. Shields | | passed aban | oned in | 47° N. 34' W. | October 1, |
| Susan | 240 | | | | Algoa Bay | |
| T. H. Havoland | Glasgow | Davison | St Petersbrg | Glasgow | Stoneskar | Sept 21, |
| Theodore | Sunderland | Cole | Quebec | Quebec | 71° N-34° E. | " cs |
| Victoria | Belfast | | Belfast | | abandoned | " 22, |
| Wesley | Yarmouth | | foundered | off Land's | End | October 6, |
| Woodland Castle | 245 | | St. John | Dublin | abandoned | |
| W. Rathbous | Liverpool | Hoseason | Calcutta | London | At. Sea | May 8, cs |

186 .. Part of crew saved by the Secret.

195 .. Part of crew saved by the Eliza Ann.

167 .. Off the Leven Islands St. Lawrence.

222 .. The Resolution for Quebec lying by her, and boats alongside wrecking her—seen by the Sir Robert Pecl arrived at New York.

242 .. Abandoned on fire, crew saved by Sunbeam, Fowler, and landed in Shetland.

MAPS OF THE STARS.—The best maps of the stars that we have seen, and those, from their compact form, best adapted for use at sea, are published by Mr. Malby, entitled, "*A Celestial Globe Atlas*," and made up in a useful and compact form. They are most complete, also, as well as the most correct, Mr. Malby having prepared them for his large celestial globe from the *Astronomical Society's* catalogue.

LIGHTHOUSES—Sir.—I have in my possession a small work entitled "*The British Pharos*," published at Leith, 1831, and purporting to give a description of the lights on the coast of the British Isles. I have hitherto kept this up by inserting the alterations from time to time taken from your magazine, but my addenda have exceeded now the original.

Whether or not the stranding of the Great Britain is to be attributed to the imperfect publication of the lights, I cannot pretend to say—but I think the moment not unfit to call upon the Trinity Board or some government authority for an annual publication of a similar work, to be sold at a fixed price similar to the *Nautical Almanac*.

If you see the value of such a publication as strongly as myself, I trust you will support it with the power of your pen.

I remain, &c.,

JOHN BULL.

[A pamphlet, containing an account of all the lighthouses, has always been kept on sale for the Admiralty by Mr. Bate, 21, Poultry, and corrected with supplements up to the year of publication.—Ed.]

THE GREAT BRITAIN.—The tale of the unfortunate disaster which has happened to the Great Britain, has been so often told in the prints of the day, that we should be disposed to leave her name in the long list of wrecks in our present number without comment, but that some degree of blame was first attached in consequence of it to the Admiralty Charts. These aspersions have been zealously and very properly refuted by Mr. Bate, the agent for the sale of those charts. The Great Britain, it was said, ran on shore in Dundrum Bay, owing to the light on St. John's Point not being inserted in the chart by which she was navigated, which proved to be *not* an Admiralty Chart. But in our opinion this had nothing to do with it. The vessel's reckoning allowing some little westerly set for nearly a whole spring ebb, *will place her where she is*. But, had her commander, who had already run beyond a discretionary distance at eight in the evening, when he shaped his course for the North Channel, stopped the ship's way through the water, as soon as he doubted his eyes, and was at a loss to know what light it was that he was looking at on his larboard bow, had he stopped his vessel's way, we repeat, as a seaman would have done, and found out what light it really was, *feeling his way cautiously with his lead*, the Great Britain would not have been run headlong on to the strand where she now lies. The absence of a light from a chart, seen plainly and distinctly before a vessel would never occasion her loss, in the hands of a careful commander in moderate weather, when she is under the control of sail and rudder. But the Great Britain seems to have darted from her port, anxious to run her course, like a high-mettled racer, and from some yet unexplained reason, to have been allowed to rush headlong on her own destruction as if she were in the hands of some landsman who had heard of the sea, but knew nothing of the duties of a seaman.

21, Poultry, 26th October, 1846.

My dear Sir.—Though late, I trust that the importance of the subject and

its prospective benefit to the nautical public, will induce you to make room for the following :—

I have been watching and contradicting the calumnies published against our charts and all connected with them since this *Dundrum* business.

You well know the steps I took in 1830; the public should know them likewise in vindication of the Hydrographical Department as well as of its agent.

As I fancied that I had a very respectable boon to offer to the shipping interests, my first step was to wait personally on some of the principal ship-owners with a specimen, imagining that the authenticity, the superior execution, and the low prices* of the Admiralty Charts would induce these gentlemen to influence their commanders to adopt them—this attempt totally failed. My next application was to the Underwriters, but I here found myself on lower ground still. You, my dear sir, know that part of my engagement was to refrain from *publishing*, and even from *selling* any other charts without the approbation of your department. I therefore attempted to impose the same conditions on my agents, but found here adverse interests so predominant that I was sometimes compelled to forego the selling part of this condition, and have, in one instance, dispensed with the other. I have invariably allowed the full discount of the trade to the retailers, and have been liberal to a fault in extent of credit; but dissatisfied with my progress and with the usual modes of advertising, which were then much more expensive and less available than now, I listened to a proposal from the late Capt. David Thomson, of the merchant service, to publish in conjunction with himself, as a vehicle for the notice of the charts, an annual to be called "The Mariner and Merchants' Almanac"—this we were encouraged to compile and print, when our encouragement was unfortunately withdrawn.

Next to this you and I started "*The Nautical Magazine*"—you, my dear sir, best know with what success, as regards the Admiralty Charts.

Last of all I opened a *new* shop in the New Royal Exchange, at the foot of the staircase leading to Lloyd's, the *sole* object of which was, as you very well know, to bring these charts under the most especial notice, and where, in the most conspicuous manner I announced that I had placed them for inspection. This experiment has also failed, and however cheering the assurance that their rapid increase and general superiority, must eventually triumph, I am mortified to find that my own efforts have contributed so little hitherto, and earnestly entreat you and your readers' valuable suggestions regarding future proceedings on my part, towards the efficient circulation and sale of the Admiralty Charts; likewise your and their opinions of the reasons of so many failures.

In your next I hope that you will allow me space for further detail of my proceedings and impediments, if it appear desirable.—I remain, &c.,

To the Editor N.M.

R. B. BATE.

* Generally one-third or one-fourth of those of *other* authorities.

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

RETIRED CAPTAIN—T. EYTE.

COMMANDERS—W. Robson, W. Cra-
croft.

RETIRED COMMANDERS—H. L. Grove,
from list 1830 to that of 1816.

LIEUTENANTS—D. Herbert, G. Lloyd,
W. G. Douglas, T. D. A. Fortescue, F.
W. Gough.

APPOINTMENTS.

CAPTAIN—H. W. Giffard, (1841) to
Princlope—E. G. Fanshawe (1845) to
study at the Royal Naval College—S.
Lushington (1839) to *Vengeance*—H. S.
Colrington, C.B., (1836) to *Thetis*—G.
G. Loch (1841) to *Alarm*—A. Milne to
St. Vincent—T. V. Alison to command
Eurydice—E. P. Halsted (1842) to study
at the steam factory at Woolwich.

COMMANDERS—E. W. Gilbert (1822) to *Andromeda*—T. Greene (1823) to *Madagascar*—R. Tyron (1841) to *Mutine*—A. P. Ryder (1846) to *Tartarus*.

LIEUTENANTS—C. B. Stockdale (1812) and T. Tribe (1815) to *Ocean*—R. W. Suckling (1838) and J. Dayman (1843) to *Rattlesnake*—H. S. Hawker (1838) to *Grappler*—I. Strover (1812) to be agent for Mails—W. Still (1815) to be agent for *Mariner*, transport—C. J. Walton (1840) to *Hibernia*—W. J. Lake (1840) to study at the Naval College—J. A. Hodgskin (1844) to *Sidon*—V. O. Inglefield (1846) to *Comus*—R. W. Clark (1844) to *Avenger*—J. H. Furneaux (1845) to *Excellent*—F. Marryatt (1845) to *Sphinx*—R. Tucker (1815) to *Poictiers*—E. Hill to *Rapid*—W. F. G. Ford to *Nimrod*—C. G. Fegan (1845) to *Racer*—T. James to *Express*—F. W. Gough to *Cleopatra*—E. Turnour (1842) to *Porcupine*—J. M. R. Ince (1841) to *Rattlesnake*—C. G. Crawley (1838) to *Gladiator*—J. M. Boyd (1841), W. Horton (1842), H. St. J. Mildmay (1844), and E. B. Rice to *Thetis*—T. H. Molyneux (1846) to *Spartan*

MASTERS—T. Johnson to command *Andromache*—P. Wellington to command *Belvidere*—J. Thomas to command *Eolus*—W. T. Mainprize to *Thetis*—R. Thompson to *Andromeda*—G. Wilson to *Blazer*—R. W. Roberts to *Dasher*—J. Brown to *Rattlesnake*.

MATES—C. O. B. Hall to *Devastation*—F. L. Cotton to *Mutine*.

SECOND-MASTERS—H. T. Ellis to *Meditina*—E. Maunder to *Blazer*—H. Cunningham to *Gladiator*—H. Inskip to *Rattlesnake*—F. C. Macdonald to *Merlin*—J. S. Bensted to *Devastation*—G. Giles to *Grappler*—W. Betts to *Mutine*—G. G. Foote to *Ardent*.

MASTERS-ASSISTANTS—E. P. Cox and T. C. Jones to *Eolus*—W. P. Pickthorne and C. F. Pucket to *Belvidere*—R. Read to *Seaflower*—H. V. Beaton to *Poictiers*—E. Williams, H. Thomsett, and R. Drew to *Sidon*—G. W. Grant to *Peterel*—G. Burtchall to *Imvum*—W. C. Buck to *Caledonia*—E. Brooks, W. H. Bree, and H. W. Bennett to *Rattlesnake*—C. G. Johnston to *Blazer*—P. Moss to *Tartarus*—G. Acheson to *Victory*.

MIDSHIPMEN—W. Hewett, H. Earle, and T. C. Smith to *Rattlesnake*—H. Rogers and D. Slaughter to *Mutine*—E. Elliot to *Recruit*—C. Forbes to *Canopus*—W. Douglas to *William and Mary*—D. Slaughter to *Queen*.

NAVAL CADETS—C. Heath, A. Anderson, and W. H. Howell to *Rattlesnake*—G. Borlase and N. Morphy to *Hibernia*—H. P. Versturne to *Mutine*—C. E. Burlton to *Trafalgar*—John Campbell to *Sidon*—Hon. Standish O'Grady, G. Hughes, R. Morris, J. Rorie, —Robertson, to *Vindictive*—H. Hodgson, F. P. Matthew, W. D. D. Selby, E. J. Pollard, B. A. Tozer, F. Fletcher, to *Vernon*—J. G. S. Clarke, J. H. Thomas M-Rowlandson, to *President*—J. M'Donnell to *Raleigh*—C. W. Wilkinson to *Dido*—V. Lushington to *Eurydice*.

SURGEONS—J. Thomson to *Rattlesnake*—E. Groves to *Mutine*—R. Wylie to superintend *Arabian* convict ship—S. Donelly to *Thetis*.

ASSISTANT-SURGEONS—T. H. Huxley to *Rattlesnake*—G. Pizey to *Express*—J. Davidson to *Seaflower*—A. Armstrong to *Grappler*—J. Phillip to *Junco*.

NAVAL INSTRUCTOR—T. Sullivan to *Sidon*.

CHAPLAIN.—Rev. P. Somerville to *Endymion*.

PURSERS and PAYMASTERS.—J. C. Little and F. Brady to *Rattlesnake*—F. W. Cole to *Mutine*—J. R. Bluet and D. F. Clow to *Actæon*—F. Lucas to *Kingfisher*—J. Wilson to *Favourite*.

CLERKS.—J. C. Messum, A. Bennett, to *Rattlesnake*—G. Reilly and R. Roberts to *Grappler*—C. Nettleton and E. L. W. Browne to *Caledonia*—V. G. Nagle to *Mutine*—J. Thompson to *Atloch*—W. B. Gordon to *Shearwater*—W. Weller to *Avenger*—H. Hawley and C. W. Griffiths to *Eolus*—W. H. Bateman to *Belvidera*—E. L. W. Browne and N. G. Simmonds to *Andromeda*—J. Jones to *Torch*—C. A. Jenkins to *Andromache*.

COAST GUARD.

Appointments—Lieut. J. H. Downes to Alnmouth Station—Commanders—J. R. Ward, R.N., to be an Inspecting Commander, to Clifden District, W. H. Kennedy, R.N., to be an Inspecting Commander, to Wexford District, E. W. Pilkington, R.N., to be an Inspecting Commander, to Kinsale District, Lieutenant J. Jeayes, R.N., to Mansand, Lieut. Bainbridge to Saltburn, Lieut. A. Webb, R.N., to be in command of Hill Station.

Removals—Com. Helpman to Lyme. Lieuts. Irwin to Malahide, Clifford to Waterford—Sterne to Dingle.

Com. Jerningham reappointed.

Capt. Lushington and the officers of the *Retribution* have had their commissions and warrants issued appointing them from the *Retribution* to the *Vengeance*, 84. They are, Lieuts. H. A. Storey, J. G. Bickford, C. Hawkey, Hon. J. R. M. Byng, and P. W. Darrell; Master, R. Salmond; Surgeon, B. Verling; Paymaster and Purser, J. S. Mountsteven; Naval Instructor, T. C. E. Warcup, B. A.; Assistant-Surgeon, Dr. Wallace; Second Master, F. T. Jameson; Midshipmen, J. A. Dewdney, George Todd, and J. H. Wemyss; Clerks, Edwin Death and John Donald; Master-assistant, Henry S. Ley; Naval Cadets, R. A. Parr, J. R. Bowling Spencer, P. Brett, George E. Murray.

The Chaplain of the *Retribution*, the Rev. Wm. S. Miller, has been appointed to *Queen*; and the Chaplain of *Queen*, the Rev. Geo. Cooper, has been appointed to *Vengeance*.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

Sept. 24th; at Siena, the lady of Capt. Sir Baldwin Wake Walker, K.C.B., H.M.S. *Constance*, of a son.

Sept. 24, at Warwick, the wife of Capt. Watson, C.B., commanding *Brilliant*, of a son.

Marriages.

Sept. 26, at St. Mark's, Jersey, James Wilcox, Esq., Lieut. R.N., to Amelia Jane Elizabeth Anover, eldest daughter of John Page Bailey, Esq., of Durnford-at-Stonehouse, and Hankhow-house, Yorkshire.

At Camberwell Church, the 14th ult., by the Rev. C. Crofts, Mr. John Scott, of Park-road, Peckham, to Mary, second daughter of James Scott, Esq., M.D. late of the Royal Naval Hospital at Haslar.

Oct. 13, at St. Mary's Church, Bryanstone square, Capt. Sir George Back, R.N., to Theodosia Elizabeth, relict of

the late A. Hammond, Esq., of Saville Row.

At Carisbrooke Church, Isle of Wight, on Tuesday last, W. Way Buckell, Esq., to Jane, daughter of Capt. Tucker, R.N., both of Newport.

Deaths.

At Spittal, near Berwick-on-Tweed, Oct. 15th, Rear Admiral W. Browne.

Sept. 24, at Peckham, Com. J. A. Gardner, (1832), aged 76.

Sept. 17, at Plymouth, Devon, aged 71, Com. Thomas Cull, (1844), of the retired list of (1830), a Lieut. of 1808.

On the 12th instant, at Clifton, Eliza, the beloved wife of Captain Wm. Wyllly Chambers, *Albion*, and only child of John Webb Hodgetts, Esq., of Hayley, Worcestershire.

Oct. 10, in his 54th year, Com. Charles English, R.N., of 15, Park Road, Regent's Park, and the Vomero, Torquay, Devon.

Oct. 20, at Dover, Kitty, the youngest daughter of Capt. Boxer, R.N.

QUARTERLY NAVAL OBITUARY.—The following officers' deaths have been officially reported since June 20, 1846:—Flag Officers—Rear Admirals—Hon. W. Le Poer Trench, and C. Mangin (1841). Captains—T. R. Toker (1813), E. Denman (1825). Retired Captains—J. Thicknesse (1840), C. Tyler (1844). Commanders—J. Gallo-way (1806), J. Dalgleish (1813), H. Maingay (1821), R. J. W. Dunlop (1842). Retired Commanders—E. Harley (1837), J. Skinner (1838), J. Manton (1839) J. Healy (1839), G. Wood (1842). Lieutenants—J. Luckraft (1802), T. Pearce (1807), J. Selbie (1815), J. Cooke (1824), D. Rymer (1825), W. P. Greene (1826), J. W. C. Nash (1826), J. F. Carroll (1837), J. Lowry (1837), H. J. Robins (1840), W. Reffell (1846). Masters—F. Whitney (1798), W. Moore (1804), J. Jenkins (1810), P. Miller (1811). Second Masters—H. Pennington, O. A. Winstanley, H. B. Smith. Paymasters and Pursers—T. A. Wallis (1803), R. C. Sconce (1807), I. Holmes (1835), E. Ward (1839). Clerk—G. E. Ricketts. Medical Officers—Deputy Inspector of Hospitals—J. Domville (1840). Surgeons—C. Evans, M.D. (1807), J. Hatley (1810), A. Yeoman, M.D. (1839), R. R. B. Hopley (1841), Sir T. Grey, Kt., M.D. (1794), W. Henderson (a) (1797), A. L. Jack (1799), W. Claperton (1808), W. Davis (1808), T. Davies (1809), J. Macbeath (1814), J. B. Hatton (1832). Assistant Surgeons—G. Zimmerman (1807), A. Lillie (1839), J. S. Born (1841), G. R. Anderson (act.) (1845). Royal Marines—First Lieutenants—G. Clark (1805), G. W. R. Yule (1837). Second Lieutenants—T. W. Hearne (1781), D. O'Connell (1831).

THE NEEDLES PASSAGE.—A discovery of a channel through the Needles Passage, having deeper water in it than hitherto known, has been recently made by Commander Sheringham in the course of his valuable surveys in H.M.S. *Dasher*. It is sufficient for our largest sized men-of-war, and will enable them to make use of that hitherto forbidden passage. We shall take an early opportunity of giving Capt. Sheringham's description of it.

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, 1846.

| Month Day | Week Day | Barometer | | Fahrenheit Thermometer | | | | Wind. | | | | Weather. | |
|-----------|----------|-------------------------|--------|------------------------|-------|-----|-----|----------|------|-----------|------|-------------|----------|
| | | In Inches and Decimals. | | In the Shade. | | | | Quarter. | | Strength. | | A.M. | P.M. |
| | | 9 A.M. | 3 P.M. | 9A | 3P.M. | Min | Max | A.M. | P.M. | A.M. | P.M. | | |
| 21 | M. | 29.62 | 29.66 | 60 | 64 | 52 | 66 | E | E | 4 | 5 | qo | qo |
| 22 | Tu. | 29.70 | 29.70 | 62 | 66 | 55 | 67 | E | E | 3 | 3 | bc | bc |
| 23 | W. | 29.52 | 29.46 | 59 | 67 | 57 | 68 | SW | SW | 5 | 3 | qbcp 1)(2 | bc |
| 24 | Th. | 29.48 | 29.86 | 58 | 62 | 54 | 64 | W | W | 3 | 4 | ber (1) | bc |
| 25 | F. | 29.80 | 29.82 | 57 | 63 | 52 | 64 | W | W | 4 | 4 | bc | bc |
| 26 | S. | 29.82 | 29.76 | 59 | 63 | 53 | 65 | S | S | 4 | 4 | op 2) | bcp 3) |
| 27 | Su. | 29.80 | 29.82 | 57 | 64 | 54 | 65 | SW | SW | 3 | 4 | bc | bcr 4) |
| 28 | M. | 29.61 | 29.55 | 54 | 58 | 50 | 60 | S | S | 1 | 1 | or 1) 2) | bc |
| 29 | Tu. | 29.48 | 29.44 | 52 | 56 | 44 | 58 | SW | SW | 3 | 3 | bc | bc |
| 30 | W. | 29.66 | 29.75 | 48 | 55 | 42 | 56 | SW | SW | 1 | 1 | bcr | bcr |
| 1 | Th | 29.98 | 29.98 | 48 | 62 | 43 | 63 | SW | SW | 1 | 1 | bc | bc |
| 2 | F. | 29.87 | 29.77 | 59 | 62 | 53 | 63 | S | S | 2 | 3 | o | or 3) |
| 3 | S. | 29.71 | 29.77 | 56 | 60 | 55 | 61 | NW | NW | 3 | 3 | bcrn (1) | bcrn |
| 4 | Su. | 29.76 | 22.69 | 56 | 62 | 41 | 63 | S | S | 4 | 2 | bc | bcrn |
| 5 | M. | 29.48 | 29.44 | 57 | 62 | 53 | 63 | SE | S | 4 | 6 | bcp 1) | qbc 4) |
| 6 | Th. | 29.48 | 29.50 | 59 | 55 | 54 | 60 | SW | W | 6 | 4 | qor (1) (1) | or 3) |
| 7 | W. | 29.50 | 29.46 | 57 | 59 | 52 | 60 | SW | SW | 5 | 6 | qbc (2) | qbcp (4) |
| 8 | Th. | 29.52 | 29.58 | 55 | 57 | 50 | 60 | SW | SW | 6 | 6 | qbc | qbcp (3) |
| 9 | F. | 29.70 | 29.60 | 55 | 58 | 46 | 59 | SW | SW | 6 | 8 | qor 1) | qor (4) |
| 10 | S. | 29.53 | 29.65 | 58 | 61 | 55 | 62 | SW | SW | 7 | 6 | qbc | qbc |
| 11 | Su. | 29.80 | 29.70 | 58 | 60 | 56 | 62 | SW | SW | 2 | 3 | o | or 3 4 |
| 12 | M. | 29.47 | 29.53 | 52 | 54 | 46 | 56 | SW | NW | 1 | 3 | bc | odr 4 |
| 13 | Tu. | 29.85 | 29.87 | 48 | 62 | 46 | 53 | N | N | 9 | 6 | bc | o |
| 14 | W. | 29.45 | 29.12 | 47 | 52 | 39 | 53 | S | S | 6 | 4 | qor (1) | bc |
| 15 | Th. | 28.87 | 29.01 | 50 | 52 | 47 | 58 | S | SW | 2 | 1 | or 1) | or 3 4 |
| 16 | F. | 29.21 | 29.26 | 51 | 57 | 46 | 58 | S | SE | 1 | 1 | bcp (1) | bc |
| 17 | S. | 29.30 | 29.52 | 53 | 57 | 47 | 58 | SE | SW | 4 | 2 | bcp 1) | bc |
| 18 | Su. | 29.52 | 29.56 | 51 | 51 | 47 | 52 | N | SW | 1 | 3 | or 1) | or 3 |
| 19 | M. | 29.80 | 29.76 | 50 | 58 | 66 | 59 | S | S | 2 | 3 | bc | bcp 4 |
| 20 | Tu. | 29.62 | 29.62 | 49 | 55 | 47 | 56 | SW | SW | 1 | 2 | o | bc |

September 1846.—Mean height of the Barometer 29.92 = Inches; Mean temperature = 60.8 degrees; depth of rain fallen = .1.92 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have no room for Captain HARVEY's communication, and the subject is one which we have so fully dealt with, that we have no inclination to repeat it in the form in which he has sent it.

A pressure of important matter has compelled us to reserve the notices of several New Works, and among them the early parts of the "*Physical Atlas*," of the learned Professor H. Berghaus of Berlin. We shall, however, take an early opportunity of redeeming ourselves in the performance of this part of our duty.

Hunt, Printer, 3, New Church Street, Edgware Road.

THE
NAUTICAL MAGAZINE

AND

Naval Chronicle.

DECEMBER, 1846.

REMARKS ON THE NORTH-EAST MONSOON IN THE CHINA SEA.
By Capt. G. R. Mundy, R.N., H.M.S. Iris.

FROM the entrance of the Canton river to the Chusan Islands, the N.E. monsoon usually blows from the beginning of October to the end of April.

It sets in strongest in the months of November, December, and January, its medium force being a double reefed topsail breeze for a frigate when close hauled; but frequently owing to the heavy sea running, a press of sail cannot be carried, and it is therefore necessary at all times to keep as close in shore as possible, where, owing to the conformation of the land, the rapidity of the tide, and other local circumstances, smoother water will always be found.

During the period of this monsoon you are liable to severe gales for two or three consecutive days. When these occur, it is supposed that a typhoon is blowing not far distant, and when the gale breaks, the wind usually becomes light and to the southward of east for a few days. It will again freshen up for a week or ten days together to a steady breeze, for treble reefed topsails and reefed courses, with a high, short, cross sea, particularly at the entrance of the Formosa Channel.

In October, November, and December, the atmosphere is moderately clear, rain and thick weather seldom lasting without a break for twenty-four hours. In January, February, and March, hazy weather with thick mist is not unfrequent. In April the monsoon begins to slacken, light southerly winds for a day or two occasionally blow, and foggy dirty weather, with returning heavy squalls and rain from N.E., will again set in and continue till the middle of May.

These remarks only apply to that part of the China seas to the northward of the Canton river.

Vessels bound from Hong-kong to the northward during the months

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4 L

of the N.E. monsoon, should, if possible, get out by the Lymoon Channel, and beat clear round the Nine-Pin Rock, standing afterwards well up to the entrance of Mirs Bay, and then close along shore in the smooth water formed by Single Island and the small group to the northward. The flood tide here sets at the rate of $1\frac{1}{2}$ and 2 knots to the N.E. at the springs. The wind will be usually found at E.N.E. or dead along shore, drawing round to the northward, as the land trends more northerly, and steadying at N.N.E., when you are round the Lamock reefs.

Having weathered Single Island and Acoongchow, a remarkable peaked rock, stand well into Haarlem Bay, keeping close round Mendoza Island, but do not approach Pauk Pyah or White Rock within three miles of its southern side; as a dangerous rock, which only breaks at low water, and in a heavy swell, is to be avoided.

The same regulation, as to keeping as near the shore as possible, applies to the whole range of coast to the Cape of Good Hope. Directly a vessel loses the land and gets well into the offing, she loses the benefit of the tides and meets a constant south-westerly current.

If the weather is unsettled or the night dark, I recommend anchoring under any of the prominent points of land, in preference to making a long board to seaward. In Ty-sami inlet, Hie-che-chin Bay, and under Cup-che-san, the anchorage is good from 8 to 10 fathoms.

Off Breakers Point, there are rocks above water and shoals two miles round it, and, during the night, or in thick weather, the shore should not be neared.

When a vessel has made the Cape of Good Hope, it is usual to stretch away to the S.E. (if bound outside of Formosa), or before reaching that remarkable promontory, should the wind hang to the north-eastward. However, at any season of the year, no difficulty will be found in making the passage to the eastward of Formosa, as a strong northerly current sets along that side of the island, frequently at the rate of $2\frac{1}{2}$ and 3 knots; but there are no harbours, and only very deep soundings within half a mile of the coast, but, having plenty of sea-room, it is all plain sailing.

The difficulty rests in beating up the Formosa Channel from the Lamock reefs to the White Dogs, where the southerly current appears to be constant as to direction, and usually running from $1\frac{1}{2}$ to 3 knots in mid-channel according to the force of the monsoon. It is, therefore, necessary to make short tacks along the eastern range of the Lamocks, and then work as near the shore as convenient from Tokako Point by Pagoda Island and Tungshang harbour, which is the finest harbour on this part of the coast.

The shore here is bold and may be approached without fear, and the small group of islands to the north-eastward of Rees Pass, give smooth water which must be taken advantage of. If off these islands at night, I recommend anchoring under their lee instead of standing out into the channel. The tides at this spot are strong and their direction not yet clearly ascertained, so that, during dark nights, great care must be taken when once you have got to the *northward* of them, not to stand in towards Hoo-tow-shan Bay, several vessels having been wrecked on the

rocks and shoals at its entrance. This may be considered the only hazardous portion of the line.

Two detached rocks, called the Brothers, are good marks, being about two miles apart, and no hidden dangers, the reef on the N.W. part of the largest being visible and of little extent.

As you work along shore towards Red Bay, many isolated rocks will be observed, but no hidden dangers have as yet been discovered, excepting a reef three-quarters of a mile off shore, and three miles to the southward of the anchorage. Red Bay is formed by a long and red sandy point stretching to the N.E., and off its extreme point is a reef of black rocks always above water, and forming a breakwater under which ships may anchor, bringing the outer ridge to bear east three-quarters of a mile from them in about 7 fathoms. From Red Bay you see Chapel Island in clear weather, and you may work up on either side of it during the day, paying attention to Capt. Collinson's directions for avoiding Merope Bank.

Having weathered Chapel Island, you will observe the islands at the entrance of Amoy harbour. If thick weather, and blowing strong from the northward, get the northern shore on board, and anchor in 7 to 10 fathoms, at any distance when the water becomes smooth. It will always be found sufficiently so to bring to when the wind is to the northward of N.E. There is an island rather smaller than Chapel Island called Lamtia, and so much like it in shape, as to make it difficult to know one from the other, when standing in from the Channel in foggy weather. Lamtia has a flatter summit. Chapel Island has a hole through it, which is visible on a W.N.W. bearing, and it has also the remains of two turrets on the top half the length of the island apart.

In standing towards the six islands at the entrance of Amoy Bay, the Chaw-chat rock is the only danger—it is always above water and steep to. The tides at springs run about 4 knots directly in and out of the harbour. In the offing the flood sets to the N.E. following the line of coast.

Any frigate may safely enter Amoy harbour with a leading wind by the marks given, and may work round the western side of Kolung-soo to an excellent berth in 9 fathoms, mud, and good holding ground, between Sanpan rock and Kew-sung-sew. Rise and fall 19 feet at springs. This is the best anchorage for any class of ship.

On leaving Amoy to work through the Formosa Channel, you will continue the plan of keeping as close to the shore as possible with safety, standing into Lee-low Bay, by Dodds Island, into Howee-tow Bay, and at night anchoring if the state of the tide requires it.

Chimmo and Chinchew pagodas are both visible at long distances, and are good marks for ascertaining position. From the latter, past the Tsong-boo promontory, you will have a decreasing swell, and from this extreme you may venture further into the channel till you make Ockseu Islands, three barren rocks or nearly so. The eastern island is long and low, and has a large fishing village on it. Unless very close in no shelter is to be had under the lee of these islands.

