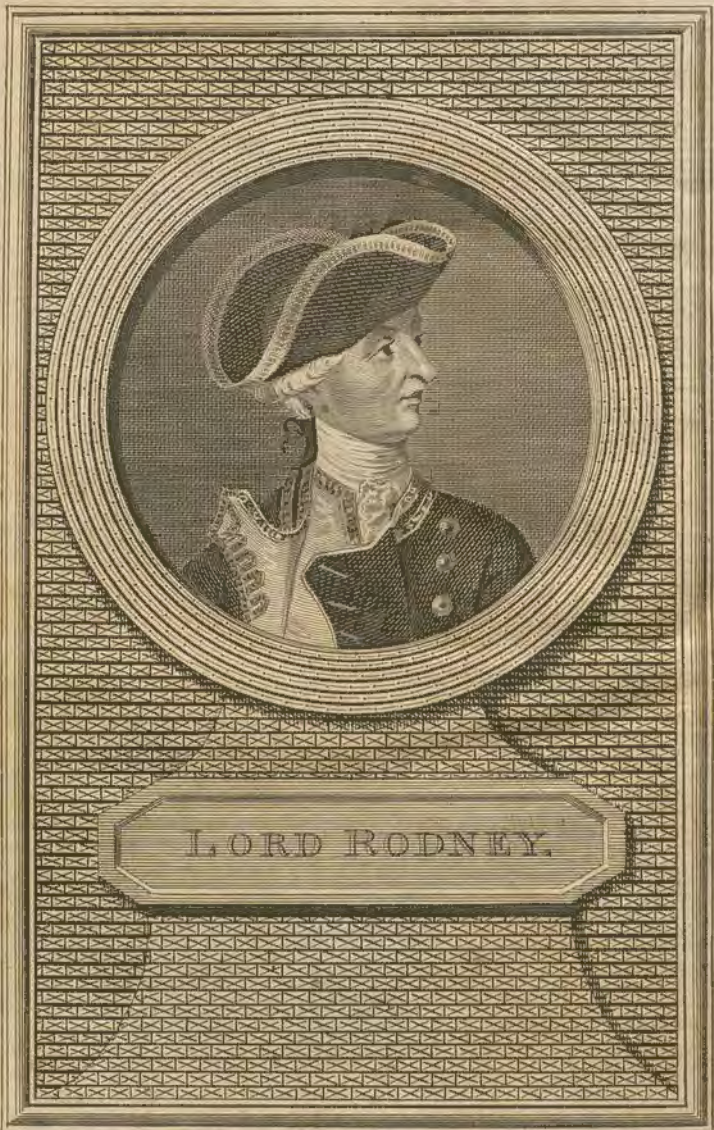




Gift of

Captain Wm. D. Puleston, USN (Ret.)



LORD RODNEY.

THE

Naval Magazine

OR,

MARITIME MISCELLANY.

Vol. 3.

For the YEAR 1801.



LONDON:

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THE SWEDISH FLAG .

Published by Mellin, April 20, 1801.

THE
NAVAL MAGAZINE,
 FOR JANUARY, 1801.

[Embellished with a beautiful Coloured Print of the UNION FLAG (or Jack) of the United Kingdom of GREAT BRITAIN and IRELAND.—Also with an Elegant Vignette Engraved Title Page for the present Year, representing BRITANNIA in the Act of inscribing the Names of NELSON, DUNCAN, ONSLOW, VINCENT, SMITH, &c. on a Monument of Fame, sacred to the Memory of the gallant Achievements of BRITISH Naval Heroes, with Fame bringing her Immortal Wreath, to complete the Ceremony.]

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LONDON:

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ACKNOWLEDGEMENTS TO CORRESPONDENTS.

A large packet of NAVAL ANECDOTES from R. R. of Reading, is received, but as our Correspondent has very candidly confessed that they are compiled, the Editor requests he will be so kind as to ascertain the different publications from which they are extracted, that they may be accordingly notified.

The Essay, signed A MIDSHIPMAN, is under consideration.

We return our thanks to NAUTICUS for his paragraphs, but they were received too late for our NAVAL NOTICES.

An impartial account of the musical piece of the VETERAN TAR in our next.

THE HISTORY of the EAST INDIA COMPANY, and NAVAL LITERATURE, as soon as possible.

Correspondents may depend upon the utmost care and attention being paid to all their favours, as we have promised in our NEW ADDRESS TO THE PUBLIC—(See the Last Page of the Wrapper)—and such as wish for an early insertion, are requested to send their communications before the 12th of the month, and before the 20th in order to be acknowledged in this place. They are also requested in future to address (post paid) To the Proprietors of the Naval Magazine, at No. 16, Paternoster-Row.

This Century having commenced with the Union of Great Britain and Ireland, we have thought fit to display the Flag, and may it long flourish to the mutual glory of the Sister Kingdoms—the PRIDE OF THE OCEAN—and the TERROR OF OUR ENEMIES!!!

Instead of giving the VIGNETTE TITLE PAGE, as heretofore, with the Last Number of the Volume, we shall, as now adopted, always give it with the FIRST NUMBER.

Not having room in the Work itself for prefatory matter, without excluding some very important articles, and unwilling to omit our due acknowledgments to the Public, we beg leave to refer all

READERS AND CORRESPONDENTS TO OUR NEW

—See the Last Page of the Wrapper.

THE
NAVAL MAGAZINE;
OR,
MARITIME MISCELLANY,
FOR JANUARY 1801.

NAVAL HISTORY OF GREAT BRITAIN.

(CONTINUED FROM VOL II. PAGE 582.)

AFTER the surrender of Calais a negociation was set on foot between Edward and Philip, under the mediation of the Pope's Legates, and a truce was soon after concluded, which was to continue till the 9th of July following, but was afterwards prolonged on account of the terrible plague which broke out in several parts of Europe in 1348, and extended itself to England. Soon after Philip, king of France, died without being able to re-establish the affairs of his country, which his unfortunate campaign against the English had thrown into the greatest disorder. He was succeeded by his son John, a prince distinguished by many virtues, particularly a scrupulous honour and fidelity, but whose authority was annihilated by the usurpation of the barons. This being a favourable opportunity for Edward to renew hostilities, the Prince of Wales was sent into France with an army, on board a fleet of 300

fail, and landing in Gascony, carried his devastations into the heart of the country; while the king, at the head of a numerous army, made an irruption on the side of Calais, and ravaged all the adjacent territories.

The Spaniards at this time envied the wealth of England, and sent out pirate vessels to take up the straggling ships of commerce. The success of the first year's expedition brought twice the number in the second, and from the same cause they every year increased, till the merchants now saw the very being of commerce in danger, for they had even burnt a fleet of English merchant ships lying in Sluys, laden with wine. Accordingly they applied to the throne; they came before the king with a dutiful, but spirited address; and they received such an answer as so considerable a body always will receive, when knowing their own importance, they knew how to ask.

Edward did not content himself to reply in general terms, that "he was sorry," and "he would take care;" he entered on the two points in their address—the sense of their danger, and the need of redress. To the first he answered, That he knew the very being of the kingdom depended on its commerce; and, to the latter, that he would command a fleet himself to clear the seas.

Edward kept his word. Orders were instantly dispatched to the ports; a large fleet was in a few days got ready, and the king embarked on board his own High Admiral at Sandwich, in 1349, taking with him the Prince of Wales, the Earls of Warwick, Northampton, and Salisbury, with many more of his best officers.

So just was Edward's sense of the importance of his kingdom's commerce, that he did not disdain himself to vindicate it, though against pirates.

The Spaniards were not less than fifty ships, all full of men, and of desperate fortunes. They heard of the fleet fitted out against them, and found it was of less force than themselves, if collected together; therefore they gathered all their power, and stood out to meet the English.

The royal fleet approached, and for the foremost vessel the king himself stood eminent upon the deck, armed with his cutlass, and pointed to the best ship of the Spaniards.

The English ships were much smaller and lower built than those of the Spaniards, and Edward, whose marine had been hitherto on a respectable footing, and capable of resenting any indignity, depended chiefly on his archers for clearing the decks of the enemy;

and, notwithstanding their large ships, which were well manned and armed, Edward succeeded in his views.

What he began, all followed. It was a great thing to fight in presence of their king, and in sight of their countrymen who crowded the shore. The Spaniards did not give up the contest easily. Much blood was spilt on both sides, but the victory was the king's. He took twenty of their vessels, and sunk as many more. The remainder got back to the ports of Spain, and never more infested the English seas.

Edward returned victorious: he received the congratulations of the merchants—more glorious than the oaken wreath, or mural crown of ancient heroes; and struck a medal to commemorate the action.

It is intimated by some historians, that the Spaniards were stimulated to those acts of violence and plunder by the French, for the truce between France and England was only observed when neither party found it their interest not to break it; and as the pestilence which had so long raged in different parts of Europe was now greatly abated, the passion for war, which seemed to slumber under the afflicting rod of Providence, was revived in proportion as health returned. But France was soon humbled by the memorable battle of Poitiers, in which the Prince of Wales, Edward, distinguished by the title of the Black Prince, displayed so much true heroism, while John, whom the French peers had placed on the throne of France, fell prisoner into the hands of the English.

(To be continued.)

MISCELLANY.

DESCRIPTION OF THE PLATE.

An elegant PLATE representing the NEW UNION FLAG.

THE NEW UNION FLAG.

ON Thursday, Jan. 1, 1801, the new Union Flag was hoisted on board the ships in the different ports, and royal salutes were fired in honour of the Union of England and Ireland. The Standard and Union Jack were also hoisted on the batteries at Portsmouth; royal salutes were fired from the platform from Walmer and Sandown castles.

BY THE KING—A PROCLAMATION.

DECLARING WHAT ENSIGN OR COLOURS SHALL BE BORNE AT SEA, IN MERCHANT SHIPS OR VESSELS BELONGING TO ANY OF HIS MAJESTY'S SUBJECTS OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, AND THE DOMINIONS THEREUNTO BELONGING.

GEORGE R.

WHEREAS, by the first article of the Articles of Union of the kingdoms of Great Britain and Ireland, as the same have been ratified and confirmed by two acts of parliament, the one made in our parliament of Great Britain, and the other in our parliament of Ireland, it was provided that the ensigns armorial, flags, and banners of our United Kingdom of Great Britain and Ireland should be such as we should appoint by our royal proclamation, under the great seal of our said United Kingdom: and whereas we have, by our royal

proclamation, dated this day, appointed and declared, that the arms, or ensigns armorial, of the said United Kingdom, should be as therein expressed: and whereas, according to ancient usage, the ensigns, flags, jacks, and pendants, worn by our ships, and appointed as a distinction for the same, ought not to be worn on board any ship or vessel belonging to any of our subjects, so that our ships, and those of our subjects, may be easily distinguished and known, we have therefore thought fit, by and with the advice of our privy council, to order and appoint the ensign described on the

side

side or margin hereof (i. e. Proclamation) to be worn on board all ships or vessels belonging to any of our subjects whatsoever, and to issue this our royal proclamation to notify the same to all our loving subjects, hereby strictly charging and commanding the masters of all merchant ships and vessels belonging to any of our subjects, whether employed in our service or otherwise, and all other persons whom it may concern, to wear the said ensign on board their ships or vessels: and, to the end that none of our subjects may presume, on board their ships, to wear our flags, jacks, and pendants, which, according to ancient usage, have been appointed as a distinction to our ships, or any flags, jacks, or pendants, in shape and mixture of colours so far resembling ours as not to be easily distinguished therefrom, we do, with the advice of our privy council, hereby strictly charge and command all our subjects whatsoever, that they do not presume to wear, in any of their ships or vessels, our jack, commonly called the union jack, nor any pendants, nor any such colours as are usually borne by our ships, without particular warrant for their so doing from us, or our High Admiral of Great Britain, or the commissioners for executing the office of high admiral for the time being: and we do hereby also further command all our loving subjects, that, without such warrant as aforesaid, they presume not to wear, on board their ships or vessels, any flags, jacks, pendants, or colours, made in imitation of, or resembling our's, or any kind of pendant whatsoever, or any other ensign than the en-

sign described on the side or margin hereof, which shall be worn instead of the ensign before this time usually worn in merchant ships; saving that for the better distinction of such ships as shall have commissions of letters of marque or reprisals against the enemy, and any other ships or vessels which may be employed by the principal officers and commissioners of our navy, the principal officers of our ordnance, the commissioners for victualling our navy, the commissioners for our customs and excise, and the commissioners for transportation, for our service relating particularly to those offices, our royal will and pleasure is, that all such ships as have commissions of letters of marque or reprisals shall, besides the colours or ensign hereby appointed to be worn by merchant ships, wear a red jack with a union jack described in a canton at the upper corner thereof, next the staff: and that such ships and vessels as shall be employed for our service by the principal officers and commissioners of our navy, the principal officers of our ordnance, the commissioners for victualling our navy, the commissioners for our customs and excise, and the commissioners for transportation for our service relating particularly to those offices, shall wear a red jack with a union jack in a canton at the upper corner thereof, next the staff as aforesaid, and in the other part of the said jack shall be described the seal used in such of the respective offices aforesaid, by which the said ships and vessels shall be employed: and we do strictly charge and command that none of our loving subjects do presume to wear any of the said distinction-jacks unless they

they shall have commissions of letters of marque or reprisals, or be employed in our service by any of the before-mentioned officers: and we hereby require our high admiral and commissioners for executing the office of high admiral, the governors of our forts and castles, the officers of our customs, and the commanders or officers of any of our ships, for the time being, upon their meeting with, or otherwise observing any ships or vessels belonging to any of our subjects, neglecting to wear the ensign hereby appointed to be borne as aforesaid, or wearing any flag, pendant, jack, or ensign, contrary hereunto, whether at sea or in port, not only to seize, or cause to be forthwith seized, such flag, pendant, jack, or ensign, worn contrary to our royal will and pleasure herein expressed, but also to return the names of such ships and vessels neglecting to wear the ensign hereby appointed, or wearing any flag, pendant, jack, or ensign, contrary hereunto, together with the names of their respective masters or commanders unto our high admiral or commissioners for executing the office of high admiral, or the judge of our high court of admiralty, for the time being, to the end that all persons offending may be duly punished for the same. And we do hereby command and enjoin the judge and judges of our high court of admiralty, for the time being, that they make strict inquiry concerning all such offenders, and cause them to be duly punished; and all vice-admirals and judges of the vice-admiralties, are hereby also required to proceed in the like manner, within the several ports and places belonging to their respective precincts. And our further pleasure

is, that this proclamation shall take place according to the times hereafter mentioned: videlicet, for all ships in the Channel or British Seas, and in the North Seas, after 12 days from the date of these presents; and from the mouth of the Channel unto Cape St. Vincent, after six weeks from the date of these presents; and beyond the Cape, and on this side the Equinoctial Line, as well in the Ocean and Mediterranean as elsewhere, after 10 weeks from the date of these presents; and beyond the line after the space of eight months from the date of these presents.

Given at our court at St. James's, the 1st day of January, 1801, in the 41st year of our reign.

GOD SAVE THE KING.

The following is a Copy of the Proclamation which was signed by the King on Thursday at St. James's, declaring his Majesty's pleasure concerning the royal stile and titles appertaining to the Imperial Crown of the United Kingdom of Great Britain and Ireland, and its dependencies, and also the Ensigns Armorial, Flags, and Banners thereof.

GEORGE R.

WHEREAS by the first article of the Articles of Union of Great Britain and Ireland, ratified and confirmed by two acts of parliament, the one passed in the parliament of Great Britain, and the other in the parliament of Ireland, and respectively intituled, "An Act for the Union of Great Britain and Ireland," it was declared, that the said kingdoms of Great Britain and Ireland, should upon this day, being the 1st day of January, in the year of our
Lord

Lord 1801, for ever after be united into one kingdom, by the name of "The United Kingdom of Great Britain and Ireland;" and that the royal stile and titles appertaining to the Imperial Crown of the said United Kingdom and its dependencies, and also the ensigns armorials, flags, and banners thereof, should be such as we, by our royal proclamation, under the great seal of the said United Kingdom should appoint; we have thought fit, by and with the advice of our privy council, to appoint and declare, that our royal stile and titles shall henceforth be accepted, taken, and used, as the same are set forth in manner and form following; that is to say, the same shall be expressed in the Latin tongue by these words—"Georgius Tertius, *Dei Gratia, Britanniarum Rex, Fidei Defensor.*" And in the English tongue by these words: George the Third, by the Grace of God, of the United Kingdom of Great Britain and Ireland, King, Defender of the Faith." And that the arms or ensigns armorial of the said United Kingdom, shall be quarterly, first and fourth, England; second, Scotland; third, Ireland; and it is our will and pleasure that there shall be borne therewith, on an escutcheon of pretence, the arms of our dominions in Germany ensigned with the Electoral bonnet. And it is our will and pleasure that the standard of the said United Kingdom shall be the same quartering as are hereinbefore declared to be the arms or ensigns armorial of the said United Kingdom, with the escutcheon of pretence thereon, hereinbefore described: and that the Union flag shall be azure, the crosses-saltires of St. Andrew and St. Patrick

quarterly per saltire counter changed argent and gules: the latter fimbriated or the second: surmounted by the Cross of St. George of the third, fimbriated as the saltire. And our will and pleasure further is, that the stile and titles aforesaid, and also the arms or ensigns armorial aforesaid, shall be used henceforth, as far as conveniently may be, on all occasions wherein our royal stile and titles, and arms or ensigns armorial, ought to be used. But, nevertheless, it is our will and pleasure, that all such gold, silver, and copper monies, as, on the day before this 1st day of January, 1801, were current and lawful monies of Great Britain; and all such gold, silver, and copper monies, as shall, on or after this day, be coined by our authority with the like impressions, until our will and pleasure shall be otherwise declared, shall be deemed and taken to be current and lawful monies of the said United Kingdom in Great Britain; and that all such gold, silver, and copper monies, as, on the day before this 1st day of January, 1801, were current and lawful monies of Ireland, and all such gold, silver, and copper monies, as shall, on or after this day, be coined by our authority with the like impressions, until our will and pleasure shall be otherwise declared, shall be deemed and taken to be current and lawful monies of the said United Kingdom in Ireland; and all such monies as shall have been coined for, and issued in any of the dominions of the said United Kingdom, and declared by our proclamation to be current and lawful money of such dominions respectively, bearing our stile or titles, or arms, or ensigns armorial, or any part or parts thereof,

and

and all monies which shall hereafter be coined and issued, according to such proclamations, shall continue to be lawful and current money of such dominions respectively, notwithstanding such change in our stile, titles, and arms, or armorial bearings respectively, as aforesaid, until our pleasure shall be further declared thereupon. And all and every such monies as aforesaid, shall be received and taken in payment in Great Britain and Ireland respectively, and in the dominions thereunto belonging, after the date of this our proclamation, in such manner, and as of the like value and denomination as the same were received and taken before the date hereof. And it is also our will and pleasure that the several dies and marks which have been used to denote the stamp duties, and all other stamps and marks and instruments, which, before the issuing of this our proclamation, shall

have been in actual use for any public purpose, and in which our royal stile and titles, or our arms or ensigns armorial, or any part or parts thereof respectively, may be expressed, shall not, by reason of this our proclamation, or any thing therein contained, be changed or altered, until the same may be conveniently so changed or altered, or until our pleasure shall be further declared thereupon, but that all such dies, stamps, marks, and instruments respectively, bearing our royal stile and titles, or arms or ensigns armorial, used before this 1st day of January, 1801, or any parts or part of such stile, titles, or of such arms or ensigns armorial, shall have the like force and effect as the same had before the said 1st day of January instant.

Given at our court of St. James's, the 1st day of January, 1801, in the 41st year of our reign.

GOD SAVE THE KING.

AN AUTHENTIC AND CIRCUMSTANTIAL NARRATIVE OF THE LOSS OF THE CHARLES BARING, WEST INDIAMAN.

(COMMUNICATED TO THE EDITOR, JANUARY 12, 1801, BY ONE OF THE
TWENTY-EIGHT FORTUNATE SURVIVORS.)

THE ship Charles Baring, Captain John Aris, sailed from Port Royal, Jamaica, on the evening of the 6th of September, bound to London; on the 8th weathered the east end of Jamaica; on the 9th made the island of Navasa, and also Hispaniola, or St. Domingo. From this time until the 17th, light breezes, mostly from the eastward, with remarkably

fine weather for the season. On the 18th cleared the Windward Passage, the wind still continuing easterly; we made little progress during the month. Nothing material occurred until the 5th of October, when we carried away our cross-jack-yard, main top-gallant-mast, and split the main top-sail in a heavy gale of wind, which continued for three days.

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On the morning of the 15th we found the ship to make a considerable quantity of water, which so increased by night that one pump could scarcely keep her free. On the 17th we were obliged to keep both pumps constantly going; on the 20th she rather gained on us, although we never left the pumps day or night. Our situation now became very alarming; every effort was made to discover the leak, but without success. On the 21st at five A. M. on sounding the pump-well, there was found upwards of five feet water in the hold. The Captain (who had lain down about an hour) was informed of it, and he instantly ordered the gun-deck to be scuttled on each side the main-mast, to get to the pump-well; this being done, two water casks, with one head out of each, were slung, and tackles fixed to them; a man attending each cask in the pump-well, tilted it over and filled it instantly: six men to each tackle-fall hoisted them up every few seconds and emptied them into the gun-deck, by which means we delivered more than a ton of water every minute, at the same time both pumps were kept constantly going: at meridian on the same day we had the inexpressible satisfaction to find we had gained near three feet. The joy with which these glad tidings were received shewed itself on every countenance; but, alas! it was of very short duration, for the coffee and cocoa in her hold began to come to the pumps in such quantities as to render them almost useless, consequently the water gained on us very considerably during the night. At eight A. M. on the 22d the Captain ordered the guns to be hove over-board to ease the ship,

which service was chiefly performed by the passengers, whose active exertions, during the whole of our misfortunes, merit the greatest praise. At six P. M. the pumps were entirely choaked and useless; the water had now increased to seven feet, and still gaining; the hands that left the pumps were ordered to heave more of the cargo over-board from forward, as the ship was found to settle very much by the head. At two A. M. on the 23d, the water was up to the orlop deck-beams; at six A. M. the fore-hold was cleared sufficiently to get two more casks to work in the fore-hatchway, by which means we rather gained on her during the day. At four P. M. the wind which had been favourable for ten days, changed to the N. E. with every appearance of bad weather. At eight P. M. we were obliged to heave the ship to. At twelve it blew a heavy gale, so that the ship lay nearly on her beam-ends: in this situation our efforts were rendered useless, as the water we delivered into the gun-deck returned back into the hold, having no passage through the scuppers. It was now considered impossible to preserve the vessel, and the people were so jaded from their unremitting exertions for nine days and nights, that death, which presented itself on every side, seemed welcome to them as a relief from their toils. The gale continuing to increase, we expected to founder before morning—Almighty Providence ordered it otherwise, or not a soul could have been saved. At dawn of day to increase our misery the main-mast went over the side, and was with infinite difficulty cleared from the ship.

ship. No prospect now presented itself of saving our lives, except a small long-boat and jolly-boat, not competent to hold more than half our number. As soon as the boats were got out the Captain (with a consideration which will ever reflect the highest honour on him) insisted the ladies should be first put into them, which was fortunately accomplished without accident, although the boat was in danger of being sunk every time she came near the ship, in consequence of the heavy sea running. A compass, quadrant, top-gallant-royal, some water, provisions, &c. were now put into the boat, and she was veered astern. Our Captain spoke to the people, and told them how impossible it was for the boats to save all, and that the only expedient he could think of, was for them to make a raft of cotton bags, spars, &c. &c. that the boats should remain by them with provisions and necessaries until they were fortunate enough to fall in with some vessel: adding, that no one should quit the ship until he did, and that he was determined to remain until the sunk, or the raft was finished. The whole crew unanimously agreed to stay by him to the last, and do whatever he desired them, and immediately proceeded to make the raft. A short time before the ship foundered, Mr. Bennet (one of the passengers) called from the boat to Captain Aris, requesting him in the most urgent manner to quit the ship, as he was sure she was going down. The answer was, "No, I will never quit her while she floats." Mr. Bennet replied, he would give him five minutes, and if she did not founder in that time, he would come on board again and sink with him, if that

was his determination. At this time the raft was in great forwardness; one hour more would have completed it, but, miserable to relate, she foundered before it was finished! The scene was now dreadful; every one that could swim trying to gain the boat (which was at this time a considerable distance from the ship, the rope being cut by those in her to prevent her going down with the ship). Some succeeded, others perished in the attempt; some floating on cotton bags, spars, &c. &c. and others unable to quit the ship, remained to await their inevitable doom, casting an anxious and imploring look to their comrades in the boat; but all in vain; there was not the least possibility of rendering them any assistance. At this moment the Captain, who had remained in the ship until the last, gained the boat and was hauled in by Mr. Bennet. Our situation was now dreadful in the extreme; obliged to witness the dissolution of our companions in the ship, while our own seemed also inevitable, for every one considered it impossible to survive many minutes longer, being 28 in a small boat, so deep as to be scarce able to float in a tremendous gale of wind, the sea running mountains high, and as a seeming prelude to what was to be our lot. The jolly-boat then close to us was overwhelmed by a sea, which forced her with such violence against the rudder of our boat, that it was carried away: she was sunk, and the two hands in her perished. Our boat being so deep it was by the greatest exertions we could keep her free, as almost every sea came foaming in on each side, particularly if we were at the head of it when it broke. About half an

hour after we had quitted the ship, Abraham Day, the man who was steering the boat with an oar, called out—there was a sea coming that would finish us! He had scarce uttered the words when it came;—"Lord have mercy on us!" was at the same instant exclaimed by all: we were literally smothered in it, and it was some time before we could see each other. It left the boat quite full—the water ran over each gunwale; not an infant was to be lost; every thing we could lay our hands on was thrown overboard to lighten her, even our provisions and the cask of fresh water shared the same fate. We had fortunately put two or three buckets into the boat, with which and our hats we had her free again in a few minutes; had another sea followed we must inevitably have perished. Captain Aris observed, that as Providence had then rescued us when so near the brink of eternity, he thought we were marked to be saved. We were now left almost without water, having only an allowance of two wine glasses in 24 hours; all our bread damaged with the salt water, and no probability of making any land; the boat being so deep we were obliged to keep her before the wind and sea; it was therefore impossible to make any direct course but left her entirely at the mercy of the wind and waves. In this miserable situation, without the least shelter, being constantly wet and exposed to the violent N. E. gale, which blew extremely cold, we continued three nights and two days, when we were providentially picked up by the American brig, Harriot, of New York, bound to Bristol. We experienced the most humane and kind treatment from the Captain and

crew, and although they were put on short allowance the day before, we were admitted to a share of what they had with the utmost cheerfulness. On the 6th of September the brig put into Kinfale, Ireland, where most of the fortunate survivors were landed. Great as the general distress was during our perilous situation, yet it was exceeded by the particular distress of Madam Beauvais and her two daughters, who had the inexpressible anguish to witness the dissolution of a most affectionate husband and tender father; who, unable to make them hear his last words drew his sword, and waving it three times over his head, bade them an eternal adieu! By the ship's account we were in lat. 42. 30. and lon. 40° when she foundered.

SAVED IN THE BOAT.

Captain John Aris.
 General le Grand, who died 2 days
 after we got on board the brig.
 Madam le Grand.
 Madam Beauvais.
 Two Misses Beauvais.
 Captain Fitzmaurice.
 Mrs. Fitzmaurice.
 Thomas Bennet, esq.
 James Gatty, 2d mate.
 George Darbish, boatswain.
 Richard Jackson, carpenter.
 John Jones, gunner.
 Thomas Blayadine, cook.
 George Rose, gunner's mate.
 Twelve seamen—one soldier.

Total 28

LOST.

General Beauvais.
 Mr. Murray, late master of the
 Surprize frigate.
 M. De La Font, doctor.
 Mr. Holloway, chief mate.
 Two servants of Generals Le
 Grand and Beauvais.
 Ten seamen and 11 soldiers.

Total 27

DESCRIPTION OF PORTS, DOCK-YARDS, AND OTHER PLACES CONNECTED WITH THE NAVY.

(Continued from Vol. II. page 551.)

PLYMOUTH.

THE harbour of Plymouth is one of the most spacious and convenient in the world, of which the legislative power seems extremely sensible, by making it one of the principal places for the royal navy. The town is situated on the borders of Cornwall, at the south-west extremity of the county, and is large and populous. It was anciently called Tamaworth, probably because it stood more towards the river Tamar, than it does at present. It is now situated on a point of land, having the river Tamar, called Hamoaze, on the west, and the river Plym, called Catwater, on the east.

This place for strength, riches, and beauty, may be considered as one of the brightest jewels in the royal diadem of Britain. It remains a striking example of what industry is able to accomplish, when countenanced by regal power; for about the beginning of the reign of Henry VIII. it was only a small inconsiderable village, having greatly suffered from foreign invasions at different periods.

During the long wars of Edward III. the French made an attempt on Plymouth, by landing within a few miles of the town: but the Earl of Devonshire raised his vassals and attacked the enemy with such resolution and bravery, that 500 were slain: the rest escaped by flying to their ships.

In the civil wars during the reign of Charles I. Plymouth followed the example of the other mercantile towns, by adhering to the parliament; and by an obstinate resistance, did more hurt to the king's interest, than any other place in this part of the kingdom.

On the river Hamoaze or Tamar, about two miles above the town, are two fine docks, one of which is dry and the other wet. The dry dock is curiously constructed, almost in the form of a man of war, being made in the reign of William III. as a place of security for ships of war, in case of any foreign invasion. The wet dock will contain five first rate men of war, both being lined with the best Portland stone; and, adjoining to the basin is a magazine, wherein are contained all the different sorts of materials necessary in building and repairing ships, together with handsome and convenient houses for the commissioners and other officers belonging to the dock-yard.

The harbour being of the utmost importance to the safety of Britain, is now a place of great strength; for besides its natural situation, it is greatly improved by art, considerable sums having been raised by parliament for that purpose. The island of St. Nicholas, which stands opposite the middle of the town, is a place of considerable strength, having a castle which commands the entrance, so that it would be extremely

tremely dangerous for any ships to pass without the commanding officer's permission.

But Plymouth has a still greater security against any foreign invasions: namely, a strong castle or citadel, first erected by one of the Earls of Devonshire from whom it reverted to the crown. King Charles II. considering it as a proper place to be improved according to the modern method of fortification, ordered the ruined part of the walls to be pulled down and new ones erected in their stead, fortified with strong bastions, whereon are mounted a great number of large guns. The whole is surrounded with a ditch, out of which the stones were dug for repairing the walls, and includes a circumference of above three quarters of a mile.

Near the entrance of the harbour is Old Fort, where there is a large battery of cannon, nearly on a level with the water. There is also another battery on the west side of the harbour near Mount Edgecumbe, strongly secured, and large guns placed fronting the water. These different forts are constantly garrisoned by a body of foot soldiers, together with several companies of invalids. Great additions have been lately made to different parts of this fort, so that at present it is able to resist the attempts of the most daring enemy.

At the entrance of Plymouth Sound is Eddystone Rock, which is covered at high water, and was formerly the cause of many ships

being lost. But this evil was for a time removed by Mr. Winstanley, an ingenious architect, who was employed to erect a light-house on the rock, that mariners might avoid it (*See Vol. I. p. 166*). The building was finished in the year 1696, but thrown down by the dreadful storm which happened on the 27th of November, 1703. Mr. Winstanley, who was there to view the place, with several other people, all perished, the ships in the harbour not being able to give them any assistance. It had been often doubted that this edifice would not be able to stand against a severe tempest: but Mr. Winstanley was so confident of its stability, that he used to say he could wish to be in it when a storm happened, which unfortunately was the case, and the next morning after the tempest, no remains of the light-house were to be seen. Another, however, was built on the same rock in the reign of Queen Anne, but was burnt down in 1755. The stone work about 30 feet high, which remained unhurt, has been re-edified and enlarged under the direction of Mr. Smeaton, and is considered by good judges, to be the most complete as well as the most useful work of the kind in Europe. Near this place the Ramilies, a fine second rate man of war was lost on the 15th of March, 1760, and the captain with 608 men perished: a midshipman and 25 sailors were saved, by jumping from the stern of the ship on the rocks.

(To be continued.)

NARRATIVE OF SOLIMAN BACHA'S INTERESTING
VOYAGE FROM SUEZ TO THE EAST INDIES
IN 1538.

(TRANSLATED FROM THE ITALIAN.)

IT was neither by motives of interest nor of fame, that the author of this relation was induced to follow the Eunuch Soliman Bacha, general of the Turks, in his expedition to the East Indies against the Portuguese.

Hostilities had begun in 1537 between the republic of Venice and the Turks. Some Venetian galleys, commanded by Antony Barbarigo, being in the port of Alexandria, were deprived till the 7th of September of the liberty of trading; and at that epoch the Venetian Consul Almero Barbaro, the Captain Barbarigo, with all the merchants and sailors belonging to them, were put in arrest, and imprisoned in the tower of Lances. After this, all such prisoners as had any knowledge of navigation (and the author was unhappily in the number), were selected and sent to Cairo, and from thence, fifty at a time, to Suez, where Soliman was fitting out his fleet; and he took from among the prisoners those who could be useful to him, either by their talents or experience.

Suez is a barren place, where nature does not produce even the most ordinary grass. Every necessary article for the construction of a fleet, as wood, iron, and cordage, had been brought to Alexandria from Sataglia and Constantinople, navigated on the Nile to Cairo, and transported from thence to Suez on camels. The road from Cairo to Suez is so complete-

ly desert, that neither a house nor water, nor provisions of any kind, are to be found; and the caravans are obliged to be furnished at their outset with stores for the whole journey. It is, however, no less true, that Suez was formerly a large town, and well furnished with cisterns. A channel communicated to it from the Nile, which was navigable when the waters of that river were high; and this supplied at the same time all the cisterns of Suez for a whole year. But when the Mahometans destroyed the town, the channel was abandoned and ruined; so that the inhabitants have now no other water than what they fetch at a distance of six miles from the town, where a few dirty ponds and wells are to be found. Suez is situated in a bay at the top of the Red Sea, and is only defended by a small fort with a garrison of 20 Turks.

Soliman's fleet consisted of 73 vessels, four only of which were considerable for size or strength. Every thing was ready, and the Admiral was expected to set sail, when on the 9th of March 1538, 2000 men, who made part of the armament, left the ships, and marched toward the mountains. Nothing could have stopped them, if they had not met a party of cavalry commanded by a Sanjack, who surrounded them, killed 200, disarmed the others, and brought them back to the port, where they were put in chains to serve in the galleys.

galleys. At length Soliman's arrival hastened the departure. The soldiers received their pay beforehand. The Venetians were put in different ships; and the Consul of Alexandria was sent on board the Khiaja's galley with 17 of his countrymen. Soliman committed his treasure (consisting of 40 boxes covered with skins) to the care of the galliys. On the 20th he gave orders for sailing two days afterwards.

Accordingly, on the 22d, they weighed anchor, but only went that day to the Point of Pharaoh, four miles from Suez, where they cast anchor in a depth of four fathoms*. This place is at 12 miles distance from Moses' Wells. On the 27th all the fleet left the bay of Suez with a N. W. breeze, and arrived at night at Korandol, 60 miles from Suez, where, as is reported, Moses separated the waters, and drowned Pharaoh's army. We found here a depth of 12 fathoms, and remained at anchor all night.

On the 28th, the fleet cast anchor two hours before night in sight of Tor, 100 miles south-east of Korandol. A convent of Franciscans here readily furnished water to all the ships. This good office took up five days. Tor is about a day and a half's journey from Mount Sinai, where the body of St. Catharine is kept in a church of that name. On the 3d of July the fleet cast anchor at Kharas, 40 miles from Tor, in a depth of 12 fathoms, behind a shelf one mile distant from the coast. The two following days were employed in searching two ships laden with stores. On the 5th the fleet got to the isle of Se-

ridan, 100 miles from Kharas, and 40 from the coast. Having sailed all night, it came at day-break in sight of a mountain called Marzcan, 100 miles from Seridan. On the 6th, continuing to direct its course to the S. E. discovered on the following morning Abyssinia on the right, 100 miles from the mountain. On the 7th, ran ninety miles south-east by east. On the 8th, proceeded at the rate of eight miles an hour. Discovered in the morning of the 9th a shelf 50 miles from the coast. In the course of the day proceeded to the north-west with variable winds, at 10 miles only from the morning station; and during the night got 20 miles farther to the south-west. On the 10th, advanced 70 miles to the south-east, and cast anchor in a bottom of eight fathoms in the port of Kor, a town almost deserted.

Leaving Kor the next day, Soliman continued his voyage along the coast for the space of 30 miles, till he came to the town of Ziden, or Joddah, a sea-port where all the spices of India and Calicut are landed, and about eight or nine miles from Mecca. The coast abounds with shelves, some higher, and others lower than the water; but the port is exceedingly good, and you find in the town all kinds of provisions except water, the inhabitants having only rain water, which they preserve in cisterns. A little out of the town is seen a large mosque, which they call *Eve's Sepulchre*. The inhabitants of Joddah are almost naked, thin, and tawny. Their chief food is fish, which is abundant on the coast. They tie together a few

* *Paces*, in the original.

pieces of wood of six feet long; and abandon themselves to the waves in all kinds of weather, and even ten miles from the coast, in those frail barks. The Turkish fleet staid four days in the port of Joddah, renewing their water. On the 15th, they made 82 miles S. W. by S.; on the 16th, 70 miles to the S. E.; on the 17th, 100 miles during the day only to the S. E. and 60 in the night to the S. E. by S. On the 18th, 100 miles during the day only to the S. E. and 50 in the night to the S. E. by E. On the 19th, proceeding with a fair wind to the E. by S. they came near some desert and barren islands called Alfas. These are inhabited three months in the year by the Moors, who come there from other islands to fish for pearls, for which they plunge in a depth of four or five fathoms. They too have nothing but rain water in dirty cisterns; but the fleet having sailed 100 miles that day, staid there all night.

The next day, being the 20th, the fleet got 40 miles from the Alfas to the island of Camaran, or Khamaran, situated 20 miles from the coast. Water and provisions are found there in abundance. The buildings of this island consist of an old ruined castle, and from 40 to 50 houses made with clay and branches of trees. Its inhabitants live by fishing white coral. All the clothing they have is a girdle round their waist, for they wear neither turbans nor shoes. They are of diminutive stature, and all sailors. Their whole property consists in a few small barges, made up of pieces of wood tied together with ropes. Their sails have the form of a fan, and are made with the

bark of palm and date trees, which also furnish them with masts and cordage. In these slight vessels they go to the Continent, and bring back dates, *zibils*, ginger of Mecca, and a kind of white barley, of which they make a paste, after breaking it between two stones; this paste, however, gets so hard, that they are obliged to renew it daily. Meat and fish are plentiful. The fleet, besides taking in fresh water, staid there 10 days, in order to select certain men, who were embarked in two pinks sent by Soliman, one to the King of Zabid, and the other to the King of Aden. He demanded of them provisions for the common cause; and the orders to the King of Zabid were, that he should go to the sea-side, as a token of homage to the Grand Signior, and pay the arrears of his tribute. On the 30th, Soliman advanced 50 miles to the S. by E. as far as the island of Tuicce, where the pink sent to the King of Zabid joined the fleet. She brought presents from the king, consisting of several swords, of the manufacture of Zimina, with gilt handles and scabbards, and some daggers of the same manufacture, ornamented with pearls and rubies. As to the tribute, the King promised to pay it at the Bacha's return, and acknowledge his being a slave of the Grand Signior.

The 1st of August we reached the Strait at 10 miles off Tuicce, and cast anchor behind a shelf called Alonfrankin, so near the Straits, that we passed the next day at only 10 miles distance. The following day and night we made about 80 miles to the E. by S. and, continuing E. by N. for 80 miles more, we safely reached the port of Aden on the 3d of August.

The town of Aden is very strong; it is situated near the sea, and surrounded with mountains, covered with castles and fortifications. On the side of the sea, and towards the interior lands, there is an opening of 300 paces, which is defended by extensive and strong works; besides which, a castle has been built on a shelf opposite to the shore, which commands the entrance of the port. There are, indeed, two ports; one to the south, with 12 fathoms water, on a good bottom; and another to the north, larger, and sheltered from all winds; but the anchorage in the latter is not quite so good. Though the soil is so barren that it produces nothing, yet water is not scarce in the town, but it is rain water, which they keep in cisterns of an amazing depth, and in which it is so hot that the people are obliged to let it cool before they drink it. The inhabitants of the town, among whom are a great number of Jews, are furnished with provisions by the surrounding villages.

As soon as the fleet arrived, four persons of rank were sent from the town to the Bacha with several kinds of refreshments, and he received them very courteously. After a few minutes conversation he gave each of them two velvet vests embroidered with figures, and sent them back to the king, with a safe conduct for him, assuring him that he should run no risk in coming on board the fleet. The king sent an answer the same day, that he was ready to furnish all kinds of provisions, but he should not come on board. Every thing continued quiet the remainder of the day. On the 5th, Soliman ordered his Janissaries to be landed with their arms, and by the

mouth of his Kiabia he summoned the Prince to come and pay, in his presence, his homage to the Grand Signior. The crowned slave did not chuse to make any resistance, protested his attachment to his lord, and came on board with a great number of his captains. The Bacha appeared to be satisfied, treated him well, and made him several presents; but after having permitted him to return to the town, he ordered him to be hanged on shore, with four of his favourites. After the execution, a Sanjack took possession of the town with 500 Janissaries.

Aden is a commercial town. Several East India ships come there every year with spices, which are sent thence to Cairo. Soliman left three pinks to protect the port.

The fleet left Aden on the 19th, and continued its navigation for 15 days in open sea. By the calculation of each day, it appeared that they had, during that time, made a voyage of 17 or 1800 miles. At length, at break of day on the 3d of September, Soliman discovered the coast of Diu, of which he was in search. He coasted along till nine o'clock, when a barge of Moors came to inform him, that the Portuguese had 700 men in the fortreis of Diu, and six gallies well armed in the port. The Bacha rewarded the Moors by a gift of six vests. A Jew taken on shore confirmed the above information. A Portuguese pink was perceived coming out of the port, and Soliman sent two of his gallies after her, but she got off at night, and they lost sight of her. The fleet then cast anchor at three miles from Diu.

SKETCH OF THE LIFE OF SIR EDWARD BERRY, KNT.
CAPTAIN OF THE VANGUARD.

[Having had occasion in our Biographical Memoirs of Lord Nelson (Vol. II. p. 214.) to mention the name of Captain Berry with much honour, we shall here give authenticated particulars of a hero, who though in *years* he has scarcely reached the meridian of manhood, yet in *fame* has given such proofs of professional skill and valour, as not only to demand the praises of his countrymen, but to hold him up as one of the principal pledges of their future glory.]

SIR Edward Berry is the son of — Berry, esq. not long since a considerable merchant in the city, who at his death left a young widow and seven children to be provided for on a fortune by no means adequate either to their reasonable expectations, or the manner in which they had been brought up. The family consisted of two sons (of which Sir Edward is the eldest), Mr. Titus Berry, bred a surgeon, and now rising into eminence in his profession, and five daughters, one of whom died young—two are married, and two remain single.

Young Berry had the good fortune of having his profession in life assigned him by his own choice; a circumstance generally favourable, as it meets difficulties with a better grace, and goes a great way in insuring us the object of our contemplation. His *penchant* was the sea service; and as such a pursuit favoured the circumstances of the family, he made his first voyage before he was quite 14 years of age.

Of the early parts of his naval life, as there was nothing could be achieved, there is nothing to be recorded. The first circumstance of any consequence was his spiritedly boarding a ship of war with which they were grappled,

and for which Lord Spencer made him a Lieutenant. Soon after this we find him in the list of heroes who signalized themselves under Lord Howe on the 1st of June 1794; an action, though becoming less popular from the number of resplendent victories which have succeeded, yet deserves to be ever remembered for the great nautical skill and spirit with which it was performed; and to the praise of the several officers and seamen who distinguished themselves on this memorable occasion, we are happy to add a deserved eulogium on the Commander in Chief, not generally known.

This venerable seaman (the title he most aspired to, and whose skill and courage will be as much the theme of posterity as it is of the present day) was then, at the age of seventy, three days without ever taking off his clothes bringing the French to action, and two days more fighting them, nor did he relax one moment from the strictest attention to his duty till the victory was completely decided; nature then yielding to such accumulated fatigues, he was carried down into his cabin almost exhausted.

When the intimacy commenced between Captain Berry and the

present Admiral Lord Nelson, cannot be said, but it was certainly more firmly established in the memorable action off the rock of St. Vincent, led by the gallant Admiral since so deservedly raised to that title. They both participated in the honours of that glorious day; and they were both thought so highly of by Lord St. Vincent, that when he thought fit to make an attempt upon the town of Santa Cruz in the Island of Teneriffe, which from a variety of intelligence he conceived vulnerable, he appointed Rear-Admiral Nelson to the command of that expedition; Captain Berry commanding the ship in which the Admiral made his attack.

Of the event of this attack the public are already acquainted, which, though rendered unsuccessful from a number of unforeseen accidents, his Majesty's arms acquired a considerable degree of lustre. Captain Berry was in the boat with the Rear-Admiral, when the shot shattered the latter's arm, and which previously passed between him and Mr. Nesbit (the Admiral's son-in-law), as they were talking together. This unfortunate accident, which was not then seen in the extent which it afterwards appeared, scarcely discomposed him: it was instantly bound up with a handkerchief, and the Admiral conducted his retreat with all that coolness and circumspection which is the general attendant of true bravery.

The Rear-Admiral, in his dispatches to Lord St. Vincent, speaking of this event, says, "Though we have not been able to succeed in this attack, yet it is my duty to state, that I believe more daring intrepidity never was shewn than by the Captains, offi-

cers, and men, you did me the honour to place under my command." Though Captain Berry was implicated in this general eulogium, his friend reserved for him a more particular honour in the presence of his Sovereign, by telling his Majesty, when he consoled with him on the loss of his arm, "That he had still his right hand left," alluding to the Captain who was near him.

Much as these actions contributed to Captain Berry's reputation, more laurels still awaited him; being appointed one of the squadron detached by Lord St. Vincent into the Mediterranean, under the command of Sir Horatio Nelson. He was Captain of the Vanguard, a 74 gun ship, in which the Admiral failed; and though the public are already acquainted with the proceedings of this squadron, from the time of its sailing from Gibraltar to the conclusion of the glorious battle of the Nile, there are some particulars necessary to be remarked upon towards elucidating these memoirs.

About a fortnight after their sailing from Gibraltar, a most violent squall of wind took the Vanguard, which carried away her top-masts, and at last her fore-mast, and though all the squadron in some measure felt the effects of this storm, a stronger vein of wind attacked this ship, insomuch that she was obliged to be towed by the Alexander for the purpose of gaining St. Pierre's Road; but notwithstanding this misfortune, and their hopes being frustrated in not meeting with a friendly reception at the place of their destination, the Admiral was determined not to quit Captain Berry's ship; and if any thing could be supposed to accelerate the

the latter's duty, it was the happiness he would derive in making the Admiral's situation tenable; his uncommon efforts, and those resources which British seamen have within themselves, soon enabled him to refit whilst at anchor at St. Pierre's Road, and he again put to sea with the rest of the squadron in tolerable condition.

When Admiral Nelson was first informed by the dispatches brought him by Captain Hardy, of the *La Mutine*, "That Captain Trowbridge had been detached with 10 sail of the line and a 50 gun ship, to reinforce them, he went up to Captain Berry who was on the quarter-deck, and in a transport of joy exclaimed, "Now I shall be a match for any hostile fleet in the Mediterranean, and the wish of my heart is to encounter one."

During the action, which happened soon after, and which shines and will for ever shine in the annals of British glory, Captain Berry's courage and presence of mind never forsook him. As soon as ever he saw the *Le Spartiate* dismasted, he sent an officer with a party of marines to take possession of her, which he effectually did, and on that officer's returning with the French Captain's sword, Captain Berry immediately delivered it to the Admiral, who was then below in consequence of the severe wound which he had received in the head during the heat of the attack.

When the *L'Orient*, the French Admiral's ship was on fire, and which soon increased with such rapidity that the whole of the after part of the ship was in flames, Captain Berry's humanity prompted him instantly to communicate this intelligence to the Admiral, to see what could be

done towards saving the lives of the unhappy crew. The Admiral was at that time under the hands of the surgeon, who was dressing the wound he received in the beginning of the action; but the call of humanity soon made him overlook his own danger; he instantly came upon deck, and ordered Captain Berry to make every practicable exertion in their favour. In consequence a boat, the only one which could swing, was instantly dispatched from the Vanguard; other ships that were in a condition to do so, soon followed the example, by which means, from the best possible information, the lives of above seventy Frenchmen were saved from their impending fate.

We mention these particulars to shew the cordial co-operation between the Rear-Admiral and Captain Berry, and the high confidence the former had in the latter's abilities, which appeared in many instances, particularly in never changing his ship, though at one time in a perilous situation, and always concerting with him the best mode of attack under all the possible situations of the enemy; but the strongest confirmation of these facts was the Admiral's own dispatch, when, after mentioning the wound he received in the beginning of the action, which obliged him to leave the deck, he pays the handsomest eulogium on the spirit and conduct of his Captain.

Soon after this action Captain Berry was dispatched by the Admiral, in the *Leander*, Captain Thompson, to bring the account of this glorious victory to Europe; but unfortunately was met by a French ship of much superior force, both in guns and men.

Here,

Here, perhaps, strict prudence should have dictated a quiet surrender; but the Conquerors of the Mouth of the Nile could not brook submission to any enemy. It was refused by both Captains to fight her; and the contest was, perhaps, one of the bloodiest which has been fought this war. Captain Berry found himself at one time with six of the ship's company falling around him in the agonies of death, when he himself received a wound from part of a man's skull being driven through his arm. He was then obliged to retire, in order to have his wound dressed, when the carnage increasing, from the great force and freshness of the enemy, opposed to the inferior and crippled state of the *Leander*, she was, after a severe contest of several hours, obliged to surrender; but in this surrender every thing honourable was obtained but victory.

When Captain Berry was carried down from the deck to have his wound dressed, he found himself so covered over with the blood and brains of his unfortunate shipmates, that he was under a necessity of changing his clothes, and putting on his full-dress uniform. This afterwards turned out rather a lucky circumstance, as, on the surrender of the *Leander*, the French sailors made rather free with the loose wardrobe of the ship's company.

Such were the hair-breadth escapes of this gallant officer; it now remains for him to reap the honourable rewards of his services:—on his exchange and return to this country, he met the praises of his countrymen, and a cordial reception from his Sove-

reign, who honoured him with knighthood, and the fullest approbation of his conduct.

Captain Berry by the advice of his physicians, went to Bath for the benefit of his health, which had suffered considerably from the variety of fatigues which he had undergone in the service, but which, we are happy to add, he has since recovered by the waters.

We shall now give our readers some particulars of this gentleman's family:

Sir Edward Berry was born in the year 1766. He married, a few months before he last went out with Admiral Nelson, a young lady of the name of Foster, a daughter of Dr. Foster, of Norwich, who is his own cousin-german.

Mrs. Berry, his mother, married a second time the late Mr. Godfrey, the celebrated chemist of Southampton-street, who, dying in less than two years after his marriage, left her a jointure of 500l. per year, with which she now lives at Kensington in very great respect and character. She is reckoned very amiable in her person and manners, and, being now only in the meridian of life, is fully capable of feeling and participating with her son the honours and rewards of his services.

Captain Berry had an uncle who went out early to India, and returned with a very considerable fortune; but dying unmarried, he bequeathed the greatest part of it to his nephews and nieces, which is supposed at least to have amounted to two or three thousand pounds a piece; so that all the immediate branches of this gentleman's family may be said to be in a very independent situation.

LOSS OF THE DROMEDARY.

[Having in a former Number (Vol. II. p. 594) alluded to a private letter by Lieutenant-Colonel Carmichael, relative to this unfortunate shipwreck, we shall for the satisfaction of our readers, give a more interesting account in a further extract.]

“YOU will possibly have seen by the papers our misfortune of shipwreck in coming to the relief of this island, supposed to be attacked by a force from Guadaloupe. On endeavouring to break through Abacas (one of the mouths of the Gulf of Paria,) His Majesty's ship Dromedary was carried by the current into the midst of the breakers on a desert rock, and completely wrecked, at 10 at night on the 10th of August. You will think it extraordinary that the patient obedience and fortitude of the soldiers of the 2d W. I. regiment, contributed much to the saving of every soul on board, which was despaired of for many hours. Our escape was considered the most miraculous that ever occurred; Captain Taylor, his officers and seamen, behaved with a coolness and intrepidity unexampled in such circumstances. The ship continued heaving to pieces among the rocks and breakers against a coast which to attempt to gain by swimming would have been attended with destruction. She was at last driven in such a situation, that the bowsprit approached a rock which a man gained by swinging from a rope: several got to it by that means till a spar was launched from the bow, by which the whole escaped from the wreck. There we were, about 500, clinging to the side of a rock, surrounded by breakers which no boat dared venture to approach, with not quite a hoghead of water, every moment expecting the wreck to

break up and go to sea with the change of current, and leave us to perish by a most deplorable fate. In this state we remained 15 hours, when, to our great joy and surprize we discovered a flotilla dispatched by Governor Kenton to our relief, in which we embarked before night, by regaining the wreck, which still stood our friend, as nothing could come near the rock we were on, to take us off. Incredible to imagine, though there were several women and children, not a life was lost; the children were tied on their parents' backs with the officers' sashes. I cannot avoid mentioning a circumstance of one of the seamen who was tying his wife to him, and was on the point of committing himself to the waves, but by which I pointed out to him both must perish, adding, that if he would leave his wife with me and take the soldiers, I would give him leave to get a spar, by which he would save her life, and that of every woman and child on board. He did so and succeeded, and after leaving her in safety, returned to the wreck, and would not quit me till I got on shore.

“When the ship became full of water, and people were preparing to swim, however fruitless the attempt, several soldiers, expert swimmers, came and stood by their officers, declaring they would not leave them. Poor fellows! their good nature and fidelity would avail but little.”

THE ADVENTURES OF A SHEET-ANCHOR.

(DATED FROM THE MOORINGS AT HAMOAZE, DEC. 18, 1800.)

MR. EDITOR,

BEING of a very ancient family, and above all a *firm* friend to the British navy; sacred* among the ancients, among the moderns emblematical of hope, and so indispensably necessary to the safety of navigation, that it is said the Dutch pilots always contrive to look askew at me and my cable, before they will venture to take a ship into port, I hope I possess *weight* enough to induce you to place my history in your interesting Naval Magazine. Though my ancestors are allowed to have contributed to the advancement of civilization and commerce, and consequently of literature, they transmitted little more of themselves to posterity than the family *arms* of which they were exceedingly tenacious; our origin is consequently involved in much obscurity. It is rumoured amongst us that we descended from a town in ancient Egypt called *Ancuropolis* or the *City of Anchors*, but the decision of this point we have long since left to the learned; be it as it will, we are now in very high repute; we are delineated in brass on the button of every infant midshipman; we represent the victualling office; we associate as an emblem of the Trinity house, and are engraved on the very walls of the Admiralty.

Our duty in port is sometimes laborious, but at sea we rest supinely on the gun-wale for the duration of voyages; equally in-

different to wars and tempests, or the interested bustle of merchants on change; however, though unacquainted with brokers, it must be confessed that we are intimately connected with the rise and fall of *stocks*.

The ancients, it is said, afforded us teeth, of which we were deprived by the moderns:—would they had in recompense always supplied us with tongues, then Mr. Editor, had I enriched your already valuable Miscellany with a treatise on the wonders of the deep.

I cannot exactly date the commencement of my being, but remember having been thumped into existence by the unmerciful strokes of a number of ponderous hammers, and fashioned amid the rude blasts of a furious furnace, which animated my natural dingy appearance into such a vivid glow, that I illuminated for some time every thing around me. Having been thus forced into the world with as little ceremony as St. Stephen was driven out of it, I began to contemplate (but not without some share of vanity) the comely appearance which I had so newly assumed, and being now perfectly cool and left to myself, I reflected on the battery which my sides had suffered from the smith's mauls with somewhat less asperity.—The care which had been taken in equalizing my various parts, and the ring attached to my extremity at first, led me

* Anchora Sacra.

to suppose, that I was destined for the trivial purpose of some pendant ornament; but I was soon convinced to the contrary, when finding myself placed in an enclosure on the margin of a spacious river, and shackled with a large stock, I surveyed the mutilated and woeful plight of many of my brethren, as they lay arranged in different postures around me; however, being anxious to convince myself still further on this subject, I turned to a venerable best bower which lay beside me, corroded with rust and disfigured with mud, and having feelingly inquired into the cause of his misfortune, was answered in a deep but sonorous voice, to this effect.—“ My adventures display from beginning to end, a series of neglect and ingratitude.—I might have saved Sir Cloudesly Shovel from Scilly rocks, but he forgot me—yet when his lifeless corpse was washed past me I sighed, and when it was dashed upon the craggs I uttered a groan. But I had lost one of my own arms. However, being at length discovered by the fishermen, I was once more restored to his majesty's navy, since which my sides have been scratched upon rugged rocks; I have braved the fury of hurricanes; twice I defied the rage of conflagration, and the billows have corroded me with rust; thus, after enduring the attacks of earth, air, fire, and water—after having performed ten times more service than ten of the eldest pensioners in Greenwich hospital, I was left here to linger out in neglect the remainder of my days.” No sooner had old *Iron-sides* finished his relation accompanied with a heart-rending sigh, than I suddenly felt myself in motion, and being trundled along to the water

side by the handspikes of a number of workmen, I was compelled to embark in a clumsy conveyance called a *lump*; but had the satisfaction as they were lowering me into it to tumble upon the toes of one of my persecutors; and the wry face he made on the occasion I think I shall never forget. I was soon conveyed to the ship in which I was destined to serve, and shortly afterwards we sailed for the Mediterranean, but had occasion on our passage to put into Gibraltar. Here, during a heavy storm, in which we lost our other anchors, I was suddenly dropped from the ship's side, and was so fortunate as to preserve her from destruction during the most violent storm I ever remember to have experienced; but judge of the ingratitude with which I was treated: a large ship having made the signal for an enemy from the Offing, they quickly slipped and put to sea, leaving me to console myself with the fragment of a ragged cable, which tumbled about my ears, and deprived me of all patience, and thus I lay entangled in my oozy bed for several months, till relieved by the master-attendant of the port, by whom I was employed in the beggarly occupation of warping ships as occasion required, from one part of the bay to another. I was at length released from this degrading servitude (which often threw me into a ferment of indignation) by the arrival of a two-decker which had parted from one of her anchors in a recent gale, and being conveyed on board this ship I returned to my native country. But now Mr. Editor, after all this, and much more laborious service, I am chained as a mooring anchor to the bottom of the harbour of Hamoaze.

ACCOUNT OF THE CEREMONY OF LAYING THE
FIRST STONE OF THE ISLE OF DOGS WET-DOCK
BUILDINGS.

THE ceremony of laying the First Stone of the Buildings of this magnificent undertaking, was performed on Saturday the 12th July, 1800, the anniversary of the day on which the act of parliament, for carrying the same into effect, received the royal assent.

The company assembled at the London Tavern at one o'clock, and moved in the following procession to the Isle of Dogs :

The Directors of the West India Dock Company ;
and, in the last of their carriages,
The Chairman and Deputy Chairman ;

then—

The Lord Chancellor,
Earl Spencer,
Lord Hawkebury,
The Rt. Hon. William Pitt,
The Rt. Hon. Henry Dundas,
The Rt. Hon. Dudley Ryder,
The Rt. Hon. Thomas Steele,
The Rt. Hon. Silvester Douglas,
Sir Joseph Banks, Bart. K. B.
Sir Andrew Snape Hammond, Bt.

and a numerous train of Members of Parliament, including those of the Select Committee of the House of Commons, for the Improvement of the port of London.

Soon after two o'clock the procession arrived at the Works, where Lord Carrington, and many other distinguished personages of both sexes had assembled to be present at the ceremony, which was conducted in the following manner :

The stone had been previously prepared to receive two glass bot-

tles, one of which contained the several coins (gold, silver, and copper) of his present Majesty's reign; and in the other, the following Inscription, (and translation thereof in Latin) was placed :

Of this Range of Buildings,
Constructed, together with the
adjacent
DOCKS,
At the expence of public-spirited
Individuals,
Under the Sanction of a provi-
dent Legislature,
And with the liberal Co-operation
of the Corporate Body of the
City of London,
For the distinct Purpose
Of complete Security and ample
Accommodation
(hitherto not afforded)
To the Shipping and Produce of
the West Indies at this
wealthy Port,
**THE FIRST STONE WAS
LAID,**
On Saturday the Twelfth Day
of July,
A. D. 1800.