Having rounded Ockseu, which may be done on either side, you must

beat close up to the Lamyets, off which islands, in every month of this monsoon, I have found fresh gales and squally weather, with the water highly phosphorescent, and so strong is the current even at the distance of ten miles from the land, that it became absolutely necessary, in order to gain northing, to work to windward in short tacks directly for the Three Chimney Islands, taking care not to approach the Reef Islands and the Cap or Double Island too closely, but going inside of Turn About Island. It is four miles from Haetan Island, a good mark, as it stands isolated in the offing.

To the N.W. of Three Chimney Island there are several patches of rugged rocks above water, and as there seemed to be broken water near them, I tacked off three miles distant. To "turn this corner," is, perhaps, the most difficult part of the whole beat through the Formosa Channel; and should the monsoon be at its medium force only, unless you anchor under the lee of one of the islands with the lee tide running, or keep close in with the land, you will be driven back again to the southward of Ockseu.

The swell seems to rush in at this particular point as into a funnel, and the sea is so short and perpendicular, as to render the loss of spars certain should any vessel attempt to carry a press of sail against it; and this character of sea I have found to extend across the Formosa Channel, and even to the southward of the Pescadores.

Having weathered the Three Chimneys, the next islands to make for are the White Dogs. There is good anchorage off the western extreme of the inner White Dog under a reef of rocks, bringing them to bear north, and when three-quarters of a mile distant the passage between the islands will be shut in, and the southern point of the eastern Dog will bear S.E.b.S.

You may beat up on either side of the White Dogs according to the weather, and when off the high rock called the "Sea Dog," you can stand towards the "outer reef" by the marks given, and, making short tacks for Matsoo-shan, you will have smooth water till you pass Chang-che-sang. The southern part of this island forms a bay in which there is excellent anchorage in 7 to 10 fathoms, Eastern Bluff Head E.b.S. $\frac{1}{2}$ S. a mile and a half off shore. A vessel wishing to communicate with Foo-chow-foo, should anchor here as she is well to windward of the "outer reef" or mark for the river Min, and having despatched the boat, she should shift her berth to the White Dogs, where the boat should rejoin her. In blowing weather do not attempt to cross the bar until the flood has made, as the breakers sometimes extend for half a mile in width right across, and are dangerous even to small steamers.

If the weather is moderate, after passing Chang-che-shan, there will be no sea, and having passed the Triad rocks, you should work up between Larne Island, Alligator Island, and Tung-yung, keeping a good look-out for Larne Rock which is always visible. There is anchorage from 30 to 18 fathoms amongst these islands—tide running 3 knots at springs, about $1\frac{1}{2}$ at other times. The ebb commences running to the westward, then gradually draws round to the S.W. and south. Towards morning the wind veers generally more northerly.

I rode out a fresh gale under Tung-yung from N.E. so late as mid May. Best anchorage with the following bearings, west bluff N.b.W., rocks off south end of island S.E. $\frac{1}{2}$ S. one mile and a half off shore. Between these points of land round by north you have shelter. There is a large fishing village here and a very fine class of boats. Tung-yung is the largest and the most eastern island of this part of the Archipelago, and yet it was not even marked in any of the Old Charts.

The Pih-seang-ahan Islands are the next to make for, and from thence up to the Quesans you should keep the different groups as seen in the sketches in sight; but do not pass to the westward of any of them till you reach the Hishans. Between these and the main you may safely work up, either by day or night, but having reached Patahay-cock, the southern island of the Quesans, (which on a northerly bearing makes like an inverted cleat,) it is not advisable to go inside except by day as there are dangers in that channel, and shoal water off the main land to the northward of Cape Montagu.

Between this cape and Patahay-cock is a dangerous "half tide rock" called by that name—keep to the eastward of it, working from thence between the Pylades rock (not visible,) and Bear Island. The Whelps will then be seen appearing long and low. Then the Corkers, which are a cluster of remarkable rocks, give them a berth and pass on either side on starboard tack. If working up to the eastward of the Quesans you will pass near the Mouse, a plain rock visible six miles. Tides run N.W., and S.E., up to Tree-a-top island. Good anchorage all over this ground from 8 to 4 fathoms.

These directions have been principally drawn out from my own observations in working up during the monsoon months; but I have also been assisted by information which from time to time I have received from the Masters of the Clippers, whose opinions I consider valuable from their long experience. On this point all agree;—That no vessel can make a good passage through the Formosa Channel unless she keeps the Chinese coast close on board.

G. R. M.

EXTRACTS FROM THE REMARKS OF H.M.S. NORTH STAR.

Capt. Sir E. Home, Bart.,—Woosung.

THE *North Star* remained at her station off Woosung, from the 24th June until the 14th of October following, keeping the blockade of that river, during which time the winds were, for part of June, and all July, as follows:—

From June 24th to the 4th of July, from S., S.E., N.E., E.N.E., E.S.E.; from the 4th to the 12th, from S., S.W., W., S.E., W.S.W., N.E., S.E., and E.; from the 13th to the 25th, from S.E., E.S.E., S.S.E., and S., varying regularly, for many days, from S.E. in the forenoon, and S.S.E., or E.S.E., in the afternoon and evening; from the 26th to 31st, from N., N.N.W., and N.b.W. The weather, during the above period, to the 6th of July was constantly wet, raining every day; frequently blowing strong, at

other times moderate; from that day to the end of the month, the breezes were of moderate strength, and the weather fine, but frequently overcast and cloudy. In the month of August, the wind, for the first few days, was from the N., N.N.E., and N.N.W., after which it continued to vary from the S.S.E., S.E., E.S.E., S.W., S.S.W., S.S.E., and S.E.; the weather variable, the breezes of moderate strength throughout the month, there being calms upon three days only. It sometimes blew strong, with clouds and thunder storms; between the 14th and 27th, there was rain, sometimes for two or three days together.

In the month of September, the winds blew (from the 1st to the 11th,) from the S.E. and S., after which they blew from N. and N.E., sometimes varying to the E. and W., W.S.W., and N.W. Calms were more frequent than in the last month; the weather was generally very fine, with occasional squalls and rain.

During that part of October (until the 19th,) that the *North Star* remained at Woosung, the prevailing wind was N. and N.N.E., and sometimes N.N.W., with calms occasionally; the weather very fine for the greater part.

The rivers have been surveyed by proper officers. Woosung is a poor village, principally inhabited by fishermen, who were incessant in labours, which they commenced as soon as they learnt they could do so without molestation. Their nets, spread across the river, are most ingeniously contrived, the meshes are very small, so that hardly a shrimp can escape; larger fish, consequently, are to be got from the sea only.

From the village of Woosung an embankment is carried on to the angle formed by the junction of the Woosung river with the Yang-tze-keang, and there is continued to a considerable distance up the right bank of that river. It prevents the overflowing of that river upon the flat country within it, which is principally cultivated with rice, and which, at the time of our arrival, was in progress of transplanting.

The rampart or embankment is fortified from Woosung to the turn of the angle, at which place it was strengthened by a castle or tower, the foundation of which is ancient; the length of the rampart from Woosung to the tower, I found to be 45 chains 10 yards.

The guns upon the rampart were of various ages, some quite new, and one, by the inscription upon it, was founded prior to the date of the arrival of the first of the Jesuits in China. It was iron; these guns were not bored out, but the metal had been run upon an iron tube about half an inch thick, which answered the same purpose. When first taken, pieces of bamboo the length of the gun, cleared out at the joints, were secured along the chases of the guns to look through as sights.

Near the junction of these rivers, and at a distance of about two miles from Woosung, is the city of Poushan. It is large, and in a very dilapidated condition. It was deserted, and appeared to be long in that state. It is a city of the same rank as Shang-hai.

The vessels detained were those conveying provisions principally, and all which had not passes from the ships below. Eighty-three large junks arrived, besides many smaller loaded with peas, and large flat circular cakes, as large as a single Gloucester cheese. They were the

colour of straw, or dried peas. They were at first believed to be a preparation of food, and, in one instance, it was said that the experiment was tried on board one of the ships, by boiling one or two in the coppers. The experiment failed. They turned out to be the husks of peas from which oil is extracted, and the husks being mixed with various ingredients, used by the Chinese for manure, is formed into cakes pressed and dried, and is then used to manure the ground. Finding this to be the case, I allowed all vessels having them for cargo to pass on, as well as others in ballast and those with passes. Some of those vessels were very large and deeply laden. Their cargoes were various, consisting principally of flour, flint-stones, sugar-candy, and brown sugar, white pepper, sandal-wood, Japan wood, rattan, Mangrove bark, cloves, peacocks' feathers, ebony, redwood, long cloth, English chintz, swallows'-nests, parrots, and parroquets, timber, camlets, and ivory; the above was the cargo of one junk. Others contained, besides the above, beetle-nut, with leaves sold with it, with which it is chewed, packed in baskets through which the air passes and keeps them fresh; these leaves are sold for half a dollar each. Sea-weed, birds'-nests, black and white horns of buffaloes and stags, hides, opium, sweatmeats, tobacco, mats, orange and lemon peel dried, trepang, tortoise-shell, fir-wood, Bombay cotton, sinews of the legs of deer in dry bundles used for soup. Of these the pea-cake, peas, and oil was the most common, and came in smaller vessels from *Quan-tou*. The tobacco and sugar, which was extremely coarse and black, came from Amoy. Other sugar, rattans, hides, and horns, sea-weed, cotton, and rice, from Hanau. The more valuable cargoes all came from Singapore and Siam.

The usual number of men on board each junk was 18 and 20; the large ones had sometimes 50, 70, 90, and one 110, but they were principally passengers.

One large junk, apparently new, took the ground, and swinging across the tide, fell over and filled; and it was remarkable how soon she went to pieces, but still more so to see the celerity with which the cargo, which consisted principally of heavy wood, was saved, the people walking upon stilts in the water, and feeling with sticks from boats, very little remained. As soon as it was known at the city that the vessel was wrecked, crowds of men and boats came down the river in the greatest numbers; they were not molested in any way.

The masters of these junks believed that the usual argument would prevail with us as with others in their country, and considerable bribes were frequently offered to allow the vessels to proceed. The Chinese interpreter, who was left on board to communicate with the natives, was not so scrupulous as to refuse, but giving out that it was by his influence that those vessels were allowed to pass which had passports, he accumulated a vast sum in ingots and rings* of fine gold, and dollars. His box, daily growing heavier and heavier, at last burst open when removed to clean the decks. It was thus found out, and, through the medium of

* These were not finger rings, but large enough to be worn round the wrist with two turns. The gold was fine and very soft, so that it was bent round or opened out. The thickness about three-fourths of an inch in diameter.

Mr. Morrison, the circumstance was explained, and the money restored to the persons whom he had duped.

The water which was used on board was pumped into the tanks once a week. It was not used until it had been three weeks on board, and was purified with alum, as is the practice throughout China. The proportion used was half an ounce to a ton of water, than which nothing could be finer; yet upon the 5th of August the cholera appeared on board, and between that day and the 2nd of September took off eight persons; three of whom died on the 21st, and three afterwards.

Fresh beef, with pigs, poultry, and eggs (particularly those of ducks,) were to be had; but not regularly. The Chinese who use oxen only for tilling the ground, knew not what we could want with them, and it was believed that the Mandarins at Shang-hai had given orders which prevented our being supplied. It was therefore necessary to forage, and the mode adopted was to go in a boat up the river, and where some persons were collected together at a village, to select the best dressed, or principal person amongst them, and to take him on board the ship, giving those who were left to understand that he would be taken care of until ransomed by a certain number of bullocks, goats, fowls, ducks, and eggs, which would be paid for. This method was not required to be repeated more than twice.

The birds here are remarkably tame, allowing one to go close to them without showing any symptoms of fear. Pheasants are numerous and equally tame. Both the birds and plants seem to resemble those found in Europe. Of wild plants it is difficult to find any, the earth being so entirely under cultivation. Those which in England decorate the gardens and greenhouses are in China to be found principally about the tombs and graves, or rather coffins of the dead.

I believe that I did not see six plants cultivated in China, in the gardens or round the tombs that I had not been acquainted with in England, but I have seen many in England which I did not see in China.

The women here are all allowed to have their feet of the natural form and size. The dress of the men and women are nearly alike—a pair of loose trousers and a jacket of blue cotton dungaree, bare legs, a pair of grass shoes, a high conical formed hat of straw, or a satin skull cap, a pouch of tobacco, long pipe, and paper folding fan, form the costume.

The lever appeared to be their principal mechanical power. I have seen a Chinese blacksmith and carpenter show surprise at the action of the screw, a power which I never saw applied in China except to fasten the button on to the crown of the cap of a mandarin.

In looking over this level country the most remarkable objects that attract the notice are, the small clumps of trees and mounds of earth. Where the view is not obstructed by the enclosures round the different habitations, the country is studded with these mounds. Upon the top or in the centre is the coffin, sometimes protected from the weather by a mat. Many are empty, ornamental shrubs and trees are planted round them, the latter as they grow up form ornamental clumps, and the field cultivation is carried on close up to the verge of the mound of earth which is about 18 feet round, so that the dead encumber the ground to the serious incon-

venience of the living, and their graves are the only waste ground I saw there; the soil is a very stiff loam and clay.

When the alarm was over the people returned to their houses, which were scattered in great numbers over the country. The schools were opened for their children, and the cultivation of the land was carried on with the greatest activity; they were remarkably civil at all times, and when the marines landed to exercise in a large meadow, which they did once a week, the people always came out with water for the men to drink, and fire for their pipes, supposing that they would of course smoke, and a stool for the officer to sit upon.

On the 8th of July the eclipse of the sun was observed upon the rampart of the fort; sights for time were taken immediately afterwards as soon as the sun's limb was clear; the time of the ingress was 6h. 54m. 55s., and that of the egress 9h. 2m. 2s.8. The error of the chronometer upon mean time of the place, 8h. 21m. 45s.72.

The variation of the compass, by an excellent compass of Capt. Kater's invention, was $2^{\circ} 0' W.$, which compass I had the misfortune to leave on shore one day after observation, and never saw it again. The dip of the needle was found to be $44^{\circ} 33'$, and the needle which I had hitherto used for vibrations was unfortunately bent and damaged by the person in whose charge it was for a short time left, upon the 29th August, since which time I considered it entirely as a new needle. All the observations by it are given in a table by themselves.

The thermometer and barometer ranged between the degrees of 69° and 78° —29.52 and 29.78 in June; of 69° and 91° —29.50 and 29.80 in July; of 75° and 88° —29.50 and 29.95 in August; of 70° and 89° —29.68 and 30.15 in September; of 61° and 78° —29.90 and 30.28 in October, during our stay at Woosung.

The time of high water and the velocity of current or tide are about 1h. 20m. P.M., strength of tides at springs $2\frac{1}{2}$ miles per hour, and at neaps $2\frac{1}{4}$ per hour, and they assume the course up and down the river. The atmosphere is so clear that I was able to see the planet Venus with the naked eye, and others readily saw it when pointed out to them, about one hour after the sun had passed the meridian.

On the 19th of October the *North Star* sailed from Woosung, and proceeded to Chusan where she arrived on the 21st, having had moderate breezes from the N. and N.N.E., and fine weather.

She remained at that anchorage until the 9th of January, during which time the weather was as follows:—

During the latter part of October, from the 21st to the end of the month, the winds were from the N., N.N.E., and E., N.W., S.b.E., and S. The weather, which had been moderate and fine, changed upon the 23rd to squally with rain and strong breezes until the 26th, after which the winds were fresh with fine weather.

During the months of November and December, the winds were principally from N., N.N.W., and N.W., there were a few days calm, the wind usually shifted to the N.E., N.N.E., and S.E., and once at the end of December to S.W. The barometer and thermometer ranged in

October from the 19th to 31st, the barometer from 29·94 to 30·32, the thermometer from 60° to 76°.

In November the barometer ranged between 30·05 and 30·38. The thermometer between 46° and 75°; and in December the barometer between 30·02 and 30·54, and the thermometer between 43° and 78°.

The dip of the needle was observed upon the site of an old fort, called Observatory Point, near Hall Gates, upon which all observations were made, and was found to be 42° 31', and the variation by azimuths observed with the large compass was 6° 40' E.

The city of Chusan, although very extensive is not to be compared with Shang-hai in size or opulence. The watering place is inconvenient, it is in a creek northward from the anchorage called Siphthead. The water is not good. Firewood is always scarce in China, and the coal is bad.

Fresh beef is plentiful, and extremely good. The Chinese frequently stole the cattle from the other islands, and sold them at the markets where they were immediately bought, and as they were soon after slaughtered and skinned, there was little chance of detection. Ducks are bred in vast abundance. The markets are well supplied with fish.

The women here have their feet distorted according to the Chinese custom. And Punch and *Judy* (she is called by that name here,) is the amusement of the passengers in the streets as in London, where it is not so well performed; but is in all other respects precisely the same.

The aptness of the boys to acquire the English language is extraordinary, and I believe there will be few young persons in Chusan unable to speak English fluently when that place is given up. Gloves were new to the Chinese, and they immediately had them in the shops for sale, made of fur and various other things, the weather being very cold.

PORT ROYAL AND ITS ASSOCIATIONS.

Continued from p. 368.

WE may now turn from this uninviting picture to one far more cheering, as it displays British bravery in a conspicuous light, and will further serve to rescue from oblivion the name of a deserving officer who has long since closed his earthly career. In the year 1806, whilst Lieutenant Theophilus Shaw was serving on board an English corvette, then cruising on the Spanish main, the ship fell in with a small British force attached to the expedition under General Miranda, who, it will be recollected, was the first patriot, of note at least, that hoisted the standard of revolt against the Spanish power, in South America. Miranda solicited the assistance of the captain of the corvette, (which was assented to), in a meditated attack on the town of Coro, situated in an islet on the eastern side of the Gulf of Maracaybo, nearly under the 70th degree of west longitude, and on the parallel of 11° 30' N.

The combined squadron anchored in the bay during the night, and, by the dawn of day, the boats had received the motley troops of the independent General, for the purpose of landing and attacking the place. Many of the boats had preceded those of the corvette; some of those had reached the beach, but the troops were so slow in landing and forming, that the enemy's ambuscade party, who kept up a brisk fire, killed and wounded many of them. Lieutenant Shaw, observing this, immediately altered the course of the boats under his orders, and pulled directly for the battery, under which he landed, and with the boats' crews alone stormed and carried it. The Spaniards were driven out and the gates shut, and the union-jack hoisted. A midshipman was now despatched with the boats to the ship, for the marines; when they arrived, the gallant Lieutenant marched for the town, and, in like manner, carried it also.

The promptitude with which our energetic sailor had altered his plan, pulled to, landed, stormed, and got possession of the battery, may be better understood when we inform the reader, that the enterprise was effected before half of Miranda's inert soldiers (if they could be so called), had disembarked.

As soon as Miranda had been left to his own resources, the Spaniards rallied, and the patriot general and his followers were constrained to evacuate the town, and re-embark on board their vessels.

There were several actions fought by our smaller vessels of war on the Spanish main with the gun-boats and schooners of the enemy, with as little success as ours. Captain R. Nicholas, in the *Lark* sloop of war, succeeded in capturing two schooners, but they got aground in ascending a creek or river after the gun-boats, and he was constrained to set them on fire. The *Elk* brig sustained some damage, and lost some men, killed in a spirited encounter with the Spanish flotilla; the unfortunate purser, it was said, had his head cut off from his body as he was ascending the ladder from below. The beautiful little brig *Raposa*, commanded by Lieut. Violet, unfortunately grounded whilst engaging the gun-boats; and the only alternative left the gallant and mortified officer was, to set her on fire, and retreat with his crew in the boats.

I have no intention of going through the list of actions and encounters on the station, the accounts of which were not published in the *Gazette*, but I may with propriety record here, that Captain Fyffe (already spoken of,) in the *Reindeer* brig, brought to action the two beautiful French brigs *Phæton* and *Voltigeur*, which were subsequently captured by the *Pique* frigate, after a very spirited resistance. Capt. F. obtained his promotion as a reward for his gallantry on the occasion.

During the late American war, the privateers fitted out in the States were not very numerous on this station; but wherever they appeared, they seemed to consider that caution was unnecessary, and they generally paid for their temerity. We have seen one of these vessels, a fine schooner, run along shore within three miles of the land, and capture a sloop off Round Hill to leeward of Montego Bay; but she was caught off the west end of the island by a frigate. They even ventured inside of Sambro lighthouse at Halifax; and above Lundy Island, in the Bristol Channel.

We shall here mention an incident which may be of some service to the merchant captain in any future war.

A very beautiful ship, called the *Nelson*, whilst running down for Jamaica, was chased by an American clipper. On nearing the ship, she appeared so warlike, that Jonathan, thinking, no doubt, with Falstaff, that, the "better part of valour was discretion," hauled off; thus following the economical principle of catching as many prizes as he could conveniently, without the hazard of being himself caught.

It so happened, however, that the "Britisher" did not entertain a similar opinion, and thought all such careful calculations needless, whilst he possessed iron guns, and sinewy arms to work them. A little vain, too, of his very showy craft, he may have considered that the effect she had already produced was half the battle won; and thus cherishing the notion that he had nothing to do than to push alongside of the fugitive and demand her surrender—secure her! The idea was too inviting to be resisted—to think of the *eclat* that would attend his entry into his destined port with the "bold Yankee" as his prize, was most encouraging; he did not remember that those who play at balls with professors in the art, require some degree of previous practice to give them a chance of success in the game; for, although it appears that he was an experienced hand in contention with the hurricane, yet he was rather green at a sea-fight.

What was the old wise saw of the "golden bridge" to him? The valuable cargo committed to his care was a consideration which the flying enemy had completely obliterated from his memory. The ship was probably insured, if so, had he any thing to do with the interests of the underwriters? The happy moment seemed arrived when he might establish a name for prowess—it was an object worthy a Briton, and, no doubt, all meaner things were absorbed in that thought. Chase was given, and the beautiful ship dashed on like a race-horse to win the goal. Elated at the prospect before him, and impatient to arrest the fugitive, he commenced firing his *six-pounders*. The first pop-gun report dissolved the delusion under which the American acted. The moment the sound met his ear, he put his vessel round, ran alongside of the ship, and was soon in possession of her! We have noticed this circumstance for the purpose of showing the necessity for a running ship, during a war, to be provided with at least, one heavy gun, for *effect*.

I recollect a very exciting chase by a frigate after a fast-sailing schooner, from Cape Tiburon towards Cuba. Edging down we gained upon her so far as to get within range; but when fairly in her wake we did not gain an inch. The long gun was brought aft to the break of the quarter-deck, the sprit-sail yard topped up out of the way, and shot after shot went through her sails, but she heeded them not. Wearing with the inefficacy of this mode for arresting the flight of the persevering little craft, the captain determined to try what virtue there might be in a "shrapnell"—he fired the gun himself—the messenger fell directly upon her deck, in an instant she rounded to, letting fly every sail in the wildest confusion.

The ingenuity of man in providing means for the destruction of his

own species, would seem to keep pace with the flight of time. The relief from a state of warfare instead of furnishing his mind with the desire of meliorating the horrors attendant on the condition of strife, gives a spur to his invention for increasing its evils. Our restless neighbours, and old rivals, who, in the long run, have suffered the penalty for their ambitious designs, seem to fancy that they owed their want of success in the contentions with our wooden-walls, to the insufficiency of their ship-guns, and they have therefore increased these instruments of destruction monstrously. Strong as is our desire for peace, we have been constrained to follow their bad example.

I do not know whether it arises from a conviction that the liability to danger and death is greater on the ocean than on the land, but when the weather assumes a gloomy and threatening appearance, which it often does, it creates an apprehension which is never felt on shore, except when a tropical hurricane is approaching. The heavy squalls which frequently occur during a cruize among the islands, are not the least of the circumstances that take place, which give exercise to the vigilance of the seaman. To a person unaccustomed to a sea life, many of these blasts, with the accompanying phenomena, would appear most appalling, especially during the night, when darkness adds a feeling of awe to the mind, as the eye surveys the wild and impressive scene.

Although generally giving warning by the dense mass of dark clouds which gather in a particular part of the horizon, by the lightning's flash, and the thunder's roar, yet, at times, the rush of the furious wind is so instantaneous as to create much alarm and anxiety, but which, in the qualified seaman, are only displayed by the prompt and decisive measures he takes to counteract the effect. The white squall is the most dreaded, as its approach is often without sign. Minor whirlwinds sometimes form on the surface of the ocean, and endanger a ship's spars,* at

* The following highly interesting account of an atmospheric phenomenon, which occurred in July 1842, at Cupar, as given in the *Fife Herald*, is worth recording here, as it would seem to support the opinion of these sudden circular winds being occasioned principally by electricity.

"On Wednesday forenoon, a phenomenon of most rare and extraordinary character was observed in the immediate neighbourhood of Cupar. About half-past twelve o'clock, whilst the sky was clear, and the air, as it had been throughout the morning, perfectly calm; a girl employed in tramping clothes in a tub on the piece of ground above the town, called the common, heard a loud and sharp report overhead, succeeded by a gust of wind of most extraordinary vehemence, and of only a few moments duration.

"On looking round, she observed the whole of the clothes, sheets, &c., lying within a line of a certain breadth, stretching across the green, driven, almost perpendicularly, into the air. Some heavy wet sheets, blankets, and other articles of a like nature, after being carried to a great height, fell, some in the adjoining gardens, and some in the high road, at several hundred yards distance. Another portion of the articles was carried upwards to an immense height, so as to be almost lost to the eye, and gradually disappeared altogether in a south-eastern direction, and has not yet been heard of.

"At the moment of the report, which preceded the wind, the cattle in the neighbouring meadows were observed running about in an affrighted state, and

least, if they do not actually, in the first instance, form on the surface, they descend to it, and sweep along with astonishing rapidity. A sudden shift of wind often follows the presence of a black squall; and it seems likely, that, in these instances, the cause is electricity cooling the air immediately below the clouds surcharged with it. These changes of wind are temporary, and, I believe, most observers are agreed as to the cause. But the phenomenon is not confined to the tropics. On the 20th of July, this year (1842), there was a light breeze from the west; at 12h. 15m. P.M., rain fell, and lightning and thunder occurred in the E.N.E., when the clouds looked very angry. This continued until 2h. 30m., and whilst the lightning was flashing, the wind shifted in an instant from west to the opposite quarter, in a squall with rain. At 4h. P.M., the weather cleared, and the wind shifted to S.W. It seems sufficiently clear here, that a sudden fall of temperature in and under the region of the electric clouds, set the air in violent motion towards the west, when the heat of the atmosphere remained unchanged, or was but slightly affected. But a question arises that is worthy of investigation. Does the air move from the given cooled space in all directions as from a centre, or do the squalls proceed in one direction only?

These squalls have sometimes proved fatal to vessels; a few cases have occurred on this station. Among the number who perished in this deplorable manner was Lieutenant W. H. Swymmer, in a tender schooner belonging to H.M.S. *Pelican*. He was a most promising young officer, who had several times distinguished himself, and was greatly esteemed by all who knew him.

Another event of this sort, which created universal regret, was the upsetting and foundering of H.M.S. *Orguezo*, close in with Port Antonio, on the north side of Jamaica, in a squall which blew off the land; some of the officers and men were picked up by the boats of another ship that was in company, but the greater part of the crew perished. She had been a Spanish vessel of war, captured by the *Æolus* frigate, Captain Evans, and commissioned in our service. She was commanded by Captain Balderson, who happened to be on board the ship in company at the time the *Orguezo* went over. He was the same officer who unfortunately and deplorably lost his valuable life by being shot dead by a violent tempered midshipman, who he had disgraced for neglect of duty, in

for some time afterwards they continued cowering together in evident terror. The violence of the wind was such, that a woman, who at the time was holding a blanket, found herself unable to retain her hold, and relinquished it in the fear of being carried up along with it. It is remarkable that, while even the heaviest articles were stripped off a belt, as it were, running across the green, and while the loops of several sheets which were pinned down were snapped, light articles lying loose on both sides of the belt were never moved from their position.

"In this description, we perceive in this whirlwind a type of the great circular hurricane of the tropics, as clear and certain as it is possible for words to express or observation to determine—a belt or zone of raging wind with a calm space within. There was also another whirlwind of great force, of eight yards in breadth, felt at Birkenhead, in the same month."—*Liverpool Mail*.

Plymouth Sound. As an officer his character stood very high, and he was much esteemed in the service; the tragical event was therefore universally deplored.

During the blockade of Cape François, a schooner, tender to H.M.S. *Blanche*, upset in a heavy squall off the land, in a dark night. Most, if not all, the officers and crew were saved by the prompt assistance rendered by the boats of the squadron. She was in charge of Lieut. N. Lockyer, (the present captain, and C.B.)

The commander of H.M.S. *Grecian* was drowned by the upsetting or swamping of his gig, at night, whilst going on board his vessel from another man-of-war in company, off Port Morant. This unfortunate event created a great sensation among the captains on the station. Blame was attached to the senior lieutenant for his conduct on the occasion; whether just or not, I cannot say, as I do not recollect the particulars; but he was ever after mistrusted, and, I believe, left the station on account of the prejudice entertained against him. It seems clear, however, that the unhappy lieutenant could have nothing to do with the actual upsetting or swamping of the boat; if captains or others are silly enough to venture the risk of their lives in a frail boat at sea, and particularly during darkness, and fatal accident occur, blame ought not to attach to others on that account. For the value of a few shillings every boat may be converted into a safety boat; yet, strange to say, we hear almost weekly of valuable lives being lost from accidents occurring to boats. There appears to be, in this matter, a want of the exercise of common sense, or a culpable negligence or apathy.

One of the most remarkable instances of loss of life and dreadful suffering occasioned by capsizing in a squall, is that of the *Maggie*, of which we have preserved the following account:—

On the night of the 27th August, 1826, about 10 o'clock, I was sitting on the stern of the *Maggie*, a very heavy cloud coming off the land, the officer of the watch immediately shortened sail to a reefed fore-topsail and a stay-foresail. I went below out of the rain, being then on the doctor's list. I had just got below and called Mr. Ross, mate, who immediately went on deck, and I followed him, and as my feet were on the hatchway, the schooner was hove on her larboard side—the water was pouring down the hatchway. When I left her I immediately got upon the starboard gunwale, and I observed several men cutting away the lanyards of the fore rigging, with the intention of cutting away the foremast, but she very soon filled and left us on the surface. The schooner immediately went down. The lightning was very vivid at the time, and I perceived one or two boat's oars. I immediately swam to them, and undressed myself; by this time there was not a voice to be heard on the surface. In about five minutes I heard a voice say "Is there any more?" I answered "Yes, there is, one." By the assistance of the oars I reached the boat to which eight persons were clinging—Lieut. Smith and seven seamen. The boat was then full of water; we put the oars across her, endeavouring to save ourselves; we remained in that situation all night. The boat continued turning over and over, which very much distressed us. Next morning, the 28th, about 10 o'clock, two of the men

went down. The sharks were then very numerous about us, so much so, that they frequently passed over the boat between us. Whilst resting on the gunwale, Lieut. Smith very frequently shook hands with us, having been at this time twice bitten by the sharks, and said there was no blame attached to any one for the loss of the schooner, and requested a lad of the name of Wilson, he being supposed to be the strongest amongst us, that if ever he saw the Admiral, he would give him his compliments, and say that he was going to Cape Antonio for a pirate; and also to request that he would promote Meldrum to a gunner. Lieut. Smith frequently encouraged us, and told us not to be alarmed, as there was every hope of seeing a vessel; but after the first night he was so exhausted as not to be able to speak much. Meldrum, about 4 A.M., on the 28th, proposed that Lieut. Smith should be put into the stern sheets of the boat, which was instantly agreed to. He continued in the boat till sunset, when Meldrum said to me, "Mr. M'Lean, the commander is gone." I immediately looked round and saw he was out of the boat, but I cannot say whether he fell out or sank when the boat turned over. The sharks left us about noon, and two more men went down about 9 P.M. We remained then, one leg in the boat and one out. About 3 A.M. of the 29th, two more men were delirious, and had very often previously swam from the boat, leaving Meldrum and myself the only survivors. We then got into the boat, one forward and the other aft; the boat was then so water-logged that her gunwale was under water. About 5 A.M. on the 29th, we saw a sail standing towards us; Meldrum and I shook hands, being rejoiced at the circumstance. About 6h. she passed close to us, when Meldrum took the boat-hook, and, of his own accord, swam towards the ship and hailed her; I stood up in the boat and held up my hands; they heard the voice of Meldrum and saw me; they immediately shortened sail, being 200 or 300 yards off, and took us on board.

The next morning we fell in with an English brig bound to the Havannah, and were put on board her, and she took us to the *Pylades* there. Before we were picked up, we were thirty-two hours in the water. When the squall took the schooner, she was on the larboard tack.

Another sufferer said:—About 9h. the wind shifted to the southward, a squall began to freshen off the land. I called Lieut. Smith, who ordered me to shorten sail, which I did by bracing up the fore-sail and hauled down the jib. Lieut. Smith then came on deck himself, ordering the hands to be turned up, which was done, and the main-sail lowered. A little after three bells, a very heavy squall took us aback from the N.W., the schooner immediately righted and went over on the other side—the hatchways were under water. Lieut. Smith then gave orders to cut away the rigging; I cut away the fore lanyards, but the top-sail being set, prevented the mast going over. I then stood on the starboard bends, the vessel all the time was settling down; in two or three minutes from the first of the squall, she had sunk entirely. I was swimming on the water for about ten minutes, when I heard one of the people calling out to know if any one was near. I immediately answered and swam to him, when I found he was clinging to the boat bottom up-

wards ; in about five minutes more we numbered nine persons clinging to the boat, Lieut. Smith among the number. We remained in this way till about 12 o'clock next day, when two of the men died through fatigue; at about sun-set two more men died. I proposed, about 4 P.M., on the 28th, that Lieut. Smith should be put inside the boat, as he was much exhausted, which was instantly done, and where he remained till about sunset, when, by accident, we capsized the boat, and Lieut. Smith was seen no more. He had said to me two hours before this, "If you survive, give my best respects to the Admiral;" he called a boy, and spoke to him, but I did not remark what he said. About 2h. the next morning, another man died, and at daybreak we lost another. During the greater part of the time mentioned, sharks were very thick about us. About 6h. in the morning of the 29th, I saw a sail steering towards us; I pointed her out to Mr. M'Lean, we clung to the boat till she was within a mile of us, when she altered her course about a point. I immediately left the boat to swim and try to cut her off; when she passed she was within hail of me, I hailed her, and they lowered the boat down and picked me and Mr. M'Lean up. About 6h. the next morning, we fell in with an English brig bound to the Havannah, on board of which we were put and taken to the *Pylades* lying in that port. The master and crew of the *Aspasia*, that picked us up, treated us with great kindness.

Having kept the reader so long at sea, let us take another glance at "Port Royal and its Associations". The receiving ship—if ship she could be called—which bore the Admiral's flag, during the absence of the two-decker assigned for that purpose, was the *Shark*, a frigate-built sloop-of-war, of very small dimensions, rickety, in fact, worn out from long service. Her last performance at sea was in a hurricane whilst on her passage up from Honduras, under the command of Capt. Herring, a very smart and skilful officer, who died on the station, and she all but foundered. Such a "crib," if we except the "coffins" built in the latter part of the war,* perhaps, was never seen in modern days as a man-of-war; she was not only unworthy to be placed under the command of a captain, but was dangerous to the reputation of the navy. A better system now prevails,—in a fight the men want plenty of elbow-room to handle their guns, and for the important purpose of respiration when in a state

* Some idea of the small dimensions of these sort of craft may be gathered from the expressions of the seamen. "One step and overboard!" A still more convincing one is the anecdote told of a lieutenant. "Big Tom W——t having been appointed to one of these 'apologies,' as they were called, on joining her, found that the usual way of descent to the officers' domicile was not large enough to admit his huge body! He therefore slipped down the sky-light aperture, and, when standing upright, found his head and shoulders were above the combings. He forthwith appealed to the captain, whether it was possible for him to serve in a vessel which seemed to have been built expressly for a race of pigmies. The captain fully agreed that she had not accommodation suitable for giants; and the gallant luff was permitted to post up to town, and lay the case before their Lordships, who, being satisfied that the fact was as represented, immediately gave him a commission for a more appropriate vessel—the *Undaunted* frigate."

of repose,—sufficient space below to insure their not being half suffocated with foul air when the hatches are on. This point, indeed, is worthy of serious consideration, for, in a hot climate, the vital principle of air, in a confined space wherein many men are congregated, soon becomes exhausted, and sickness follows. It seems proper, therefore, that small frigate-built ships should not be employed within the tropics, unless tubes are let in between the timbers of the upper works, to convey a constant supply of atmospheric air into the lower deck. The wind-sails, although useful for this purpose, are insufficient, and cannot always be used. Corvettes have, generally, if not always, proved more healthy floating domiciles than two-decked ships, which probably arises from a freer circulation of air in that class of vessels than in the others. When laid up, the *Shark* had her mizen-mast taken out, and she was housed over, and moored for a “full due” off the victualling wharf, where she remained many years a curiosity, and a very picturesque object, among others, which served to embellish the view of a naval station.

It may be satisfactory to the nautical antiquarian to be informed that I have preserved a “particularly accurate” sketch,—as the late prince of pedestrians and sketchers, the worthy James Walker of Hereford, would have said—of this armadillo looking craft, which, on account of some of the gallant tritons that paraded her decks, I most highly value.

WANT OF A LIGHT ON GUERNSEY.

SIR.—As a reader of your valuable and impartial publication, I am fully convinced that your columns are always open to advocate any thing in a nautical way, where a general public good, and a safeguard to life and property is endeavoured to be attained; and as the matter which I am now about to bring before your notice is one of a public nature, and in which no private interest is concerned, I take the liberty of requesting the favour of your inserting in your next publication the following observations.

On the 10th of January last I addressed a letter to the Secretary of the Trinity Board, requesting him to lay it before the Elder Brethren of that Board. It contained some observations on the absolute necessity of a light on the sea board of the Island of Guernsey, of which, from long practical experience, and also from the opinions of others, I defy contradiction from any quarter.

I have since entered into a long correspondence on the subject with different parties, in which, I have shewn that during the period with which I have been acquainted with the locality of the Islands of Guernsey, Jersey, &c., several hundred lives have been lost, together with property to a large amount, which have been, I may say wantonly, thrown away from the want of such a light to point out to the mariner the situation of the dangers which surround the coast in nearly every direction, and I have no hesitation in saying that occurrences are taking place almost daily, to prove that my statements are matter of fact.

At the very moment I was pointing out, to the various parties in whom the vested rights are placed to look after the protection of life and property afloat, the necessity of such an erection, the French schooner "Union," was thrown high and dry upon the beach within a mile of where the lighthouse ought to be placed. This occurred on the night of the 7th of the present month, and fortunately being high water at the time no lives were lost, but the cargo was nearly all destroyed, and the vessel has become a total wreck. I feel confident that the loss of this vessel is entirely attributable to the want of a lighthouse.

Every one, whether nautical or otherwise, with whom I have conversed on the subject, has joined in expressing their great surprise, that an island with such innumerable dangers surrounding it, and its approaches, from strong sets of tides and uncertain soundings, so difficult, as even to baffle the skill of the natives themselves in the night; and which must be much worse for strangers, should be left without such a desirable and necessary object. Again it should be recollected that it is placed in one of the greatest and most frequented thoroughfares, and I may confidently say that more wealth passes between this island and the English coast than any other part of the world, and this without being lighted to warn the mariner of his approach to danger.

I have represented to the Trinity Board that wrecks take place almost every winter, without *one* being left alive to tell the tale, the only thing known of it being from the circumstance of dead bodies and pieces of wreck being picked up by the natives. Now, to every reflecting mind, it must appear mysterious in these days of *reform*, that a place so immensely dangerous to the navigation of the British Channel should have been left to remain in total darkness, and thus be an annual destroyer of life and property.

I must say that I consider a great responsibility rests on the shoulders of those parties in whom the power lies to obviate this crying evil. It might be done at a trifling expense, which the shipping interest, I am satisfied, would be ready and willing to bear.

It appears there is an opposition offered from some of the resident shipowners in these islands, but which is done from a most selfish principle, viz. because all vessels leaving the islands for a foreign port evade the payment of all English Light Dues. If the islanders are more entitled to these privileges than all Her Majesty's other liege subjects, by all means let them enjoy it; but at the same time not at the cost of life and property of the other part of the community.

Apologizing for the length of these plain remarks on what must be acknowledged to be a most important subject.

I remain, &c.,

W. SADLER,

To the Editor N.M.

Master of Sir F. Drake steamer.

AUTO-BIOGRAPHICAL SKETCHES, by a Merchant Sailor, illustrative of the State of the British Merchant Service.

(Continued from page 590.)

DURING our stay at Charleston, when any money was required by myself or the other youngsters on board for necessary expenses, it could not be obtained from the master without my going to him with vouchers and documents to prove the necessity of the expenditure. I wrote not only my own bills for shoe-mending, washing, and such like demands, but also those of my shipmates; and the interviews I had with the master proved him to be as insane as ever,—he would keep me a whole hour on these occasions, asking a number of useless silly questions, and repeating them without any meaning.

At this time, and even up to the present time, a most infamous system of crimpage existed in all the southern ports of the United States,—a vessel was no sooner arrived than the crimps set to work, enticing the crew to their dens of drunkenness and dissipation where their evil passions were inflamed through the most pernicious spirits and lewd company; they soon ceased to work, and frequently came on board the vessels openly, and took away their clothes; the master or officers on board not daring to prevent them. When the latter happened to be more courageous than usual, and attempted to resist such misconduct, they were either overpowered in open day by numbers, or the vessel was boarded by boats at night, and the object accomplished. Vessels have been frequently robbed of cargo in this manner, by these crimps, assisted by the crew, without the possibility of any redress, either through the supineness or inefficiency of the authorities. Deserters from the vessels walked on the wharfs in open day, in the presence of their masters without molestation, the police either unable or unwilling to interfere; and the whole police regulation, except in so far as related to the slaves, was entirely useless. So soon as the men got into the power of the crimps, they were kept intoxicated, until, in a few days, they were shipped off on board some vessel proceeding to sea, incapable of knowing either the vessel or the voyage, their mouths advanced pocketed by the crimp who had deluded them away. The most of our crew acted in the manner just described, and we received on board, when in the river ready for sea, a parcel of men in a senseless and beastly state of drunkenness, who, when they recovered their senses, neither knew the vessel nor the part of the world they were going to; two of them had severe attacks of delirium tremens, and were several days on board ere they were able to perform their duty.

Our cargo of cotton was taken on board by the few who remained by the vessel, and stowed by negroes hired from the shore. I had seen so much of irregularity on board the brig, and heard so many fine stories about America and its liberal laws, glorious constitution, and high wages, as well as the facility with which I could get a certificate of citizenship, that I had made up my mind to try republicanism, and had my clothes ready packed to go on shore. My steady friend the carpenter, however,

prevented me, and pointing out the fallacies of the parties who were persuading me, induced me to remain under my national flag, a step for which I have ever since had much reason to be thankful.

There is nothing very interesting or agreeable about the neighbourhood of Charleston, low swampy muddy ground, and a hot stifling unhealthy atmosphere giving everything a sickly tinge. The city itself is well built, possesses regular wide streets, and some handsome public buildings and churches. Cotton and rice are the great staple articles of export; the ships receiving them lie moored to wooden wharfs, projecting out into the river. The churches are well filled, but they are so few compared to the population, that it is not decisive of their being a church-going people. As I have already mentioned, even here in the house of God do the abominable results of a depraved morality, from the effects of slave holding, present themselves prominently to view; one door, and one side of the church being set apart for the white, and the other for the coloured population. Many free people, of education and respectability are under the ban, as well as their bond brethren. Such a system requires no comment;—to the mind of every christian it must be abhorrent, and no greater absurdity can well be imagined than a professing christian proclaiming aloud with one voice, liberty and equality; and with the other ordering his fellow creature, held in a degrading state of bondage—to be flogged.

When loaded and ready for sea, the brig was hauled into the stream, and anchored while we received on board the new crew and the master; the latter going below to his berth on arriving on board, and there remaining. While lying at anchor, and clearing the decks for sea, some of the crew, whose bedding had been occasionally defiled by a mangy-looking brute of a cat we had on board, put her in a bag, and threw her overboard; some of the others remarking that such a thing was very unlucky, and that we should certainly meet some misfortune on the passage home. We sailed from Charleston the day before Christmas, bound for Liverpool, and proceeded on our passage during the first few days with light baffling winds. Our new shipmates were incapable of performing their duty, from the effects of former dissipation, and it was dreadful to witness the state of the two who were attacked with delirium tremens; one in particular was very bad. He would in a moment jump from his hammock and run crouching into a corner of the fore-castle, trembling as if in an ague, his eyeballs projecting from their sockets, and rolling about wildly, he would occasionally point into a corner, and call out, "There! don't you see him?" When asked what he saw, he would reply, "The devil! don't you see him throwing darts at me." His gaze would then remain fixed on the spot for a few moments, when he would burst out into a hoarse maniacal laugh, which made me shiver, but little accustomed as I then was to such scenes. Neither of these two men thoroughly recovered during the passage, and on many a bitter cold night, when blowing heavy, one of them, an old man, used to cry when sent aloft to reef topsails, never venturing farther than the bunt of the sail, and in very bad weather lying down in the top until the sail was reefed.

One morning, a week after we left, we were running along with an increasing fair wind, the studding-sails had been hauled down, and the crew and mates had gone to breakfast, I was at the wheel, which I had just relieved, when I found a tremulous sort of motion in the rudder that I had been unaccustomed to, and fancied the brig did not answer her helm so quickly as usual. I looked down the rudder case, where, to my utter amazement, I observed the lower part of the rudder twisting about, almost entirely irrespective of the upper part within the rudder trunk. I made a signal to the cook, who was sitting in the galley door taking his breakfast. He came aft, and without informing him what I wanted, I desired him to call the carpenter. When the old man came aft, and saw the state of the rudder, his face changed colour for a moment, but he said nothing except "It is a bad job, I will call the mate." The mate came up, and evidently not thinking it very bad, said "We will see about fishing the rudder stock after breakfast." Below they both went, and, in less than five minutes, the lower part of the rudder, up to within three feet of the rudder head, broke right off from the upper part. The rudder irons, previously broken, did not keep it fast, and weighed down by the weight of bolts and copper, it sank, and with it my spirits, presenting to me a long vista of difficulties and dangers, in the midst of a winter passage through a stormy ocean. Sail was quickly reduced, the brig hove to, and then the sailors began to smoke, and the mate to ruminate, the master never shewing himself, and, as we understood from the steward, listening to the account of the loss with the greatest indifference, and apparent want of any apprehension of the reality of our loss. Quiet, subdued looks were succeeded to the usually jocund faces of the crew, the mate and carpenter seemed puzzled, their various consultations were conducted in whispers, the men were addressed in a quiet, kind, equality sort of tone, instead of the usual firm, decided word of command. Misfortune, that leveller of all distinctions, had its due influence, and while we were all serious and subdued, no irregularity was committed, but the mate's orders were treated with the greatest respect, and to him alone the crew looked for assistance in the difficulty.

All the various manners of getting temporary rudders were thought of, but all seemed alike beyond the probability of realization from our want of means and materials. In the midst of the difficulty, I recollected having seen while a boy at school, an engraving and description of a temporary rudder by which H.M.S. *Ipswich* had been steered under similar circumstances. I got a piece of chalk, and sketched the plan, describing it at the same time as a spare spar, having a weight attached to the outer end to cause it to sink, placed over the stem, the upper end secured on the taffrail, the outer end in the water, while guys fastened to spars rigged out on each quarter, and brought inboard with tackles attached moved the spar and steered the vessel. With a spare main-yard we tried this plan, and watching a favourable opportunity got our spar overboard, the weather during the whole period being very bad. The brig being light, from the nature of her cargo, and having a high poop there was a considerable space between her taffrail and the water, this and the same cause, making her tumble about very much, caused

the spar often to be out of the water, and it bumped so much against the stern that, after a few hours unsuccessful attempts to wear the brig by it, we were obliged to get it alongside, and happy to be enabled to get it on board.

Meanwhile days of continued westerly gales were passing away, during which time we either remained lying to, or when more moderate scudded, under the close reefed main-top-sail, and double reefed fore-top-sail and fore-sail, keeping the jib and staysail set, to pay her off, as she alternately came to on either side. The main-topsail and main braces were also kept in hand to assist the head sails, and thus careering about, without control, like the human mind without the rudder of reason, as wayward in her actions as any maniac, the brig for eighteen days, was gradually running or drifting to the eastward. Many and various were the surmises amongst the crew as to our ultimate fate, and considering the reason, hope was not very prevalent either in the fore-castle or the cabin. We had saved the upper rudder iron from the rudder head, and acting under the advice of the carpenter, the mate resolved to construct a temporary rudder, and endeavour to get it fastened by means of the iron saved and chains, so as to steer the vessel. The carpenter accordingly constructed a rudder, the shape of the old one, the main piece being the spare main-yard, the broad part was formed of spare spars bolted to the main piece, and covered transversely with inch boards.

While in this state of preparation in the midst of a severe gale, lying to under the main top-sail, we observed a vessel scudding. The mate ordered the ensign to be placed in the main rigging, the man who obeyed him placing it union down, actuated by his feelings. The brig soon answered the flag, and bore down, rounding to under our lee, evidently seeing our crippled condition, and asking what he could do for us? We asked in return if he could give us a spare rudder-iron? To our joyful astonishment he said he could, it being very unusual for any vessel to keep such a necessary article on board; and we afterwards discovered his having it, proceeded from the vessel having got a new rudder the previous voyage. We could not launch a boat for the sea, but we threw a cork fender with the lead line attached to it overboard, which he saw, and wearing, adroitly caught. He made fast the spare rudder-iron and bolts, with a piece of paper attached, containing the latitude and longitude, and an offer to remain by us, which was at once declined without a dissentient voice, so much did the possession of another rudder-iron rejoice the whole of us.

On looking at the stern-post when the brig pitched heavily, we saw that the third pintle from the top, had broken short off in the gudgeon, and remained in the socket supported by the saucer; without the extraction of this we could not proceed, as we proposed to put the rudder-iron got from the brig on the rudder at the corresponding place to this gudgeon on the stern-post. Taking advantage of a slight cessation in the wind and sea which occurred, the chief mate, with a rope round his middle, and attended by the carpenter and myself, to hold the line, went out at the cabin windows, and after diving three times succeeded in bringing up the broken iron, although he was very much exhausted

and bleeding from a blow he received from being driven against the counter by a sea. The carpenter now by means of a long boat-hook measured the exact distance of the gudgeon from the rudder-head, and fitted the iron accordingly. He also got a length of the stream chain, and attached it by the middle to the rudder about three feet from the bottom, the ends being to be brought up inboard, about the fore channels. As a difficulty presented itself in getting the new rudder shipped, from its great buoyancy preventing its being got over and so as to enter the rudder case, the carpenter attached a few fathoms of the mooring chain to the lower part of it, taking it across and fastening it with rope, which was afterwards cut, with a chisel fastened to a long spar.

The rudder was finished on the evening of a Saturday, and, on the Sunday morning, a very unusual lull took place in the gale, the sea falling very much. We all looked on the event as providential, and at once proceeded to ship our new rudder. We got it overboard, and so well had the old carpenter's judgment and skill been applied that we found comparatively little difficulty in shipping it, the irons and chains being most judiciously placed. By 6h. P.M. on the same Sunday evening the steering apparatus and wheel were attached to the new rudder, and I considered myself fortunate in getting the first trick at the wheel. What my feelings were would not be easily described, and that night the first smiles appeared on the men's countenances which had been seen since the accident occurred. Doubtless many a silent aspiration of thankfulness also found its way to that Divine Being who so mercifully protects his creatures.

[One of the readiest, if not the best, substitute for the rudder, we believe, is the end of the chain-cable over the stern, with a guy to each quarter.—*Ed. N.M.*]

LOCAL ATTRACTION.

11, *Acre Terrace, Stoke, Devonport, Nov. 10th, 1846.*

SIR.—Having taken a trip to the River from this port a few months since, in one of Her Majesty's iron steamers, the officer in charge of her was remarking to me the great difficulty he had had previously to leaving the Mersey, (where the steamer was built,) in order to ascertain correctly the deviation of the compass arising from local attraction. As *en route*, we were approximating the Needles, I suggested to him that it would be an excellent opportunity to test the correctness of his previous observations, more especially for the easterly course, by noting the bearings of the Hurst lighthouses when in one, their correct magnetic bearings being known to be N.E.b.E. $\frac{1}{4}$ E., and S.W.b.W. $\frac{1}{4}$ W. from each other, as it would, in a practical way, shew what dependence might be placed during the remainder of the passage up Channel. When on the Needles Bridge, between the Isle of Wight and the Shingles, with the two lighthouses on Hurst in one, the bearing of them coincided with that shewn by the binnacle compass, viz., N.E.b.E. $\frac{1}{4}$ E. Again, after

leaving Spithead, and running between the Elbow and Warner buoys, with the leading mark on, viz., Kickergill Tower on with the middle of Fort Monkton Magazine N.N.W., the same compass shewed a similar bearing, or nearly so, another proof of its correctness.

The above observations suggested to me, that, if there were conspicuous beacons erected on well-known headlands in the Channel, with their *true* or *magnetic* bearings from each other, published, how very satisfactory would it be to a vessel to heave to for a short time, (if the weather would permit), and, by bringing the beacons in one, to ascertain the error, or prove the correctness of his compasses. The greater part of the lighthouses in the Channel might be made available in lieu of *one* of the beacons, and if the position of the coast would admit of it, let them be erected north and south of each other, *true* or *magnetic*, as it would prevent confusion in the bearings of other marks. If the *true* meridian were adopted, the difference between the bearings of the beacons in one, and that shewn by the compass, would be the variations for the Channel + or — the deviation. But, perhaps, the *magnetic* meridian would be the more simple, and the error, if any, more readily ascertained. I have troubled you with these hints on the subject, should you consider them deserving a place in your valuable magazine. But, before I finish with the subject, allow me to mention a plan which I adopted whilst master of H.M.S. *Eurydice*, previously to commencing swinging the ship to ascertain the deviations of her compasses from local attraction in Halifax harbour, October, 1844. The standard compass was taken on shore, and the distant object (lighthouse on Maugher beach, MacNabs Island), brought on with the mizen-mast, close to which the pillars for the standard compass was fixed, and its real magnetic bearing found to be S. 9° 10' E. At the same time I measured with a sextant the angular distance between the sun's nearest limb and the lighthouse, which, with the latitude and sun's true altitude, gave the *true* bearing of the lighthouse S. 25° 50' 28" E., and, consequently, the variation of the compass for Halifax harbour 16° 40' 38" westerly, corresponding nearly with the observations of Capts. Owen and Bayfield. I am aware that the above is not a novel plan of ascertaining the variation of the compass, but it is at the same time satisfying to know that your standard compass is in good order before operations are commenced, especially when the result corresponds with observations taken by such good authority, and with first-rate instruments.

JOHN BURDWOOD, *Master R.N.*

NAUTICAL SKETCHES.—No. VI.

The Commonwealth.—Tromp and Monk.

(Concluded from page 595.)

TROMP is said to have received a tolerably good education, and to have possessed the suavity of the gentleman, with the skill and resolute bravery of the seaman, and that he constantly evinced a remarkable mo-

desty. We have, however, a singular instance of the contrary—an exception, perhaps, which some may lay down to national vanity—in his hoisting a besom at his mast-head when sailing through the English Channel, after his essay with Blake, intimating thereby that he would sweep the seas of English vessels! If that was his feeling, he lived long enough to discover his mistake, and, as in all vain-boasting, the shaft recoiled upon himself. But the English interpretation of such a *sign* is very different from that which the world has given the Dutchman credit for—it is this: “I am of no farther use to my owner! Who will buy me?”*

The Parliament was in an ecstasy of joy, and (wisely) was very profuse in the distribution of gold chains and medals; and, by way of crowning the whole, a day of solemn thanksgiving was observed—as if the bloody and inhuman contentions of man could be acceptable in the eyes of a merciful Creator! A peace followed, for which the nation's gratitude may have been consistently displayed.

Among the gallant admirals who had their flags flying in this memorable action, were Sir William Penn (the father of the quaker who settled Pennsylvania),—who gave to England the island of Jamaica; his remains are interred in the church of St. Mary, Redcliff, Bristol. Sir John Lawson, a capital old seaman, who sustained the honour of his country's flag with unsurpassed intrepidity. It is reported of this officer that he acted a very honest part during the civil war, altogether upon conscientious motives, which induced him, though disliking the government, not to resist it, as he thought that a man might lawfully serve his country under any authority, which was also Blake's notion, who also had his flag in this sea-fight. Sir John finished his career in the desperate action off Lowestoff, in June 1665, with the Dutch, and the English fleet under the Duke of York. He was wounded in the knee, and died some days after.

With reference to the force of allegiance to bind subjects, there are several well known works which have, ever since they were written, been held as test books. Puffendorf, Vattel, Grotius, &c, but what voice, or power of moral obligation shall bind the human mind, when reason, and the restraining influence of humanity have lost their sway, in times of popular commotions? Grotius observes: “What shall we say,” as if he were puzzled, “of the wars that subjects make against kings, or such as have the supreme authority? Though they may possibly have a cause not in itself unjust, yet that they cannot have a right to act by force against their prince, I have shown elsewhere. And sometimes, too, their cause may be unjust, or their resistance so obstinate, that it may be severely punished.”

Puffendorf gives the following short account of the origin of this Dutch war; “The English Parliament, which at the beginning being very ambitious of their friendship, sent one Dorislaw to the Hague; who before he had his public audience, was murdered by some Scots, who were all masked. And the Parliament having received no satisfaction upon this account, began to look with an evil eye upon them, which they little re-

* When a vessel is to be sold, a besom is hoisted to her mast-head.

garded, till Cromwell had reduced the Scots. And though the Parliament sent other embassadours to the Hague, yet the Dutch were not very forward, but were for protracting the treaty, till the embassadours having been affronted by the rabble, departed dissatisfied: whereupon the Parliament gave out reprisals against them, declaring withal, that no merchandizes should be transported into England, except in English bottoms; and the English privateers began to fall everywhere upon the Dutch merchant ships.

“The Hollanders, who were not very unanimous among themselves, did resolve at last, to try first whether the business might be compounded by fair means, and if that did not succeed, to begin the war in good earnest, and for this purpose embassadours were sent to England. Tromp in the meanwhile was sent out with a fleet to secure their commerce, and meeting with the English Admiral Blake, and refusing to strike, (the flag,) a bloody engagement ensued, which ended with equal loss on both sides. The Hollanders pretended, that this had happened by accident;* both parties, however, made great preparations for war, and fought twice, the advantage remaining on the English side, notwithstanding they were beaten near Leghorn. But in the last engagement the Hollanders having lost their Admiral, Tromp, and seven-and-twenty men-of-war, they were obliged to conclude a peace with Cromwell which was very advantageous and glorious on his side.” And we may remark, *en passant*, that such a finale was much more to the purpose than Tromp’s beginning with a “broom.”

We have not much to detain us with reference to Monk. In the end he was instrumental in bringing about the “Restoration,” but the seamen were the working hands.† His great abilities have been disputed; but one thing we are certain, he had the address to play his part to perfection, under the varying circumstances; and, if he had any fixed principles, apart from ambition, he may be considered as a very excellent dissembler. That Cromwell had some mistrust of General Monk may be gathered from a remarkable P.S. in one of his letters to that officer, a hint conveyed in ambiguous words. It runs thus—“There be that tell me, that there is a certain cunning fellow in Scotland, called George Monk; who is said to lie in wait there to introduce Charles Stuart. I pray you use your diligence to apprehend him, and send him up to me.” It is probable, the general, feeling himself pretty secure where he was, paid no regard to the warning, but went on in his usual reserved course.

Under King Charles the Second, he held the command of the fleet jointly with Prince Rupert. It seems likely that this double appointment was given rather in deference to the rank of the prince, than from any mistrust of Monk’s abilities for commanding singly, and it would probably have been displeasing to the seamen at that time, if the king, leaving Monk aside, had given the Prince entire command of the fleets;

* I was present when the American Commodore Decatur tried the trick of an “accidental” shot upon two small British men-of-war off the Chesapeake, to bring on an action, but it failed, and he apologized. He was in the President.

† At the head of whom was Admiral Montague.

and though joint commands are not, according to the precedent, held in estimation in our day, they appear to have been so in those times; but the practice does not appear to have worked well with regularly bred seamen, however accommodating it may have been to the shoreman thrust into a command, the routine of which he knew little. The principle upon which these joint commands were based, it may be presumed, was that of "two heads being better than one," according with the very old adage to that effect; but it is very questionable whether it is not a false one, and that as little good might have been expected from it as from councils of war, which a long experience has now proved to be extremely detrimental to correct action.