By the concurring Hands of
The Right Hon. Lord Lough-
borough,
Lord High Chancellor of Great
Britain,
The Rt. Hon. William Pitt,
First Lord Commissioner of his
Majesty's Treasury, and Chan-
cellor of his Majesty's Ex-
chequer ;
George Hibbert, Esq.
the Chairman,
And
Robert Milligan, Esq.
Deputy Chairman,

Of the West India Dock Company;

The two former conspicuous in the Band of those illustrious Statesmen,

Who in either House of Parliament have been zealous to promote,

The two latter distinguished among those choicest to direct,
AN UNDERTAKING,
Which, under the Favour of God, shall contribute

Stability, Increase, and Ornament, to

BRITISH COMMERCE.

Then follows the same in Latin.

The bottles being deposited in the recesses made to receive them, and also a plate with the Director's names engraved thereon, Mr. Tyrrel, the Clerk and Solicitor to the West India Dock Company, read the Inscription, and the four Noble and Honourable Personages, named for that purpose, raised the stone (by means of four rings fixed thereto) and laid it in the proper situation.

The spectators then gave three times three hearty cheers, and declared their best wishes for the success of the undertaking.

RESOLUTIONS,

AGREED TO BY A COMMITTEE OF DIRECTORS OF THE ROYAL HUMANE SOCIETY RELATIVE TO THE PRESERVATION OF SHIP-WRECKED MARINERS.

ON Tuesday the 19th of March, 1799, a committee of directors of the Royal Humane Society was held at the London Coffee-house, at which some of the Elder Brethren of the Trinity House did them the honour to attend; a resolution of a former committee was read, relative to an ingenious essay presented on this subject to the Humane Society, and ordering the publication of the same with the consent of the author. On opening the sealed note, which accompanied the same, the author appeared to be Dr. Fothergill, of Bath.

After duly considering the various projects submitted to their consideration for saving lives in cases of shipwreck, and assisting vessels in distress, the committee

concluded on the following resolutions:

“ Resolved, That no original invention having been presented to this society for saving the lives of ship-wrecked mariners, the first premium is not adjudged to any candidate.

“ Resolved, That on examining the projects of Mr. L. Granshaw, particularly that of conveying a line by a bow to the shore, he appears to be entitled to the second prize; and that it be earnestly recommended to him to consider of the most powerful and practicable projectile force for effecting that desirable purpose.

“ Resolved, That the sum, appropriated to the first prize, be divided amongst the other candidates

dates in the following proportions.

“ Mr. R. Crane, of Norwich, as a testimony of the pains and ingenuity which he has taken on this important occasion, is requested to accept of a present of four guineas.

“ To No. 1, the sum of three guineas is adjudged.—To No. 6, the same.

“ Resolved, That the treasurer be requested to transmit the thanks of this committee to Abraham Bosquet, Esq. for his ingenious communications, and the committee hope he will continue his attention to the subject.

“ Resolved, That this committee having been attended by a deputation of Elder Brethren of the Trinity House, it is by this committee strongly recommended to the Humane Society to institute similar premiums for the following year, for the encouragement of ingenious persons in the benevolent endeavour to save the lives of ship-wrecked mariners; and that the ground work of the essays and projects be the following resolutions.—On duly considering the various projects which have been submitted to us for preserving the lives of ship-wrecked mariners, &c. Resolved, That it is the opinion of this committee,

“ I. That means may be contrived for preventing vessels which are light and of particular importance, such as packets, from foundering at sea, by means of a thick lining of cork or very light timber, which may prevent the vessel from sinking in case of any of her planks starting, or other accident happening to the hull.

“ II. That, in case of ship-wreck, the grand object is to

form a communication with the shore; and it appears to this committee, that the most probable means of effecting this object is to convey a rope or line by some projectile force to the nearest land; and that, the more simple the machine for this purpose (having ample power), the more likely it is to have a proper practical effect.

“ III. That the construction of life-boats, to go from the shore to a vessel wrecked, or in distress, (which life-boats ought to be made heavy at the keel, and lined with cork or light timber, so as to keep buoyant in almost all cases), is a most laudable and excellent invention; and this committee cannot but hope, that, if this plan was universally adopted on all our sea coasts, at least wherever it is practicable, it would save the lives of numbers of mariners and other persons valuable to society.

IV. “ That the institution of a body of watermen ready to venture, on all occasions of ship-wreck, in life boats, or other vessels, to assist persons in distress, would be extremely useful. That such persons should have particular privileges, particularly protections from being impressed, and perhaps badges such as the firemen in London, and should be encouraged by the prospect of rewards to adventure on all such occasions.

“ These resolutions are humbly submitted by this committee to the candid consideration of the public; and all seafaring gentlemen, and mechanics, are earnestly entreated to give their attention to these and other methods for preserving the lives of ship-wrecked mariners.

NAVAL NOTICES.

MONTHLY STATEMENT OF THE DISTRIBUTION OF THE BRITISH NAVAL FORCE.

Exclusive of the Hired Armed Vessels, which are chiefly employed
in protecting the Coasting Trade of Great Britain.

	Line.	Fifties.	Frigates.	Sloops.	Total.
In port, and fitting - - -	27	7	46	98	178
Guard Ships, Hospital and Prison Ships, at several Ports - - -	20	1	2	0	23
In the English and Irish Channels - - -	33	1	26	45	105
In the Downs & North Seas - - -	9	1	17	36	63
At the West India Islands and on the Passage - - -	1	0	21	24	46
At Jamaica - - -	5	1	22	12	40
In America and at Newfoundland - -	2	0	4	5	11
East Indies and on the Passage - - -	10	8	20	19	57
Coast of Africa - -	0	0	1	3	4
Portugal, Gibraltar, & Mediterranean - }	16	2	53	28	99
Total in Commission -	123	21	212	270	626
Receiving Ships - - -	9	1	7	0	17
Serviceable, and repair- ing for service - - }	2	0	1	0	3
In Ordinary - - -	44	3	23	44	114
Building - - -	17	2	8	0	27
Total - - -	195	27	251	314	787

A LIST OF LINE OF BATTLE SHIPS,

COMPLETELY MANNED, WHICH WILL COMPOSE THE CHANNEL AND NORTH
SEA FLEETS.

	Guns.		Guns.
VILLE de Paris . . .	118	Royal George . . .	110
San Josef . . .	112	Royal Sovereign . . .	110
Prince . . .	112	Temeraire . . .	98
		Windfor	

	Guns.		Guns.
Windfor Castle	98	Edgar	74
Atlas	98	Mars	74
St. George	98	Elephant	74
Princess Royal	98	Russell	74
Formidable	98	Warrior	74
Neptune	98	Excellent	74
Prince George	98	Triumph	74
London	98	Belleisle	74
Barfleur	98	Superb	74
Glory	98	Captain	74
Prince of Wales	98	Venerable	74
La Juste	84	Terrible	74
Cæsar	84	Invincible	74
La Pompée	80	Spencer	74
Ajax	80	Saturn	74
L'Impetueux	78	Princess of Orange	74
Magnificent	74	Leyden	68
Ramillies	74	Monmouth	64
Resolution	74	Ardent	64
Ganges	74	Raisnable	64
Bellona	74	Agamemnon	64
Defence	74	Veteran	64
Robust	74	Polyphemus	64
Achilles	74	Agincourt	64
Centaur	74	Ruby	64
Renown	74	Texel	54
Defiance	74	Madras	54
Audacious	74	Hindostan	54
Courageux	74	Glatton	54
Montague	74	Assistance	50
Canada	74	Isis	50
Monarch	74		
Cumberland	74	Total	70

Excepting four or five undergoing slight repairs, the whole number are ready for service.

THE FOLLOWING SHIPS ARE IN DOCK, AND WILL SHORTLY BE REPAIRED.

	Guns.		Guns.
Victory	110	Culloden	74
Powerful	74	Dictator	64
Goliath	74		
Bellerophon	74	Total	6

LORD KEITH'S FLEET IN THE MEDITERRANEAN.

	Guns.		Guns.
Foudroyant	84	Gibraltar	80
Le Tigre	80	Hector	74
		Swiftsure	

	Guns.		Guns.
Swiftsure	74	Alexander	74
Le Genereux	74	Dragon	74
Kent	74		
Minotaur	74	Total	11
Northumberland	74		

Such of the following ships as want the least repairs, will be taken into dock first.

	Guns.		Guns.
Salvador del Mundo	112	L'Hercule	74
Britannia	110	Brunswick	74
Queen	98	Hannibal	74
Namur	98	Alcide	74
Blenheim	98	Utrecht	68
Malta	84	Admiral de Ruyter	68
Canopus	80	Cerberus	68
Donnegal	80	Vigilant	64
Tonnant	80	Standard	64
Zealous	74	Lion	64
Vanguard	74	Asia	64
Aboukir	74	Batavier	54
Spartiate	74	Beschermer	54
Thefeus	74	Broederschap	54
Vengeance	74	Leander	50
Orion	74		
Irresistible	74	Total	32

The Guard, Hospital, and Prison ships, amounting to near 30 sail of the line, are not included in any of these lists.

LIST OF THE FRENCH AND SPANISH FLEETS IN BREST.

	Guns.		Guns.
Ocean	120	Jean Jacques Rousseau	74
Conception S	116	Wattigny	74
Prince Asturias S	116	Revolution	74
Reyna Louisa S	116	Cisalpine	74
Conde Regla S	112	Du Quesne	74
Justa Anna S	112	Fougeux	74
Republicane	110	Redoubtable	74
Terrible	110	Constitution	74
Invincible	110	Jean Bart	74
Neptuna S	80	Convention	74
Indomptable	80	Galvis	74
Tyrannicide	74	Tourville	74
Dix d'Aout	74	Mont Blanc	74
Jemappe	74	St. Sebastian	74
Zèle	74	Oriente S	74
			St.

	Guns.		Guns.
St. Joachim	S 74	Tablo	S 74
Conquestadore	S 74	Toberano	S 74
St. Paula	S 74	Guerrero	S 74
Bahama	S 74	Formidable	S 74
Pelago	S 74	Batave	S 74
St. Elmo	S 74		
Asia	S 74	Total	42

Those marked with an S are Spanish.

LIST OF THE RUSSIAN FLEET IN THE BALTIC, MANY OF WHICH HAVE BEEN FITTED AND REPAIRED IN ENGLAND.

	Guns.		Guns.
Evsevie	100	Uscrolod	74
Wadimir	100	Civilot	74
St. Nicholai	100	Cædar	74
Saratov	100	Severnoy Orele	74
Ire Erarkoy	100	Arfee	66
Rasteflay	100	Probedt	66
Makfie Ispovendik	74	Elizabeth	66
Sifmi Vilikol	74	No. 82.	66
Constantine	74	Graf Orloff	66
St. Peter	74	Jona	66
Pobedoflay	74	Philip	66
Prince Gustaf	74	Pemen	66
Sophie Magdalena	74	Parmen	66
Boris	74	Nikonor	66
Yfelav	74	Ratvisan	66
Jaroflav	74	Omgefes	66
Pamet Estafei	74	Whidiflau	66
Kieb	74		
Oger	74	Total	37
Helena	74		

LIST OF THE RUSSIAN FLEET IN THE BLACK SEA.

	Guns.		Guns.
St. Paulus	82	Pobeda	66
St. Petrus	74	St. Michael	60
Epiphania	74	St. Nicholas	50
Holy Trinity	74	St. Gregorius	50
Zacharias	74	Pfingstfest	50
Ifidore	74	Jungfran Von Casan	50
Asia	74		
Maria Magdalena	68	Total	14

The last three sailed from England to the Mediterranean.

Lieutenant Magrath, of his Majesty's ship *Salamine*, was assassinated in the streets of Leghorn on the 31st of August last, by a ruffian, of whom the deceased was at the time enquiring his way to some part of the town. The weapon with which the fatal wound was inflicted was a stiletto.

The machine, called the *Infernal*, by means of which Bonaparte's destruction was lately attempted in Paris, is well known to those acquainted with the history of artillery and engineering. *Infernals* have been constructed of various dimensions, and used both on *terra firma* and on ship-board. The first inventor of them, or at least the first who put them in practice, was *Frederick Jambelli*, an Italian engineer, at the siege of Antwerp, under the Duke of Parma, in 1585. The great destruction made by these caused several others to be tried, but none of them by any means succeeded. At Dunkirk and St. Maloes they were tried by the English; and at Havre-de-Grace by the English and Dutch, under King William.

We are extremely sorry to announce the loss of His Majesty's ship *El Galgo*; of which melancholy event an official account has been received at the Admiralty.

List of officers drowned on board His Majesty's late ship *El Galgo*.

Captain G. S. Stovin,
Lieutenant Barnes,
Mr. Gibson, surgeon,
Mr. Roberts, purser,
Mr. Edwards, gunner,
Mr. Roberts, boatswain,
Mr. Hughson, master's mate,
NAVAL MAG. VOL. III.

Mr. Simpson, carpenter.

List of passengers drowned.

Mr. Grimshaw, of Martinique
— Poyner of ditto,
— Osborne, of Antigua,
— Ross (a clergyman of Jamaica)
A French lady
A serjeant and 11 privates of the
11th regiment of foot,
Two soldiers wives.

List of persons saved from *El Galgo*.

Mr. T. Forrest, master,
Mr. Clark, midshipman,
J. Edwards, Carp. Crew,
C. London, Captain Foretop,
J. Griffiths,
W. Comeford, after-guard,
D. Dehy, seaman,
P. Brown, ditto,
J. Murray, after-guard,
Jack Joe, Negro cook,
B. Andrews, quarter-master,
R. White, Captain Forecastle,
G. Nillidge, sail-maker,
T. Williams, Capt. after-guard,
H. Dowlin, lieut.'s servant,
J. Otway, (boy),
G. Hurd, gunner's mate,
J. Can, Cooper,
R. Fox, seaman,
A. Isaac, (Negro) ditto,
W. Moss, ditto,
S. Rusby, ditto,
T. Guy, ditto,
R. Higgs, captain maintop,
A slave.

Total saved—two officers and 23 men.

A letter from the master of one of the ships detained at Riga, dated Wolmar, December 2, 1800, says, "they took the people from all the ships on the 23d ult. excepting the mate and two hands left in each: they have marched us about 80 English miles to the eastward from Riga; the place is named Wolmar, and

we are billeted about the town, two or three in a house, with the inhabitants; there are 16 of us masters at this place, with our crews; we have liberty to walk about, and are no way at all confined, the sailors are allowed near a rouble (2s. 6d.) each per week, and we the same; but provisions, at present, are very dear."

By a private letter to a merchant at Hull, we learn, that a Swedish vessel loaded for a house in London, the captain of which, contrary to his promise on oath, made his escape from Riga; on which account the house which loaded him has been obliged to make a deposit of 10,000 roubles; it further adds, that the Swedish consul's counting-house is sealed up, on account of the above-mentioned ship escaping. The accounts from our sailors are favourable, and they meet with good treatment.

SEA LOG.—A patent has been granted to Mr. Chester Gould, of the county of Oneida, New York, merchant, for an instrument or log for ascertaining a ship's distance at sea.

The machine used by the patentee is a cylinder of brass or other material not injured by salt water, of about three inches and a half in diameter, and nine or ten inches in length. To one end of the cylinder a head-piece of brass wire is screwed in order to detain any sea-weed or other floating substances which might get within and interrupt the working of

the machinery. This latter is composed of a fly wheel revolving on its axis and set within the inside of the cylinder so as to prevent itself endways to the water, and takes its motion from the oblique or angular position of the vanes like a common windmill or smoak jack. All the accuracy of the instrument depends essentially upon the exactness of position of the vanes of the fly wheel, as it is on the angle at which they are set that the calculation of velocity of current is calculated. On the axis of this wheel is fixed a pinion head of eight leaves, which moves a contrate wheel of 96 teeth, the pinion of which stands across the cylinder. Behind this are five more wheels, the four last of which have 60 teeth each; each of these carries an index round a circle graduated in 10 equal parts, the numbers of which are successively reversed, because the wheels move contrary ways. If the angle of the fly wheel is regulated so as to equal the 24th of a circle, or 15 degrees, then the first wheel will make one revolution for every eight feet and a quarter that the machine moves through the water; the second wheel for every six rods; the third, every 37 rods; the fourth, every 370 rods, or a mile sea-measure; the 5th, every 10 miles, &c. This machine works entirely under water and is preserved in an horizontal position by a plate of brass attached to the cylinder on the opposite side from the machinery.

POETRY.

ODE FOR THE NEW YEAR, 1801.

By HENRY JAMES PYE, ESQ. Poet
Laureat.

I.

FROM delug'd Earth's usurp'd do-
main,
When Ocean fought his native bed,
Emerging from the shrinking main,
Rear'd many a mountain idle its head;
Encircled with a billowy zone,
Fair Freedom mark'd them for her own:
"Let the vast Continent obey
"A ruthless master's iron sway,
"Uncheck'd by aught from pole to
pole,
"Where swol'n ambitious torrents roll;
"Those seats to tyrants I resign—
"Here be my bless'd abode, the island reign
be mine."

II.

Hating the sane where Freedom sat en-
shrin'd,
Grasping at boundless empire o'er man-
kind,
Behold, from Susa's distant towers,
The Eastern Despot sends his mighty
powers:
Grecia, through all her rocky coast,
Astonish'd views the giant host;
Not the fam'd Strait, by bleeding heroes
barr'd,
Nor Cætop's walls, her hallow'd altars
guard—
While each bold inmate of the isles
On inroad's baffled effort smiles;
From every port, with cheering
sound,
Swells the vindictive Pæan round,
And Salame's Island, from her sea-girt
shore,
Sees o'er the hostile fleet th' indignant surges
roar.

III.

Fiercer than Persia's scepter'd Lord,
More numerous than th' embattled
train,
Whose thirsty swarms the sea-broad rivers
drain,
Lo! Gallia's plains disgorge their mad-
'ning hord!
Wide in Europa's trembling lands,
Victorious speed the mur'd'rous bands;

Where'er they spread their powerful
sway,
Fell Desolation marks their way;
Unhurt, amid a warring world, alone,
Britannia sits secure, firm on her island
throne.

IV.

When thunders roar, when lightning^g
flies,
When howling tempests shake the sky,
Is more endear'd the shell ring dome,
More sweet the social joys of home—
Fondly her eye, lo! Albion throws
On the tried partner of her weal and
woes;
Each tie to closer union draws,
By mingled rights and mingled laws;
Then turns averse from Gallia's guilty field,
And tears, with generous pride, the lilies
from her shield.

V.

Albion and Erin's kindred race,
Long as your sister Isles the seas embrace,
Long as the circling tides your shores that
lave,
Waft your united banners o'er the wave,
Wide thro' the deep commercial wealth to
spread,
Or hurl destruction on the oppressor's head,
May Heaven on each unconquer'd Nation
shower
Eternal concord, and increasing power;
And, as in History's awful page,
Immortal Virtue shall proclaim
To every clime, through every age,
Imperial GEORGE'S patriot fame;
That parent care shall win her warmest
smiles,
Which rear'd, 'mid Ocean's reign, the
Empire of the Isles.

LOYAL SONG

FOR THE
NEW CENTURY.

SONS of Albion, rejoice, eighteen cent'rie^s
are o'er,
And old Time's revolution now brings on
one more;
A cent'ry to Britons full proud was the last,
And may the ensuing one equal the past.
Hearts of oak, &c. &c.

O'er the wide-spreading ocean we still hold
our sway,
Since 'tis founded on that which can never
decay;
On the courage of those on whom Fortune
e'er smil'd,
For our failors the bulwarks of England are
styl'd.

Hearts of oak, &c.

What tho' Bonaparte keeps vict'ry in view,
(For Britons to merit will e'er give its due)
Still to heroes like our's every Frenchman
must bow,
As St. Vincent and Duncan, brave Nelson
and Howe.

Hearts of oak, &c.

May our Monarch long reign, and uphold
those great laws,
Whose justice must e'er meet with Europe's
applause;
And may fell division and discord soon cease,
And hostilities yield to the blessings of peace!

Hearts of oaks, &c.

Bruton-street,
Jan. 1, 1801.

G. B.

NELSON'S RETURN,
OR THE
BRITISH FLAG TRIUMPHANT.

Tune—*There's no Luck about the House.*

THRICE welcome to his native land,
The Hero of the Nile;
Let every heart with joy expand,
Wear every face a smile.
Brave Nelson has return'd again,
With bays immortal crown'd;
Each British voice take up the strain,
Each ear drink in the sound.
Brave Nelson, &c.

With Howe's, St. Vincent's, Duncan's name,
Let Nelson's be enroll'd;
And be their deeds of matchless fame
Engrav'd on burnish'd gold.
Great Spencer's too, the heart and soul
Of Britain's naval pride,
Shall waded be from pole to pole;
Shall swell on every tide.
Great Spencer's too, &c.

The haughty Gaul had plann'd to seize,
An Empire in the East;
Through Egypt's land to pass with ease,
On Asia's spoils to feast.
But Nelson, arm'd with Moses' rod,
Forbade the bold design;
Expos'd the Atheist's new-made God,
To water turn'd his wine.

But Nelson, &c.

In Egypt foil'd, the Gallic host
To Syria's shores retir'd;
Stung with the shame of laurels lost,
With deadly vengeance fir'd.
Sir Sidney came, he saw, he fought,
The Frenchman's legions fell;
What deeds that day our Douglas wrought,
Let vanquish'd Frenchmen tell.
Sir Sidney, &c.

The British Flag triumphant flies,
"From Indus to the Pole;"
Proclaim it Fame, up to the skies,
As far as billows roll.
Then let us sing, long live the King,
Health to each British Tar,
His valour still fresh triumphs bring,
And close the glorious war.
Then let us sing, &c.

THE NEGRO'S COMPLAINT.

Supposed to have been written by the ingenious WILLIAM COWPER, ESQ.

FORC'D from home and all its pleasures,
Africa's coast I left forlorn,
To increase a stranger's treasures,
O'er the raging billows borne.

Men from England bought and sold me,
Paid my price in paltry gold:
But though theirs they have enroll'd me,
Minds are never to be sold.

Still in thought as free as ever,
What are England's rights, I ask,
Me from my delights to sever,
Me to torture, me to talk?

Fleecy locks and black complexion,
Cannot forfeit Nature's claim;
Skins may differ, but affection
Dwells in white and black the same.

Why did all-creating Nature,
Make the plant for which we toil?
Sighs must waft it, tears must water,
Sweat of ours must dress the soil.

Think, ye masters iron-hearted,
Lolling at your jovial boards,
Think how many backs have smarted,
For the sweets your cane affords.

Is there, as ye sometimes tell us,
Is there One who reigns on high?
Has He bid you buy and sell us,
Speaking from his throne, the sky?

Ask him if your knotted scourges,
Fetters, blood-extorting screws,
Are the means which duty urges,
Agents of his will to use?

Hark!

Hark; He answers! Wild tornadoes,
Screwing yonder sea with wrecks,
Wasting towns, plantations, meadows,
Is the voice wherewith he speaks.

He, foreseeing what vexations,
Afric's sons would undergo,
Fix'd their tyrants' habitations,
Where the whirlwinds answer "No!"

By our blood in Afric wasted,
Ere our necks receiv'd the chain;
By the miseries we talked,
Crossing in your barks the main:

MR. EDITOR,

Though I know nothing much (d'ye see me) of poetry making, and such like palaver, I thought on a line or so, t'other day (in praise of our brave Admiral Nelson), as I, and some messmates sat drinking over a can of flip; now mayhap with some they may stick aground, when clapped alongside of the finer lingo of my betters; but all's one for that—for what if their lines run somewhat more even than mine, I know that I mean what I say, and like-enough they don't; so no more at present from your friend,

JACK TRAMPER.

D'YE see now, my name is Jack Tramp-
per,
On the ocean I've sail'd a long while,
Though we ne'er the Mounseers did fo hamper,
As we did t'other day one the Nile.
Damn it, boys, Nelson's a stout one,
And a gallanter one you'll ne'er see,
My peepers, the French were done up man,
And who did it all now but we?

Elated by bloodshed on land,
France thought she could conquer by sea,
But Horatio, who's born to command,
Convinc'd them how weak was their plea,
(D'ye see me) he left them awhile,
For a time he allow'd them to play,
Then gently sail'd up the broad Nile,
And triumphantly led them away.

NAVAL INTELLIGENCE,

FROM THE LONDON GAZETTE.

SATURDAY, DEC. 27, 1800.
ADMIRALTY OFFICE, DEC. 27.

EXTRACT of a letter from the
Earl of St. Vincent, K. B. Ad-
miral of the White, &c. &c. to Evan
Nepean, Esq. dated in Torbay, the
21st instant,

I herewith transmit a letter which
I have received from Captain King,
of his Majesty's ship Sirius, giving
an account of his having captured a
Spanish brig from Corunna bound to
Monte Video,—

His

His Majesty's ship Sirius, at Sea,
MY LORD, Dec. 22, 1800.

I beg leave to acquaint you, that his Majesty's ship Sirius, under my command, captured on the 11th inst. (Sifargo bearing W. by N. three miles) the Spanish merchant brig Melchura from Corunna, bound to Monte Video, out of port only twenty-four hours. It may be some satisfaction to your Lordship in hearing it is the only Spanish vessel that has sailed from Corunna since the ship taken by his Majesty's ship Boadicea in August last. I have the honour to be, &c. &c.

RICHARD KING.

The Right Hon. Earl St. Vincent,
K. B. &c. &c. &c.

Copy of a letter from Lieutenant Matthew Smith, commanding his Majesty's schooner Milbrook, to Evan Nepean, Esq. dated Oporto, 14th November, 1800.

SIR,

I have the honour to inclose, for their Lordships information, a copy of a letter I have this day written to the Right Honourable Lord Keith. I am, &c. MATTHEW SMITH.

His Majesty's Schooner Milbrook,
off Oporto, Nov. 14, 1800.

MY LORD,

I have the honour to inform your Lordship, that being off Oporto, in his Majesty's schooner Milbrook, under my command, early on the morning of the 13th instant, we fell in with a French ship wearing a pendant, apparently a frigate, mounting 36 guns; and as I had at that time two brigs of the Newfoundland convoy under my protection, and several vessels appearing in the Offing, which I have every reason to suppose part of that convoy also, I determined, as the only means of preserving them, to give her battle, and made sail to close with her accordingly, at the same time, with a view of increasing our distance from the

convoy. It was nearly calm when the action commenced, at eight in the morning, and continued till near ten, when the enemy's colours came down; but the Milbrook at this time having her masts, yards, sails, and rigging, very much cut, and ten of her guns disabled, I could not prevent his taking advantage of a light breeze springing up, assisted by his sweeps, to get away from us. The bravery and steady conduct of the officers and seamen under my command against such superior force, in the disabled state of the Milbrook, for a long time with only three guns opposed to the enemy's broadside, and their activity in changing her position with the oars (nor a sail set) whilst exposed to his raking us for fifteen minutes, merits my highest commendation, and does them the greatest credit; but I should fail in my duty if I did not in the strongest manner recommend to your Lordship's notice Mr. Thomas Fletcher the master, who, wounded in the beginning of the action, continued on deck, exerting himself with the greatest bravery; as did also Mr. Thomas Groves the clerk, and Mr. Jose da Sa, the Portuguese pilot.

I inclose a list of wounded; and have the honour to be, &c.

MATTHEW SMITH.

Right Hon. Lord Keith,
K. B. &c. &c. &c.

List of Wounded.

Eight seamen and 1 marine (severely).—Mr. Thomas Fletcher, master; Mr. J. Parfiter, Surgeon's mate; and 1 seaman (slightly).—Total, 2 petty officers and 10 seamen.

MATTHEW SMITH

Copy of a letter from Mr. Richard Le Gallais, Commander of the Comus private ship of war, to Evan Nepean, Esq. dated at Jersey, the 20th instant.

SIR,

I have the honour to acquaint you, that being on a cruize in the *Comus* privateer, I captured, the 7th instant, a French chassè marée, mounting three 3-pounders, laden with hides; and the next day, 8th instant, after a chase of seven hours, boarded and took possession of the French brig letter of marque *Rocou*, pierced for fourteen guns, and had on board twelve 6 and two 2-pounders, but only four 6-pounders mounted, from Cayenne, bound to Bourdeaux, laden with cotton and rice. I am happy to add, the brig is safely arrived in Guernsey, and the chassè marée in this island.—I have the honour to be, &c. &c. &c.

RICHARD LE GALLAIS.

At the Court at St James's, the 14th of January, 1801, present, the King's most Excellent Majesty in Council.

Whereas his Majesty has received advice, that a large number of vessels belonging to his Majesty's subjects have been and are detained in the ports of Russia, and that the British sailors navigating the same have been, and now are detained, as prisoners, in different parts of Russia; and also, that during the continuance of these proceedings, a confederacy, of a hostile nature, against the just rights and interest of his Majesty, and his dominions, has been entered into with the Court of St. Petersburg by the Courts of Denmark and Sweden respectively; his Majesty, with the advice of his Privy Council, is thereupon pleased to order, as it is hereby ordered, that no ships or vessels belonging to any of his Majesty's subjects be permitted to enter and clear out for any of the ports of Russia, Denmark, or Sweden, until further order; and his Majesty is further pleased to order, that a general embargo or stop be made of

all Russian, Danish, and Swedish ships and vessels whatsoever, now within, or which hereafter shall come into any of the ports, harbours, or roads, within the United Kingdom of Great Britain and Ireland, together with all persons and effects on board the said ships and vessels, but that the utmost care be taken for the preservation of all and every part of the cargoes on board any of the said ships and vessels, so that no damage or embezzlement whatever be sustained: and the Right Honourable the Lords Commissioners of his Majesty's Treasury, and the Lords Commissioners of the Admiralty, and the Lord Warden of the Cinque Ports, are to give the necessary directions herein as to them may respectively appertain.

W. FAWKENER.

ADMIRALTY OFFICE, JAN. 16.

Extract of a Letter from Admiral the Earl of St. Vincent, K. B. &c. &c. &c. to Evan Nepean, Esq. dated on board his Majesty's ship *Ville de Paris*, in Torbay, the 12th of January, 1801.

I inclose two letters from Captain Sir Richard Strachan, Bart. detailing particulars of the meritorious exertions of himself, and the officers under his command, in intercepting the enemy's supplies.

His Majesty's hired cutter *Nile*,
SIR, Dec. 11, 1800.

I have the honour to inform you, that the vessels you signalled us to chase, on the 6th instant, never came through the passage, but rowed up along shore again, and went under Fort Lomara; I watched for them all night, but in the morning, seeing them no more, I left the *Lurcher* off the *Morbihan*, and proceeded to execute your farther orders; on that day I saw a convoy couring round *Croific* of 15 or 16 sail, but was in no hurry to chase, rather permitting them

them to get nearer to St. Gildas, and in the evening stood out, and made the necessary signals to Mr. Forbes; it fully answered my expectations, as he being to windward turned them all, and they made for the Vilaine just where I was; about eight we took a small one just as the battery of St. Jacques was hailing us, which I immediately manned and sent her with our own boat along shore, and by four A. M. found ourselves in possession of five more; his is all they could attempt, as the whole coasts were then alarmed, and the battery of Notre Dame, at the entrance of the river Peners, kept up so brisk a fire as to send three shot through the last vessel: but the spirit of our people was such that they were determined to have her out, and luckily only one man was slightly scratched with a splinter; on joining the Lurcher in the morning, I found she had got three more, making nine, the particulars of which are expressed in the adjoined list; the four largest are decked, and very capable of going to England, but the others cannot; since the 7th Mr. Forbes has been continually on the look-out, but not a single vessel, I believe, has stirred since. I have the honour to be, &c. &c. &c.

GEORGE ARGLES.

Captain Sir Richard Strachan, Bart.

A List of Vessels captured by the Nile hired cutter, under the orders of Captain Sir Richard Strachan, Bart.

Maria Joseph, Pierre Midago, master, of five men and 48 tons, from Bourdeaux bound to Brest, laden with wine and brandy.

Notre Dame de Consolation, Clouarie, master, of five men, and 35 tons, from Bourdeaux bound to Brest, laden with wine and brandy.

St. Pierre, Pierre Hoeck, master, of seven men and 39 tons, from Bour-

deaux bound to Brest, laden with wine and brandy.

L'Peloin, Matthew Rio, master, of four men and 13 tons, from Nantes bound to Auray, laden with Nantes wine.

Le François, Jean de Brats, master, of three men and four tons, from Nantes bound to Auray, laden with iron, tar, pottery &c.

L'Aimable François, Geldo Boullignan, master, of 55 tons, from Bourdeaux bound to Brest, laden with Bourdeaux wine.

By his Majesty's Cutter Lurcher.

Maria Joseph, Martin Beront, master, of two men and eight tons, from Nantes bound to Yannes, laden with Nantes wine.

L'Épouine, Yine Le Frank, of three men and 13 tons, from Nantes bound to Yannes, laden with ditto; driven on shore on Houat, cargo lost.

Le Bon Secour, Yine Nicolane, of two men and eight tons, from Nantes bound to Yannes, laden with ditto; sunk at anchor, cargo saved.

La Magiciennes, Isle Oleron, S. E. MY LORD, by S. Two leagues.

I have the honour to inform your Lordship, that, after a short chase, I this day captured, between the Isles of Rhe and Oleron, a French sloop laden with wine and brandy for the use of the combined fleet at Brest, and have sent her to Plymouth. I have the honour to be, &c. &c. &c.

W. OGILVY.

The Earl of St. Vincent, K. B. Admiral of the White.

Extract of a Letter from Captain Rowley Bulteel, Commander of his Majesty's Ship Belliqueux, to Evan Nepean, Esq; dated at Rio Janeiro, the 24th of August, 1800.

"On Monday the 4th day of August, soon after day-light, four sail were

were discovered from the mast-head in the north-west quarter, and apparently steering about N. by E. At seven A. M. they hauled their wind, tacked, and stood towards us, upon which I bore down with the whole of my convoy: at noon the enemy perceived our force, (which was greatly exaggerated in their opinion by the warlike appearance of the China ships) they bore up under a press of sail, and by signal separated. I stood for the largest ship, and notwithstanding the light and baffling winds, we came up with her, and after a few chase guns, and a partial firing for about ten minutes, at half past five in the afternoon (Tuesday) she struck her colours, and proved to be the French frigate *La Concorde*, of 44 guns, 18-pounders, and 414 men, commanded by Citizen Jean François Landolphe, Capitaine de Vaifseau, and Chef de Division. At seven the same evening, the French frigate *La Medée*, of 36 guns, 12-pounders, and 315 men, commanded by Citizen Daniel Coudrin, struck her colours to the Bombay Castle, Captain John Hamilton, and the Exeter, Captain Henry Meriton. The above frigates were of the squadron which sailed from Rochefort the sixth day of March 1799, and having committed great depredations on the coast of Africa, had resited in the Rio de la Plata, and were now cruising on the coast of Brazil. *La Franchise*, of 42 guns, and 380 men, commanded by Citizen Pierre Jurieu, escaped by throwing a part of her guns overboard, and also her anchors, boats, and booms, and by night coming on; as did also an American schooner, their prize, fitted as a cruiser. On this occasion I hope their Lordships will permit me to bear testimony to the spirit of the officers and ship's company of the *Belliqueux*; and I have peculiar pleasure in mentioning the zeal and activity I have ever found in Mr. Ebdon, my first Lieutenant, to whom I only do justice in

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recommending him to their Lordship's notice and favour. Too much praise cannot be given to the captains, officers, and crews of the different ships under my convoy, for their ready obedience to my signals, and for the whole of their conduct on that day, particularly to Captains Hamilton and Meriton, who very gallantly pursued and captured the aforesaid frigate, *La Medée*; and also to Captain Torin, of the *Coutts*, and Captain Spens, of the *Neptune*, who with great alacrity pursued *La Franchise*, although they had not the good fortune to come up with her, for the reasons above assigned; and my best thanks are due to the whole of the commanders of the ships under my convoy, for their assistance in taking a number of prisoners on board their respective ships. We arrived at Rio Janeiro on Tuesday the 12th of August.

Extract of a Letter from Captain Robert Barton, Commander of his Majesty's Ship *Concorde*, to Evan Nepean, Esq. dated at Lisbon the 4th inst.

"During my stay off the bar of Oporto, I captured the Spanish privateer lugger *San Josef*, alias *Larcon*, of six guns and 40 men, out from Vigo, and had captured the *Speedy* brig, one of our convoy, and in an hour more would have captured another, as she was within hail when we saw her".

SATURDAY, JAN. 24.

ADMIRALTY OFFICE, JAN. 24.

Copy of a Letter from Captain Yorke, Commander of his Majesty's Ship the *Jason*, to Evan Nepean Esq. dated at Sea, the 18th inst.

"SIR,

"I have to acquaint you, for the information of my Lords Commissioners of the Admiralty, that I this day captured *La Venus* French Lugger
F Privateer,

Privateer, of fourteen brass carriage guns, and thirty-six men. She sailed from Cherbourg yesterday evening, and had not made any captures.

"I have the honour to be, &c.

"JOSEPH SIDNEY YORKE."

Copy of a Letter from Rear Admiral Duckworth, Commander in Chief at the Leeward Islands, to Mr. Nepean, dated Leviathan, Martinique, Oct. 27, 1800.

"SIR,

"Having directed the Gipsy, of ten 4-pounders and 42 men, tender to the Leviathan, under the command of Lieutenant Coryndon Boger, to carry the Charlotte merchant ship (in which my late Captain, Carpenter, took his passage), to the northward of the islands, I am to beg you will inform the Lords Commissioners of the Admiralty, that on the 7th instant, in passing near Guadaloupe on the above service, he chased and brought to action a French sloop of very superior magnitude, and manned with double his number of select troops of Guadaloupe.—For the particulars of this very handsome contest I shall refer their Lordships to Lieutenant Boger's letter; but I should not do justice to his Majesty's service, from the knowledge I have of this valuable officer's character, and from the unanimous voice of his crew, if I did not say his modest recital of his gallantry does him as much honour as the action itself, and I flatter myself he will be honoured with their Lordship's protection.

"I have the honour to be, &c.

"J. T. DUCKWORTH."

P. S. Since the concluding of the above I find two more of the wounded have died.

Gipsy, in St. John's Roads,

"SIR, Oct. 8, 1800.

"I have the honour to acquaint

you, that at eight A. M. off the north end of Guadaloupe, I chased and came up with an armed sloop: on firing a shot at her she hoisted French colours and returned it; an action instantly commenced; we remained at very close quarters for an hour and an half, when, finding that her musquetry did us considerable damage, I hauled a little farther off and kept up a sharp fire of round and grape: at half past ten I had the satisfaction to see her strike; she proves to be Le Quiproquo, commanded by Tourpie, formerly a Capitaine de frigate in the service of the King, and was charged with dispatches from Curaçoa bound to Guadaloupe: she mounts eight guns: six and nine-pounders, and had on board 98 men, eight of whom were Guadaloupe chasseurs and canoneers. I am sorry to add that our loss is considerable, having had one killed and eleven wounded; among the latter I include Mr. Clarke and myself. Finding it necessary to get medical assistance as soon as possible, I put into this port, and have got all the wounded into an hospital. The loss on the side of the enemy was the captain and four killed, and 11 wounded; both vessels have suffered much in their sails and rigging but I am happy to say His Majesty's schooner has not suffered in her hull. I cannot omit, Sir, mentioning the great assistance I received from the Charlotte merchant ship under my convoy, both in securing the prisoners, and giving every assistance to the wounded that lay in their power.

"The petty officers and men you did me the honour to place under my command, behaved extremely well on the occasion.

"I am sorry to add that two men have since died of their wounds.

"I have the honour to be, &c.

"CORYNDON BOGER."

Rear Admiral Duckworth. &c.

MONTHLY

MONTHLY JOURNAL,

FOR JANUARY 1801.

LONDON, JANUARY 1.

LIEUTENANT Healy, of the Niger frigate, who commanded one of the boats employed in the capture of the Spanish frigate at Barcelona, contradicts the official representation of the affair by the Spanish court, in a letter addressed by him to a banker at Cork, of which the following is an extract, :—"The Barcelona transaction you have perceived is a good deal abused by the manifesto of his Catholic majesty's ministers. The whole declaration, I can assure you, upon my word, is, for the most part, vilely false; a malicious misrepresentation to palliate the most barefaced cowardice and unparalleled neglect of duty that ever disgraced a country or a people. The Swedish vessel was of no assistance to us whatsoever; we examined her papers, and that was all the intercourse we had with her. There is one comfort however, I trust, in reserve, and that is, whenever the Spanish captain is brought to trial, his disgrace will be inevitable: it is pretty clear he must be shot, as he threw himself, with two or three officers, while the crew still defended the vessel, from the cabin window into a boat which lay under the stern, and to avoid the guillotine he has given rise to the above report.

2. The Danish government is using every exertion to have a respectable naval force ready for sea by the next spring. Eight sail of the line, a frigate, and two cutters, are already equipped, and it is reported, that 14 more ships of war of different rates will be speedily put in commission.

A curious circumstance took place on board the Royal William at Spithead, which at first was by our sailors,

a superstitious race of men, notwithstanding all their courage, considered an unfavourable omen for the Union. On New Year's day the Royal William having hoisted the new Royal standard, the lanyards by which it was suspended gave way, the standard fell over-board, sunk in the deep, and disappeared. On the 5th, however, when the ship was unmooring, the surprize of the crew may be conceived when they found the lost flag fast entwined round the anchor! Such an occurrence in ancient times would have produced an embassy to the Oracle of Delphos, or among our ancestors would have demanded a consultation of witches at least. Without any great pretensions to divination, or violent interpretation of the circumstance, it seems fair to infer that while the Union flag is saved by adherence to the anchor of the Navy, there is just ground of hope!

5. Lord Nelson has accepted of the command in the Mediterranean, which has been for some time offered to him. His object will be to act against the Russians, should it be found impossible to bring about an amicable explanation with the great Paul.

7. On the 22d ult. a gallant action was fought between the *Nessus*, by the Ocean, of Newcastle, Captain Johnson, on her loaded passage to London. When the Frenchman called to him to strike his colours, he nobly replied, that, as long as he had an ounce of powder on board he would not strike. The battle then became very hot, at length the privateer was beat off, having many killed and wounded on her decks. We are concerned to state, that the Chief Mate of the Ocean was killed

by a cannon ball carrying away his head, and one boy severely wounded. The Mate has left a widow and five small children.

10. Letters from the Cape of Good Hope, dated October 22, state, that the ship *Wellesley*, having on board provisions, &c. consigned to the Agent Victualler at that place, and naval stores for the supply of His Majesty's squadrons in India, arrived in False Bay on the 10th of September. The *Belleisleux* being bound to Plo de Janeiro, she parted from that ship with the approbation of Captain Bul- teel, on the 17th of July, being then in latitude 0. 16. south, and longi- tude 27. 30. west. On the 9th of August, in latitude 22. 30. south, and longitude 30. 30. west, she was at- tacked by a French frigate, of 36 guns, (of which frigate intelligence had before been received there, but Captain Gordon had made such judi- cious preparations for her reception, that she ran from him after an action of little more than an hour, and did not dare to renew the combt. al- though she dogged him for six days afterwards. The greatest praise is due to Captain Gordon, his officers, and ship's company, and to his pas- sengers, for their very gallant con- duct on this occasion; and there is no doubt that proper consideration will be shewn to Captain Gordon, for his having so bravely defended the ship and important cargo he had in charge, against an enemy of a force so very superior to the *Wellesley*, the latter mounting no more than 12 nine and 10 six-pounders, and manned chiefly with Lascars and China men.

Other letters dated November 10, mention, that intelligence had arrived there of the capture of two French frigates, by two of ours, with Spanish dollars on board, amounting to three millions sterling, off Cape Frio.

A letter from Plymouth says, that on Sunday, Jan. 4, there came on here a most tremendous hurricane at south-

west, accompanied with a heavy sea: it blew with unremitting fury all night, and till six on the following morning; guns of distress were firing the whole night from the men of war in the Sound; but providentially the return of day presented all the men of war safe, though some had drift- ed. The *Nimrod*, of 14 guns, drifted on the rocks under Government House; but assistance being given, she soon got off the rocks with little damage.

A Court of Enquiry was, on Friday last, held on board the *Gladiator*, at Portsmouth, on Captain Sotheby, his officers, and crew, for the loss of His Majesty's late ship *Marlborough* — The sentence of the Court was, that they were of opinion her loss was oc- casioned by her striking on the shoals of *Hervadeaux*, on the coast of France; which accident hapened from the un- certain situation of the rocks, and Captain Sotheby's anxiety and zeal to carry his orders into execution, and being thereby so disabled as to render it utterly impossible to save her; that no blame whatever was im- putable to Captain Sotheby, his offi- cers, or ship's company, for their conduct on so trying an occasion; and that they afterwards did their utmost to preserve the ship and her stores.

WEYMOUTH, Jan. 11. — Early on Friday morning, as the *Constitution* hired armed cutter was cruising to the eastward, off Portland, which is her station, she fell in with two large French cutter privateers, and imme- diately made sail after them. The Commander soon finding them to be enemy's ships, he hoisted out his boat, and got all clear for action. For some time they run him out to sea, after which they tacked towards him, and commenced the action, one on each side for an hour. Both vessels were superior in force, but the gallant Commander, Lieutenant Fanknor, defended his cutter with a valour and skill that do him the highest honour, and which will no doubt entitle him

to the notice of the Lords of the Admiralty: he had eight of his men killed and wounded; his sails and rigging cut to pieces, and his vessel totally unmanageable. The enemy's cutters manœuvred in such a manner as to get one on the broadside and the other on the quarter: when they attempted to board, but were repulsed by the gallantry of this officer and his small crew. At last one of the cutters made sail and sheered off, while the other renewed the action with double vigour. Soon after the Constitution was attacked by them both, when the largest sheered on her quarter, and boarded with upwards of sixty men, under a very heavy shower of grape shot and musquetry. The small crew, not amounting to more than forty men, being unable to contend with such a superior force any longer, were obliged to yield, and to suffer the French to haul down the colours themselves. Lieutenant Faulkner gives the highest praise to his ship's company, and particularly to Mr. Richard Mielan, the Master, who highly distinguished himself during the whole of the action. They kept up a constant fire, even until they were boarded and drove from their guns by the French. Mr. Mielan and the whole of the crew were taken out and divided between the two cutters. The Lieutenant had the good fortune to be left on board, and was yesterday morning brought in here with the cutter retaken by the Greyhound Custom-house cutter, Captain Wilkinson, who on the alarm from Portland, immediately put to sea, and recaptured her the same evening, leaving his Majesty's ship the Weasel in chase of the privateers, and within five or six miles of them: hopes are therefore entertained that one or both of them may be taken either by this vessel, or by some other of his Majesty's cruizers. The French officer who boarded says, that the French had 26 of their men killed

and wounded. The cutters mounted each 14 guns; one of them had 95 men, and the other 80. They sailed from Cherbourg last Wednesday, but had taken nothing: they were to have cruized off Portland nine or ten days, and then to have proceeded, in company, for the coast of Portugal. If they should not fall into the hands of our cruizers, they must go into port to rest.

17. By the arrival of the cartel from Holland we have received the following particulars respecting the loss of the Rose cutter, on the 13th of October last:—the Rose cutter was in the Embs, where she procured a pilot, who at seven o'clock, P. M. brought her to anchor, in order to proceed to Embden on the following morning. At ten P. M. the same night, she was attacked by the enemy, who made an attempt to board her, but the crew defended themselves one hour and ten minutes against a very superior force, consisting of two gun-brigs, one carrying seven 24-pounders, 16 swivels, and 52 men, and the other three 18-pounders, and 50 men. The force of the Rose was only ten 4-pounders, and 28 men. From the great superiority of the enemy, being much shattered, and having several men wounded, she was at length obliged to strike. The Rose had one man killed, and five others, with Mr. Oliver, the Commander, badly wounded. It is much feared that the Commander will lose the use of his right arm, as he was wounded by grape-shot; the rest are likely to do well.

20. The following is an account of the number of men raised since the commencement of the war, for the service of the navy.

Volunteers, 1597; Pressed, 2781; Landmen, 213; By the Civil Power, 71; By act of Parliament, 1795, 224; Total, 4886. Number of men raised, since the commencement of the

the war, for the service of the navy, 134,968.

Lord Nelson, it is said, disputes the right of Earl St. Vincent to a share of the prize money arising from the capture of the French fleet at Aboukir. The latter, who claims as Commander in Chief, has joined issue on the subject, and the matter is of course to be shortly brought to a legal decision.

25. His Majesty's Ship THESEUS. —The accounts of the explosion on board this ship, which have hitherto appeared, being extremely imperfect, a correspondent has favoured us with the following official particulars of that event. They are extracted from the letter of the Commanding officer to Sir Sidney Smith, dated in Syria Bay, the 15th of May :

"It is with extreme concern I have to acquaint you, that yesterday morning, at half past nine o'clock, twenty 36-pound shells, and fifty 18-pound shells, had been got up and prepared for service, by Captain Miller's order, the ship then alone off Cefarea; when in an instant, owing to an accident that we have not been able to discover, the whole was on fire, and a most dreadful explosion took place: the ship was immediately in flames in the main rigging and mizen-top, in the cock-pit, the tiers, several places about the main-deck, and various parts of the ship;

the danger was very imminent, and required an uncommon exertion of every one to get under so collected a body of fire as made its appearance, and I have the happiness to add, that our exertions were crowned with success, the fire got under, and the ship most miraculously preserved: and I here feel myself called upon to declare how much obliged I am to all the officers and ship's company; but more particularly to Lieutenant Summers, Mr. Atkinson, master, and the officers and men, whose assistance on this occasion was truly great, and enabled us to get the better of so great a calamity. Our loss from the explosion, I lament to say, has been very great, and Captain Miller, I am sorry to add, is of the number killed, which amounts to 26, drowned 10, and 45 wounded. The whole of the poop and after part of the quarter-deck is entirely blown to pieces, and all the beams destroyed; eight of the main-deck beams also broke, which fell down and jammed the tiller; all the wardrobe, bulk-heads, and windows, entirely blown to pieces, and the ship left a perfect wreck; in short, a greater scene of horror and devastation could not be produced; and we are all truly grateful to God Almighty for his most signal preservation in saving us from a danger so very great and alarming."

LIST OF NAVAL PROMOTIONS, APPOINTMENTS, MARRIAGES, DEATHS, &c.

In pursuance of the king's pleasure, the following flag-officers of his majesty's fleet were promoted, viz.

Richard Brathwaite, esq. Philips Cosby, esq. Samuel Cornish, esq. John Brisbane, esq. Charles Wolfelley, esq. Samuel Cranston Goodall, esq. and his Royal Highness William Henry, Duke of Clarence, admirals of the blue, to be admirals of the white.

Robert Linzee, esq. Sir James Wallace, kn't. William Peere Williams, esq. Sir Thomas Pasley, bart. Sir Thomas Rich, bart. James Cumming, esq. Sir John Colpoys, K. B. Skeffington Lutwidge esq. Archibald Dixon, esq. George Montagu, esq. Thomas Dumareiq, esq. and the right honourable George Lord Keith, K. B. vice-admirals of the red, to be admirals of the blue.

Thomas

Thomas Mackenzie, esq. Thomas Pringle, esq. Sir Roger Curtis, bart. Sir Henry Harvey, K. B. Robert Mann, esq. Sir William Parker, bart. Charles Holmes Calmady, esq. John Bourmaster, esq. Sir George Young, knt. John Henry, esq. and Richard Rodney Bligh, esq. vice-admirals of the white, to be vice-admirals of the red.

Robert Biggs, esq. Francis Parry, esq. Isaac Prescott, esq. John Bazely, esq. Christopher Mafon, esq. Thomas Spry, esq. Sir John Orde, bart. William Young, esq. James Gambier, esq. and Sir Andrew Mitchell, K. B. vice-admirals of the blue, to be vice-admirals of the white.

Christopher Parker, esq. Philip Patton, esq. Charles Morice Pole, esq. John Brown, esq. John Leigh Douglas, esq. William Swiney, esq. Charles Edmund Nugent, esq. Charles Powell Hamilton, esq. Edmund Dod, esq. and the right honourable Horatio Lord Nelson, K. B. rear-admirals of the red, to be vice-admirals of the blue.

James Brine, esq. John Pakenham, esq. Sir Erasmus Gower, knt. John Holloway, esq. John Blankert, esq. George Wilton, esq. Sir Charles Henry Knowles, bart. the honourable Thomas Pakenham, Robert Deane, esq. Cuthbert Collingwood, esq. James Hawkins Whitshed, esq. Arthur Kempe, esq. Smith Child, esq. the right honourable Lord Charles Fitzgerald, Thomas Taylor, esq. and John Thomas Duckworth, esq. rear-admirals of the white, to be rear-admirals of the red.

John Knowles, esq. John Willett Payne, esq. Sir Robert Calder, bart. James Richard Dacres, esq. the honourable George Berkeley, Thomas West, esq. James Douglas, esq. Peter Aplin, esq. Henry Savage, esq. Bartho. Samuel Rowley, esq. Sir Richard Bickerton, bart. George Bowen, esq. Robert Montagu, esq. John Ferguson, esq. Edward Edwards, esq. and Sir John Borlase

Warren, bart. and K. B. rear-admirals of the blue, to be rear-admirals of the white.

The under-mentioned captains were also appointed flag-officers of his majesty's fleet, viz.

Edward Tyrrel Smith, esq. Thomas Graves (1st) esq. Thomas Macnamara Russel, esq. Sylvester Moriarty, esq. and Sir Henry Trollope, knt. to be rear-admirals of the white.

Henry Edwin Stanhope, esq. Robert M'Douall, esq. Billy Douglas esq. John Wickey, esq. John Inglis, esq. John Fish, esq. Jahleel Brenton, (1st) esq. John Knight, esq. Edward Thornbrough, esq. James Kempthorne, esq. Sampson Edwards, esq. George Campbell, esq. Thomas Hicks, esq. Henry Cromwell, esq. Arthur Phillip, esq. Sir William George Fairfax, knt. Thomas Totty, esq. and Sir James Saumarez, knt. to be rear-admirals of the blue.

The king has been pleased to appoint Sir E. Pellew, bart. W. Donnet, esq. and Sir T. Troubridge, bart. to be colonels of his majesty's marine forces, in the room of E. Thornbrough, esq. Sir W. G. Fairfax, knt. and Sir J. Saumarez, knt. appointed flag-officers of his majesty's fleet.

James Peter Fearon, esq. is appointed commander of the honourable East India Company's ship the Belvidere, consigned to China direct, in the room of Captain Charles Christie, who has resigned.

Captain O'Bryen, who distinguished himself in the action with De Winter, off Camperdown, by his gallant command of the Monarch, has been appointed to the sea-feoicible protection off the coast of Hants.

The following naval appointments have just taken place:—Admiral Sir Hyde Parker is to be commander in chief in the North Sea; Vice-Admiral Lord Nelson, second in command, and to hoist his flag on board the Neptune; and Rear-Admiral Sir G. W. Fairfax,

Fairfax, third; Captain Domett, of the *Belleisle*, is to be first captain to the commander in chief; Captain Lumsdaine succeeds him in the command of the above ship; Captain Lawford is appointed to the *Invincible*, Captain Charles Fare to the *Madras*, Captain White to the *Sulphur*, Captain Hatherhill to the *Hecia*, and Captain Rasset to the *Sovereign*.

The report of the loss of his Majesty's ship *Camilla* is unfounded, that vessel being safely arrived at Cork.

MARRIAGES.

Jan. 1. At St. George's Church, Bloomsbury, Captain Rand, of the honourable East India Company's service, to Miss Lancaster, daughter of Joseph Lancaster, esq.

Admiral Sir Hyde Parker, to Miss Oslow, the daughter of the Admiral. The difference of their ages is exactly 15 years.

Jan. 17. At St. George's, Bloomsbury, Captain Henry Bazely, of his Majesty's royal navy, to Miss Ruddle, of Queen's-square, Bloomsbury.

On the 9th of August last, at Fort St. George, in the East Indies, Mr. John Locke, of the honourable East India Company's ship *Marquis Wellesley*, to Miss Cullen, daughter of Colonel Cullen, of his Majesty's Scots brigade, and grand-daughter of Sir Archibald Hope, of Pinkie, bart.

DEATHS.

From the *Madras Gazette*, May 1800.—We learn that on Saturday the 18th current, on board His Majesty's ship the *Dædalus*, at sea, after a lingering illness, Henry Sewell, esq. His Majesty's naval officer and mayor of Madras, who conducted himself with strict probity, integrity, and honour, in the several important relations in which he was placed. His remains were brought on shore on Monday last, and were interred on the next morning, amidst the pure and unaffected sorrow of the whole settlement, to whom his internal

worth and exterior manners were as extensively known as they were universally approved and admired.

On the 13th ult. in Wexford, John Green, a superannuated revenue officer. He had been prisoner to the Rebels in June, 1798, but his extreme age and inoffensive manners saved him from their fury. He was born in the month of July, 1694, and had he lived a few weeks longer, would have seen three centuries. At the advanced age of 106, he retained his memory and faculties; and the vigour of his constitution was such as enabled him to walk about till very near that period.

Jan. 3. At Chatham, William Cayley, esq. son of the late Sir G. Cayley, bart. commander of His Majesty's ship the *Invincible*, now sitting in Chatham dock-yard; his remains were conveyed to Rochester Cathedral, from Hulbert's hotel; the procession was attended with all the naval and military honours, amidst a concourse of some thousands of spectators; the corpse was carried by seamen, the pall supported by captains of the navy, and attended with all the officers of the marines, and of the upper barracks, and other officers of the navy; the marine band played the solemn dirge, and a large detachment of the sailors, marines, and soldiers of the upper barracks attended the funeral with the greatest decency and solemnity.

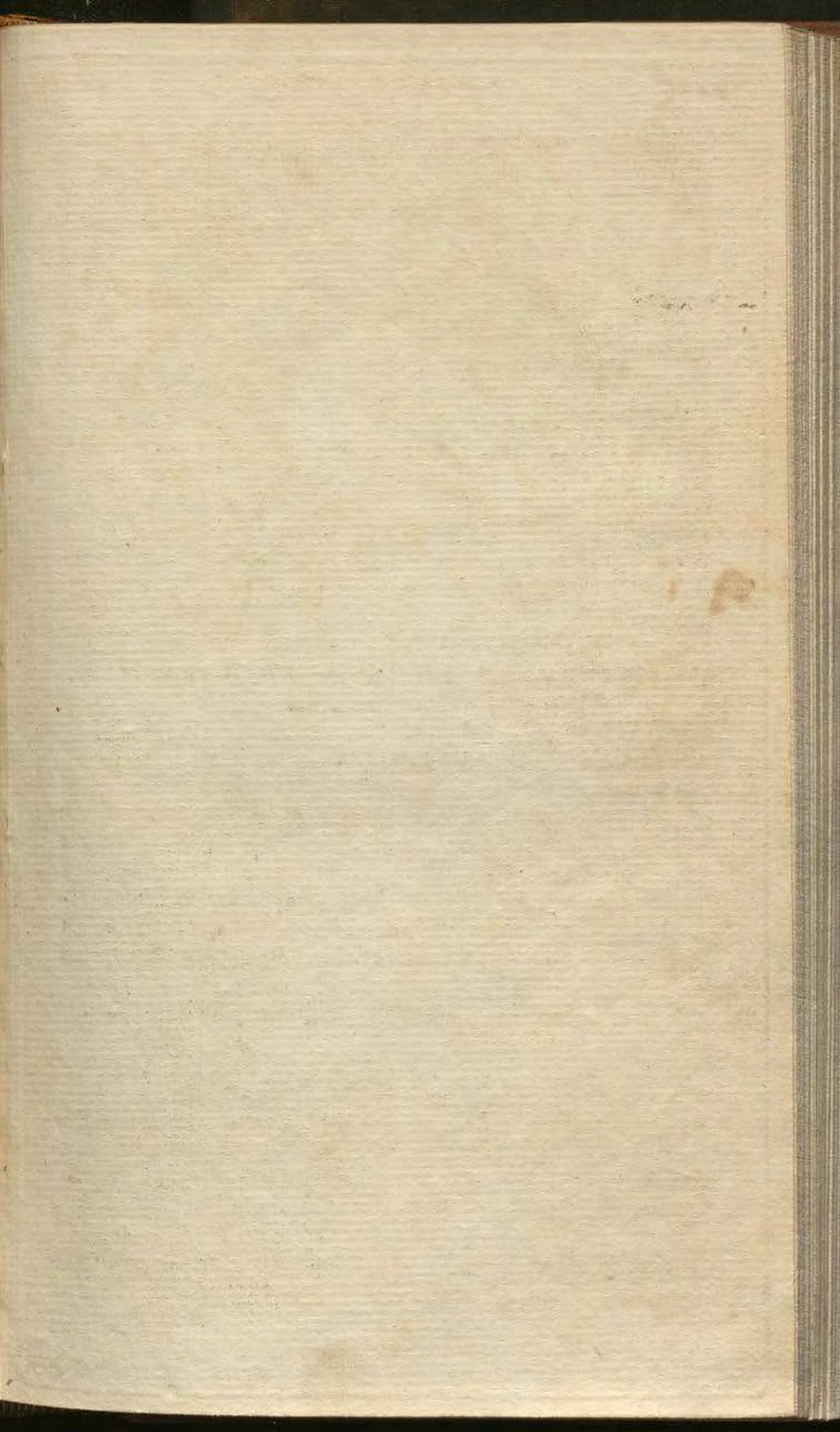
On the 20th ult. at Clifton, near Bristol, in the 15th year of his age, John Harness, eldest son of Dr. Harness, commissioner of sick and wounded seamen of the royal navy.