Prince Rupert, it appears, having been detached in quest of the French fleet, with the ships under his flag, the Duke of Albemarle (Monk), was left in command of the main body of the fleet (fifty sail); and, on the 1st day of June, fell in with the Dutch ships, which outnumbered the English by twenty-six sail; but that did not deter the veteran from attacking them. The action, however, where the odds were so great, was indecisive, but it raised the mettle of the seamen, and on the second and third days the engagement was renewed with the accustomed resolution on both sides, and continued until night, when, having received considerable damage, our fleet was compelled to retire. Prince Rupert's coming in towards the close of the fight, could not prevent the result on the fourth.

This was a catastrophe which must have weighed heavily on the spirits of the gallant old warrior, and have been any thing but pleasing to the king and the nation; but much of the affair appears to have been the consequence of the wisdom emanating from councils of war—the erroneous policy of which the moderns have had the good sense to shake off.

We are not now to feel much surprise at what followed in England. The Court profligacy of the day was equal to any thing—and so the "merry" monarch proclaimed the flight a victory, and public thanksgivings was ordered to be given—which the "Own Times" prelate very pertinently observes, "was a horrid mockery of God, and a lying to the world."^{*}

That our fleet fought nobly, and deserved success, there can be no manner of doubt; but it may be admitted, without casting any slur on the brave seamen or their heroic chief, that the councils directing them, were not, as a consequence of their rashness, unjustly humiliated by the result, after so much experience had been gained of the stubborn spirits they had to deal with, for despising the great superiority in ships against us; for there is as much merit in following the prudence of a Fabius, as in daring an enemy whose numerical strength is not too preponderating.

The errors seem to lie, however, principally in the weakening of the fleet by detaching Prince Rupert, and in the want of correct information of the motion of the enemy.

The Dutch ships, upon the whole, having suffered less than those of

* That was a matter not very material to the thoughtless,—the art of deceiving was imported from France in that day.

the English, soon reappeared at sea; to the surprise of the Hollanders, however, it was not long before our ships sailed forth to meet them, and and once more to try the fortune of war.

On the 24th of July, the hostile fleets met; the next day, as early as 6 A.M., the battle commenced, and, after the most determined resistance, the enemy was completely beaten, and forced to fly for refuge into port. By way of finish, the Dutch town of Bandaris* was burned by Admiral Sir Robert Holmes. And this was the last scene of consequence at sea in the career of honest George Monk."

Puffendorf says of this war,—“Holland† was then, (after Tromp’s death,) for a few years at peace, till a bloody war broke out between them and the English, who could not but think the flourishing trade and great power of the Hollanders at sea, to be very prejudicial to them. France blew up the coals, being desirous to see these two mighty States weaken one another’s power.

In this war the English had the advantage in the first and third engagements, and the Hollanders in the second; but the English at last, being willing to save charges, did resolve only to infest the Hollanders by their privateers, and not to equip a fleet, which the Hollanders taking advantage of, ventured to enter the river of Thames, and having landed near Cinatham, they burned several ships in the harbour. This obliged England to make a peace with them. “What a shifting of scenes!”

The “Dutch in the Medway” were far more nettlesome to the tars than Tromp’s bravado with the broom; but, as I observed before, we of the present age can feel no surprise, however much we may share in the mortification that must have sunk deep into the hearts of naval men of the day, at this or any of the untoward events recorded. “*Petites guerres*” are worse than useless, and so the “merry monarch” found out; but the nation, then, had not the mighty resources which it is now enabled to command; and the sovereign was often put to the greatest shifts for the “needful” to carry on the war.

Experience at length taught the two nations the folly and stupidity, if not the wickedness, of weakening their strength, and wasting their means by such terrible contentions. And history has shewn that these very two powers which had been so hotly hostile to each other, subsequently became close allies, and that they jointly waged war against other states; yet it may be doubted if they were very cordial co-actors after all.

* Opinions are divided as to the credit or demerit of this action. However, Monk, on his return, found that a great part of London had been burnt; which the Dutch thought a just retribution, though they had no hand in it. This catastrophe, (known as the “great fire,”) had been preceded by the plague the year before—(i.e. 1665.)

† The first action was between the Duke of York and Admiral Opdam, who was slain, on 3rd June, 1665. The second in June 1666, between Monk (Duke of Albemarle) and De Ruyter, (off Dunkirk); it lasted four days, and for daring on one side, and obstinate exertion on the other, and furious valour reciprocally, perhaps unequalled. Victory could not be properly claimed on either side. The third, on 24th July, off the Dutch coast, between Monk and De Ruyter again. This was the clearest victory yet gained by the English.

Those who imagine that naval men are fond of war, as conducive to their rise in life, or desire it from ambition, are assuredly mistaken. There is no class* that deprecate it more sincerely on account of its inhumanity; and this feeling is very reconcilable with their known characteristics. But having from patriotism embraced the profession of arms, whenever the country becomes involved in strife with other nations, it then is their duty to enter with zeal into its defence; and as they are sensible that upon their exertions mainly depend the safety of the state, their devotion becomes the more intense. Hitherto they have maintained their station with honour, and have reaped a corresponding fame from their merit; and there is no reason for entertaining the least doubt that they will continue to do so again whenever that merit shall be put to the test.

THE MARIA SOAMES' HURRICANE.

(Concluded from page 459.)

It is a curious coincidence, that, in the midst of our discussion on the subject of hurricanes, two remarkable instances should force themselves on our notice, as if to provide a practical illustration of the soundness of the theory, and an undeniable proof of the little progress which it has made on the attention of seamen. The *Maria Soames* comes first, to shew us that this inattention permits her to run into the focus of a storm, and by so doing to incur the loss of some fourteen lives with wreck of every thing above board, and in the confusion and destruction of every thing below. Next comes the *Pluto*, suffering worse in wreck, by running into the focus of another storm, and narrowly escaping from it, is cast on shore a helpless hulk, not far from the port whence she started.

In both cases escape from all this misfortune was at hand,—perfectly available. In the first instance a fair wind might have been found by going a little out of the course, and in the last another day or two would have been all the sacrifice required. The *Maria Soames* might have stood to the E. and S.E., and not lengthened her distance above a day's run; and like the *Pluto* might have got to the eastward, or behind the whirlwind, as it travelled across her path to the westward, saving thereby all the miserable consequences of the gale. Both cases stand on record in this volume, the last in our November number, and the former in that for September, of the neglect of the theory of hurricanes, one of the most remarkable discoveries, and one of the most important to seamen of modern times.

But, of what use to write about such things when those for whom we write will not read. Mr. Piddington's exertions in the East Indies, would seem to be of little avail, if we judge of their effects by these two cases. Memoir after memoir appears from his busy pen, illustrating with diagrams the cases of hurricanes and all their attendant ill conse-

* All branches included.

quences; and yet neither the *Maria Soames* nor the *Pluto* appear to have known any thing of them! But let us go to our lesson.

We left you with the first fair wind of a hurricane, from which you were to ascertain at once the direction of the focus from you. The method we gave you was good and simple, but perhaps the following may be more so. Turn your back to the wind; then if you are in north latitude the focus will be on your left hand, but if you are in south latitude it will be on your right; in both cases at a right angle from the direction in which you are looking. This rule holds good, you will perceive from the very nature of a whirlwind, in all parts of it clear of the focus. Having determined the direction of the focus from you, the next step to be taken to avoid it depends on the part of the hurricane circle on which you find yourself to be, along with the direction in which it is travelling. Your principal object is to avoid the focus as you would a waterspout, and to do this you must *give up all idea of keeping your course*, even should the hurricane wind which you have be fair. Make a fair wind of it if you like, but not to run into the focus. The *Pluto* and the *Maria Soames* did this, and both suffered for it. Let us suppose you were on board the *Pluto* (in north latitude) when she had her first hurricane wind from E. and E.S.E. Turning your back on the wind, and facing yourself W.N.W., would have given you the focus of the hurricane on your left hand, at a right angle S.S.W. of you. It would then be clear to you that standing down to the southward would be the worst course you could adopt, as it would take you into the middle of the storm; and knowing that the hurricane was travelling to the westward, as the hurricanes of the China Sea, and indeed all hurricanes do, you would have immediately put your ship's head to the N.E., and have sacrificed a day to get out of the way of it.

Again suppose you had been in the *Maria Soames* in south latitude. She had her first hurricane wind from west. By turning your back on the wind and facing the east, you would have found the focus of her hurricane on your right hand due south of you, and in that case too you would have had a good opportunity with a fair wind to have run to the east, and reached a position which her hurricane had passed over, and then hauled gradually to the southward. But the *Maria Soames* too stood to the south because, like the *Pluto*, her course lay that way!

Now, in deciding on what you should do to avoid the mischief you must inevitably suffer by penetrating into the body of the storm, after ascertaining the direction of the focus from you, you must consider the direction in which the whole whirlwind is moving. We will here briefly note the general direction in which those that are known usually travel. In both hemispheres, without doubt, they always move westward. In the West Indies, they generally move on courses between W.S.W. and W.N.W. Some rush over the American continent, but the greater number form a curve in their course up the Florida Gulf, and thence along the Gulf Stream, sweep the coasts of America, and traverse the Atlantic. In the Indian Ocean, they adopt a course about W.S.W., curving to the south towards the end of it. In the Bay of Bengal, they move about W.N.W. across the bay. In the China Sea, they

assume directions varying from W.S.W. to N.W. But they all travel westerly, and, therefore, if you can get to the eastward of them, or, as it were, behind them, in low latitudes, where they do not recurve to the east, you will be safe.

Now the nature of the whirlwind, considered with its law of gyration in both hemispheres, which we have already explained to you, at once suggests these rules, in order to get out of it. *The starboard tack in north latitude, and the port tack in south latitude, will always take you from the focus.* But here, again, come other considerations, and first, your own position with reference to the focus and sea-room.

With respect to sea-room, you must take your chance, and do as well as you can; but with respect to the focus, knowing the direction of it from you, and that in which it is going, it will be easy to shape your course to avoid it; your quickest way of doing that being to stand off on a course at a right angle to the track on which the storm is moving. But it will be evident to you, on considering the progressive movement of the storm, that in all these cases there is one part of the hurricane circle on which you may find yourself that is more particularly dangerous than another, from the tendency there is there to draw you into the focus. And this is the foremost part of it, and that particular part which is farthest from the equator, or nearest to the poles in both hemispheres.

Examples will best serve to instruct here, so let us take the Indian Ocean hurricane, and suppose you to find yourself assailed by a furious gale from the S.E., in about 20° S. If you were to put your ship on the starboard tack and make way to N.E., you would be adopting the very worst possible course, for you would be meeting the very centre of the storm which is itself also travelling towards you. This has been the ill fate of many a ship. Some have escaped miraculously from it, but others have left none to tell the tale of their wreck. The port tack would draw you away from the focus, but the focus is making progress towards you; and it becomes a question whether its progress is not greater than yours, and it is nearing you.

Now, this is the very worst part of the storm circle to encounter. If you stand on one tack, the starboard, you are going into the focus of the storm, and if you adopt the port tack, the storm is following you in its progress to the S.W. also. In this state of affairs, the very worst position in which you could be placed, you would be justified in bearing up to the westward with the view of crossing the track of the storm, and getting to the northward of it before it reached you. But this is a bold measure, and much depends for its execution on the qualities and speed of your vessel. In this manœuvre, you will bring the wind south of you on your port quarter, but you should make as much on a N.W. and even N.N.W. course as you can, for the wind will draw round to S.W. and W. When you have brought the wind to S.W., you will know that you have crossed the track of the storm, the focus being S.E. of you: you will then, according to your distance from the focus, have either the hurricane wind, or the moderate S.W. monsoon.

We might multiply our cases and assume that you get the first hurricane wind from different points, but having given you the main prin-

ciples, by considering them well first,—according to whether you are in north or south latitude, the direction in which the hurricane wind revolves; then the part of the hurricane circle, you first encounter; and then the direction of the focus from you, then the direction in which the whole whirlwind is travelling;—considering all these circumstances with reference also to sea room, you will not be long in making up your mind how to avoid the focus of the storm.

We have said nothing of your barometer, your real friend on these occasions, which only requires to be consulted to give timely warning. The mercury will fall an inch or more from the outer part of the whirlwind to the focus, and that past it will as certainly rise again as the opposite outer limit approaches. In the *Pluto's* hurricane the barometer was observed to fall two inches and a half, the greatest fall ever known in a hurricane, and that the *Pluto* had good warning is evident from the remarks in her log.

We might extend these remarks if time permitted to several other important points of this subject, but our object was by placing before you the distinct features of the hurricanes of both hemispheres, and their great principles of action to enable you, by reasoning on them, to see them so clearly as to be able to decide for yourself on the course which you ought to adopt.

And we have not intended them as instructions, sufficient for your guidance under all circumstances; rather they are meant to direct the attention of commanders of ships to the subject; for we quite agree with Mr. Thom when he says “let them but make themselves thoroughly acquainted with this, and *abstract instructions* will be an unnecessary appendage to the subject.” The various situations with reference to your position in the hurricane circle, the locality in which it is encountered, and the conditions of your ship are so numerous that to treat on them all, and deduce directions for each would require a volume larger than you would be disposed to read. But we trust that with the assistance of what you have read, and your professed desire to adopt the theory as soon as you can see that it is established by reality, we have now placed sufficient before you to make you a real “convert.”

THE MERCHANT SERVICE.

SIR.—Being a constant subscriber to your invaluable journal from its commencement, I have of course read a wonderful deal about this unfortunate Merchant Service, of which, I have the misfortune to be a very unworthy member. I have served a long apprenticeship to it, and have not exactly had my eyes shut the while, to the very many abuses, and serious evils existing and increasing in it, all having their origin from two sources—*laxity* in the laws, and *parsimony* in the owners. Now I wish to tell you, Mr. Editor, that I may not be supposed to be wincing under the effects of some of the abuses I shall have

occasion to mention, I am not a "put-in" master. But to give you an idea of the disgust I feel towards the service, as it is now constituted, I have three sons who are daily taught to dread it as a life degrading from circumstances, and never to be thought of by one of them under any consideration, and this, I say of a profession which formerly was, and still ought to be a most honorable one, as it is one of great trust. It has fallen, and parents ought to dread it, for where is there anything to encourage the expanding intellect of youth? far from it, for when he begins to see things in their proper light, and view his situation as it really is, when the novelty of sight-seeing and foreign countries has lost its interest, and nothing but a future prospect of £9. per month spreads out before him, then he curses the day he ever sacrificed his early years in such a service; and this is evinced to us every day in the number of still young men we see abandon it, and to which Liverpool Exchange will bear ample testimony any afternoon.

A great noise is made about sailors, Common Jack, and his position. Let the remedy be applied at the seat of the disease, and the healthy state of the subordinate members will soon become apparent. Something must be done to save the British merchant service from utter destruction; and the first grand step, but the last that will be taken, I fear, being unpalatable, is to increase the emolument of its officers, and protect the well informed and efficient from the bravado of the ignorant and the inefficient, by well established laws which cannot be evaded. At present there is no inducement for a respectable youth to enter the service; the utmost he can expect, after long years of servitude, is some £10 per month, as an equivalent for a life of hardship, peril, and responsibility. He must naturally say to himself, Why, with good conduct, it will be a very hard case if I cannot get that much as a clerk in a counting-house, where I shall have no hardship to undergo. Another thing more trying to the man of spirit is the harsh superiority assumed over him by his owners as is too often the case; for in nine cases out of ten they hardly deign to treat their masters with common civility; but expect him to leave his hat outside the door, and advance into his presence stroking down his hair as if he feared losing his head. It appears strange, but it is true, this is the sort of man preferred now. He goes cheap, submits to insult; its no for the muckle wage, but after he gets out of his owner's sight, the wee things about the decks accumulate vastly. Oh, if they could see these characters as I have seen them, were they to hear the tales I could unfold, would they think such men cheap then? No, they would soon see the fallacy of their doctrine, and find that a few pounds per month were dearly saved, when loss of time in port and passages, and neglect and destruction of property are taken into account. Then again, a gentleman, and I still maintain merchant vessels going abroad ought to be commanded by gentlemen, expects to live more or less as he has been accustomed to do, and not in the piggish way the principal part of the ships are now provided; he certainly ought to be indulged with reasonable comforts, but this is rarely the case. God knows long sea voyages are trying enough with every comfort one can procure. I once knew a captain who had his wife with him the voyage. One of his owners in

examining the disbursements saw some milk charged. He took it into his head the milk had been for the poor woman's baby, for which fortunately nature had provided, and it did not need to live at the owner's expense. However, he was not allowed to indulge himself and officers with a little milk to their coffee in the morning, nor were baby and mamma allowed to go again. Now this is rather hard, Mr. Editor, as the poorest people can generally get a little milk to their meal if nothing else.

I knew another who lost his situation because he dared to defend his right to buy a little of cayenne pepper. Now, poor man, they might have allowed him a little pepper to his scouse. What blind folly all this sort of thing is. How many little odds and ends can be cloaked under a bolt of canvass, a coil of rope, or other necessaries, if a man has a mind to be dishonest, and this is the very way to make him so; doubt a man's probity, and he has no farther incitement to honesty but his own conscience. So, where trust is unavoidable, confidence and liberality are its safeguards; liberality will induce economy, and confidence will beget respect, and, in the end, the ship-owner will find whether it is to his interest to employ the unprincipled and grovelling at a small rate of remuneration, or the man of principle and spirit at a high rate.

It is not the shipowners alone who are aiming a death blow at the mercantile marine of this country; their agents in foreign countries are aiding more in working its ruin. A master of a British merchant vessel now, even if he spends half his income in lavender water, appears to cause that peculiar turn of the lower part of the nasal organ which may be observed occasionally in a person where the kind of something not very savory assails it, (such scents for instance as the street of Shaang-hai dispense,) he appears to be endowed with some property, contact with which would cause contamination. How different it was when I first joined the service. Then we met with some hospitality, and respect when merited always, and that at least, is every man's due. How is it now? A short time ago I happened to be in China when two vessels arrived at Whampoa from Bombay, each commanded by a very gentlemanly man, but both strangers. Of course it was imperative on them as soon as possible to make their appearance at the hong of their respective agents in Canton, a distance by water of some fifteen miles, which in July is no pleasant journey. They took with them each a bottle of beer, naturally supposing they would have dinner offered there. They saw their agents, called on several others with whom they had more or less business, and left Canton just as they were all going to dinner, returned to their ships at eight o'clock, never having broke their fast since six in the morning, for at that time there was no place in Canton where refreshments could be purchased. Now, is not this enough to stir up the phlegm of a man of spirit, who, had any one of those merchants gone on board his ship as a stranger or not, would have had the very best that ship contained set before him. This is only one instance out of many I could enumerate.

I am very sorry to be obliged to acknowledge that there are many men in command of Merchant vessels, who are really not fit to sit down at a gentleman's table; and why are such men in command? ask their

owners—they go cheap! At the same time I am proud to assert that there still exist numbers who are an ornament to any society, men of conduct, education, and principle, men from whom these lordly merchants might receive information, from their extensive knowledge of the world. Are these men noticed? No! For why? They cannot draw a line. This is absurd, this very line ought to be drawn, or where is the encouragement given to such men—none! They become disgusted with the treatment they receive, disgusted with their profession, and many valuable young men are lost to their country and themselves, by having to seek consolation in society degrading, and destructive to their moral character; they find the gentleman is no more respected than the blackguard; they have no encouragement to do well; they are away from all their friends; the bottle is accepted in their stead, it leads to ruin, and how often to suicide, at any rate, to death; and this is the end of a being who (might) if taken by the hand and noticed in his brightest days, (would), no doubt, have lived to be an ornament to his profession. This picture is not over drawn. I have seen it realized, and, with weak minds, it will be the case at all times. Now, let them draw the line, it will not cost them much, (although that is a serious consideration now-a-days.) Let the well conducted man be more noticed, occasionally invited to their tables. At all times, let his ship have the preference; let the man of bad character be shunned; if possible, his ship unloaded; at any rate, his conduct represented to his owner, with an objection to load her again under his command. I think, then, owners at home would see the necessity of paying a little more to get respectable men. Let the present system go on much longer and all the latter class will have vanished from the face of the waters, for they all leave it as fast as they can; and they are not likely to allow their children to subject themselves to the contumely they themselves have suffered.

Now, neither Liverpool nor London are anything to me, for I belong to neither; but it does amuse me to hear of the Liverpool ships, in all parts of the world, being under such inferior command to the London ships. This, I have no doubt, is the case to a certain extent—not because the men are either London or Liverpool, but because the men in the London ships are *better paid*, their owners are *less mercenary*, and more respectful towards them; and hence the greater inducement to serve them. It would be folly to blame the place for the fault of the people. I should say the one-half of the commanders of London and Liverpool ships are Scotchmen, and the other half of the former from some way between Harwich and North Shields. Notwithstanding this, abroad, poor Liverpool has to stand donkey for all the world except London; the Firths of Clyde, Forth, Murray, and Tay, rivers Tees, Tyne, and Humber, pour out their fleets to all parts of the globe, and Liverpool comes in for all their transgressions.

I was once at a party at Bombay, near the lighthouse, the officer in charge of it being one. About nine o'clock a gun was fired; "Ah!" said he, "there is a vessel on the rocks." "Some Liverpool blockhead, no doubt," said a smoke-dried, liverless, looking subject. Sure enough it was a Liverpool vessel, which, no doubt, his bilious system felt much gratified,

although, not many weeks before, a large London ship, and one of their own large Bombay ships, were wrecked, with melancholy loss of life, on the same spot. But give a dog a bad name, &c. I once knew a young lady abroad, who had married a Liverpool skipper, and just come to England with him. Some one was rather surprised that her mamma would have allowed such a thing. "O!" said she, (the mamma) "he is going to get a London ship next voyage;" as if this was to work a total revolution in the otherwise disgraceful affair.

A vast deal is also said now, about the superiority of the different Foreign Mercantile Marine. Now, I myself, have never been able to find it out. No doubt it is the opacity of my discernment. Still I should like to know in what their superiority exists. That they will not often err from want of caution, I will allow, and I had a pretty good proof of this a short time ago. I was outward bound, and experienced a very heavy gale from the southward, which reduced me to a close reefed main-top-sail for twelve hours; with the rising sun, it moderated and westered, I wore and set reefed courses, and close reefed top-sail. P.M. Still moderating, let the close reefs out; set jib and mizen.

A.M. Set top-gallant-sails over single reefs, and at 4h, let out all the reefs, going seven knots, course S.W., wind N.W., at 6h, passed through a fleet of seven sail, four French and three Dutch, still lying to, and all like myself bound to the southward. Taking advantage of the tail end of the gale, which is the grand secret in making passages, I gained 147 miles while they lost considerably by drift. Suppose we in British ships where everything must keep pace with the times, and passages must be made, were to follow this course, what would become of us? We cannot afford to lay to, either for wind or land, the system is go along, and go along we must. Did ever any one hear of a Frenchman or a Dutchman running for land, or passing intricate straits in the night, or doing any other thing when there was the slightest risk or danger? No, they lie to and take their rest, when we can hardly afford to lay down, let alone, lie to. No, I deny the superiority of any nation over the British. When seamen are the subject in the time of peril, where energy, never flinching perseverance, expedient, and presence of mind, are requisite, where is the nation can compete with us? No, no, English hearts and English hands depend on us when we get into difficulties. They say Foreign vessels always command a preference in the Brazils, and why, because, four-fifths of the merchants are Germans, Frenchmen, &c.; and as a matter of course, they give the preference to their own ships. It is all stuff, and I am tired of hearing our proudest boast suffering so vitally from the incessant scribbling of a parcel of fools, who don't know an anchor from a wheel-barrow. We have fallen off it is true, the remedy if taken in time is apparent. Let the service through strict examination, be made less accessible to the ignorant and unworthy, and let the worthy and accessible be *better paid*, and *more respected*, and our ships will be better commanded, precept and example will improve our tars, when all the crimps are hung or transported, lodging-houses for sailors heavily taxed, and *Sailors' Homes* universally established. I would have no more power placed in the hands of

masters, for no examination can prove whether they know how to wield it. But I would like to see more vested in the hands of officers commanding her Majesty's ships; they are the men to act, and not landsmen who know nothing of Jack, and fancy him a very ill-used person. Such they thought in Bombay in 1842, and I must say, the philanthropic magistrates tried all they could do to ameliorate their anguish, until they found if they continued their practice, they might not only have to turn the town-hall, but the cathedral into police offices, from the daily influx of these ill-treated beings, from all the ships in the harbour, there being then about 200 sail. From having nothing for the men to do, Jack had too much time to think, and it became quite the fashion to pull their skippers up before these kind justices, as they term them now, because their pea-soup was served up to them without celery seed, which you will allow, Mr. Editor, was a very hard case.

No, let the Commanders of H.M. ships have the power to punish as they think proper, and we may expect the justice of a case to be arrived at. At present, all they can do is to take them from us, which they do frequently to our very great inconvenience.

Hoping you will excuse this long and tedious trespass on your valuable time, I leave it to yourself whether you think it worth room in your useful journal or no; should you not, I shall not feel offended.

I have vented a little of my spleen, and mentioned a few facts which tend most vitally to injure the British Mercantile Marine.

I am, &c.,

MASTER OF A MERCHANT SHIP.

[We hope to hear again from the "Master."—ED. N.M.]

PASSAGE THROUGH TORRES STRAITS BY THE BARRIER REEF.

Surveys of Capt. Blackwood, late of H.M.S. Fly.

English Channel, June 9, 1846.

The following remarks may be of interest to those who may have to proceed through Torres Straits by Raines Island, and the route as lately surveyed by Captain Blackwood, also to Lloyd's and shipowners, for the purpose of erecting three beacons on the following named places. One beacon on one of the middle banks, north of Ashmores Banks; a beacon (or an old ship filled with stones), on the east end of Cockburn Reef; the wreck of the *Sir A. Campbell*, filled with stones, near to the west end of the same reef; and a beacon on the small sand bank to the N.W. of it, to make the track of the late survey by Captain Blackwood (which is an excellent one), safe and easy with only one night's anchoring, if the barrier reef be not entered before noon, in the middling sailing merchant ships.

A few remarks on board the *Persian*, from Sydney to Calcutta:—Sept. 10th, 1845, left Sydney, wind N.N.W.; 18th, got S.E. trades in lat. 22° 22' S, long. 156° E, in the vicinity of Bird Islet, a small sandy islet covered with brush wood. At 4 P.M., 24th, observed Yules small detached reef from the mast-head, bearing N.W.b.W.; steered for it, in the expectation of getting through Steeds passage before dark. At 5 P.M., small detached reef N.W.b.W. 3 miles, the breeze getting light, brought the ship to the wind under single-

reefed topsails, jib, and mizen, and courses, to work her off until morning. At 6 P.M., observed the great detached reef bearing N., tacked ship every two hours. At 5 A.M., 25th, made sail and stood in N.N.W. for the great detached reef; at 5h. 30m. A.M., observed the tower on Raines Island over the great detached reef bearing N.N.W., distant 13 miles; found a current setting northward at about 1 mile per hour. At 7h. 30m. A.M., took sights for chronometers, and found them correct with Raines Island, as put down by Capt. Blackwood. At 9h. 30m. A.M., sounded in 19 fathoms water, and steered S.W. for Middle Banks. Noon, rounded Middle Banks, and steered W.b.S. for Cockburn Reef. At 2h. 30m. P.M. the sun getting ahead, with strong breezes and heavy passing clouds, came to an anchor in 9½ fathoms water on the north side of Cockburn Reef, Sir C. Hardy Islands in one bearing S.E. ¼ S., Cockburn Islands, W.b.S. ¼ S. 8h. P.M., squally with showers of rain; bar. 29.96, stationary; ther 80; winds E S E.

26th, at daylight got under way, and steered for Cockburn Isles, when the north and south islands were in one, and the westernmost open a ship's length (being then a short mile off the reef); steered N.W.b.W. for the wreck of the Sir A. Campbell near to the extreme end of the reef, passed her within half a mile, and steered N.W. to pass north of the first sand bank, as I could not distinguish the end of the reef on account of heavy clouds passing rapidly over head, showing the water all discoloured; rounded the sand bank, and steered for Bird Island, entering King's inner route.

We shipmasters have many thanks to return Captain Blackwood for his excellent survey of this now expeditious and safe route through the Barrier Reef and most dangerous part of Torres Straits, and the benefit he conferred by having it published at Sydney at his first possible opportunity, previous to sending it to England.

Were there beacons placed, as I have stated at the commencement, ships would have no occasion to anchor before dark, and unless entering the barrier late in the day, could always secure good anchorage under the lee of Bird Isles; from there a dull sailing ship could always get into Endeavour Strait before dark; but if night overtook her about Turtle Island, on no account anchor to leeward of it, or in Newcastle Bay, being unsafe (as will be seen by the following remarks), come to under the lee of the sand bank marked X, in smooth water, if 11 or 12 fathoms.

26th, at 5h. 20m. P.M. wind E.S.E., cloudy weather, passed close to Turtle Island, it appearing bold on the N.N.W. side, with a long reef off the west end. Came to an anchor with the island bearing S.E., distance 2 miles in 5 fathoms water, gave the ship 45 fathoms cable and sounded alongside in 4½ fathoms, with a nasty chop of a sea. While furling sails observed the water to break over a small rock, about 1½ cables' length in shore of our quarter; being then nearly dark, hove up anchor and run her N.W. 2 miles, and brought the ship up in 7½ fathoms, the island bearing S.E., a nasty short sea, the island giving us no shelter, let the ship have 65 fathoms chain, chocked and backed the windlass, with tackle for support; midnight, more moderate.