In India, S. Whitehill, esq. chief and custom-master at Mahim, and senior merchant.

At Buxtorah, Mr. J. Skinner, acting lieutenant in the company's marine.

At Blackheath, Paul Patrick, esq. of London, merchant.

13. At Greenwich, Martin Ware, esq. late master shipwright of the king's yard, Deptford.





Engraved by Goldar from the Original Picture.

CAPT^N RICHARD PIERCE,

*late Commander of the Halsewell East India Man, which
Wrecked at Rowcombe in the Isle of Parbeck, Jan^y 16. 1786.*

THE

NEW NAVAL MAGAZINE,

FOR FEBRUARY, 1801.

[Embellished with a Beautiful LIKENESS of the MUCH ESTEEMED and LAMENTED CAPTAIN PIERCE, late of the HALSEWELL EAST-INDIAMAN.]

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ACKNOWLEDGMENTS TO CORRESPONDENTS.

WE should have been happy to have complied with the request of OUR CONSTANT READER at Stanton, but could not meet with the Article to which he alluded.

The Essay, signed A MIDSHIPMAN, is upon consideration deemed improper for insertion. We wish to avoid all personalities, and the style of our Author sufficiently evinces, that Impartiality has not been his PILOT.

The poem of the SLIGHTED MAID has no connection with our Miscellany, for we presume the Man against whom CHLOE so bitterly rails, was never a TAR.

Correspondents may depend upon the utmost care and attention being paid to all their favours, as we have promised in our NEW ADDRESS TO THE PUBLIC—(See the Last Page of the Wrapper)—and such as wish for an early insertion, are requested to send their communications before the 12th of the month, and before the 20th in order to be *acknowledged* in this place. They are also requested in future to address (post paid) *To the Proprietors of the Naval Magazine, at No. 16, Paternoster-Row.*

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As it comprehends all that is useful, interesting, and entertaining, relative to British and Foreign Naval Affairs; particular and authentic accounts of Voyages, Sea-Fights, Piracies, Shipwrecks, Discoveries, Ship-Building, &c. &c. with the Lives of Admirals, Commanders, and remarkable Heroes, who have in all ages done honour to the British Navy; and includes a Comprehensive Naval History of Great Britain, from the earliest accounts to the present time; and a Complete Monthly Journal of Naval Transactions, Foreign and Domestic; is earnestly recommended, not only to the whole British Navy, and every Individual any ways connected therewith, but also to Merchants, Captains, Mates, Purfers, Midshipmen, Cadets, Supercargoes, Writers, Passengers, and all persons employed in the Hon. East-India Company's service, as well as to Ship-Brokers, Under-Writers, all Mariners, Masters, and Commanders of Ships, and to all those on Land or at Sea, interested in trading to the West-Indies, America, and all other parts of the Globe; including the Coasting Trade to and from London, Portsmouth, Plymouth, Liverpool, Deal, Dover, Pool, Falmouth, Hull, Margate, Harwich, Exeter, Canterbury, Dartmouth, &c.

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THE
NAVAL MAGAZINE;

OR,

MARITIME MISCELLANY,

FOR FEBRUARY, 1801.

NAVAL HISTORY OF GREAT BRITAIN.

(CONTINUED FROM PAGE 4.)

THE truce which succeeded the battle of Poitiers, was a period of rest and glory to England, but to France it was a time of despair. Great troubles arose during their King's absence. John saw the disadvantages of it, and offered such terms to Edward as satisfied the King of England; but being disapproved of by the States of France, John still remained a prisoner.

On the expiration of the truce, Edward, too successful to be indolent, ravaged France up to the gates of Paris. The Dauphin then perceiving all in danger, offered terms, which though larger than Edward had before consented to accept for John's ransom, were now refused. Edward proposed his own, which though still harder, were agreed to, and were the substance of the treaty at Bretigny. By these terms Edward seemed to tread upon the neck of haughty France, and England then demanded *hostages*

for the performance of the articles.

John was conducted by our fleet to Calais, where Edward soon after arrived; and when John had sworn to keep the treaty faithfully, his liberty was granted him. Edward then embarked for England, and landed at Dover with all his hostages.

In 1361, Edward having attained his fiftieth year, there was a public solemnization and thanksgiving for his late victories. After this he confirmed the *Magna Charta* to his people, and proclaimed a general pardon. In about two years after the King of France, who had been so long a prisoner in England, came over on a visit of friendship to Edward, and having met with a kind reception, died in London in 1364. This opened a new commotion in England; for King John had engaged for England to pay a yearly tribute to the Holy See; and Urban the VIth. being then

then Pope, took this time to demand it; but Edward, by an excellent stroke of policy, laid the demand before his parliament: this took the burthen from his own shoulders, and had the appearance of a compliment to them; who, knowing the King's mind, returned this short answer:

“That the demand was illegal; that the King could not engage the nation without the consent of parliament; that he had broken his coronation oath in doing what he did; that no *John* being now upon the throne, they would pay no tribute; and that if the Pope again demanded it, the nation should every way oppose him.”

This answer had the desired effect; for Urban, who was as cowardly as insolent, never presumed to repeat his demand.

After this Peter, surnamed the Cruel, King of Castile, was expelled his dominions; he addressed himself to the Prince of Wales, who previously had sailed for Aquitain, landed safely at Rochelle, and was attended by the Lord Chandois, who resigned into his hands the government of that Duchy, and in return was appointed by the Prince High Constable of all his possessions in France. From Rochelle the Prince removed his court to Poitiers, and was at Guienne at the time of Peter's application, whose crimes had made his subjects desert him, and whose kingdom was usurped by his own brother Henry.

The Prince of Wales engaged in Peter's cause, raised a considerable army, fought his way through the kingdom of Navarre, and on the 3d of April, 1367,

fought the usurper at Nejava, and was victorious.

Peter was restored to his kingdom, and now shewed that his ingratitude was equal to his former cruelty and oppression, for he refused the stipulated pay to the English soldiers, and Edward received no satisfaction for this dangerous enterprize. But the ungrateful tyrant was soon repaid as he deserved: he lost his friends by his folly, and his brother having gathered fresh strength, hostilities were renewed between them—he was slain in the field, and Henry, being as much beloved as Peter was hated, was placed upon the throne in safety.

The year 1368 may be considered as the period of Edward's glory. John had acted in all things with sincerity, but it was not so with others. The French saw province after province resigned to England with regret; and Charles the Vth, who had made the treaty of Bretigny, now resolved to break it. In 1369 he spread reports much to the disadvantage of the English; and the French, who had submitted with reluctance, sought occasions of revolting. In Guienne they accused the King of breach of obligation and impositions. The nobles declared the first, in consequence of the King's revoking some grants, and the common people the other, on account of a chimney tax, or hearth-money, levied by order of the Prince.

Charles took a bold course, and summoned the Prince of Wales before a court of peers, to answer the complaints of oppression made against him by the people of his provinces. But the Prince's answer was—“That he would appear,

pear, and that he would bring with him 60,000 men."

Charles expected this answer, and was prepared to dispute the great business again with England; for when Kings have a mind to quarrel, he must be a poor minister on either side who cannot find a cause.

It was made clear to Charles, by some of his people, that the treaty of Bretigny was violated, and he confiscated by edict all the lands held by the English in France, and again annexed them to the crown.

This was sufficient to rouse the lion Edward; but he was no longer in that full strength and vigour which had carried him up to the gates of Paris.

The hostages, whom he treated with honour, abused his indulgence and meanly escaped. The earldom of Ponthieux was seized soon after, and Guienne was, in its best cities, in arms against him.

Hereupon Edward called a parliament, laid before them the perfidy and insolence of France, and solicited a supply to carry the war into the country. This was readily granted; but Edward's usual success did not attend him. The Prince of Wales, who was at this time in Guienne, was equally unfortunate. His health was impaired, and his temper altered by that and his ill success.

Charles had received a very considerable addition to his navy, by a fleet of ships sent him by the King of Castile. Edward, however, took care to guard every quarter; he ordered a fleet of observation to cruise in the Channel, and a strong body of archers were sent down to guard the borders of Scotland, and a conside-

erable force embarked for Ireland, under the command of the Lords Windfor and Fauconberg. Both Edward and the Prince depended on the service of the Companies, in order to oppose the armies of the King of France. Charles, however, had carried on his intrigues in so secret and successful a manner, that all, except those who were natives of England, joined the French standard. Encouraged by the great improvement of his navy, he formed the design of carrying the war into England. With this view he had drawn all the flower of his troops to the coasts of Picardy, and had been some time in person at Rouen, giving orders for the embarkation, which he pretended was designed against Portugal; but having imparted his design to his council, they endeavoured to dissuade him from making so desperate an attempt. They informed him that his real intention was no secret at the court of England; that whatever ideas he might entertain of the number and strength of his fleets, they were unable to meet the English on the open sea. Charles, however, continued obstinate in his resolution of invading England; but before he had finished the necessary preparations, Edward had a strong squadron at sea, on board of which were the Duke of Lancaster, the Earls of Warwick, Hereford, and Salisbury; the Lords Manney, Ross, and Percy, with many other noblemen and officers; 500 men at arms, and as many archers. After cruising some time in hopes of meeting with the French fleet, they entered the harbour of Calais; and the Duke of Lancaster, who had received a commission to take upon him the command of the

the

the troops in that town and neighbourhood, carried fire and sword into the French territories. This unexpected irruption of the English disconcerted all Charles's measures. He ordered his land forces to disembark, and the Duke of Burgundy, who had been appointed to command in this expedition, to advance against the Duke of Lancaster, but not on any terms to hazard a general engagement, which prohibition was a great disappointment to the English, who had seldom failed of gaining the victory, by the precipitate behaviour of the French.

Limoges having now declared against the Prince of Wales, put itself under the French government. The Prince soon besieged the town, took it, and put the people to the sword: an act by no means illustrative of that *humanity* which historians in general ascribe to him. His distemper having then increased, he returned to England.

England was now deserted by some of her most powerful friends, and terrified with the approach of new enemies. The *Flemings* quitted the English cause, and Henry of Castile, as before observed, joined the French against the English. •Edward's fleet was equal to the naval force with which the Flemings had furnished Charles. He gave the command to the Earl of Hereford, and commissioned him to seek and fight them without delay; and the years 1371 and 1372 stand distinguished by two naval engagements, both well fought by the English, but with various success.

Hereford was as bold as honest. His first view was to treat with the Duke of Brittany for his royal master, who having continued

some time in a neutral state, Edward thought it necessary to gain him over entirely to his own interest. But he was met in his passage by a strong fleet of Flemish ships, whose Admiral had received secret orders from the Earl of Flanders, not to strike the flag to the English, even if a battle should be the consequence. On the meeting of these fleets a fight accordingly ensued, which lasted with great fury eight hours, when the Flemings were defeated, with so remarkable a slaughter, that a few only of the chief officers escaped, who were taken prisoners. About 20 of the Flemish vessels were destroyed in the action, and near 30 were brought into the English ports.

Though great as were the alarms of war, the gentle passion of love was not excluded from court. The two ladies of Castile, who had been left as pledges for the performance of the engagements of their father, Peter, King of Castile, with the Prince of Wales, still remained at Ayre in Gascony. Constantia, the elder, was considered as the lawful heir of the Castilian crown, and was universally admired. The Duke of Lancaster who had lost his wife, and was then in the vigour of his age, was, with his brother, very desirous of seeing the fair hostages, and on being introduced to them, were so charmed with their persons, that the Duke of Lancaster married the elder, and his brother, the Duke of Cambridge, the younger. This double marriage being celebrated with a splendour more suitable to the birth than the fortunes of the ladies, was considered by Henry, the King of Castile, as more dangerous than even a declaration of war,

war, and induced him to unite more closely with France than ever. A league, offensive and defensive, was now signed by the two crowns; and the constable, Du Guesclin in France, and Henry himself in Castile, redoubled their military preparations both by sea and land. Their naval armament consisted of 40 large, and 13 smaller vessels, on board of which were several pieces of cannon. This fleet, which was commanded by four experienced Admirals, was destined to make a descent on the coast of Poictou. The intelligence of these great preparations induced the Duke of Lancaster and his brother to pass over into England with their ladies. The two Princes with their consorts were received by Edward with the utmost politeness and affection.

Though Guesclin was unsuccessful against the English, when under Henry of Castile, yet now, while in the service of the French, he was more fortunate—for there was no Prince of Wales to animate the English troops. Accordingly he drove them out of the Limosin, Perigord, and Rouergne, and having marched into Saintonge, laid siege to Rochelle, while Henry of Castile sent a stout fleet to block it up by sea.

This was a stroke of great importance to England. Edward immediately fitted out 40 ships, gave the command of them to the Earl of Pembroke, and filled them with supplies for the town.

One of the chief excellencies of Charles's government consisted in acquiring the most early and certain intelligence of every thing that passed in the cabinet of the enemy; and the Admirals of Castile were immediately apprized of

the intentions of the English. They were directed to cruize off the port of Rochelle, in order to intercept the Earl of Pembroke's fleet. They were also informed of the strength of the English, and that they had a large sum of money on board, for the payment of the foreign mercenaries.

On the 22d of June, 1372, the English fleet appeared and endeavoured to gain the port of Rochelle, but the Spaniards being to windward, failed between them and the port, so that the Earl of Pembroke, finding it too late to think of a retreat, prepared for an engagement. The Spanish fleet was commanded by Boccanegra, a Genoese of spirit, who attacked the English fleet, though late in the evening. The darkness, however, soon put an end to the dispute, though not before two of the English store-ships were sunk, with all their crews. The next morning the fight was renewed with the greatest fury; but the contest was unequal: the height of the Spanish ships rendering the valour of the English useless. By three in the afternoon the Earl of Pembroke's fleet was entirely ruined, his own ship taken, and the military chest fell into the hands of the Castilians. Pembroke was sent a prisoner to Spain, and Rochelle submitted in consequence of this action.

This defeat filled all England with consternation, and Edward was extremely mortified to see all the effects of his military glory, blasted by a Prince who had never affected a warlike character. He therefore suddenly formed a resolution of once more going over to France in person. Accordingly he issued orders for fitting out 400 sail of large ships, besides other vessels

vessels for transporting his troops. This resolution retarded the departure of the Duke of Lancaster, who was then ready to embark with his army for Calais. By this change the Duke found himself only third in command, as he was to serve under the Prince of Wales, and the Prince under the King. The King's intention was generally considered as a desperate effort, the Prince of Wales being from illness almost incapable of acting, and the re-

taking of Rochelle, which Edward declared to be the chief motive for his heading his army in person, being also accounted very dubious. However the court was so intent on this project, that few or none of his military tenants were excused, and on the 30th of August the King embarked with a prodigious army on board his ships, having left Richard, eldest son to the Prince of Wales, guardian of the kingdom during his absence.

(To be continued.)

MISCELLANY.

DESCRIPTION OF THE PLATE.

An elegant LIKENESS of the MUCH ESTEEMED and LAMENTED CAPTAIN RICHARD PIERCE, late of the HALSEWELL East-Indiaman.

A CIRCUMSTANTIAL NARRATIVE OF THE LOSS OF THE HALSEWELL EAST-INDIAMAN, CAPTAIN RICHARD PIERCE,

WHO WAS UNFORTUNATELY WRECKED AT SEACOMB, IN THE ISLE OF PURECK, ON THE COAST OF DORSETSHIRE, ON THE MORNING OF FRIDAY THE 6TH OF JANUARY, 1786.

THE pilot having left the vessel Tuesday noon, January 3, she sailed down the Channel with a fair wind, till about four o'clock Wednesday morning, when a very hard gale with a heavy fall of snow came on, by which the ship received so much damage, as

to admit six feet water in the hold. About 11 o'clock on Wednesday morning when they thought they were between the Lizard and Start Points, they cut away the main and mizen masts, then wore ship, and endeavoured to make Portsmouth under jury masts. They

They stood up the Channel on Wednesday afternoon, and all the day on Thursday. In the afternoon of the last mentioned day, a heavy gale blew from the south, which, by degrees, drove them on a lee-shore, in spite of all their endeavours to avoid it. Between one and two o'clock on Friday morning they saw land, and came to anchor, at which they rode about an hour. But having either driven or parted, they then let go the only anchor left them, with which they were unable to bring up the ship, as the hurricane continued to increase. In this place the vessel drove upon the rocks at the head-land of St. Alban's, about three leagues to the east of Portland, those on board expecting her every moment to strike. The boats were then mentioned, but it was agreed that at that time they could be of no use, yet, in case an opportunity should present itself, of making them serviceable, it was proposed that the officers should be confidentially requested to reserve the long-boat for the ladies and themselves: and this precaution was immediately taken.

The ship still driving and approaching very fast to the shore, Mr. Meriton went to consult with Captain Pierce, who was then in the cuddy, his two daughters, two nieces, and three other beautiful young ladies, clinging round him for protection. At this critical moment the ship struck with such violence, as to dash the heads of those who were standing in the cuddy against the deck above them, and the fatal blow was accompanied by a shriek of horror, which burst at one instant from every quarter of the ship!

The seamen, many of whom

had been remarkably inattentive and remiss in their duty great part of the storm, and had actually skulked in their hammocks and left the exertions of the pump and the other labours attending their situation, to the officers of the ship, and the soldiers, roused by the destructive blow to a sense of their danger, now poured upon the deck, to which no endeavours of their officers could keep them, whilst their assistance might have been useful, and in frantic exclamation, demanded of Heaven and their fellow sufferers that succour which their timely efforts might possibly have succeeded in procuring; but it was now too late! by this time all the passengers and most of the officers were assembled in the round-house; the latter employed in offering consolation to the unfortunate ladies, and with unparalleled magnanimity suffering their compassion for the fair and amiable companions of their misfortunes, to get the better of their own danger and the dread of almost inevitable annihilation; Captain Pierce sitting on a chair, cot, or some other moveable, with a daughter on each side of him, each of whom he alternately pressed to his affectionate bosom; the rest of the melancholy assembly were seated on the deck, all of them tolerably composed. At this moment, what must be the feelings of a father—of such a father as Captain Pierce!

But soon a considerable alteration in the appearance of the ship took place, the sides were visibly giving way, the deck seemed to be lifting, and other strong symptoms that she could not hold together much longer. Mr. Meriton therefore attempted to go forward

H

ward

ward to look out, but immediately saw that the ship was separated in the middle, and that the fore part had changed its position, and lay rather farther out towards the sea. In this emergency, when the next moment might be charged with his fate, he determined to seize the present, and endeavour to make his way to a shore, of which he knew not yet the horrors.

Among other measures adopted to favour these attempts, the ensign-staff had been unshipped, and attempted to be laid from the ship's side to some of the rocks, but without success, for it snapped to pieces before it reached them; however, by the light of a lantern, handed from the round-house, Mr. Meriton discovered a spar, which appeared to be laid from the ship's side to the rocks, and on this spar he determined to attempt his escape. He accordingly laid himself down on it, and thrust himself forward, but he soon found that the spar had no communication with the rock. He reached the end of it, slipped off, received a violent bruise in his fall, and, before he could recover his legs, he was washed off by the surge, in which he supported himself by swimming, till the returning wave dashed him against the back part of a cavern, where he laid hold of a small projecting piece of the rock, but was so benumbed, that he was on the point of quitting it, when a seaman, who had already gained a footing, extended his hand, and assisted him till he was out of the reach of the surf.

Mr. Rogers, the third mate, remained with the captain near 20 minutes after Mr. Meriton had quitted the ship. The captain asked what was become of Meri-

ton? And Mr. Rogers replied, he was gone on deck to see what could be done. After this, a heavy sea breaking over the ship, the ladies exclaimed, "O poor Meriton! he is drowned; had he staid with us he would have been safe:" and they all, and particularly Miss Mary Pierce, expressed great concern at the apprehension of his loss. On this occasion Mr. Rogers offered to go and call in Mr. Meriton; but this was opposed by the ladies, from an apprehension that he might share the same fate.

At this moment the sea was breaking in at the fore part of the ship, and had reached as far as the main-mast, and Captain Pierce gave Mr. Rogers a nod, and they took a lamp, and went together into the stern gallery; and after viewing the rocks for some time, Captain Pierce asked Mr. Rogers, if he thought there was any possibility of saving the girls? to which he replied, he feared there was not. The captain sat down between his two daughters, struggling to suppress the parental tear which then burst into his eye.

The sea continuing to break in very fast, Mr. M'Manus, a midshipman, and Mr. Schutz, a passenger, asked Mr. Rogers what they could do to escape? who replied, "follow me;" they then all went upon the poop; and whilst they were there a very heavy sea fell on board, and the round-house gave way, and he heard the ladies shriek; at that instant Mr. Brimer joined the party, and seizing a hencoop, the same wave which proved fatal to those below, happily carried them to the rock, on which they were dashed with such violence as to be miserably bruised and hurt. At the

the time Mr. Rogers reached this station of possible safety, his strength was so nearly exhausted, that had the struggle continued a few minutes longer he must have been inevitably lost.

They could yet discern some part of the ship, and solaced themselves in their dreary stations, with the hope of its remaining entire till day-break; but, alas! in a very few minutes after they had gained the rock, an universal shriek, in which the voices of female distress was lamentably distinguishable, announced the dreadful catastrophe; in a few moments all was hushed. The wreck was buried in the remorseless deep, and not an atom of her was ever discoverable.

Thus perished the Halfewell, and with her, worth, honour, skill, beauty, amiability, and bright accomplishments; never did the angry elements combat with more elegance; never was a watery grave filled with more precious remains. Great God, how inscrutable are thy judgments! yet we know them to be just; nor will we arraign thy mercy, who hast transferred virtue and purity from imperfect and mutable happiness to bliss eternal!

What an aggravation of woe was this dreadful, this tremendous blow to the yet trembling, and scarcely half-saved wretches, who were hanging about the sides of the horrid cavern! Nor were they less agonized by the subsequent events of this ill-fated night; many of those who had gained the precarious stations which we have described, worn out with fatigue, weakened by bruises, battered by the tempest, and benumbed with the cold,

quitted their hold-fasts, and tumbling headlong either on the rocks below, or in the surf, perished in sight of their wretched associates.

At length, after the bitterest three hours which misery ever lengthened into ages, the day broke on them, but, instead of bringing with it the relief which they had flattered themselves, served to discover all the horrors of their situation; the only prospect which offered, was to creep along the side of the cavern, to its outward extremity, and on a ledge, scarcely so broad as a man's hand, to turn the corner, and endeavour to clamber up the almost perpendicular precipice, whose summit was near 200 feet from the base.

The first men who gained the summit of the cliff, were the cook and James Thompson, a quartermaster. By their own exertions they made their way to the land, and the moment they reached it, hastened to the nearest house, and made known the situation of their fellow sufferers.

The following is an extract of a letter, from a clergyman in the west of England, to his friend in London, dated January 9, 1786, describing the manner in which the rest of the crew, who escaped from the wreck, were preserved.

“I was sitting at breakfast with Mr. Garland on Friday the 6th of January, when news was brought us, that a large ship was on shore. The disposition of the country to plunder is well known; we therefore immediately mounted our horses, to afford what protection we could to the unfortunate. But the fury of the wind,

the violence of the rain, thick fog, and a deep snow, frustrated our endeavours after three hours riding round the coast. We then met with three poor wretches, who had escaped from the general ruin, over the cliffs. They were in a most distressed state at Worth. We removed them to a better house, and left them in good beds, and well provided, and then proceeded with a guide to the fatal spot. But such a horrid, tremendous scene never did my eyes behold! and God of his mercy grant they never may again! The sea ran mountains high, and lashed the rocks, which checked its rage with all the appearance of insolence and anger. The ship, which struck at two in the morning, was so entirely beat to pieces, that nothing but the whole ocean covered with her fragments could have persuaded me she ever had been drifted thither. In one place lay her rigging, &c. wound up like the garbage of an animal, and rolling to and fro in fullen submission to the imperious waves. In the different recesses of the rocks, a confused heap of boards, broken masts, chests, trunks, and dead bodies, were huddled together, and the face of the water as far as the eye could extend was disfigured with floating carcases, tables, chairs, casks, and part of every other article in the vessel. I do not think any two boards remained together. You remember Winsprit Quarry; she was lost half a mile to the east of it. I do not mention all the circumstances, as you have probably seen them in the papers. Of the whole crew about 70 were saved, mostly sailors; the rest, with the captain and 15 women, of whom two were his own daughters, and

three more young ladies, perished. The second mate, a stout young man, ascended the cliffs without help; but how, it is impossible to tell, nor could he himself, as they are nearly perpendicular; a few others were equally fortunate, by being carried on pieces of the wreck to parts more easily to be ascended. The fourth mate and about 40 of the men followed the second mate as far as they dared, and then waited in painful suspense till they were drawn up by a rope let down by the men who work in the quarries. Another party of 30, worse situated, or unable to gain a higher part, were seen to be washed from the rock on which they stood by one furious wave, at the return of the tide in the morning.

“The arrival of Mr. Garland and myself proved fortunate for about 20 more unhappy wretches, who were discovered under the shelter of a large chasm in the rock, about 30 feet from the bottom. The quarriers were worn out with fatigue, cold, wet, and hunger; and were more eager to get their share of two casks of spirits which had been just sent them, than to attend to the cries of the sufferers below; nor was there one person attending of sufficient authority to encourage or direct them. Our presence occasioned a proper application of the liquor, prevented all intoxication, and saved many of them from tumbling down the precipice, and our promises of reward cheered them to proceed with vigour, till we had drawn up every one that remained alive.

The method of saving these last was singular, and does honour to the humanity and intrepidity of the quarriers. The distance from the

the top of the precipice to the cranny was about 60 feet, with a projection of the rock of about eight feet; 10 of these feet formed a declivity to the edge, and the remaining 50 feet were quite perpendicular. On the very brink of the precipice stood two daring fellows, a rope being tied round their bodies, and fastened above to a strong iron bar, fixed in the ground; behind them, in like manner, two more and two more. A large cable also, properly secured, passed between them, by which they might hold and support themselves from falling; they then let down a rope, with a noose ready fixed, below the cavern, and the wind blowing hard, forced it under the projecting rock sufficiently for the men to lay hold of. Whoever caught it put the noose round his waist; and after escaping from one element, committed himself, in full swing, to another, in which he dangled till he was drawn up with great care and caution.

"We brought up 18 in this manner, three died before we could assist them; they were all senseless when we received them, and sadly bruised; but we had brought cherry brandy and gingerbread with us, and by supplying them with small quantities of these, we soon recovered them, and sent them to a farm-house, where every possible assistance was given."

Besides the captain, the first, fourth, and fifth mates, the following passengers were lost, viz. — John George Schultz, Miss Elizabeth Pierce, Miss Mary Ann Pierce, two Miss Pauls, Miss Mary Haggard, Miss Elizabeth Blackburn, Miss Ann Mansell,

Master Templer, and about 160 or 170 seamen and soldiers.

Officers saved. — Mr. Henry Meriton, second mate; Mr. Rogers, third ditto; Mr. Daniel, sixth ditto; Mr. Duncan Macdonald, and Mr. M'Manus, midshipmen, with 40 seamen, and 25 soldiers.

Mr. Meriton was driven from on board the *Halfewell* on the rock, by a very heavy sea breaking over the ship; just before which Captain Pierce asked him, if he thought any thing could be done for the safety of the ladies, but he replied it was impossible. Upon which the Captain, addressing himself to his daughters, and enfolding them in his arms, said, "Then, my dear children, we will perish together;" the ship disappeared in a few minutes.

Mr. Thompson, the quartermaster, was the first who climbed up the rock and got on shore; he saw a light about a mile off, to which he went; the people very humanely came down with him to the shore with ropes, which were the means of saving many lives, though several, after being drawn part of the way up the rock, from fatigue let go their hold, and were dashed to pieces.

The chief mate of the unfortunate *Halfewell* East-Indiaman said, in the fatal moment when the second mate was quitting the ship, that he would die with his uncle the Captain, and his cousins the Miss Pierces; for were he to leave such dear relatives behind him, he could only expect the worst of deaths—to be discarded for ever from the service.

The body of the unfortunate Captain Pierce was afterwards found at Christ-Church, near 20 miles

miles from Purbeck, where part of the wreck had also floated ashore, and many other dead bodies.

Captain Pierce was the oldest captain in the service of the Honourable East India Company, and proposed to retire, had it pleased Providence to permit his

return from this intended voyage. His two daughters were going to India to be married to gentlemen of considerable fortunes. The eldest was only 17, and the youngest but 15 years of age. He left behind him seven other children, and a wife, to lament his loss!

DESCRIPTION OF PORTS, DOCK-YARDS, AND OTHER PLACES CONNECTED WITH THE NAVY.

(Continued from page 14.)

PORTSMOUTH.

PORTSMOUTH is so called from its situation on the mouth of a small bay, or rock, that runs up a part of the coast, which at high tide is surrounded by the sea, and is therefore called Portsea Island. This town, which arose out of the ruins of Portchester, is extremely populous, and the principal rendezvous of the royal navy. It is strongly fortified, and the haven is capable of holding 1000 sail of the largest ships, without the least inconvenience.

The Island of Portsea is about 14 miles in compass; it is surrounded at high tides by sea water, of which they make salt, and is joined to the continent by a bridge, where was anciently a small castle, and the town of Portchester, or Port Peris, the place where Vespasian landed in his voyage to Britain. This Port Peris stood at the upper end of the Creek, but the sea retiring from it, the inhabitants followed and built the town of Portsmouth, which is the only regular fortification of Britain,

and the key of England, and which we find memorable in our annals before it attained its present grandeur.

When the Empress Matilda came over from Normandy to contend with King Stephen for the crown of England, in 1140, she landed here, but was obliged to take shelter in the castle of the Earl of Arundel, who had married her step-mother, the widow of Henry I.

In 1229, King Henry III. intending to invade France, mustered his army here, which was the greatest that had ever been raised in England; but the expedition proved abortive, by the treachery of the Duke of Bretagne, and the weakness of the King, who was exceedingly timid and pusillanimous.

In the reign of Richard II. during that monarch's disagreement with his subjects, the French embraced that opportunity of landing here, and after robbing the inhabitants of all their most valuable effects, burnt the town. Within six years after it was restored

stored so effectually, that the inhabitants fitted out a sufficient force by sea, not only to defend themselves from future insults of the like sort, but to act offensively; for they met the enemy as they approached the second time, took all their ships, and killed all their men, except nine who got on the English shore in a boat, and were immediately taken prisoners. The English, elate with their success, attacked the French on their own coast, sailed up the Seine, and burnt and sunk many of the enemy's vessels, and returned to England with a rich booty of wines, and other articles of merchandize.

At this time it had no better fortifications than a timber wall well lined with mud, and a high mount at the N. E. near the Gate, till King Edward IV. built two forts of freestone at the entrance of the harbour, which were considered of great importance by Henry VII. who made them a garrison for the defence of the coast, and which was found to be of great service in the succeeding reign, when the French made several attempts on this town, and especially in 1545, when they entered the harbour with six gallies and engaged the English ships lying there, but were not able to force their way into the port, and so landed on the Isle of Wight.

During the long reign of Henry VIII. the fortifications were carried on with great vigour. That Prince erected a Fort called South-Sea Castle, situated about a mile and a half S. of the town which defended the mouth of the harbour. This castle is fortified with a double moat, pallisades, ravelins, and a counterscarp, from which there are several advanced

works to cover the Fort against the approach of an enemy. There is also on the same side, a large platform, on which are placed pieces of ordnance, and on the opposite side near Gosport, there is another platform of 20 great guns, almost level with the water.

Queen Elizabeth added new works to the old fortifications at a very great expence, and augmented its garrison, with orders to keep guard night and day, by parties at the town gates, and on the top of the church steeple, where, by the ringing of a bell, they might give notice of the enemy's approach, and shew from what quarter they advanced, by waving their colours. This guard-bell was afterwards tolled upon different occasions, viz. to give an account of the number of ships that enter the harbour; of which there is a fine prospect from the watch tower on the top of the steeple, as well as of Spithead, where the ships ride before they come in.

In the reign of Charles I. when the French Protestants were besieged in Rochelle, they solicited assistance from England, and the Duke of Buckingham mustered his army in Portsmouth, but before he had time to embark, he was stabbed by John Felton, a lieutenant in one of the regiments.

When the civil wars broke out between Charles I. and his Parliament, this town was seized by the latter as a place of great importance: but it was one of the first that declared for Charles II. when they heard of General Monk's design of restoring him to the crown; and Catherine the consort of that Prince landed here, where

where she waited five days before the King arrived, when they were married by Dr. Sheldon, and the marriage consummated in this town in 1662.

The King added very much to the strength, extent, and magnificence of its fortifications by land, and to its naval preparations. He made it one of the principal chambers in the kingdom for laying up the royal navy; furnished it with wet and dry docks, storehouses, rope-yards, and all materials for building, repairing, rigging, arming, victualling, and completely fitting to sea ships of all rates.

King James II. added greatly to its fortifications, and made the Duke of Berwick its governor. But the officers of the army began in this place first of all to shew their dislike of what that Prince was contriving in favour of Popery: for Colonel Beaumont, who commanded the Duke of Berwick's regiment in his absence, and five other captains, refused to admit the Irish papists, according to that Duke's orders: which might have cost them their lives, had not the revolution delivered them out of confinement for the same.

After the revolution, this port flourished mightily, being the constant rendezvous of the grand fleets and squadrons; and for convoys to the merchant ships. By which means it is so much increased and enriched, that the number of houses and its inhabitants are above double what they were before; besides dwelling-houses, with ample accommodations for a commissioner of the navy, and all the subordinate officers, and master-workmen, necessary for the constant day and night service in this port.

The greatest industry has been used in fortifying the town of Portsmouth on the land side, where the fortifications are perfectly regular, having a fosse, which can be filled with water eight feet deep, in less than half an hour. Within the fosse is a well 15 feet perpendicular, on which is a double parapet with bastions and curtains, regularly flanking the parapet; there are also a glacis and covered way. These works are carried round the dock-yard, so that the magazine of stores, arms, and ammunition, is well secured from any attack.

The dock-yard contains such an amazing quantity of every thing necessary for the royal navy, and placed in so regular a manner, that it even exceeds imagination. There are seldom less than 1000 men employed in the dock-yard, and sometimes double that number, who in time of war are all disciplined and formed into a regiment, under the command of the Commissioner, who is Colonel; the Master-Builder, Lieutenant-Colonel; and the Clerk of the Check, Major; the subalterns being chosen from among the other officers. The dock and other yards are now like a town, and may be said to form a corporation, there being large rows of dwellings, built at the expence of the public, for all the officers, who are obliged to reside constantly on the spot.

The rope-house (where the cables are made) is almost a quarter of a mile long, and some of the cables are so large, that they require 100 men to work them, whose labour is so hard, that they can only toil about four hours in a day.

The situation of the place being

ing low, and full of sea water and ditches, makes it aguish, and is in want of fresh water. Here are many good modern buildings: the town is large, and so full of people, that the streets seem always in a hurry, by the continual resort of seamen, soldiers, and their dependants to it. Camden observes, that in Queen Elizabeth's reign, Portsmouth was more populous during a war, than in time of peace: but now there is so much of the navy business done here, that there is a hurry at all times. The inns and taverns are crowded continually, and this concourse makes both provisions, fuel, and lodgings, very dear.

It is observed, to the great credit of the civil and military government of this place, that the one does neither corrupt nor interrupt the other. The church is large and handsome; and the Deputy-Governor has a very good house and a neat chapel.

Here is a royal academy, esta-

blished at the public expence, where youth are instructed in all sorts of learning, proper to qualify them for the naval service; and in one of the rooms is a model of the *Victory*, a large ship of war, unfortunately lost near Guernsey, and a fine large orrery, constructed by the ingenious Mr. Rowley.

Here are also proper officers to take care of the revenue: and the garrison, docks, &c. are furnished with them in their several distinctions. Yet it is no more than a member port of Southampton, as it appears by commission returned into the Exchequer in Michaelmas Term, 32 Car. II. where the town quay is described to measure 153 feet from N. to S. at the head of the said quay; and in depth at its N. wing, to the head thereof, 29 feet or thereabout; and about 40 feet in depth at the S. wing to the head thereof; besides which, here is a very fine new quay for laying up the cannon.

(To be continued.)

HISTORY OF NAVAL LITERATURE.

(CONTINUED FROM VOL. II. PAGE 130.)

FROM 1717 to 1730 we meet with no naval publication of any consequence. In the last mentioned year Mr. Archibald Patoun produced "A complete Treatise of Practical Navigation, demonstrated from its First Principles." This was a work of considerable ingenuity, which has been since improved by other writers.

NAVAL MAG. VOL. III.

In 1731 was published, "A View of the Depredations and Ravages committed by the Spaniards on the British Trade, &c." Several masters and sailors of Bristol merchant ships, that were taken by Spanish *Guarda Costas*, came to town to give an account to the Parliament of the cruel treatment they met with from the Spaniards. This business was ridiculed

diculed in the "Hyp Doctor," (March 9, No. 13.) who observed, "That the depredations said to be committed by the Spaniards on our shipping in the West Indies, should be chalked up to the score of the then ministry; because, (writing in a burlesque manner), some of those depredations were none at all. Many of them were dated before the time of the ministry, and others while Spain was at variance with us; and because those made by pirates, as much as those supposed to be done by GuardaCostas, are alike chargeable to the ministry." This subject led to other publications at this time, viz. "The Case of some English Ships taken by the Spaniards."—"Some short Reflections on the Situation of Gibraltar, and its Importance to the Trade."—"Spanish Fortifications near Gibraltar described." In this description the Spaniards were said to have erected a wall with its proper angles. Behind it, towards the country, was a ditch, and both these were carried on from sea to sea, about an English mile from the nearest of our works. Small ships, which drew but little water, could anchor within a mile, or three quarters of a mile of this part of the Spanish wall. Their usual places of mooring and anchoring were near the New Mole and other forts; that in time of war, when their batteries were half a mile nearer, they could not annoy our ships, and they never thought it practicable to hinder the supply of provisions and ammunition for the town. By the wall and ditch the manifest design of the Spaniards was to cut off all communication.

In the same year (1731) were published, "Remarks upon the

present State of the Sugar Colonies."—"The Importance of the Sugar Colonies to Great Britain stated."—"Considerations on the Dispute, &c. between the British Southern and Northern Plantations in America, &c." On this subject were writers, *pro and con*; the latter insisted that a compliance with Barbadoes would be exceedingly disadvantageous to our shipping in that trade, and that the French would increase in shipping as we decreased.

In the month of May appeared an English translation by Mr. Medley, of the "Present State of the Cape of Good Hope, Vol. II." originally written in High German by Peter Kolben, A. M. Also, "A Projection of the Longitude at Sea, &c." by Benjamin Parker, being both works of great merit.

Mr. Henry Huntley published the same year, "Observationes in Morbos Nautarum;" but a subject of such general utility should not have been confined to Latin. "The Ship and Super-cargo Book-keeper," was an excellent vade-mecum at sea.

Mr. Jeremy Woodyer, a native of Ireland, invented at this time a machine for discovering the longitude. He brought it to such perfection, that in the opinion of several skilful mathematicians, it would unquestionably answer the end of the inventor. The only point disputed was, Whether it would produce the latitude (without observation) as it did the longitude, when the latitude was found by observation? The Projector had made a trip to try experiments, and came to London by long sea to make a farther proof, and lay it before the judges appointed by parliament.

In defence of the then administration, the following remarks on the state of the navy were published in the Weekly Register, August 7, 1731, No. 69.

“All parties agree that the navy is of the utmost consequence to the constitution: the natural strength of Great Britain, her repose and defence, the guardian of her trade, and support of her glory. Had the ministry ever neglected this important point, or misapplied the sums granted for its support; had it been suffered to decay or exhausted without a supply, there would be real grounds for complaint. On the contrary, they have made the fleet the continual object of their tenderest regard. Hence our maritime power is not only the greatest in the world, but has been greater under their conduct than ever before. This appears from the care taken of our ships of war in the docks, where in peace they are laid up under the strictest inspection, their decays watched and instantly repaired, and old ships rebuilt, and the whole complement may be always complete and ready for service. Materials and

stores provided for exigences, and committed to the care of proper officers; the seamen encouraged and courted into the service, and never paid with such certainty and exactness, with so little imposition and delay. Their short allowance money, smart money, &c. is as sure as their pay, and as regularly discharged.

“The laws of preferment among the officers were never on so equitable a basis. Gentlemen are first volunteers, then midshipmen, before they are made officers, and must serve in both capacities to qualify them for commissions; after this their abilities are to be examined, and to have certificates in form.

“Nor is this all—By a late proposal from the Lords of the Admiralty to the seamen and commanders of the fleet, a voluntary proportion is to be deducted from their pay, to maintain the families of such who die in the service of their country, without any additional charge of procuring or receiving it.—Neither Europe, nor our own annals, afford any establishment like this.”

(To be continued.)

HISTORY OF THE ENGLISH EAST-INDIA COMPANY.

(CONTINUED FROM VOL. II. PAGE 581.)

HAVING in the former part of this history mentioned the insolence of the Hollanders, and their long concerted scheme of engrossing the entire India trade, (page 544), we shall now take a

retrospect of the enormous cruelties which were exercised by the Dutch on the English at Amboyna, and then proceed from the period we left off.

The English and Dutch companies

nies in the Indies were grown so powerful in the year 1614, that they began to extend the sovereignty of their respective countries over several places in the Indies; and the English particularly procured from the inhabitants of the island of Banda, a surrender of themselves to the crown of England, which they did by a formal instrument, which, however, did not hinder the Dutch, who alleged that they had prior claims upon those countries, from endeavouring to make themselves masters of them. The English, on the other hand, proceeded in extending their dominions in the East-Indies, without considering that they wanted a force to maintain them; and procured likewise the surrender of Lentore, by another solemn instrument, under the hands of the natives, dated Nov. 24, 1620.

It is very certain that all this was very well designed, and that the English Company, if they had been strong enough, would by this means have procured to themselves a very large share of the spice trade; but as it was, they only opened a way to their own destruction. While this was doing in India, there was a treaty carried on in Europe, between commissioners appointed by each of the East-India Companies, English and Dutch, under the inspection and direction of ministers plenipotentiaries from the King of Great Britain and the States-General. This treaty was concluded July 7, 1619, by which it was agreed, that all past offences on either side should be buried in oblivion; that both Companies should trade freely upon their own stock for their own benefit, but with a mutual regard

to each others interest. That the Molucca Islands, together with those of Banda and Amboyna, should belong to the English and Dutch, but in such a manner that the English should have but one third of the trade, and the Dutch two thirds; that a council of defence should be erected, composed of members of both Companies, who should provide such ships of war as are mentioned in the treaty, for the joint defence of both Companies; that for the future, the whole trade of the Indies should be free to both nations, and that neither should attempt to shut out the other by fortifications or contracts with the natives; and that this treaty should endure for 20 years; and in case any disputes shall arise notwithstanding thereof, which cannot be either decided or accommodated by the councils of the said Companies, his Britannic Majesty and the States-General are humbly desired to take the same under their cognizance, and finally to adjust and determine them.

One would have imagined that all things must now have gone on harmoniously and peaceably, and that an end had been put to all the disputes between the English and Dutch Companies for 20 years at least; but it fell out quite otherwise; for the Dutch General of the East-India Company, having a fleet of large ships under his command, attacked Lantore, and, having defeated the natives, fired the town, plundered the English factory, took away the cloth, money, and bullion, belonging to the East-India Company, together with 23,000 lb. of mace, and 150,000 lb. of nutmegs. The English factors that were settled there, were stripped
naked,

naked, bound, beaten, thrown over the town-wall, and afterwards dragged through the streets in chains. The factory of Poolaroon had the same fate; and thus all things were in a worse state after this treaty than they were before in the Indies. What seems to be most extraordinary and astonishing is, that the Dutch East-India Company published in Holland a defence or vindication of these proceedings, in which they allege, that, having a prior right to these islands, this could not be taken away by any subsequent act of the inhabitants, who were no longer their own masters; that this war was prosecuted against the natives as principals, and against the English as auxiliaries only. To this the English published an answer, in which they absolutely denied, that the inhabitants of the island of Banda ever submitted themselves to the Dutch, and insisted on their legal title to that country.

But it does not appear that the Government ever interfered properly in this affair, or demanded just satisfaction from the States of Holland; which perhaps might be owing to the perplexed circumstances of our administration, and the differences that had arisen between King James and his Parliament. But, if this ill usage was to be borne, there followed soon after much worse, when, to take from the English the small remains of the spice trade, and to monopolise intirely a commerce of such importance into their own hands, the Dutch were guilty of such unheard-of barbarities in Amboyna, as, though they may be forgiven, yet ought never to be forgot; and yet we find them very slightly passed over, even in those

works where we might reasonably expect the fullest accounts of them; which is probably owing to the inclination some writers have to hide the faults of their neighbours, and to publish the excesses of no government but their own.

Yet, as, at the very time it happened, the East-India Company here took care to give a full and large account of the whole transaction, from such authorities as cannot be questioned, it seems but reasonable, that, for the sake of truth, and the perpetual preservation of so authentic and curious a piece, we should insert it, without any material alteration, though it is of some length, and delivered in an uncouth and antiquated stile.

“ Amboyna is an island lying near Seran, of the compass of 40 leagues, and giveth name also to some other small islands adjacent. It beareth cloves; for gathering and buying in whereof, the English Company, for their part, had planted five several factories. Upon these islands of Amboyna, and the point of Seran, the Dutch have four forts; the chief of all is at the town of Amboyna, which is very strong, and is the chief rendezvous as well for the island of Banda, as for the rest of Amboyna. Here the English lived not in the castle, but under its protection, in a house of their own, holding themselves safe, as well in respect of the ancient bonds of amity between both nations, as of the strict conjunction made by the late treaty beforementioned.

“ They continued here two years trading with the Dutch, by virtue of the said treaty, in which time there fell out several differences and debates between them; the

English

English complaining, that the Dutch did not only lavish away much money in building and unnecessary expences upon the forts, and otherwise, and bring large and unreasonable reckonings thereof to the common account, but also did, for their part, pay the garison with victuals, and cloth of Coromandel, which they put off to the soldiers at three or four times the value it cost them, yet would not allow of the English Company's part of the same charge, but only in ready money, thereby drawing from the English more than two thirds of the whole charge. Hereupon, grew some discontents, and complaints were sent to Jaccatra, in the isle of Java Major, to the Council of Defence of both nations there residing, who also, not agreeing upon the points in difference, sent the same over into Europe, to be decided by both Companies; or, in default of their agreement, by the King's Majesty and the Lords the States General. In the mean time, the discontent between the English and the Dutch daily increased, until at last there was a sword found to cut in sunder that knot at once, which the tedious disputes of Amboyna and Jaccatra could not untie.

“ About the 11th of February 1622. O. S. a Japanese soldier of the Dutch, in their castle of Amboyna, walking in the night upon the wall, came to the centinel, and asked him some questions touching the strength of the castle, and the people in it. These Japanese served the Dutch as soldiers, yet were not of their trusty bands always lodged in the castle, but, upon occasion, called out of the town to assist the watch. The Japanese soldier, for his confer-

ence with the centinel, being apprehended upon suspicion of treason, was put to the torture and confessed, that himself and several of his countrymen had contrived the taking of the castle. Hereupon other Japanese were examined and tortured, as also a Portuguese, the guardian of the slaves under the Dutch. During this examination, which continued three or four days, some of the Englishmen went to and from the castle, upon their business; saw the prisoners, heard of their tortures, and of the crime laid to their charge; but all this while suspected not that this matter did in the least concern themselves, having never had any conversation either with the Japanese or Portuguese.

“ At the same time, one Abel Price, surgeon to the English, was prisoner in the castle, for offering, in his drunkenness, to set a Dutchman's house on fire; the Dutch, shewing him some of the Japanese, whom they had first most grievously tortured, told him, that they had confessed the English to have been of their confederacy, for the taking of the castle; and that if he would not confess the same, they would use him as the Japanese, and even worse. Having put him to the torture, they soon made him confess whatever they asked: this was on the 15th of February, 1622, O. S. About nine o'clock the same morning, they sent for Captain Towerfon, and the rest of the English that were in the town, to come to speak with the Governor, in the castle; they all went but one, who was left to keep the house. Being come, the Governor told Captain Towerfon, that himself and others of his nation were accused of a conspiracy

conspiracy to surprize the castle, and therefore, till further trial, were to remain prisoners; they also instantly attacked him who was left at home in the house, took the merchandise of the English Company there into their own custody by an inventory, and seized all the chests, boxes, books, writings, and other things in the English house.

“ Captain Towerfon was committed to his chamber, with a guard of Dutch soldiers; Emanuel Thomson was kept prisoner in the castle; the rest, viz. John Beaumont, Edward Collins, William Webber, Ephraim Ramsay, Timothy Johnson, John Fardo, and Robert Brown, were sent aboard the Dutch ships then riding in the harbour; some to one ship, and some to another, and all laid in irons. The same day, also, the Governor sent to the two other factories in the same island, to apprehend the rest of the English there; so that Samuel Colson, John Clarke, George Sharrock, that were found in the factory at Hitto, and Edward Collins, William Webber, and John Sadler, at Larica, were all brought prisoners to Amboyna, the 16th of February; upon which day also John Pocol, John Wetheral, and Thomas Ladbrook, were apprehended at Cambello, and John Beaumont, William Griggs, and Ephraim Ramsay at Loho, and brought in irons to Amboyna, the 20th of the same month. In the mean time, the Governor and Fiscal went to work with the prisoners; and first they sent for John Beaumont and Timothy Johnson, from on board the Unicorn, who

being come into the castle, Beaumont was left with a guard in the hall, and Johnson went into another room, where Beaumont soon heard him cry out very pitifully, then quiet a little while, and then loud again; after a taste of the torture, Abel Price, the surgeon who was first examined and tortured, was brought in to confront and accuse him; but, Johnson not yet confessing any thing, Price was quickly carried out, and Johnson brought again to the torture, where Beaumont heard him sometimes cry aloud, then quiet again, then roar afresh. At last, after he had been about an hour in the second examination, he was brought forth wailing and lamenting, all wet, and cruelly burnt in diverse parts of his body, and so laid aside, in a bye place in the hall, with a soldier to watch him, that he should speak to nobody. Emanuel Thomson was then brought to examination, not in the room where Johnson had been, but in another somewhat farther from the hall; yet Beaumont, being in the hall, heard him roar most lamentably, and many times. At last, after an hour and a half spent in torturing him, he was carried away into another room another way, so that he came not by Beaumont through the hall. Next was Beaumont called in, and being asked many things, all which he denied with deep oaths and protestations, he was made fast to be tortured; but yet, for this time, the Governor having ordered him to be loosed, said he would spare him a day or two, because he was an old man.

(To be continued.)

A NARRATIVE OF THE UNFORTUNATE VOYAGE OF PIETRO QUIRINI, A NOBLE VENETIAN,

WITH SEVERAL CURIOUS PARTICULARS RESPECTING THE NATURAL HISTORY AND COMMERCE OF NORWAY, AND THE MANNERS AND CUSTOMS OF ITS INHABITANTS, IN THE 15TH CENTURY.

PIETRO Quirini, a Venetian nobleman, was a merchant and master of a ship in the island of Candia, which at that time was in the possession of the Venetians. With a view to acquire fame as well as profit, in the year 1431, he undertook a voyage from Candia to Flanders.

On the 25th of April, 1431, he set sail from Candia, on a westward course; but, meeting with contrary winds, he was obliged to keep near the coast of Africa. On the 2d of June he passed the Straits of Gibraltar, and through the ignorance of his pilot ran upon the shoals of St. Petro, in consequence of which the rudder was thrown off the hinges, and the sea entered the ship at three places. In fact, it was with great difficulty that they could save the vessel from going to the bottom, and run into Cadiz, where they unloaded her, and in 25 days, having put her into perfect repair, took her lading in again. In the mean time, having heard that the Republic of Venice was at war with that of Genoa, he augmented the number of his crew, so that in the whole it amounted to 68 men. On the 14th of July he set sail again, and bore up for the Cape of St. Vincent; but, by reason of contrary wind, which blew from off the land in a north-east direction, and on that coast is called Agione, they were obliged to traverse for the space of 45 days, at a great distance from the land, and

indeed near the Canary Islands, tracks which were very dangerous, and with which they were entirely unacquainted. But at length, just as their stock of provisions began to fail, they had a fair wind from the south-west, and directed their course to the north-east; some of the iron-work, however, gave way, on which the rudder was hung. In the mean time they mended them as well as they could, and on the 25th of August, arrived safe at Lisbon.

Here having carefully repaired the iron-work of their rudder, and taken in a fresh stock of provisions, they set sail again on the 14th of September. They were now a second time tossed to and fro by contrary winds, till the 26th of October, when they reached the port of Mures, whence Quirini, with 13 of the crew, went to San Jago Di Compostella, in order to perform their devotions. They returned with all possible speed, and setting sail with a fair south-west wind, kept, in hopes that the wind would continue, at the distance of 200 miles from the land, and Cape Finisterre, till the 5th of November, when the wind shifting to the east and south-east, prevented them from entering the British Channel, and carried them beyond the Scilly Islands.

The wind now increased in violence, and on the 10th of November, carried the rudder a second time from off its hinges. They flung

flung it indeed by ropes to the quarters of the ship, but it soon got loose again, and was dragged after the ship for the space of three days, when they used their utmost efforts, and made it fast again. But their vessel now drove continually farther from the land; and as the crew consumed the victuals and drink without limits or moderation, at length two or three of them were set to guard the provisions, who twice a-day distributed to each man his share, Quirini himself not excepted. In this condition, by the advice of the carpenter, they constructed, out of the main-mast and the spare-yards, two rudders with triangular boarded ends, in order to prevent the vessel from going unsteady. These new rudders were properly fastened, and proved very serviceable, a circumstance which inspired them all with fresh hopes; but, by the violence of the winds, this, likewise, their last refuge, was torn away from the ship.

On the 26th of November, the storm increased to such a degree, that they had no doubt but that that day would be their last. The storm, indeed, by degrees became somewhat less violent; but they were driven out to sea, W.N.W. and the sails, which had been perpetually fatigued by the rain and wind, were now torn to shivers; and though they clapt on new ones, yet these did not last long. Now the ship drove without either sails or rudder, and was filled with water by the waves which beat over it, insomuch that the crew, debilitated by labour and anxiety, were scarcely able to keep the water under. Having heaved the lead, and found ground at 80 fathoms, they spliced all the four cables together, and rode at

anchor for the space of 40 hours. One of the crew, terrified at the dreadful working of the ship in consequence of the tempest and the swell of the sea, cut the cable at the forecastle of the ship, which now drove about as before.

On the 4th of December, four large waves breaking over the ill-fated vessel, filled it so full, that it was almost ready to sink. The crew, however, summoning up their resolution and spirits, baled the water out, though it reached up to their waists, and in the end quite emptied the vessel.

On the 7th the tempest increased to such a degree, that the sea flowed into the vessel on the windward side, and their destruction seemed to them inevitable. But now they were of opinion, that if the main-mast were cut away, it would lighten the ship. They therefore set about this business immediately, and a large wave fortunately carried away the mast, together with the yard, which made the ship work less. The wind, too, and the waves, became somewhat more calm, and they again baled out the water. But now the mast was gone, the vessel would no longer keep upright, and lying quite on one side, the water ran into it in torrents, when, being exhausted with labour and want of food, and finding that they had not strength left sufficient for clearing the vessel of the water, they resolved at length to save themselves in the boats, of which the larger held 47, and the smaller 21 men. Quirini, who had the choice which boat he would go in, at last went with his servants into the great boat, into which he saw the officers enter. They took with them a stock of provisions, and as soon as the

winds and the waves were become somewhat more calm, which was on the 17th of December, they quitted the ship, which, among other costly articles of commerce was laden with 800 casks of Malmsey wine, and a great quantity of sweet-scented Cyprus wood, ginger, and pepper.

On the following night the small boat with the 21 men in her, was separated from them by the violence of the storm, and they never heard of her more. Indeed they were themselves obliged, in order to lighten their boat a little, to throw over-board their stock of wine and provisions, together with all their clothes, excepting what they carried on their backs. The weather proving fair for a time, they steered to the eastward, with a view to get, as they supposed, to Iceland; but the wind chopping about, drove them to and fro again. Their liquor beginning to fail, and besides many of them being exhausted in consequence of the preceding scarcity of provisions, as well as of the incessant labour, long watchings, and other hardships they had undergone, a great number of them died: the scarcity of drink in particular was so great, that each man had no more than the fourth part of a cup (and that not a large one) every 24 hours. With salted meat, cheese, and biscuit, they were better provided: but this salt and dry food excited in them a thirst, which they were not able to quench. In consequence of this, some of them died suddenly, and without having previously exhibited the least symptoms of any complaint; and in particular it was observed, that those were first carried off who had before this period lived in the most riotous

manner, who had drank great quantities of wine, or entirely given themselves up to drunkenness, and had hovered continually over the fire, without stirring at all but to shift from one side of the fire to the other. These, though they had externally the appearance of being strong and healthy, were yet least of all capable of bearing the hardships they were obliged to undergo, in consequence of which they died two, three, and four in a day. This mortality prevailed among the crew from the 19th of December to the 29th, the corpses being thrown into the sea.

On the 19th the last remainder of the wine was served out, and every one prepared for death. Some of them drank sea water, which hastened their deaths, while others had recourse to their own urine, and this latter beverage, joined with the precaution of eating as little salt provision as possible, contributed most of all to the preservation of their lives. For the space of five days they continued in this dreadful situation, sailing all the time to the north-eastward.

On the 4th of January, one of them, who sat at the fore part of the boat, descried somewhat to the leeward, as it were, the shadow of land, and immediately informed the crew of it in an anxious tone of voice. Their eyes were now all turned to the object, and continued stedfastly fixed upon it, and by break of day they saw, with extreme joy, that it was really land.

The sight of this inspired them with fresh vigour, so that they now took to their oars, in order to arrive the sooner at the shore; but this, on account of its great distance,

distance, as well as of the shortness of the day, which was only two hours long, they could not compass. Besides, they could not long make use of their oars, as they were so weak, and as the night soon overtook them, which, long as it was, seemed still longer to them from the impatience natural to men in their condition.

The next morning by day-break, they lost sight of the land; however, to the leeward, they discovered another mountainous country very near them. That they might not, on the following night, lose sight of this, they took the bearings of it with the compass, and then immediately set sail for it with a fair wind, and arrived at it about four o'clock in the evening. When they approached near to it they observed that it was surrounded by a great number of shallow places, for they heard very distinctly the sea breaking upon them. They gave themselves up, however, to the guidance of the Almighty; and once their boat being brought upon a shoal, a vast wave came and carried it off again, at the same

time setting them entirely out of danger, and upon a rock which was now their greatest security and preservation. This was the only place where they could land, as the rock was encompassed on every other side by other projecting rocks. They therefore ran their boat on to the land, when those that were in the fore part of the boat, leaped directly on shore, and finding it entirely covered with snow, they swallowed the snow in immense quantities, filling with it their parched and burning stomachs and bowels. They likewise filled a kettle and water-pitcher for us, that from weakness staid in the boat. I must confess, says Quirini, that I swallowed as much snow as I should find it very difficult to carry on my back. It seemed to me as though all my welfare and happiness depended on my swallowing it. However, this extravagant quantity of snow agreed so ill with five of our men, that they died the same night, though, indeed, we considered the sea water they had swallowed as the cause of their death.

(To be continued.)

CURSORY REMARKS ON LABILLARDIERE'S ACCOUNT OF A VOYAGE IN SEARCH OF LA PÉROUSE,

UNDERTAKEN BY ORDER OF THE CONSTITUENT ASSEMBLY IN FRANCE, AND PERFORMED IN THE YEARS 1791, 1792, AND 1793, IN THE RECHERCHE AND ESPERANCE SHIPS OF WAR, UNDER THE COMMAND OF THE REAR-ADMIRAL BRUNE D'ENTRECASTEAUX.

THE principal object of this French expedition was to obtain every possible information concerning the fate of La Pérouse,

of whom no tidings whatever had been received in France, since the date of his last letter to the Marshal De Castries, minister of the marine,

marine, from Botany Bay, in the month of February 1788, in which he delineated the course he intended to pursue, agreeable to his instructions, and concluded with the flattering hope, "that he should be able to get to the northward in time to arrive at the Isle of France in the beginning of December 1788." But, alas! this able navigator is unfortunately to be added, together with the other officers and the crews of two ships, to the list of victims sacrificed to the advantages to be derived from these perilous voyages, which, however, they may have enlarged the compass, and enriched the stores of human science, already sufficiently enlightened to remain satisfied with the knowledge they possessed, have been too dearly purchased by the loss of a succession of celebrated characters, whose talents and virtues might, in any other situation in life, have been at this moment more highly useful to the respective communities to which they belonged.

Humanity dictated the voyage in search of La Pérouse and his companions; and this motive renders it more interesting than any former expeditions to the same remote and unfrequented regions. The return of M. Labillardiere is thus related by the translator:

"After the death of Rear-Admiral D'Entrecasteaux, and of Captain Huron, commanders of the two ships *La Recherche* and *L'Esperance*, the command of the expedition devolved on M. Dauribeau, who had been previously appointed captain of the *Esperance*. When the ships, on their return, lay off Sourabaya, one of the principal settlements of the Dutch in the Island of Java, an account was received there of war

having broken out between France and Holland; but the dysentery having made considerable ravages on board, most of the gentlemen belonging to the expedition took up their residence on shore; and fresh news arriving from Europe some time after their landing, M. Dauribeau, and the principal officers, came to a resolution of hoisting the white flag, as the emblem of their attachment to the old monarchical government of France, and putting themselves under the protection of the Dutch, they caused all the officers, naturalists, and such of the people belonging to the two ships, as they thought would espouse the Republican cause, to be apprehended and thrown into prison. M. Dauribeau, at the same time, seized upon all the collections of the naturalists (M. Labillardiere's being the principal), and soon after prevailed on the Governor of Samarang to cause their effects to be searched, in order to get possession of the manuscripts containing the observations which they had made during the voyage; but M. Labillardiere, and his friend M. Legrand, saved their journals. The officers, and other persons of the Republican party, were, in the sequel, transferred to the prisons of Batavia, and, after a long confinement in the vicinity of that unhealthy spot, were exchanged, and sent to the Isle of France. The *Recherche* and the *Esperance* being left without men sufficient to navigate them, an inventory was taken of their furniture, stores, &c. by commissioners appointed on both sides; and these, together with the ships, were received by the Regency of Batavia to answer the advances made in provisions, and in other kinds of succour

succour afforded to the officers and crews. M. Dauribeau died on the 22d of August, 1794, and M. Rossel, then first lieutenant of the *Recherche*, took into his charge Admiral D'Entrecasteaux's journal, with all the charts, plans, drawings, specimens of natural history, &c. and early in the year 1795, embarked with them for Europe, in the *Hoogly*, a Dutch East-Indiaman, bound from Batavia to Amsterdam. On the 9th of June following, this, and seven more Dutch ships that were in company with her, were captured off St. Helena by the British ship of war the *Sceptre*, of 64 guns, commanded by Captain Essington, who was bringing home his prizes, when, in consequence of the *Hoogly* springing a leak, she was so near foundering, as to make it necessary to take out all her people and abandon her. This service was executed on the 2d of September, when Captain Essington ordered her to be set on fire.

On the *Sceptre's* arrival in England, Captain Essington transmitted to the Lords Commissioners of the Admiralty, such of the journals, charts, plans, drawings,

and collections in natural history, as belonged to Admiral D'Entrecasteaux's expedition; and which, previous to the capture of the *Hoogly*, M. Rossel was conveying to Holland.

On the 12th of March, 1796, M. Labillardiere arrived at Paris from the Isle of France; and finding his collection of specimens of natural history in the possession of the British Government, he urged the persons then exercising the government of France to claim them; this application being warmly seconded by Sir Joseph Banks, they were delivered up, in a manner that reflects the highest honour on the persons immediately concerned, and, with all the other papers, charts, plans, &c. transmitted to Paris in the month of August, 1796: and so exact were ministers in their compliance with this application, that the Board of Admiralty ordered a lieutenant of the navy to be sent to Havre de Grace, in a flag of truce, with the 21 cases, which contained M. Labillardiere's collection, and which had previously been in the care of Sir Joseph Banks.

(To be continued.)

THE NECESSITY OF CORK JACKETS AT SEA.

TO THE EDITOR OF THE NAVAL MAGAZINE.

SIR,

IN case of shipwreck, where numbers are lost every day, the inattention of mankind to their own preservation is truly

astonishing.—To prevent this disaster is impossible; but sure I am, if the simple contrivance of the *cork jacket* were universally adopted,

ed, multitudes would be saved from drowning. I believe it will be granted, that by far the greater number of ships are lost on a lee-shore. In this case, suppose two vessels stranded, of 300 men each, at equal distances from the land. One of these ships is provided with *cork jackets* in proportion to the number of people. It is needless to say in which vessel there is most danger of drowning. Perhaps from the one, fifty, a hundred, or more, may escape by keeping above water, while there is little probability of 10 or 20 being saved from the other, if the sea runs high, allowing them to be expert swimmers. What numbers of lives were lost on board the *Prince George*, of 90 guns, in a former war. She took fire in the midst of a fleet, and continued to burn for several hours. Her guns being loaded, went off as the fire reached them, which prevented the ships and boats from approaching her. It is true some hundreds were saved; but it is equally true that some hundreds perished, who might almost to a man have been picked up, had they been furnished with the *cork jacket*. I do not know what are the reasons against introducing this contrivance into the fleet, or why even every merchant ship is

not provided in proportion to her complement of men. I should like to know what consideration can be of equal or superior value to preserving men's lives when reduced to the dire necessity of being drowned or burned. I hope there is not so little subordination in the navy, that a parcel of *cork jackets* could not be kept under the power of the officers, till they became really necessary. I am convinced that a ship's company knowing they were provided with these, instead of deserting their duty too soon, would rather be stimulated to continue their exertions to the last, from a confidence they would naturally entertain of their personal safety. Let a person suppose himself wrecked on a lee-shore, the vessel going to pieces, the boat flayed, and the land a mile or two distant: let him also suppose his companions furnished with the *jacket*, while he remains at the mercy of the raging element; and then determine who has the best chance for life. A man may undoubtedly be killed or drowned in spite of this contrivance; but surely he who keeps on the surface has a better prospect for life, than another who must sink to the bottom.

OBSERVATOR.

PROPOSALS,

BY AN EMINENT PHYSICIAN AT PLYMOUTH, FOR PRESERVING THE HEALTH OF SEAMEN, IN LONG CRUIZES AND VOYAGES.

IT is too well known, what vast numbers of sailors we have lost, within these few years; one great cause of which, hath been

universally attributed to the terrible scorbutic disorders, which so greatly infested them; in a great measure owing to bad provisions,
bad

bad water, bad beer, &c. the unavoidable consequence of long cruizes and voyages. For the provisions will naturally decay, though truly good, when first served in; and by degrees taint the juices of the body, produce great acrimony in the blood, and dispose it daily more and more to a state of putrefaction. These effects will be considerably augmented by living continually in a moist salt atmosphere, and breathing, for a great part of the time, the foul polluted air between decks. Constant experience shews this to be the case.

The most effectual method of correcting an acidescent acrimony of the blood, and of preventing the further advances of putrefaction in the humours, is by vegetable and mineral acids; the former of which are much the safest, and may be given in draughts, the others only by drops.

It is also well known, that a vegetable acidescent diet and regimen, fresh air, fresh provisions, subacid and vinous drinks, are its certain and speedy cure, when not very far advanced. Apples, oranges, and lemons alone, have been often known to do surprising things in the cure of very deplorable scorbutic cases, in long voyages.

But what will cure, will prevent. If, therefore, such diet and regimen can be used at sea, it will prove a kind of a continual antidote to the rank putrescent qualities of the common ship's provision, and correct, at least very much lessen, the ill effects. And it is eventually found, that the officers, who carry wine, cyder, lemons, fresh provisions, &c. are infinitely less affected with the scurvy, than the poor com-

mon sailors, who are not so provided.

Is it practicable then, to introduce such a general regimen into the navy? I think it is; and, from reason and experience, I recommend the following methods:

Let all ships, that are to proceed on a long cruize or voyage, be supplied with a sufficient quantity of sound generous cyder; the rougher, provided it is perfectly sound, the better. This cyder should be at least three months old before it is served in, and quite fine. If it be too new, and foul, it is apt to give severe cholics. It should be racked off once at least, from its gross lees, which will contribute to its becoming fine, and prevent it from growing ropy, in which state it is good for nothing. It should be always racked off into good sweet butts, or hogheads, when shipped, and it should be drawn off very fine. Cyder may be generally bought very cheap in this country, seldom exceeding 20 or 30 shillings per hoghead, for what is really good, and sometimes much cheaper.

Every sailor should have at least a pint of cyder a day, besides beer and water. And I would advise also a frequent and free use of vinegar, in the seamen's diet; especially when the provisions begin to grow rancid. Besides this, the decks, &c. should be frequently washed, or sprinkled, with vinegar; after having drawn the gross and foul air out of the ship by ventilators, which should be done once at least every day.

In autumnal cruizes, a quantity of apples might be also carried, which, when well chosen, and well put up in tight dry casks, will keep very good for two or three

three months. Even lemons and oranges wrapped in flannel (or something that will imbibe their exhaling moisture) kept in close dry vessels, and pretty cool, may be preserved a long while also: they are sometimes vastly cheap, and would make a very useful part of the stores. If this is not so feasible, a mixture of lemon-juice and rum (shrub, as they call it) may be carried in any quantity, as it will keep a long time, and would prove infinitely more wholesome than the nasty fiery poisonous spirits, which are dealt about so largely in the navy and elsewhere. By the bye, nothing would more effectually correct the pernicious qualities of these spirits, than lemon-juice.

In the case of stinking water, juice of lemon, elixir of vitriol, or vinegar, should be always mixed with it, which will render it much less unwholesome: the Ro-

man soldiers drank Posca (viz. water and vinegar) for their common drink, and found it very healthy and useful.

Elixir of vitriol and vinegar are already allowed to the navy, in large quantities, and have been found greatly serviceable. And there was some years ago an order issued for supplying the ships of war with cyder also, which would be of the highest advantage, if properly and honestly managed. Indeed, it hath already been actually found so in some few men of war, and other ships, where it hath been tried, even though in small quantities.

This, indeed, may be deemed a very expensive project; but, where the lives of so many brave and useful people, are in the case, the cause should, by no means, come into competition with the advantage that may be received from it.

THE VETERAN TAR,

A MUSICAL ENTERTAINMENT OF TWO ACTS, PERFORMED FOR THE FIRST TIME AT THE THEATRE ROYAL DRURY LANE, JANUARY 29, 1801.

THE title of the piece is sufficient to give our readers to understand, that its prominent feature is a display of the honest nature, the loyal and patriotic sentiment, of a true Son of the Ocean, Britain's best protector. The language, which is very appropriate to the scene, often rises to a dignified energy, inspiring the auditor with a just sense of the honourable character of an English Sailor, while it excites a live-

ly spirit of resentment towards our puny, aggressive rivals, upon whose unprovoked hostility the national arm is now about to inflict a just and exemplary chastisement. Such being the principal design of this *petite* drama, we cannot but approve the motive, at the same time that we applaud the ability of the author, displayed in its construction. The fastidious critic might, perhaps, discover some few points upon which

to inflict the rigid stroke of his lacerating rod; but its merits so far outnumber its defects, that the *tout ensemble* must be regarded as a successful effort of a very promising genius. The Veteran Tar seems to possess something of the nature of the Peruvian Rolla, and his patriotic sentiments are no less applauded throughout. This character was very ably supported by the junior Bannister; and Wewitzer, Suett, Mrs. Sparks, Miss Stephens, and Mrs. Mountain, have parts well

suites to their respective talents.

The music is extremely pleasing, and does honour to the taste, even of its celebrated composer, Dr. Arnold. Most of the songs were deservedly encored; and we have no doubt of the Veteran Tar proving eminently successful in his spirited exertions on the coast of Old Drury.

The piece was highly applauded in every scene, and announced for repetition with universal approbation. It is the production of the junior Arnold.

NAVAL TRIALS, &c.

COURT OF KING'S BENCH, JANUARY 26.

THE KING *v.* BAKER.

MR. Justice Grose, in passing sentence on the above defendant, observed, that his offence was of a very serious nature at the time it was committed, and might have been attended with serious consequences. It was for having left the Iris from Barcelona without performing quarantine. By an act of parliament, and also by His Majesty's Proclamation in October 1799, it was ordered, that every pilot going on board a vessel from that place, shall not leave her until he has

performed the necessary quarantine. There was great danger to be apprehended in breaking the rule; no person could tell the pernicious consequences that might ensue. His affidavits stated, that at the time he went on board he was ignorant of the state of the ship; this might be true, but then he was informed, while on board, that there was a pestilence, and he ought not to have left it. The Court sentenced him to be imprisoned six months in Newgate.

FEBRUARY 2.—VANDYCK *v.* WHITMORE.

This was an action on two policies of insurance on the cargoes of two ships, warranted neutral

property, from London to Rotterdam, and which had been captured off the Maefe. A verdict

had been given in favour of the plaintiff. A motion had been made for a new trial.

Mr. Gibbs shewed cause against the rule; he contended, that the assured had a right to recover, though the Captain had changed the destination of his voyage, as it had been found absolutely necessary so to do, in order to preserve the vessels.

Mr. Rous, on the other side contended, that the Order of Council, which gives permission to trade with the United Provinces, except in military or naval stores, had provided that the vessels so trading should have entered for the direct place where he intended to proceed to; the clearance had been made for Calais and no where else, and yet they had proceeded direct for Rotterdam; therefore, by not complying with the regulations provided by the Order of Council, he had no right to recover of the assurers.

After a deal of argument on both sides, Lord Kenyon said, he was not prepared to give his opi-

nion on the case at present. He would look into it, and give his opinion on a future day.

Mr. Gibbs moved for leave to file a criminal information against a person of the name of William Hitchons, for a libel on Lieutenant Burlton, of the Hecate gunboat.—Rule granted.

Mr. Erskine had moved for a writ of Habeas Corpus, to bring up the body of John Gurdis, convicted by a court-martial in Gibraltar of receiving stolen goods, and sentenced to be transported for 14 years to Botany Bay.

Mr. Abbott shewed cause against it; he contended, that a court-martial in that island was a competent court of jurisdiction, as by the Mutiny Act of the 39 Geo. III. a power was vested in them to try all offences punishable with death, or any other punishment; and that the Court of King's Bench, not sitting as a Court of Error, had no power to repeal any sentence pronounced by that Court.—Rule discharged.

FEBRUARY 10.—ABEL v. POTTS.

THIS was a motion for a new trial. It was an action on a policy of insurance on the Danish brig Elizabeth, from Bourdeaux to St. Thomas's, warranted neutral property, which had been captured and carried into Guadaloupe. The cargo, consisting of wine, was kept for the use of the colony, and another cargo of colonial produce substituted by the commandant of that island. After she had sailed from Guadaloupe she was taken by an English ship of war, and carried into Nevis, and confiscated. The jury found for the plaintiff.

It was contended, on the part of the underwriters, that by the evidence produced on the trial,

the Captain had agreed to sell the cargo four days previous to the compulsory act of the commandant; and that the underwriters were discharged from all liability. The jury, they contended, had come to a wrong conclusion on the former trial.

Lord Kenyon was of opinion, there ought not to be a new trial. He said, if the island were in want of the cargo of this ship, it was likely the hand of power would be extended to supply their wants; he thought the jury had decided right.—Rule discharged.

This disposes of three other motions upon the same grounds.

NAVAL NOTICES.

MONTHLY STATEMENT OF THE DISTRIBUTION OF THE BRITISH NAVAL FORCE,

Exclusive of the Hired Armed Vessels, which are chiefly employed
in protecting the Coasting Trade of Great Britain.

	Line.	Fifties.	Frigates.	Sloops.	Total.
In port, and fitting - - -	20	6	48	92	166
Guard Ships, Hospital and Prison Ships, at several Ports - - - }	21	1	0	0	22
In the English and Irish Channels - - - }	41	1	29	45	116
In the Downs & North Seas - - - }	8	2	14	37	61
At the West India Islands and on the Passage - - - }	1	1	22	26	50
At Jamaica - - - -	5	1	18	13	37
In America and at Newfoundland - - }	2	0	2	5	9
East Indies and on the Passage - - - - }	9	5	8	15	37
Coast of Africa - - -	0	0	1	3	4
Portugal, Gibraltar, & Mediterranean - }	18	4	66	34	122
Total in Commission -	125	21	208	270	624
Receiving Ships - - -	9	1	8	0	18
Serviceable, and repair- ing for service - - }	4	0	2	1	7
In Ordinary - - - -	38	3	24	44	109
Building - - - - -	19	2	5	20	46
Total - - - - -	195	27	247	335	804

WE are concerned to state, that the hopes which have been entertained of the safety of the *Orestes*, appear to have but little foundation. She left

Bombay on the 31st of October 1799, on a cruise in the Gulph of Persia; she was seen on the 4th of November, and on the 5th the most tremendous hurricane took

place that had been known in India for upwards of 17 years, since which time she has not been heard of.

No Danish ships of war are to be stationed in the Sound, except at Copenhagen, where no ship can enter the Baltic without approaching the batteries within gun-shot.

The French squadron which lately attempted to sail from Brest, is now lying at single anchor in Cormorant Bay, a very favourable situation for putting to sea, whenever an opportunity serves for that purpose. According to letters from Sir Edward Pellew, it consists of nine sail of the line, two frigates, one or two store ships, and some transports, having on board 3500 troops, with the younger brother of Bonaparte, and a considerable sum of money. This squadron is under the command of Admiral Villaret, and is supposed to be destined for the West Indies.

The following are the names of the ships which are proceeding to India under the licence of the East India Company, for cargoes of rice, viz.

The Rose, Scarborough, Automacia, Sir John Borlase Warren, the William Dent, Minerva, Experiment, Nancy, Bellona, Betsey, Hinde, Ceres, Thames, Indian Chief, Sir Edward Hamilton, the William Pitt, Active, Eliza, Loyalist, Coromandel, Young, Nicholas, Nutwell, Suffolk, Perseverance, Berrington, Bridgewater, Malabar, Ganges, Suffolk, (2d), Earl St. Vincent and Grant.

The number of ships licensed this season to proceed to the East India Company's settlements for rice, amount, in the whole, to

32, and occupy collectively, 16,464 tons, or 36,672,360 pounds weight.

Of the ships engaged by the East India Company to proceed to India this season for their regular investments, 14 are of the burthen of 1200 tons and upwards. The largest ship is the Hindostan, and she is chartered at 1248 tons.

SAILING OF A FRENCH SQUADRON.

Dispatches were lately received at the Admiralty, containing advice of a French squadron, which had sailed from Brest, having, on the 25th ult. been seen off Cape Finisferre, supposed by some to be destined for Egypt, and by others for the West Indies. Its force consists of five sail of the line and two frigates. His Majesty's ship *Immortalite* of 36 guns, fell in with the enemy on the above day, in lat. 46. 10. long. 8. c. at which time all the ships were much disabled in their sails, from a gale of wind which was then breaking up. The *Immortalite*, lost sight of them on the 26th, in lat. 43. 20. long. 10. and immediately steered her course for Lisbon. On the same night, or early on the following morning, His Majesty's ship *La Concorde*, of 36 guns, also fell in with the enemy. This ship engaged for some time, and completely silenced one of the frigates; but was soon after obliged to relinquish the pursuit, and attend only to her own safety, as a part of the squadron had began to bear down upon her. The loss of *La Concorde* on this occasion, consisted of five men killed, and 13 wounded. Another French squadron is supposed to have left Brest; but of this no official

official account has yet been received.

Private Letter from an Officer on board La Concorde, commanded by Captain Robert Barton, dated Plymouth, Feb. 4, 1801.

On the 27th of January, Cape Finisterre bearing E. $\frac{1}{2}$ N. distant 25 leagues, we discovered at nine at night, by moonlight, seven large ships about two miles to windward, under easy sail, steering to the westward; being on opposite tacks, two bore up for us. One, however, in a short time resumed her course and joined her fleet; the other continuing in chase of us, we stood on, until we supposed the fleet distant about six miles, somewhat on our lee-quarter, when having brought to, we made the private signal, which not being answered, convinced us she was an enemy. When she was within hail, and during some preliminary conversation between the captains, I had an opportunity of observing her, from our comparative size, to be a frigate of very large dimensions, with a poop; any further observations were prevented by a volley of musketry, and an order to strike to a French frigate. She then ranged up on our lee-side, receiving and returning our fire as she passed, till she shot so far ahead as to bring us on her quarter; in which position we kept her warmly and closely engaged for about half an hour, when the enemy's fire entirely ceased, he receiving our broadsides, which brought his boat and other wreck from his stern and quarters into the water, without returning a shot. From this we concluded that his people had deserted their

quarters and surrendered; but we soon found his attention was engaged in making his escape, as we perceived him making off from us before the wind. Our braces being shot away, some minutes elapsed before we could pursue him; and though every exertion was made by Captain Barton, we could not again bring him to action. At three in the morning we lost sight of him, and perceived him again at day-light; but, his fleet soon appearing to windward, obliged us to relinquish the pursuit and steer for England. Though the presence of a very superior force has deprived the officers and brave crew of La Concorde the honour of adding a fine frigate to the British navy, yet the consciousness of having beaten a ship of a much greater force, under the existing circumstances, must ever be a pleasing reflection to every person belonging to her.

The necessity of having constantly a squadron of frigates cruising off Cape Finisterre, from 10 to 20 leagues, is strongly evinced by the above intelligence, particularly at this season of the year, when the enemy are watching every opportunity to avail themselves of the unavoidable absence of our fleet from before Brest.

The enemy's squadron is commanded by Admiral Gauthaume, the officer who made his escape from the battle of the Nile on the memorable 1st of August, 1798: a circumstance which renders it highly probable that Egypt is the destination of his force, although it is more generally supposed that he is bound for St. Domingo. Should the Mediterranean prove his destination, as we are inclined to think, from there being between

tween 3 and 4000 troops on board (of which the colony of Egypt in all likelihood stands much in need) we have very little doubt of the greater part of the ships being destined ultimately for an English port, as prizes to our brave and vigilant tars.

La Concorde is arrived at Plymouth, as will be seen by the following letter, dated Plymouth, February 4.

Yesterday evening arrived here His Majesty's ship Concorde, of 36 guns, Captain Barton, from the Lisbon station: on her arrival an officer went off immediately, by express, for London. It appears, that on her voyage to England, she fell in, on the 26th ult. about 30 leagues from Cape Finisterre, with five sail of French line of battle ships, and two frigates, which gave chase to her, and a partial action soon took place between her and one of the frigates, when the other French frigate, bearing down upon her, and the line of battle ships being at no great distance, the Concorde was obliged to make sail from them in a running fight, to prevent being captured; during the engagement, the Concorde had five men killed and 13 wounded, and the ship was very much cut in her hull, masts, sails, and rigging; she is now going up Hamoaze to refit. By the number of ships, of which the French squadron was composed, it seems likely to be the one that was chased and blocked up in Villaine Bay, by the ships under the command of Sir Edward Pellew; if so, they have escaped the vigilance of that active and persevering officer by some unlooked for circumstance that favoured their designs, and which he had not the

power to guard against or prevent: by the course they were steering, it is very probable, that their destination may be for Egypt; or, as some others suppose, were bound on a cruise for the purpose of intercepting the English convoys. A very large fleet for Lisbon, Oporto, and the Mediterranean, are now on their voyage, under the escort of a few frigates; and a very large fleet at Oporto have been waiting a convoy to bring them to England, for some months past; whether either of these may be the object of this squadron's cruise, time will disclose.

P. S. The French squadron were steering N. W. at the time the Concorde fell in with them; the action between her and the French frigate was short but smart, and the Frenchman's fire was soon silenced, and she would have been in possession soon, had not the squadron bore down to her assistance: the Concorde had five killed, and 13 wounded, five of the latter mortally: it is supposed that the squadron got out of port in a snow storm, but their destination is not known; the Concorde had a Swede in tow from Nantz to Malaga, which she cast off.

It was reported, that the above squadron had captured several of our West India fleet of merchantmen; but this report, we have reason to think, is not correct. It originated, we understand, from a letter received by a mercantile house in the city from Bristol, and of which the following extract was exhibited at Lloyd's:

The Adventure, Finlay, from London to Martinique, was taken by La Mouche privateer on the 31st of December, near Madeira. One of the crew of the Adventure,

put on board a Portuguese vessel, taken by La Mouche, and retaken, arrived at Bristol, relates that 15 sail of the West India convoy were captured by the said privateer.

Leith Roads is about to be the principal place of rendezvous for our northern squadrons.

A dry dock is about to be begun on the east side of Rossie Island, near Montrose, for the purpose of repairing ships, and is to be connected with a ship building business on an extensive plan. The undertaking will prove of the greatest utility to the shipping interest on the east coast, as there is nothing of the kind northward of Leith, nor can so great a depth of water be commanded as at Mon-

rose. It is also in agitation to establish a life-boat at Montrose, on a plan similar to that of Newcastle.

The total number of Danish and Swedish vessels detained at the principal outports, in consequence of the embargo, according to the latest list at Lloyd's coffee-house, appears as follows:

	Danes	Swedes
At Plymouth - -	15	9
At Portsmouth - -	2	8
At Hull - - -	3	12
At Falmouth - - -	5	5
At Whitehaven - -	0	1
At Poole - - -	0	1
At Dartmouth - -	2	0
	—	—
Total - - -	27	36

POETRY.

THE SHIPWRECK.

Occasioned by the Loss of the *HALSEWELL*
East-Indiaman. (See p. 36.)

Written by MR. BIRCH.

THE sorrow light, and common is the sigh,
When heroes perish, or when monarchs die;
Tears flow obedient to the court's command,
And servile fashion sables all the land.
The heart, a stranger to the outward show,
Forgets not with its wonted joy to glow.
Far otherwise is public sorrow seen,
When woes domestic sadden all the scene;
The spreading grief assumes no gloomy vest,
Its house of mourning is each feeling breast!
With sighs the desolating tale we hear,
And every cheek is moisten'd with a tear:
Tears of high price! that spite of manhood start,
And sighs that vibrate all along the heart.
Thy fate, O gallant Pierce! where'er 'tis known,
Each child of sympathy shall make its own;

Fame's choicest meed the dismal tale attend,
And sprigs of laurel with the cypress blend!
An equal fate, not time itself can show,
Of mighty ruin and extended woe!
Destructive deep, whose captivating calm,
Allures the bark with more than tyren
charm;
With plenty stor'd, she cheerful spreads the
sail,
And vainly trusts to the deceitful gale:
Then sudden howls thy fury from afar,
And midnight tempests all thy caverns tear!
The climbing billows mock the seamen's toil,
And burst relentless on the sinking spoil!
Dismal the trophies that thy conquest wears,
The sighs of friendship and the orphan's
tears!
The weeds of widows, and to glut thy rage,
The hoary honours pluck'd from children's
age!
But these are common to thy awful state,
Alas! new horrors on thy trident wait!
What piercing shrieks ride on the midnight
blast;
And groans that deeply murmur to the
coast!

Lo! anxious Seraphs hover o'er the deep,
The Tritons tremble and the Naiads weep!

The hardy veteran to his fate resign'd,
In vain collects the firmness of his mind;
His blood flows back at the remembrance wild,

Of widow'd comfort, and of orphan'd child.
Yet still with less compofure can he bear,
The fruitless cries of beauty in despair:
Doom'd in the keenest anguish to expire,
The daughters helpless grasp their helpless
Sire!

But Thou Supreme! whose undivided
Sway,

Not man alone, but earth and seas obey;
Whose faithful providence in unseen form,
Still "points the whirlwind, and directs the
storm!"

If deeply agonized with mental pain,
Forgive the mourner that shall dare com-
plain:

Sooth the wild workings of affliction's breast,
And teach our wishes that thy will is best.

The Spanish fleet could not unite,
Such was the fury of the fight;
For every effort which they tried,
Serv'd only more to curb their pride;
And though their ships were three times nine,
Our Tars fought for a Valentine.
For they stood pledg'd, ere they did dine,
Britain should have a Valentine.
For they, &c.

Just at the time of setting-sun,
The Spaniards on all sides did run;
Leaving behind their Salvadore,
Saint Joseph, aye, and two Saints more;
Our Tars then wash'd their throats with
wine,

While Jervis form'd the Valentine.
Then all in triumph went to dine,
And Calder bore the Valentine.
Then all, &c.

A Sailor on board His Majesty's sloop the
Tartar, having been sentenced to the Cat-
o'Nine-Tails, when he was tied ready for
punishment, spoke the following Lines to
his Commander.

BY your honour's command,
An example I stand,
Of your justice to all the ship's crew:
I am hamper'd and stripp'd,
And if, Sir, I am whipp'd,
'Tis no more than I own is my due.

In this scurvy condition,
I most humbly petition,
To offer some lines to your eye:
Merry Tom, by such trash,
Once avoided the lash,
And if fate and you please, so may I.

There is nothing you hate,
I'm inform'd, like a cat;
Why! your honour's aversion is mine:
If Puff then with one tail,
Can so make your heart fail,
O! save me from that which has nine.

It ought to be added, in justice to the Offi-
cer, that this Sailor was pardon'd, and was
afterwards Boatwain in one of the chief ships
of the navy.

THE BRITISH TAR'S VALENTINE;
OR THE
GLORIOUS FOURTEENTH OF
FEBRUARY.

Tune—*Valentine's Day.*

WHEN Morpheus veil'd the briny
deep,
And landfmen all were gone to sleep;
Brave Jervis, with his gallant few,
Kept watch, in hopes the Dons to view.
For though their ships were three times nine,
Our Tars would have a Valentine.
And pledg'd themselves, ere they did dine,
To send us home a Valentine.
And pledg'd, &c.

When grey-ey'd morning dawn'd her light,
The Spanish Squadron, here in sight;
Brave Jervis form'd two lines compact,
That with more vigour they might act.
For though their ships were three times nine,
Our Tars would have a Valentine.
As they had pledg'd, ere they did dine,
To send us home a Valentine.
As they, &c.

Our Tars, quite bent upon their prey,
Impatient left they'd skulk away;
Then Jervis bravely led them on,
'Twas near the time of mid-day sun;
And though their ships were three times
nine,
Undauntedly he broke their line.
For he stood pledg'd, ere they did dine,
His Tars should have a Valentine.
For he, &c.

CRAZY PAUL!

WHY, fair Isle, in every sailor,
Are such signs of rage express'd?
Can a moon-struck Russian railer,
Draw the fleet of France from Brest?
Do you dread my late embargoes?
Trust me soon my power will fall:
Man your vessels, ship your cargoes,
Fear no harm from Crazy Paul.

Do you mock my fierce defiance?
 Act like me—'tis glorious fun!
 Search the globe round for alliance;
 League with all—adhere to none.
 Once for Thee I fought courageous,
 ('Twas a lucid interval);
 But a Gallic pest contagious,
 Stole the wits of Crazy Paul!

Malta's Isle your fleet blockaded;
 Martin's (kill each pass secures:
 Silly I, by France persuaded,
 Thought it mine—but found it your's!

Little Paul, no more Grand Master!
 Mad with baby rage, I bawl;
 Malta fell, but how much faster
 Fled the faith of Crazy Paul!

Now for Gallia's cause right hearty,
 Fickle as the passing air,
 Led about by Bonaparte!
 Growling like a dancing bear:
 How I shame the sons of Russia!
 While intent to work thy fall,
 Holland, Denmark, Sweden, Prussia,
 Cry, "Come help us, Crazy Paul!"

NAVAL INTELLIGENCE,

FROM THE LONDON GAZETTE.

SATURDAY, JAN. 31, 1801.

AT THE COURT OF ST JAMES'S,
 THE 11TH OF JANUARY, 1801,
 PRESENT THE KING'S MOST
 EXCELLENT MAJESTY IN
 COUNCIL.

WHEREAS His Majesty, by and with the advice of his privy council, has been pleased to cause an embargo to be laid on vessels belonging to the subjects of Russia, Denmark, and Sweden, now within, or which hereafter should come into, any of the ports of the United Kingdom of Great Britain and Ireland, together with all persons and effects on board the said vessels; His Majesty, by and with the advice of his privy council, is pleased to order, and it is hereby ordered, that no person residing within His Majesty's dominions do presume to pay any money or bills due, or payable to, or on behalf of any person or persons being subjects, or residing within the dominions of the Empe-

ror of Russia, or of the Kings of Denmark or Sweden, or any of them, for the freight of merchandize imported in any Russian, Swedish, or Danish ship, which is detained under the said embargo, or which shall hereafter be brought into any of the ports of His Majesty's dominions, until His Majesty's pleasure shall be further known, or until other provision shall be made by law: whereof all persons whom it may concern are to take notice and govern themselves accordingly.

W. FAWKENER.

ADMIRALTY OFFICE.

Copy of a Letter from Admiral Lutwidge, Commander in Chief of His Majesty's ships and vessels in the Downs, to Evan Nepean, Esq. dated the 28th January.

SIR,

I enclose to you, for the information of my Lords Commissioners of the Admiralty, a letter which I have

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just

just received from Lieutenant Pearce, commanding the King George hired cutter, giving me an account of his having this morning captured the Flibustier cutter privateer,

I am, &c.

SKEFF. LUTWIDGE.

King George hired armed cutter,
Downs, Jan. 28, 1801.

SIR,

I have the pleasure to inform you, that about one o'clock this morning, I captured the French cutter privateer Le Flibustier, commanded by—Deslounge, manned with 16 men, armed with muskets and pistols. She had been out from Dunkirk two days, and had made no captures.

I have the honour to be, &c.

W. PEARCE.

Skeffington Lutwidge, Esq.

Admiral of the Blue, &c.

Copy of a Letter from Captain John Giffard, commanding His Majesty's ship, Active, to Evan Nepean, Esq. dated at Sea the 26th instant.

SIR,

His Majesty's ship under my command this morning captured the French cutter privateer Le Quimola, carrying 14 guns, six and three pounders, 48 men, after a chase of two hours: she sailed from Morlaix yesterday morning, and had not made a capture.

I remain, Sir, &c. &c.

JOHN GIFFARD.

TUESDAY, FEB. 3.

ADMIRALTY-OFFICE, FEB. 3.

Extract of a letter from the Earl of St. Vincent, K. B. Admiral of the White, &c. to Evan Nepean, Esq. dated in Torbay the 31st ult.

I enclose a letter from Captain Ogilvy, of His Majesty's ship Magicienne, giving an account of the capture of the Huron French corvette, from the Isle of France, bound to Bourdeaux.

Magicienne, Plymouth Sound,
Jan. 31.

MY LORD,

Captain Halliday's letter will inform your Lordship, of my having, on the 25th instant, captured in sight of the Doris, the French ship letter of marque Le Huron, from the Isle of France, bound to Bourdeaux, and of his directing me to see her into Plymouth: I now beg leave to acquaint your Lordship of my arrival with her; she is a remarkable fine ship, sails well, is pierced for 20 guns, had 18 mounted, but threw them over-board, except four, during the chase; I think her a vessel well calculated for His Majesty's service; the cargo is of great value, and consists of ivory, cochineal, indigo, tea, sugar, pepper, cinnamon, ebony, &c. &c.

I have the honour to be, &c.

(Signed) W. OGILVY.

Admiral Earl St. Vincent.

SATURDAY, FEB. 7.

ADMIRALTY OFFICE.

Extract of a Letter from the Earl of St. Vincent, K. B. Admiral of the White, &c. to Evan Nepean, Esq. dated in Torbay the 2d instant.

I enclose, for their Lordship's information, a letter which I have received from Captain Lukin, of His Majesty's ship Thames, informing me of the capture of L'Aurore French National corvette, of 16 guns, charged with dispatches from the Mauritius, and a letter from Captain Halliday, of the Doris, giving an account of the capture of the brig La Favorite.

Thames, at Sea, January 19, 1801.

MY LORD,

I have the honour to acquaint your Lordship, that on the 18th instant, His Majesty's ship I command captured the French national ship corvette L'Aurore, of 16 guns, commanded by Charles Giroit, Lieutenant De Vaisseau; she was from the Mauritius,

Mauritius, having on board the Aide-Camp to the Governor of that place, charged with dispatches to the French government.

I have the honour to be, &c.

W. LUXIN.

Admiral the Earl of St. Vincent,
K. B. &c. &c. &c.

Doris, January 23, 1801.

MY LORD,

Since the evening of the 20th when I had the honour of communicating to your Lordship the fortunate capture we had made of the French ship *Le Huron*, I have been cruising, agreeably to my orders, and have this morning captured the French brig *La Favorite*, from *L'Orient* bound to *Bourdeaux*, laden with staves, copper, and hides.

I have the honour to be, &c.

JOHN HALLIDAY.

The Earl of St. Vincent,
K. B. &c. &c.

Copy of a Letter from the Earl of St. Vincent, K. B. Admiral of the White, &c. to Evan Nepean, Esq. dated Torbay, the 3d instant.

SIR,

I herewith transmit a letter from Captain King, of His Majesty's ship *Sirius*, giving an account of the capture of the *Charlotta*, Spanish Letter of Marque.

I am, &c.

ST. VINCENT.

Sirius, off Cape Belem, Jan.
28th, 1801.

MY LORD,

I beg leave to inform your Lordship, His Majesty's ship *Sirius*, under my command, in company with His Majesty's ship *Amerbyth*, captured the Spanish letter of marque *Charlotta*, from *Ferrol* bound to *Curaçao*, out of *Ferrol* only 16 hours, Cape Belem bearing S. by W. six or seven leagues.

RD. KING.

Earl of St Vincent, K. B.
&c. &c. &c.

Copy of a Letter from Vice-Admiral Lord Hugh Seymour, Commander in Chief of His Majesty's ships and vessels at Jamaica, to Evan Nepean, Esq. dated the 21st of December, 1800.

SIR,

I beg you will lay before the Lords Commissioners of the Admiralty, the enclosed copy of a letter which I yesterday received from Captain Halkett, of his Majesty's ship *Apollo*.

I am, &c.

H. SEYMOUR.

His Majesty's ship *Apollo*,
December, 1800.

MY LORD,

At noon on the 10th ultimo, in the Gulf of Mexico, in latitude 21 deg. north. we gave chase to a xebec to windward of us, but soon after discovering a brig directly in the wind's eye. we chased her, and at two in the morning got up and took possession of the *Resolution*, Spanish sloop of war, of 18 guns, and 149 men, commanded by Don Francisco Oarrichena, (formerly the *Resolution* cutter in the British navy), she sailed from *Vera Cruz* three days before. As soon as her crew were removed to this ship, we made all sail, and an hour after day-break got sight again of the xebec, and captured her at three o'clock in the afternoon; she is from *Vera Cruz*, and was bound to the *Havannah*. The *Resolution* was in general towed by us until the 27th ultimo. when her main-mast went by the board; an attempt was made to refit her, but her rigging and sails being perfectly rotten, and every thing belonging to her in such a miserable state, it was necessary to destroy her. On the 7th instant, off *Porcillo*, in the island of *Cuba*, we recaptured the schooner *St. Joseph*.

I am, my Lord, &c. &c. &c.

P. HALKETT.

Right Hon. Lord Hugh Seymour,
&c. &c. &c.

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TUESDAY,

TUESDAY, FEB. 10.

ADMIRALTY-OFFICE, FEB. 10.

Extract of a letter from the Earl of St. Vincent, K. B. Admiral of the White, &c. to Evan Nepean, Esq. dated Torbay, the 3d instant.

SIR,

His Majesty's ship *Oiseau* is this instant arrived, and I enclose a letter from Captain Linzee, giving an account of the capture of *La Dedaig-neuse* French frigate.

His Majesty's ship *l'Oiseau*,
Torbay, Feb. 3, 1801.

MY LORD,

I have the honour to acquaint your Lordship, that on Monday the 26th of January, at eight A. M. in lat. 45. deg. North, long. 12 deg. West, I fell in with the French National frigate *La Dedaig-neuse*, of 36 guns and 300 men, with dispatches from Cayenne for Rochfort, and chased her until noon the following day, when I discovered His Majesty's ships *Sirius* and *Amethyst*, off Cape Finisterre, whose Captains I directed by signal to chase; and continued in pursuit of the enemy until two o'clock on Wednesday morning; being within musket-shot, she opened her fire on the *Sirius* and *Oiseau*, (which was immediately returned), and surrendered to the above ships after an action of 45 minutes, distant from the shore, near Cape Eslem, about two miles; her running rigging and sails were cut to pieces; several men killed, and 17 wounded, amongst the latter were the captain and the fifth lieutenant. My warmest thanks are due to Captains King and Cooke for their exertions, but particularly to the former, as from the *Sirius*'s steady and well-directed fire, the enemy received considerable damage; the *Amethyst*, from unfavourable winds, was unable to get up until she had struck. I am happy to say, notwithstanding the gallant resistance made by the *Dedaig-neuse*, neither of the

ships lost a man; the *Sirius*'s rigging and sails were a little damaged, her main-yard and bowsprit slightly wounded. I cannot conclude without expressing my approbation of the officers and company of His Majesty's ship under my command, and in justice to them must add, their anxiety to close with the enemy, on first discovering her, was equal to what it was on becoming so superior; and must further beg to acknowledge the very great assistance I received from Mr. H. Lloyd my first Lieutenant, during a long and anxious chase of 42 hours; I trust your Lordship will be pleased to recommend him to the Lords Commissioners of the Admiralty as a most valuable officer, and deserving of their attention; on this account most sincerely do I lament the baffling winds that prevented my bringing the enemy to action on the preceding day, which I was several times in expectation of doing. *La Dedaig-neuse* is a perfect new frigate, copper-fastened, and sails well; 28 twelve-pounders on her main-deck, and pierced for 40 guns. I have given the prize in charge of my first Lieutenant, with directions to proceed to Plymouth; and have also to acquaint your Lordship of my having detained, on the 1st instant, the Swedish ship *Huffnung*, from Valentia, bound to Altona, laden with brandy, burthen 260 tons.

I have the honour to be, &c. &c.

S. H. LINZEE.

The Earl of St. Vincent, K. B.
&c. &c. &c.

SATURDAY, FEB. 14.

ADMIRALTY OFFICE, FEB. 14.

Copy of a Letter from Lieutenant Bond, commanding His Majesty's schooner, *Nesley*, to Evan Nepean, Esq. dated Oporto, 22d of December, 1800.

SIR,

You will be pleased to communicate to my Lords Commissioners of the Admiralty, the substance of the enclosed

closed copy of a letter to Lord Keith, which I have the honour to transmit to you, giving an account of the transactions and success of His Majesty's schooner under my command.

I have the honour to be, &c.
F. G. BOND.

Netley, Porto, 22d Dec. 1800.

MY LORD,

I have the honour to acquaint you, that His Majesty's schooner under my command sailed from Lisbon on the 18th ult. and that on the 23d she captured the St. Antonio y Animas La Fortuna, Spanish lugger privateer, of six guns and 34 men. On the 1st instant she took the St. Miguel El Volante, of the same description, of two guns and 29 men: and on the 16th, 17th, and 18th, successively took possession of the Speedy brig, from Newfoundland, with cod fish; a Spanish coaster, laden with wine, &c. and the Spanish schooner privateer St. Pedro y San Francisco, of three guns and 39 men.

I have the honour to be, &c.

F. G. BOND.

Right Hon. Lord Keith,

K. B. &c. &c. &c.

ADMIRALTY-OFFICE, FEB. 17.

Copy of a Letter from Admiral Milbanke, Commander in Chief of His Majesty's ships and vessels at

Portsmouth, to Evan Nepean, Esq. dated the 15th instant.

I beg you to lay before the Lords Commissioners of the Admiralty the enclosed letter which I have received from Captain Morris, commanding the Lady Charlotte hired armed brig, giving an account of his having captured a French lugger.

I am, Sir, &c. &c.

M. MILBANKE.

His Majesty's hired armed brig,
Lady Charlotte, Plymouth
Sound, Feb. 12.

SIR,

I beg leave to inform you, that yesterday the Star bearing N. N. W. six leagues, I observed a lugger to leeward, to which I gave chase, and in two hours came up with and captured her.—She proves to be the Espoir, mounting six carriage guns (two brass four-pounders, and four iron two-pounders), manned with 23 men, from Cherbourg 2 days, and had not made any capture. From its blowing a gale of wind we were unable to exchange prisoners. I therefore judged it proper to see her into port.

I have the honour to be, &c. &c.

G. MORRIS.

Mark Milbanke, Esq.

Admiral of the White, &c. &c.

MONTHLY JOURNAL,

FOR FEBRUARY 1801.

A COURT of Directors of the East-India Company was held at the India-house, when the following Commanders attended, and took their final leave of the Court, previously to their being dispatched according to their respective assign-

ments, viz. Captain William Stanley Clarke, of the ship True Briton; Captain George Millett, of the ship Hindostan, and Captain James Horn-castle of the ship Hope, severally destined to Madras and China; Captain John Altham Cumberlege, of the

the ship Charlton; Captain Patrick Burt, of the ship Duke of Montrose; Captain Peter Sampson, of the ship Dover Castle; Captain William Maxwell, of the ship Calcutta; and Captain Edward C. Bradford, of the ship Admiral Gardner; severally consigned to Madras and Bengal.

The Charlton, Duke of Montrose, Dover Castle, Calcutta, and Admiral Gardner, are all ordered to be in the Downs, on or before the 5th day of February inst.; shortly after which they will be dispatched.

Sweden, Jan. 9.—As far back as the 17th of October, the Spanish Ambassador, the Chevalier de Huerta, delivered to a note to the Swedish High Chancellor, Baron Ehrenheim, respecting the violation of the Swedish flag by some English vessels, in the capture of certain Spanish ships in the road of Barcelona. In that Note, which demands decisive measures of satisfaction, it is stated—The complaint which has been made respecting this affair, is not intended to save appearances, or exhibited *pro forma*, then to be consigned to oblivion. In it are involved the common interests of all the Powers in Europe, which, if Sweden were to shut her eyes to such a crying outrage upon all the rights of nations, would consider her as responsible for the misfortunes that might afterwards ensue from it. Sweden, and the other Northern Powers, have lately experienced an example of the bad faith of the nation, whose subjects were guilty of the proceeding at Barcelona; since the nation in question, after insulting their flag, sent a squadron to the entrance of the Baltic to demand satisfaction for that very insult which she had committed; thus shewing to the Northern Powers, that no course remained for them but to unite, and bend all their force to compel to return within the bounds of duty, a State that would sacrifice the peace and tranquillity of all Europe to its own policy. To this Note

Baron Ehrenheim returned an answer, blaming the negligence of the Spaniards in defending their own rights, and in permitting violence to be done to neutrals in her ports.—Upon which the Chevalier de Huerta presented the following reply:

Stockholm, Dec. 29.

SIR,

I have this moment received from my Court an answer to the dispatches in which I communicated the first steps I had taken with his Swedish Majesty, when I had the honour to present my first note on the subject of the outrage of which the English were guilty in the road of Barcelona.

The King, my Master, has observed with regret the coldness with which the Swedish Court has received his complaint, while it has confined itself to feeble and indecisive measures, from which it does not even indulge the hope of any advantage. This view of the matter shews the small interest with which Sweden is prepared to act in the business. I cannot conceal from you, Sir, that this inactivity, which is observed in the applications of the Court of Sweden to that of London, might afford room to believe that this negotiation will be connected with other objects of private interest which demand temporising measures, incompatible with that energy and zeal which His Catholic Majesty expected to see displayed by his Swedish Majesty, in regard to an affair which, as it involves the honour of his flag, would have afforded him an occasion to prove to Europe the warm part he takes in the interests of the maritime powers, as well as to testify the value he puts upon the good understanding which hitherto has prevailed between the two Courts. In pursuance of a new order from my Court, I repeat, and formally insist upon, what I demanded in my last note of the 17th October. I fondly flatter myself that his Swedish Majesty will adopt

adopt far more active measures than the contents of your note allowed me to hope. It is not probable, that you will expose Swedish ships to all the severity of the measures which circumstances require to be exercised against suspected vessels, and whose conduct might be considered as connived at, unless the Swedish Court receives from England the most ample reparation respecting the affair of Barcelona.

I have the honour to be, &c. &c.

(Signed) The Chevalier De
H U E R T A.

Sheerness, Feb. 1.—Yesterday the Desire frigate was hove down by the Dutch prize careening hulk Broederfchap, being the first experiment of the kind on so large a ship, in this, or (we believe) any other dock-yard in England. Her keel was hove clear out of the water, and a part of her false keel being taken off, in order to be replaced by another one, she was righted at high water.

Dover.—His Majesty's sloop Anacreon, and the Cygnet cutter, sent into this harbour yesterday 10 of the large Dieppe fishing boats, deeply laden with fish. Fresh orders have been sent to the Commanders of cruisers to capture these boats, in consequence, it is said, of two of them having lately attacked and carried a West-Indiaman into one of the French ports.

Torbay.—This day arrived the San Josef, of 112 guns, Admiral Lord Nelson, from Plymouth.

Deal, Feb. 2.—The Anacreon armed brig failed last night on a cruise, and re-captured, about two o'clock this morning, off the South Foreland, the Catharine, a light collier belonging to Sunderland, taken a short time before by a French lug-sail privateer belonging to Boulogne. The Anacreon and her prize are both arrived in the Downs.

The American ship Columbia, from Charles-town bound to London, was yesterday evening taken by a French

privateer in Dover Roads, and carried opposite Calais, where the Frenchman brought her to an anchor with two cables a-head; and while they went on shore with the Captain, the Mate cut her cables, and succeeded in getting away, and fortunately arrived in the Downs this morning in safety, and has since been conducted by a Deal boat into Ramsgate Harbour.

Kingston, Jamaica.—We are happy to announce the arrival of His Majesty's ship America, Captain Bingham, which had struck on Las Formigas, a shoal of rocks off the N. E. end of this island, but was fortunately got off. His Majesty's ship Surprise, Captain Laroche, accompanied her into port.

The Dictator of Liverpool, a fine new ship, on her first voyage, mounting 24 brass guns, from Demerara to Liverpool, was on the 5th ult. totally wrecked at Rossbeg, near Castleman, county of Kerry; out of the crew, consisting of 60 persons, only three common sailors were saved. Unfortunately, as no magistrate lives in the neighbourhood of that part of the country, every thing was at the mercy of the people for 3 days. On the 4th day Mr. Marshall, the late High Sheriff of the County of Kerry, who lives 40 miles from that place, arrived at the shore, and at the risk of his life, which was often threatened, succeeded in recovering a quantity of valuable property, together with many important letters addressed to the first commercial houses in Europe, which he immediately forwarded; he also recovered nearly 20,000*l.* in London bank notes and bills. He took from one of the countrymen alone, who could not read, more than 12,000*l.* in bills, which it appears belonged to a Mr. James Frazer, a respectable merchant in Barbice, who was passenger and one of the unfortunate sufferers. His body was found many miles from the wreck, and afterwards decently interred in the church of Inch.

LIST OF NAVAL PROMOTIONS, APPOINTMENTS, MARRIAGES, DEATHS, &c.

WHITEHALL, JAN. 7.

The King has been pleased to grant unto Sir Thomas Troubridge, Bart. Captain in the Royal Navy, and Colonel of His Majesty's marine forces, his royal licence and permission to accept the rank of commander of the Order of St. Ferdinand, and of merit, which it is the intention of Ferdinand the Fourth, King of the Two Sicilies, to confer upon him; and to bear the Insignia of Commander of the said Order.

The King has also been pleased to grant unto Captain Alexander John Ball, of the Royal Navy, his royal licence and permission to accept the rank of commander of the Order of St. Ferdinand, and of merit, which it is the intention of Ferdinand the Fourth, King of the Two Sicilies, to confer upon him; and to bear the Insignia of Commander of the said Order.

The King has been pleased to grant unto Captain Samuel Hood, of the Royal Navy, his royal licence and permission to accept the rank of commander of the Order of St. Ferdinand, and of merit, which it is the intention of Ferdinand the Fourth, King of the Two Sicilies, to confer upon him: and to bear the Insignia of Commander of the said Order:

The King has also been pleased to grant unto Captain Benjamin Hallowell, of the Royal Navy, his royal licence and permission to accept the rank of commander of the Order of St. Ferdinand, and of merit, which it is the intention of Ferdinand the Fourth, King of the Two Sicilies, to confer upon him; and to bear the Insignia of Commander of the said Order.

And also to command, that these, His Majesty's concessions and declarations, together with the relative documents be respectively registered in the College of Arms.

Feb. 17. The King has been pleased to constitute and appoint the Right Hon. John Earl of St. Vincent, Admiral of the White Squadron of His Majesty's fleet, and Knight of the most Hon. Order of the Bath, Sir Philip Stephens, Bart. William Elliot, Esq. Sir Thomas Troubridge, Bart. James Adams, John Markham, and William Garthshore, Esqrs. to be His 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.

MARRIAGE.

On Monday, the 19th instant, at Mary-le-bone church, Captain Van Spengler, of His Majesty's Dutch navy, to Miss Graham, eldest daughter of A. Graham, Esq. late of Hatton Garden.

DEATHS.

At the Hotwells, Bristol, Lieutenant Bridgman, of the royal navy.

A few days since, at his father's house. Lieutenant Cuthbert Waldegrave Ellison, of the royal navy. He was interred on Saturday last, the 31st ultimo, with military honours, at Gravesend; attended by Major Kite, commander of the Gravesend volunteers, and his band, the officers, seamen, and marines of His Majesty's ship *Fortunie*.

At Brentford, of a decline in the 20th year of his Age, Alexander John Ross, captain-lieutenant and adjutant of the Plymouth division of marines, and only son of the late Major Robert Ross, of the marines.

In Charlotte street. William Galcoign, Esq. of the Admiralty, aged 38 years.

Lady Hardy, widow of the late Admiral Sir Charles Hardy.

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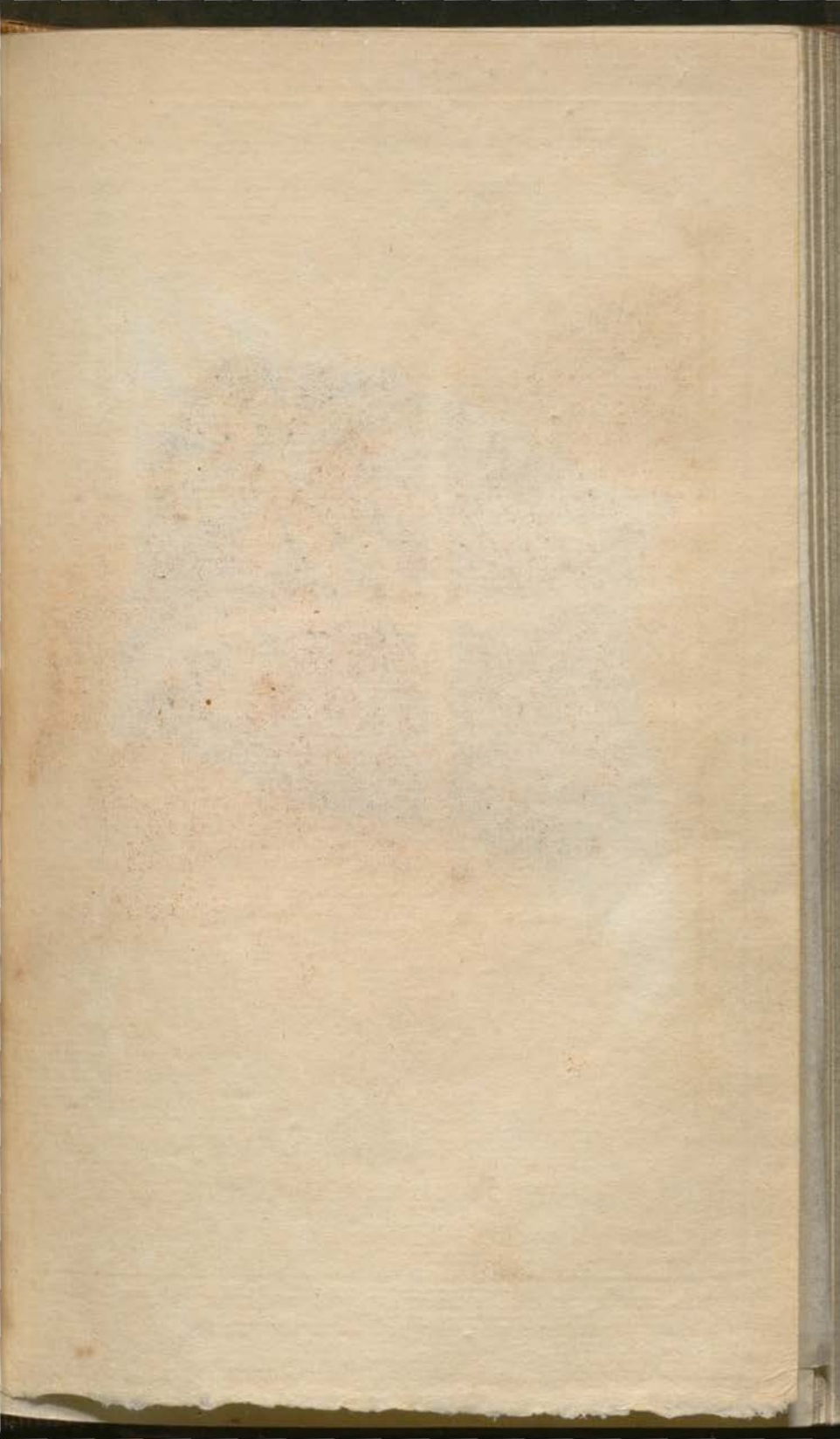
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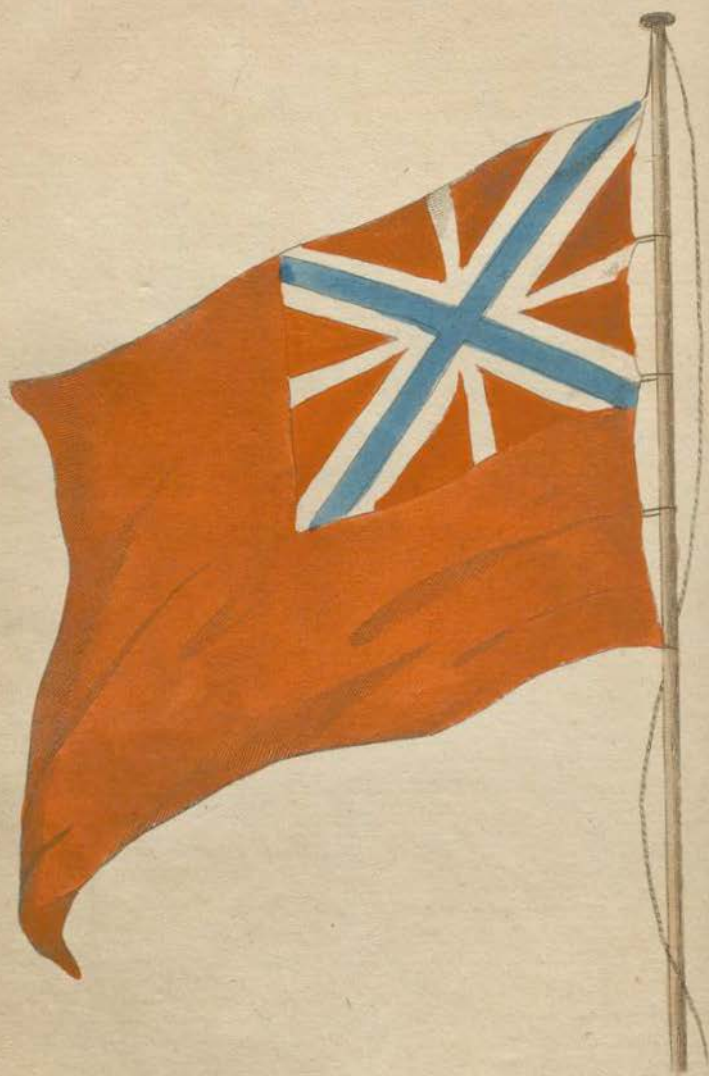
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THE DANISH FLAG .

Published by Alex. Hogg, Mar. 31, 1801.





RUSSIAN FLAG.

Published Feb. 1804 by Harrison, Lane & Co. No. 75 Fleet Street

THE

NEW NAVAL MAGAZINE,

FOR MARCH, 1801.

Embellished with an elegant coloured Print of the
DANISH FLAG.

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SCOTLAND, and IRELAND.

ACKNOWLEDGMENTS TO CORRESPONDENTS.

Several articles in hand for this Number have been unavoidably postponed in consequence of the interesting and melancholy accounts relative to the *INVINCIBLE*, *KENT* East-Indiaman, &c. &c.

Our Poetical Correspondent, S. shall be indulged as soon as possible.

NAVAL RIDDLES are under consideration; also—

The HISTORY of POOR JACK.