27th, at 5h. 30m. A.M., wind E.S.E., strengthening and cloudy weather, with a short jumping sea—unchocked the windlass, and commenced heaving in with a luff tackle power messenger to the winch. Got very little of the chain, when the body of the windlass in the wake of the chain snapped, and wrenched asunder; tried stream chain and tackles as a messenger upon it; could get very little, and afraid of detaining the ship too long, so as not to clear the straits before dark, unshackled the chain, set sail, and slipped. 9 A.M. observed a strong ripple of the tide, over the rock between Mount Adolphus and Cape York. 10h. 30m. A.M., entered the westernmost channel of Possession Group into Endeavour Strait, according to Lieut. Yule's directions, and steered S.W.b.W. in 9 and 10 fathoms water. At 11 A.M., in sound-

ings of 9 fathoms, passed within a ship's length of a small sand patch, of about 40 feet in extent, with three or four feet water upon it, the tide making a strong ripple over it. The mate being upon the top-gallant-yard reported it when about one mile distant half a point on the larboard-bow, and another one-and-a-half point on the starboard-bow. I fancied it to be tide rippings, but, to make sure, steered for the former, and passed within a cable's length in nine fathoms, when I saw the sand bank plain from the quarter-deck. While passing I took the following bearings:—A small island S.b.W. $\frac{3}{4}$ W., Cape Cornwall, W. $\frac{3}{4}$ N., south extreme of an island, not named, next to the main island, N.W.b.N.; in a few minutes after, we opened this island from the main island, and could see down the deep opening as laid down in the charts. The other rippling looked as suspicious, but without windlass, and the day far gone, I could not stay to examine. At 1h. P.M., North Wallis Island S.W.b.W. $\frac{1}{2}$ W., three miles distant, eight fathoms water, steered N.W. and N.W. $\frac{1}{2}$ W., until 2 P.M., Booby Island bearing N.N.W. 10 miles; we had then 4 fathoms water for about half a mile, being the least soundings we had. At 3h. 30m P.M., rounded to under the lee of Booby Island, and visited the Post-office. Saw a good many letters addressed for Sydney, left by the late Horse ships. Bread, water, beef, and tobacco, left by the Ann, and Bussullah Merchant, all in good condition. Read a report of Capt. William Reid, brig James Wheeler. of Cork, who stated he went over a bar with only 15 feet water, Red Wallis Isle bearing S.S.E., and Cape Cornwall E. At 6h. 30m. P.M., made all sail to the westward.

It is very probable that the channel through Endeavour Strait round Cape Cornwall well towards Booby Island, may be composed of loose shifting sand; but by observing Lieut. Yule's directions in steering towards Wallis Islands, to within two or three miles, before steering N.W. and N.N.W. for Booby Island, there will be found plenty of water for any ship.

The approaching departure of H.M.S. *Fly* from the colony, on her return to England, from the arduous voyage on which with H.M. schooner *Bramble*, she has been employed, induces us to give our readers a brief sketch of her services, in order to impart to them some idea of the benefits that have been conferred upon the commercial interests of the colony by Capt. Blackwood and the officers under his command.

The "outer route," through Torres Straits, as it is generally called, which has been of late years so generally followed by vessels bound to India, has hitherto been but imperfectly known, and could only be considered safe for those ships whose commanders had already passed that way. The rough, and little more than eye-sketched plans of different passages through the Barrier Reef, which were procurable previously to the *Fly's* voyage, were sufficient to lead a stranger into danger, but not to extricate him from it; and many have been the melancholy and distressing losses of fine ships in consequence. During the last year, even with the advantage of Capt. Blackwood's chart, the loss of the *Hyderabad*, with a valuable cargo of horses for the East India Company's service, which, by missing the beacon on Raines Island, was thrown to leeward, and was obliged to run through the first opening that offered, in doing which she struck on a rock, and sank almost instantaneously, in deep water, is a proof, were one wanting, of the difficulties of these passages; and fully shows when, under circumstances of unfavourable weather, or an error in the reckoning, the passage intended to be taken is passed by, or cannot be recognized, it becomes necessary to dash at the first opening, and the lives of all on board are jeopardised.

Secondary to this, but not less important, is the detailed survey of the channel round Darnley Island, between it and the coast of New Guinea—a route, although to the northward, far preferable to any entrance through the

barrier, inasmuch as the passage will not be lengthened more than 24 hours, and is many miles in width, and quite free from difficulty and danger of any kind. It is evidently the principal passage through Torres Straits.

One of the chief objects of Capt. Blackwood's instructions was to erect a beacon in a convenient spot to direct ships to the best channel through the reef—and this has been most effectually performed. The passage generally used to lie in the neighbourhood of that part of the barrier situated to the north of 12° south. In the lat of $12^{\circ} 21'$, the Ferguson, with a detachment of the 50th Regiment, was wrecked; and in $12^{\circ} 11'$, the wreck of the Martha Ridgway serves to point out the entrance round the Black Rock, in $12^{\circ} 12'$ —a favourite passage, and perhaps the best among the bad. It is not known to us whether any ship has been lost in this passage; but if not, chance has carried them clear of a very dangerous sunken patch, having only 10 feet upon it, in the direct track of the course. Here there was no possibility of erecting a mark, as heavy breakers lashed over the reef, and there is no rock or island where a party could be landed. To the north there are several openings in the reef, such as Nimrods entrance, $12^{\circ} 5' 30''$, about a quarter of a mile wide; and Steads passage, considered a safe one by Capt. Blackwood, in $11^{\circ} 55'$, but equally contracted. No beacons could be erected at any of them; but, in Raines Island, in $11^{\circ} 36'$, every facility was afforded, and the beacon was constructed, and serves to point out the safest and best passage that exists; and, according to the direction given by Capt. Blackwood, there will be no difficulty in making it.

During the progress of building the beacon, the *Fly* and *Bramble* were employed in exploring the relative situations and extent of all the reefs between Raines island and the coast, as well as the exact positions of the more southern entrances above noticed; so that through whatever passage a ship, may enter, the chart will be found most useful in leading her clear of all dangers to a safe anchorage.

A chart of this part, showing the whole detail of the Barrier Reef, and of the new passage round Darnley Island, and embracing the track to Booby Island, has been put into the hands of the engraver, at the expense of the Colonial Government, and will be completed before the ensuing season, by the use of which ships bound to India may proceed on the voyage with confidence.

In thus leaving for immediate use the most important result of this voyage, Capt. Blackwood is entitled to the thanks of the colonists, inasmuch as no small portion of the *eclat* of his labours will be lost in England by the previous publication of his work in the colony. The Admiralty will doubtless republish it in England, and probably with improvements; but, in the mean time, the public will reap the advantage of an early possession of the information it conveys.

A more particular description of this part of the voyage would be out of place here; nor indeed, is it at all necessary, because the chart itself will be a description which those who consult it will perfectly understand and be satisfied with: but it is due to those who have rendered this service to be assured that, their labours are valued and duly appreciated, by those who are capable of judging of the vast importance of this survey to the large and rapidly extending commercial intercourse between the Australian colonies and India.

Although the principal object of Capt. Blackwood's voyage was confined to the Great Barrier, yet there was another of less immediate importance attached to his instructions, viz., the exploration of the coast of New Guinea—the one of labour and intense anxiety; the other full of interest and novelty—in fact the cream of the voyage. The time, however, expended upon the survey of the barrier, the progress of which was materially interfered with

by the erection of the beacon, precluded any thing being done there until the last few weeks of the last voyage; but sufficient was seen of its coast and inhabitants to cause the greatest regret on leaving it. The portion of the country explored, which embraced about fifty or sixty miles to the west of the meridian of 145° E., was formed by a low coast, intersected by numerous inlets running many miles into the country, and forming, as was supposed, the deltoid *embouchures* of a considerable river or inlet of the sea; its shores were densely populated, villages of considerable size being passed at intervals of every two or three miles, at some of which they landed, and were enabled to look about them; but at some they were prevented, and their intercourse fiercely opposed.

There were no signs of any previous intercourse with white people, and they were evidently ignorant of the effect of fire-arms, but they possessed some of the refinements of a civilized life, which showed that they were a people of superior intelligence to the generality of savages, particularly to their neighbours of New Holland.

Lieut. Yule, of H.M. schooner *Bramble*, with the *Custlereagh* as her tender, under Mr. Aird, remains to carry out the survey of the outlying reefs, and of the coast of New Guinea. This important service could not be left in better hands.—*Australian Paper*.

EXAMINATION OF MASTERS AND MATES IN THE MERCHANT SERVICE.

EXACTLY a twelvemonth has elapsed since the regulations of the Board of Trade, for encouraging the voluntary system, were first put in operation. We have, therefore, some means, though very limited, of testing the efficacy, or otherwise, of that mode of applying a remedy to an evil, which, at all times, but within the last five or six years, more particularly, has been held out to the public as a main cause of the great sacrifice of life and property risked in merchant shipping. We do not mean to say that we entirely concurred in this view of the case, because we know that, since the East India trade was thrown open, and our commerce extended to all parts of the world, and since, from the use of steam vessels and tugs, ships are enabled to proceed to sea at all times, and in all weathers almost, there are many gallant and intelligent masters to be found in our mercantile fleet, consisting of upwards of 30,000 ships, and in tonnage of more than 3,000,000 tons, who are always ready and willing to "brave the dangers of the sea," and who have made most extraordinary and successful voyages. It cannot, however, be denied, that there are also many, who, perhaps, are good men enough, but who are still quite unequal to the discharge of that important duty which is often cast upon masters of merchant ships, "under the many difficult circumstances and trying situations to which vessels may be exposed; such, for example, as having to erect, and to rig jury-masts, when suddenly requisite, or to form rafts in case of being stranded, &c.; and in such other cases as call for a higher order of resources." (*Vide Regulations, Article 7.*)

With these considerations in view, we have been anxious not only to ascertain the total number of masters and mates examined and qualified within the twelvemonth, but the number returned from each port, where there is a "Board of Examiners duly constituted by the Lords of the Committee of Privy Council for Trade."

In the schedule annexed to the regulations before alluded to, it appears that Boards were established at the following ports, viz. :—

London Corporation of Trinity House; Beaumaris, Gloucester, Milford,

Plymouth, Portsmouth, Great Yarmouth, Branch Boards, consisting of Sub-Commissioners; Hull, Newcastle, Leith, Dundee, Trinity Houses; Glasgow, Boards for Licensing Pilots; Dublin, Ballast Board; Liverpool, Commissioners of Pilotage; South Shields, Marine Board.

We are not aware that any others have been subsequently authorized, or, if they have been, that they have proved of any utility whatever. As we have been favoured from time to time with a copy of the lists of masters and mates who have obtained certificates of qualification, as they have been printed and published by the Committee for managing the affairs of Lloyd's Register Book of British and Foreign Shipping, we shall, from this authority, shew the number of persons of each class, and at each port who have successfully subjected themselves to the voluntary examination prescribed, viz. :—

| MASTERS. | | | MATES. | | |
|-------------|---|----|-------------|---|----|
| First Class | . | 39 | First Class | . | 11 |
| Second " | . | 69 | Second " | . | 16 |
| Third " | . | 15 | Third " | . | 7 |
| Total | | | Total | | |
| 123 | | | 34 | | |

These have been examined in the following proportions at each of the ports, against the same hereinafter expressed, viz. :—

| | MASTERS, | Class. | | | MATES. | Class. | | | |
|------------------------------|----------|--------|------|------|--------|--------|------|------|---|
| | | 1st. | 2nd. | 3rd. | | 1st. | 2nd. | 3rd. | |
| Trinity House, London, | | 28 | 39 | 1 | . | 2 | 9 | 3 | |
| " Dundee, | | 6 | 3 | 1 | . | 4 | 2 | 1 | |
| " Newcastle, | | 0 | 0 | 1 | . | 0 | 1 | 0 | |
| Branch Board, Portsmouth, | | 0 | 1 | 0 | . | 4 | 1 | 0 | |
| " Plymouth, | | 0 | 3 | 1 | . | 0 | 3 | 3 | |
| Marine Board, South Shields, | | 2 | 25 | 11 | . | 0 | 0 | 0 | |
| Pilot Board, Glasgow, | | 1 | 0 | 0 | . | 0 | 0 | 0 | |
| Trinity House, Leith, | | 0 | 0 | 0 | . | 1 | 0 | 0 | |
| Total Masters | | 37 | 71 | 15 | Mates | | 11 | 16 | 7 |

The foregoing lists necessarily give rise to many and very serious reflections. We should be sorry to pronounce this system a failure, but, unless from some fortuitous circumstance which we can scarcely anticipate, it receives a decided impetus, little or no hope can be entertained of its ultimate success, judging from the tardy rate at which it has hitherto proceeded.

It would indeed be a pity that the example of the 37 masters of the first class, and 71 of the second class, should be altogether without any useful effect. The number of the third class, 15, is really hardly worthy of notice. For the last mentioned class a limited qualification only is necessary. They must be able to write a legible hand (*which is not always the attribute of a sailor*), and understand the five first rules of arithmetic. They must also possess a competent knowledge of seamanship, and of rigging vessels, stowing holds, &c., as well as an ability to correct the courses steered by compass for variation, lee-way, &c., to work what is termed a day's work, and to prick off the vessel's place on a chart, either by the calculated latitude or longitude, or by the bearings of the land by compass. They are likewise expected to shew that they understand the use of the quadrant or sextant, and can observe the sun's meridian altitude, and therefrom determine the latitude; and can also work the tides by the age of the moon from the known time of high water at the full and change. There is really nothing so difficult in these

requirements that should deter any man of fair ability from proving the qualification desired; but as masters of this class, must satisfy the examiners, who are enjoined to take particular care, as to the "habitual sobriety of the party," we fear there is more difficulty in producing testimony to this effect than in any thing else; hence it happens, we apprehend, that so few masters of the third class, who may be mostly considered to be in command of colliers, have proved a qualification.

The masters of the second class, must of course be of superior character, and must be able also "to ascertain the latitude by double altitudes of the sun, and by meridian altitudes of the moon, or of those bright planets or stars, the places of which are given in the *Nautical Almanac*. They are expected also to understand the care and management of chronometers, and the mode of working out and ascertaining the longitude therefrom; and to be able to ascertain the variation of the compass by the azimuth of the sun, as well as by the amplitude. We are really glad to see that in proportion to the whole, there is a fair number possessing the attainments above described.

There is in truth no very great distinction, except what may be expected to arise from a sound and discriminating judgment, between the requirements of the second and the first class. Candidates for the latter are only required to undergo "a more strict examination" in reference to the trying and difficult circumstances in which an officer of their rank may be exposed from the voyages he may be destined to perform. They must, it is true, have a competent acquaintance with plane trigonometry, a general knowledge of nautical astronomy, including the determination of the latitude by reduction to the meridian, and of the longitude by lunar observation.

They are likewise required to "prove their acquaintance with the compass and its deviation, and that they know how to compare two or more chronometers, and to rate them by equal altitudes; and, further, to understand the construction of Mercator's charts, and how to correct courses, and be well versed in the mode of laying down the required course on the chart. These officers, too, are supposed to possess a knowledge of mercantile book-keeping, at least, by single entry.

Such attainments ought to be within the reach of a very large portion of those able men who would make no difficulty in doubling the Cape, or rounding Cape Horn, and who are to be found in the merchant service; but we feel, as we have done all along, that their greatest difficulty is in bringing themselves to a determination to place themselves before the examiners. We are the more pleased, therefore, to see that the Corporation of the Trinity House, London, is principally resorted to. We recommend both masters and mates to go there, by which they almost entirely avoid the disagreeable consequences too sure to arise from local prejudice or influence. The Marine Board at South Shields seems to have lent a helping hand in aid of the important object; but the return we have laid before our readers is positively discreditable to our northern neighbours. Only imagine one master found qualified at Glasgow, and one mate at Leith! What can this mean? Have those strenuous supporters of the great outcry for an examination of masters and mates, with which the Board of Trade had been for three years assailed, gone to sleep, or have they changed their opinions? or have they, by casting reflections too freely upon the whole body of masters and mates, as we fear they did, shewn how injudiciously even *Scotchmen* can act! We would willingly pass by other places without comment, such as Liverpool, Hull, Dublin, Beaumaris, Gloucester, Yarmouth, and Milford; but it is impossible to avoid giving some expression to the disappointment we feel that nothing has been done at any of these ports, highly important as some are, in furtherance of the system sanctioned by the Board of Trade. It may be that the leading commercial men at these ports are in favour of a compulsory system,

and will support no other. Should such be the prevailing feeling, we would advise our friends, in the mercantile fleet, to qualify of their own accord as soon as they can, and thus prove their independence.

CAPTAIN BECHER'S MARINE ARTIFICIAL HORIZON.

Starcross, near Exeter, October 26th, 1846.

DEAR SIR,—Previous to my quitting England, in 1840, for the west coast of South America, I had my sextant fitted with your artificial horizon by Carey; and although, at first, I found some difficulty in obtaining correct altitudes, owing to the novelty of the application, as well as the tremulous motion of the steamer, a little practice soon overcame it; and, by occasionally obtaining a series of observations (with the time corrected by D. R.), at nearly equal intervals just before and after noon, I found the mean altitude correspond very closely with that by the real horizon taken by a second observer.

The first time I had occasion to make a practical use of your valuable invention, was off Cape Frio, on the 14th of August, 1840. The observed latitude on the previous day had been somewhat uncertain, owing to cloudy weather, and the night proved the same, so that no observations for stars could be obtained. On the following day the sun was very bright overhead, although a dense fog enveloped the ship. I was, by D. R. brought forward to noon, nearly in the latitude of Cape Frio, and, by observation with your horizon, found we were 5 miles to the northward of the Cape. I made 15 miles more southing, and then hauled round to the westward. At 6h. the following morning, going very easy, we made the Marika islets, nearly ahead about a mile distant, the ship at the time steering (by reckoning brought forward), to pass between these islets and the lighthouse island for the entrance of Rio, the wind at the time, and during the night, blowing strong from the west, with thick weather. On rounding the Cape, I had but 6 tons of coals on board, which were entirely consumed as we passed the forts, just leaving steam enough in the boilers, with shut off valves, to reach the outer anchorage. Had I not obtained an observation by the aid of your horizon, I should hardly have ventured to run; and as heavy westerly gales, with thick rainy weather, continued for several days after our arrival, in all probability, but for your valuable invention, our voyage would have been lengthened very considerably. We anchored at Rio on the thirtieth day from Plymouth without calling any where for fuel.

I have found your horizon, on the west coast of South America, where foggy weather prevails, of very great service during the last six years. The same pendulum oil is still in the reservoir or cistern that was placed there in May 1840, and I have never had any difficulty in fixing and adjusting the horizon to the sextant, owing to its beautiful simplicity of construction.

For inland surveys and river navigation, where the quicksilver horizon cannot be used for latitude owing to high meridional altitudes, as well as for true altitudes, I consider your horizon would be invaluable;—for, by fixing the sextant to the tripod of the theodolite, or any common stand, it may be used by any ordinary observer with the greatest accuracy.

How frequently, coming into the Channel, or entering the Gulf of St. Lawrence, do we encounter a dense fog with a bright sun overhead, after a continuance of gales of wind and cloudy weather, when no observation for latitude has been obtained perhaps for a week or more; and what anxiety would be relieved could we but obtain at such a moment the latitude within even ten miles of the truth, and which your horizon places within the reach of or-

inary observers. Certainly, no practical navigator or scientific traveller should be without one.

With every wish and hope to see your valuable invention brought into general use,

I remain, &c.,

Capt. Becher, R.N.

GEO. PEACOCK,

Late Com. of Chili and Peru Steamers.

HURRICANE IN THE WEST INDIES.

The Thames brings an account of the violent hurricane that lately visited the Havana. It commenced Sunday, the 11th, ult., and continued to increase in fury until it reached its climax on the following day. A great number of vessels were sunk; and out of 120 sail, the Habanera, Spanish brig of war, the Royal Mail steam-ship Thames, the English brig William Rushton of Liverpool and two or three others, at the termination of the gale, were the only vessels riding in safety. The immense shears in the Navy-yard were blown down, the whole of the wharfs torn up and much injured, and entirely covered with wrecked property of every description.

At the height of the hurricane the barometer was at 27.74: in 1844, on the occasion of another storm, it was 28.42.—The following, as near as can be ascertained, is the list of the casualties to the shipping.—Ships of War—French frigate *Andromache*, 60, Rear Admiral *La Placé*, was driven on shore, with three anchors a head, and topmasts gone by the cap.—French corvette, *Blande*, 24, totally dismasted, and on shore on her beam ends, a wreck.—Ships of War.—French steamer *Tonneure* totally dismasted and funnel gone.—Three Spanish vessels sunk.—Three driven on shore, *Montezuma* steamer, on shore, Quarantine vessels a total wreck.

We have to add that two English vessels were lost, and seven other seriously injured.

Ten American vessels were also lost, others damaged. The Spanish steamers *Matanzas* and *Regia*, and sixteen other Spanish vessels beside coasters completely wrecked. The *Jassen* French barque sunk, two other French ships dismasted, and a Belgian brig and a Dutch barque sunk. The Thames left on the 13th, two days after the catastrophe, and such was the confusion then prevailing, that it was next to impossible to arrive at exact conclusions as to the number of lives sacrificed.

The following letter from Captain Hart, shows the violence of the hurricane, and the excellent conduct of the officers and crew of the Thames:—

Southampton, Nov. 4, 1846, 7h. 30m. p.m.

SIR,—I have the happiness of reporting to you for the benefit of the Court of Directors, the safe arrival of this ship, after experiencing on the 11th ult., in the harbour of Havana, the most tremendous hurricane ever known there, attended with a loss of shipping almost incredible in that beautiful and land-locked basin. It had blown fresh all the previous day, and at sunset, not liking the appearance of the weather, I had struck the main and mizen topmasts, and fore-yards. At midnight the second anchor was let go, and otherwise all was ready to proceed to sea at daylight, it being arranged that the mail boat was to leave the ships at four o'clock for the mails, but at that time the storm came on from N.E., and continued with a force beyond conception until 10h. 30m. P.M.; it then lulled, veered round to N., then W., and W.S.W. and blew most violently until 4 P.M., afterwards gradually moderating, leaving such a scene of devastation, as thank God seldom falls to the lot of any one to behold.

"The French frigate, *Andromeda*, of 60 guns, Rear-Admiral *La Place*, ashore and topmasts gone by the cap; the corvette *Blonde* on shore on her beam ends totally dismasted; the steamer *Tonneure* at her anchors, but dismasted, and her funnel gone. Several of the Spanish men-of-war not to be seen; the harbour covered with all sorts of merchandize and upset vessels, and along the wharf, instead of ships' hulls, not more than their lower masts to be seen above water.

"At 7 A.M., the *Thames* drifted about half a cable's length, when Her Majesty's late ship *Romney*, in sheering to a tremendous squall stove our pinnace, but shortly afterwards fortunately for us, that ship drove a good cable's length, leaving us the weathermost ship in the harbour, and to this may be attributed our safety, for we were then enabled to veer, and by keeping an equal strain on both cables held our own. The barometer at the height of the gale went down to 27.70. It was then absolutely impossible to stand upon the deck. With the exception of the pinnace the only loss sustained is that of the mail boat, which, although moored close under the stern with a stout hawser, in addition to her painter, broke adrift; had she been at her quarters the *Romney* would have smashed her.

"The *Tay* left for *Vera Cruz* at 4 P.M., the previous day, and must have been at least 120 miles to the westward before the heaviest strength of the gale, and from the circumstance of a *Bremen* brig having arrived on the 12th from the westward, without experiencing the gale so violently, I do not think the slightest fear may be entertained for her safety. The *Lee* sailed for *Honduras* on the 8th.

"I delayed sailing from *Havana* until the morning of the 13th, at the urgent request of Her Majesty's Consul-General, and with the perfect concurrence (in writing) of the Admiralty agent, to enable the merchants to add to their European correspondence. In this I feel satisfied that the Court of Directors will bear me out, the more so, as we left *Bermuda* at the proper time.

"I trust I shall be excused in stating how much I had reason to be pleased with the exertions of every officer and man on board, during this most anxious day of my life. There was much heavy and wet work in ranging every fathom of cable, and getting the third anchor ready for letting go; in all this every one most cheerfully lent a willing hand.

"I am, Sir, &c ,

"*PHIL. HART, Captain.*"

"*Capt Chappell, R.N.*"

From the slight account of the direction of the wind the focus of the hurricane appears to have passed northward of the *Havana* and followed the usual course to the N.W. As might be expected its ravages have not been confined to the *Havana*.

Accounts have been received says another paper "Of a very violent and destructive gale off the coast of *Florida* on the 11th inst. The little island of *Cay West*, a bare sand bar in the ocean was literally devastated; the lighthouse was destroyed, almost all its habitations were overthrown, and 50 lives at least were, it is computed lost. Many vessels were driven ashore, and among them the United States gun brig *Perry*. Our readers will not fail to note the destruction of the lighthouse on *Cay West*."

NAUTICAL NOTICES.

NEW LIGHTHOUSE.—The lighthouse steamer *Pharos*, having on board Mr. *Stevenson*, lighthouse engineer, arrived in our bay some days ago. Mr.

Stevenson has been making an inspection of the northern lighthouses, and came to Wick to make the preliminary investigations relative to the erection of the projected lighthouse on Noss Head. We believe that the building will be proceeded with early in spring, and that Dunnet Head has been fixed upon as the spot from which the stones, for the proposed erection, will be taken. They will, in all probability, be conveyed by sea, that being the cheapest and readiest way of conveyance. Meanwhile, it is highly probable that the new road leading from Wick to the site of the lighthouse will be forthwith contracted for, it being indispensable in order to the conveyance of other building materials. Should the ground, which is considered the most eligible, viz., by the coach road, be fixed on, it will not only give employment to a large number of labourers, but will furnish the inhabitants with an admirable walk, better, by far, than any at present around the town. The erection of the lighthouse itself will, we have not a moment's doubt, be the means of preserving an incalculable amount of property, and many valuable lives. There is no part of the United Kingdom where a lighthouse is such a desideratum as on the east coast of Caithness, and we are satisfied that when the light of the proposed one is exhibited, it will lighten the mind of many a mariner of a heavy burden.

—————

H.M.S. Bramble, Booby Island, June 12th, 1846.

Notwithstanding the very minute manner in which Endeavour Strait was sounded, when surveyed by me in 1844, I have since heard of a shoal patch having been discovered by Mr. M'Kenzie, master of the late schooner *Heroine*, nearly in mid-channel. In consequence of his representation I searched for it yesterday, and find a small coral rock does exist in the position mentioned by Mr. M'Kenzie.

This rock, although surrounded by 8 and 9 fathoms, has only 3 feet on it at low water. I have named it M'Kenzie shoal. From it

| | |
|--------------------------------|----------------------------|
| Peaked Hill bears (magnetic) | . N. 02° E. dist. 7½ miles |
| S.W. Possession Island, } | . N. 18° E. " 3½ " |
| Little Woody, } | . N. 23° W. " 3½ " |
| N. E. Peak on Entrance Island, | . S. 84° W. " 8½ " |
| Cape Cornwall, | . S. 2° E. " 4½ " |
| Barn Island, | . S. 2° E. " 4½ " |

As it is most important that this danger should be made known as speedily as possible, I beg to request that the above notice may be published by any person into whose hands it may fall.

W. B. YULE, *Lieut. and Comr.*

—————

Trinity House, London, November 11th, 1846.

BEACONS AT HELIGOLAND.—The beacons which have long existed upon Sandy Island of Heligoland, having fallen into decay, and the Landesvorstechaft of that place having solicited this Board to cause them to be reinstated, and thereafter to uphold them, and the beacon upon the mainland of the Island,—and this Corporation having consented so to do, and to regard the said beacons as appendages to their Lighthouse upon that Island, notice is hereby given, that, in accordance therewith, three new beacons, each coloured *black*, and surmounted by a *triangle*, have been erected upon Sandy Island aforesaid, and mariners are to observe,—

That the centre or highest beacon in line with that on the west side from which it is distant 340 feet, and bears S.W. ¼ S., strikes the Steen Rock.

That the centre or highest beacon in line with that on the north side, from which it is distant 420 feet, and bears N.W. ¼ N., leads into the North

Channel, and being so kept, until the lighthouse and church are in line and bearing S.S.W. $\frac{1}{2}$ W., will bring vessels up to the mooring buoys.

And that the beacon on Heligoland in line with the old tower, and bearing S. $\frac{1}{2}$ E. strikes the Steen Rock.

By order,

J. HERBERT, *Secretary.*

East India House, London, October 14th, 1846.

BOMBAY LIGHT.—Notice is hereby given, that the present Fixed Light of the Bombay Lighthouse is to be converted into a Revolving Light, and will be exhibited as such on the 1st February, 1847.

No alteration will be made in the present Floating Lights.

JAMES C. MELVILLE, *Secretary.*

Trinity House, London, September 11th, 1846.