The Retrospect of MODERN NAVAL LITERATURE is reserved till our review of ANTIENT NAVAL LITERATURE is finished.

Correspondents may depend upon the utmost care and attention being paid to all their favours, as we have promised in our NEW ADDRESS TO THE PUBLIC—(See the Last Page of the Wrapper)—and such as wish for an early insertion, are requested to send their communications before the 12th of the month, and before the 20th in order to be acknowledged in this place. They are also requested in future to address (post paid) To the Proprietors of the Naval Magazine, at No. 16, Paternoster-Row.

THE NAVAL MAGAZINE,

OR,

MARITIME MISCELLANY,

As it comprehends all that is useful, interesting, and entertaining, relative to British and Foreign Naval Affairs; particular and authentic accounts of Voyages, Sea-Fights, Piracies, Shipwrecks, Discoveries, Ship-Building, &c. &c. with the Lives of Admirals, Commanders, and remarkable Heroes, who have in all ages done honour to the British Navy; and includes a Comprehensive Naval History of Great Britain, from the earliest accounts to the present time; and a Complete Monthly Journal of Naval Transactions, Foreign and Domestic; is earnestly recommended, not only to the whole British Navy, and every individual any ways connected therewith, but also to Merchants, Captains, Mates, Purfers, Midshipmen, Cadets, Super-cargoes, Writers, Passengers, and all persons employed in the East-India Company's service, as well as to Ship-Brokers, Under-Writers, all Mariners, Masters, and Commanders of Ships, and to all those on Land or at Sea, interested in trading to the West-Indies, America, and all other parts of the Globe; including the Coasting Trade to and from London, Portsmouth, Plymouth, Liverpool, Deal, Dover, Pool, Falmouth, Hull, Margate, Harwich, Exeter, Canterbury, Dartmouth, &c.

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THE
NAVAL MAGAZINE;

OR,

MARITIME MISCELLANY,

FOR MARCH, 1801.

NAVAL HISTORY OF GREAT BRITAIN.

(CONTINUED FROM PAGE 56.)

EDWARD's voyage was tedious, toilsome, dangerous, and fruitless. He attempted during a whole month, to gain his passage, and several essays were made to land, even with the utmost hazard of losing his whole fleet, so that he was obliged in the beginning of October to return and disembark his troops.

Though success had now changed sides, Edward was not totally discouraged; he determined to carry into execution a scheme he had formed, and by which he hoped to repair all his former disasters. He determined to arm the Duke of Brittany against Charles, and support him with all his forces: but the latter had taken the most prudent measures to divert this blow, which he had long apprehended. He had shewn particular favour to all the noblemen of that duchy, among whom were the Constable and Oliver de Clifton, one of the best generals and ministers at Charles's court. He

had likewise by his liberality and favour attached to his interest the Viscount de Rohun, with the Lords of Beaumanoiere and Lavalle.

The French army were still successful, and Edward was far from being unconcerned at this catastrophe of all his power and interest in France, so gloriously acquired, and so ignobly lost. He had appointed the Earl of Salisbury Lord High Admiral of England, and that nobleman was obliged by contract to serve the crown with 300 men at arms, and the same number of archers. The Admiral accordingly fitted out a formidable fleet, consisting of forty capital ships, and sailed directly to St. Malo, where he burnt seven large Spanish ships, then lying in that harbour. This spirited behaviour greatly alarmed the whole coast of Brittany, and prevented several of the nobility from declaring in favour of Charles.

However, the Constable of France was making rapid progress in subduing Brittany, and after taking several places in that duchy, formed the siege of Hennebon, where the English garrison were commanded by Sir Thomas Wych and Sir Thomas Fryar. The garrison made a noble defence, but the town being at last taken by storm, were all, except the two commanding officers, put to the sword. Several sieges followed; at last that of Brest was raised, but the blockade continued with 2000 men, who by means of a fort they had erected, effectually shut up the place on the land side. In the mean time Sir Hugh Bright, the Governor of Derval, agreed to deliver up the place if not relieved in two months, and gave three hostages for the performance. This capitulation alarmed Sir Robert Knolles, who, in order to prevent his favourite castle from falling into the enemy's hands, entered into a treaty with the French General, by which he agreed to deliver up the Castle of Brest if not relieved within forty days by an army, which should offer the Constable battle. Du Guesclin was lying before the city of Nantes, when the offers were made him by Knolles; they were readily agreed to, and hostages being delivered for the performances, Knolles, with some chosen friends, threw himself into Derval before the expiration of the time limited for its surrender.

By this time the city of Nantes had admitted the Constable as Lieutenant-General to the King of France, on condition, however, that the Duke should be reinstated, if upon his return he should make submission to Charles

and abandon his connexions with England. This important acquisition seemed to render the whole conquest of Brittany as certain. But the Earl of Salisbury being now arrived at Brest with a large reinforcement of troops, landed his men, drew them up several times in order of battle, and on the expiration of the term limited by the capitulation, very justly demanded the English hostages from the Constable, as the place was relieved by an army who had offered him battle. But the Constable evasively answered, that if the Earl would march to Nantes, the place where the capitulation was signed, he would find the French ready to give him battle. This proposition was considered as so unreasonable, that the Earl after re-victualling the garrison of Brest, put to sea, upon which the Constable committed the hostages to prison.

The siege of Derval became very difficult, the Duke of Anjou, who commanded before the place, insisted, that as no army had appeared to relieve the castle, the terms of the capitulation ought to be fulfilled. Knolles, on the other hand, refused to be bound by that capitulation, which he declared his Governor had no power to conclude. Exasperated at his answer, the Duke ordered the heads of the three English hostages to be struck off, and in return Knolles commanded those of three French gentlemen, whom he had taken prisoners, to be taken off in sight of the French army, and thrown into their camp. The Duke, however, found it impracticable to take the place but by a long siege, which a new scene of operations would not suffer him to undertake.

The Duke of Lancaster with a large force now marched from Calais unopposed to Bourdeaux, and thence throwing himself into Upper Guienne, offered battle to the Duke of Anjou. A truce between the two crowns prevented this action, which would have been a very bloody as well as an important one. The Pope's interest procured this cessation.

England enjoyed a repose from this truce not very advantageous for Edward; he who had been so glorious in his younger years, now doated. Love of a lady, formerly of the bed-chamber to Queen Philippa, drew him into some scandal with the people: and his lavish expence, wasting the public money on trifles, raised for the most important purposes, lost him their affection. At this time (1376) died Edward Prince of Wales, whose death was much lamented, though it had been long expected by the public.

The latest prolongations of the truce with France being expired in 1377, Sir Hugh Calverly, Governor of Calais, was sent over thither with fresh forces, and all the militia of England were ordered to be in readiness to oppose an invasion, then expected from France. But though that nation was very busy in their ports, it was only to amuse the English till they could strike a blow nearer home. Accordingly they laid siege to a long fort near Calais, possessed by the English and commanded by one William Weston, who basely surrendered the fortress, and was sent over to England to be tried for cowardice; but Sir William Coverly retook the place soon after and returned with a very considerable booty to Calais.

This was the last military ope-

ration in the reign of Edward: he fell sick in June, and it was seen he could not recover: still doating, he preferred to the services of his more faithful subjects, the presence and offices of his mistress Alice, who acting like the generality of such women, stripped him in his last moments of every thing, even of the rings upon his fingers, and fled. Edward had reigned upwards of 50 years.

War had then the effect which it always will have upon a country; commerce and industry were reduced to a very low ebb at this period. The parliament soon began to complain of the decay of shipping during this reign, and asserted that one sea-port formerly contained more vessels than were then to be found in the whole kingdom. This calamity was ascribed to the arbitrary seizure of ships by Edward, for the service of his frequent expeditions. This complaint was renewed again during the succeeding reigns, but without effect, for we find an order afterwards directed to the mayor and sheriffs of London, to take up all ships of forty tons and upwards, to be converted into ships of war.

The death of the Prince of Wales had raised Richard, Earl of Cornwall, grandson of the king, to that dignity, and the succession was firmly and prudently established in his favour.

Charles received no information of Edward's death till some weeks after it happened, the English government having laid an embargo upon all the shipping, as soon as that event was known. He was not, however, the less assiduous in his preparations, especially those by sea, and was soon

in a condition to send out a strong navy, which being joined by that of Castile, amounted to 120 ships, vessels and galleys. A squadron of this fleet had already landed and burnt the town of Rye, from whence they sailed to the Isle of Wight, the whole of which they reduced, except the castle of Carisbrook, which was bravely defended by Sir Hugh Tyrrel, while the inhabitants of the island were obliged to pay a large contribution to prevent their houses from being pillaged and burnt. Having succeeded in this expedition, they visited several of the English coasts, and burnt the towns of Hastings, Portsmouth, Dartmouth and Plymouth, but found Southampton too well guarded by the Earl of Arundel for them to hope for success. They, however, landed a party of their men in Sussex, where they were opposed by the Prior of Lewes, at the head of a few raw and unexperienced forces, who were easily defeated, and the Prior himself, together with two knights, being taken prisoners, were sent into France. From them the French gained the first intelligence of Edward's death, and John de Vienne, Admiral of France, immediately dispatched an express to his court, with advice of this important event. Charles shewed a generous concern for the great virtues of Edward. In the mean time the Abbot of Battel made a brave resistance, and drove the enemy from the coast of Sussex. By this time the Earls of Cambridge and Buckingham had collected a body of troops, and appeared on the coast to prevent the enemy's landing. This, however, was all they could do, for the navy of England was in no condition to face

the combined fleets of France and Castile. The whole nation was greatly alarmed, their coasts insulted, their commerce interrupted, and the people threw out many melancholy, though bitter reflections, on the fatal reverse of their affairs, from the time they held in chains the father, and almost the whole nobility, of the very prince who thus distressed them. The same success which Charles had by sea, attended him also by land.

All things went amiss with England; more pains were never taken to place a sovereign on the throne, and no reign ever began so unsuccessfully: for the attention which should have been employed in equipping fleets, was lavished on idle ceremonies.

However Sir Hugh Calverly, Governor of Calais, had better success on the side of Picardy; towards the end of this year he burned about 26 French ships in the port of Boulogne, laid the town in ashes, and carried off a large booty, particularly in cattle, a very seasonable relief for his garrison. In his return to Calais he learned that the garrison had betrayed to the French, in the absence of Sir Robert Solle their Governor, the castle of Merck, a fortress of great importance not far from Calais; but Sir Hugh attacked the place so vigorously that he retook it, and hanged up all the garrison as traitors. But about this time some English noblemen received a severe check by sea. The government having at length fitted out a fleet, received intelligence that a number of Spanish vessels were lying in the harbour of Sluys, and the Earl of Buckingham, the Duke of Brittany, with the Lords Latimer,

timer, Fitzwalter, and Sir Robert Knolles, assisted by several of the noblemen, went on board a squadron of ships, with a design of either taking or burning them; but they had hardly left the harbour before a violent storm shattered, dispersed, and drove them back. The ships, however, being resisted, they again put to sea in quest of the Spaniards, but so corrupted were the manners of the sailors, that they mutinied, and the Lord Fitzwalter, Admiral of the squadron, must have lost his life, had he not fortunately escaped on board the Earl of Buckingham's ship. Thus all the fond hopes entertained of this expedition va-

nished, and the whole fleet, except a small squadron under the Lord Thomas Percy, returned into port. That nobleman had soon the good fortune to fall in with a fleet of merchantmen, consisting of 50 sail, part of which belonged to the Flemings, and part to the Spaniards, laden with French merchandize. Percy sent a message to the Flemings, desiring them to separate from the Spaniards, but this request not being complied with, a sharp dispute ensued, in which the English commander took 22 sail, and returned with great honour to England.

(To be continued.)

MISCELLANY.

DESCRIPTION OF THE PLATE.

An elegant coloured PRINT of the DANISH FLAG, with a White characteristic Cross in the Middle, according to the Daneburg Order, instituted in 1219, and revived in 1671.

THE present fleet of Denmark is composed of 36 ships of the line and 18 frigates; but many of the ships being old, and wanting great repairs, it is supposed they cannot fit out more than 25 ships on the greatest emergency. This fleet is generally stationed at Copenhagen, where are the dock-yards, store-houses, and all the

materials necessary for the use of the marine. They have 26,000 registered seamen, who cannot quit the kingdom without leave, nor serve on board a merchantman without permission of the admiralty; 400 of these are kept in constant pay, and employed in the dock-yards.

CURSORY

CURSORY REMARKS ON LABILLARDIERE'S ACCOUNT OF A VOYAGE IN SEARCH OF LA PEROUSE,

UNDERTAKEN BY ORDER OF THE CONSTITUENT ASSEMBLY IN FRANCE, AND
PERFORMED IN THE YEARS 1791, 1792, AND 1793, IN THE
RECHERCHE AND ESPERANCE SHIPS OF WAR, UNDER THE
COMMAND OF THE REAR-ADMIRAL BRUNE D'ENTRECASTEAUX.

(CONTINUED FROM PAGE 77.)

THE course of this unfortunate voyage affords nothing new, nor in any material point differing from former voyages of discovery in the South Sea, till the arrival of the *Recherche* and *Esperance* at Van Dieman's Land: and, on the whole, it is more valuable for the additions made to the stores of natural history, by M. Labillardiere, than for any new information of material importance to the science of navigation; we shall not, therefore, follow the regular track of the expedition from Brest to the Cape of Good Hope, but shall select such passages only as appear to merit particular notice. Of this class we consider the following easy method of sweetening fresh water at sea, when it is beginning to putrefy.

“The water kept on ship-board undergoes, in long passages, the same decomposition as stagnant water; and this decomposition is frequently accelerated by the heat of the climate. There then arises from it so great a quantity of inflammable air, that a person runs the risk of being suffocated in going down to the hold, where it is deposited. This accident, however, is very uncommon, because the opening which leads thither allows part of these noxious miasmata to escape. It is not the less true, that these often produce nervous fevers, the

malignity of which is proportionate to the degree of heat that decomposes the water.

“As this gas, the specific gravity of which was first discovered by Dr. Priestley, is much lighter than the atmospheric air, and as it has, besides, little adherence to the water, it is easy to separate the former from the latter, and to restore to this beverage its primitive purity; for this it is sufficient to agitate it for a quarter of an hour.

“We had on board a machine which perfectly answered this end; it was a large tub of the size of a double hectoliter: when it was three-fourths filled with water, there were turned round in its middle, by means of a winch, four large iron plates, disposed in the form of a cross; the water then received a strong agitation, which, by disengaging the inflammable gas, with which it was impregnated, restored to it, at the same time, the pure air of which it had been partly deprived: and, however tainted it was before, it did not, in a very little while, differ from the best water.

“This process, which is very easily executed, completely resolves the numerous series of questions which some natural philosophers have proposed to navigators, respecting the means of rendering fresh water drinkable, when it becomes putrid on board a ship.

“ It will hardly be believed, that, with so simple a mean of sweetening water, there was often distributed to us some in almost as putrid a state as if it had just come out of the hold; but the astonishment will cease, when it is known that the officer of the watch, charged to superintend this operation, generally abandoned it to the care of a sailor, who, being soon tired of turning the winch, almost always thought the water sufficiently agitated before it was drinkable. It should be entrusted only to men, whose sobriety, strength, and resolution to persevere in the operation, to the full extent of the time assigned, can be relied on.”

An anecdote of the amusing kind may gratify some who happen to have friends or relations in the sea service, from whom they may occasionally hear a slight mention made of the circumstances here related, without a satisfactory explanation.

“ Seamen are in the habit of christening, as they term it, the persons who cross the Line (the Equator) for the first time. In French ships this baptism is performed by fousing them with several buckets of salt water: this is sometimes practised in such a manner as to divert those who are sure of not being sluiced. One of the sailors, who is called *le bon homme de la ligne*—the Good Man of the Line, descends from the maintop with an oakum beard, and comes and presides at this nautical entertainment.”

On board of English men of war, the translator relates the practice to be as follows. Whenever a ship crosses the Line or the Tropics, one of the seamen, who

is supposed to be “ a fellow of infinite jest,” being dressed in a whimsical manner, to represent Neptune, goes over the bows, and, through a speaking trumpet, hails the ship, asking her name, that of her commander, whence she came, and whether she is bound? These questions being resolved, he rises majestically from the briny waves, and, wielding the trident, comes on the fore-castle, accompanied by his consort, who is personated by another seaman, also fantastically attired. Being seated in his car (which is previously prepared, and is generally composed of a half-tub fixed on a grating, lashed to capstan bars), he is borne on the shoulders of his suite, and carried in procession from the fore-castle to the quarter-deck. The watery god then welcomes the Captain to his dominions, and expresses a hope that he will have no objection to his levying, among the officers and people who have never before visited them, his accustomed tribute, which consists of a shilling each from the men, and a present in liquor from the officers. Such of the ship’s company as are unable to pay this tribute, are obliged to submit to the penalty of being shaved, in order to be in a condition to be presented to his aquatic Majesty. This ceremony is performed in the following manner:

The novice being seated over a large tub of sea-water, in lieu of a lather of soap, his chin is besmeared with tar, and a piece of rusty iron hoop supplies the place of a razor. The operation is terminated by the insolvent undergoing, first, a ducking in the tub over which he sits, and afterwards

a copious ablution of salt water from Neptune's attendant Tritons. It is almost unnecessary to add, that the rest of the day is spent in that sort of conviviality, congenial to the disposition of British tars.

Of the unfortunate *La Perouse* and his companions, the officers and crews of the two French frigates, the *Bouffole* and the *Astrolabe*, no certain information has ever been obtained, so as to decide whether they remain in existence, or suffered shipwreck; for, after the strictest researches, and the most exact inquiries, the result of the intelligence received by Admiral *D'Entrecasteaux* and his associates, amounts to no more than circumstantial evidence that they perished at sea.

The last letter of *La Perouse* to the French Minister of the Marine Department, served as a guide to direct their course in this painful research; for he therein stated, "that from Botany Bay, he should again make a run to the Friendly Islands, and strictly pursue his instructions in regard to the south part of New Caledonia, Mendana's Island of Santa Cruz; the southern coast of Surville's *Terre des Arfacides*, and the land called by Bougainville *La Louisiade*, and endeavour to ascertain whether this last makes a part of New Guinea, or is separated from it: that, towards the end of July 1788, he should pass between New Guinea and New Holland, by a different channel than Endeavour Strait, provided such a one exists. During the month of September, and a part of October, he proposed to visit the Gulf of Carpentaria, and all the west coast of New Holland, as far as Van Diemen's Land.

If Admiral *D'Entrecasteaux* had adhered to the plan laid down in this letter, he would have taken a different course from that which he pursued in his voyage from the Cape of Good Hope; but it appears by the narrative that he gave too much credit to the information he received on his arrival at that station; and that his ardent wish to find out his suffering countrymen, if living, and to afford them the speediest assistance in his power, got the better of his judgment; for the intelligence which induced him to change his course, had not the probability of truth, the substance of it being, "that two French Captains of merchant ships had deposed, before the French Commander in Chief on the India station, that Captain Hunter, of the English frigate the *Syrius*, when passing by the Admiralty Islands, in his voyage from Botany Bay to Batavia in a Dutch ship (the *Syrius* having been wrecked on Norfolk Island, in the South Seas, towards the end of the year 1790) had seen several canoes containing savages, some of whom appeared to be clothed in the uniform of the French navy, but with whom, from the contrariety of the winds and currents, he could not have any intercourse—that Hunter had further declared, he had no doubt that the European clothes were the remains of the shipwreck of the vessels under the command of *La Perouse*. Hunter is said also to have told these French Captains, that he had seen *La Perouse* at Botany Bay, was particularly intimate with him, and had learnt from himself, that he intended, on leaving Botany Bay, to pass through St. George's Strait, in order to get to the northward; and

and he had no doubt that it was by falling in unexpectedly with the islands there, that the *Astrolabe* and the *Bouffole* were lost, in consequence of the calms and violent currents which prevail in that quarter: these currents, he told them, had carried the *Syrius* to the eastward, 600 miles in ten days; on which account he recommended, that ships intending to the Admiralty Islands ought to take the precaution to get into their latitude in good time, in order to prevent being carried away by the currents, which set to the eastward with prodigious rapidity and strength."

Perouse must have been lost in the month of July or August 1788, and Captain Hunter and his officers could not have passed by the Admiralty Islands till the early part of the year 1791, since his own ship was lost only towards the end of 1790; and it is inconceivable that savages should have kept their dresses so long, and have worn them in common, as they did not appear to have come out dressed in them in their canoes upon any particular occasion.

With respect to the expedition under the command of La Perouse, it clearly appears, from the instructions cited in his letter, that he was to attempt new discoveries, and upon inspecting the chart prefixed to Labillardiere's account of the voyage in search of that navigator, there is every reason to believe that he met with his

untimely fate in his attempt "to pass between New Guinea and New Holland, by a different channel than Endeavour Strait." The experiment of exploring whether any other channel existed, probably, closed the catastrophe; and much time must have been mispent by Admiral D'Entrecasteaux in the researches he made in consequence of the false information he had received.

Following the example of his predecessors, Admiral D'Entrecasteaux gives his name to a newly-discovered island and Strait. At the latter they remained a considerable time: it will be found on the chart at the southern extremity of Van Diemen's Land. In various excursions to the interior of this country, they met with different subjects, as trees, plants, birds, rare animals, and insects, the descriptions of which considerably enrich the stores of natural history; particularly that of the *rara avis in terra*, the black swan of Cape Diemen. "The bill at the upper mandible is of a red colour, with a transversal whitish stripe towards the extremity: the lower mandible is red on the edges, and whitish underneath. It is a little larger than our swans, and has the same fine shape; but the colour of the body is of a shining black, as remarkable as the white colour of ours; it has only six large white feathers in each wing, and the feet are of a dark grey."

A NARRATIVE OF THE UNFORTUNATE VOYAGE OF
PIETRO QUIRINI, A NOBLE VENETIAN,

WITH SEVERAL CURIOUS PARTICULARS RESPECTING THE NATURAL HISTORY AND COMMERCE OF NORWAY, AND THE MANNERS AND CUSTOMS OF ITS INHABITANTS, IN THE 15TH CENTURY.

(CONTINUED FROM PAGE 75.)

HAVING no ropes to fasten the boat with, and thus prevent it from being dashed in pieces, they remained in it the whole night. The next day, at dawn, these 16 poor wretches, the only remains of 46, went ashore and laid themselves down in the snow. Hunger, however, soon obliged them to examine whether there was not some provision still remaining of their stock; but they found nothing more than a few crumbs of biscuit in a bag, mixed with the dung of mice, a very small ham, and an inconsiderable quantity of cheese. These they warmed by means of a small fire, which they made of the seats of the boat, and thus, in some measure, appeased their hunger. The day after, having convinced themselves beyond a doubt that the rock they were on was uninhabited and quite deserted, they were going to quit it, and accordingly, after filling five small casks with snow water, got into the boat, when the instant they entered it, the water ran into it in torrents through all the seams, as during the whole of the preceding long night the boat had been dashing against the rock, insomuch that it went to the bottom immediately, and they were all obliged, quite wet through, to go a-shore again. They now made of the oars and sails of the boat two small tents, by way of sheltering

themselves from the weather, and with the knees and planks of it, which they hewed in pieces, they kindled a fire to warm themselves by. The only food that was now left for them, consisted in a few muscles and other shell-fish, which they picked up on the shore. Thirteen of the company were in one tent, and three in the other. The smoke of the wet wood occasioned their faces and eyes to swell up to so great a degree, that they were afraid of losing their eyesight; and what still added to their sufferings was, that they were almost devoured by lice and maggots, which they threw by handfuls into the fire. Quirini's secretary had the flesh on his neck eaten bare to the sinews by these vermin, which, indeed, occasioned his death. There died also three Spaniards besides, who were of a very robust frame of body, but probably lost their lives in consequence of the sea water they had drunk. The 13 still remaining alive were so weak that they were not able, for the space of three days, to drag away the corpses from the fire-side, where they lay.

Eleven days after this, Quirini's servant going along the shore to pick up muscles, the only food they had, found on the farthest point of the rock, a small house, built of wood, in which, as well as round about it, they saw some

cow-dung. From this circumstance they had reason to conclude that there were both men and cattle in the neighbourhood of this spot; an idea that served to revive their drooping spirits, and inspired them with fresh hopes. This house offered them good shelter and house-room, and all, but three or four of them, who were too weak, went to occupy it, taking with them several bundles of wood from the ruins of their boat. With great difficulty they crawled thither through the deep snow, the distance being about a mile and a half. Two days after this, going along the shore to seek their usual food of muscles and other shell-fish, one of the company found a very large fish, cast up by the sea, which appeared to weigh about 200lb. weight, and to be quite sweet and fresh. This fish was cut into small slices, and carried to their dwelling, where they directly set about boiling and broiling it. But the smell of it was so extremely tempting, that they had not patience to wait till it was thoroughly dressed, and ate it half raw. They continued gorging themselves with this fish, almost without intermission, for the space of four days; but at length the evident decrease of this their stock taught them to be more economical with it in future, so that it lasted them ten days longer. Those three that staid behind in one of the first huts had sent one of their number to look for the rest, and as soon as he was refreshed with some of the fish, he carried a part of it to his companions, and now they all assembled together again in the wooden hovel they had discovered. During the whole time that they lived on the fish the

weather was exceedingly tempestuous, so that they certainly would not have been able to look for muscles.

Having made an end of their fish, they were obliged to return to their first resource of picking up muscles wherever they could find them; and there being about eight miles from them a rock, inhabited by fishermen, it so happened, that a man, with two of his sons, came to this rocky islet, which was called Santi, to seek after some cattle which had strayed away from them. The sons went strait to the hovel, where these unfortunate wretches were, for they had seen smoke ascend from it, a circumstance that greatly astonished them, and became the subject of their discourse. Their voices were heard, in fact, by the people in the house; but they supposed the noise to be nothing more than the screaming of the sea fowl, which had devoured the corpses of their deceased companions. Notwithstanding which Christopher Fioravante went out, when spying two youths, he ran in again in haste, and called to the rest aloud, that two men were come to seek them out. Upon this the whole company ran out immediately to meet the lads, who, on their parts, were terrified at the sight of such a number of poor, famished wretches. Indeed these latter had debated with each other, whether they should not detain one or two of these visitors, with a view to make themselves more certain of procuring assistance: but Quirini dissuaded them from putting in execution so very unadvisable a plan. They all accompanied the youths to their boat, and intreated the father

ther and sons to take two of their people with them to their habitations, in order the sooner to procure them assistance from thence. For this purpose they chose one Gerard, of Lyons, who had been purser of the ship, and one Cola of Otranto, a mariner, as these two men could speak a little French and German.

The boat, with the fishermen and the two strangers, went to the island of Rost, on a Friday. On their landing, the inhabitants were greatly astonished at their arrival, but were not able to understand them, though these latter addressed them in different languages, till at last one of the strangers began to speak German a little with one of the company, a German Priest of the order of the Monks Predicant, and informed him who they were, and whence they came.

On the 2d of February, the Festival of the Purification of the Virgin Mary fell on a Sunday, when the priest admonished all the people in Rost to assist the unhappy strangers to the utmost of their power, at the same time representing the difficulties they had undergone, and pointing to the two famished wretches present. Many of the congregation were softened even to tears, and resolved to bring away the rest of these miserable people as soon as possible, which they did the next day. In the mean while, to those that remained in Santi, the time of their companions absence appeared an age; and what with hunger and

cold together, they were almost dead. Their joy at the first sight of the six boats that went for them, is not to be described. The Dominican Priest inquired which of them was the ship's Captain and when Quirini made himself known as such, the former presented him with some rye bread, which he looked upon as manna, and some beer to drink. After this the priest took him by the hand, and desired him to choose two out of his company to go along with him. Quirini accordingly pitched upon Francis Quirini, of Candia, and Christopher Fioravante, a Venetian; when they all four went together in the boat of the principal man in Rost. The rest were distributed in the other five boats.

Nay more, these good Samaritans went likewise to the first dwelling-place of these unfortunate people under the tent, and taking away with them the only survivor of the three men, who had staid behind, from weakness, buried the others. The poor invalid, however, died the next day. The boats arrived at Rost, and Quirini was quartered with the principal person in the island. The son led him by the hand, on account of his great debility, to his father's dwelling; when the mistress of the house, with her maid, advanced to meet him, and Quirini, going to fall at her feet, she would not permit him, but got immediately a basin of milk for him out of the house, by way of comforting him and restoring his strength,

(To be continued.)

HISTORY OF NAVAL LITERATURE.

(CONTINUED FROM PAGE 67.)

IN 1734 appeared "The Navy Surgeon, or a Practical System of Surgery," by J. Aitkins, of the Weymouth man of war; also, "Observations on Dr. Littlejohn's Proposal to the Lords of the Admiralty, for the more effectual Cure of such Seamen belonging to the Navy as may have Ruptures," by Ashlin Warner, Esq.

In 1735 was published, (price only *One Shilling*) "A new Voyage to Georgia, by a young Gentleman, with a curious Account of the Indians;" this was said to be the production of an honourable person. Also, "A Voyage to Guinea, Brazil, and the West Indies, in His Majesty's Ships the Swallow and Weymouth, describing the several Islands and Settlements."—This was by the author of "The Navy Surgeon."

Though literature at this time did not consist of much maritime matter, as religious and theatrical squabbles, fashions, &c. engrossed the attention of both writers and readers, still the navy was the chief topic of the Parliament-House, and it became also the subject of the pulpit; a sermon was published, proving "The Navy the sole Defence of the Nation," which was preached at Greenwich Hospital, July 15, 1735, by James Barber, M. A.

At this time were also published, "A Voyage to Barbary;" and "The Naval History of England," which latter was greatly improved and re-published a few years after, but still we think it an imperfect work, and though

a folio, too brief upon the most important subjects.

In 1736 (July) appeared "A Voyage from the East-Indies," the only naval publication of this year, though the weekly papers abounded with much maritime information, in one of which it was proved, that ships were unknown before the deluge, consequently that Noah's ark was the first vessel.

In 1737 were published, "The Trials of the Pirates hanged at Execution Dock, March 14, 1737."—Piracy at this time was a common crime, and demanded exemplary punishment; but it is apprehended that many suffered who were innocent; indeed it is well known that Captain Green, an English master of a vessel, and his officers, were unjustly condemned in Scotland, for in a few months after their execution, letters came from the Captain, for whose murder, and from that very ship for whose Captain the unfortunate persons suffered.

John Hulls published at this time "A Description and Draft of a new invented machine for carrying Ships and Vessels out of, or into any Harbour or River, against Wind and Tide, or in a Calm." In the title-page it was said to be very proper to be read by all Merchants, Captains, and Masters of Ships. Also, a second edition appeared, in two volumes, of "The present State of the Cape of Good Hope," translated by Mr. Medley—the first edition was in 1731, as already mentioned.

In 1738 "A faithful Narrative of the Capture of the ship Derby, by Angria the Pirate;" was published. The crew belonging to this vessel were made slaves by Angria, but were unexpectedly released. The Governor of Bombay had a ship well manned and armed, and sent it to Andrea's fort, where, by a stratagem, the Captain got five of Angria's chief men on board of his vessel, and then sent word to this pirate, that if the English were not immediately set at liberty, he would hang those he had in his power. Angria was very much surprized at the message, and refused; but offered any five English he would name; the Captain answered, if he did not comply in a certain time limited, he would proceed to execution. Angria at last complied, and they were all delivered up, but stripped quite naked. They were brought safe to Bombay, and sent home in different vessels: and no doubt

from their accounts the above narrative was composed.

Among the other naval productions of this year, were "A Voyage up the Thames;" this was a mere trifle.—"Travels into the Interior Parts of Africa, containing Descriptions of several Nations for the Space of Six Hundred Miles up the River Gambia, with a Map of that River;" this was the production of Francis Moore.—"Treaty of Navigation and Commerce between Queen Anne and Philip V. of Spain, 1713."—"A General Law Treatise of Naval Trade and Commerce."—"A Journal of a Voyage from London to Savannah in Georgia;" this consisted of two parts, by G. Whitefield, A. B.—"The Trade and Navigation of Great Britain considered," by Joshua Gee; and "A Letter to an eminent Director of the late Ostend East-India Company, in relation to the British Fishery."

(To be continued.)

DESCRIPTION OF PORTS, DOCK-YARDS, AND OTHER PLACES CONNECTED WITH THE NAVY.

(Continued from page 65.)

THE dock-yard at Portsmouth has at different times sustained considerable injury by fire. In 1756, during the war with the French, the South Sea Castle was greatly damaged, part of it being blown up, but whether by accident or design, was never discovered.

In 1760, in the month of July,

just after midnight, a dreadful fire broke out in one of the warehouses in the dock-yard, containing pitch, tar, oil, and turpentine, with other combustible materials, which soon reduced it to a heap of ruins; but it did not stop here, for having communicated itself to another warehouse, where were great quantities of dry stores,

stores, the whole exhibited a most dismal spectacle; and many pieces of burning wood were carried, by the violence of the fire and wind, even as far as Gosport. The general opinion was that it caught fire by lightning, it being a very tempestuous night, and had it not been for the great quantity of rain which fell during the storm, the conflagration would, in all probability, have been general throughout the dock-yard. The damage by this accident amounted to upwards of 50,000*l.* but such was the assiduity of administration to supply every deficiency, that the whole was in a few weeks put into as good a state as before the accident happened; for which, indeed, there was an absolute necessity, England being at that time engaged in a very long and expensive war.

In 1770, in the month of July, about four o'clock in the morning, another dreadful fire broke out in this dock-yard. It burnt with the most rapid fury, and communicating with the hemp-house, and other offices, consumed every thing before it. Whether this was an accident, or the work of any vile incendiary, was never fully ascertained. Some, indeed, pretended to have been concerned in it, particularly one Dudley, who was afterwards transported for perjury; and another, whose name was Britain, who was executed for forgery. The most remarkable circumstance attending this fatal affair, was the fire being discovered in five different places at once, which gave strong suspicions that more than one person must have been concerned, as accidental fires generally break out in one place only. Had this fire happened during a war, it might have proved fatal to the nation;

for the whole loss, amounting to 149,888*l.* could not have been made good without great difficulty, till such time as the Parliament had assembled, and even supposing the money advanced, the time necessary for replacing the stores, might have given the enemy an opportunity of doing us the most irreparable injuries.

In 1776, in the month of December, another fire broke out in the rope-house, about half an hour after four in the morning, and burnt with such violence that it soon consumed the whole building, except the outer walls. However by the timely assistance and vigorous efforts of the workmen of the yard, the seamen of His Majesty's ships, the marines quartered at Portsmouth, and the men belonging to the ordnance, with their respective officers, it was happily prevented from extending to any of the other buildings in the yard, and was at length totally extinguished. The loss sustained by this fire consisted chiefly of the rigging of two ships, the implements belonging to the rope-makers, and rigging-house, a small quantity of cordage, and some toppings of hemp. The alarm which this occasioned was greatly increased by another fire of the like nature, which happened a short time after at Bristol, and had it not been for the quick discovery and alacrity of the people, in suppressing it, would have been productive of the most fatal consequences.

For some time the occasion of these fires was a mystery, but at length it was discovered that they took place by the machinations of a wretched incendiary, well known by the appellation of John the Painter, but whose real name was

James Aitken. When he was taken up and examined, he refused answering any questions, and otherwise behaved in a very daring and resolute manner; however, there appearing sufficient reason to suppose him the guilty person, he was committed to Winchester Jail, and was tried at the assizes, Thursday, March 6, 1777, before the Hon. Sir William Henry Ashurst, and Sir Beaumont Hotham.

Of this interesting trial the following is a summary:

The prosecution having been opened by Serjeant Davy, who stated the nature of the evidence about to be adduced in support of the charge,

The first witness called was James Russel, a deputy clerk in the rope-house, who proved, that a fire did happen in the yard as alleged, and produced the tin cannister which had been found full of combustibles in the rope-house.

The second witness, William Tench, proved, that the prisoner was at Canterbury a few weeks before Christmas, and that the cannister produced was then made by him for the prisoner.

The next witness proved his lodging at her house the night preceding the fire, and preparing the combustibles.

The Commissioner of Portsmouth-yard, James Gambier, Esq. produced a bundle, which had been found in the lodgings of the prisoner, after he quitted Portsmouth, and which contained three books, a pair of buckles, &c.

The Commissioner's clerk, J. Jefferies swore, that he found the bundle at the lodgings aforesaid.

The woman, Mary Cole, at whose house the bundle was found,

swore to its identity, and that of the prisoner who left it with her.

A blacksmith's lad, William Abraham, deposed, that he lodged in the same house with the prisoner, and conversed with him at his lodgings the day before the fire.

Elizabeth Boxel deposed, that the prisoner came and lodged at her house in Portsmouth on the 6th of December, the day preceding the fire; that he had not been long there before she was assailed by a violent sulphureous smell; that she went up into his room, and, opening his door, saw him at work with gunpowder and other combustibles; that she immediately asked him if he was going to set her house on fire; that he put her off with some excuse, and inquired if she had ever suffered by fire; that he went out, and she, seeing his bundle, opened it, and there, perceiving the tin cannister, was much surprized; that she took down a candle out of his room, and perceived it was not the candle she had given him up; that on his return she insisted on his quitting her house; that he did quit it in the morning, first expressing his anger at her having presumed to open his bundle, and demolishing the candle she had carried down from his garret.

John Baldwin deposed, that he was a painter, and, having been in America, he was sent by Lord Temple to the Office in Bowstreet, to hear the examination of the prisoner, and see if he recognized his person. That Sir John Fielding asked him the question, and he replied in the negative; that the prisoner instantly bowed to him from the bar; that he followed the prisoner after the examination into another room, when

the latter returned him thanks for his behaviour, and wished he could make him satisfaction;

[Here the prisoner hastily said, 'satisfaction, for what?' but the Court desiring him not to interrupt the witness, but that as soon as he had finished his evidence he should ask any question he chose, he accorded, and the witness pursued the thread of his testimony, declaring that the prisoner told him]—that he was a gentleman, but that there had been other persons questioned about him, who had spoke what they were intirely ignorant of, and had even gone so far as to say, he could change the colour of his hair if he chose, just as if he was a cameleon; that in the course of conversation the prisoner asked him to come and see him in New Prison; that he took the advice of Lord Temple on the subject, and went at four in the afternoon to New Prison, where he and the prisoner, between the two gates, talked together; that America was the subject, and that he mentioned the names of several persons there, and had much conversation about his family, having married his wife at Perth Amboy, and having worked at New-York and Philadelphia; that a kind of intimacy subsisted between them, insomuch that he visited the prisoner daily, and frequently twice a day, till the 15th of February; that in the course of that time their conversation often turned upon America, of which country, and its concerns, the prisoner spoke in general terms, and appeared to be very urgent to know if General Cornwallis had been worsted; that he asked him if he knew Deane, and, upon his replying in the negative, the prisoner replied, 'Not know

Mr. Deane, Silas Deane! Oh, he's a fine fellow, he's employed by the Congress at Paris; I believe Benjamin Franklin is also employed there on the same account.'

[At the mention of Deane's name, the prisoner checked the witness, and said, 'Beware of perjury, take care of what you say of Mr. Deane; there is a righteous God above, who deals out righteous judgments, and in whose presence we are all at this moment.']

This witness further deposed, that the prisoner asked what countryman he was; that he replied, a Welchman; that the prisoner said he saw clearly he was, nevertheless, in the interest of America, and was an American by principle; that he therefore talked to him very freely, saying, that he knew General Washington; that he was much abler than General Howe; that the former would perplex and harass the latter during the winter, but that the grand campaign was to be in the summer; that America would certainly be victorious; that she had plenty of pitch, tar, and turpentine, and that the back country would furnish stores; that all her army wanted was a few officers, and that France would supply them.

On the 15th of February the witness declared that the prisoner fully revealed his criminality, telling him, that he had been to Paris to Silas Deane, and had carried him an account of the several garrisons in this kingdom, their present state, the number of guns and men at each, and also an account of the quantity of shipping in the service of the navy, their tonnage, guns, &c.

That Silas Deane much applauded his zeal; that he then propos-

led to him that important scheme of setting fire to the dock-yards, and offered to return and execute it; that Deane was amazed, and thought it too great a matter to be carried into execution by one man; that he said, he could execute more than either he, or any person on the face of the earth, could imagine; that Deane asked him what money he would have; that he replied, not much, he only desired to be rewarded according to his merit.

That Deane gave him a letter to a great man in the city, a merchant, with bills drawn on the same merchant to the amount of 300*l*. That he in consequence came over to England, and at Canterbury applied to a tin-man to make him a machine of his own contriving, somewhat like a cannister; that the master of the shop was a stupid fellow, and he could not make him understand what he meant; that he, however, found the apprentice more ingenious, and stood by him while he finished what he wanted; that he put it under the breast of his coat, and went to an ale-house, where he was interrupted by two dragoons, and had an affray with them; that he got the wooden part of the cannister also made at Canterbury, and that it fitted so close that no person could see a light was in it, after it was shut in; that he ordered two more of the same kind of cannisters to be made at another tin man's, but that he left them behind him, they not being finished in time; that he made the best of his way to Portsmouth, and there hired a lodging at the house of Mrs. Boxell; that he instantly set about his preparations; that his mode of making matches was to fold paper double,

and cut it into slips; and after grinding charcoal on a painter's colour-stone quite fine, and breaking gunpowder with a knife, as painters do vermilion, to mix the two in clear water till it come to the consistency of new milk, and then to cover the matches with it: that, when so prepared, they would last, according to their length, any given time after they were lighted.

That Mrs. Boxell was an impudent woman, for that she had opened his bundle in his absence, and that she had come up and seen him at work, and being alarmed had obliged him to quit her lodgings. That on Friday he had got into the hemp-house, and found the hemp so closely packed, that it took him a considerable time to loosen it; that he pulled off his coat to do it, and sprinkled a quantity of turpentine all about the hemp, laying also trains of gunpowder upon the floor, and lightly strewing hemp over them. That he had some difficulty to find his coat, and, after he had found it, he perceived a good deal of hemp upon it, which he took off; that when he attempted to go out, he found the door fastened; that he pulled off his shoes, and got up into the loft, hoping to get out that way, but that he found it impracticable; that he then returned below, and hearing a person at one of the doors, he cried halloo! and was asked what he did there? That he replied he went in from motives of curiosity, and was locked in; that the person at first said he must stay all night, but at length he was let out; that he found his matches would not do, and he bought a halfpenny worth of others of a woman who lived on the Common; that on Saturday morning he took

two lodgings on the Common, and picked out such houses as had most wood in them, intending to set them on fire, that the engines might be employed in extinguishing them, while the dock-yard was burning; that on Saturday he got to the rope-house again, and renewed his labour there, cutting his matches into short pieces; that he wasted a whole box of tinder in trying to make his matches light, and almost burnt his lips with blowing the sparks; that he was so vexed at the last matches not succeeding, that he was almost ready to fire in at the windows of the woman he bought them of; that after firing the rope-house, and burning the letter to the merchant in London, and the bills for 300l. for fear Mrs. Boxell's having opened his bundle should lead to a discovery of him, he set off to escape, and as he was running along the road, overtook a market-woman's cart; that he got up in it, and begged the woman to drive fast, wanting to get by the centinels, who are posted four miles round Portsmouth; that the woman drove pretty briskly, but had occasion to stop to purchase something; that he begged she would not, but that she said she must, but would not stay; that when she stopped, what she bought came to a shilling; that he threw down six-pence, got out of the cart, and made the best of his way towards London; that after going some way he turned round and saw the flames of the rope-house, and that it appeared as if the element itself was on fire; that he walked all night, and two dogs barking at him, he fired a pistol at one, and he believes either killed or wounded him; that he reached Kingston about ten in

the morning, staid there till evening, when he went to town in the stage, and on his arrival called on the merchant for whom the letter had been directed; that he informed him that he came from Paris, and what had passed between Silas Deane and him, and mentioned the bills; that the merchant received him coldly, and said he had no advices from Paris which adverted to the matter; that he then told him he had fired the dock-yard at Portsmouth, as he would see by the Monday's newspapers; that after this he accompanied the merchant to a coffee-house, and observing a person there eyeing him in a very particular manner, he went away, and walked to Hammersmith; that he was much vexed at the merchant's reception of him, and wrote him a letter that night, in which he told him he was going to Bristol, where he would soon hear of his 'handy works;' that he went accordingly—

[Here, upon a voluntary motion of a Counsel who sat at the table, the Court objected to the witness's being examined as to any circumstances which happened at Bristol, the facts there not being in question before the Court; it was agreed by the Counsel for the Crown to go no further into that matter, than just as far as was necessary to confirm the truth of Baldwin's testimony by the assistance of collateral proof; he was therefore suffered to go on, and he further said]—that the prisoner told him, that on his arrival there he applied to a painter in or near Bristol, and borrowed his colour-stone to grind his charcoal upon.

The witness added, That the prisoner lamented much having left his bundle at Portsmouth, and
said

said it contained an English *Justin, Ovid's Metamorphoses, and The Art of War, and of making Fire-Works according to the Manner practised last War by the Military of the King of France, with a French passport, a pistol, a pair of buckles, a piece of an old shirt, &c.' and that what chiefly grieved him, was the passport's being there, for that it contained his real name; it was some comfort, however, that it was in French, and probably whoever found it would not be able to read or understand it.

The witness concluded with declaring, that he had imparted to Lord Temple and Lord George

Germaine, all that the prisoner had told him.

In order to shew that Baldwin's testimony was not invention, a great variety of witnesses were sworn, who corroborated the whole of his testimony, each confirming a part of his information.

Several of these witnesses came from Canterbury, and swore positively that the prisoner was there a short time before the fire; that he had two more cannisters made for him (which he left behind because they were not finished in time, and which were produced in Court) that he purchased some saltpetre there of an apothecary, &c.

(To be continued.)

A PERILOUS VOYAGE.

EXTRACT OF A LETTER FROM PLYMOUTH, FEBRUARY 20.

ON the 30th of last month the 49th and the two battalions of the 85th regiments, embarked at Jersey on board the following transports for Plymouth, viz. The Sovereign, Brainsford, Sea Horse, Eliza, William and Anne, Ceres, Carlise, Calypso, Polly, and Denton; the whole being under convoy of the Rambler gun brig. These vessels had brought the 9th regiment (three battalions) from Lisbon to England, and thence to Jersey. They had been four or five months at sea, and were consequently far from being either clean or well found. However, as the distance from Jersey to Portsmouth is inconsiderable, no great inconvenience would have ensued, had the

troops remained only two or three days on board.

On the 2d instant the whole convoy was ready for sea. The transports had hauled out in the Bay of St. Aubin's, waiting for the signal to sail with a fair wind, blowing rather fresh from the S. W. No signal, however, was made, and they were thus lying for three days in a most dangerous and exposed situation; for had the wind blown hard from the South, they must inevitably have gone on shore.

On the 5th instant, however, the whole convoy got under weigh with every prospect of reaching Portsmouth by the next morning.

But such was not our good fortune, for instead of proceeding immediately

immediately to England, the convoy was brought to anchor in Guernsey Roads the same evening, for the supposed purpose of calling there for transports, having on board the 29th regiment; but these transports, it appeared, had sailed five days before.

“The Roads of Guernsey, environed on all sides with rocks, are still more dangerous than the Bay of St. Aubin. In this perilous situation the vessels rode out a gale all night, some dragged their anchors, and the Denton unfortunately struck on a rock about midnight. She had on board 200 men of the 49th regiment, minute guns were fired, and other signals of distress made. After some time a neighbouring transport, (the Polly) sent off her boats, by whose assistance, together with the exertions of Lieutenant-Co-

lonel Sheaffe, the officers on board, and the proper and steady behaviour of the men, every person was brought off safe, immediately after which the wreck went down.

“The men from the Denton having been distributed among the other transports, the convoy once more put to sea (Feb. 8th), but just as it got within sight of the Needles Light, the wind suddenly shifted to the N. E. Every possible exertion was made to bring her to Spithead, but in vain, the convoy was much dispersed. The greater number of the vessels kept the sea for five or six days, after which they were constrained to bear away for Plymouth, where all the convoy happily arrived, except two, the Calypso and the Carlisle, and it is hoped they have either reached Portsmouth, or put into Weymouth.”

TO THE EDITOR OF THE NAVAL MAGAZINE.

MR. EDITOR,

AT a time like the present, when we can only look forward for success and prosperity from the bravery and skill of our gallant Tars, it is sincerely to be hoped and wished, that Government would take into their serious consideration, the very small stipend allowed to Officers for the dangerous services on which they are so frequently employed—a stipend so small, that, at the present period, when every article of life is so exorbitantly dear, as not to enable them (unless possessed of private property) to leave, during their absence, even a decent competence for the maintenance of a wife or children;

which disagreeable circumstance must greatly increase the horror of separation from relatives tenderly beloved.

There are few people, of any description, who have not had some additional allowance, on account of the increase of taxation, and great advance of every article in life: surely, then, the same indulgence will be granted to our natural and brave protectors, whose gallant exertions, on every occasion, has so long been the boast and glory of their country.

Your's, &c.

A. B.

HISTORY OF THE ENGLISH EAST-INDIA COMPANY.

(CONTINUED FROM PAGE 71.)

THUS the unfortunate men at Amboyna were examined, tortured, and forced to confessions, being the work, as the East-India Company's account expresses it, "of eight days, from the 15th to the 23d of February;" after which there was a respite of two days before the sentence. John Powell, being acquitted, went to the prison to visit John Fardo, one of those who had accused Captain Towerfon: to him Fardo religiously protested his innocence, but especially his sorrow for accusing Master Towerfon; for, said he, the fear of death doth nothing dismay me; for God, I trust, will be merciful to my soul, according to the innocence of my cause. The only matter that troubles me is, that through fear of torment I have accused that honest and godly man Captain Towerfon, whom I think in my conscience, was so upright towards all men, that he harboured no ill-will to any man; much less would attempt any such business as he is accused of. He farther said, he would before his death receive the Sacrament, in acknowledgment that he had accused Captain Towerfon falsely and wrongfully, only through fear of torment.

On the 25th, all the prisoners, as well the English, as the Portuguese and Japanese, were brought into the great hall of the castle, and there were solemnly condemned, except the four formerly acquitted; Captain Towerfon, during his imprisonment, having been kept from the rest, so that none could come to speak with

him, wrote much in his chamber; but all was suppressed, save only a bill of debt, which one Thomas Johnson, a free burgher, got of him, by favour of his keepers, for an acknowledgment, that the English Company owed him a certain sum of money.

In the end of this bill he wrote these words, "Firmed by the form of me Gabriel Towerfon, now appointed to die, guiltless of any thing that can be justly laid to my charge. God forgive them their guilt, and receive me to his mercy. Amen."

This bill being brought to Mr. Weldon, the English agent at Banda, he paid the money. The following words, written in a table-book, were also brought to Mr. Weldon, by one that served the Dutch:

"We whose names are here specified, John Beaumont, William Griggs, Abel Price, and Robert Brown, being apprehended for a conspiracy for blowing up the castle of Amboyna, were, through torment, constrained to speak that which we never meant, nor once imagined; the which we take upon our deaths and salvation. They tortured us with that extreme torment of fire and water, that flesh and blood could not endure; and this we take upon our deaths, that they have put us to death guiltless of our accusation."

Samuel Colson wrote much to the same effect in the waste leaves of a Prayer Book, which he delivered to one who served the Dutch, and, having sewed it up in his bed, afterwards, at his opportunity

opportunity, delivered it to Mr. Weldon. All these writings are yet extant.

The 26th day of February, the prisoners were all brought into the great hall of the castle, except Captain Towerfon and Emanuel Thompſon, to be prepared for death by the miniſters. The Ja-paneſe now all in general, as ſome of them had done before in particular, cried out unto the Engliſh, ſaying, oh! you Engliſhmen, where did we ever in our lives eat with you, talk with you, or, to our remembrance, ſee you? The Engliſh answered, why then have you accused us? The poor men, perceiving they were made to accuse each other, ſhewed their tortured bodies, and ſaid, if a ſtone were thus burnt, would it not change its nature, how much more then we that are fleſh and blood? Whiſt they were all in the hall, Captain Towerfon was brought up into the place of examination, and two great jars of water carried after him: what he did there or ſuffered, is unknown to the Engliſh; but it ſeems they made him then underwrite his confeſſion.

The Engliſh ſtill profeſſed their innocency, and prayed the miniſters that they might all receive the Sacrament, as a ſeal of the forgiveness of their ſins; and, withal, thereby to confirm their laſt profeſſion of their innocence; but this would by no means be granted. Whereupon Samuel Colſon ſaid thus to the miniſters, tell us, if we ſuffer guiltleſs, being otherwiſe true believers in Jeſus Chriſt, what ſhall be our reward? The preacher answered, by how much the clearer you are, ſo much the more glorious ſhall be your reſurrection. With that word Colſon ſtarted up, embraced the

preacher, and gave him his purſe, with ſuch money as he had in it, ſaying, God bleſs you; tell the Governor I freely forgive him, and I intreat you to exhort him to repent of his bloody tragedy wrought upon us poor innocent ſouls. Here all the reſt of the Engliſh ſignified their conſent to this ſpeech. Then ſpoke John Fardo to the reſt, in the preſence of the miniſters: my countrymen and brethren, here condemned with me to die, I charge you all, as you will answer it at God's judgment ſeat, if any of you be guilty of this matter, diſcharge your conſciences, and confeſs the truth, for ſatiſfaction of the world. Hereupon Samuel Colſon ſpoke with a loud voice, ſaying, according to my innocence in this treaſon, ſo, Lord, pardon all the reſt of my ſins, and, if I be guilty thereof, more or leſs, let me never be partaker of thy heavenly joys; at which words every one of the reſt cried out, Amen: for me Amen; for me, good Lord. This done, each of them, knowing whom he had accused, went to one another, begging forgiveness for their falſe accusation, being forced from them by the pains or fear of tortures; and they all freely forgave one another. After this, they ſpent the reſt of that doleful day and night in prayer, and comforting each other, though their Dutch guards offered them wine, bidding them drink luſtily, and drive away ſorrow, according to the cuſtom of their country in the like caſes, but contrary to the nature of the Engliſh.

On the morning of the next day, the 27th of February, all things being prepared for the execution, the condemned were brought forth into the hall, along

by the chamber, where the pardoned were, who stood in the door to give and take the farewell of their countrymen now going to execution; staying a little for this purpose, they prayed and charged those that were saved, to bear witness to their friends in England of their innocence, and that they died not traitors, but so many innocents, merely murdered by the Dutch, whom they prayed God to forgive their blood-thirstiness, and to have mercy upon their own souls. Being brought into the yard, their sentence was read unto them from a gallery; and they were then carried to the place of execution, together with nine Japanese and a Portuguese, not the ordinary and short way, but round about, in a long procession through the town, the way guarded by five companies of soldiers, Dutch and Amboynese, and thronged with the natives of the island, who, upon the summons given the day before by the sound of a drum, flocked together to behold this triumph of the Dutch over the English. Emanuel Thompson told the rest, he did not doubt but God would shew a sign of their innocence; and every one of them took it upon their death, that they were utterly guiltless; and so one by one, with great cheerfulness, suffered the fatal stroke.

The Dutch had prepared a cloth of black velvet for Captain Towerfon's body to fall upon, which, being stained and defaced with his blood, they afterwards put to account of the English Company. At the instant of the execution there arose a great darkness, with a sudden and violent gust of wind and tempest, whereby two of the Dutch ships, riding in the harbour, were driven from their an-

chors, and with great labour and difficulty saved from the rocks. Within a few days after, one Dunckin, who had told the Governor, that Robert Brown, the English taylor, had a few months before told him, he hoped that within six months the English should have as much to do in the castle of Amboyna as the Dutch; This fellow, coming upon an evening to the grave, where the English were buried, being all, except Captain Towerfon, in one pit, fell down upon the grave, and, having lain there a while, rose up again stark mad, and so continued two or three days together, and then died. Forthwith also fell a new sickness at Amboyna, which swept away above 1000 people, Dutch and Amboynese, in the space wherein there usually died not 30 at other seasons. These signs were by the surviving English referred to the confident prediction of Emanuel Thomson, and were by the Amboynese interpreted as a token of the wrath of God for this barbarous tyranny of the Dutch.

The day after the execution was spent in triumph and public rejoicing by the Dutch for their deliverance from this pretended treason. The Governor and Fiscal, having now made an end at Amboyna, set out for Banda, where they made very diligent inquiry against Captain Weldon, the English agent there, yet found no colour or shadow of guilt to lay hold on, but at last entertained him with courteous speeches, professing to be very glad that they found him, as well as the English at Jaccatra, to be without suspicion of this treason.

Captain Weldon, perceiving the disorder and confusion of the English

English Company's affairs at Amboyna, by means of this dealing of the Dutch, hired a Dutch pinnace at Banda, and passed to Amboyna; where, instantly upon his arrival, he recalled the Company's servants, who were sent by the Dutch Governor to the Upper Factories. Having inquired of them, of the whole proceedings lately passed, he found by their constant and agreeing relation, that there was no such treason of the English as was pretended, and understanding what strict command the Governor had given to the surviving English, not once to talk, or confer with the country people; concerning this bloody business, though the country people every day reproached them with treason, and a bloody intention to have massacred the natives, and to have ripped up the bellies of women with child, and such-like stuff, wherewith the Dutch possessed the poor vulgar, to make the English odious to them.

He, the said Mr. Weldon, perceiving, therefore, that it neither suited with the honour nor profit of the English Company, his masters, to hold any longer residence in Amboyna, took the poor remnant of the English along with him in the hired pinnace for Jaccatra. As soon as this heavy news of Amboyna came there, the President sent to the General of the Dutch, to know by what authority the Governor of Amboyna had thus proceeded against the English, and how he and the rest of the Dutch at Jaccatra approved of the proceedings.

He returned for answer, that the Governor of Amboyna's authority was derived from the Lords States-General of the United Netherlands, under whom he

had lawful jurisdiction both in criminal and civil causes; and that such proceeding was necessary against traitors, as the English appeared to be by their own confessions; a copy whereof he sent to the English President, who sent the same back to be authenticated, but received it not again.

Now, as the Dutch defended their own proceedings by the confessions of the parties executed, acknowledging severally under their hands, that they were guilty of the pretended crime, it will not be amiss to recollect here certain circumstances dispersed in several parts of this narration, whereby as well the innocence of the English, as the unlawful proceeding against them may be manifested.

First, therefore, it is to be remembered, that the Japanese were apprehended, examined, and tortured three or four days before the English were attacked. Thompson, in the mean time, and the very first day of the examination of the Japanese, went to the castle to ask leave of the Governor to land some rice, and brought back the news to the English house of the cruel treatment of the poor Japanese. This had been warning enough to the English, if guilty, to shift for themselves by flight in the small boats of the Amboyners, which they might easily have done, and transported themselves out of the jurisdiction of the Dutch; but not having consulted their safety by flight is a very strong presumption, that they were as little privy to any treason of their own, as suspicious of any treacherous design on their own lives.

In the next place, let it be considered, how impossible it was for the English to achieve this pretended enterprise. The castle of

Amboyna was of very great strength, the garrison consisted of between 200 and 300 men, besides upwards of that number of the free burghers in the town. Durst 10 Englishmen, whereof not one was a soldier, attempt any thing against such strength? At the seizure of the English house, all the arms and ammunition there found were but three swords, two muskets, and half a pound of powder. As for the assistance of the Japanese, they were also but 10, and all unarmed, as well as the English.

But let it be imagined these 20 persons, English and Japanese, were so desperate as to hazard the exploit, how should they be able to master the Dutch in the castle, or to keep possession, when they had got it? What had they to second them? There was neither ship nor pinnace of the English in the harbour. All the rest of the Japanese in the island were not 20 persons. The nearest of the rest of the English were at Banda, 40 leagues from Amboyna; and those but nine persons, all afterwards cleared, by the Governor and Fiscal themselves, from all suspicion of this pretended crime, as were also the rest of the English at Jacatra.

But what shall be said of the general and religious profession made by the condemned English of their innocence to their countrymen at their last parting with them, and their sealing this profession with their last breath and blood, even in the very article of death, and in the stroke of the executioner? Hence it is evident, that this barbarous and tyrannical proceeding was entirely owing to the insatiable covetousness of the Dutch, to gain by this cruel treachery the

sole trade of the Moluccas, Banda, and Amboyna, which soon after became the event of this bloody process.

It must be confessed, that this is in all respects a most astonishing and surprising relation. But perhaps it may be accounted still stranger, that, when they had done it, they durst justify it, and justify it even here.

This produced the account we have partly given our readers, which the East-India Company were not at liberty to publish, till the Dutch made their appeal to the public themselves. After this, indeed, the publishing of their case could be no longer refused them, especially as what they offered was supported upon the fullest proofs upon oath, registered in the Court of Chancery. We see from hence the great consequence of the liberty of the press; had it been open at that time, it had been impossible to have hindered the nation from receiving ample satisfaction for such a flagrant injury, such an intolerable insult. But, as it was, there was a party, we are told, in King James's Court, who, if they did not justify, at least excused this horrid fact. At this juncture also, the States were actually demanding and receiving assistance from the Crown of Great Britain; and that too as large in its nature, and as effectual in its consequences, as any they had received in the time of Queen Elizabeth, and for which the States expressed as much gratitude to that Monarch, as ever they did to the Queen; and, as it clearly appears, with just as much sincerity. We would not, however, be understood to mean, that the tragedy of Amboyna was acted in consequence of any instructions from Holland,

Holland, since that would not only be unfair, but untrue; but then the reason of this ought to be attended to, which was, that the Prince of Orange was at the head of their affairs, and they could not, under the eye of their Stadtholder, take any such bloody resolutions. But, in the Indies being at full liberty, the true genius of the nation displayed itself there; and the Dutch writers in those very times boast, that the General of the East-India Company kept as great a court, and made in every respect as magnificent an appearance as the Prince of Orange himself; which plainly proves, that, as they hated the government of the Prince of Orange, so they were willing that strangers should take notice of their independency and power in another part of the world, where the government was in such hands as they best approved.

The genius of the Dutch nation, and of their East-India Company, was gain, at all events, and no matter at whose expence. The genius of the Dutch government at home was to live fair with her neighbours, and, by smooth language, high professions of friendship, and ready compliance in trifles, to secure their protection, and command their assistance. It was this disposition in the latter, that engaged them to make the treaty with Great Britain, in 1619, by which there was a sort of union made between the two East-India Companies.

This was what the Dutch Company disliked, and resolved not to bear; which induced them to frame and execute that barbarous and bloody contrivance at Amboyna, which answered their ends effectually. For, first, it abso-

lutely dipped the States-General in their quarrel; the first question in the dispute being this, whether the Governor of Amboyna, by virtue of the authority derived to him from them, had any right to proceed against the English? And next, it totally destroyed all confidence in the treaty, and obliged the English East-India Company to abandon the methods prescribed by it, which turned them out of the spice trade entirely, the great thing aimed at by the Dutch, and which they never otherwise could have accomplished.

The interest of the Duke of Buckingham was at this time so great with King James, that it was thought, if he had not been some way or other appeased, the massacre at Amboyna would not have passed as it did; but at the same time, we must confess, that we do not believe he was capable of being bribed to such a behaviour. We rather think he was misled and imposed upon; and make no question that the Dutch account of the affair was transmitted to some person in his confidence for that purpose. It is an easy matter to speak ill of the dead, and too common a practice to tear those characters to pieces, which are least likely to be defended; but this we are not inclined to do; though, to shew that it is not without some reason we suspect the Duke of Buckingham to have had a large share in preventing King James from testifying a becoming resentment upon this occasion, we will relate a particular fact that led us into this opinion: the East-India Company, to perpetuate the memory of this barbarous transaction, caused the tortures and sufferings of the English at Amboyna to be very exactly painted, and hung

hung up in their hall; which picture, by the direction of Buckingham, was taken down, and the reason assigned for so doing, was, that, as it had not been thought proper to involve the nation in a war on this account, it was, by no means, decent, that such a picture should remain in public view; since, at the same time that it exposed the cruelty of the Dutch, it threw some kind of odium on the English administration.

The death of King James happened in a very short time after this misfortune, and the troubles of various kinds, which very early disturbed the reign of King Charles I. put it out of his power to pursue that matter, as he seems to have intended; for, in the beginning of his reign, he granted letters of request to the States-General for obtaining satisfaction, which, however, had not their effect, neither did the King pursue that point any farther; the reason of which we presume to have been this, that, finding other causes of complaint against the Dutch, he absolutely determined to lessen their strength, as a maritime power; the rather, because he found them joining with the French, in order to the execution of a scheme, which they have had always in view, of dividing the Netherlands with France, and then disputing, in confederacy with her, the sovereignty which the English claim over the narrow seas. This King Charles I. saw, and determined to prevent; and, in order thereto, found it necessary to fit out a fleet, which induced him to demand ship-money; and that began those confusions which ended in the ruin of our government, and leaving the Dutch in possession of all that

trade, which they had acquired at our expence.

The immense wealth, and great naval power of the Dutch, acquired, in the times of our distractions, and when it was impossible for us to prevent it, encouraged them to think of establishing their own wealth and grandeur by a total suppression of our maritime force; to which, perhaps, they were tempted from an opinion, that the Parliament, or, as it was then called, the Commonwealth of England, would scarce venture upon a war abroad, when she had hardly extricated herself from one at home. But they were mistaken, for the Parliament of England, however they came by their right, or by their power rather, were determined to make a just use of it; and this produced the first Dutch war, in which they, for the reasons before assigned, were the aggressors, but suffered dearly for it in the end; since, after repeated defeats at sea, and notwithstanding they helped to procure a new revolution here, by setting up the Protector, instead of the Parliament, yet they were forced to submit to a peace upon the terms prescribed to them, which was signed at Westminster, April the 5th, 1654; and by this treaty the States were obliged to do that justice to Cromwell, which they had refused to King James and King Charles.

The 27th article of that treaty was conceived in these words:

“It is agreed, that the Lords the States-General of the United Provinces shall take care that justice be done upon those who were partakers or accomplices in the massacre of the English at Amboyna, as the Republic of England

is pleased to term that fact, provided any of them be living."

In consequence of this treaty, there was a commission granted on both sides, which sat at Goldsmith's-hall, in order to hear and determine the complaints that should be made to them both by the English and Dutch East-India Companies, and their determination was to be final. The English Company put in a charge, consisting of 15 articles, concluding, that, besides the loss of their settlements, they had suffered to the amount of the sum of 2,695,999 pounds, 15 shillings, sterling. The Dutch East-India Company, on the other hand, brought in their demands, but without entering exactly into particulars; yet ascertaining in the

close their expences at 850,000 pounds.

It was also decreed and ordained, that the Dutch Company should pay here at London, before the first day of January next ensuing, the sum of 3,615 pounds sterling, to the several administrators of the English massacred at Amboyna.

This award or arbitration was strictly put in execution as soon as it was made, and ought therefore to be considered as decisive against the Dutch, who, by these small and inconsiderable satisfactions to the representatives of those that were murdered at Amboyna, clearly admitted, and took upon themselves the guilt of that whole proceeding.

(To be continued.)

CAPTURE OF THE KENT EAST-INDIAMAN.

FROM THE INDIA TELEGRAPH OF THE 18TH OCTOBER, 1800.

ON Sunday last accounts were received in town, (Calcutta) of the capture of the Hon. Company's ship Kent, Captain Rivington, after an engagement of considerable duration with the Confidence, Captain Surcouff, off the Sand Heads. The following particulars we have copied from the Mirror:

On Tuesday morning the 7th instant at day-light, a strange sail was discovered in the N. W. quarter; the Kent at that time was lying to for a pilot, and Captain Rivington, conceiving the vessel in sight to be a pilot schooner, immediately bore down, hoisted

his colours, and made the signal for a pilot; the stranger upon this made sail, and hauled up towards the Kent; it was soon after discovered that she was a ship, the hands were immediately called to quarters, and the ship prepared for action. Upon her approach to the Kent, as she shewed no colours, a shot was fired at her from the larboard side, which was followed up, as she passed upon the opposite tack, by a broadside, and a constant fire kept up while she was within reach of the guns.

The privateer, for it was now ascertained to be so, soon afterwards tacked, came up on the larboard

board side, and commenced the engagement within about musket shot, but without doing much injury, although she continued in this position for some time. She then shot a-head, and passing round the bow of the Kent, renewed the engagement on the other side, nearly at the same distance, and for the same length of time, but with as little effect as before. She afterwards made sail a-head, as if with the intention of relinquishing the attack and making off, which she could easily have done, having greatly the superiority in sailing: when she had got about the distance of half a mile a-head of the Kent, she was, however, observed to haul her main-sail up, and wear round immediately towards her; and in about ten or fifteen minutes afterwards, or as soon as her guns would bear, she for the first time hoisted National Colours, (Surcouff afterwards declared that he had forgot them before) and fired a broadside and a volley of musketry from every part of the ship, which was immediately returned by the Kent, and continued while her guns would bear; the privateer then wearing round her stern, ranged close up along-side, and received a full discharge from the Kent's starboard guns; at this moment she fired a whole broadside, and threw a number of hand-grenades from her tops into the Kent, some of which penetrated the upper-deck, and burst on the gun-deck, at the same time a fire of musketry was kept up from her tops, which killed and wounded a great number of the passengers and recruits that were on the quarter-deck and poop.

When the ships were completely locked with each other, Cap-

tain Surcouff entered at the head of about 150 men, completely armed for boarding, having each a sabre and a brace of pistols; the contest upon deck was now desperate, and lasted for about 20 minutes, but the enemy having greatly the superiority both in numbers and arms, were victorious, and a dreadful carnage ensued, they shewing no quarter to any who came in their way, whether with or without arms; and such was their savage cruelty, that they even stabbed some of the sick in bed.

Upon gaining possession of the poop, the French immediately cut down the colours, and soon after had complete possession of the ship.

Captain Surcouff, finding some disinclination in his crew to board, had been under the necessity of plying them several times with liquor, as well as to promise them an hour's pillage, in the event of carrying the ship, and this time they completely occupied, breaking open every package they could come at, and even taking the coats, hats, shoes, &c. from the persons of the officers and passengers.

From the commencement of the action, until the French were in possession of the ship, was about an hour and 7 minutes; and from the gallant manner in which the officers and crew of the Kent behaved while the ships were close of each other, there is not a doubt but she would have overcome the privateer; but their being a very great deficiency of small arms, they had no means of repelling such a number of boarders so well prepared for close action; and Captain Surcouff acknowledged, that had he not succeeded in tak-

ing her, his own ship must have soon sunk along-side.

It is with extreme regret we add, that Captain Rivington, after the most manly conduct in the defence of his ship, fell by the musquetry from the tops of the privateer, while Surcouff was in the act of boarding.

In the afternoon, the officers, passengers, and crew of the Kent were sent on board an Arab vessel, which hove in sight, and which had been plundered by the privateer the day before: some of the seamen were, however, detained on board the privateer, and put in irons, with the hopes of inducing them to enter. The chief officer, surgeon, and surgeon's mate, with about 13 of the most dangerously wounded, were detained on board the Kent, under pretence of its requiring too much time to remove them.

Although the prize-master informed the unfortunate people who were sent on board the Arab, that there was abundance of provision and water, yet upon inquiry there was found only a very small quantity of rain water, scarcely equal to half a pint each per day for four days, with a few dates, and raw rice to subsist on, and they were consequently reduced to the utmost distress, before they were relieved by one of the pilot schooners which they met in the roads.

List of Officers, Seamen, Passengers, and Troops killed and wounded on board the Hon. Company's ship Kent.

R. Rivington, Esq. Commander, killed.

Mr. J. Findlay, carpenter, ditto.

Mr. W. Bazely, boatswain's mate, ditto.

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Mr. R. Youl, third officer, dangerously wounded.

Mr. J. Tween, fourth officer, dangerously wounded.

John Cooper, seaman — Henry Barnsley, ditto — Cornelius Zadh, ditto—ditto, and left on board the Kent.

William Karr, ditto, wounded.

Mr. W. Cator, free merchant, Bengal, killed.

Mr. T. H. Graham, writer, ditto, ditto.

Mr. J. Puller, ditto, ditto—Mr. Benjamin Tichburn, cadet, Madras—Mr. R. Sherwood, assistant surgeon, ditto, dangerously wounded, and could not be removed from the Kent.

Mr. J. Ewer, writer, Bengal, slightly woundrd.

Mr. John Warner, cadet, wounded.

Mr. H. Gibson, assistant surgeon, ditto.

Mr. R. Moor, cadet, Madras, wounded, since dead.

Mr. Alex. Pentland, ditto, ditto, ditto.

Mr. C. Gahagan, ditto, ditto, wounded.

Mr. C. Mitchell, ditto, ditto, ditto.

Mr. L. S. Smith, ditto, ditto, ditto.

Corporal Wally, H. M. 10th regiment of foot, killed.

T. Cooper, H. M. 76th ditto, ditto.

S. Cole, H. M. 27th light dragoons, ditto.

J. Davies, H. M. 25th ditto, ditto.

J. Pickering, H. M. 29th ditto, ditto.

J. Mullagen, Hon. Company's recruit, ditto.

Captain Pilkington, aide-de-camp to Hon. General St. John, severely wounded.

R

Ensign

Ensign Palmer, H. M. 10th regt. of foot, dangerously wounded.	W. Colliers, H. M. 27th light dragoons, ditto.
Ensign Byne, H. M. 76th, ditto, ditto.	Henry Perry, ditto—ditto.
Serjeant O'Brien, H. M. 10th ditto—Serjeant M'Cullum, H. M. 29th light dragoons—P. Lucas, H. M. 76th foot—A. Crowdall, H. M. ditto, ditto—Francis Fletcher, H. M. ditto—Henry Magnes, H. M. ditto—J. Floyd, H. M. 25th light dragoons, dangerously wounded, and could not be removed from the Kent.	Samuel Daniels, H. M. 10th regiment foot, ditto.
Corporal Finegan, H. M. 29th light dragoons, wounded.	Richard Gillings, ditto—ditto.
Corporal Spiecr, 76th foot, ditto.	G. Wright, H. M. 29th light dragoons, ditto.
John Healing, ditto—ditto.	J. Griffiths, Hon. Company's recruit, ditto.
John Seawood, ditto—ditto.	Henry Hayding, ditto—ditto.
W. Potts, ditto—ditto.	John Gamerith, ditto—ditto.
	Andrew O'Neal, ditto—ditto.
	John Stafford, ditto—ditto.
	William Dickson, ditto—ditto.
	E. Ford, private, H. M. 76th foot, dangerously wounded, and left on board the Kent.
	Abstract, 11 killed
	44 wounded.
	Total killed and wounded 55

TO THE EDITOR OF THE NAVAL MAGAZINE.

MR. EDITOR.

IT may amuse some of your Naval Readers, and afford an honest gratification to their pride, as well as to that of the whole country, to read, in this day of our maritime glory and security, the following records of the condition from which our Navy has risen, and to see that at no very distant period, an English Prince thought Constantinople too remote to be visited by his fleet, and an English Admiral held the rolling of a three-decker unfit to be endured by persons of "better sort."

In the year 1500, Henry the Seventh thus answered an application from the Court of Rome to send a fleet against Constantinople.

"That no Prince on earth should be more forward and obe-

dient, both by his person and by all his possible forces and fortunes, to enter into this sacred warre than himselfe. But that the distance of place was such, as no forces hee should raise for the seas could bee levied, or prepared, but with double the charge, and double the time at the least that they might be, from other Princes, that had their territories nearer adjoining. Besides, that neither the manner of his ships, having no gallees, nor the experience of his pilots and mariners, would bee so apt for those seas as theirs."—Lord Bacon's Life of Henry VII. edit. 1622, p. 200.

Sir Walter Raleigh, in his "Letter to Prince Henry, touching the Model of a Ship," has the following passages:

"A ship

“A ship of 600 tons will carry as good ordnance as a ship of 1200 tons, and where the greater hath double her ordnance, the less will turn her broadside twice, before the great ship can wind once, and so no advantage in that overplus of guns.

“Two decks and an half is enough, and no building at all above that, but a low master's cabin.

Our masters and mariners will

say, that the ships will bear more well enough; and true it is, if none but ordinary mariners served in them. But men of better fort, cannot so well endure the rolling and tumbling from side to side, where the seas are never so little grown, which comes by high charging.”
Sir Walter Raleigh Remains.

I am, Sir, your's,

BRITANNICUS.

WRECK OF THE INVINCIBLE.

IT is with much concern we announce the total loss of His Majesty's ship *Invincible*, of 74 guns, Captain Rennie, which ran aground on the Norfolk Coast. The ridge of sand on which this melancholy accident happened, is called the Hamondiburg, or Hippisburg, and is situated about 14 miles from Winterton. Dreadful to relate! the number of human beings, who perished on this occasion, amounts to upwards of 400, including the Captain and the greater part of the officers; 195 only out of the whole of the crew and passengers, having been saved from the wreck.

Rear-Admiral Totty, who was proceeding in the *Invincible* to join the North Sea Fleet, is happily among the survivors. He arrived in town, and immediately waited on the Lords of the Admiralty.

Of this truly lamentable event we shall give an extract of a letter and further interesting particulars.

Extract of a Letter from a Midshipman of his Majesty's late

ship the *Invincible*, to a Friend in Town, dated Yarmouth, March 18.

“Only two days have elapsed since I last wrote to you, and in that short space the most melancholy accident has happened, namely, the total loss of our ship. We set sail from Yarmouth on Monday morning for the Sound, to join the fleet under the command of Admiral Sir Hyde Parker, and, about two o'clock in the afternoon, the ship struck on a sand bank, where she beat most violently for upwards of two hours, when her masts were cut away, and she immediately got into deep water. Her anchor was then cast, and we all thought ourselves safe; for, notwithstanding she leaked considerably, the water gained but little upon us. Our signals of distress were heard and answered by a cutter, which immediately bore down to Yarmouth, to give intelligence of our distress; and we therefore hoped, with the assistance that should arrive, to be able to save the ship, as well as ourselves.

ourselves. But God ordained it otherwise. The rudder being unfortunately gone, the ship became unmanageable, and, in the evening, she again drove on the bank, when we all gave ourselves up for lost. Through God's providence, however, a fishing-smack, at this awful juncture, hove in sight, and the Admiral, myself, and two or three more, succeeded in getting on board of her; but the rest, in endeavouring to do the same, lost all the boats they were able to get overboard. In this melancholy condition, she remained till the following morning, when, oh! shocking to relate, she entirely sunk; we being all the time spectators of the distressful scene, without any possible means of affording the sufferers the least assistance, as any attempt to that effect would only have involved ourselves in the general calamity. By God's providence, however, the ship's launch, full of men, at length got clear of the wreck, and by her assistance we were enabled to save some others. In the whole about 195 are saved. The greater part of the officers, including the Captain, have unfortunately perished.

For my own part, I have lost every thing but the clothes I now wear, two shirts, and three pair of stockings, with part of my money."

The Invincible first struck upon the fatal bank between two and three in the afternoon. In this situation she remained near three hours, when the mizen-mast went by the board, and the main-mast was immediately after cut away. The ship, to the infinite joy of the crew, then dropped from about 3½ into 17 fathom water, where

however, unfortunately losing her rudder, she soon became unmanageable, and was again driven on the bank. A fishing smack now approached the wreck; on which two boats belonging to the Invincible were ordered out. On board one of these, the Admiral, the Purser, four Midshipmen, three of the Admiral's servants, and six or eight seamen, reached the fishing smack in safety, as did also the other boat full of people. Both of them immediately returned to the ship, but on re-approaching the smack, one was forced away, and every person on board would inevitably have perished, had not a collier which happened to be passing at this critical moment, happily picked them all up. This vessel afterwards afforded every assistance that humanity urged, or that she was capable of giving, and was the means of saving the lives of many of the crew.—The fishing smack, with the Admiral on board, being unable to afford the least assistance to the ship, remained at anchor during the whole of Monday night.

On the approach of day, the Master of this vessel expressed an unwillingness to go any nearer the wreck; but Admiral Totty, in direct opposition to him, caused the cable to be cut, and immediately proceeded to the ship. Melancholy, however, to relate, while he was doing every thing of which human exertion is capable, to assist the unhappy people on board, the wreck once more got into deep water, and gradually sunk, to the infinite distress of the Admiral and the other spectators, who were nearly frantic with grief, at this tremendous scene of human misery and destruction. While the
ship

ship was thus rapidly going down, the launch was hove out—as many of the crew as she could possibly hold, instantly jumped on board, and had only time to clear the poop, when the vessel, with upwards of 400 souls, entirely disappeared, and went to the bottom. A number of the unhappy sufferers attempted to get on board the already over-laden launch, but as no more could be permitted to enter, without the certain loss of the whole, they were struck away with the oars, and in a few seconds became wholly ingulphed in the pitiless waters!

Captain Rennie, after the ship had sunk, attempted to swim to the launch, and after a severe exertion, got within reach of the oars, when, exhausted with fatigue, and unable to make any farther effort, he calmly resigned himself to his fate. Lifting up his hands, as if to implore the blessing of Heaven, and immediately after placing them upon his face, he went directly down without another struggle. Thus perished a brave and meritorious officer, whose eminent virtues as a man ensured him the esteem of all who knew him, and whose professional fame, had he survived, bid fair to render him an ornament to his country.

All the other commissioned officers of the ship, except Lieutenants Tucker and Quash, together with all the officers of marines, and most of their men, likewise went to the bottom.

About 70 or 80 of the crew were saved by means of the launch, the whole of whom had assembled

upon the fore-castle; but all those who remained in the poop were lost.

The total number of human beings who thus found a watery grave, amounts to upwards of 400, among whom were several passengers, on their way to join other ships belonging to the North Sea fleet. The number saved, including officers, is stated at 195.

This afflicting disaster is attributed solely to the ignorance of the Pilot. He belonged to Harwich, and was taken on board at Sheerness. Instead of taking the ship through the ordinary channel from Yarmouth, he steered her through the narrow passage of the Cockle; and when she ran upon the Sands, he insisted that the fatal spot was not laid down in any chart. In this point, however, he was soon confuted by the gunner of one of the ships of Admiral Parker's fleet, who was only a passenger on board the *Invincible*. This man soon convinced the Pilot of his error, by shewing him the exact spot distinctly marked. But the pilot is among the numerous sufferers, and, in common charity, death must now be considered as having expiated all his faults. When the mizen-mast went over board, he also fell from the deck, and was never after seen.

The *Lively* cutter was for several hours within sight of the wreck, but was unable to afford the distressed people on board, the least assistance. A boat from *Winter-ton* was very active on the occasion.

NAVAL NOTICES.

MONTHLY STATEMENT OF THE DISTRIBUTION OF
THE BRITISH NAVAL FORCE,

Exclusive of the Hired Armed Vessels, which are chiefly employed
in protecting the Coasting Trade of Great Britain.

	Line.	Fifties.	Frigates.	Sloops.	Total.
In port, and fitting - - -	24	6	38	84	152
Guard Ships, Hospital and Prison Ships, at several Ports - - -	17	1	0	0	18
In the English and Irish Channels - - -	44	1	40	52	137
In the Downs & North Seas - - -	7	2	13	40	62
At the West India Islands and on the Passage - - -	1	1	23	25	50
At Jamaica - - -	6	1	21	10	38
In America and at Newfoundland - -	1	0	2	6	9
East Indies and on the Passage - - -	8	5	8	14	35
Coast of Africa - -	0	0	1	4	5
Portugal, Gibraltar, & Mediterranean - }	19	4	66	34	123
Total in Commission -	127	21	212	269	629
Receiving Ships - - -	8	0	5	0	14
Serviceable, and repair- ing for service - - }	5	0	2	1	8
In Ordinary - - -	37	4	25	50	116
Building - - - - -	19	2	5	20	46
Total - - -	196	27	250	340	813

SIR Hyde Parker will have the chief command of the North Sea Fleet, Vice-Admiral Gambier is to be second in command, and Lord Nelson third. The fleet, we understand, will consist of the following ships:

London	98
Neptune	98
St. George	

St. George	98	Leighton	22
Blenheim (reduced to)	74	Ariadne	20
Monarch	74	Perseus	20
Powerful	74	Jaloufe	18
Princess of Orange	74	Victor	18
Zealous	74	Kite	18
Defence	74	Plover	18
Bellona	74	Harpy	18
Ramillies	74	Pylades	18
Ganges	74	Martin	16
Edgar	74	Inspector	16
Utrecht	68	Bittern	16
De Ruyter	68	Driver	16
Leyden	68	Cruiser	16
Gelykheid	68	L'Espeigle	16
Ardent	64	L'Espoir	16
Agincourt	64	Favourite	16
Veteran	64	Lynx	16
Monmouth	64	Ranger	16
Agamemnon	64	Shark	16
Polyphemus	64	Speedwell	14
Raisonné	64	Trial	12
Asia	64	Sulphur—Hecla—Volcano—Ze-	
Lion	64	bra—Terror—and Explosion	
Dordrecht	64	bombs; Alecto—Discovery—	
Director	64	and Otter, fire-ships.	
Prince Edward	60		
Texel	54	The Shannon frigate has cut	
Glatton	54	out of ports in Norway three ves-	
Madras	54	sels which had been sent in there	
Assistance	50	by French privateers.	
La Pomone	44	From Egerfund, Captain Pater	
La Desirée	40	cut out the Charlotte, Machie,	
La Gloire	40	from London to Boness, and the	
Amazon	38	Jason from Memel for Lynn, and	
Latona	38	from Stavenger, he took the Hen-	
Fortunée	36	ry, Captain Grey, from Dantzic	
Solebay	32	for London, laden with wheat.	
Shannon	32	The Henry, for her better protec-	
Ifis	32	tion, had been lashed by the ene-	
Dart	30	my along-side the town wharf, at	
Helder	28	Stavenger; but, in that situation,	
Lapwing	28	our tars boarded her in the pre-	
Wakzamheid	26	sence of 5000 people, and carried	
Jamaica	26	her out—the two former have ar-	
Hyena	24	rived in the Forth.	
Squirrel	24	All the ships engaged to pro-	
Ann	22	ceed to India this season, in the	
Albion	22	service of the East-India Com-	
Selby	22	pany, are to be clear of the Chan-	
		nel	

nel by the middle of next month. The *Henry Dundas*, Captain Carruthers, and the *Preston*, Captain Murray, both consigned to Bengal direct, are the last ships to be dispatched, and are appointed to be in the Downs on or before the 6th of April.

We have the pleasure to state, that a vast importation of a most excellent substitute for hemp, from Bengal, is expected by the returning ships of this season. It is said, on good authority, that Bengal is capable of supplying our whole marine with excellent cordage, very little inferior to that manufactured of the growth of Russia.

A letter received from the last over-land dispatch from Bombay, informs us, that the commanders of the enemy's armed vessels seldom come to a regular engagement, if the same can be avoided. They adopt a practice which is universally adhered to in most cases, that of boarding. The number of their crew is concealed between decks, until they are nearly on board their opponent, when they pour in from all quarters, and thus overpower a ship which depends on the effect of her great guns.

The Swedish ship which was alleged to have been made use of by the English, for the purpose of capturing two Spanish frigates at Barcelona, is now detained at Dover by the embargo. She is called the *Hoffnung*, and belongs to Barth in Swedish Pomerania. Martin Rubarth, the master, and the crew of the vessel, have made a formal protest respecting the transaction, in which they solemnly declare the truth of all the circumstances that have already been

stated relative to that subject. The protest concludes as follows:

“ And the said appearers declare, that they have been informed, and verily believe, that the said line of battle ship is called the *Minotaur*, Captain T. Lewis, but they have not been enabled to learn the name of the said English frigate, or of her Commander, and that they used their utmost endeavours for the preservation of the said vessel; that whatever damage or loss the same sustained, was not occasioned by, or through any neglect or default of them, or any of the then crew, or by reason of any defect or default in the said vessel or her tackling, but merely by means of the said capture. Therefore the said master has desired a protest, whereof I, the said Notary (Thomas Paine) at his request, have solemnly protested, and by these presents do protest against the said Captain T. Lewis, and the other officers and crew of the said ship *Minotaur*, and also the officers and crew of the said English frigate, and every other person and cause occasioning the said capture and detention of and for all losses, costs, charges, damages, demurrage, suits and expences, already and hereafter to be suffered and sustained thereby, to be allowed and recovered in time and place convenient.”

Letters from Amsterdam state, that for some time past a great number of sailors, and about 800 newly-raised marines, have been sent to the Texel for the fleet. A great number of sailors have been also sent to Helvoetsluys for the division of the Meuse.

POETRY.

SONNET TO THE OCEAN.

ERE the rich purple of thy growing wave,
Which deviates gently into doubtful
green,
Where the fierce day-beams rush, and love
to lave,
Whilst liquid diamonds flit athwart the
scene;

Ere the soft gale which plays upon thy breast,
And springs on humid wing towards the
shore,

Off'ring to each Hygeia's magic vest,
And adding still to Health's encreasing
store;

Ere thy gay Steine, where flutt'ring graces
rove,
And which the Muses sometimes deign to
know,
Where wanders Harmony, where trembles
Love,
And where thy George's happiest moments
flow--

Ere these I quit, accept this meed from me,
So charm'd, O Sea! so gratified by Thee!

CATHERINE.

ADDITIONAL STANZAS

TO

GOD SAVE THE KING.

Which were sung at the Oratorio, at the Hay-
market Theatre, Friday, Feb. 27.

THY healing arm extend,
Our gracious King defend,
Save our lov'd King.

Lord, in thy mercy hear,
A prostrate nation's pray'r,
Our King! Friend! Father! spare,
God save the King.

Ward off the fatal blow,
Give him again to know,
Comfort and health.
To thee our pray'rs arise,
Humbly we raise our eyes,
Hear--hear our earnest cries,
God save the King.

Sung at the Theatre-Royal Drury-Lane.

O God, thy mercy shed
On his anointed head,
God save the King!
Grant Britain's earnest prayer,
Make him thy special care,
And for his virtues spare,
Great George our King!

A prostrate people see,
Who, with one voice, to thee,
Pray for their King!
O God, remove our fears,
Renew his health and years,
And to a nation's tears
Give back their King!

Sung at the Ancient Concert, Feb. 25.

LORD! to our pray'r attend,
Health in thy mercy send
To George our King.
All ill from him remove,
Long may he live to prove
His grateful people's love,
God save the King.

NAVAL INTELLIGENCE,

FROM THE LONDON GAZETTE.

SATURDAY, FEB. 28, 1801.

ADMIRALTY OFFICE.

Copies and extracts from letters re-
ceived by Vice-Admiral Rainier
from the several Captains and Com-
NAVAL MAG. VOL. III.

manders of His Majesty's ships and
vessels in the East-Indies, from the
25th October, 1799, to the 28th
September, 1800, with accounts of
their respective captures, &c.

S

Copy

Copy of a Letter from Captain William Hills, of His Majesty's ship Orpheus, dated La Copoong, the Streights of Banca, the 25th October, 1799.

SIR,

I have the pleasure to inform you, that on my passage from Ternate to the Streights of Banca. I yesterday discovered two sail off Togolanda, which I chased at one P. M. at three it fell calm, all the boats were hoisted out to tow the ship, and every exertion made to get up with them. On a breeze springing up at five o'clock, we cast off all our boats, but were not able to get along-side of them until a quarter before nine o'clock, when we brought them to a close action on each bow, which continued about a quarter of an hour, when they both struck their colours. They proved the Zeevraght and the Zeelast, the one a brig and the other a large Panchallang, each mounting 22 guns of different calibres, from Macassar, loaded with rice, powder, shot, gun-carriages, and stores from Ternate. The vessels both belong to the Dutch East-India Company.— During the action, I lost one of my best seamen, killed in the main-top, and five wounded, among whom is the first lieutenant, Hodgkins, who received a musket ball through his right arm; his conduct on this, as on every occasion, has given me the satisfaction that warrants my recommending him to your notice and attention. I had great pleasure in observing the zeal of all the officers and men on this occasion, as I have done several other times since my arrival at these islands, which justly entitled them to my thanks. Enclosed I send you a list of the killed and wounded on board the Dutch vessels.

I have, &c.

WILLIAM HILLS.

P. Rainer, Esq. Vice-Admiral
of the Blue, &c. &c. East-Indies,

List of killed and wounded on board the under-mentioned vessels, captured by His Majesty's ship Orpheus, William Hills, Esq. Captain, the 25th October, 1799.

Sanchallang Zeelast, Captain Pieter Janfen. Number on board at the time of the action, 42; 1 killed.

Brig Zeevraght, Captain Pieter Meuse. Number on board at the time of action, 33; 6 killed; Captain Meuse and 6 seamen wounded.

W. HILLS.

Extract of a letter from Captain George Affle, of His Majesty's ship La Virginie, dated Amboyna, the 20th May, 1800, to Vice-Admiral Rainier, Commander in Chief, &c. &c. &c.

I beg leave to acquaint you that I arrived here on the 6th of May. I enclose a list of vessels I captured on my passage, which are all arrived at Amboyna.

A list of vessels captured by Captain Affle, in His Majesty's ship La Virginie, on his passage to Amboyna, between the 22d of March, and 26th April, 1800.

A Dutch prow, mounting 4 fwiwels, small arms, &c. manned with 10 men, laden with fundries, out three days, from Macassar bound to Sambauwa; captured 22d March, in latitude 6 deg. 5 min. south, longitude 117 deg. 25 min. east.

A Dutch prow, mounting 2 brass fwiwels, small arms, &c. manned with 15 men, laden with fundries, six days from Macassar, bound to Sambauwa; captured 26th March, in latitude 5 deg. 51 min. south, longitude 118 deg. 25 min. east.

A Dutch prow, manned with 14 men, laden with fundries, eight days from Macassar, bound to Sambauwa; captured 29th March, in latitude 5 deg. 29 min. South, longitude 118 deg. 46 min. east.

On the 26th April, in latitude 1 deg.

deg. 10 min. south, longitude 126 deg. 25 min. east, fell in with and captured the following vessels, under Dutch colours, from the island of Java, bound to Ternate, viz.

Vrow Helena (ship) mounting 8 six-pound carriage-guns and 4 swivels, manned with 40 men.

Brig Helena, mounting 12 six-pound guns, manned with 20 men.

Brig Braack, mounting 10 four-pound guns, manned with 12 men.

The three latter vessels, laden with annual supplies for the garrison on the island of Ternate, and had on board, exclusive of their cargoes, specie to the amount of 17,943 Spanish dollars.

Extract of a letter from Captain E. O. Osborne, of His Majesty's ship *Arrogant*, to Vice-Admiral Rainier, Commander in Chief, &c. &c. dated on board His Majesty's ship *Arrogant*, at sea, the 26th of June, 1800.

The difficulty of getting water at Anjer Point, induced me to proceed to Mew Bay, where I arrived with the *Orpheus*, the 5th May. The 7th of May we captured a small ship from the Isle of France, in ballast, which was burnt. May 16th, sailed with the *Arrogant* and *Orpheus*, from Mew Bay, and passing to the northward of the islands of Batavia, made the land of Java, 16th May, near Point Indramago, and having Bunkin Island in sight at the same time to the eastward of Batavia; the same discovered a large ship and brig at anchor, to whom we gave chase, and who, after having made some signals to each other, made all sail from us in for the land. It was late in the evening before we got near them, when we discovered the ship to be a vessel of force, and having several guns on her lower deck, and the brig also mounting 14 guns; finding they could not escape us, they both ran on shore at some miles distant from each other,

to the westward point of Indramago. We were soon within random-shot of the ship, and anchored as near as the depth of water would admit, when she began firing at us, which was returned by several guns from each deck. About this time two boats were observed going from her full of men; and as it grew dark shortly after, some of our boats were sent to prevent the crew of the ship from landing, and to summon her to surrender, which they could not do till the morning; this I conclude was with a design of destroying her, if they could have accomplished landing the crew in the night, but the vigilance of our boats prevented this taking place, as her boats were taken, full of men, the first time the attempt was made. At day-break she surrendered, and was taken possession of, when we found her to be the *Hertzoy de Brunwick* (armed ship), belonging to the Dutch East-India Company, Jan Cornelius Baune, Commander, mounting 20 guns on the upper decks, and 8 guns on the lower deck, and manned with 320 men, part of whom had made their escape on shore. At the time boats were sent to prevent the men from landing from the ship, other boats were sent under the direction of Lieutenant Blayney, to board the brig, which was some miles distant from us. This service he accomplished without loss, and soon after brought her near us, when we found her to be the *Dolphin* armed brig, commanded by Jan Vauntyes, belonging to the Dutch East-India Company, mounting 14 guns, and having on board 65 men. May 24th, at day-break in the morning, we captured, close under the land, a small armed brig of six carriage guns, and some swivels, on a cruise from Sumarang, which place she had left the preceding day. On the evening of the 25th we got sight of Japura, and the ship at anchor there; but it fell little wind, and we were obliged to anchor

chor at the distance of 10 or 11 miles from it; as they had observed us from the shore, I thought no time was to be lost, and therefore at eight P. M. sent all the boats, well manned and armed, with Lieutenant Blayney Rice, who got to the ship about midnight; and though she had been hauled close to the shore (on seeing us in the evening), under a small battery, yet the surprize was complete, and she was boarded without any loss, many of the crew jumping over-board at the time. The battery fired on them so soon as they discovered her to be in our possession; but though some of the boat oars were broke by the shot, no other accident happened, and they effected getting her out before day-light, when she joined us, and we found her to be the Dutch East-India Company's ship *Underneming*, mounting six carriage guns, and having 80 men on board. After putting the prize in order, May 28th, joined the *Orpheus* off *Cheribon*, and found that in our absence she had captured a Dutch brig, a sloop, and prows; the three latter were destroyed. Same day run into the anchorage to the westward of *Point Indramago*, where she landed most of the prisoners, some of them being very sickly. The *Dolphin* brig is a new vessel well coppered and equipped, and well adapted for service (particularly in shoal water), she mounts 14 guns, and had good room and security at quarters. A true extract.

(Signed) J. HOSEASON,
Pro. Sec.

Arrogant, Madras Roads, A M.
August 11, 1800.

SIR,

I have the pleasure to acquaint you, that on the morning of the 4th of August, being in sight of *Point Divy*, we discovered two ships in the N. E. and a brig E. by S. to the former we gave chase, and about noon

we were sufficiently near to see that one of them was a small frigate with a tier of guns, and the other a merchant ship, both under English colours. At three quarters past two P. M. we had neared the chase considerably, when she began throwing her guns, boats, and other heavy articles, over-board. At four P. M. the shot from our chase guns went over, when she hauled the English ensign down, and hoisted French national colours, fired her stern chases two or three times at us, and then struck. She proved to be *L'Uni* French privateer, of 30 guns, 18 and 9 pounders, all of which were thrown over-board during the chase, except two 18-pounders, two 9-pounders, and two carronades; she was commanded by *Jean Francois-Hodoul*, and had a crew of 250 men on her leaving the *Mauritius* on her present cruize, but had on board only 216 men when captured, having put the rest into prizes; on taking possession of her, we found that the other ship was the *Friendship* (English merchantman), from *Bengal* bound to *Madras*, and that the brig was the *Bee*, from *Madras* bound to *Masulipatam*, both of which vessels had been captured by her in the morning; we made sail after the ship, which we recaptured at ten at night, but the brig made her escape. *L'Uni* left the *Mauritius* the 4th May, and had captured the English privateer *Harriot* from the *Cape of Good Hope*, the *Helen* belonging to *Bombay*, and the ship and brig before-mentioned. The *Arrogant*, with *L'Uni* prize anchored in this Road last night at nine o'clock, and recaptured ship *Friendship*, which I expect shortly, as the sails tolerably well, and I only parted with her two days ago.

I have the honour to be, &c.

EDW. O. OSBORNE.

To *Peter Rainier*, Esq. Vice-Admiral of the Blue, and Commander in Chief, &c.

Bombay,

Bombay, September 3, 1800.

SIR,

I beg leave to inform you of my arrival here on the 30th of August, after a passage of 11 days from Mocha. About 50 leagues to the eastward of Aden, I fell in with and took the Clarissa, French privateer, from the Mauritius, who threw over her guns, and cut away her anchors, with a view to escape we found 148 men on board her; she is only between two or three years old, built at Nantz.

I am, &c. &c.

J. BLANKETT.

Vice-Admiral Rainier,

&c. &c.

Copy of a Letter from Lieutenant James Main, commanding his Majesty's Schooner Netley, to Evan Nepean. Sq. dated off Oporto, the 2d inst.

SIR,

I beg leave to enclose for the information of my Lords Commissioners of the Admiralty, the copy of a letter from me to Admiral Lord Keith.

I am, Sir, your most obedient humble servant,

JAMES MAIN.

Netley, off Oporto, February 2, 1801.

MY LORD,

I have the honour to inform your Lordship, that, in obedience to orders from Captain Cockburn, of His Majesty's ship La Minerve, on the 20th ult. I failed from the Tagus in His Majesty's schooner Netley, under my command, charged with the trade from Lisbon bound to the northward. On the 31st, being off the bar of Oporto, I fell in with four privateers, one of which was captured by the Netley, after a chase of two hours; she is called Santa Victoria, a Spanish lugger, mounting six guns, and manned with 26 men. The other three privateers escaped by my being obliged to rejoin the convoy, some of the

ships having the signal hoisted for an enemy to windward.

I have the honour to be, &c.

JAMES MAIN.

Lord Keith, K. B.

Copy of a Letter from Lieutenant Lloyd, commanding the Nimble cutter, to Evan Nepean, Esq. dated Feb. 24, 1801.

SIR,

I beg you will be pleased to acquaint my Lords Commissioners of the Admiralty, that at the back of the Isle of Wight, yesterday at two P. M. having the trade from Dartmouth under my convoy for the Downs, I fell in with, and, after a chase of six hours, engaged and captured the Bonaparte cutter privateer, of Cherbourg, of 14 brass guns, of four and six pounders, and 44 men, two days out of port: she had captured a light collier from Plymouth. I am happy to say the Nimble had no men killed or wounded; and that Mr. Watts, the master, and all the petty officers and seamen, behaved like British seamen. The privateer had two men killed, and the first lieutenant dangerously wounded.

TUESDAY, MARCH 3.

ADMIRALTY OFFICE.

A Letter from Lord Gardner introduces the following:

Revolutionaire at Sea, Feb. 16.

MY LORD,

I have the honour to inform your Lordship, that early this morning I captured the French brig privateer Moucheron, belonging to Bourdeaux, mounting 16 guns, 12 and six-pounders, and 130 men, out 20 days from passage, but had only made one capture, the William brig, of London, from Sr. Michael's, loaded with fruit.

I have the honour to be, &c.

THOMAS TWYSDEN.

Extract of a Letter from the Honourable Captain Robert Stopford. of His

His Majesty's Ship Excellent, in Quiberon Bay, to Earl St. Vincent, Feb. 23.

MY LORD,

I have the honour to acquaint your Lordship, that on the night of the 20th instant, I sent the boats of the Excellent to endeavour to bring off a cutter and a sloop which were at anchor near the Point of Quiberon; unfortunately that same evening, after dark, a large chaffe maree, with troops on board, going to the Island of Belleisle, had taken her station close to the above vessels; the resistance which the boats met with was consequently much greater than there was at first reason to expect; this circumstance did not, however, prevent Lieutenant Church (having the command of the boats) from making the attack upon the chaffe maree, in which he gallantly persevered, till being badly wounded himself, and two men killed in his boat, he was obliged to retire; the other boats, under the command of Messrs Crawford and Manning (midshipmen), resolutely boarded, and succeeded in bringing off the cutter called L'Arc, an armed vessel in the service of the Republic, commanded by an Ensigne de Vaisseau, and employed as convoy to and from Belleisle. This vessel had also on board a detachment of troops, who were made prisoners, and who made the vessel's force much superior to that of the assailants.

R. STOPFORD.

Copy of a Letter from Mr. Humphrey Gibson, Master of the Lord Nelson private ship of war, to Evan Nepean, Esq. dated Plymouth Sound, Feb. 28.

SIR,

Be pleased to inform the Lords Commissioners of the Admiralty, that on the 26th instant, at three P. M. being between the Isle of Wight and Portland, a lugger hove in sight to leeward, with a large sail in chase of her; conceiving I might cut her

off, I instantly bore away in a direction for that purpose, and, after a chase of four hours, had the good fortune to effect it; and being about to board her, she struck her colour. On taking possession of her, I found her to be the *Espoir* lugger privateer, Monsieur Alegis Basset, commander, mounting 14 carriage guns, with 75 men; had sailed only two days before from St. Maloe, and had taken nothing. The sail in chase proved to be His Majesty's frigate *L'Oiseau*, Lord Augustus Fitzroy, commander, which came up as we were exchanging prisoners. None killed or wounded.

HUM. GIBSON,

SATURDAY, MARCH 7.

DOWNING-STREET, MARCH 7,
1801.

A Letter, of which the following is an Extract, has been received by the Right Honourable Henry Dundas, one of his Majesty's principal Secretaries of State, from Lieutenant-Colonel Frazer, commandant of the garrison of Gorée, on the Coast of Africa, dated off Senegal, 5th Jan. 1801.

On the 3d instant, the weather being very favourable, and the surf unusually low, it was determined by Sir Charles Hamilton and myself to attack an armed brig and schooner lying at anchor in the river.

The party destined for this service, consisting of 55 volunteers from the *Melpomene*, under the command of Lieutenant Dick, five from the crew of the transport, and 36, commanded by Lieutenant Christie, from the African corps, left the frigate at half past nine o'clock in five boats, and having passed the Bar without accident, and the batteries at the Point without being discovered, arrived at a quarter before 11 o'clock within a few yards of the brig, when the enemy commenced a very heavy fire, through which our people boarded, and, after a severe contest, which lasted 20 minutes, carried the vessel.

It appears she was called the Senegal, commanded by M. Renou, mounting 18 guns, with about 60 men, 18 of whom are prisoners.

Two of the best boats having been destroyed by the enemy's shot, Lieutenant Dick judged it better to turn the guns of the brig upon the schooner, than to attempt boarding her, and kept up a well-directed fire for some time, but she was so well protected by the batteries on shore, and by small arms from the southern bank, that he found it necessary to desist; and cutting the brig's cable, made sail with her down the river.

After two hours possession she un-

fortunately grounded, and he was obliged to relinquish his prize, after rendering her unfit for further service.

The retreat was conducted with the greatest order, and the whole of the prisoners and wounded brought off, notwithstanding the surf upon the bar, and under a fire of grape and small arms from the adjoining batteries.

I enclose a return of the killed and wounded (see Captain Hamilton's letter), and have to regret the loss of two very gallant officers, Lieutenants Palmer of the Navy, and Vivion of the Marines.

[The remainder of the Gazettes in our next Number.]

MONTHLY JOURNAL, FOR MARCH 1801.

THE following extract of a letter from an officer on board the fleet destined to act against the Powers of the Baltic.

"We are all in high spirits. The signal is now flying on board the London (the flag-ship of the Commander in Chief) and in the course of the afternoon as complete and as well-appointed a fleet as ever left England, will be under weigh.—Nothing ever exceeded the alacrity of Lord Nelson, whose flag flies on board the St. George. He thinks every moment an age till he gets into action, and he openly declares, that every day's delay from this time will cost us 1000 men.

"Our first achievement will be to force the passage of the Sound, which, it is thought by many, will prove a very formidable affair. The Channel, for some distance, is only three

miles wide. On the Danish coast the batteries are very numerous: report states them as consisting of not less than 300 heavy pieces of artillery."

The passage of the Sound, now about to be attempted by our fleet, is an enterprize of that sort which the Nation may willingly commit to it. It may require seamanship and courage, but is not necessarily of extreme difficulty. The Memoirs of Affairs in the North, laid before the Earl of Bristol in the last century, speak of it in even lower terms:

"At length the wind coming fair at N. W. with a fresh gale, the Dutch fleet weighed and set sail for the Sound. Both the castles of Cronenburgh and Helsingburgh fired at them as they passed the Narrow, some of the cannon carrying 50 and 60 pound ball, but to no other effect than to shew that those castles are but bugbears

bears to frighten merchantsmen, and that nothing less than a fleet can command the passage of the Sound."

Plymouth, March 14.—Yesterday arrived a French lugger, name unknown, laden with rye and wheat, cut out of a bay on the coast of France, by the boats of his Majesty's ship Excellent, of 74 guns, Captain Stopford: they also cut out at the same time a French cutter. His Majesty's ship Uranic of 38 guns, Captain Towry, in going up Hamoaze yesterday, got ashore on the Devil's Point; but, it being tide of flood, she soon floated off again without damage. This afternoon arrived here the ship letter of marque, Bolton, of Liverpool, of 22 guns, and 70 men, Captain John Watfon, from Demerara, bound to Liverpool, laden with sugar, coffee, cotton, elephants teeth, &c. she sailed from thence on the 18th of January last, in company with the ships Union and Dart, both belonging to Liverpool, but parted from the latter in a heavy gale of wind soon after: the Bolton and the Union kept company until the Union sprung a very dangerous leak, which increased to such a degree, that the crew were obliged to abandon her, and save themselves by getting on board the Bolton; the Union soon after foundered: on the 5th instant, the Bolton fell in with the Garonne French ship privateer, of 24 guns, and 250 men, which she engaged one hour, but was at length obliged to strike to a superior force, having four men killed, and six wounded; among the former are two passengers, and among the latter the Captain; the ship was also much cut in her hull, masts, yards, sails, and rigging; the French ship was much disabled, but had none of her crew killed or

wounded: on the 12th instant, the Bolton was met with on the French coast by His Majesty's ship Leda, of 38 guns, Captain Hope, by whom she was recaptured, and sent in here Captain Watfon with the greater part of his crew, as also the crew of the Union, are on board the French privateer, and supposed to be carried to France. The advantages, on the part of the Frenchman, during the action, were, by the great superiority in number of men, by which they were enabled to keep up a constant discharge of musketry, to the very great annoyance of the crew of the Bolton. She carried away her main-top-gallant mast, and the head of her topmast, in a gale of wind, after being captured. It is said that the Frenchman plundered her cargo very much; there is on board her a very fine tiger, a large collection of birds, monkeys, &c.

A letter received from an officer of the inshore squadron, off Brest, under the orders of Rear-Admiral Sir James Saumarez, dated the 13th inst. states, that there were seven sail of the line, besides frigates, cruising to watch the motions of the French fleet. On the 12th, the guard boat fell in with and captured a Spanish boat belonging to a frigate of that nation in Brest. They informed our people, that there were now quite ready for sea, in Brest, for a secret expedition, on a plan of escape similar to Gantheaume's, seven sail of the line and four frigates and corvettes: they were also to take in troops, and try to get out the first N. E. wind. In consequence of this important intelligence, a very strict look-out is ordered to be kept throughout the whole of the British squadron.

[Naval Trials, Marriages, Deaths, &c. are unavoidably postponed till our next.]

THE BRITISH
NAVAL MAGAZINE;
OR,
MARITIME JOURNAL,
APRIL, 1801.

At the particular Desire of the generality of our numerous Subscribers, instead of Matter merely of a temporary Nature, we have (agreeable to their request) with much Labour and Expence, introduced a New and Complete NAVAL DICTIONARY of Technical Terms and Sea Phrases, used in the Construction, Equipment, Furniture, Machinery, Movements, and Military Operations of a Ship, written and compiled by a most respectable Character in the Royal Navy—Which valuable Work will be regularly continued, and finished in the most complete Manner, and may be bound up separate or with the Work itself.

NAVAL HISTORY OF GREAT BRITAIN.

(CONTINUED FROM PAGE 103.)

WHENEVER one enemy has been successful at sea against the English, it is generally a temptation for others: in the earliest history of our country, we find that when the Danes and Saxons ravaged the coasts, the Scots took advantage and followed their practices. Thus it was at this time; induced by the example of the Spaniards and French, they had armed themselves for the same purpose. One Mercer undertook the command of these vessels of plunder; and after many slight successes, entered the port of Scarborough and carried off with him at once the whole number of the merchants ships.

Remonstrances were sent to the Duke of Lancaster, and he promised redress, but while the people were amused with unavailing promises, the Scots were every day taking their vessels.

Alderman Philpot, a man of

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spirit and intrepidity, and who was one of the two bankers to whom the public money was committed, and from whom it was taken to put into the hands of Lancaster, now fitted out some vessels at his own expence, and taking with him 1000 brave fellows, went in pursuit of the Scotch pirate. He soon came to an engagement, conquered Mercer, retook his prizes, and brought him in chains to London. The reward, however, of this gallant action, was a trial, but Philpot was acquitted with honour!

About this time (1378) the Duke of Lancaster soon after the rising of Parliament hired nine large Bayonne ships, with which he attacked a fleet of French merchantmen, and took fourteen of them laden with wine.

The success which the Scots had met with at sea, tempted them to ravage the borders, but
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their purposes were defeated by the Earl of Northumberland and his son Percy.

At this time Charles, King of France, discovered or pretended to discover a plot formed by one of the sons of the King of Navarre to poison him, who had been left hostage at that court, and attacked with success all the strong places in Normandy. Thus distressed the King of Navarre was obliged to solicit assistance from England.

The whole preceding winter had been spent in putting the English navy into the best condition possible; and early in the spring, the Earls of Salisbury and Arundel, with a body of land forces, were ordered to embark on board a strong squadron, commanded by Sir Philip Courtenay, and to sail over to Normandy, in order to throw a garrison into Cherburgh. In their voyage thither, the division in which the Admiral sailed, fell in with a strong fleet of Spanish ships, and a sharp fight ensued. The Admiral, notwithstanding the great inequality of numbers, assisted by his brother, engaged the Spanish ships with so much intrepidity, that the transports, together with some of the ships of war, entered the harbour of Cherburgh soon enough to save the town from being taken by the prince. But that part of the English fleet which continued engaged with the Spaniards, were so roughly handled, that one of the brothers, after receiving several wounds was obliged to quit the line of battle, and the other was taken prisoner.

In the mean time the Duke of Lancaster was very closely employed in fitting out a powerful squadron, in order to retrieve the honour of the nation, and assert

the empire of the sea. It was Midsummer before he was ready to put to sea; when the French fleets being in no condition to meet him, retired into their harbours. The Duke insulted the coasts of France, and took many prizes, burning several small places belonging to the enemy. At last he sailed towards St. Malo in Brittany, then in possession of the French. In the harbour he found a fleet of merchant vessels laden with wine and other commodities, all which he either took or destroyed, and, landing his troops, formed the siege of the place both by sea and land. The place was defended by Morfonace, a brave French officer, having under him several of the French nobility.

The Constable of France, who was then in Brittany, advanced immediately on hearing the Duke had invested St. Malo, at the head of 16,000 choice troops, to raise the siege. He encamped within sight of the place, and had in his front a creek which ran up from the sea, and was filled with water every tide, but at low water had only a small stream of inconsiderable depth. This creek divided the two armies. The Constable, however, took his precautions so well, that he was always, as soon as the tide was out, ready to attack the English, while they found it impossible to attack him, without exposing themselves to the greatest danger.

The Duke of Lancaster would willingly have put the whole to the issue of a battle, but this the Constable took the greatest care to avoid. He contented himself with making dispositions for falling on the English camp, whenever they attempted to scale the walls, and knew that the fortifica-

tions being built upon a rock it would be difficult to take the place by sap. The Earls of Cambridge and Arundel commanded the English army under the Duke of Lancaster; and a council of war being held, it was resolved to proceed by sap, as it would be impracticable to reduce the place by any other method, in the presence of so large an army as that commanded by the Constable of France. The work was accordingly undertaken, notwithstanding all the discouragements of a rocky soil, and the mine was almost completed, when the French garrison made so successful a sally, that the miners were all put to the sword, their works destroyed, and many of the English cut to pieces. This misfortune obliged the Duke to raise the siege, and re-embark his troops, as the season was now far advanced.

Before the Duke of Lancaster left England, all Europe was alarmed at this expedition, and several courts were apprehensive that the storm would fall upon their dominions. The reigning King of Castile in particular, dreaded a visit from his rival, and not only raised a vast army by land, but also augmented his forces by sea, with which he now blockaded the city and harbour of Bayonne, in revenge for the as-

sistance that place had furnished to the English. This fleet consisted of 200 sail, which landed 20,000 troops to invest the city on the land side. Had that important place been taken, it would have damped the spirit of the English, and must have ruined all the schemes of the Duke of Lancaster. But the King of Portugal threatening to invade Castile with a powerful army, and an epidemical disease having at the same time attacked the troops of the besiegers, the King of Castile abandoned his undertaking, embarked his troops, and returned to his own country.

In the mean time, the war was carried on with the greatest vigour in France, where the King of Navarre was stripped of all the dominions he held from the crown. The King of Castile fell with the utmost fury upon Navarre, where he gained several advantages, and the Duke of Anjou being obliged, by the Duke of Lancaster's navy putting to sea, to abandon the project he had formed for besieging Bourdeaux, took the city of Montpelier. On the other hand, the Duke of Berry was forced to raise the siege of Cherburgh with great loss, and Oliver du Guesclin, brother to the constable of France, was taken prisoner.

(To be continued.)

SKETCH OF THE LIFE AND NAVAL SERVICES OF THE
RIGHT HON. GEORGE BRYDGES LORD RODNEY,

BARON RODNEY, OF RODNEY STOKE, SOMERSETSHIRE, BART. AND K. B.
ADMIRAL OF THE WHITE AND VICE-ADMIRAL OF GREAT BRITAIN.

THIS gallant officer was born in 1718 and entered early into the naval line; and, after going through the usual gradations of service, he received the commission of captain in 1742, and

two years after was appointed to the command of a forty-gun ship. In 1747, he had the command of the *Eagle* of 60 guns, and contributed much to the great victory gained by Admiral Hawke on the 14th of October in the same year. In 1749, he was appointed Governor of Newfoundland, and, in 1753, married Miss Jane Compton, second daughter of the hon. Charles Compton, envoy extraordinary to the court of Portugal, and father of Charles and Spenser, Earls of Northampton. This lady died on the 28th of January, 1757, having one son, George, elected member in the present Parliament for Northampton.

In May, the same year, he commanded the *Dublin* of 74 guns. Soon after he was made a rear-admiral, and in July 1759, was sent with a squadron to bombard *Havre-de-Grace*, where great preparations were understood to be carrying on for an invasion of England. On the 3d of that month he anchored in the great road off *Havre*. A proper disposition being made, the bombs proceeded to place themselves in the narrow channel leading to *Harsleur*; and early the next morning the bombardment began, which continued without intermission for 52 hours, and with such effect, that the town was several times on fire, and the magazines of stores burnt with great fury, notwithstanding the efforts of several hundred men to extinguish the fire. The explosion of the shells overturned many of the flat-bottomed boats; and so great was the consternation in the town, that the inhabitants fled into the country. On his return to England, he took but a short time to rest, and then went back to his

station off *Havre-de-Grace*; and, continuing there during that year and part of the following, he had the good fortune totally to destroy all the preparations of the enemy for an invasion.

In 1760, he was made rear-admiral of the blue, and such was the sense the ministry entertained of his late important services, that he was appointed to the command of the squadron destined for the reduction of *Martinico*. On the 18th of October 1761, he sailed from *Spithead*, with five sail of the line, three bomb-ketches, and a sloop; and arrived at *Barbadoes* alone on the 22d of November, having parted company with the rest of the squadron in a hard gale of wind, soon after he had left the Channel. He was joined, however, by all his ships on the 9th of December, by the troops from *Belesse* on the 14th, and by the forces under General *Monckton*, from *North-America*, on the 24th. On the 7th of January 1762, the fleet arrived off *Martinico*, having employed very little of the intervening time in refitting the ships, and refreshing the men. On the 8th he anchored in *St. Ann's bay*, and having silenced the forts and batteries, landed the forces on the 16th. The siege, commencing immediately, was carried on with such spirit and perseverance, that on the 7th of February following, the whole island capitulated. It may be here not improper to observe, that the dispatches, announcing this important conquest, were brought over by Major (late the celebrated American general) *Gates*, then aid-de-camp to General *Monckton*, who recommended him in the warmest terms to the Earl of *Egremont*, then Secretary of State,

State, as a most deserving officer.

After the reduction of Martinico, the Admiral and General sent a detachment of the navy and army, which forced St. Lucia, and the remaining French islands to surrender. But, at the peace of Fontainebleau, in 1763, the greater part of these valuable conquests were restored to the enemy.

On the 21st of January 1764, the Admiral was created a baronet of Great Britain, and on the 3d of December 1765, was appointed Governor of Greenwich Hospital. In March 1766, he was married to Miss Clyse, by whom he had several children. In the Parliament which met at the accession of his present Majesty, he had been chosen member for Penryn, in Cornwall; and in 1768, he engaged in a contested election at Northampton, that was productive of the most ruinous consequences to the principal parties. The interest of this town seemed to be divided between the Earls of Halifax, Northampton, and Spencer, whose seats were in the neighbourhood.

The three peers, not being able to settle the point by a coalition, respectively set up their candidates; Sir George Osborne being supported by the Earl of Halifax, Sir George Brydges Rodney by the Earl of Northampton, and Mr. Howe by Earl Spencer. In the sequel the two first joined interests. After lavishing immense sums, and involving the town and neighbourhood in inveterate enmities, the return was made in favour of the two baronets. A petition, however, being immediately presented to the House of Commons, Mr. Howe's right ap-

peared so evident, that, before the matter came on to be heard, it was agreed, that the two baronets could not both sit for Northampton in that Parliament. Their counsel therefore agreed to decide by chance which should be the member, and the lot fell on Sir George Brydges Rodney. In a word, such were the ruinous consequences of this contest, that the Earls of Halifax and Northampton embarrassed their circumstances in such a manner, that the former continued poor and distressed during the remainder of his life, and the latter was compelled to exile himself; and Sir George's fortune was so involved, that he also was under the necessity of leaving his native country.