PRINCES CHANNEL.—This Corporation having caused the channel, north of the Pansand and Tongue Sands, known as the "Princes Channel," to be marked by buoys on the south side, and two standing Iron Beacons on the north side, notice thereof is hereby given, and that the beacon placed on the southern extremity of the dry sand, called the Shingles, is distinguished by a top in the form of a diamond, which is 45 feet above low water mark, with—

| | |
|---|---------------------------|
| Margate East Windmill, in line with the centre of the baths in | |
| Margate Cliff, bearing | S. b. E. |
| Monckton Beacon, it's length on the east end of Lower Hale Grove. | S. S. W. |
| North Foreland Lighthouse, | S. b. E. $\frac{1}{2}$ E. |
| East Tongue Buoy, | S. E. $\frac{1}{4}$ S. |

The beacon placed on the South Spit of the South Girdler Sand, is distinguished by a triangle the top of which is 45 feet above low water, with Burchington West Windmill, it's length on the east end of Cleve

| | |
|---|------------------------------|
| Wood, bearing | S. $\frac{1}{2}$ E. |
| St. Peter's Church Tower, it's width east of the Tower of | |
| Margate Old Church, | S. S. E. $\frac{1}{4}$ E. |
| Shingles Beacon, | E. b. S. $\frac{1}{4}$ S. |
| East Tongue Buoy, | S. E. b. E. $\frac{1}{4}$ E. |
| Girdler Buoy, | W. N. W. |

The five buoys which denote the south side of this channel, include the large buoy placed at the east end of the Tongue Sand, which also marks the eastern entrance of both the Princes and Queen's Channel, and has been previously advertised; the other four buoys are marked and coloured as understated, viz. :—

North Pansand, *Black and White in Chequers*, lies in 5 fathoms at low water, with—

| | |
|---|---------------------------|
| The east end of Herne Preventive Station House, in line with | |
| Herne pier-head, bearing | S. W. b. S. |
| St. Peter's Church Tower, in line with Margate Sea-bathing Infirmary, | S. E. S. |
| West Pansand Buoy, | S. b. W. |
| East Spaniard Buoy, | W. $\frac{1}{4}$ N. |
| East Gilman Buoy, | N. W. $\frac{1}{4}$ W. |
| Girdler Buoy, | N. N. W. $\frac{1}{4}$ W. |
| Girdler Beacon, | E. b. N. $\frac{1}{4}$ N. |
| Shingles Beacon, | E. $\frac{1}{4}$ S. |

North-East Pansand, *Black*, in $7\frac{1}{2}$ fathoms, with—
Monckton Beacon, it's length east of a gap near the middle of

| | |
|-------------------|---------------------|
| Upper Hale Grove, | S. $\frac{1}{4}$ E. |
|-------------------|---------------------|

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| | |
|--|---------------------------|
| North Down Tower, in line with the chancel end of Margate New Church, | S.E.b.S. |
| North Pansand Buoy, | W.b.N. $\frac{1}{4}$ N. |
| Girdler Beacon, | N.N.E. $\frac{1}{4}$ E. |
| Shingles Beacon, | E. $\frac{1}{4}$ S. |
| North Tongue, <i>Black</i> , in 5 fathoms, with— | |
| Chislet Windmill, in line with the second house west of Reculvers Church Spires, | S.W.b.S. |
| North Down Tower, in line with the east end of the Baths in Margate Cliff, | S.S.E. $\frac{1}{4}$ E. |
| N.E. Pansand Buoy, | W.b.N. $\frac{1}{4}$ N. |
| Girdler Beacon, | N.W. |
| Shingles Beacon, | E. $\frac{1}{4}$ N. |
| North-East Tongue, <i>Black</i> , in $4\frac{1}{2}$ fathoms, with— | |
| Monckton Beacon, it's length open east of Lower Hale Grove | S.S.W. |
| Margate East Windmill, in line with the west end of the Baths in Margate Cliff, | S.b.E. $\frac{1}{4}$ E. |
| East Tongue Buoy, | S.E.b.E. $\frac{1}{4}$ E. |
| North Tongue Buoy, | W.N.W. |
| Shingles Beacon, | N.b.E. |
| Girdler Beacon, | N.W.b.W. |

N.B.—The above bearings are magnetic, and the depths those of low water spring tides.

By order, J. HERBERT, *Secretary*.

AZORES, ST. MICHAEL'S.—There are now Five Buoys laid down in this anchorage, which will reduce considerably the risk of vessels leaving their anchors and chains behind them when they leave these roads.

RUVD ROCK.—On the 23rd December, 1845, the Dutch ship "Ruyd Pool," working up D'Entrecasteaux Channel, with a light northerly air, struck on a rock with which we were previously unacquainted. The weather proved so unsettled whenever I went to visit it, that I have not been able to obtain so favourable a description of it as I could wish. It does not seem larger than a boat, and has 12 feet water on it. Its position will be found at the point of intersection of lines drawn from Satellite Island to Hope Island in Port Esperance, and from Huon Island to the point of Little Taylors Bay. The bearings being respectively N. 72° E., and S. 72° W.; and S. 34° $30'$ E., and N. 34° $30'$ W.

The S. E. cape of Van Diemen Land, kept open to the westward of Partridge Island, will take a vessel clear of this danger, upon which a chequered black and white buoy is now riding.

WM. MORIARTY.

Hydrographic-Office, Nov. 17th. 1846.

CAPE ST. VINCENT, Coast of Portugal.—Notice was given by this office on the 29th of September, that a Light was in preparation for Cape St. Vincent; and the Portuguese Government has now announced that a Revolving Light was established there on the 29th of October.

Each revolution of this light is performed in two minutes, in the course of which period, a brilliant light appears for a short time, and is then succeeded by darkness.

The light-house stands on the western part of the Cape, in latitude 37° $29'$ north., and in longitude 9° $0'$ west of Greenwich; and the light being 221 feet above the level of the sea may be seen at the distance of about 19 miles.

LAW.

CONVICTION UNDER THE MERCHANT SEAMEN'S ACT.—*Plymouth, Aug, 18,*—Mr. Henry Pope, owner of the barques William Lushington and Priscilla, belonging to Plymouth, has this day been convicted, on a charge preferred by Mr. Richard May, clerkin the Seamen's Register-office at this port, for neglecting to comply with the 3rd and 26th sections of the Merchant Seamen's Act, which requires, that within 24 hours after the ship's arrival at her port of destination in the United Kingdom, he deliver to the collector and comptroller of customs his agreement, or a true copy thereof, as set forth in schedule A; and the 26th section provides that within 48 hours after the ship's arrival at her port of destination, the master shall transmit a list of his crew, as set forth in schedule C. The masters, in not complying with the provisions of this act, have been proceeded against, and the owner fined in the mitigated penalty of £3. 6s. 8d. on each section for each of the abovenamed vessels.

CONSPIRACY TO DEFEAT THE MERCHANT SEAMEN'S PROTECTION ACT.—This useful measure, which promises, if fairly carried out, to destroy the numerous race of crimps, Jews, boarding-house-keepers, and other land sharks, who have so long preyed on merchant seamen, as well as those of the royal navy, has been opposed by many interested in keeping up the old abuses, and two cases, which lately came before Mr. Broderip, proved that a conspiracy has been organized to defeat the act. *Thomas William Beale*, an agent licensed by the Board of Trade to ship seamen, was charged with receiving a gratuity from James Rose, a British registered seaman, for obtaining a berth for him on board the Laurel. Mr. Pelham prosecuted at the instance of the Board of Trade on behalf of Mr. Coleman, Clerk to the Registrar of Seamen. The 8th section of the act 8 and 9 Victoria, cap. 116, entitled "An Act for the Protection of Seamen entering on board Merchant Ships," states, "And be it enacted, that if any person shall demand or receive from any seaman, or from any person other than the owner, part owner, master, or person in charge of a merchant ship, or the ship's husband requiring seamen, any remuneration whatever, either directly or indirectly, for and on account of the hiring, supply, or providing any such seaman, he shall forfeit for every such offence a sum not exceeding £5." Mr. Pelham said that, in order to defeat this useful law, seamen who shipped for £2. 10s. or £2. 5s. per month, were only allowed £2. 5s. or £2. for the first month, and the 5s. thus deducted was either paid to the shipping agent, or divided between him and the master. Evidence was then gone into, and it was shewn that Beale had shipped the crew of the Laurel, and that they had signed articles for £2. 10s. per month, but for the first month only £2. was inserted on the articles. There was no legal proof that Beale had received the difference, but Mr. Broderip said he had no moral doubt on the subject, and strongly condemned the practice, which no respectable owner or master would have recourse to. He was obliged to dismiss the case, but the affair would be represented to the Board of Trade, who had the power of revoking Beale's license.

THE FALLING STARS OF NOVEMBER.

This extraordinary phenomenon, which has been observed to recur annually between the 9th and 14th of November, will not be allowed to pass unnoticed this year; as we learn that scientific arrangements have been made on the continent for its observation and registry. The importance which attaches to the subject will, perhaps, render a brief *resume* of the various facts,

and of the theories that have been founded upon them, interesting to our readers.

Until the end of the last century, we had no definite information concerning these meteors:—for although the cosmical origin of the more remarkable fire-balls was suspected, the falling stars were by some ascribed to electricity and by others to the ignition of hydrogen gas accumulated in the higher regions of the atmosphere. In 1794 Chaldini published his celebrated work in which he gave a catalogue of all the recorded dates and observations on fire-balls and falling stars. The following is a brief digest of the annual Appendix attached to those dates and observations.—On the 11th and 13th of November, 1831, Capt. Bernard, when off the coast of Carthage, in South America, observed a shower of falling stars, which, during three hours, he calculated to be at the rate of two stars a minute; and precisely at the same time, Dr. Wright observed a similar shower in the province of Ohio, in the United States.

In 1832, a shower of falling stars was observed at Oremburg, in Asiatic Russia, between three and four o'clock in the afternoon. They were in large and continuous numbers, and travelled the horizon in a regular current from north-east to south-west.

In 1834, numerous showers of falling stars were seen in most of the states of North America,—where the circumstance caused great excitement, and was recorded in the various journals of the Union. It occurred, as usual, in the nights between the 9th and 14th of November. In 1835, these appearances were renewed in America, at the same date. In 1836, at the usual period, simultaneous observations were made of showers of falling stars in many of the provincial districts of France. In Paris, at six o'clock in the evening of the 12th of November, M. Arago observed 190 of these stars, the tracks of which were principally confined to the constellation Leo. At Bercy, at the same time, the astronomer Meret saw 123, half of which proceeded from the same constellation. At Strasburg, 85 were seen by Professor Fangeau; out of which 57 were visible in the direction of Leo:—at Angiers, 49, by Professor Moren:—at Rochfort, 23, by Lieutenant Salneuve—and at Aix-la-Chapelle 137 were observed, within the space of three hours and three-quarters, by the astronomers Calais and Racine. Contemporaneous with these observations in France, 60 of the same falling stars were observed at Plymouth in the special interval of their periodical return,—viz., between the 9th and 14th of November. The catalogue of facts and dates extends to last year; and during the whole interval (viz., from 1831) these brilliant visits have been constant and uniform. It should be added briefly,—without going into the repetition of special details,—that during the whole above described succession, the regular phenomenon of falling stars was uniformly accompanied by brilliant meteors and detonating fire-balls, in this country, in France, in Germany, in Russia, in America, and even in Australasia.

From a comparison of these two different, but associated, descriptions of meteors, Chaldini inferred that they had not their origin in our atmosphere; but were "cosmical masses" moving through space with velocities equal to those of the planets,—and which, when they encountered the earth's atmosphere, were inflamed by its resistance and friction, and became luminous. Brande, in 1823, commenced a series of observations; in which he was materially assisted by a number of scientific associates resident in Breslau and the neighbouring towns. Observations were continued from April to November; and during that interval 1800 falling stars were observed at different places. Thirty-six orbits were obtained;—in twenty-six of which the motion was downwards, in one horizontal, and in the remaining cases more or less upwards.

The predominant location was Leo; and the predominant direction of the

motion was from north-east to south-west, contrary to the motion of the earth in its orbit :—a circumstance which has been before remarked, and which is important with regard to the physical theory of these meteors. But the most interesting conclusion from the numerous data collected with respect to these radiant phenomena is, the time of the year when the earth enters a particular portion of its orbit and when the great meteoric displays take place. The theory of the astronomer Biot is, that the result is produced in consequence of the earth, on reaching a particular point of its course in the early part of November, “coming in contact with that solar nebulousity to which the Aurora Borealis is, by the majority of astronomers, attributed.” Thence he infers that the phenomena of the solitary igneous meteors, and the falling stars of the 9th and 14th of November, being synchronical, they are connected with, and depend upon, the more familiar phenomenon of the zodiacal lights.

Another continental astronomer, M. Milet, infers that stars, or fragments of unformed stars (thence denominated *asteroids*), do really fall to the earth ; and thus the old and vulgar superstition of falling stars—extremes meeting—would seem to be philosophically correct. Other astronomers supposed that the periodical meteors of November are produced by the action of the sun and moon on the electricity of the atmosphere. Sir John Herschel's opinion is, that a zone or zones of these asteroids revolve about the sun ; and are intersected by the earth in the course of its annual revolution round that central luminary of our planetary system.—*Athenæum*.

GUN COTTON.—*Sketch of its Discovery.*

November 4th.

THE candid manner in which you gave “honour to whom honour is due” respecting this substance, leads me to beg you will permit the following statement to appear in the scientific portion of your publication : as I conceive it will fully establish the correctness of your own judgment regarding the claim which Prof. Schönbein has to be considered the inventor,—and prove, possibly, of general interest to your readers.

Previously to Dr. Schönbein's visit to England, I received the following statement from him :—“In the course of my recent researches, I have been lucky, or unfortunate, enough to discover a substance having all the properties of gunpowder ;—that substance is common cotton. I made the discovery in the beginning of this year,—in January. In the month of March, I sent portions of it to several scientific friends ; and notably, to three of the most distinguished men of your country—whom I have the honour to call my friends. At the same time, I forwarded the substance to a nobleman of Würtemberg ; who communicated with the King on the matter :—in consequence of which I was honoured with an invitation to Stuttgart,—where I made, in the presence of his Majesty, experiments showing some of the singular properties of the substance. This took place on the 11th of April last. Some days previously, experiments were made in the Arsenal at Ludwigsburg, which proved the propelling force and inflammability of the cotton.

During the months of April, May, June and July, a great many experiments were made by me in Basle ; with the view of establishing the applicability of gun cotton to fire-arms of all descriptions,—and also for blasting and mining purposes. It was not in the nature of experiments, carried on by musketry and artillery, to remain a secret ; and the journals of Switzerland and Germany soon contained statements of the trials and results made and obtained at Basle. This naturally directed the attention of chemists to the

subject; and in the month of August, Prof. Böttger, of Frankfort, announced to me that he also had succeeded in preparing gun cotton. This led to a correspondence, and the subsequent association of our names." In the month of August, Professor Schönbein arrived in England; and, from his presence at the meeting of the British Association—his experiments in blasting in Cornwall, and the trials which took place in the neighbourhood of London with small arms—the subject became one of public notoriety. It is not, however, generally known that, previous to the departure of Dr. Schönbein for Switzerland, an opportunity presented itself of testing the power of the cotton with heavier shot than had been thrown from the mortars of Basle; and it was then satisfactorily proved that the relative powers of cotton and gunpowder were in the proportion of 3 to 8 in favour of the former.

Repeated experiments have established that the cotton possesses the following properties:—some of which are not generally known. When struck violently on an anvil with a hammer, it may occasionally be made to explode, but it will not ignite. It is known that water does not affect it; but it has been subjected by myself to the following severe trials:—It has been boiled in fresh and salt water, steeped in caustic, potash and ammonia, and, when washed, found to retain all its explosive properties. These facts may be considered unimportant in a practical point of view;—but its property of resuming all its energy when washed and dried, after having been saturated with salt water, is surely calculated to render it eminently useful for naval purposes, especially when it is remembered that the small quantity of smoke it gives is almost instantaneously dissolved by the atmosphere.—*Athenæum*.

J A. B.

The results of the experiments instituted by the government authorities on the gun-cotton of Dr. Schönbein have, we understand, induced the Board of Ordnance to decline its adoption for the use of the British military services. The following are the principal of the objections which have led to this decision, as we find them stated by a contemporary:—"It explodes at a far lower temperature than gunpowder, even the least explosive gun-cotton, requiring a heat very considerably below redness for its explosion, whilst some of the varieties can be fired by the heat of boiling water. This is a serious objection in all cases where any number of charges have to be fired in succession; as the heat caused by the explosions very soon raises the temperature of the gun above that point at which it is hot enough to cause the charge to explode spontaneously—thus rendering its use exceedingly inconvenient and dangerous. The great facility with which gun-cotton explodes, even when not perfectly dried, would, of course, render its manufacture more hazardous than that of powder: and for the same reason, its preservation in bulk, when of necessity it must be kept in a state of compression, would be attended with a considerable degree of risk; since it is very probable that any mass of gun-cotton or other similar combustible compound, particularly when compressed, would have a tendency to undergo spontaneous combustion, and there can be no doubt that a magazine of gun-cotton would be far more dangerous than a powder magazine. A very considerable quantity of steam is produced by the explosion of gun-cotton, so much, in fact, that the inside of the gun becomes quite wet. The inconvenience of this is obvious. A last objection, and one which it is to be feared may interfere with some of the most valuable applications of this very interesting substance, is the productions of acid vapours when it is fired. It is generally stated, that gun-cotton leaves no residue, and produces no noxious fumes when fired. As regards the first statement, it is practically true; for when tried against gunpowder it does leave no residue. The minute quantity of solid matter left after its explosion is nothing compared with the saline residue of gunpowder. It is

also true, that gun-cotton, being free from sulphur, no sulphurous acid gas is formed when it is fired; and hence, none of those suffocating fumes are perceived which result from the explosion of powder,—in which various alkaline salts are mechanically suspended in an atmosphere loaded with sulphurous acid gas. No inconvenience, therefore, is felt when gun-cotton is fired in a mine. At the same time, a small quantity of nitric and nitrous acids is always produced, sufficient to interfere with its use in those cases where the presence of acid vapour would do injury.”—It is probable that this very remarkable discovery will, after all prove valuable, principally for mining purposes.

THE GREAT BRITAIN AND NAUTICAL CHARTS.

To the Editor of the Nautical Magazine.

21, Poultry, November 23rd, 1746.

SIR.—In my last I requested space for farther detail of my proceedings, little anticipating that I should require so much as now appears desirable and for a purpose so different.

On the 7th current, the *Shipping Gazette* published a letter from Mr. Laurie. This was a period when I was confined by indisposition, and the delay elicited a spontaneous answer from the Editor much more *effective* than mine would have been; as there are one or two points *personally* relating to yourself and me, I shall here endeavour to refute them; and, as some of your readers may not have seen the original, I trust, with your usual fair play, you will give it insertion.

“To the Editor of the Shipping and Mercantile Gazette.

(1) “SIR,—As we have probably heard all the statements and conjectures respecting the loss of the Great Britain, which are likely to throw any light upon her disaster, I think it right that some of the observations that have been made should not pass unnoticed. I consider it but justice to myself and others, that some of the obloquy which has been cast on private charts by the resolutions of the Great Western Directors, and by those interested in the *sale* of the Admiralty surveys, should be fairly answered. I would refer more particularly to the remarks in the *Shipping and Mercantile Gazette* of October 23, and the *Nautical Magazine*.

(2) “Up to a recent period, the Admiralty had no good charts of the coast in question, and now make use of my chart of St. George’s Channel for the navy. The copyright of this was purchased of the late Captain Huddart by this house for 2,000*l.* and I will state, that it has afforded materials for nearly every chart that has since been published—Captain Hosken’s chart included. The notice of the lighthouse on St. John’s Point is shown on this chart (as it is upon all others that I have), and has been so since January, 1844, or four months before the lighthouse itself was illuminated. Concerning the omission of the light in the chart published at Liverpool, I shall not remark, but I think it unjust to argue from that *one* circumstance, that all charts are incorrect, as it is to assume that all Admiralty charts are absolutely perfect. I will not say a word in dispraise of the collection of Admiralty surveys, they are worthy of the nation, and are as complete as care and talent can make them: but, they are liable to omissions as gross, and errors as glaring, as that to which the loss of the Great Britain has been attributed.

(3) “I will cite one or two instances that occur to me. The Admiralty chart of Harwich, would have inevitably laid any ship on shore that followed their direction, until Captain Washington’s survey of the harbour was pub-

lished in 1842. This fine chart was issued with a scale attached, that was nearly *one-seventh* in error. Another: Captain Blackwood's survey of Endeavour Straits, (Australia), was published in March, 1846; in August, the ship *Heroine*, following the track laid down in it, after passing two shoals not mentioned, struck, and was nearly wrecked on a shoal of nine feet, where *nine fathoms* was marked on the chart. Again, as to description of lights by authority:—The *Nautical Magazine* is conducted well, I acknowledge, but in a *corrected* description of the lights in the English Channel at twenty-nine places, in July, 1845, there are not fewer than *fourteen* errors, any one of which is as likely to produce a disaster as great as that of the Great Britain. This list is especially marked to be depended on.

(4) "I do not cite these instances invidiously, they may be easily multiplied, but merely to show that absolute perfection is not attainable.

(5) "Now it has been complained of that the Admiralty charts are not appreciated by the mercantile marine; that Mr. Bates's endeavours to promulgate them have been thwarted. I can say to this, that every chart seller has the same opportunity of supplying the public with these documents, and at the same rate, and they are sold in large numbers by chart publishers. But the Admiralty charts are not the only documents of authority extant, nor are our naval surveyors the only observers; and if private enterprise be left unfettered, the wants of the public will be far more efficiently served than by the exercise of any authority, such as that proposed by the Great Western Directors, or of any body of men, upon which to throw the responsibility of error.

(6) "That there are many very inferior charts sold I am quite ready to admit, but with those of any character, I boldly challenge comparison, with the Admiralty charts, for amount or correctness of information; and with respect to the alleged cheapness of the Admiralty charts, I at once deny their superior claims on this head. Charts are not the only instruments of navigation, but to have them of the best authority is undoubtedly the duty of every seaman: but if he has not discrimination enough to decide between a good and a bad chart, the assistance they will afford to him is of minor importance. When accidents do occur, if commanders will be but ingenuous enough to publish by what authority they have been led into error, and thus afford the means of refuting, when necessary, any erroneous statements, the evils complained of, that of incomplete charts, will soon be cured.

I am, sir, yours, &c.,

35, *Fleet street*.

R. H. LAURIE."

[We publish this letter, considering it desirable that our nautical friends should be correctly informed upon the subject of marine charts: at the same time it is due to remark, that there are slight discrepancies in Mr. Laurie's letter which we hope to see explained.—Ed. S. & M. G.]

(1.) The writer begins by charging with obloquy the resolutions of the Great Western Directors and those who are interested in the *sale* of the Admiralty surveys, and names the *Shipping Gazette* and *Nautical Magazine* as so interested. He surely means to include the Hydrographic department, and I wish he may have grounds for his opinion, and will then acknowledge the truth of the observation, that others see more of ourselves and our position than we do.

(2.) With regard to the use made by the Admiralty of Mr. Laurie's chart, he knows well that this is not the only instance of such practice. It will be my duty now to inform the public of all other instances, as much more important and more permanent. The remainder of his paragraph may be best

answered by his brother publishers. I will merely add, that I am quite innocent of any such sweeping censure of other authorities or blind laudation of our own.

(3.) Mr. Laurie must have intended this paragraph to begin with his encomiums upon the Admiralty surveys, he so well understands the modern grace of raising an adversary to floor him more effectually. The Admiralty chart of Harwich would not have led any ship on shore the commander of which had observed its *date* (1812). If it had been that of any other authority than that of East India, it might have been liable to such a charge, for then its date would have been altered, and that, (as in the case of some which I could name,) biennially or annually. But the fine survey of 1842, was published with a scale nearly one-seventh in error. Will Mr. Laurie coolly say that this oversight was capable of occasioning such a calamity as the loss of the Great Britain?

(4.) Mr. L. says that these instances may be easily multiplied; he will not surely do such violence to his private interest or compromise his public interests, so far as to refrain from the multiplying proof.

(5.) This paragraph is ably answered by the Editor of the *Shipping Gazette*, in his leading article of 11th current,* I will merely add my ignorance also of the other "documents of authority," and "other observers" now employed than our "naval surveyors, and it is our province to lay any new discoveries before the public.

(6.) The only part of this paragraph I need notice is Mr. Laurie's denial of my assertion of the superior *cheapness* of the *Admiralty charts*; perhaps your readers will be satisfied with my re-assertion of their being "generally one-third or one-fourth of the price of those of other authorities.

I am, &c.,

R. BATE.

[We have looked into Mr. Laurie's complaint against us of our "fourteen errors", "at twenty-nine places," any one of which he says, "is as likely to produce a disaster as great as that of the Great Britain," a conclusion which in our opinion is an error of that gentleman. We do not pretend to be immaculate, and admit readily that some trifling errors do appear which should not. We have assigned three lights to Dover instead of two, the column "colour of light" should have been "colour of lighthouse," which "w" for "white" and "st" for "stone colour" in it, would suggest; the Lizard should have been a fixed and not intermitting light—two or three shore lights are made floating ones, and the converse. We admit these inaccuracies should not have occurred, but they do not affect the existence and the positions of the lights, and are such as any seaman would readily see are purely typographical, and would therefore disregard.—Ed. N. M.]

* I particularly request attention to his happy expression that "the chart is the *silent pilot* of the shipmaster."

A SUSPICIOUS CRAFT.—The following is an extract of a letter received at Lloyd's on Saturday, dated Rio Janeiro, August 22nd:—"The British brig *Medora* fell in, on the coast of Patagonia, lat. 40° S., in June or July last, with a schooner of about 150 tons, named the *Sovereign*, with six brass guns, the commander of which stated her to be one of H.M. ships, but he had no pendant flying. She was standing to the northward, and was bound for Liverpool. The officers on deck appeared in naval uniform." The *Medora* also reports that two other similarly armed schooners, but rather larger, had visited the coast of Patagonia where British ships were collecting guano, and were offered freight to take guano to an island, for the purpose of ship-

ment, but refused, stating that they had other objects. The master of one vessels, wrecked on the coast of Patagonia, stated that he saw a schooner leave Liverpool last November, similar to the above, pierced for, but not shewing, guns, and full of men; but her destination seemed unknown.

STEAM NAVIGATION TO THE CAPE.—The subject of steam communication has often of late found a place in our columns, and it is one of such vital importance to the colony, that we feel confident our readers will require no apology for our again reverting thereto. We trust that the time is fast arriving when we shall possess these advantages, and which the existence of fuel in the southern hemisphere will greatly facilitate. Coal beds have already been worked in New South Wales;—it has also been found in Kerguelen's Land, (better known by the name of the Island of Desolation,) and at Natal, and there can be no doubt, but that on general attention being directed to this subject, this useful mineral will be found in many other parts of the southern regions. It is stated by competent persons, that the requisite outlay for such steamers will not be formidable; vessels of 600 tons, with engines of 200 horse-power, have been estimated at £20,000 each, if built of wood, and £16,000, if of iron. The southern regions seem especially intended for voyaging by means of steam; in this part of the globe the boundless ocean occupies a preponderating extent, and the pacific character of her seas seems to invite the mariner to her sunny isles, and wealth-abounding continent.—*Cape Paper.*

EMERALD AUXILIARY SCREW STEAMER.

We have much pleasure in giving our readers the extract from a letter by Captain Prichard to Lieutenant Sarsfield, R.N., the intelligent Marine Manager of the City of Dublin Company:

Belfast, October 15, 1846.

“This is to inform you of our safe arrival in this port from London, after a passage of four days and three hours. The first thirty hours, we had a strong beeeze from the west; after, five or six hours, the wind was flying about to the south-west, until we got to the Isle of Wight. We then got the wind to the northward, which carried us to the Lizard, after this little or no wind; but at ten that evening, it came on like a hurricane from the westward to the north-west, and round to the southward, and then came a-head. There were two screw boats which had left London, one twenty-four hours before us, for Limerick, and we passed her off the North Foreland. The other left thirty hours before us—we passed her off the Isle of Wight. The Pearl* left the same day from Southampton that we left London; we spoke her off the Land's End, and arrived here seven hours before her. Close hauled we beat them the most; we went to windward more than any we tried with; we acted well both with the wind a-head and fair, and did not labour the least—were quite dry, and ran much better than I expected.”

We wish particularly to draw attention to this account in consequence of the Emerald being the first of several vessels of various sizes, built at Liverpool, with auxiliary steam power, having Mr. Grantham's patent arrangements, by which all spur wheels and multiplying gear are removed, and the engines applied direct to the screw shaft as in paddle-wheel steamers: thus obviating one of the greatest objections to the screw-propeller. The vessel was also modelled by Mr. Grantham. Besides the fact of the

* Built by Ditchbourne & Mare.—Engines by Maudslay and Field.

Emerald's great superiority over the other three screw-vessels, as stated in Captain Pritchard's letter, we would notice a still more important circumstance.

The speed of the Emerald has been about equal to the coasting paddle-wheel steamers. These average about 700 tons measurement, and 250 horse power, and cost about £28,000. They carry about 200 tons dead weight, besides their coals, burn from 80 to 100 tons per voyage of the same distance. On the other hand the Emerald can take from 200 to 300 tons cargo, burns about 25 tons of coals, and has cost under £9,000.

We shall wait with much interest for the result of the Sarah Sands, a vessel, of 1,000 tons, now building under Mr. Grantham's directions, and fitted on the same principle.

CONFINEMENT IN COAL BUNKERS.—In consequence of the death of the petty officer on board the Retribution steam-frigate, from confinement in the coal bunker, and the evidence on the court martial (although not of the clearest) that this mode of punishment exists on board some of our steam-vessels, the Admiralty have issued positive orders to the respective captains and commanders of steam-vessels, that on no account shall such punishment be inflicted in the fleet. Attention is also called to the state of the coal bunkers, and a more rigid and frequent inspection of them is to be enforced, more particularly when under steam, to prevent the generation of carbonic acid gas, from the effects of which, in his confinement, the poor captain of the Retribution's hold died, whilst under confinement for a slight offence.

CAPTAIN WARNER'S LONG RANGE.—Colonel Chalmers, R.A., attended by Capt. Warner, has just selected the range of marsh required for the purpose, on the east side of the Essex coast, suitable to the occasion, where no danger can arise from such experiments. The Lords of the Treasury have granted the sum of £1,500 to defray the expenses consequent upon these trials, which are to take place in the course of a few days, and both the gallant captain and the Government have, it is stated upon good authority, unanimously selected Colonel W. Dundas, C.B., Royal Artillery, inspector of artillery, to carry out and decide upon the merits of these important experiments.

REDUCTION IN THE COMPLEMENTS OF HER MAJESTY'S SHIPS.—The following is the table of complements of sea-going ships, sloops, steam-vessels, &c. issued by the Admiralty, Nov. 1. It is not to apply to those at present in commission, but only to such as may in future be brought forward; both officers and men are to be reduced in number; a Lieut. less in every vessel, except steamers; and in three-decked ships, a reduction of about fifty men. All steamers are to have fewer seamen, but more stokers and coal trimmers; the boys, both first and second class, to continue as before; also the marines. The number of Lieuts. to be as follows, viz:—First-rates to have 7 instead of 8. Second-rates to 5 instead of 7, but if on three decks to bear 7 Lieuts., 22 Mates and Midshipmen, and 6 Naval Cadets. Third-rates to have 5 instead of 6. Fourth-rates to have 5 as before. Fifth-rates to have 4 instead of 5. Sixth-rates to have 3 instead of 4. Steam-vessels of four rates, viz.—300, 260, 240, and 195 men, to have three Lieuts.; those of 160, and 140 men, to have but two. Sloops of five rates, viz.:—145, 130, 125, 120, and 80 men each, to bear but two Lieuts. instead of three.

WIRE-ROPE RIGGING.—A shipowner gives the following opinion of wire-rope:—I once had a very favourable opinion of wire-rigging, but experience (the grand test of novel inventions), has caused me to alter my mind, by pointing out its defects. In the first place, the wire-rope is very rigid, and from its not yielding, the ship is more liable to be dismasted,—in fact, the vessel in question is said to have lost her topmasts some two years ago from that cause alone; and in the event of a vessel losing her masts, the wreck cannot be cut adrift as with hemp rope, without greater trouble and loss of time, which latter, under the then existing circumstances, is of the utmost importance. The wire-rope itself cannot be cut with a hatchet, the setting up screws takes a long time to unscrew, and the shackle-pins or their fore-locks are, in all cases that have come under my notice, in too rusty and tight a state to unfasten.

Although an advocate for the improvement of our mercantile marine, and particularly anxious for the introduction of iron ships, having employed wire-rigging on vessels from 150 tons and upwards, I intend to adhere to hemp in future, even with all its defects.

FRENCH FISHING VESSELS—As the act which regulates the right of fishing between Great Britain and France applies only to vessels fishing in the prescribed limits, the Treasury have signified that their lordships will not object to the vessels in question using the ports of the United Kingdom for the purposes, not connected with their fishing operations, nor to the purchase of wearing apparel, provisions, and salt, in quantities not more than necessary for the use of the crew.

MANNING THE NAVY.—On Monday last, another batch of 30 seamen left this city *en route* for London, per Great Western Railway, at seven A.M. It is truly surprising where all those fine-looking fellows come from. They left their quarters, the Royal Naval Rendezvous, in College-street, on an omnibus, followed by their officers, triumphant, with music, flags, &c., and gave three hearty cheers at the corner of each street. This excellent arrangement of land carriage pleases Jack beyond measure, and they keep the whole line of rail alive with their drolleries, singing and cheering. At every station they were loudly cheered by the country folks, who expressed their delight at the *cortege* by waving their hats and shovels. We learn with pleasure that not a single complaint on the line has been made either by the company or passengers, since this mode of conveyance has been adopted; and we hear from the commander that out of nearly 400 men who had left this city by rail, not a single desertion had taken place, notwithstanding the temptation of passing through London from Paddington to the Tower.—*Bristol Journal*.

GREAT INCREASE OF MERCHANT SHIPPING AND SEAMEN IN THE BRITISH EMPIRE.

We have been favoured with some very interesting statistics, which we hasten to give our readers, showing the increase of our shipping and seamen from 1816, being the first year of actual peace, at the end of the great European war, down to the year 1845—these years inclusive. In 1816 there were, by registry, in the British Empire, 25,346 ships, of 2,664,986 tons, bearing as their crews 171,013 men. Between this year and the year 1835, great fluctuations occurred; in 1827 there had even been so serious a reduction as to bring the amounts to the following return:—ships, 23,199; tonnage, 2,460,500; men, 151,415. The highest return was 1817—this gave an excess over the year 1834 of ships, 809; tonnage, 67,840; and men, 10,759. The gradual increase from this year 1834 we will now show year by year.

| | Year. | Ships. | Tonnage. | Men & Boys. |
|----------------|-------|--------|-----------|-------------|
| 31st Dec. | 1835 | 2,5511 | 2,783,761 | 171,020 |
| " | 1836 | 2,5820 | 2,792,646 | 170,637 |
| " | 1837 | 2,6037 | 2,791,018 | 173,506 |
| " | 1838 | 26,609 | 2,890,601 | 178,583 |
| " | 1839 | 27,745 | 3,068,433 | 191,283 |
| " | 1840 | 28,962 | 3,311,538 | 201,340 |
| " | 1841 | 30,052 | 3,512,480 | 210,198 |
| " | 1842 | 30,815 | 3,619,850 | 214,609 |
| " | 1843 | 30,983 | 3,588,387 | 213,917 |
| " | 1844 | 31,320 | 3,337,231 | 216,350 |
| " | 1845 | 31,817 | 3,714,061 | 224,900 |
| Increase since | 1835 | 6,306 | 930,300 | 53,880 |

During this period, upwards of 50,000 apprentices have been rated as seamen, under the provisions of the Merchant Seamen's Act, independently of 25,000 now serving out their time. It is thus fair to suppose that as the increase of men and boys, serving in the merchant service from the 31st of December, 1835, to the 31st of December, 1845, was 53,880, this demand has been supplied, for the most part, by the legitimate means of educating boys at sea for the sea, and not by shipping landsmen, withdrawing them from other trades and professions, to the deterioration of the class of British seamen. The navy estimates of 1835-6, votes 17,500 seamen, including 2,000 boys. This proves the actual increase of seamen in the British merchant and Royal navy since 1835, to be 65,880! a proud and cheering result for the consideration of this great maritime country. Surely it is high time that the British Government and nation should establish an institution protecting the interests of our seamen, yearly increasing in number, every year bringing by an increase of wealth to our shores, and every year by an increase of Colonies and Empire, having more and more important interests to protect.—*Nautical Standard*.

STEAM ENGINEERS.—It is proposed to admit a very limited number of engineers as ward-room officers in the royal navy. The Monarch and Neptune steam-vessels have been purchased by the Spanish Government from the General Steam Navigation Company, and are fitting by Messrs. Seaward as war-steamers. The chief engineers have been offered £24 per month, the second £20, and the third, £16, and the stokers, £8 per month, with every-thing found them on joining the vessel.

ILLUSTRATED GEOGRAPHY AND HYDROGRAPHY.—In a former number of our Journal, (December, 1844), we first called attention to this projected work. We then stated, "that the plan was capable of being carried out to any extent," and we now invite our readers to an examination of the Preliminary Papers attached to our present number, which show in detail, the whole scope and bearing of the work. It is intended to consist of three parts:—*First*. The General Index. *Second*. The Sectional Series of Maps and Charts, with indexes to each. *Third*. The Descriptive Appendix.

The main feature of the work, viz., the "General Index," will of itself form a book of Universal Geographical Reference, and will be a key to the contents of every Atlas, Map, or Chart,—discriminating each of any number of synonymous places. The Sectional Series of Maps and Charts when complete, will be available to the index, thus rendering it a more complete work; and the addition of the third and last part, the Gazetteer portion of it will make the work fully efficient for any ordinary enquiry. Of the vast utility of such a work, there can be no doubt; and as it is the design of one of our

own countrymen, we hope to see it appear as an English book, published in London, and not to have it sent to us from the press of New York, or any other Foreign establishment.

It would be premature to speak more of a work only in contemplation, the plan of which is certainly most comprehensive and practicable; and whether in its first, second, or third stage, it will be of great utility, and in the three combined, it will contain a mass of information never before condensed in one book.

NEW AND CORRECTED CHARTS.

Admiralty Charts, published and corrected in October and November, and sold by R. B. Bate, 21, Poultry.

- COLUMBIA RIVER, 2 sheets, *Sir E. Belcher*, 1839, each 3s.
 AMOY HARBOUR, *Capt. Kellett, C.B.*, 1843, price 2s.
 STRAIT OF GIBRALTAR TO THE GAMBIA RIVER, 1 sheet, *Africa, Capt. Vidal*, 1835, price 3s.
 ENGLAND EAST COAST, 3 sheets, *Capt. Washington*, 1843, each 2s.
 MIRAMICHI BAY, AND WESTERN ENTRANCE TO NORTHUMBERLAND STRAIT, *Capt. Bayfield*, 1839, price 2s.
 COQUET ROAD AND CHANNEL, *Com. Slater*, 1839, price 2s. 6d.
 PADSTOW HARBOUR, *Com. Sheringham*, 1839, 3s.
 BELFAST BAY, *Capt. Beechey*, 1841, price 2s. 6d.
 TIDE TABLES, for 1847, price 1s. 6d.
 INVERNESS FRITH AND BEAULY BASIN, *Com. Slater and Otter*, 1845, price 3s.
 SCARBOROUGH, *Mr. Calver*, 1843, price 2s.
 SEAHAM HARBOUR, *Com. Slater*, 1840 price 2s.
 ST. HELENA ISLAND, *Mr. J. Barnes*, 1816, price 2s.
 NUKULAU PORT (*Ambro Island, Feejee Group.*) *Sir E. Belcher, C.B.*, 1840, price 1s. 6d.
 WEXFORD HARBOUR, *Com. Frazer*, 1845, price 3s.
 LABOUAN ISLAND, (*Borneo*) *Capt. Bethune*, 1845.
 BRUNI RIVER, (*Borneo*), price 1s. 6d.
 CORK HARBOUR, *Com. Wolfe*, 1843, price 3s.
 COVE OF CORK, *Com. Wolfe*, price 2s. 6d.
 PORT OF CORK, *Com. Wolfe*, price 2s.
 SINGAPORE, DURIAN AND RIO STRAITS, corrected 1845, price 2s.
 INDEX TO THE COAST OF CHINA, corrected, *Capt. Collinson, C.B.*, price 2s.
 CHINA SEA, corrected, *Capt. Collinson*, price 2s.
 SHOURAKA GULF, corrected, price 2s.

ARCTIC EXPEDITION.—Mackenzie River, April 1st, 1846.—By the express from Peel's River (not far from the sea) in February last, we are told that late last fall (the autumn), a noise was heard at that fort resembling the report of cannon, and Indians who arrived there shortly after, said, that they also heard a noise which was *not* like thunder. It may, perhaps, be *Capt. Franklin*, who, I hear, was sent out to endeavour to explore the long-sought north-west passage. It will be a novelty to see a boat's crew of Jacks come dancing up the Mackenzie this summer. I hope they may get safe past the Esquimaux at the entrance of it, who are hostile to the whites and Indians in that quarter. It must be noted that a boat expedition also, under the auspices of the Hon. Hudson's Bay Company, was fitted out about the same period with a similar object, but whether they carried any heavy guns we are not aware. Peel's River is in latitude 68° long. 135° west.—*Times*.

ADMIRALTY, Oct. 31.—This day, in pursuance of her Majesty's pleasure, the following Captains of the Royal Navy were promoted to the rank of Retired Rear-Admiral of her Majesty's Fleet, on the terms proposed in the *London Gazette* of the 1st of September, 1846, viz. :—James W. Maurice, James Prevost, Spelman Swaine, Thomas White, (a), James Lillicrap, Walter Grosset, Thomas F. Baugh, Samuel M. Colquitt, Gustavus Stupart, Thomas F. C. Mainwaring, Right Hon. William Earl Waldegrave, John Hollinworth, Clement Sneyd, John D. Markland, CB, Abel Ferris, Robert M. Fowler, Donald Campbell, Sir Henry Hart, Knt, KCH, George Henderson, Thomas T. Tucker, CB, Christopher Bell, CB, James Stevenson, Hon. Edmund S. P. Knox, Right Hon. David Earl of Leven and Melville, Colin Campbell, (a), Joseph Symes, Hon. William H. Percy, James Pringle, Samuel Leslie, Edward Ellicott, Peter Rye, James Gifford, George Le Geyt, CB, Henry G. Morris, Edward A. Down, Thomas Whinyates, John W. Andrew, CB, Robert Mitford, Henderson Bain, Clement Milward, John F. Maples, CB, Henry Bouchier, Robert W. G. Festing, CB, George Morris, John Tancock, James Stewart, CB, Robert Bloye, CB, Thomas E. Symonds, Lewis Hole, John M'Kerlie, Frederick J. Thomas.

Captains John Simpson, John Bowker, George Moubray, and Alexander Barclay Branch, KN, having accepted the situation of Captains of Greenwich Hospital, are to be placed on the list of Captains on retired-pay.

And this day also, in pursuance of her Majesty's pleasure, the following Captains of the Royal Navy, having accepted the retirement of their rank on the terms proposed in the *London Gazette*, of the 1st of September, 1846, have been placed on the retired half-pay list at the increased rates therein specified :—Frederick J. Thomas, Henry T. Davis, Hon. Henry D. Byng, George G. Lennox, Sir William G. Parker, Bart, Robert Gambier, Charles F. Payne, Colin Macdonald, CB, Abraham Lowe, Charles Bertram, George Hills, Henry Fanshawe, Isaac H. Morrison, George B. Trollope, CB, Sir T. Mansell, Knt, KCH, Thomas Groube, Hercules Robinson, William Black, John Harper, CB, Weston Phipps, Thomas Dick, Bertie C. Cator, Frederick E. V. Harcourt, Right Hon. Kenelm Lord Somerville, Henry Jenkinson, Edward Saurin, John H. Godby, Christopher Strachey, Arden Adderley, James Boxer, Richard O'Connor, KCH, Thomas B. Sullivan, CB, David Scott, Richard Creyke, Nicholas L. Pateshall, Rowland Money, CB, John Sheridan, Sir Henry L. Baker, Bart, CB, George W. H. d'Aeth, CB, Robert Ramsay, CB, John C. G. Roberts, Sir Samuel Roberts, Knt, CB, Archibald Tisdall, Joseph G. Garland, William S. Lovell, KN, John Moberly, Joseph Digby, Charles Ward, KN, William Ffarington, Frederick W. Burgoyne, James Rattray, John Allen, Arthur P. Hamilton, Daniel Lawrence, Robert H. Rogers, George Bentham, James A. Murray, Thomas Renwick, Henry Higman, George Hewson, J. M. Ferguson, John Gourly, Augustus Baldwin, H. C. Deacon, Edward Barnard, James Wallis, William B. Dashwood, Martin White, John Cooksby, Charles G. R. Phillott, William Wolrige, George Brine, Hon. John Gordon, William Popham, James Hay, Sir Charles T. Jones, Knt, Robert R. Carre, Hugh Patton, Hon. Charles O. Bridgemaas, Sir Henry Shiffner, Bart, Henry Forbes, Alexander Montgomerie, John W. Montagu, Hon. George P. Campbell, Wilson B. Bigland, John Gore, (a), John C. Carpenter, KN, Robert Hockings, John Gedge, Sir Charles Burrard, Bart, Thomas L. Peake, Christopher C. Askew, William Hendry, Charles Nelson ; the above-named officers on the half-pay of £1 per diem.

Charles H. Reid, Henry T. B. Collier, John Brenton, William Ramsden, John D. Boswall, Henry Stanhope, John T. Coffin, Frederick Hunn, Edward Curzon, CB, Septimus Arabin, Thomas B. Clowes, James Couch, William H. Smyth, Richard Saunarez, James Montagu, Thomas Prickett, Alexander D. Y. Arbuthnot, Isham F. Chapman, John Shekel, John Stoddart, George O. Lempiere, Thomas Warrant, John Gore, (b), Charles Bowen, John G. Graham,

John G. Alphin, William Rochfort, John Pakenham, Francis Fead, Frederick A. Wetherall, Henry Lichfield, William Webb; the above-named officers on the half-pay of 18s. per diem.

ADMIRALTY, Nov. 9.—This day pursuant of her Majesty's pleasure, the following Flag Officers of her Majesty's Fleet were promoted, viz:—*Admiral of the Red to be Admiral of the Fleet*: Sir G. Martin, GCB., GCMC. *Admirals of the White to be Admirals of the Red*: P. Stevens, Esq., Sir W. Hotham, GCB., Sir E. Codrington, GCB., GCMG., Sir G. Parker, KCB. *Admirals of the Blue to be Admirals of the White*: Sir C. Ogle, Bart, R. D. Oliver, Esq, D'A. Preston, Esq, M. Dobson, Esq, Hon Sir J. Talbot, GCB, J. Giffard, Esq. *Vice-Admirals of the Red to be Admirals of the Blue*: H. R. Glynn, Esq, Sir E. Hamilton, Bart, KCB, Sir R. Laurie, Bart, KCB, Sir W. H. Gage, Knt, GCH. *Vice-Admirals of the White to be Vice-Admirals of the Red*: J. Marquis of Thomond, GCB, R. Matson, Esq, J. Mackellar, Esq, G. Barker, Esq, Sir C. Adam, KCB, W. Granger, Esq, Sir A. Drummond, Knt, KCH, Sir T. Livingstone, Bart, Sir F. W. Austen, KCB. *Vice-Admirals of the Blue to be Vice-Admirals of the White*: T. J. Maling, Esq, Sir J. A. Ommaney, KCB, Z. Mudge, Esq, H. Hill, Esq, A. W. Schomberg, Esq, Sir E. D. King, Knt, KCH, Sir G. Mundy, KCB, F. Warren, Esq, J. Carthew, Esq, Sir T. Briggs, GCMG, Rt. Hon. Thos. Earl of Dundonald, N. Tomlinson, Esq, Sir W. Parker, Bart, GCB, G. M'Kinley, Esq. *Rear-Admirals of the Red to be Vice-Admirals of the Blue*: R. Curry, Esq, CB, Sir J. W. Loring, KCB, KCH, Sir R. H. Bromley, Bart, Hon. D. P. Bouverie, J. Dick, Esq, P. Riboulean, Esq, M. Buckle, Esq, J. Allen, Esq, J. Noble, Esq, C. J. W. Nesham, Esq, Sir C. Bullen, KCB, KCH, J. Wright, Esq, W. Young, Esq, B. M. Praed, Esq. *Rear-Admirals of the White to be Rear-Admirals of the Red*: S. Butcher, Esq, R. Jackson, Esq, C. B. H. Ross, Esq, CB, Sir C. Malcolm, Knt, Hon. G. Elliot, CB, Rt. Hon. Lord W. Fitzroy, KCB, M. Godwin, Esq, Sir H. Pigot, Knt, CB, KCH, E. Hawker, Esq, Sir C. Richardson, KCB, F. Temple, Esq, H. Gordon, Esq, Sir J. Alexander Gordon, KCB, Hon. F. W. Aylmer, CB, R. Thomas, Esq, J. R. Dacres, Esq, J. S. Carden, Esq, J. Sykes, Esq, J. Impey, Esq, H. M. Ommaney, Esq. *Rear-Admirals of the Blue to be Rear-Admirals of the White*: Sir J. C. Coghill, Bart, J. Ayscough, Esq, Sir T. J. Cochrane, Knt, CB, Sir G. F. Seymour, Knt, CB, GCH, Hon. G. Poulett, Sir W. B. Proctor, Bart, C. J. Johnston, Esq, E. Ratsey, Esq, C. B. P. Bateman, Esq, M. A. N. de Starck, Esq, A. Lysaght, Hon. J. Percy, CB, Hon. Sir A. Maitland, CB, KCMG, Hon. G. L. Proby, Rt. Hon. G. G. Lord Radstock, CB, Rt. Hon. G. Earl Cadogan, CB, Sir E. Tucker, KCB.

And the undermentioned Captains were also appointed Flag-Officers of her Majesty's Fleet:—*To be Rear-Admirals of the Blue*: J. M. Gordon, Esq, Sir W. H. Dillon, Knt, KCH, T. Searle, Esq, CB, H. Hope, Esq, CB, Sir T. Ussher, Knt, CB, KCH, W. Ward, Esq, Sir S. J. B. Pechell, Bart, CB, KCH, R. Elliot, Esq, C. F. Daly, Esq, CB, Hon. Sir F. B. R. Pellew, Knt, CB, KCH, Sir F. A. Collier, Knt, CB, KCH, Hon. J. W. King, Sir C. Napier, KCB, J. B. Purvis, Esq, W. H. Shirreff, Esq, R. Arthur, Esq, CB, P. Hornby, Esq, CB, Hon. W. Gordon, C. J. Austen, Esq, CB, P. Browne, Esq.

This day also, in pursuance of her Majesty's pleasure, the following officers have been promoted:—*Commanders to be Captains*: J. Kaine, Esq, G. G. Burton, Esq, P. G. Haymes, Esq, W. H. Higgs, Esq, J. S. W. Johnson, Esq, G. Baker, Esq, H. Layton, Esq, W. H. Kitchen, Esq, J. Onke, Esq, R. F. Gambier, Esq, A. Darley, Esq, J. R. Booth, Esq, Sir C. Ricketts, Bart, T. S. Thompson, Esq, W. H. Jervis, Esq, J. W. D. Brisbane, Esq, H. E. Edpell, Esq, H. B. Young, Esq, J. H. Ward, Esq, E. St. L. Cannon, Esq, J. Macdonell, Esq, R. Barton, Esq, R. Burridge, Esq, F. H. H. Glasse, Esq, C. G. Robinson, Esq, W. Louis, Esq, Hon. R. Gore, C. J. Bosanquet, Esq, C. O. Hayes, Esq,

J. Simpson, Esq, G. T. Gordon, Esq, Hon. E. Plunkett, E. Ommaney, Esq, W. F. Glanville, Esq, D. Curry, Esq, W. K. Stephens, Esq, W. W. Chambers, Esq, C. M. M. Wright, Esq, G. G. Macdonell, Esq, G. H. P. White, Esq, J. W. Noble, Esq, H. M. E. Allen, Esq, W. Maclean, Esq, J. W. Morgau, Esq, W. W. Hornby, Esq, F. W. Austen, Esq.

Lieutenants to be Commanders:—E. Monday, Esq, G. Kennicott, Esq, J. T. Knott, Esq, H. J. Jones, Esq, G. Butler, Esq, D. Welch, Esq, F. White, Esq, J. Bowie, Esq, W. H. Brand, Esq, J. Harding, Esq, J. Stephen, Esq, J. Rawstorne, Esq, G. Caswell, Esq, W. Critchell, Esq, G. Spong, Esq, W. Carr, Esq, W. V. Read, Esq, C. E. Wilmot, Esq, G. Goldfinch, Esq, W. T. Griffiths, Esq, E. Franklin, Esq, R. Dowse, Esq, W. Hamley, Esq, J. W. Finch, Esq, J. J. McDonnell, Esq, W. Howat, Esq, H. E. Wingrove, Esq, W. Hoseason, Esq, E. E. Grav, Esq, C. Hadaway, Esq, G. Harvey, Esq, W. O'B. Hoare, Esq, A. N. Fairman, Esq, C. Jenkin, Esq, W. M. I. G. Pasco, Esq, J. B. West, Esq, W. Chambers, Esq, T. M. Rodney, Esq, C. H. Baker, Esq, W. G. Maude, (B), Esq, H. Byng, Esq, G. Lavie, Esq, W. R. Mends, Esq, J. W. Tarleton, Esq, F. Holland, Esq, W. Reid, Esq, R. D. Fowler, Esq, J. H. Norcock, Esq, D. R. B. Mapleton, Esq, G. Gore, Esq, W. Barrie, Esq, A. Heseltine, Esq, H. Dobbie, Esq, A. Little, Esq, E. Little, Esq, C. Y. Campbell, Esq, H. S. Hawker, Esq, J. J. B. E. Frere, Esq, G. G. Randolph, Esq, R. Curtis, Esq, H. A. Story, Esq, C. J. Balfour, Esq, W. F. Burnett, Esq, F. E. Johnston, Esq, H. E. S. Winthrop, Esq, T. H. Christian, Esq, A. Cumming, Esq, O. Knott, Esq, G. Johnson, Esq, Hon. G. D. Keane, T. Carmichael, Esq, R. R. Quin, Esq, R. R. Western, Esq, E. M. Lyons, Esq, Rt. Hon. Lord A. W. Beauclerk, H. King, (B), Esq, R. S. Smith, Esq, J. Willcox, Esq, J. M. R. Ince, Esq, J. B. Willoughby, Esq. *Mates to be Lieutenants*: Messrs. C. Vesey, R. Berington, P. R. Couch, J. S. Darell, G. A. E. Ridge, R. H. H. Mends, T. A. Swinburne, O. M. C. Read, F. W. Gough, C. F. Des Vœux, E. A. Porcher, S. S. Skipwith, W. J. S. Pullen, G. M. Smith, A. G. E. Murray, T. T. Hambley, E. H. G. Lambert, H. Nelson, W. H. Phipps, W. Swinburn.

Second Masters to be Masters: Messrs. T. Arundel, G. J. Gibbon, D. M. Jago, R. Read, J. W. Symonds, W. H. Crane, B. Simpson, D. J. Louitid, J. Stokes, H. Norway, F. J. Kent, T. J. Whillier, W. Squire, R. T. Saunders, J. N. Willis, W. H. Williams, J. F. Beckett, J. Wallis, T. Edwards, S. Spain.

Assistant-Surgeons to be Surgeons: L. D. Buchanan, R. Hayward, T. Tait, J. J. Acheson, J. S. Davidson, W. Roberts, W. Crofton, J. T. Jenkins, T. Crawford, D. Ritchie, R. Dalton, R. Anderson, Dr. E. H. Derriman, MD, Messrs. J. G. Risk, A. Brown, J. H. Haire, J. G. Buchanan, D. Russell, Dr. H. O'Hagan, MD, H. J. Donville.

Clerks to be Paymasters and Purser:—Messrs. W. Meredith, C. J. J. Brown, E. D. Back, W. F. Maturin, C. H. Elkins, H. K. Conquer, J. B. Hay, F. Gilbert, W. B. Pearce, H. S. Hooper, C. S. Giles, J. W. Anchell, A. Nash, S. Fisher, T. M. Ramage, J. E. Autey, W. Wiles, J. P. Cole, G. Ramsden, T. Pidcock, W. R. Dalton.

GOOD SERVICE PENSIONS.—The Pensions vacant by the resignation of Retired Rear-Admirals Maurice White, Earl Waldegrave, John Duff Markland, c.b., Sir Henry Hart, Thomas Tudor Tucker, c.b., have been conferred on the following Captains:—Philip Browne (1810); Manley Hall Dixon (1811), Peter John Douglas (1811), Barrington Reynolds, c.b. (1812), A. R. Sharpe, c.b. (1813), W. Fairbrother Carroll, c.b. (1813).

With reference to the announcement which appeared in the *London Gazette* of the 3rd inst., the name of Capt. Francis Beaufort has been added to the list of Captains of the Royal Navy, who have accepted the rank of retired Rear-Admiral of Her Majesty's Fleet.

PROMOTIONS.

RETIRED CAPTAIN—E. Hall.
 CAPTAIN—J. P. Roepel.
 COMMANDERS—J. Neale, W. Boyes.
 LIEUTENANTS—L. W. Peyton, G. M. Balfour.
 SURGEONS—H. H. Turnbull, M. D., H. H. Jones.
 ASSISTANT-SURGEONS—F. Anderson, F. M'Aree, N. C. Hatherly, W. H. Cameron.
 PAYMASTERS AND PURSERS—S. Winter, H. S. Gibson.

APPOINTMENTS.

CAPTAINS—The Hon. F. T. Pelham, (1840), to study at the Steam Factory, at Woolwich—Sir T. Maitland, C.B., (1837), to *America*—D. Price (1815), to be Captain-Superintendent of Sheerness Dockyard—Sir J. J. G. Bremer, K.C.B. and K.C.H., (1814), to be Commodore-Superintendent of Woolwich Dockyard—F. Hutton (1844), to *Tortoise*, at Ascension, as Governor of that Island.

COMMANDERS—W. H. Haswell (1830), to *Poitiers*, for service in Chatham Ordinary—E. T. Crouch (1821) to *Victory*, for service in Portsmouth Ordinary—G. E. W. Lamond (1843), to *Medea*—A. H. Ingram (1841), to *Birkenhead*—J. Foote (1845), to *Rosamond* (late *Eclair*)—A. Farquhar (1844), to *Albatross*—T. Carpenter, to study at Naval College—R. T. J. Levinge (1845), to *Devastation*—H. Layton (1825) to *Belvidera*—F. T. Brown (1840), to commission and command the *Geyscr*—T. Chaloner (1845), to command *Syren*—C. C. Grey (1842), to command *Columbine*—J. Moore (d) (1843), to command *Harlequin*—A. Morrel (1823), to *Hydra*.

LIEUTENANTS—P. McK. Godfrey (1841), and C. R. Gill (1846), to *Mutine*—G. P. Mends (1841), to *Eurydice*—E. Forbes (1843), E. F. T. Roberts (1841), and H. W. Comber (1846), to *Penelope*—C. A. Lodder (1846), to *Sidon*—L. Miles (1825), to be Agent for Mails at Liverpool—T. H. Lysaught (1841), to study at the Steam Factory at Woolwich—C. Fellowes (1846), to *Queen*—T. Cochran (1844), to *St. Vincent*—J. Hyett (1815), to out-pension of Greenwich Hospital—T. C. R. Gill (1846), and G. S. Boys (1845), to *Childers*—C. W. Bonnam (1843) (addit.), and E. B. Rice (1844), to *Hibernia*—M. Burrows (1843), to *Excellent*—W. G. Douglas

(1846), to *Geyscr*—A. Wilmshurst (1846), of *St. Vincent*, to *Albatross*—J. F. Tottenham, to *Medea*—G. H. Wale (1846), of *Ferret*, to *Rosamond*—N. S. Sullivan (1846) (addit.), from *Acteon*, to *Birkenhead*—Black (1814), to be Agent of *Maria Soames*, transport—F. T. C. Strode (1842), *Thetis*—to T. S. Lysaught (1841), to command *Grappler*.

MASTERS—A. S. Knight, to *Sphinx*—Burney to *Madagascar*—J. H. Ashtou to *Rosamond*—F. G. Kent (act.) to *Geyscr*—W. H. Crane (act.) to *Albatross*—R. B. Mudge (act.) to *Medea*—W. Archer to *Penelope*—G. Collier to *Eurydice*—G. H. K. Bower to *Scourge*—W. L. Browne to command *Naiad*, store-ship—M. Bradshaw to command *Alban*—H. Harvey to Sheerness-yard Hoy—W. Tozer to *Adventure*—S. Jago to *Hamoaze*, lighter.

MATES—H. D. Selby, and H. Donaldson to *Thetis*.

SECOND MASTERS—P. Rundle (act.-master), and J. Rumbolt to *Prospero*, packet—H. J. Cunningham (act.), from *Gladiator*, to *Raven*—W. F. Hains to *Penelope*—R. Reed (act.), to *Lightning*.

MIDSHIPMEN—G. H. Maseell to *Victory*—C. Stirling, R. Knight, C. J. Robinson, and T. H. B. Fellowes to *Thetis*—A. S. Bullock to *Porcupine*—N. Parks to *Rattlesnake*—H. A. Ford to *Eurydice*—A. J. Thrupp to *Vengeance*—G. Whiting to *Mutine*—H. R. D. Freeman to *Penelope*.

NAVAL CADETS—J. A. Luttrell to *Collingwood*—C. C. Robinson to *Rattlesnake*—R. H. Swinton, E. C. Chaplin, A. Forbes, G. H. Broadhead, and W. B. Bingham to *Thetis*—W. F. Harding to *Mutine*—A. E. Lothbury to *Raleigh*—G. E. Verling to *Vengeance*—H. R. Battislaw to *Rosamond*—P. H. Colomb to *Sidon*—F. W. Nandi to *Scourge*—T. T. Bullock to *Geyscr*.