On the 24th of October, 1770, Sir George was appointed vice-admiral of the red, and on the 28th of the same month vice-admiral of the white. In August 1771, he became rear-admiral of Great Britain; but, on being appointed to the command on the Jamaica station, he was obliged to resign the mastership of Greenwich Hospital in favour of Sir Charles Hardy. In February 1778, he was appointed admiral of the white. But while he was thus rising to the highest ranks in the service, the pressure of the demands upon him was now so great, that on his return from Jamaica, he found it impossible to continue in England with any safety. He therefore retired to France, and contracting fresh debts, he was soon involved in difficulties that seemed to be insurmountable. It was now that his integrity was to sustain the severest trial. So great was his indigence, that he frequently knew
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not where to apply for a dinner. *Monf. de Sartine*, no stranger to his professional abilities, thought this a proper time to wean his affections from his country, and therefore employed the Duke de *Biron* to make him an offer of the command of the French West-India fleet, with a sum of money that should restore him to independence.

The Duke, in consequence of this, invited Sir George to spend a month at his house, and in the course of that time frequently founded him with great delicacy on the subject; but not being able to make himself properly understood, at last openly declared to him, that as his Royal Master meant the West-Indies to be the theatre of the present war, he was commissioned to make the handsomest offers to Sir George, if he would quit the English service, and take upon him the command of a French Squadron.

Sir George, after hearing him with great temper, spiritedly made him this answer:

'Sir, my distresses, it is true, have driven me from the bosom of my country, but no temptation whatever can estrange me from her service: had this offer been a voluntary one of your own, I should have deemed it an insult;—but I am glad to learn that it proceeds from a quarter that can do no wrong!' The Duke de *Biron* was so struck with the public virtue of the old British tar, that he instantly exclaimed,—'It is a pity so gallant an officer should be lost to his country: will 1000 louis d'ors enable you to re-visit it, and to tender your services to your Sovereign?' The other replied they would; the Duke immediately advanced him the sum,

with which Sir George set out the next day for England, where he had not arrived a week, before he returned the Duke's loan, accompanied with the most grateful letter, for the singular obligation he had so politely conferred on him.

The generosity of the French nobleman having enabled him to re-visit his native country, a variety of circumstances had by this time concurred to render his slighted services particularly acceptable to the ministry. The unhappy divisions that followed the memorable engagement off *Ushant* on the 27th of July, 1778, and other causes perhaps not less apparent, had banished some of our best officers from the service. It was at this delicate conjuncture that administration beheld the exiled Admiral in England. He was immediately appointed to the command of the fleet destined for the relief of *Gibraltar*. In the execution of this service, and in his subsequent command in the West-Indies, he preserved the high opinion entertained of him by all parties in the kingdom. He sailed from *Spithead* in December 1779, with a Squadron of 18 ships of the line, having under his command the Admirals *Digby* and *Rofs*.

On the 8th of January, 1780, he fell in with a fleet of 22 Spanish transports from *St. Sebastian's*, laden with naval stores and provisions for the use of their navy at *Cadiz*. These were all taken, together with their convoy, consisting of seven ships of war from 64 to 10 guns, belonging to the Royal Company of *Caraccas*. On the 16th of the same month he obtained a signal victory off *Cape St. Vincent*, over a Squadron of 11 ships of the line and two frigates,

gates, commanded by Don Juan de Langara. Of these the Phoenix of 80 guns, and the Minotca, the Princesa, and the Diligente of 70 guns each, were taken; the San Domingo of 70 guns, blew up during the action; and the San Julian, and the San Eugenio, each also of 70 guns, were driven ashore and lost. After staying some time at Gibraltar, where his humanity to the Spanish officers and prisoners made a most sensible impression on the Court of Madrid, he left the bay on the 15th of February, and, parting company with Admiral Digby on the 24th, he proceeded to the West-Indies with the Sandwich and three other ships.

On his arrival in that part of the globe, he exerted every effort to bring the French commander, Mons. de Guichen, to action. At length, on the 17th of April, a general engagement ensued, the French fleet consisting of 23, and the English of 20 sail of the line; and if retreat, and every endeavour to avoid a pursuing enemy, be decisive proofs of a defeat, M. de Guichen was certainly worsted. It since appears, that had Sir George been as nobly supported as the French Admiral, the latter would not have had such a fortunate escape. Not a ship was lost on either side. General Vaughan, who accompanied Sir George on board the Sandwich, passed the highest eulogy on him, in his letter to Lord George Germaine: 'No ship,' said he, 'could be led on with more gallantry; nor do the annals of the navy record a greater character than Sir George supported, in setting the noblest of examples; but to attempt his praise would be detracting from his merit, which surpasses applause.'

Sir George, after this action, continued to pursue a flying enemy till the 15th of May, when the van of our fleet and the rear of the French came to action. No material loss was sustained on either side. However, our gallant Admiral had the satisfaction of affording full protection to all our islands; as well as to our commerce there, notwithstanding the great superiority of our combined enemies; and he now rode triumphant in those seas.

These services were not unrewarded. In the House of Commons, they unanimously voted their thanks to him. Ministry, uniting with the grateful public, though not, perhaps, with their grateful views, Sir George was elected by a great majority one of the representatives of the city of Westminster; and his Majesty created him a knight companion of the most honourable order of the Bath.

In 1782, April 12, he gained a complete victory over the French fleet, commanded by the Count de Grasse. The battle lasted with unremitting fury from seven in the morning till half past six in the evening, when the setting sun put an end to the contest. For this important service he was thanked a third time by both houses, and created a Peer; the thanks of the City were likewise voted and presented to him, to which he returned an heroic answer: other honours soon after followed these, and he died much lamented May 27, 1792, having been succeeded in his titles and estates by his son George, who married April 10, 1781, Martha, daughter of the Right Honourable Alkerman Harley.

A NARRATIVE OF THE UNFORTUNATE VOYAGE OF
PIETRO QUIRINI, A NOBLE VENETIAN,

WITH SEVERAL CURIOUS PARTICULARS RESPECTING THE NATURAL HISTORY AND COMMERCE OF NORWAY, AND THE MANNERS AND CUSTOMS OF ITS INHABITANTS, IN THE 15TH CENTURY.

(CONTINUED FROM PAGE 110.)

DURING three months and a half that Quirini spent in this house, he experienced the greatest friendship and humanity from the owners; while, on the other hand, he endeavoured by complaisance to acquire the good will of his hosts, and to require their benevolence. The other partners, too, of his misfortunes, were distributed into the different houses of the place, and taken good care of. The rocky isle of Rost, on which they landed, lies 70 Italian miles to the westward of the southernmost promontory of Norway, which in their language they call the World's Backside. It is three miles in circumference. The rock is inhabited by 120 souls, of whom 72, like good Catholic christians, received the Communion on Easter-day with great devotion. They get their livelihood and maintain their families by fishing, as there grows no corn of any kind in this very remote part of the world. For in all this time, during the three months of June, July, and August, they have but one continued day; as the sun never sets with respect to them. In the opposite months of the winter they have also but one continued night, and they are never without the light of the moon. They catch, during the whole year, an incredible quantity of fish; these, however, are of two different sorts only; one,

which they catch in an incredible number in the greater bays, is called stock-fish, and the other is a kind of a flat-fish, of an astonishing size, for one of them was found to weigh near 200 pounds. The stock-fish is dried, without salt, in the air and sun, and as there is not much fat and moisture in them, they grow as dry as wood. When they are prepared for eating, they are beaten with the back part of the hatchet, by which manœuvre they are divided into filaments like nerves: after this they are dressed with butter and spices to give them a relish.

With this commodity the people here carry on a considerable trade beyond sea with Germany. The halibuts are cut into pieces on account of their size, and then salted, in which state they eat very well. With these fish they afterwards, in the month of May, load a ship about 50 tons, and send them to Bergen, a place in Norway, about 1000 miles distant from them; whither likewise at this time of the year a great number of ships, from 300 to 350 tons burthen, carry all the produce of Germany, England, Scotland, and Prussia; together with every thing necessary in regard to food, drink, and clothing; and these fish they barter for those commodities and necessaries, because their country being entirely barren

ren and unfruitful, they consequently have no use for money. Immediately as the exchange is made, they return home, landing in one place only, whence they carry wool for the whole year for burning, and for other exigencies.

The inhabitants of these rocks are a well-looking people, and of pure morals. They are not in the least afraid of being robbed. Accordingly they never lock up any thing, but leave their doors and every thing open. Their women also are not watched in the smallest degree; for their guests lay in the same room with the husbands and their wives and daughters, who, when they went to bed, stripped quite naked in their presence. The beds of the foreigners, who were saved from the wreck, stood close to those in which slept the grown-up sons and daughters of their landlords. Every other day the father and sons went a fishing by break of day, and were absent for eight hours together, without being under any concern with respect to the honour and chastity of their wives and daughters.

In the beginning of the month of May, their women usually begin to frequent the baths. Custom and purity of morals have made it a law amongst them, that they should first strip themselves quite naked at home, and then go to the bath, at the distance of a bow-shot from the house. In their right hand they carry a bundle of herbs to wipe the sweat from off their backs; and at the same time laying their left hand somewhat extended on their middle, as if they thereby wished to hide their nakedness, though in fact, regardless of their situation,

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being frequently seen in the bath (according to an ancient custom) promiscuously with the men.

They had not the least notion of fornication or adultery, and did not marry from sensual motives, but merely in order to conform to the divine commands. They also abstained from swearing and cursing. At the death of their relations they shewed the greatest resignation to the will of God, and even returned thanks to the Almighty in their churches for having spared their friends so long a time, and for having suffered them to live so long with them, and in that he now called them to himself to be partakers of his heavenly bounty. They also shewed so little of extravagant lamentations and grief, that it appeared just as if the deceased had laid himself down and fallen into a sweet sleep. If the person who died was married, the widow, on the day of burial, prepared a sumptuous banquet for the neighbours; when she herself, as well as her guests, appeared in their best clothes; and on this occasion she intreated the guests to eat and drink heartily in memory of the deceased, and to his eternal repose and happiness. They went constantly to church, praying there very devoutly on their knees, and kept the fast-days very strictly.

Their houses were made of wood, and were of a round form, with a hole in the middle of the roof for the admission of the light, which hole in the winter they covered with a transparent fish-skin, on account of the severity of the cold. Their clothes were made of course cloth, manufactured at London and elsewhere. As to furs, they wore them but seldom; but, in order to use themselves

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the better to the cold, they would lay their new-born infants, the fourth day after their birth, naked, under the sky-light, which they then opened in order to let the snow fall upon them; for it snowed almost continually during the whole winter that Quirini's people were there, from the 5th of February to the 14th of May. In consequence of this treatment the boys are so inured to the cold, and become so hardy, that they do not mind it in the least.

The Isle of Rost is surrounded by a great number of sea-fowl, which the inhabitants in their language call Muxi. They are fond of living near mankind, and are as tame as the common pigeons. They make an incessant noise, excepting in the summer, when it is one continued day, and then they are silent for about four hours, and this silence serves to point out to the inhabitants the proper time for them to retire to rest. In the early part of the spring arrived also an amazing number of wild-geese, that made their nests upon the island, and that sometimes against the walls of the houses. They likewise were very tame, inasmuch that when the mistress of the house went to take some eggs out of their nests, the female would walk slowly from the nest, and stay away till the house-wife had taken as many eggs as she wanted for baking. As soon as the good woman was gone, the goose would immediately set herself on the nest again.

In the month of May the inhabitants began to prepare for their voyage to Bergen, and were willing also to take the strangers along with them. Some days before their departure the intelli-

gence of their being at Rost reached the wife of the Governor over all these islands; and her husband being at that time absent, she sent her chaplain to Quirini with a present of 60 stock-fish, three large flat loaves of rye bread, and a cake; and at the same time let him know that she had been informed their hosts had not used them well, and desired them to mention in what point they had been wronged, and that they should receive instant satisfaction; it was also recommended to the inhabitants to treat them well, and to take them over to Bergen along with them. They thanked the lady, and giving their testimony to the innocence of their hosts, spoke of the reception they had met with in the highest terms; and as Quirini had still remaining a string of amber heads, which he had brought from St. Jago in Galicia, he took the liberty of sending them to the lady, and desired her to pray to God with them for their safe return to their own country.

When the time of their departure was come, the people, by the advice of the Dominican Friar, forced them to pay two crowns for each month, that is, seven crowns a piece; and as they had not cash enough about them, they gave, besides money, six silver cups, six forks, and six spoons, together with some other articles of small value, such as girdles and rings. The greater part of these things fell into the hands of the rascally Priest, who, that nothing might be left to them of this unfortunate voyage, did not scruple to take them, under pretence that it was due to him for having acted as their interpreter. On the day of their departure all
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the inhabitants of Rost made them presents of fish, and, at taking leave, the women and children shed tears, as did also the strangers themselves. The Priest, however, accompanied them in order to pay a visit to his archbishop, and give him part of his booty.

At their departure from Rost, the season was so far advanced, that, at the end of the month of May, during their run, they saw the image of the sun 48 hours above the horizon; but, as they continued sailing farther on towards the south, they lost the sun for a short time, though but for one hour, it being all the while broad day-light. They sailed constantly between the rocks, and they perceived here and there, near the projecting points of the land, marks of deep and navigable water. Many of these rocks were inhabited; and they were kindly received by the inhabitants, who gave them meat and drink without accepting any recompence. The sea-fowl, that when awake were always so loud and noisy, they found had built their nests upon all these rocks, and the stillness and silence of these birds was a signal for them all to retire to sleep.

In the course of their voyage they met the Bishop of Drontheim, who, with two galleys, was making the tour of his diocese, which extended all over these countries and islands, attended by above 200 people. To this prelate they were now presented, who, when he was informed of their misfortunes, their rank, and family, expressed great compassion for them. He gave them a letter of recommendation for Drontheim, his archiepiscopal see, where St. Olave, one of the

Kings of Norway, was buried, which procured them a kind reception; and a horse was given to Quirini. But as the King of Norway happened at that time to be at war with the Germans, their host, who was likewise master of the vessel, refused to sail any farther, but landed at a little inhabited isle near Drontheim; and, after recommending them to the inhabitants, returned directly. The next day, being Ascension-Day, they were conducted to Drontheim, into the church of St. Olave, which was very handsomely ornamented, and where they found the Lord Lieutenant with all the inhabitants. There they heard mass, after which they were conducted before the Lord Lieutenant, who immediately asked Quirini if he spoke Latin? and being informed by him that he did, invited him, together with all his attendants, to his table, whither they were conducted by a Canon. They were afterwards taken, by this same Canon, to good comfortable lodgings, and amply provided with all kinds of necessaries.

Quirini wished for nothing more than to return to his own country; and he therefore desired advice and assistance to enable him to return home by the way of Germany or England. That they might avoid travelling too much by sea, which was not safe on account of the war, they were advised to apply to their countryman, John Franco, whom the King of Denmark had knighted, and who resided at his castle of Stegeburg, in the kingdom of Sweden, 50 days journey from Drontheim. Eight days after their arrival, the Lord Lieutenant gave them two horses and a guide

guide, to take them to Stegeborg: but as Quirini had presented the Lord Lieutenant with his share of the stock-fish, a silver seal, and a silver girdle, he received from the latter a hat, a pair of boots, spurs, and leathern cloak-bags, and a small axe, with the image of St. Olave, and the Lord Lieutenant's coat of arms on it, together with a packet of herrings, some bread, and four guilders Rhenish. They had besides this, a third horse from the Archbishop of Drontheim; and now, being 12 in number, they all set out together on their journey, with their guide and three horses. They travelled on for the space of 53 days, chiefly to the southward, and frequently met with such miserable inns on the road, that they could not even procure bread at them. In some places they ground the bark of trees, and, with milk and butter, made cakes of it, which they eat instead of bread. Besides this, they had milk, butter, and cheese, given them, and whey for drink. They still proceeded on their journey, and sometimes met with better inns, where they could have meat and beer. One thing, however, they every where found in great abundance, and this was a kind and friendly reception, so that they were extremely welcome wherever they went.

There are but few dwellings in Norway, and they often arrived in the night, at the hour of repose, though it was not dark, but broad day-light. Their guide, who knew the custom of the country, opened the door of the house, in which they found a table, surrounded by benches, covered with leathern cushions, stuffed with feathers, which serv-

ed instead of matresses. As nothing was kept locked up, they took some of the victuals they found ready there, and then went to rest. Sometimes the masters of the house happened to come in, and see them asleep, and were much amazed, 'till the guide, who heard them, acquainted them with all the particulars, upon which their astonishment was mingled with compassion, and they gave the travellers every necessary without taking any recompence, by which means these 12 people and three horses did not spend, on a journey of 53 days, more than the four guilders they had received at Drontheim.

On the road they met with horrid, barren mountains and vallies, and with a great number of animals, like roes, besides fowls, as hasehens, and heath-cocks, which were as white as snow, and pheasants of the size of a goose. In St. Olave's church they saw the skin of a white bear, which was 14 feet and a half long. Other birds, such as ger-falcons, goshawks, and various other sorts of hawks are whiter here than common, on account of the great cold of the country.

Four days before they reached Stegeborg, they came to a place called Wadstena, where St. Bridget was born, and had founded a monastery of nuns, together with chaplains of the same order. At this place the northern kings and princes have built a most magnificent church, covered with copper, in which they counted 62 altars. The nuns and chaplains received the strangers very kindly, who, after two days stay there, at length set out in order to wait on the Chevalier John Franco, who did all he could to comfort them

them in their distress, and relieved them in a manner that did honour to his generosity. A fortnight after, there was given at St. Brigetta's church in Wadstena, a plenary indulgence, of which the people of Denmark, Norway, and Sweden, as well as those of Germany, Holland, and Scotland, came to partake. Some of them came from the distance of 600 miles.

They went to the Indulgence at Wadstena with the Chevalier John Franco, in order to see whether they could not procure some intelligence there of any ships bound for Germany or England, there being always at that time a great concourse of people. The Chevalier was five days on the road, and had more than 100 horses in his train. Here they took leave of their beneficent countryman, who had furnished them plentifully with clothes and money for their journey, and had ordered his son Mathew, a very amiable young man, to accompany them to the distance of eight days journey to Lodesse, where they were lodged at his own house, the ship not setting sail directly. He had lent them his own horses all the way from Stegeborg; and, as Quirini was ill of a fever, he mounted him on a horse, which had an easier pace than ever he had met with in one of these animals before. From Lodesse three of his crew went home in a vessel bound for Rostock, and eight of them accompanied him to England, where they came to their friends in London, by way of Ely and Cambridge; and, after a two months residence there, continued their route through Germany and Basil, and at length, in the

space of 24 days, arrived safe and in good health at Venice.

One observation of Quirini, having been so often confirmed since, deserves attention. Those who, when the ship was in great distress, had given all up for lost, and, without moderation, had drunk the fine Malvasia wine, which they had on board, when the want of provisions began to be felt, and the scurvy commenced its ravages, soon died, and that suddenly; while those who had lived temperately held out longer, and, indeed, for the most part, saved their lives. In like manner those who had approached too near the fire, in order to warm themselves, paid for this rash action with their lives; while, on the other hand, such as had recourse to the unnatural expedient of drinking their own urine, an expedient which is likewise to most people highly disgusting, even when urged to it by the most intolerable thirst, escaped the jaws of death. We may observe farther, that the drinking of sea-water proved very beneficial to these adventurers, and that the great quantity of snow they had swallowed on their landing did not hurt them in the least. The different kinds of shell-fish and the flesh of a dolphin, upon which they fed, undoubtedly served to keep them alive.

The description of the state of Norway, and of its commerce, together with the picture of the manners and customs of its inhabitants, are extremely fine fragments of the history of mankind. The three northern kingdoms were at that time governed by King Erich, of Pomerania, and, considering the times, the state of them

them was not absolutely bad. We see that the cattle made the principal food of the inhabitants, that corn was very scarce, and that, just as it does now in the mountains and in barren years, the bark of trees, mixed with a certain quantity of flower, milk, and butter, served them for food. Money, on the other hand, was scarce; and a little silver plate, and a few trinkets, were very acceptable presents. To Quirini, as a Venetian, the length of the days in summer, and that of the

nights in winter, the great quantity of water fowl, that were so little shy, and the singular chastity and the purity of morals of the northern nations, must necessarily have appeared extremely striking. And, lastly, we see the stock-fish and herring trade, even at that time, in a flourishing state. In short, it is one of those voyages, which, from the general utility of their contents, are as instructive as they are important, and well worthy the attention of all seamen.

HISTORY OF THE ENGLISH EAST-INDIA COMPANY.

(CONTINUED FROM PAGE 127.)

BY the conduct of General Child, already related, the East-India Company were considerable losers: the unhappy affair was at length ended, after having exhausted 416,000*l.* besides the loss of many vessels, some thousands of lives, and having several years impeded the trade of the Company, notwithstanding these losses, they carried on for many years a successful trade. But, in process of time, when the principles of liberty were better understood, it became every day more and more doubtful how far a royal charter, not confirmed by act of parliament, could convey an exclusive privilege. Upon this question the decisions of the courts of justice were not uniform, but varied with the authority of government and the humour of the times. Interlopers multiplied upon them; and towards the end of the reign of Charles II. through the whole of that of

James II. and during a part of that of William III. reduced them to great distress. In 1698, a proposal was made to Parliament of advancing two millions to government at eight per cent. provided the subscribers were erected into a new East-India Company with exclusive privileges. The old East-India Company offered 700,000*l.* nearly the amount of their capital, at four per cent. upon the same conditions. But such was at that time the state of public credit, that it was more convenient for government to borrow two millions at eight per cent. than 700,000*l.* at four.

The proposal of the new subscribers was accepted, and a new East-India Company established in consequence. The old East-India Company, however, had a right to continue their trade till 1701. They had, at the same time, in the name of their treasurer,

furer, subscribed, very artfully. 315,000l. into the stock of the new. By a negligence in the expression of the act of parliament, which vested the East-India trade in the subscribers to this loan of two millions, it did not appear evident that they were obliged to unite into a joint stock. A few private traders, whose subscription amounted only to 72000l. insisted upon the privilege of trading separately upon their own stocks and at their own risk. The old East-India Company had a right to a separate trade upon their old stock till 1701; and they had likewise, both before and after that period, a right, like that of other private traders, to a separate trade upon the 315,000l. which they had subscribed into the stock of the new company. The competition of the two companies with the private traders, and with one another, is said to have well nigh ruined both. Upon a subsequent occasion, in 1703, when a proposal was made to parliament for putting the trade under the management of a regulated company, and thereby laying it in some measure open, the East-India Company, in opposition to this proposal, represented in very strong terms, what had been, at this time, the miserable effects, as they thought them, of this competition. In India, they said, it raised the price of goods so high, that they were not worth the buying; and in England, by overstocking the market, it sunk their price so low, that no profit could be made by them. That by a more plentiful supply, to the great advantage and convenience of the public, it must have reduced, very much, the price of India goods in the English mar-

ket, cannot well be doubted; but that it should have raised very much their price in the Indian market, seems not very probable, as all the extraordinary demand which that competition could occasion, must have been but as a drop of water in the immense ocean of Indian commerce. The increase of demand, besides, though in the beginning it may sometimes raise the price of goods, never fails to lower it in the long run. It encourages production, and thereby increases the competition of the producers, who, in order to undersell one another, have recourse to new divisions of labour and new improvements of art, which might never otherwise have been thought of. The miserable effects of which the Company complained, were the cheapness of consumption and the encouragement given to production, precisely the two effects which it is the great business of political economy to promote. The competition, however, of which they gave this doleful account, had not been allowed to be of long continuance. In 1702, the two Companies were, in some measure, united by an indenture tripartite, to which the Queen was the third party; and in 1708, they were, by act of parliament, perfectly consolidated into one Company by their present name of the United Company of merchants trading to the East-Indies. Into this act it was thought worth while to insert a clause, allowing the separate traders to continue their trade to Michaelmas 1711, but at the same time empowering the Directors, upon three years notice, to redeem their little capital of 72000l. and thereby to convert the whole stock of the Company

pany into a joint stock. By the same act, the capital of the Company, in consequence of a new loan to government, was augmented from two millions to 3,200,000*l.* In 1743, the Company advanced another million to government. But this million being raised, not by a call upon the proprietors, but by selling annuities and contracting bond-debts, it did not augment the stock upon which the proprietors could claim a dividend. It augmented, however, their trading stock, it being equally liable with the other 3,200,000*l.* to the losses sustained, and debts contracted, by the Company, in prosecution of their mercantile projects. From 1708, or at least from 1711, this Company, being delivered from all competitors, and fully established in the monopoly of the English commerce to the East-Indies, carried on a successful trade, and from their profits made annually a moderate dividend to their proprietors.

During the French war, which began in 1741, the ambition of M. Dupleix, the French Governor of Pondicherry, involved them in the wars of the Carnatic, and in the politics of the Indian Princes. After many signal successes, and equally signal losses, they at last lost Madras, at that time their principal settlement in India. It was restored to them by the treaty of Aix-la-Chapelle; and about this time the spirit of war and conquest seems to have taken possession of their servants in India, and never since to have left them. During the French war, which began in 1755, their arms partook of the general good fortune of those of Great Britain. They defended Madras, took Pon-

dicherry, recovered Calcutta, and acquired the revenues of a rich and extensive territory, amounting, it was then said, to upwards of three millions a year. They remained for several years in quiet possession of this revenue: but in 1767, administration laid claim to their territorial acquisitions, and the revenue arising from them, as of right belonging to the Crown; and the Company, in compensation for this claim, agreed to pay to government 400,000*l.* a year. They had before this gradually augmented their dividend from about 6 to 10 per cent, that is, upon their capital of 3,200,000*l.* they had increased it by 128,000*l.* or had raised it from 192,000*l.* to 320,000*l.* a year. They were attempting about this time to raise it still further, and twelve and a half per cent. which would have made their annual payments to their proprietors equal to what they had agreed to pay annually to government, or to 400,000*l.* a year. But during the two years in which their agreement with government was to take place, they were restrained from any further increase of dividend by two successive acts of parliament, of which the object was to enable them to make a speedier progress in the payment of their debts, which were at this time estimated at six or seven millions sterling.

In 1760, the Dutch discovered a hostile disposition; and to all appearance were willing to act a sequel to the tragedy of Amboyna with the selfish view of extending their commerce and enriching themselves; but the governor of Batavia having failed in his designs, their High Mightinesses thought proper

(To be continued.)

proper to disavow his conduct, but evinced no determination to punish his insolence and treachery, and give satisfaction for the mischief he had committed. A mere disapproval was no reparation for the violence attempted; and probably, had the scheme at Amboyna been as fortunately defeated, the States General would likewise have disavowed that business.

The following is the substance of a letter which was brought by the Holderness Indiaman that arrived at Portsmouth in 1760, which gives a circumstantial account of the affair that then happened between the English and Dutch in the East-Indies.

“The affair we have just had in this part of the world with our good friends the Dutch, will, no doubt, surprize you. But to us, who have been eye-witnesses of the inroaching selfish temper of this people, it was in a manner what we expected, and what we took care to guard against.

“The chief settlement the Dutch have in Bengal, is a very strong fort and factory at Chinserah in the river of Bengal; at this place, but more so at Calcutta, a very considerable trade is carried on in salt-petre. The Dutch seemed long to have been grasping at an opportunity to engross this trade to themselves; and the present opportunity, when our ships of war were off the coast, seemed the most favourable. Under colour, therefore, of reinforcing their garrisons, the governor of Batavia had formed a scheme of sending thither such a body of troops, as would secure to the Dutch not only the whole trade of salt-petre carried on there, but, in time, might be able

entirely to worm out the English from the trade of Bengal.

“Happily Colonel Clive suspected their design. Upon the arrival of the first two transports, which were ships of 36 guns, and full of men, the Colonel sent a letter to the Dutch Commodore, informing him that he could not allow them to land any forces, or to march them up to Chinserah, as he had from good authority been acquainted with their scheme. In answer to this letter the Dutch Commodore wrote Colonel Clive, that he never intended to march any forces to Chinserah, and that he only begged the liberty of putting his men ashore down the river, to refresh them; which liberty Colonel Clive granted him, upon condition, that they were not to offer to march farther.

“In the mean time five other Dutchmen arrived in the river. The Dutch Commodore, thinking himself now in a situation to act as he pleased, resolved to retaliate the supposed injury he had received in not being permitted to go up the river: he therefore not only ordered the land-forces now on shore to make the best of their way to Chinserah, but he also sent orders to the ships under his command, to use their utmost endeavours to seize every English ship that should appear upon the river. In consequence of these orders, several small vessels belonging to the Company were taken that day, and detained as lawful prizes. The day following, the Calcutta (one of our East-Indiamen) Captain Wilson, went down the river, bound for England. When he came abreast of the Dutch Commodore, the Dutch-

man hailed him, and told him, that, if he offered to pass, they would sink him. As they were getting ready their guns, and seemed in earnest, Captain Wilson thought it most prudent to return up to Calcutta, where two of our Ladiamen were lying, the Duke of Dorset, Captain Forrester, and the Hardwick, Captain Sampson. Captain Wilson, upon his arrival, informed Colonel Clive of his being stopt; whereupon Colonel Clive sent orders to the three ships abovementioned immediately to get in readiness, and gave them orders to do their utmost endeavour to take, burn, or sink, every Dutch ship or ships they should meet with. The ships immediately were equipped, their quarters lined with bags of salt-petre, to screen the men from the shot, and each of them took on board two additional 12-pounders. Thus fitted out, they fell down the river, till they came up to the seven Dutch ships, who, on their approach, drew up in a line of battle to receive them. Three of the Dutchman mounted 36 guns, three 26, and one 16.

“ Our ships, as they approached, following their example, likewise drew up in a line. As the Duke of Dorset was nearest the enemy, Captain Wilson, of the Calcutta, the Commodore, fired a gun, as a signal for her to begin the engagement, which she immediately did, and came to an anchor close to the enemy. Unhappily it fell a dead calm, so that the Duke of Dorset was engaged alone close to the enemy a considerable time before either the Hardwick or Calcutta could possibly come up; however they at last got up, and all three joined

in keeping a continual and very hot fire upon the enemy, which was returned by the Dutch with great briskness. At length, two of the Dutch ships were obliged to slip their cables, and run away, and, a cross shot having cut the cable of another of the Dutchmen, she drove ashore, so that now there were only four ships to engage with. A few broadsides after, the Dutch Commodore struck his flag to Captain Wilson, upon which the other three followed his example. In the engagement, which lasted just two hours five minutes, our ships did not lose one man; a circumstance the more remarkable, as the Duke of Dorset was tore almost to pieces, having above 90 shot in her hull. Captain Forrester was wounded in the knee with a ball, and is reduced so low, that it is feared he cannot survive it.

“ After the Dutch ships struck, Captain Wilson had the curiosity to go on board them. He reported that they were a most shocking sight, the decks being covered with dead bodies, and every thing bespattered with blood and brains. Out of one ship he saw 30 dead bodies thrown overboard; from which, and from other circumstances, he had reason to believe, that their loss in the engagement must have amounted to some hundreds.—The crews were all carried up prisoners to Colonel Clive.

“ During this engagement on the river, the land forces which the Dutch had put on shore, were in full march for Chinserah, to the number of about 1100. Colonel Clive, having intelligence of their march, sent a corps of 500 English to oppose them, under the command

command of Colonel Ford. The two engagements ended much about the same time, and the English were victorious both by land and water. Colonel Ford played his part so well, that he killed 400 on the spot, and made all the rest prisoners, and carried them likewise to Colonel Clive. This last victory was the more happy for us, as, had it gone otherwise, in all probability, the interest of the English in Bengal, would have greatly suffered; for the new Nabob, whether from some secret correspondence with the enemy, or from the natural treachery of the people, stood by with a considerable army to join the victorious party, whatever side should

get the better: this appeared from his after-behaviour; for, though he stood by a tame spectator of the apparently unequal combat the English sustained, no sooner did victory declare in their favour, than he sent to the Commander, and offered his service, and even offered with his army to reduce Chinserah; but Colonel Clive thought proper to decline accepting his services.

“The affair was then made up, and Colonel Clive delivered back the ships to the Dutch, on their giving security to pay one hundred thousand pounds for the damage the English sustained in the two engagements.”

(To be continued.)

A DESCRIPTION OF THE COASTS OF THE BALTIC,

INCLUDING ACCOUNTS OF THE PORT OF COPENHAGEN,
SWEDISH NAVIGATION, &c.

THE Baltic is an inland or mediterranean sea, so called from an ancient High-Dutch word, Belt, signifying a strait or narrow; so that the Baltic sea is no more than the Belt sea, or narrow sea. The opening of this sea into the ocean is called, by the Dutch and us, the North sea, as the farther and inmost parts are called the East seas. The part called the North sea, being the entrance of the Baltic, lies between the Skaw, or Scagh, on the south, and the Naze of Norway on the north. About 200 miles from the Naze, east, and in the middle of the channel of this North sea, stand the islands of Denmark, ten in number, and in

a kind of cluster, as if they were thrust together by the stream in the very entrance of the Baltic sea. They block up indeed the passage, so as to leave no way into or out of the Baltic, but through some of the channels between them; the principal of which is called the Sound, passing between the island of Zealand and the country of Schonen in Sweden.

The kingdom of Denmark, one of the most ancient in Europe, is divided into two parts by the Baltic sea, namely, the Peninsula annexed to the Continent of Germany, and the islands. The former, which contains the duchy of Holstein, South Jutland, or Sles-

wic, and North Jutland, is bounded on the west and north by the German ocean; on the east, by that part of the sea called Categate, and the Middle-fort Sound; and, on the south, by the river Elbe. Its greatest length, from south to north, is about 224 miles; but its breadth (not including the islands) is not above 74 miles; and, in some places, much narrower. The islands, which make up the other part of this kingdom, are Zealand, Funen, Langeland, Laland, Falster, and some others of less note.

The chief towns of South Jutland, or the duchy of Sleswic, are: 1. Sleswic, the capital, seated on a small arm of the sea, called the Sley, was formerly a place of very great trade, but it is now almost dwindled to nothing. 2. Gottorp, about six miles from Sleswic to the south-west, of note only for its fortrefs and noble palace. 3. Tonningen has a pretty good trade, which increases daily, by means of its commodious harbour, formed by the Eyder, on which it is situated; it is much frequented by the Dutch for black cattle. 4. Husum has a harbour capable of small vessels, and every week a market for cattle, the neighbouring country abounding with pastures; in time of war, above 4000 horses have been sold here in a year. In the gulph, on the west of the town, they fish vast quantities of excellent oysters. 5. Flensburg, so called from the bay or gulph on which it stands, and which is formed by the Baltic. The bay makes a fine haven, where ships of great burthen may ride safe, and come up to the very warehouses. 6. Apenrade stands on

another gulph of the Baltic, 16 miles north-west of Flensburg. It has a port at the bottom of the bay, much frequented by the Danish fishermen, and has a pretty good trade with the adjacent islands. 7. Hadersleben is a good sea-port town, near 20 miles north of Apenrade. The country about it abounds with fruitful corn-fields, and excellent pastures, which, with the fish taken out of the lake and gulph near it, render this a pretty flourishing place. 8. Tunder lies in a fruitful soil, and had formerly a considerable trade, now lost, the harbour being choked up with sand.

The most considerable towns of North Jutland, are: 1. Repin, a place of considerable trade. Hither are brought almost all the black cattle from many parts of Jutland, which are shipped off, especially for Holland; and they export corn to neighbouring countries, all which afford them great profit. 2. Colding, though it lies commodious for trade, has hardly any but in cattle. 3. Rincoping lies on a bay of the German ocean, made by a neck of land 25 miles in length from north to south, so that ships ride in the port safe from all winds. 4. Aarhus, at the mouth of the river Gude, which runs through it, and, a little lower, falls into the Categate, is a neat pleasant town, well supplied with all necessaries, and has a good harbour. 5. Randers, on the river Gude also, is a place of good trade, and famous for the best salmon in Jutland. 6. Scheve has the reputation of breeding the best horses in the North. 7. Schagen is more frequented by merchants from all parts of Europe, than any other town in Jutland, because they touch

touch here in their way to the Sound. Its trade would be far greater, but for the dangerous coast it lies on.

Zeeland, the largest and most fruitful of the islands of Denmark in the Baltic sea, is in length about 68 miles, and in breadth about 60. The most considerable cities and towns contained therein are, 1. Copenhagen, the capital of the kingdom, so called from its safe and commodious harbour, its name signifying "The Merchants Port," and it may justly be reckoned, in all respects, one of the best in the whole world. 2. Ellineur, about 20 miles distant from Copenhagen to the north, and defended by the neighbouring impregnable castle of Croonenburg, which commands this side of the Sound, as Helsingburg does the other. Every ship that passes this strait must strike sail at Croonenburgh, and come to the town to compound for the custom, under penalty of forfeiting vessel and cargo. 3. Frederickiburg, a small town 20 miles north-west of Copenhagen, is of note only for the stately castle and royal palace that stand near it. 4. Holbeck, a pretty considerable town, stands at the bottom of a narrow bay, that affords it some trade. 5. Kallunburg has a safe harbour, and pretty good trade. 6. Koge is a small but very populous town, seated on a bay of the Sound. It is enriched by trade, which consists chiefly in corn and fish.

Funen, the next most considerable island, is about 36 miles from east to west, and 30 from north to south. It is better peopled than Zeeland. The places for trade in it are: 1. Odensee, a large populous town. They

brew here excellent beer, reckoned the best in all Denmark. 2. Nyburg, about 13 miles east of Odensee, has an excellent port, which occasions some trade. Here people embark to pass into Zeeland. 3. Schwinburg is a pleasant town, and has a large and commodious harbour.

Arroe, Langeland, Laland, and the rest of the smaller islands of Denmark, have no towns of any considerable trade.

The port of Copenhagen is not only the finest in the Baltic sea, but also one of the most commodious in all Europe: so that the chief trade of Denmark is carried on here, though there is some at Ellineur. But the trade of either of these cities is small, in comparison of that on the rest of the Baltic. Goods which sell best in Denmark, are salt, chiefly that of Spain and Portugal, rather than of France; but the wines and brandies of France are the most esteemed. Great quantities of paper are also imported; gold and silver stuffs; silk and woollen stuffs, chiefly those of Holland; spices and drugs. Tallow, hemp, cod, stock-fish, wheat, and rye, are the chief commodities they export from Zeeland. The French have an advantage over other nations in passing the Sound, that their goods are not inspected; nor need they, if they will not, pay the customs till three months after, on the Master's declaration and bill of lading.

This country enjoys the singular advantage of a sea coast for the encouragement of navigation, and their King by that means has a tolerable good fleet; yet, as observed, they have only the port of Copenhagen that is considerable. But

But their whole country does not supply any great matter for merchandizing; they have few of the essential funds of trade; they have neither any extraordinary produce of the earth, nor manufactures among the people; and some have asserted, that they scarce ever loaded one ship with their own productions and manufactures, to any part of the world, except corn, and that not very frequently.

Lately, indeed, in imitation of many other powers of Europe, they seemed to give more than ordinary attention to the affairs of commerce and navigation, as well in the East-Indies as in Europe; and their merchants began to increase, not only at Copenhagen, but at Altona, near Hamburgh, who indeed were not, properly speaking, to be called merchants of Denmark, though many of them were Danes; and they were admirably situated for the fisheries, great and small; that is, for the herring-fishery, and for the North-sea cod-fishing, which is on their own coast, and for the whale-fishery in Greenland; but they did not seem to exert themselves in any but the whale-fishing, and that to no great degree, as, on the contrary, they bought their herrings, and their train-oil, and whale-bone of the Dutch. So indolent have they been till lately, and so averse to trade, that, though the best harpooneers, and the best steersmen, and most skilled in the whale-fishing, are found among the subjects of the King of Denmark, yet they generally go to Greenland in the service of the Dutch, the Bremeners, or the Hamburghers.

By the means of Norway, now

subject to the crown of Denmark, they used to supply Great Britain, Holland, France, and Spain, with so great a quantity of fir-timber, deals, &c. that they loaded upwards of 2000 ships a year, and returned seven eighths, at least, of the value in ready money. And some complained in England of this timber trade being very detrimental to us; because we should rather have encouraged our own navigation, by building large bulky ships, such as are used by the Danes and Swedes, in order to import timber from New England, Nova Scotia, and Newfoundland.

We shall now pass over to the kingdom of Sweden, which is bounded by the Baltic sea, the Sound, and the Categate on the south; by the mountains of Norway on the west; by Danish or Norwegian Lapland on the north; and by Muscovy on the east. The soil, where capable of cultivation, is tolerably fruitful; but, for want of industry, the Swedes have not a competent supply of corn, and therefore import many sorts of grain from Livonia. Their cattle are small in size; their sheep bear a coarse wool, fit only to make clothing for peasants; their houses are of a delicate kind: they have plenty of wild beasts, which are hunted for their flesh, as well as their hides and furs: fowl, both wild and tame, are in great plenty, and good in their kind: their lakes are well stored with variety of fine fish: their woods and forests overspread great part of the country, and for the most part of pines, fir, beech, birch, alder, juniper, and some oak. They have no considerable manufactures, and yet they

they have a very great trade, and are very strong in shipping; the reason is, the produce of their land, notwithstanding its northern situation and barren soil, is an immense treasure, and makes up for their want of manufactures: this product is not only great, but inexhaustible in its fund, and consists of silver, copper, iron, timber, flax, pitch, tar, hemp, furs, and hides.

The Swedes have two countries distant from their native one, in which they have still some interest; and these are Finland and Pomerania. In Finland they have very few ports left, having lost Elsingvas and Wiborg to the Muscovites; however, at Abo, and some other small places remaining to them, they drive a considerable trade in Swedish deals, which are very valuable in England and Holland, being of a good durable and uncommon kind of yellow fir. They also export the best masts for ships of any place, except Wiborg, in all those seas. The inland country is famed for good horses, and the Finland horses were once esteemed the best cavalry in all Germany.

In Pomerania the Swedes have still the port of Stralsund, which is a very considerable rich trading city, and a good port; and the isle of Rugen is a large, fruitful, and well cultivated island; and from hence Sweden itself, in times of scarcity, is often supplied with corn. The country of Pomerania is one of the most considerable in all the seas for the best oak timber and plank, and the Swedes have the greatest part of theirs from hence, with which

they build their ships of war at Carelskroon.

The Swedish navigation was very inconsiderable, till Queen Christina, at the conclusion of the war in 1664, obtained from Denmark a freedom and custom for all ships and merchandize, belonging to the Swedish subjects, in their passage through the Sound, and established in her own dominions that difference of custom which still subsists between Swedish and foreign ships, and is in the proportion of 4, 5, 6; the first being called whole-free, the second half-free, and the last unfree: so that, where a whole-free Swedish ship pays 400 crowns, a half-free one pays 500, and a foreign vessel 600.

But, as great as this advantage was, it had but little effect, till the English act of navigation bridled the Hollanders, and opened the intercourse between England and Sweden. Since that time their commerce has been much augmented, as well as ours, that way, and goods transported by both, or either party, according to the various junctures of affairs. When Sweden has been engaged in a war, the English ships have had the whole employ; but, in time of peace, the advantage is so great on the Swedish side, and merchants so much encouraged, by freedom in customs, to employ their own ships, that English bottoms cannot be used in that trade, but only when Sweden is unprovided with a number of ships sufficient for the transportation of their own commodities.

HISTORY OF NAVAL LITERATURE.

(CONTINUED FROM PAGE 112.)

IN 1739 appeared the fifth edition of "A New Voyage, to Italy, by Mons. Miffan," 4 vol. 8vo. price 1l. In this edition were several additions and improvements, and it was adorned with various copper plates. Also, "The Trials of Seven Pirates." "A Journal of the Squadron under Admiral Haddock," by the Rev. Mr. Lumley. "The Sovereignty of the British Seas," by Sir John Burroughs, knt. "An Historical Account of many Sea-fights with the Spaniards." "A Complete Treatise of Practical Navigation," by A. Patoun, this was the second edition, 8vo. price 5s. "The British Sailor's Discovery, or the Spanish Depredations confuted." "A Description of the Windward Passage or Gulph of Florida." "Improvements in Navigation and Philosophy," by W. Comines, M. A. And "The Ways and Means to Man the Navy," by Thomas Robe, Esq. this was the third edition.

In 1740, the then management in victualling the fleet was particularly noticed in the Craftsman (No. 710) of which the following is an extract.

"Nothing is more necessary to a squadron of ships, which are designed for real service, than to supply them with good and wholesome provisions. I hope, therefore, the strictest care is taken as to this particular, and that the orders from above are punctually obeyed, though a rumour flies about that some complaints of this kind have been lately made; and

I am even informed that there is a person, who will undertake to prove that great quantities of beef and pork actually stunk before it was sent abroad. This, if true, must be owing either to the badness of the commodities, when bought up, to the want of skill in salting them, or to some corrupt gains made by those concerned in the management. I have heard one man declare that having contracted to supply a large number of bullocks, and neglecting to make the usual present, upon such occasions, the cattle were thrown back upon his hands, under pretence that they were not fit for service; upon which he privately employed another man to offer the very same oxen, and by tipping a bank-note of 200l. into proper hands, they were reported to be very good meat, and accordingly received.

"The ——— pays for found and wholesome provisions, of all sorts; and therefore the poor seamen ought to have them, whether they enter voluntarily, or are pressed into the service; especially those, who are locked down under hatches, during this rigorous season; and yet I am very well informed by a gentleman, who happened to go on board one of our tenders in the river, that no less than eleven poor wretches had died in two or three days, and several others were almost starved with ——— cold.

"These things deserve the strictest enquiry of Parliament; and if any person should be found guilty of such enormous practices, they

they ought to be published in the most exemplary manner; for when we are engaged in a very expensive war, how can we expect that our men will fight with cheerfulness, and vigour, without good usage; or how shall we be able to support it, without saving all the money we can?"

A reward of 150*l.* was offered for the writer to prove his assertions; and if not the printer was threatened with a prosecution.

Among the naval productions of this year, appeared "A Translation of the French King's Ordinance concerning Sea Officers," "A Narration of the glorious vic-

tory over the Spanish Armada in 1588." The revival of this history was in consequence of the then Spanish war. "A Geographical Description of the Coasts and Harbours in the West Indies; from a Spanish Manuscript, by the Editor, Caleb Smith." "The Sailor's Companion, and Merchant's Convoy;" and "The dangerous Voyage of Captain Thomas James in his intended discovery of a North-West Passage into the South Sea."

In 1741 were published, "Navigation Improved." "A concise History of the Spanish Armada;" and "The History and Life of Admiral Blake."

BIOGRAPHICAL SKETCH OF REAR-ADMIRAL KEMPENFELT.

RICHARD Kempenfelt, son of Lieutenant Colonel Kempenfelt, a native of Sweden, was born December 10, 1715. He entered very early into the naval service, and was appointed a lieutenant in 1740, but did not obtain the rank of Post Captain till January 1757, soon after which he sailed in the *Elizabeth*, of 64 guns, Commodore Stevens, with three others of the line for the East-Indies. Captain Kempenfelt, was Commodore Stevens's captain in the three naval actions fought on the Coromandel coast, in 1758 and 1759, in each of which he greatly distinguished himself.

On the death of the Commodore, Admiral Cornish succeeded to the command, and retained Captain Kempenfelt as captain, with whom he sailed in 1762,

and whose prudent conduct was taken great notice of by Sir William Draper. After the peace, he commanded the *Northolk* guard-ship at Portsmouth.

Having been made first captain, he served under Admirals Geary and Darby, and was soon after made an admiral, and in his first cruise, December 1781, greatly distinguished himself against the French, who were superior in number. He displayed equal skill under Admiral Barrington, and was on the point of accompanying the late Lord Howe, to the relief of Gibraltar; but while he was writing in the cabin of the *Royal George* of 100 guns, which hove upon a careen at Spithead, in order to have the water-pipe of the pump-room repaired, the ship was overset in a strong squall at half past ten in the morning,

August 29, 1782: she filled and went to the bottom in the space of a minute or two, so that only her topmast appeared at the water

edge. Upwards of 500 gallant seamen were lost, besides officers; and about 330 men with Captain Waghorne escaped.

HISTORY OF THE ENGLISH EAST-INDIA COMPANY.

(CONTINUED FROM P. 163.)

IN 1769, the Company renewed their agreement for five years more, and stipulated, that, during the course of that period, they should be allowed gradually to increase their dividend to twelve and a half per cent. in one year. In 1773, their debts, instead of being reduced, were augmented by an arrear to the treasury in the payment of the 400,000*l.* by another to the custom-house for duties unpaid, by a large debt to the bank for money borrowed, and by a fourth for bills drawn upon them from India to the amount of upwards of 1,200,000*l.* The distress which these accumulated claims brought upon them, obliged them, not only to reduce all at once their dividend to six per cent. but to throw themselves upon the mercy of government, and to supplicate, first, a release from the further payment of the stipulated 400,000*l.* a year; and, secondly, a loan of 1,400,000*l.* to save them from immediate bankruptcy. The great increase of their fortune had, it seems, only served to furnish their servants with a pretext for greater profusion, and a cover for greater malversation than in proportion even to that increase of fortune. The conduct of their servants in

India, and the general state of their affairs both in India and in Europe, became the subjects of parliamentary enquiry; in consequence of which several very important alterations were made in the constitution of their government, both at home and abroad.

The regulations of 1773, however, did not put an end to the disorders of the Company's government in India. Notwithstanding that, during a momentary fit of good conduct, they had at one time collected into the treasury of Calcutta, more than three millions sterling; and also that they had afterwards extended, either their dominion, or their depredations, over a vast accession of some of the richest and most fertile countries in India; all was wasted and destroyed. They found themselves altogether unprepared to stop or resist the incursion of Hyder Ally; and, in consequence of those disorders, the Company in 1783, was in greater distress than ever; and in order to prevent immediate bankruptcy, once more reduced to supplicate the assistance of government. This application produced the memorable East-India bill of Mr. Fox, which passed the House of Commons, but was
thrown

thrown out by the Lords; the consequent subversion of the famous coalition ministry; the dissolution of parliament; and the act, which finally passed, under the auspices of Mr. Pitt, for subjecting the affairs of the Company to the inspection of a board of controul.

DESCRIPTION OF PORTS, DOCK-YARDS, AND OTHER PLACES CONNECTED WITH THE NAVY.

(CONTINUED FROM P. 118.)

ACCORDINGLY James Aitken, or to use his more familiar appellation, John the Painter, was found guilty, and received sentence of death.—He was hung in chains on the Gosport side of the harbour. Providentially his deep laid scheme was, in a great measure frustrated, by its breaking out prematurely in the day instead of the night, and the wind driving towards the water.

Though Camden speaks in the highest terms of Portsmouth, particularly of the walls, forts, &c. made by King Edward IV. and Henry VII. which, he says, "Within our memory, Queen Elizabeth, at a great expence, has so secured by new works, that nothing seems now wanting to make it a most complete fortification;" yet what a wonderful change is here wrought since his time, both as to the extent, strength, and magnificence of the land fortifications, as well as those nobler bulwarks, the royal navy and other requisites and ornaments belonging to marine affairs. The genius of England was too unbounded ever to rest below the highest attainment of human perfection; ever soaring

above the rest of the world in the business of commerce or the arts of war; and through the vast growth of naval action, this is become the principal chamber for these royal stores in this our superior kingdom. And though every port has had its proportionable increase, yet what a disparity may we observe in comparing the different states of the royal navy in Camden's time; that of his learned editor; and at this day. Nor is the disparity in these circumstances more striking, than in the appearance of the town itself, which, from the simple account of our fine old Author, is now, through the great increase of business and confluence of people, swelled into the size and magnificence of a modern city; so that the walls, not able to contain a further enlargement, have discharged the great surplus into two noble suburbs to the west and north, named the Point and the Common, so called from its healthy situation; both of which are large, populous, and handsome; but the latter from its immoderate increase, soon promises to out do, both in size and beauty, the great town itself; this too, on reasonable grounds, being free from

from the laws of garrison, town, and corporation duties, &c. So that the idea of Camden is now totally subverted or eclipsed, where he says, "Portsmouth is populous in time of war, but not so in time of peace, and seems more inclined to the arts of Mars and Neptune,

than of Mercury." Surely it may now be said, that the common business of this place creates more life and action under the soft olive branch of peace, than was then seen beneath the boisterous banner, and the rousing clarion of war.

NAVAL HISTORY OF GREAT BRITAIN.

(CONTINUED FROM PAGE 147.)

IN 1379, Sir Hugh Calverly was recalled from his government of Calais, and with Sir Thomas Piercy was appointed Admiral of England. Their first exploit was taking a fleet of seven French merchant ships richly laden, together with their convoy, a large ship of war. These Admirals, returning from a successful cruize against the French and Spaniards, had occasion to land in Brittany, and were witnesses of the discontent expressed by the Bretons against the French and the ardour of their wishes for the restoration of the Duke of Brittany. Indeed the English had no advantages for asserting their rights in France, which it does little honour to the time to have neglected.

So great was our success at the beginning, that the Court of England was encouraged to support the Duke with a more considerable army. A strong fleet was accordingly fitted out under the command of Sir Hugh Calverly and Sir Thomas Piercy, on board of which a great number of the best land forces in England, commanded by Sir John Arundel, were embarked. But the fleet

had hardly put to sea before they were overtaken by so furious a storm, that 35 of the transports, together with Sir John Arundel's ship, were lost, and above a 1000 men, together with their general, perished. This misfortune might have proved fatal to the Duke of Brittany, had he not been effectually supported by the spirit of his own subjects. The Duke of Bourbon found it impossible to stem the torrent; he was obliged to retreat, and the King of France, sensible that he had been too hasty in his measures, sent du Guesclin to succeed the Duke of Bourbon in the command of the French army. But even that great officer could perform no effectual service, except scouring the country, and reinforcing the garrison of St. Malo. While the constable continued at the latter, Sir Hugh Calverly with part of his fleet entered the mouth of the harbour, which being narrow the rear was attacked by a squadron of Spanish and French ships. Upon this Sir Hugh instantly ordered his pilot to carry him again out of the harbour, and coming up with the enemy just at the time when the English were reduced to
the

the last extremity, he defeated the enemy's squadron, and brought all his ships safe into the harbour of St. Malo. This exploit of the Admiral gave the constable a very high opinion of the English courage, and, being himself a native of Brittany, the French court imagined that he did not, on this occasion, act with his usual vigour and vivacity against the Duke.

The war continued three years, with but little advantage to either side: great preparations that did nothing to answer their expence joined to weary both kingdoms.

In 1380, Charles the Vth died, and was succeeded by Charles the VIth, then an infant. Domestic quarrels at this time employed the attention of England, and Wat Tyler's insurrection gave general alarm.

The Scots continued their depredations in the north, and the English ministry were so totally engaged with the expedition to France, that they sought rather to appease than restrain them. The Earl of Northumberland, as warden of the marches, was, indeed, very assiduous in collecting an army; and the inhabitants of Hull and Newcastle were so active, that they took a very rich Scotch ship, and brought her safe into an English harbour. But the Earl of Northumberland claiming part of this prize, and the captors refusing to admit his demand, a misunderstanding between them was the consequence; so that it was a considerable time before he found himself in a condition to face the enemy. In the mean time an army of Scots, amounting to 20,000 men, with Douglas at their head, broke into

Westmoreland and Cumberland, ravaged the country, plundered the fair at Penrith, and took a great number of prisoners. This flagrant breach of the truce so highly provoked the English, that forgetting their private animosities, they united under the Earl of Northumberland; but before that nobleman could give the enemy battle, an express from the English court arrived with orders to suspend all hostilities; it being intended to terminate the disputes between the two nations in an amicable manner. The Earl of Northumberland, though sufficiently mortified at this order, was obliged to submit, and the Scots returned with their plunder by way of Carlisle.

The King, though young, having given an instance of good sense and courage in his conduct in the affair of Tyler, which would have done honour to a riper age,—the world naturally expected great things from him: but when he took the reins of government into his own hands (1381) those who had the warmest hopes, now saw themselves disappointed: he grew capricious, rash, and insolent: a few favourites engrossed all his attention, and to those he gave grants upon grants so fast and so imprudently, that his Chancellor Scroop refused to put the seal to them. Accordingly he took it from him and was his own lord keeper for some time; after which he delivered it to the Bishop of London.

In 1383, the quarrels of the Popes engrossed the attention of the kings of Europe. Urban published a crusade against Clement, and while the King of England, idly engaged his forces
in

in this service, the Kings of France and Scotland employed theirs in harassing his kingdom.

A considerable force was raised against Scotland, and the command was given to Lancaster. The Scots, when they found they could no longer plunder with impunity offered peace, but the Duke of Lancaster refused to hear of terms.—He came, not to contend he said, but to punish.—France was as soon terrified, she offered terms, and the first consequence of the preparation was a ten months truce. With much difficulty Scotland was included in this truce, which was afterwards prolonged further.

The year 1385 threatened England heavily. France had for some time, formed a design of invading England; and it was now determined to carry the scheme into execution. A strong fleet was collected at Sluys, and the whole was to be executed in concert with the Scots. Accordingly de Vienne, the French Admiral, was ordered to sail with a considerable fleet for Scotland, after embarking 500 men at arms. He also carried with him 50,000*l.* in gold to be distributed among the members of the Scottish court. The Admiral executed his commission with great success, and waited with impatience for the news of a descent being made in England.

It had been agreed that the Constable of France the Marechal de Sancerre, and the Lord Couci, should command a powerful army destined for the invasion of England; while the Scots were to make an irruption into the northern counties. Accordingly a powerful body of troops marched to Sluys, and every

thing was ready for the embarkation, when the sudden turn of affairs in Flanders, rendered the whole design of the French abortive. For the Duke of Burgundy, who had lately succeeded his father-in-law as Earl of Flanders, finding the spirit of revolt very strong among the Flemings, thought it his interest that the great preparations made in France should rather be employed against the rebellious Flemings, than against England; and an incident which happened about this time operated very strongly in his favour. The inhabitants of Sluys, where the French fleet lay, taking part with their countrymen in their revolt, formed a design of burning the ships, and the conspiracy was on the point of being executed, when one of the conspirators discovered the whole to the French, and therefore rendered it abortive. Upon this discovery, the Duke of Burgundy did not fail of representing to the French monarch, the necessity of chastising these rebellious Flemings before the fleet sailed for England. These remonstrances had the desired effect: a resolution was taken of besieging Dam, a place of great strength, and which had lately revolted. The town was soon invested, and bravely defended by the inhabitants. But after several unsuccessful attempts, it was taken by storm, and all the garrison put to the sword. Having taken Dam, the French King marched farther into the country of the revolted Flemings, and before his return the season was so far advanced, that the project of invading England was laid aside.

This remissness of the French gave Richard an opportunity of exerting

exerting the whole force of his arms against the Scots, who were preparing to invade England under the command of Robert their King. The Admiral of France did every thing in his power to prevail upon Robert to take the field early, but he excused himself till he heard the French were landed on the coast of England: Robert, however, furnished the Admiral with 3000 men, and he immediately broke into Northumberland with great fury. Several places of some consequence were taken; but hearing that Richard was making great preparations for invading Scotland, he returned thither with a considerable booty.

Soon after their return, Richard entered that kingdom at the head of a powerful army, consisting of 60,000 men. The Scots did not offer to resist so great a force; they abandoned their country to be pillaged and destroyed by the enemy. This conduct astonished the French Admiral, but the Scots soon convinced him that they had taken the only method of distressing the enemy, and that they well knew how to compensate their losses by invading the northern parts of England. Accordingly when Richard entered Scotland by the road of Berwick, and the eastern coast, the Scots and French, to the number of 30,000, passed the borders of England, on the west, extended their ravages through Cumberland, Westmoreland, and Lancashire, collected a very rich booty, and returned safely into Scotland.

In the mean time Richard advanced towards Edinburgh, destroying all the towns and villages

in his route, and at last reduced that city also to ashes.

Soon after the return of the English, the Scots, who considered the heavy cavalry of the French as of little use to them in their incursions, treated their allies so ill, that the French returned to their own country highly disgusted at the ferocious manners of the Scots. By this separation the English saw themselves no longer exposed to the dangerous invasions of their northern neighbours.