MASTER ASSISTANTS—T. Borrett and T. J. Richards to *Thetis*—H. Bond, and T. E. Knight to *Caledonia*—W. R. Comin to a ship under Sir H. Pigot—G. W. Acheson to *Naiad*—W. A. N. Monck to *Geyscr*—G. A. C. Brooker to *Amphion*—J. D. Switzer to *Comet*—A. E. Parks to *Queen*—H. Chalmers to *Gladiator*—R. R. Pringle to *Acheron*.

SURGEONS—J. Findlay to *Ferret*—G. T. M. Martin to *Wanderer*—C. T. S. Kevern to *Bittern*—A. Lane, M.D., to *Penelope*—W. White to *Geyscr*—R. Douglas to *Vanguard*.

ASSISTANT SURGEONS—J. T. Ross, (act.), to *Geyser*—N. C. Hatherly re-appointed to *Alarm*—G. Pizey to *Caledonia*—G. Clarke (act.), and W. P. Ward (act.), to *Penelope*—T. Deageley (act.), and A. Coates to *Andromache*—W. H. Cameron, confirmed to *Spiteful*—A. Clark (act.), to *Harlar Hospital*—A. Mitchell, M.D., to *Devastation*—J. D. Macdonald to *Thetis*—C. Forbes, M.D., to *Æolus*—J. T. U. Bremner, M.D., and F. B. Pritchard to *Belvidera*—W. Ward (act.), to *Vengeance*—W. B. C. Christy, Dr. G. Clarke, and E. W. Pritchard to *Victory*—G. Gordon to *Naiad*—W. S. Burke to *Mutine*—F. Anderson to *Sappho*.

PAYMASTERS AND PURSERS—W. H. Bateman (act.), to *Geyser*—W. J. Mason to *St. Vincent*—J. C. Pinhorn (act.), to *Melea*—H. K. Conquer (act.), to *Albatross*—J. Bell to *Penelope*—B. Dyer to *Thetis*—S. J. Butcher to *Birkenhead*—W. Stanway to *Rosamond*.

CHAPLAINS—The Rev. P. Somerville to *Endymion*—Rev. C. L. Bell to *Amphion*—Rev. J. W. Griffiths to *Excellent*.

CLERKS—C. Forbett, Burton, and A. J. C. Buxton to *Penelope*—J. W. Griffiths (assist.) to *Excellent*—H. H. Gilbert to *Caledonia*—W. H. Ozzard to *Victory*—W. Simmonds to *Thetis*—J. Jones (in charge), and H. R. Gilbert (in charge), to *Belvidera*—G. Palmer to *Belleisle*—H. West (assist.) to *Gladiator*—D. G.

Yeoman (assist.) to *Æolus*—I. Hearnden to *Geyser*—R. F. Wiley (assist.), to *Seaflower*.

Capt. Woodford, J. Williams, and the officers of the *Avenger*, viz:—Lieuts. Sibbalk, Hawkins, and Clark; Master, J. Tucker; Surgeon, Dr. G. Mackay; Paymaster and Purser, J. Beckwood; Assistant-Surgeon, J. T. Robinson; Second Master, J. Fiddes; Naval Instructor, A. Speed; Clerks, A. W. Chimmo and E. A. Rowe; Midshipmen, A. F. O. Young and R. Moore; Cadets, T. T. Phillips and S. Babington; Master's Assistant, R. L. Cleveland; Clerk's Assistant, W. Wells; together with the crew of that steam-frigate, have been turned over to the *Amphion*.

COAST GUARD.

Appointments.—Lieut. M. Corbyn, to Sizewell, Gap station; Capt. Houston Stewart C.B., to be Comptroller-General, vice P. Hornby, promoted; Lieut. W. H. Broad, R.N., of Cranfield Point, to command *Dolphin*; Lieut. E. Digby R.N., to Mullion; Lieut. A. Webb, R.N. to Portland; Lieut. J. Seaton, R.N., to command a station.

Removals.—Lieut. W. R. Asby, R.N., from 42 Tower to Galley Hill; Lieut J. Stubbin, R.N., from Whitby to Flambro' Head; Mr. C. J. Pegus, from Cumber to Prawle station.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

November 11, at Largs, the lady of Capt. Edmonstone, R.N., of a daughter.

Marriages.

November 10, at Waltham Abbey, Essex, Philip Melmoth Nelson Guy, Esq. Captain 5th Fusiliers, to Anne Elizabeth, eldest daughter of Captain J. H. Plumridge, R.N., M.P.

November 2, at Lympstone, George E. A. Tobin, Esq. 2nd Queen's Royal Regiment, youngest son of Major-Gen., Tobin, R.A., to Louisa, only daughter of Captain Williams, R.N., Snowdon, Devon.

October 27, at Charlton, Kent, Commander H. Eden, R.N., to Lavinia Mary, youngest daughter of William Rivers, Esq., Greenwich Hospital.

October 19, at St. Peter's Church, Dublin, by the Rev. Richard Malone, Robert Malone, Esq., Paymaster and Purser of H.M.S. "Stromboli," to Frances Anne Stepney, eldest daughter of the late Richard Russell Maurice, Esq., of Ballinoo, County Limerick.

Deaths.

October 22, in Catherine-street, Plymouth, after a long and painful illness, Lieut. Henry Jenkins, R.N., late First of the "Caledonia," aged 54.

On the 27th ult., at his residence in George Place, Plymouth, Commander William Watson, on the retired list of 1830.

On the 10th of August, on board the "Spiteful," steam-sloop, in Singapore Roads, Commander W. Maitland.

Lately, Capt. James Slade, attained the rank of Captain (1810). P. W. Gibson (1844), died on board the Cleopatra, of fever.

On July 25, in the Mozambique, Lt. At Hokianga, Lieut. Benthall.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory
From the 21st of October, 1846, to the 20th of November.

| Month Day. | Week Day. | Barometer | | Fahrenheit | | | | Wind. | | | | Weather. | |
|------------|-----------|-------------------------|--------|---------------------------|--------|-----|-----|----------|------|-----------|------|----------|---------|
| | | In Inches and Decimals. | | Thermometer In the Shade. | | | | Quarter. | | Strength. | | | |
| | | 9 A.M. | 3 P.M. | 9 A.M. | 3 P.M. | Min | Max | A.M. | P.M. | A.M. | P.M. | A.M. | P.M. |
| 21 | W. | 29-11 | 29-01 | 51 | 54 | 42 | 55 | SW | SW | 6 | 6 | gor (2) | qbc (4) |
| 22 | Th. | 29-12 | 29-20 | 47 | 47 | 45 | 48 | W | W | 6 | 4 | gor (2) | bcp (4) |
| 23 | F. | 29-56 | 29-80 | 46 | 49 | 42 | 50 | NW | W | 4 | 4 | bc | b |
| 24 | S. | 29-55 | 29-53 | 47 | 53 | 38 | 54 | SW | SW | 3 | 3 | bcp (2) | bcp (3) |
| 25 | Su. | 29-74 | 29-78 | 47 | 49 | 43 | 50 | N | N | 4 | 2 | bcp (2) | bcp (3) |
| 26 | M. | 30-02 | 30-02 | 43 | 45 | 42 | 46 | NW | NW | 1 | 1 | of | o |
| 27 | Tu. | 30-28 | 30-28 | 40 | 42 | 38 | 43 | N | S | 1 | 1 | of | bef |
| 28 | W. | 30-22 | 30-14 | 37 | 41 | 36 | 42 | NW | NW | 1 | 1 | of | of |
| 29 | Th. | 30-06 | 30-04 | 44 | 47 | 39 | 48 | N | N | 2 | 2 | or (2) | o |
| 30 | F. | 30-13 | 30-15 | 47 | 48 | 46 | 50 | N | N | 1 | 2 | o | bcm |
| 31 | S. | 30-15 | 30-11 | 42 | 42 | 39 | 43 | NW | W | 1 | 1 | gor | gor |
| 1 | Su. | 30-06 | 30-02 | 40 | 48 | 39 | 49 | NE | SE | 1 | 1 | of | bc |
| 2 | M. | 30-00 | 29-96 | 46 | 52 | 40 | 53 | SE | S | 2 | 3 | bc | bc |
| 3 | Tu. | 30-04 | 30-07 | 53 | 57 | 47 | 58 | S | S | 4 | 3 | bc | bc |
| 4 | W. | 30-13 | 30-13 | 53 | 58 | 45 | 59 | S | S | 1 | 2 | bc | bc |
| 5 | Th. | 30-22 | 30-20 | 55 | 56 | 50 | 58 | S | SE | 1 | 1 | od (2) | o |
| 6 | F. | 30-18 | 30-17 | 44 | 45 | 43 | 47 | E | E | 3 | 3 | o | bc |
| 7 | S. | 30-26 | 30-26 | 41 | 43 | 40 | 44 | NE | NE | 1 | 1 | o | o |
| 8 | Su. | 30-40 | 30-38 | 46 | 47 | 42 | 48 | NE | SE | 1 | 1 | o | o |
| 9 | M. | 30-48 | 30-47 | 41 | 43 | 40 | 44 | E | E | 4 | 4 | o | o |
| 10 | Tu. | 30-47 | 30-41 | 40 | 44 | 37 | 45 | NE | NE | 5 | 5 | qbc | qbc |
| 11 | W. | 30-31 | 30-29 | 45 | 47 | 40 | 48 | NE | NE | 4 | 4 | bc | b |
| 12 | Th. | 30-37 | 30-37 | 46 | 48 | 37 | 49 | NE | NE | 5 | 3 | go | o |
| 13 | F. | 30-36 | 30-34 | 45 | 46 | 43 | 48 | E | F | 3 | 3 | o | o |
| 14 | S. | 30-30 | 30-24 | 46 | 48 | 44 | 49 | SE | NE | 3 | 2 | o | o |
| 15 | Su. | 30-22 | 30-18 | 42 | 44 | 39 | 45 | NE | NE | 2 | 2 | bc | bc |
| 16 | M. | 30-16 | 30-11 | 41 | 42 | 40 | 44 | SE | S | 4 | 3 | bc | bc |
| 17 | Tu. | 29-98 | 29-92 | 45 | 48 | 39 | 49 | S | S | 3 | 4 | o | od (4) |
| 18 | W. | 29-85 | 29-83 | 48 | 52 | 46 | 53 | S | SW | 3 | 3 | bcp (2) | bc |
| 19 | Th. | 29-83 | 29-85 | 49 | 52 | 47 | 54 | SW | SW | 2 | 4 | bcp (1) | bc |
| 20 | F. | 26-46 | 22-32 | 51 | 52 | 47 | 53 | S | SW | 8 | 6 | gor (2) | bc |

October 1846.—Mean height of the Barometer 29-657 = inches; Mean temperature = 50-4 degrees; depth of rain fallen = 5-27 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We regret that CAPT. J. V. HALL's paper did not reach us earlier, as another illustration of the truth of the Hurricane Theory. It shall appear in our next.

The letter of a CIVILIAN is on a subject which will be well taken care of without our assistance.

The Notes from the Diary of a CIVIL ENGINEER came too late for this Number. Their importance will secure them a "front place" in our next.

Mr. Sharp's letter, also, too late. If he will refer to p. 85 of our volume for 1840, he will find something to his purpose.

Hunt, Printer, 3, New Church Street, Edgware Road.

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STATEMENT
 SHEWING THE RESULT OF THE
 RECENT RETIREMENT IN THE ROYAL NAVY,
 DOWN TO CAPTAINS OF 1826.

ACTIVE LIST OF ADMIRALS.

The Admiral's List, not permanently to exceed 150 in number, and to be thus distributed.

Thirty Admirals, or ten of each squadron.

Forty-five Vice Admirals, or fifteen of each squadron.

And seventy-five Rear Admirals, or twenty-five of each squadron.

ADMIRALS OF THE FLEET.

Sir James Hawkins Whitshed, Bart., GCB.

Sir George Martin, GCB., GC., St. M. and G.

ADMIRALS.

| <i>Red.</i> | <i>White.</i> | <i>Blue.</i> |
|--|---------------------------------|-----------------------------|
| Sir Davidge Gould, GCB. | John Erskine Douglas. | Joseph Bullen. |
| Hon Sir R. Stopford GCB, gc. St. M. and G | T. Le Marchant Gosselin. | Stephen Poyntz. |
| Sir C. Hamilton, Bart. KCB. | Sir Willoughby T. Lake, KCB. | Rt. Hon. Lord Colville. |
| Rt. Hon. Lord A. Beau- clerk, GCB. GCH. | Sir Charles Ogle, Bart. | John Cochet. |
| Sir T. Byam Martin, GCB. | Robert Dudley Oliver. | Sir Charles Ekins, KCB. |
| Rt. Hon. Sir G. Cockburn, GCB. | D'Arcy Preston. | Henry Richard Glynn. |
| Sir W. Hotham, GCB. | Man Dobson. | Sir E. Hamilton, Bart. KCB. |
| Sir Edward Codrington, GCB. gc. St. M. and G. | Hon. Sir John Talbot, GCB. | Sir R. Laurie, Bart. KCB. |
| Sir George Parker, KCB. | John Giffard. | Sir W. Hall Gage, Knt. GCH. |
| Frederick Watkins. | Sir John West, KCB. | Sir Henry Heathcote, Knt. |

VICE-ADMIRALS.

| <i>Red.</i> | <i>White.</i> | <i>Blue.</i> |
|--|---|---------------------------------------|
| Sir E. W. Campbell Rich Owen, KCB. GCH. | Thomas James Maling. | Richard Curry, GCB. |
| Sir Graham Eden Hamond, Bart. KCB. | Sir J. Acworth Ommanney, KCB. | Sir J. Wentworth Loring, KCB. KCH. |
| Robert Honyman. | Zachary Mudge. | Sir R. Howe Bromley, Bart. |
| Hugh Downman. | Henry Hill. | Hon. Duncombe Pleydell Bouverie. |
| Hon. Sir Thomas Bladen Capel, KCB. | Alexander Wilmot Schom- berg. | John Dick. |
| Marquis of Thomond, GCH. | Sir Edward Durnford King, Knt. GCH. | Peter Ribouveau. |
| Richard Matson. | Sir George Mundy, KCB. | Matthew Buckle. |
| John Mackellar. | Frederick Warren. | John Allen. |
| George Barker. | James Carthew. | James Noble. |
| Sir Charles Adam, KCB. | Sir Thomas Briggs, Gc. St. M. and G. | Christopher J. W. Nesham. |
| William Granger. | Rt. Hon. Thomas Earl of Dundonald. | Sir C. Bullen, KCB. KCH. |
| Sir Adam Drummond, Knt. KCH. | Nicholas Tomlison. | John Wight. |
| Sir T. Livingstone, Bart. | Sir W. Parker, Bart. GCB. | William Young. |
| Sir F. W. Austen, KCB. | George M'Kinley. | Bulkeley Mackworth Praed |
| Bendall Robert Littlehales. | Sir C. Dashwood, KCB. | Charles Carter. |

REAR ADMIRALS.

| <i>Red.</i> | <i>White.</i> | <i>Blue.</i> |
|-----------------------------------|--|--------------------------------------|
| Thomas Browne. | Sir Francis Mason, <i>KCB.</i> , | Sir E. Chetham Strode, <i>KCB.</i> |
| W. H. Brown Tremlet. | Thomas Brown. | William Croft. |
| Sir Samuel Pym, <i>KCB.</i> | Sir Lucius Curtis, <i>Bart.</i> <i>CB.</i> | Francis Beauman. |
| Samuel Butcher. | Sir John Louis, <i>Bart.</i> | James Robert Philips. |
| Robert Jackson. | Brian Hodgson. | Pringle Stoddart. |
| C. Bayne Hodgson Ross, <i>CB.</i> | Hood Hanway Christian. | William Bowles, <i>CB.</i> |
| Sir Charles Malcolm, <i>Knt.</i> | Sir J. Coghill Coghill, <i>Bart.</i> | Hyde Parker, <i>CB.</i> |
| Hon. George Elliott, <i>CB.</i> | John Ayscough. | Chas. Sibthorpe Jn. <i>Haw-</i> |
| Right Hon. Lord William | Sir T. J. Cochrane, <i>Kt., CB.</i> | <i>tayne.</i> |
| Fitzroy, <i>KCB.</i> | Sir Geo. Francis Seymour, | J. W. Deans Dundas, <i>CB.</i> |
| Matthew Godwin. | <i>Knt. CB. GCH.</i> | Sir E. T. Troubridge <i>Bt., CB.</i> |
| Sir Hugh Pigot, <i>Knt. CB.,</i> | Hon. George Poulett. | Charles Gordon, <i>CB.</i> |
| <i>KCH.</i> | Sir W. Beauchamp Proctor, | James Murray Gordon. |
| Edward Hawker. | <i>Bart.</i> | Sir W. H. Dillon, <i>Kt. COM.</i> |
| Sir C. Richardson, <i>KCB.</i> | Charles James Johnson. | Thomas Searle, <i>CB.</i> |
| Francis Temple. | Edward Ratsey. | Henry Hope, <i>CB.</i> |
| Henry Gordon. | C. Philip Butler Bateman. | Sir T. Ussher, <i>Knt. KCH. CB.</i> |
| Sir J. Alex. Gordon, <i>KCB.</i> | Mauritius Adolphus New- | William Ward. |
| Hon. Fred. W. Aylmer, <i>CB.</i> | ton de Starck. | Sir Samuel John Brooke |
| Richard Thomas. | Arthur Lysaght. | Pechell, <i>Bart. CB. KCH.</i> |
| James Richard Dacres. | Hon. Joseline Percy, <i>CB.</i> | Robert Elliot. |
| John Surman Carden. | Hon. Sir Anthony Mait- | Cuthbert F. Daly, <i>CB.</i> |
| John Sykes. | land, <i>CB., KC. St. M. & G.</i> | Hon. Sir Fleetwood Brough- |
| John Impey. | Hon. Granville Leveson | ton Reynolds Pellew, <i>Kt.</i> |
| H. Manaton Ommanney. | Proby. | <i>CB. KCH.</i> |
| Archibald Duff. | Right Hon. Granville Geo. | Sir Francis Augustus Col- |
| Hon. Donald Hugh Mackay | Lord Radstock, <i>CB.</i> | lier, <i>Knt. CB. KCH.</i> |
| | Right Hon. George Earl | Hon. James William King. |
| | Cadogan. | Sir Charles Napier, <i>KCB.</i> |
| | Sir Edward Tucker, <i>KCB.</i> | John Bret Purvis. |
| | Samuel Hood Inglefield, <i>CB.</i> | William Henry Shirreff. |
| | Sir W. Augustus Montague, | Richard Arthur, <i>CB.</i> |
| | <i>Knt. CB., KCH.</i> | Phipps Hornby, <i>CB.</i> |
| | | Hon. William Gordon. |
| | | Charles John Austen, <i>CB.</i> |
| | | Philip Browne. |

CAPTAINS ON RETIRED PAY.

Hon. John Rodney. | Christopher Laroche.

Plan of Retirement as carried out up to 1st December, 1846.

No new admissions to the £1. 5s. List to be made until it is reduced below the number of Twenty-five, which it is not to exceed afterwards.

RETIRED REAR-ADMIRALS.—*On the pay of £1 5s. per Diem.*

| | | |
|--------------------------|----------------------------------|------------------------------|
| James Wilkes Maurice. | John Hollinworth. | John Tancock. |
| James Prevost. | Clement Sneyd. | James P. Stewart, <i>CB.</i> |
| Spelman Swaine. | John Duff Markland, <i>CB.</i> | Christopher Bell, <i>CB.</i> |
| Francis Beaufort. | Abel Ferris | James Stevenson. |
| Thomas White (A). | Robert Merrick Fowler. | Hon. Edmund Sexton Pery |
| James Lillierap. | Donald Campbell | <i>Knox.</i> |
| Walter Grosset | Sir Henry Hart, <i>Knt. KCH.</i> | Rt. Hon. David Earl of Le- |
| John Thompson (A). | George Henderson. | <i>ven and Melville.</i> |
| Thomas Folliott Baugh. | Thomas Tudor Tucker, <i>CB.</i> | Colin Campbell (A). |
| Samuel Martin Colquitt. | Henry Bouchier. | Joseph Symes. |
| Gustavus Stupart. | Robert Worgan George | Hon. William Henry Percy. |
| Thomas F. C. Mainwaring. | Festing, <i>CB.</i> | James Pringle. |
| Rt. Hon. William Earl | George Morris | Samuel Leslie. |
| Waldegrave. | | |

Edward Ellicott.
Peter Rye,
James Gifford.
George Le Geyt, *св.*
Henry Gage Morris.
Edward Augustus Down
Thomas Whinyates.

John William Andrew, *св.*
Robert Mitford.
Henderson Bain.
Clement Milward.
Joseph Needham Taylor,
св.

John Fordyce Maples, *св.*
Robert Bloye, *св.*
Thomas Edwards Symon *ls.*
Lewis Hole.
John M'Kerlie.
F. Jennings Thomas.

RETIRED CAPTAINS.—*On the pay of £1. per Diem.*

Henry Thomas Davis.
Hon. Henry Dilkes Byng
George Gustavus Lennox.
Sir W. G. Parker, *Bart.*
Robert Gambier.
Charles Frederick Payne.
Colin Macdonald, *св.*
Abraham Lowe.
Charles Bertram.
George Hills.
Henry Fanshawe.
Isaac Hawkins Morrison.
George Barne Trollope, *св.*
Sir T. Mansell, *Кнт. ксв.*
Thomas Groube.
Hercules Robinson.
William Black.
John Harper, *св.*
Weston Phipps.
Thomas Dick.
Bertie Cornelius Cator.
Frederick E. V. Harcourt.
Rt. Hon. Kenelem Lord
Somerville.
Henry Jenkinson.
Edward Saurin.
John Hardy Godby.
Christopher Strachey.
Arden Adderley.
James Boxer.
Richard O'Connor, *ксв.*
Thomas Ball Sullivan, *св.*

David Scott.
Richard Creyke.
Nicholas L. Pateshall.
Rowland Money, *св.*
John Sherilan.
Sir H. L. Baker, *Bart. св.*
G. W. Hughes d'Aeth, *св.*
Robert Ramsay, *св.*
John C. Gawen Roberts.
Sir S. Roberts, *Кнт. св.*
Archibald Tisdall.
Joseph Gulston Garland.
William S. Lovell, *ксв.*
John Moberly.
Joseph Digby.
Charles Ward, *ксв.*
William Farrington.
Frederick W. Burgoyne.
James Rattray.
John Allen.
Arthur Philip Hamilton.
Daniel Lawrence.
Robert Henley Rogers.
George Bentham.
James Arthur Murray.
Thomas Kenwick.
Henry Higman.
George Hewson.
John Macpherson Ferguson
John Gourly.
Augustus Baldwin.
Henry Collins Deacon.

Edward Barnard.
James Wallis.
W. Bateman Dashwood.
Martin White.
John Cookesby.
C. G. Rodney Phillott.
William Wolrige.
George Brine.
Hon. John Gordon.
William Popham.
James Hay.
Sir C. T. Jones *Кнт.*
Robert Riddell Carre.
Hugh Patton.
Hon. C. O. Bridgeman.
Sir Henry Shiffner, *Bart.*
Henry Forbes.
Alexander Montgomerie.
John William Montagu.
Hon. G. Pryce Campbell.
Wilson Braddyll Bigland,
ксв.
John Gore (A).
J. Cook Carpenter, *ксв.*
Robert Hockings.
John Gedge.
Sir Charles Burrard, *Bart.*
Thomas Ladd Peake.
C. Crackenthorpe Askew.
William Hendry.
Charles Nelson.

The vacancies upon the £1. List, to be filled up, in turn of Seniority, by Officers from the 18s. list.

RETIRED CAPTAINS.—*On the pay of 18s. per Diem.*

Charles Hope Reid.
H. T. Browne Collier.
John Brenton.
William Ramsden.
John Donaldson Boswall.
Henry Stanhope.
John Townsend Coffin.
Frederick Hunn.
Edward Curzon, *св.*
Septimus Arabin,
Thomas Ball Clowes.

James Couch.
William Henry Smythe.
Richard Saumarez.
James Montagu.
Thomas Prickett.
A. D. Young Arbuthnot.
Isham Fleming Chapman.
John Skekel.
John Stoddart.
George Ourry Lempriere,
Thomas Warrant.

John Gore (B).
Charles Bowen.
John George Graham.
John George Aplin.
William Rochfort.
John Pakenham.
Francis Fead.
Frederick A. Wetherall.
Henry Litchfield.
William Webb.

The permanent Retired List to be reduced to 100, by making one appointment for every two vacancies,

CAPTAINS OF GREENWICH HOSPITAL.

John Simpson.
John Bowker.

George Moubray.
Alex. Barclay Branch, КН.

ACTIVE LIST OF CAPTAINS.—Seniority 1810 to 1826.

| | | |
|-----------------------------|-----------------------------|-----------------------------|
| Philip Browne. | Wm. Bowen Mends. | David Price. |
| Henry Prescott. | George Ferguson. | Rt. Hon. Algernon Lord |
| Sir Nisbet Josiah Willough- | Sir Geo Rose Sartorius, Кт. | Prudhoe. |
| by, Кт. СВ. КСН. | Robert Wauchope. | John Toup Nicolas, СВ., КН. |
| Edward Wallis Hoare. | Sir John Gordon Sinclair, | Daniel Pring. |
| John Coode, СВ. | Bt. | William Willmott Hender- |
| Sir Thomas Fellowes, СВ. | George Edward Watts. | son, СВ., КН. |
| Edward Henry A'Court. | Sir James John Gordon | Sir John Hill, Кт. |
| John Pasco. | Bremer, КСВ., КСН. | John Carter. |
| Wm. Fisher. | Ralph Randolph Worm- | Henry Meynell. |
| Edward Harvey. | eley. | Arthur Fanshawe, СВ. |
| Wm. Fitzwilliam Owen. | George Wickens Willes. | John Lawrence, СВ. |
| Manley Hall Dixon. | Hayes O'Grady. | Houston Stewart, СВ. |
| Hon. Alexander Jones. | William Isaac Scott. | Sir John Ross, Кт., СВ. |
| Peter John Douglas. | Maurice Fred. Fitzhardinge | Sir James Stirling, Кт. |
| Barrington Reynolds, СВ. | Berkeley, СВ. | Right Hon. Lord John |
| Hon. Geo. Alfred Crofton. | Sir David Dunn, Кт., КСН. | Hay, СВ. |
| Villiers Francis Hatton. | Fairfax Moresby, СВ. | Constantine Rich. Moor- |
| Charles Sotheby. | Rt. Hon. Geo. Anson Lord | som. |
| Sir Aug. Wm. James Clif- | Byron. | Rt. Hon. Geo. James, Earl |
| ford, Bt. СВ. | Sir Edmund Lyons, Bart., | of Egmont. |
| Sir Joshua Ricketts Row- | СВ., КСН. | Sir Geo. Augustus West- |
| ley, Bt. | Sir Charles Sullivan, Bart. | phal, Кт. |
| Alex. Renton Sharpe, СВ. | Sir John Marshall, Кт., | Provo Wm. Parry Wallis. |
| Gordon Thos. Falcon. | СВ., КСН. | William Walpole |
| Sir Watkin Owen Pell. Кт. | James Erskine Wemyss. | Donat Henchy O'Brien. |
| Wm. Fairbrother Carroll, | Francis Erskine Loch. | Geo. Cornish Gambier. |
| СВ. | Edward Collier, СВ. | Edward Lloyd, КН. |
| Sir Andrew Pellet Green, | Nicholas Lockyer, СВ. | Benedictus Marwood Kelly |
| Кт., КСН. | | |

The above Officers are on the Half-Pay of 14s. 6d. per diem.

| | | |
|----------------------------|---------------------------|----------------------------|
| Armar Lowry Corry. | Geo. Fred. Rich. | Fred. Marryat, СВ. |
| Sir W. Edward Parry. | William James Hope John- | Geo. Robert Lambert. |
| Henry William Bruce. | tone. | Thomas Smith. |
| William James Mingaye. | James Ryder Burton, КН. | Alexander Thos. Emeric |
| Norwich Duff. | William Fanshawe Martin. | Vidal. |
| Sir Charles Christopher | Hon. Geo. Rolle Walpole | John Leith. |
| Parker, Bart., | Trefusis. | Rt. Hon. Chas. Lord Col- |
| John Edward Walcott. | Hon. Rich. Saunders Dun- | chester. |
| Right Hon. Fred. Earl | das, СВ. | Charles Hope. |
| Spencer, СВ. | Rt. Hon. Lord Adolphus | William Keats. |
| James Hanway Plumridge, | Fitzclarence, ССН. | Sir Henry John Leeke, Кт., |
| Sir George Tyler, Кт., КН. | Percy Grace. | КН. |
| Sir John Franklin, КСН. | Henry Dundas. | Thomas Martin. |
| Sir Thomas Herbert, КСВ. | William Hotham, КН. | Henry Edwards. |
| Geo. Richard Pechell. | Hon. Montagu Stopford. | Charles Howe Fremantle. |
| Herbert Brace Powell. | Rt Hon. Chas. Philip Earl | Michael Seymour. |
| Hon Henry John Rous. | of Hardwicke. | Rt. Hon. Lord Wm. Paget. |
| Edward Boxer, СВ. | Henry Ducie Chads, СВ. | |

The Active List of Captains not permanently to exceed 500. 70 Captains to be on the half-pay of 14s. 6d., and the next 100 on the half-pay of 12s. 6d., per Diem.

ERRATA.

- Page 16, line 13 from foot, for "view." read "run."
11, line 7, for "Chesmise," read "Chermin."
17, line 14, for "visible," read "warlike."
17, line 9 from foot, for "frontier" read "premises,"
17, line 8 from foot, for "behind" read "blind."
17, line 3 from foot, for "steamer" read "steamers,"
17 bottom line, for "carpenter" read "carpenters."
18, line 22, for "Lincoe" read "Simcoe."
154 line 16 from bottom, for "arrived" read "aimed."
154, line 6, for "arranged" read "annexed."
154, line 12, for "men" read "them."
154, line 13, for "in" read "on."
419, line 3, for "ge" read "we."
429, line 9, for "carelessness" read "carelessness."
421, line 16, for "officers" read "officer."
488, age of Mr. G. D. Harris, for "67" read "27,"
488, col. number of register ticket of Mr. S. Feech, for "21485," read "21486."
and of Mr. Gray, for "15445" read "15455."

LONDON:

**PRINTED BY R. H. HUNT, 3, NEW CHURCH STREET,
EDGWARE ROAD.**