The court of France was still desirous of wresting from the English the sea-port towns they yet possessed in their country. Accordingly, Clifton, the Constable of France, was sent into Brittany, in 1386, where, in conjunction with that Duke, he formed the siege of Brest, then in possession of the English. Another army under the High Admiral of France, was sent to block up Cherbourg in Normandy, while a third body was ordered to have a watchful eye over the garrison of Calais, and other places possessed by the English in Picardy. The Duke of Burgundy, who still continued to act as prime minister of France, represented to his master the pleasing opportunity that now offered for his conquering England itself, by a seasonable invasion. Accordingly the embarkation of Sluys was returned, and such a prodigious number of transports collected, that a contemporary author declares, they were sufficient to have formed a bridge between Dover and Calais. The whole army was reviewed at Arras, and consisted of 8000 men at arms, with their followers all well mounted, and a prodigious

prodigious number of foot. The Duke of Lancaster was now in Spain with the flower of the English army, so that an invasion could never have happened at a more critical juncture. The citizens of London were so sensible of their danger, that they were consulting the best method of securing their most valuable effects, and had actually demolished part of their suburbs. But England owed, to the envy and ambition of an enemy, by the interference of Providence, that safety which she could not have commanded either by her arms or by her councils. The Duke of Berry, a man rapaciously covetous, and violently ambitious, was secretly disgusted, because this invasion had been formed without his being consulted. He did not, however, venture to discover any signs of resentment, but proceeded so very slowly in raising his share of troops, that they did not embark till late in the season. A tempest scattered their fleet; several of the vessels were sunk, and those laden with materials for building their first fortrefs upon the English coast, were thrown so many wrecks upon its shores.

Early in the spring of 1387, the Earl of Arundel put to sea, with a powerful fleet, while the French thinking it impossible for the English to fit out a fleet in so short a time, had laid up their ships. During his cruise, the Earl happened to fall in with a very rich fleet of Flemish, French, and Spanish vessels, with some Flemish and Spanish men of war for their convoys. The English attacked them very bravely, and were as bravely received; but victory at last declared for the English, who took the Flemish Admiral with many of the ene-

my's best officers, and fifty-six of their ships. Nor were they contented with this capture; they pursued the flying enemy for two days with such success, that the number of ships taken amounted to 126. At their return they were received with great applause by the whole nation, except the King and his favourites, who treated them with coldness and neglect. They were even discharged from their employments, and the famous Piercy made lord admiral.

In 1393 a rebellion broke out in Ireland which Richard went in person to suppress: but though he had made some progress was obliged in consequence of a church dispute to return.

In 1399 Richard embarked for Ireland, and he was no sooner out of the kingdom than all whom fear had kept silent exclaimed against him. The Duke of Lancaster came to London, where he was received with every mark of honour. The winds kept Richard in ignorance of what was passing: all intelligence was kept from Ireland for three weeks, and eager as he was to return, they purposely delayed him in the ports. At length he landed at Milford Haven, and finding his condition desperate, offered to resign his crown, which, after being confined in the tower, he did, and the Duke of Lancaster claiming it as his right by descent, was accordingly crowned Henry the Fourth, and with his coronation the fourteenth century closed.

As the naval transactions which followed, have been so frequently recorded, and the chief parts already related in various pages of this work, we shall now close our history as no longer interesting.

THE
BRITISH MARINER'S ENCYCLOPÆDIA,
OR,
A NEW, UNIVERSAL, AND COMPLETE
NAVAL DICTIONARY.

CONTAINING a Copious Explanation of all the Technical Terms and Sea Phrases, used in the Construction, Equipment, Furniture, Machinery, Movements, Management and Military Operations of Shipping. On the Plan of the celebrated *Marine Dictionary*, formerly published by Falconer, Author of the *Shiptwreck*; and including all the *Modern Improvements* in the *British and French Naval Tactics*, &c. &c. &c.

A B A

ABACK—a marineterm which signifies the situation of the sails when their surfaces are pressed against the masts by the force of the wind.

Taken **ABACK**—is when they are brought into this situation by a sudden change of the wind, or by inattention of the helmsman.

Laid **ABACK**—is when the sails are purposely placed in this position to give the ship stern-way, or to prevent her advancing; they may be laid aback to effect an immediate retreat without turning either to the right or left in order to avoid some imminent danger.

Lay all flat **ABACK**—the order to arrange all the sails in that situation.

ABAFT—the hinder part of a ship, or all those parts which lie towards the stern; used relatively, it signifies further aft, or nearer the stern, as the barricade is abaft the main-mast, that is, nearer to the stern. The stem, strictly speaking, is only the outside: abaft, includes both inside and outside.

ABAFT the beam—implies that the object spoken of is in some part of that arch of the horizon contained between a line drawn at right angles to the keel, and the point to which the ship's stern is directed.

A B R

ABLE-BODIED seamen—are those who are not only able to work, but who are also well acquainted with their duty as seamen.

ABOARD—the inside of a ship: therefore any person who enters a ship is said to go aboard.

To fall **ABOARD** of—is to strike against another ship while one or both are in motion, whether by design, or by the force of the wind or current.

ABOARD main tack—denotes the order to draw one of the lower corners of the main-sail down to the cheestree.

ABOUT—is the situation of a ship immediately after she has tacked, or changed her course, by going about and standing on the other tack.

ABOUT sh p; or Ready **ABOUT** O—is the word of command to the sailors to prepare for tacking, or going about.

ABREAST—side by side, or opposite to: the situation of two or more ships with their sides parallel to each other, and their heads equally advanced; also of any object in a line with the beam of a ship.

Line **ABREAST**—is when the line of battle at sea is formed abreast, and the whole squadron advances uniformly, the ships being equally distant from and parallel

rallel to each other, so that the length of each ship forms a right angle with the extent of the squadron, or line abreast. In an attack, pursuit, or retreat at sea, the squadrons or divisions of a fleet are often obliged to vary their positions and at the same time observe a proper regularity by sailing in right or curved lines.

ABREAST within the ship—implies on a parallel line with the beam, or at right angles with the keel; as abreast the fore hatchway, in opposition to afore or abaft the hatchway.

ABREAST of a place—means directly opposite to it.

A-BURTON—is a term applied to such casks as are stowed athwart ships, or on a line with the beam.

ACORN—a little ornamental piece of wood, fixed on the uppermost point of the spindle, above the vane, to prevent its being blown off.

ACCOMMODATION LADDER. A convenient light staircase fixed on the gangway.

ACTION—is used in the same sense as Battle or Engagement. See **BATTLE**.

ADMIRAL—an officer of the first rank and command in the fleet, and who is distinguished by a flag displayed at the main-top-gallant-mast head. See **COMMANDER IN CHIEF**. Also, an officer who superintends the naval forces of a nation, and who is authorized to determine in all maritime cases.

ADMIRAL of the fleet—the highest officer under the Admiralty of Great Britain; when he embarks on any expedition, he is distinguished by the union flag at the main-top-gallant-mast head.

Vice ADMIRAL—the officer next in rank and command to

Admiral; his flag is displayed at the fore-top-gallant-mast head. Also a civil officer appointed by the Lords Commissioners of the Admiralty. There are several of these officers established in different parts of Great Britain, with judges and marshals under them, for executing jurisdiction within their respective districts; their decisions, however, are not final, an appeal lying to the Court of Admiralty in London.

Rear ADMIRAL, the officer next in rank and command to the Vice-Admiral, and who carries his flag at the mizen-top-gallant-mast head.

ADMIRALTY—the office of Lord High Admiral, whether discharged by one single person, or by joint commissioners called Lords of the Admiralty, who are generally seven in number.

Court of ADMIRALTY—a Sovereign Court held by the lord-high Admiral or Lords of the Admiralty, where cognizances taken of all maritime affairs, whether as admirals of the fleet of ships from the mouth of the Thames, northward, southward, or westward. See **COMMISSIONERS**.

ADRIFT—the state of a vessel broken loose from her moorings and driven to and fro by the winds or waves.

ADVICE BOAT—a small vessel employed to carry expresses with all possible dispatch.

AFLOAT—floating on the water, and free or clear from the ground.

AFORE—the foremost parts of a ship, or those which lie near the stem: relatively, it implies further forward, or nearer the stem, as, the manger stands afore the foremast. It is used in contradiction to abaft.

AFT—behind or near the stern of

of the ship, being opposed to fore; as, run out the guns fore and aft, that is, from one end of the ship to the other. See **ABAFT**.

Right AFT—in a direct line with the stern.

AFT—is also applied to some of the sheets or ropes fastened to the corners of the sails; as, haul aft the jib-sheet, fore-sheet, &c. that is, pull the corner of the jib, the fore-sail, &c. more towards the stern.

AFIER—is applied to any object situated in the hinder part of the ship; as, the after-hatchway, the after sails, &c.

AFTER GUARD—in the royal navy, the seamen who are stationed on the poop or after part of the vessel, to attend and work the after-sails, &c.

AFTER SAILS—usually imply all those which are extended on the mizen-mast, or on the stays between the mizen and main-masts; they are opposed to the head-sails to balance the ship when under-sail.

AGENT Victualler, or **AGENT** of the Victualling-Office—an officer stationed at several ports to regulate the victualling of the king's ships, under the direction of the commissioners for victualling the navy.

Navy AGENT—a person on shore employed by the officers of the navy to receive their pay, prize-money, &c. for their use.

AGROUND—is the marine term for the situation of a ship, whose bottom or any part of it rests upon the ground.

AHEAD—signifies further onward than the ship, or being immediately on that point of the compass to which her head or stem is directed; in opposition to **ASTERN**.

To run **AHEAD** of one's reck-

oning—is to sail beyond the place erroneously estimated in the Dead reckoning as the ship's station.

A-HULL—the situation of a ship when all her sails are furled, and her helm lashed on the lee-side; she then lies nearly with her side to the wind and sea, her head somewhat turned towards the direction of the wind. This shall be further explained in **TRYING**.

AIM—the direction of a cannon or other fire-arm to its object.

To take **AIM**—is to point a gun to its object according to the point blank range.

AIXO, or **AIXOS**—in the North Coast of South America, is a general term for Flats and Shallows.

ALEE—the situation of the helm when pushed close to the lee-side of the ship, in order to put the ship about or lay her head to the windward.

Hard ALEE, or **Luff ALEE**—words of command to the helmsman to put the helm down to the lee-side.

Helms ALEE—a word of command to the crew to cause the head-sails to shake in the wind, the more readily to bring the ship about.

ALL in the wind—the situation of a ship's sails when they are parallel to the direction of the wind, so as to shake or shiver.

ALL hands hoay—is the word of command by which all the ship's company are summoned upon deck.

ALL hands to quarters hoay—is the word of command for the crew to repair to their respective stations for battle.

ALL's well—an acclamation of safety used by each sentinel every half hour (when the bell is struck) during the night watches.

ALLOTTING, or **ALLOTMENT** of Goods—is when a ship's barge

barge is divided into several parts bought by different persons whose names are written on as many pieces of paper which an indifferent person applies to the several lots or parcels, by which the goods are impartially divided and allotted to the proper persons.

ALLOWANCE—the quantity of victuals and drink allotted to each person on board.

Short ALLOWANCE—is when necessity obliges a curtailment of the usual quantity.

Two thirds ALLOWANCE—when necessity obliges an allowance of two thirds of the usual quantity.

To stop the ALLOWANCE—is the last resource when the provisions are nearly exhausted.

ALOFT—up in the tops at the mast-heads, or any where about the higher yards or rigging.

ALONG-side—side by side, or parallel to a ship, wharf, &c.

To lay ALONG-side—to place a ship by the side of another.

ALONG-shore—along the coast; applied to coasting navigation, or to a course which is in sight of the shore, and nearly parallel thereto.

Lying ALONG—the state of being pressed down sideways by a weight of sail.

ALOOF—at a distance.

To keep ALOOF, commonly called **Keep the Luff**—is the command given by the pilot or officer to the helmsman, to direct the ship's course nearer the wind or nearer that point of the compass which the wind blows from. This phrase probably regards the dangers of a lee-shore from which the pilot might order the helmsman to keep aloof.

ALTITUDE—height.

Meridian ALTITUDE—is an arch of the meridian, measured

from the horizon to any celestial object then upon the meridian.

AMAIN—at once, suddenly. This phrase is generally applied to a tackle-fall.

To lower AMAIN—to lower at once or let go the fall of the tackle.

To strike AMAIN—to lower or let fall the topsail.

To wave AMAIN—to make a sign to another vessel by waving a bright sword or something else as a demand for striking its topsails.

AMIDSHIPS—the middle of the ship, either with regard to her length or breadth; as, the enemy boarded us amidships, that is, in the middle, between the stem and stern. Put the helm amidships, that is, in the middle, between the two sides.

AMPLITUDE—in Gunnery, is the range of the shot, or the horizontal right line which measures the distance it has moved.

AMPLITUDE—in Astronomy, is an arch of the horizon intercepted between the true east or west point, and the centre of the sun, or a star, at its rising or setting. It is of use in navigation to find the variation of the compass or magnetic needle.

Magnetical AMPLITUDE—is an arch of the horizon contained between the sun or a star at its rising or setting, and the magnetical east or west point of the horizon pointed out by the compass; the difference between this and the true Amplitude in the preceding article, is the variation of the compass.

ANCHOR—a strong heavy instrument of iron, dropped from a ship into the ground, to moor or retain her in a proper situation. The parts of an anchor are ten, viz. 1. The shank, 2. The eye, 3. The ring, 4. The nuts, 5. The crown, 6. The

6. The arms, 7. The palms, 8. The flukes, 9. The bill, 10. The stock.

An anchor is artfully calculated by the construction of its parts, both to sink into the ground when it reaches the bottom, and to bear a very great strain before it can be drawn from thence by the weight of the ship; and, indeed, it very seldom loses its hold but in very bad ground, so that the cable or rope fastened to it, generally breaks before the anchor gives way. That the form of so very useful an instrument may be more clearly understood, let us suppose a round massy beam of iron, standing upright; at the lower end of which are two arms pointing north and south, nearly of the same thickness with the shank, but tapering a little near the points which are elevated above the horizontal plane about thirty degrees, or inclined to the shaft at an angle of sixty degrees. On the upper part of each arm is a fluke, i. e. a strong thick plate of iron in form of an isosceles triangle, the base of which reaches into the middle of the arm. At the upper end of the shaft is fixed the stock, which is a long square beam of oak in two parts, bolted together, the ends of which point east and west. Close above the stock is the ring, to which the cable is bent or fastened: the ring is curiously covered with a number of pieces of rope equal in length to its circumference; which are firmly fastened round it to preserve the cable from being fretted or chafed by the iron. Great care is to be taken that the metal of which the anchor is made be neither too soft nor too brittle; the latter renders it liable to break, and the former to

straighten: the goodness of the anchor in all its parts, is a point that should be well attended to, as the safety and preservation of the ship depend principally upon it. The following dimensions of the several parts of an anchor, are given by M. Bouguer in his *Traité de Navire*. The two arms generally form the arch of a circle, whose centre is $\frac{1}{4}$ of the shank from the vertex, or point where it is fixed to the shank; and each arm is equal to the same length or the radius; so that the two arms together, make an arch of 120 degrees: the flukes are half the length of the arms and their breadths two fifths of the said length. With respect to the thickness, the circumference at the throat or vertex of the shank, is generally made about the fifth part of its length, and the small end two thirds of the throat: the small end of the arms of the flukes, three fourths of the circumference of the shank of the throat. These dimensions should be bigger when the iron is of a bad quality, especially if cast iron is used instead of forged iron.

The ANCHOR comes home—implies that the anchor is dislodged from its bed in the ground by the violence of the wind, sea, or current, or all united.

To drag the ANCHOR—implies the effort of making the anchor come home, so as to drag it along the ground.

Foul ANCHOR—is so called when it either hooks some other anchor, wreck, or cable under the water, or when by any accident the ship entangles her slack cable about the stock or upper fluke of it.

The ANCHOR is a cock bill—implies that the anchor is suspended

pended perpendicularly from the cat-head, ready to be let go at a moment's warning.

The ANCHOR is a-peek—the cable has been drawn in so tight as to bring the ship directly over it.

The ANCHOR is a-trip, or a-weigh—the state of the anchor when it is just drawn out of the ground, in a perpendicular direction, either by the cable or the buoy-rope.

To ANCHOR, or cast ANCHOR—to let go the anchor, that the ship may ride thereby.

At ANCHOR—the situation of a ship which rides by her anchor.

To back an ANCHOR—to lay down a small anchor ahead of the large one by which the ship rides, the cable of the former being fastened to the crown of the latter, in order to prevent its coming home.

To cat the ANCHOR—is when the anchor is drawn perpendicularly up to the cathead by a sort of strong tackle called a cat.

To fish the ANCHOR—to hoist and draw up the flukes of a ship's anchor towards the top of the bow by a machine called a fish; in order to stow it after it has been catted.

To steer the Ship to her ANCHOR—is to steer the ship's head to the place where the anchor lies when they are heaving the cable into the ship.

To shoe the ANCHOR—is to cover the flukes with a broad triangular piece of thick plank, whose area is greater than that of the flukes, in order to give the anchor a stronger hold in soft ground.

To weigh the ANCHOR—to heave the anchor out of the ground by its cable.

To weigh the ANCHOR by the long boat—is performed by apply-

ing mechanical powers, fixed in the boat, to the buoy rope instead of the cable, and thereby pulling it up to the boat.

ANCHORAGE, or ANCHOR-GROUND—is a bottom which is neither too deep, too shallow, nor rocky.

The several Anchors are named, The Sheet ANCHOR, The Best Bower ANCHOR, The Small Bower ANCHOR, and the Spare ANCHOR—which are nearly of equal weights.

The Stream ANCHOR—is less than any of the preceding; and

The Kedge ANCHOR is the smallest of all.

With respect to the situation when in the ground, they are sometimes denominated

The Flood ANCHOR—or that by which the ship rides during the flood tide;

The Ebb ANCHOR—or that by which she rides during the ebb tide;

The Sea ANCHOR—is that which lies towards the offing.

The Shore ANCHOR—that which is between the ship and the shore.

AN-END—the situation of any mast when in a perpendicular situation to the plane of the deck. The topmasts are also said to be an-end when they are hoisted up to their usual station at the head of the lower masts.

ANGLE—is the opening or mutual inclination of two lines, or two planes, meeting in a point called the angular point, and is measured by comparing that opening to the whole circumference of a circle, e. g. the horizon supposed to be divided into 360 equal parts called degrees, of which the angle is said to contain so many.

ANGRA—on the coast of Africa,

ca, is a term which has the signification of Great.

APEEK—perpendicular. See the **ANCHOR IS APEEK**.

APRON—a square piece of sheet-lead tied over the touch-hole of the cannon, to keep the charge dry at sea, or in rainy weather.

APRON of a dock—the platform or flooring of plank raised at the entrance of a dock, a little higher than the bottom against which the gates are shut.

APRON in ship-building—a piece of curved timber just above the foremoſt end of the keel.

Naval ARCHITECTURE—or ship building, comprehends the theory of delineating marine vessels upon a plane, and the art of framing them upon the stocks according to the proportions exhibited in a regular design, and may be distinguished into three principal parts.

1st. To give the ship such an exterior form as may be most suitable to the service for which she is designed.

2d. To give the various pieces of a ship their proper figures, and to unite them into a firm and compact frame.

3d. To provide convenient accommodations for the officers and crew, as well as suitable apartments for the cargo, furniture, provision, artillery, ammunition, &c. With respect to the first article, it may be necessary to remark that a ship of war should be able to sail swiftly, and carry her lower tier of guns sufficiently out of the water; a merchant ship out to contain a large cargo of merchant goods, and be navigable with few hands; and both should be able to carry sail firmly, steer well, drive little to leeward, and sustain the shocks of the sea without being violently strained.

Originally all ships for whatever use designed, appear to have been of the same form, but the various purposes of navigation soon occasioned a considerable difference in their size, construction, and equipage; at which time they became chiefly characterized as vessels of war, burthen, or passage.

The ships of war of the ancients, were distinguished from other kinds of vessels; by various turrets and accessions of building, some to defend their own soldiers, and others to annoy the enemy, and from one another in later ages, by several degrees or ranks of oars; the most usual number of which was four or five, which appear not to have been arranged as some imagine, on the same level in different parts of the ship; nor yet as others have supposed, directly above one another's heads; but their seats being placed one behind another, ascended gradually like stairs. Ptolemy Philopater, urged by a vain glorious desire of exceeding all the world besides in Naval Architecture, is said to have further enlarged the number of banks to forty, and the ship being otherwise equal in proportion; this raised her to such an enormous bulk that she appeared at a distance like a floating mountain or island; and upon a nearer view, like a prodigious castle on the ocean: she contained 4000 rowers, 400 sailors employed in other services, and near 3000 soldiers. But this, and all such monstrous fabrics, served only for shew and ostentation, being rendered by their vast bulk unwieldy and unfit for service.

A ship should be so duly poised as not to dive or pitch heavily, but go smooth and easy through the water, rising to the waves when they run high and the ship has reduced

duced her sail to the storm: otherwise they will break aboard and strain the decks or carry away the boats: the masts are likewise in great danger from the same cause. It should sail well when large and before the wind, but chiefly close hauled or with a side wind and her sails sharp trimmed, and then not fall off to the leeward.

But as there are so many particular services for which vessels are built, and every one has some excellence peculiar to itself, the whole is to form the body in such a manner, that none of these qualities shall be entirely destroyed, and in giving the preference to that which is chiefly required in the particular service for which the vessel is built. See BUILDING.

ARMED Ship—a vessel occasionally taken into the service of the government in time of war, and employed to guard some particular coast, or attend on a fleet, and are upon the establishment of king's sloops.

ARMOURER—an officer appointed by warrant to clean and keep in repair the muskets, pistols, cutlasses, &c. of a ship of war; having a mate to assist him in those duties.

ASHORE—on the shore, or land, as opposed to aboard. A ship is said to be ashore when she has run upon the ground, either by design or accident.

ASTERN—any distance behind a ship as opposed to ahead, which is before her.

ATHWART—across the line of the ship's course; as, we discovered a fleet standing athwart us, i. e. steering across our way.

ATHWARTHAWSE—the situation of a ship when she is driven by any accident across the stem of

another, whether they bear against, or are at a small distance from, each other; the transverse position being principally understood.

ATHWART the fore foot—is generally applied to the flight of a cannon ball, as fired by one ship across the line of another's course, but ahead of her, as a signal for the latter to bring to.

ATHWART ships—reaching across the ship from one side to the other, or in that direction.

ATLAS—a large book containing maps and charts of the principal coasts, harbours, &c.

ATRIP—is applied differently to the anchor and the sails; for the first, see ANCHOR. The top-sails are said to be atrip when they are hoisted up to the mast-head, or to their utmost extent.

AVAST—the order to stop or pause in any exercise, as avast heaving, i. e. stop the drawing in the cable or hawler, by means of the capstan, &c.

AVERAGE—in commerce, the accidents and misfortunes which happen to ships and their cargoes, from the time of their loading till their unlading, and is divided into three kinds: 1st. Simple, or particular average; 2d. large and common average; and 3d. the small averages.

AVERAGE also signifies a small duty which merchants pay to the master of a vessel for his care of their goods, over and above the freight. Hence it is expressed in the bills of lading, paying so much freight for the said goods, with primage and average accustomed.

AUGER—a wimble.

AWEIGH—is synonymous to atrip, when applied to the anchor.

AWEATHER—the situation of the helm when pushed to the weather

weather side of the ship, in contradistinction to lee.

AWNING, a canopy of canvas extending over the decks of a ship, or over a boat, in hot weather, to protect the officers and crew, and preserve the decks from the heat of the sun. That part of the poop-deck which is continued forward beyond the bulk-head of the cabin, is also called the awning.

AZIMUTH compass—an instrument employed to discover the magnetic azimuth or amplitude of any heavenly object, and thereby to find the exact variation of the magnetic needle. It is also used to take the bearings of headlands, ships, and other objects at a distance.

The azimuth compass differs from the common sea compass in this—that the circumference of the card, or box, is divided into degrees, and there is fitted to the box an index with two sights, which are upright pieces of brass placed diametrically opposite to each other, having a slit down the middle of them, through which the sun, or star, or other object is to be viewed, at the time of observation. See **COMPASS**.

AZIMUTH of the sun, or a star, is an arch of the horizon, intercepted between the meridian of the place and the azimuth, or vertical circle passing through the sun or star.

Magnetic AZIMUTH—an arch of the horizon contained between the magnetic meridian and the azimuth or vertical circle of the object, or its apparent distance from the N. or S. points of the compass.

BACK of the post—an additional piece behind the stern-

post, as the difficulty of procuring a stern-post of sufficient breadth in one piece has introduced this practice: it is strongly bolted thereto, and the hinges which support the rudder are fixed to it, and it is tenanted into the keel.

To BACK an Anchor—See **ANCHOR**.

To BACK astern—in rowing, is to manage the oars in a direction contrary to the usual method, so as that the vessel impressed by their force, shall retreat or move with her stern foremost.

BACK the starboard oars—the word of command to confine the above management to the oars on the right-hand side of the boat only, in order to turn her round more speedily to that direction.

To BACK the sails—to arrange them in a situation that will occasion the ship to retreat or move astern.

To BACK and fill—an operation most usually performed in narrow rivers, when a ship has the tide in her favour and the wind is against her.

BACK the main-top-sail—a command to brace that sail so as that the wind may exert its force against the fore part of the sail, and by thus laying it aback, or against the mast, greatly retard the ship's course.

BACK-BOARD—a piece of board placed transversely in the after part of a boat, for the passengers to recline against whilst sitting in the stern sheets.

BACK-STAFF—an instrument formerly used for taking the sun's altitude at sea, being so called because the back of the observer is turned towards the sun during the observation; it was also called **Davis's quadrant**, from its inventor, who produced it about 1595.

BACK-STAYS are long ropes extending from the top-mast heads to both sides of the ship, where they are extended to the channels. Their use is to second the efforts of the shrouds in supporting the mast when strained by a weight of sail. They are usually distinguished into breast back-stays, after back-stays, and shifting back-stays; the first being intended to sustain the mast when the ship fails upon a wind; or, in other terms, when the wind acts upon a ship sideways; the second is to enable her to carry sail when the wind is farther aft; and the third kind take their name from being shifted, or changed, from one side to the other, as occasion requires. There are also back-stays to the top-gallant masts.

BADGE—in naval architecture is a sort of ornament placed on the outside of small ships, very near the stern, containing either a window or the representation of one.

BAFFLING—is spoken of the wind, when it frequently shifts from one point to another.

To **BAGPIPE** the mizen—is to lay it aback, by bringing the sheet to the mizen shrouds.

BAG-REEF—a fourth, or lower reef; often used in the royal navy.

To **BALE** a boat—is, to throw the water out of her, which has got in by leakage or otherwise.

To **BALANCE**—to contract a sail into a narrower compass, and is peculiar to the mizen of a ship, and the main-sail of those vessels wherein it is extended by a boom. The operation of balancing the mizen is performed by lowering the yard or gaff a little, then rolling up a small portion of the sail, at the peek or upper corner,

and lashing it about one-fifth down towards the mast.

A boom main-sail is balanced, by rolling up a portion of the clue, or lower aftermost corner, and fastening it strongly to the boom.

N. B. It is requisite in both cases to wrap a piece of old canvas round the sail under the lashing, to prevent its being fretted by the latter.

BALANCE REEF—a reef-band that crosses a sail diagonally, and is used to contract it in a storm.

BALGH—on the coast of Germany is a name for a creek.

BALLAST—a certain portion of stone, iron, gravel, or such like materials, deposited in a ship's hold, when she has either no cargo, or too little to bring her sufficiently low in the water, and is used to counterbalance the effort of the wind upon the masts, and give the ship a proper stability, that she may be enabled to carry sail without danger of overturning. See **TRIM**.

The art of ballasting consists in placing the centre of gravity, so as neither to be too high, nor too low, too far forward, nor too far aft, and that the surface of the water may nearly rise to the extreme breadth amidships, and thus the ship will be enabled to carry a good sail, incline but little, and ply well to windward.

Shingle **BALLAST**—ballast of coarse gravel.

BANDS—strips of canvas strongly sewed across a sail to strengthen it, as the **REEF-BANDS**, &c.

BANIAN-days—are those three days in the week, on which the sailors have no flesh meat served out to them.

BANK—an elevation of the bottom

bottom of the sea; some of which are so high, as to prevent a ship floating over them, and in this sense, amount to nearly the same as shallows, flats, &c. The shelves that abound with rocks under water, are distinguished by other names, as reefs, ridges, keys, &c.

BANKS on the sea-coast are usually marked by beacons, or buoys, and in charts are distinguished by little dots, as ridges of rocks are by crosses.

An exact knowledge of the banks, their extent and the depth of water on them, makes the most essential part of the science of a pilot and master of a ship: if the vessel be large and draw much water, great attention will be necessary to keep clear of the banks: on the contrary, if it be small, the same banks afford a sure asylum where it may brave the largest and stoutest vessels which dare not follow it here. By means of this barrier, many small craft have escaped their enemies.

BANK of oars—a seat, or bench, of rowers in a galley: these are properly called the thought by seamen. The common galleys have 25 banks on each side, with one oar to each bank, and four men to each oar. The galleasses have 32 banks on a side, and six or seven rowers to each bank.

BANKER—a vessel employed in the cod fishery on the banks of Newfoundland.

BAR of a port or harbour, a shoal or bank of sand, gravel, &c. thrown up by the sea to the mouth of a river or harbour, so as to endanger, and sometimes totally prevent the navigation into it.

Hatch-BARS, bars to lock over the hatches for security from theft, &c.

Capstan-BARS, large thick bars put into the holes in the drum-head of the capstan, by which it is turned round.

BARCA-LONGA, a large Spanish coasting vessel navigated with pole-masts, i. e. single-masts, without any topmast or upper part, and high square sails, called lug-sails.

Under **BARE-POLES**—having no sails set when out at sea.

BARGE—a vessel or boat of state, curiously decorated, furnished with elegant apartments, canopies, and cushions, equipped with a band of rowers and adorned with flags and streamers: they are generally used for processions on the water, by noblemen, officers of state, or magistrates of great cities: of this sort we may reasonably suppose the royal barge, the barges of companies, &c.

BARGE is also a vessel used on rivers for conveying goods from one place to another, loading and unloading ships—it is a flat-bottomed vessel, and has various names; as a Ware **BARGE**, a West Country **BARGE**, a Sand **BARGE**, a Row **BARGE**, a Severn-Trough, a Light Horseman, &c.

BARGES belong also to men of war, and are employed to carry generals, admirals, and commanding officers.

BARK—a general name given to small ships; it is, however, peculiarly appropriated by seamen to those which carry three masts without a mizen top-sail; our mariners in the coal trade, apply this distinction to a broad-sterned ship without a figure head.

There are various kinds of barks, as a bilander, a faick, a fettee, a schuyt, a snavl, a snouke, &c. of which we shall speak in their proper places.

Armed BARK—is a kind of fire-ship filled with soldiers, used for making sallies to attack galleries and bar the passage over them.

Long BARK—is a little vessel that has no deck, and is longer and lower than the common barks, being sharp afore, and generally going back with sails and oars. It is built like a sloop, and called a double sloop in many places.

Water BARKS—small vessels used in Holland, for the carriage of fresh water, to places where it is wanting, and also for fetching sea-water to make salts of. They have a deck, up to which they are filled with water.

BARNACLES—a species of shell-fish, often found sticking to the bottom of ships, rocks, &c.

BARRICADE—a strong wood rail, supported by stancheons, extending as a fence across the foremost part of the quarter-deck, on the top of which some of the seamen's hammocks are usually stowed in time of battle.

In a vessel of war the vacant spaces between the stancheons, are commonly filled with rope mats, cork, or pieces of old cable, and the upper part, which contains a double rope-netting above the sail, is stuffed with full hammocks to intercept the motion and prevent the execution of small shot in the line of battle.

BASON—a place where the water is confined by double flood-gates, and thereby prevented from running out at the tide of ebb. It also implies some part of a haven, which opens from a narrow channel into a spacious receptacle for shipping.

BATTENS of the hatches—a sort of long narrow laths, or straitened hoops of casks, serving by the help of nailing to con-

fine the edges of the tarpaulings close down to the sides of the hatchways, to prevent the water from penetrating to the lower apartments of a ship in a storm.

BATTERY—a parapet or wall of earth, faggots, &c. thrown up to cover the men employed about the guns from the enemy's shot.

Naval BATTLE—is an engagement between two fleets or even single ships; usually called a sea fight or engagement.

Fleets of late times are ranged in line of battle like land armies, and fight much after the same order: but some objections may be made to the expediency of this method.

The ancient and usual mode of naval battles in our fleets, was board and board, yard-arm and yard-arm, through and through, and not at a distance in a line or half-moon, as is now done, which practice our old seamen say they were strangers to. For this reason our guns are shorter and of larger bore than those of the French, which are adapted to the method of fighting in line of battle, as being longer and carry farther, so that we engage with them in this way to a disadvantage. It has often been found that their balls will fly over our ships, while ours cannot reach them by a mile.

In the beginning of the year 1782, when the nation was depressed by the disasters of our arms and the want of naval success during the American war, Mr. Clerk of Eldin, printed and distributed among his friends a few copies of his *Essay of Naval Tactics*, systematical and historical, which threw such a new light upon the subject of sea engagements, that no doubt can be entertained

tertained of the happy change which (since that period) has taken place in the naval affairs of Britain, is to be attributed to this ingenious and scientific work. When we look back to our naval transactions, before the adoption of the present system, the contrast is so striking, as to fill us with regret that it had not been sooner known.

The disappointment which the nation suffered with regard to our great naval armaments, induced Mr. Clerk to study to find out, if possible, the cause of these disappointments, and to publish his ideas on the subject. Though he never was at sea, he had always attended very much to maritime affairs, and had observed that during the greater part of the three last wars, when British single ships met with single ships of equal force belonging to any other nation, they always were an overmatch for the enemy; or that even in the rencounter of small squadrons, our seamen never failed to exhibit the most skilful seamanship, intrepidity, and perseverance, attended with uninterrupted success. Yet when large fleets were assembled, no proper exertion had ever been made, nothing memorable had been achieved, more particularly with the French, whose system was to batter and destroy our rigging, and then escape unhurt themselves, leaving the British fleet too much disabled to follow them; in fine, to use the author's own words when speaking of general engagements, "The result has always been the same, namely, that in such actions our fleets in the two last wars and the present (meaning the then American war) have been invariably baffled—

nav, worsted, without having ever lost a ship, or almost a man." Yet our officers and men were as brave as they are now, and our ships were equally as good; but experience has proved that we were defective in tactics.

Our mode of attacking was then to range along the line of the enemy, until the van of our fleet came opposite to the rear of his; thus our ships ran the gauntlet of the enemy's whole fleet, given them an opportunity to cripple each ship as it passed, of which the French never failed to take advantage. But the happy genius of an individual, by pointing out a superior mode of attack, has been the means of enabling us to carry our naval glory to a pitch hitherto unrivalled in any age or nation.

The leading principle of this author's system is, to force an enemy's fleet into close engagement, whatever efforts he may make to avoid it, and the breaking through his line of battle, and cutting off one division of his from another, so as to prevent the enemy from being able to extricate himself, is recommended as a certain means of either capturing the division you have cut off, or of bringing on a general engagement. The uniform success of this manœuvre, now so well known, leaves no room to doubt the infallibility of Mr. Clark's system. Of this the victories of Lords Rodney, Howe, St. Vincent, and Duncan, who all read and approved his work, and adopted his system, are most brilliant examples.

In the instance of the battle of the Nile, the French had formed themselves in a line, which they very naturally deemed impregnable, but which certainly deprived them

them of the power of retreating. In this fixed position they remained to wait our attack, and consequently the superior skill which Lord Nelson has exhibited, was not in facing them to fight, but in his manner of commencing the action. And here it is easy to discern the spirit of the new system in his mode of attacking the van of the enemy's fleet, to which the rear could give no assistance until it was become too late; while the brave Captain Thompson in the *Leander*, by cutting their line, completed their confusion and defeat. There is a degree of masterly boldness, as the French observe, in Lord Nelson's manœuvres, and a dauntless intrepidity in the execution of them, which must ever command the admiration of the whole world. This action is a flattering proof of the superiority of our seamen, a topic much insisted on by Mr. Clerk, and from which he promises certain success whenever our fleets can be brought into close engagement with the enemy.

Strange as it may seem, Mr. Clerk's *Essay on Naval Tactics* was the first original scientific treatise published on that subject in this kingdom: all the other essays that appeared in Great Britain prior to it, being either translations from the French or remarks upon French authors.

The order of battle, which was first formed in the last century by the Duke of York, and has been continued in use to the present day, the Viscount de Grenier thinks extremely defective. Various causes may conspire to render the task of breaking it not difficult. Its great extent must make it an easy matter for the

Admiral to judge what orders are proper to be issued to the ships stationed in its extremities; whilst his signals, however distinctly made, are liable to be mistaken by the commanders of those ships. The extremities of a long line are necessarily defenceless, especially if it be to leeward; because, after it is formed, the enemy may throw himself with a superior number on its van or rear, and put that squadron to flight before assistance can be sent to it from the other squadrons. These defects the Viscount de Grenier thinks may be remedied by never presenting to the enemy any part of a fleet without its being flanked; so that were the commander of the adverse fleet to attack those parts which hitherto have been reckoned weakest, he might find himself defeated when he looked for conquest. With this view the Viscount proposes a new order of battle; in which the fleet, composed of three divisions, instead of being drawn up in one line as usual, shall be ranged on the three sides of a regular lozenge, formed by the intersecting of the two close hauled lines. It is obvious that one of the divisions of a fleet ranged in this manner will always be formed in the order of battle; whilst the two others, resting upon the first ship ahead, and the last astern of that division, will be formed on the close-hauled line opposite, and will stand on chequer-wise on the same tack with the ships which are in the line of battle serving to cover the headmost and sternmost of those ships, and thereby prevent the enemy from penetrating the line or doubling the rear.

The Viscount thought it a great mistake, though very generally

rally fallen into, that the weather-gage is of any advantage to a fleet equal in force to its enemy, and willing to engage. To him the great art of war at sea appears to consist in drawing or keeping to windward a part of the adverse fleet, and collecting all one's forces against that part; and it is chiefly to effect this purpose that he proposes his new system of tactics. The reader, who would understand his principles, must never lose sight of this evident truth, that each ship of a fleet necessarily occupies at all times the centre of an horizon; which the author divides into two unequal parts, called the greater the direct and graduated space, and the less, the indirect, crossed, and ungraduated space. The reason of these appellations is, that on the greater segment of the horizontal circle there are 20 different points, which may be marked by degrees from one of the close-hauled lines to the other, and to which a ship may sail from the centre by so many direct courses without tacking; whereas to the other 12 points, including that from which the wind blows, she cannot arrive but by steering cross courses, which must necessarily delay her progress.

Mr. Clerk's work on this subject, is divided into demonstrations and examples, and the latter are admirably chosen to illustrate his principles, while the former conclude with the following striking reflections;

"If, then, after a proper examination of the late sea engagements, or rencounters, it shall be found that our enemy, the French, have never once shown a willingness to risk the making of the attack, but, invariably, have made

choice of, and earnestly courted a leeward position: if, invariably, when extended in line of battle in that position, they have disabled the British fleets in coming down to the attack: if, invariably, upon seeing the British fleet disabled, they have made sail, and demolished the van in passing: if, invariably, upon feeling the effect of the British fire, they have withdrawn, at pleasure, either a part, or the whole of their fleet, and have formed a new line of battle to leeward: if the French, repeatedly, have done this upon every occasion: and, on the other hand, if it shall be found that the British, from an irresistible desire of making the attack, as constantly and uniformly, have courted the windward position: if, uniformly and repeatedly, they have had their ships so disabled and separated, by making the attack, that they have not once been able to bring them to close with, to follow up, or even to detain one ship of the enemy for a moment; shall we not have reason to believe, that the French have adopted, and put in execution, some system, which the British either have not discovered, or have not yet profited by the discovery?"

The following general observations are extracted from some very judicious ones, which conclude the article of examples cited, with Mr. Clerk's opinion of their merit.

"From these examples it appears, that the attack, in every one of them, without variation, has been made by a long extended line, generally from the windward quarter, by steering or directing every individual ship of that line upon her opposite of the enemy,

enemy, but more particularly the ships in the van.

“That the consequences of this mode of attack have proved fatal in every attempt; that is, our ships have been so disabled, and so ill supported, that the enemy have been permitted not only to make sail and leave us, but to complete the disgrace, have, in passing, been permitted to pour in the fire of their whole line upon our van, without a possibility of retaliation on our part.”

“—— Another reflection will naturally occur; that, by the great destruction of rigging, the consequence of this mode of attack, the nation has been thrown into a most enormous expence of repair; while our enemy, by their cautious conduct, preserving their ships often unhurt has been enabled not only to protract the war, but, if persisted in, will, without doubt, ensure the possession, perhaps, of a superior navy, complete, and entire to the conclusion.

“Having now demonstrated, from evidence which should be satisfactory, that the mode or instruction hitherto followed for arranging great fleets in line, so as to be able to force an enemy to give battle on equal terms, must be somewhere wrong, it will be required to show whether any other mode may be devised, or put in practice, that will have a better effect.”

This Author then proceeds to the mode of attack proposed, which he divides into sections, in which the attack from the windward upon the rear of the enemy, the leading subject of the volume, is treated of at large.

“Suppose a fleet of 10, 20, or more ships, extended in line of

battle, endeavouring to avoid a close engagement, but, at the same time, keeping under an easy sail, with the intention of receiving the usual attack from another fleet of equal number, three or four miles to windward, sailing in any form; but let it be in three lines or divisions: it is required by what method shall the latter make the attack on the former with advantage.

“The improbability, or rather impossibility, of attacking and carrying the enemy's whole line of ships having already been demonstrated; the next consideration will be, how many ships may be attacked and carried with advantage? Let it be supposed that the three sternmost ships only, and not exceeding the fourth, are possible to be carried; let a sufficient strength be sent down to force an attack upon these three ships, disposed and supported according to the judgment of the Admiral, while, in the mean time, he should keep to windward with the rest of his fleet, formed into such divisions as might best enable him to attend to the motions of the enemy, and the effect of his attack; being himself so far disengaged from action, as to be able to make his observations, and give his orders, with some degree of tranquillity.”

In the second section he considers the attack upon the enemy's sternmost ships more particularly, and, in the succeeding sections, pays attention to the supposed attempts of the enemy to support the attacked ships. In his introduction he observes:

“After an interval of 12 years, the Dutch war was the next occasion of a farther display of our naval

naval character. But, it must be observed, that, while the English seamen had been so often engaged, and generally successful, in the lesser battles, or rather enterprises, yet, till now, they had never been tried in the greater, where a number of ships were assembled together. However, their wonted intrepidity, far from forsaking them on this new and unexperienced occasion, seemed to be augmented, or rather exalted to a state of enthusiastic fury, which was supported with an unremitting perseverance during the course of three dreadful wars; in the first of which we had nine pitched battles; in the second five; and in the third not less than five also; making in all 19 general engagements; in one of which the fight was renewed for three additional days successively; in another for two days; and in the third for one day: which may fairly be stated for other six engagements; making, when taken together, 25 days of general actions. And, what would now be considered as ridiculous and impracticable, many of the officers appointed to the command of these fleets had never been in sea-service till they were past the age of 40, and some even of 50 years. Of the last number was Blake, who, although renowned for the many obstinate battles he had been engaged in, particularly that in the Downs, where he had no more than 15 ships, did not refuse the combat when attacked by 42 ships of the enemy, led on by the great Van Tromp. Yet for nothing was he more conspicuous than for his patriotic virtue. When in opposition to the party then in power, 'It is still our duty,' said he to the seamen,

'to fight for our country, into whatever hands the government may fall.'

"In all these enterprises, whether with the Spaniards or the Dutch, whether in making the attack on castles, ships in harbours, or encountering ship with ship in close action, and formed in line of battle, we shall find the British seamen, whether equal or inferior in number, victorious or worsted, invariably fired with such enthusiastic courage, that these battles, though not always decisive, were constantly marked with strong effect, 10, 20, 30 or more ships, being taken or destroyed, 2000 men killed, and as many taken prisoners.

"Therefore, without derogating from the gallant behaviour of the Dutch, which was equally displayed in those wars, we are bound, from these proofs and examples, to believe that British seamen are, by nature or habit, endued with a peculiar extraordinary character. And, though the spirits of the people might have been, for a little time, depressed by the unfortunate battles of Beachy-Head and Bantry-Bay, which were fought some time after; yet the natural impressions, so justly in favour of our seamen, soon recovered our confidence; which was so much increased by the battle of La Hogue, that, many years afterwards, the victories of Malaga and Messina were things to be expected of course.

"The long intervals between these actions, and that of the war 1743, nowise abated the sanguine impressions respecting our seamen. Much effect was expected from the powerful fleet sent into the Mediterranean under the command of Matthews and Lef-

tock, who encountered the combined fleets of France and Spain on the 17th of February, 1744. But, intending afterwards to give a more particular description of this affair, we shall only add, that Matthews, who commanded, accompanied with the Marlborough and Norfolk, his two seconds a head and a stern, together with the Berwick in another place, broke out from the line of battle, got within a proper distance, and fought with great bravery; but, being ill-supported by the rest of the fleet, little more was done, than to show what cannon shot, at a reasonable distance might effect. The two admirals mutually accused each other; and Matthews, in consequence of a trial, was broke. But the late King, without attending to the nice distinctions which had determined the court-martial, and being satisfied that the Admiral had behaved like a brave man, refused to confirm the sentence.

“Happily some other more favourable opportunities offered, during the course of this war, in which, having a greater superiority, we were more successful. These were the capture of the May fleet by Admiral Hawke; the voyage round the world by Lord Anson; his bold attack of the Acapulco ship, so much his superior in force; and capture of six French ships of the line and Indiamen in October.

“These with the unremitting exertions in the many lesser sea combats, removing the evil impressions made by the miscarriage in the Mediterranean, we still flatter ourselves that the glory of the British flag was yet untarnished.

“Again, while we remark the

wonderful exertions, and constant success, attending the lesser conflicts; while we remark how much, and how often, our ships have been put to severe trial, by being exposed, in all weathers, during the storms of winter, the enemy not daring to set out their heads—”

[Alluding to the Squadron of British ships kept in the Bay of Biscay during the course of last war, to watch over the motions of the enemy, in winter as well as in summer.]

“When, after recollection, we remark, that, to the numerous, bold, and successful enterprises, coups de mains, performed during the last 250 years, and that our enemies have only the single disgrace which befel us at Chatham to counterbalance so great an account, should we not at the same time remark, that this boasted intrepidity, this persevering courage of British seamen, has never once been brought to trial, where it would have been of the greatest importance; that is, in the greater engagements; of which, because this superiority has never had an opportunity of being displayed, the result has always been the same, namely, that, in such actions, our fleets, in the two last wars and the present, have been invariably baffled, nay worsted, without having ever lost a ship, or almost a man?

“While we remark these circumstances, is it not evident, and will it not be admitted, that one of three things must be the fact, either that our enemy, the French, having acquired a superior knowledge, have adopted some new system of managing great fleets, not known, or not sufficiently attended to by us? or that, on the other

other hand, we have persisted in following some old method, or instructions, which, from later improvement, ought to have been rejected?

“ During the course of the wars with the Dutch, much improvement was made, particularly in the invention of signals. But the naval instructions then framed, although founded upon experience and observation, and though they might be admirably fitted for fighting in narrow seas, where these battles are fought; yet, from later experience, it will be found, that they have been but ill qualified for bringing on an action with a fleet of French ships, unwilling to stand a shock, having sea room to range in at pleasure, and desirous to play off manœuvres of defence, long studied with the greatest attention.

“ But if it were possible that there could have remained a doubt of the truth or force of these observations before the breaking out of the present war, will not this doubt be resolved, if they shall be confirmed by every case that has followed since; whether we consider the intrepidity and exertion so conspicuous in the lesser conflicts, or the defect of conduct and address, so palpable in most of the greater engagements, although, at the same time, our admirals, whether by good fortune, by skilful seamanship, or by permission of the enemy, have never failed, on every occasion, to acquire their wish, viz. the circumstance of being to windward; excepting, indeed, on those occasions where the French have chosen to keep such an advantage, without availing themselves of it; a circumstance which is plainly a confir-

mation that their system or mode is different from ours, and that they are uniformly determined never to be brought to make the attack, if it can be avoided.

“ From all which these three conclusions will naturally follow: 1st, That, in bringing a single ship to close action, and in conduct during that action, the British seamen have never been excelled: 2dly, That the instructions (by which is meant the method hitherto practised of arranging great fleets, so as to give battle, or to force our enemy, the French, to give battle upon equal terms), after so many and repeated trials, having been found unsuccessful, must be wrong; and lastly, that on the other hand the French having repeatedly and uniformly followed a mode which has constantly the effect intended, they therefore must have adopted some new system, which we have not discovered, or have not yet profited by the discovery.

“ But, it may be asked, have the French ever effected any thing decisive against us? Have they ever, in any of these encounters, taken any of our ships? Have they ever, presuming upon their superior skill, dared to make the attack? No. But confident in their superior knowledge in naval tactics, and relying on our want of penetration, they have constantly offered us battle to leeward, trusting that our headlong courage would hurry us on to make the customary attack, though at a disadvantage almost beyond the power of calculation; the consequences of which have always been, and always will be, the same, as long as prejudices prevent us from discerning either the improvements made by

the enemy, or our own blunders.

“Before concluding this part of the subject, it may be proper further to observe, that, though our apprehensions of suffering in character and importance, as a naval power, might have been very great at the breaking out of the war with the colonies, from an idea that the recent increase of that importance had arisen alone from the growth of these colonies; yet, from experience, from the great exertions made, and from the continuance of the war itself, it has been clearly proved, that that increase must have arisen from other resources, which will every day more and more be found to exist in the mother country herself. At the same time, from that superior exertion, so constantly and gloriously exhibited by our seamen in the lesser conflicts, as well during the course of the present as of the two last wars, we may rest satisfied that the character of the British Tar is not in the least debased, but still as predominant as formerly.

“Hence, if the American colonies shall accomplish their wished-for separation, Britain, by her force being more collected, and, with these resources, will yet be more powerful than ever.”

In the first part of this work, it has been established, that the intention of our enemy, the French, has constantly been to avoid bringing their ships to a close engagement: and that an admiral, commanding an opponent fleet, and being in pursuit any where from the windward quarter, may have it in his power to bring the enemy either to give him battle on equal terms, and in a close engagement, or otherwise force him

to abandon a number of his ships, let him be as shy, as artful, and cautious as he will. In the second part the author demonstrates the practicability of forcing also an attack upon such an enemy, and with equal success, from the leeward quarter. He illustrates the mode of attack from the leeward with some judicious and interesting examples; and concludes the second part with illustrations of the perpendicular attack, or the attack at right angles.

Part the third contains an historical sketch of naval tactics, to which is prefixed the following introduction:

“Since the study of naval tactics is of the greatest importance to this empire, and since the abilities and skill of British seamen, in the conduct and management of single ships, are so manifest, that nothing higher has existed in any one profession or department of life; it is therefore the more worthy of inquiry from what cause or accident it should have proceeded, that so little progress has been made, in the most important part of the subject, I mean the mode of arranging and conducting of ships, when assembled in great fleets, for the purpose of advancing to battle.

“It is not, however, intended that the naval tactics of the ancients should be understood to be affected by what has been said; on the contrary, from history, we are made to believe that the conduct of their commanders, in most of their military operations at sea, was founded on principles equally applicable, and equally understood with those which governed their military operations by land. Of this, the battles of Salamis, of Actium, &c. are examples.

“That naval history, in modern times,

times, has not been so perfect in its information, may be admitted; if it is true, that, of all the numerous engagements at sea, with the Spaniards, with the Dutch, and with the French, spirited and successful as they sometimes were, not one satisfactory plan or description has been obtained, by which even the arrangement or movement of the different fleets could be discovered, more early than that of Admiral Matthews, in 1744; nor one, from which an idea of any system of either attack or defence, can be formed, more early than that of Admiral Byng in 1756.

“From a distinction so remarkable as this, an idea has been suggested, of having naval history divided into periods, in which, by comprehending and distinguishing the particular changes of the weapons, in the shipping, or in the modes of practice, some cause, some essential error in principle, some defect in conduct, will be discovered, from whence should have originated this singular difference of information, between the naval tactics of ancient and of modern times; for it never can be imputed to the historian alone.”

The history of naval tactics is divided into the following periods:

The first period comprehends the time in which the progressive motion of ships and fleets, advancing to battle, had continued to be dependant upon, and confined to, the propulsive power of the oar, and while the decision of the contest was intrusted to the sword, as in the sea battles of antiquity, Salamis, Actium, &c. as before mentioned; with which also may be included the battle of Lepanto in 1571.

The second period includes the time that sails became the necessary, and almost the only means of the progression of ships, now of greater dimensions, more unwieldy, and no longer manageable, by the exertion of the men within by oars. This period begins with the Spanish Armada, comprehends the engagements between the English and the Dutch, together with the battles of Bantry Bay, Beachyhead, La Hogue, and of Malaga in 1719, of none of which have we been able to procure any particular plan or description, down to the year 1740.

The third period, treats of the battles of Admiral Matthews in 1744, including Admiral Byng's engagement in 1756, Sir George Pocock's in 1758, together with those of the American war, from the year 1778 to 1782.

Period the fourth contains descriptions of naval battles in the year 1782, chiefly from the Gazette letters, with the author's remarks on each. Sir Samuel Hood's engagement with the French fleet in the West Indies, off the island of Nevis, occupies in this part, considerable attention. He states the facts simply as they were, and then adds,

“On the part of the British will be found a plan, gallantly, but prudently formed, to attack a force superior, as three to two, which if it was not put into execution, it was because the enemy had prudently declined. Again, in consequence of a still more daring plan having been formed, immediately upon the above disappointment, we find them, in defiance of all former rules (in the face of this superior fleet, who had taken every means of obstruction, and
even

even while they were maintaining a combat with this fleet), bringing their ships to an anchor without a possibility of being prevented. Afterwards, we find them disposed at anchor in so masterly a manner, that little loss was sustained, though two several attacks were made in the same day by an enemy, who had it in their choice to take every advantage.

“ Lastly, that there might be nothing wanting to establish a complete proof of British superiority, we find them keeping, without difficulty, that post which had been thought untenable, sending relief on shore, and maintaining a communication with the island for twelve days without interruption.

“ During the more ancient and more heroic days of naval prowess, one fleet, at one time, might have had the good fortune to shew their valour in the attack, as those at Cadiz, at Vigo, &c.; and another fleet, at another time, might have been so happy as to have an opportunity of exhibiting their steadiness in sustaining an attack, such as that under Blake in the Downs; but, on no occasion whatever has one and the same fleet been so fortunate, as in this of Sir Samuel Hood forcing their opponents to so complete and unequivocal an acknowledgment of their superiority in both cases, whether we shall consider their courage and perseverance, or their skill in seamanship.”

We shall speak further on this subject in the article of **ENGAGEMENT**.

BAXOS—on the coast of America, is the name for **SHOALS**.

BAY—an inlet of the sea between two capes or headlands.

A BAY—is such a gulph or

inlet of the land as does not run very deep into it whether large or small; such is the Bay of Biscay. But smaller Bays are frequently denominated creeks, havens, or roads; of which description is Milford Haven, and others of inferior note. It may be observed indeed in general that a Bay has proportionably a wider entrance than either a gulph or a haven; and that a creek has usually a small inlet, and is always much less than a Bay. What is called a road, is a place upon any coast where there is anchorage and a certain degree of protection and shelter from winds.

BAY—in large ships of war, is that part on each side between decks, which lies before the bits.

BEACH—the sea shore, or margin of the sea.

BEACON—a post, or stake, erected over a shoal, or sand-bank, as a warning to seaman to keep at a distance; also, a signal placed on the top of hills, &c.

BEAK-HEAD—a name given to the fore part of ships, whose fore-castle is square, or oblong; a circumstance common to all vessels of war which have two or more tiers of guns. In smaller ships, the fore-castle is generally shaped like a parabola, whose vortex lies immediately above the stem. The strong projecting pointed beaks used by the ancients in time of battle, are intirely disused since the invention of gunpowder.

BEAMS—strong thick pieces of timber, stretching across the ship from side to side, to support the decks, and retain the sides at their proper distance, with which they are firmly connected by means of strong knees, and sometimes of standards. They are sustained at each end by thick planks

in the ship's side called clamps, upon which they rest.

Midship BEAM—the longest beam in a ship, being lodged in the midship frame, or between the widest frame of timbers. At about two thirds of the height from the keel to the lower deck, are laid a range of beams to fortify the hold and support a platform called the orlop, which contains the cables and stores of the ship.

There are usually twenty-four beams on the lower deck of a ship of seventy-four guns, and to the other decks, additional ones in proportion as the ship lengthens above. It is necessary that the beams should have a greater height in the middle than at the two ends, to carry the water more readily off from the decks and to diminish the recoil of the guns which will thereby more easily return to their places.

Orlop BEAMS—those which support the orlop deck, but are chiefly intended to fortify the hold.

On the BEAM—implies any distance from a ship on a line with the beams, or at right angles with the keel.

Before the BEAM—is an arch of the horizon, comprehended between a line that crosses her length at right angles, and some object at a distance before it; or between the line of the beam and that point of the compass which she stems.

Aft the BEAM. See ABAFT.

On the Weather BEAM—on the weather side of the ship.

BEAM ends—a ship is said to be on her beam ends, when she inclines very much on one side, so that her beams approach to a vertical position; hence also a person lying down is said to be on his beam ends,

BEAN-COD—a small fishing vessel, or pilot boat, common on the sea coasts, and in the rivers of Portugal. It is extremely sharp forward, having its stem bent inward above in a considerable curve, and is commonly navigated with a large lateen sail, which extends the whole length of the deck, and sometimes of an outrigger over the stern, and is accordingly well fitted to ply to windward,

To BEAR—is used in the following different phrases:—The Land's end bore E. N. E. i. e. it was seen from the ship in a line with the E. N. E. point of the compass. We bore down upon the enemy; i. e. having the advantage of the wind, or being to windward, we approached the enemy by sailing large, or from the wind. When a ship that was to windward comes under another ship's stern, and so gives her the wind, she is said to bear under the lee.

She bears in with the land; is said of a ship when she runs towards the shore.

We bore off the land; i. e. we increased our distance from the land.

To BEAR off—also implies to thrust off, or to keep any weight, which is being hoisted up, clear from rubbing against the sides, &c. as bear off the boat.

BEAR ahead—implies make haste, quick, dispatch, &c.

To BEAR up, or away—is to change the course of a ship, in order to make her run before the wind after she had sailed some time with a side-wind, or close hauled; and seems to have been derived from the motion of the helm, by which this is partly produced, as the helm is then borne
up

up to the windward, or weather side of the ship.

BEARING—an arch of the horizon, intercepted between the nearest meridian, and any distant object, either discovered by the eye, and referred to a point on the compass; or resulting from sinical proportion; as at four P. M. we discovered Cape Malacha bearing W. 64° S. or having the difference of longitude and latitude given, we find the bearing and distance by analogy.

BEARING—is also the situation of any distant object, estimated with regard to the ship's position; and in this sense the object must be either ahead, astern, abreast, on the bow, or on the quarter; if a ship sails with a side wind, a distant object is said to be to leeward, or to windward, on the lee quarter or bow, or on the weather quarter or bow.

BEATING—the operation of making a progress at sea against the direction of the wind, in a zigzag line or traverse: beating, however, is generally understood to be turning to windward in a storm, or fresh wind.

To **BECALM**—to intercept the current of the wind in its passage to a ship, by means of any contiguous object; as a high shore, some other ship to windward, &c. At this time the sails remain in a state of rest, and are consequently deprived of their power to govern the motion of the ship.

BECALMED—implies also, that from the weather being calm, and no wind blowing, the sails hang loose against the mast,

BECKETS—any thing used to confine loose ropes, tackles, or spars in a convenient place; hence becketts are either large hooks; or short pieces of rope with a knot

on one end and an eye in the other; or formed like a circular wreath; or they are wooden brackets; and probably from corruption and misapplication of this last term arose the word becket, which seems often to be confounded with bracket.

Put the tacks and sheets in the **BECKETTS**—the order to hang up the weather main and fore sheer, and the lee main and fore tack, to the small knot and eye becket on the foremost main and fore-shrouds, when the ship is close hauled, to prevent them from hanging in the water.

BED—a flat thick piece of timber, lodged under the quarters of casks containing any liquid, and stowed in a ship's hold.

BED of a river—the bottom of a channel in which the stream usually flows. The use of a Bed is to support the cask, and keep the bulge or middle part of it from bearing against the ship's floor, or against the body upon which it rests, lest the staves should give way and break in the place where they are weakest, or lie in a wet place so as to rot in the course of the voyage.

BED of a cannon—is one of the parts of a carriage of a cannon.

BELAY—to fasten a rope by winding it several times round a cleat, belaying pin, or kevel; this term is chiefly applied to the running rigging, there being several other expressions used for large ropes, as, biting, making fast, stoppering, &c. which articles are explained in their due place.

BELFRY—the shelter under which the ship's bell is suspended.

Strike the **BELL**—the order to strike the clapper against the bell as many times as there are half hours of the watch elapsed; hence

we say it is two bells, three bells, &c. meaning there are two or three half hours past.

BEND—that part of one rope which is fastened to another, or to an anchor, &c. hence to bend is to fasten one rope to another, or to an anchor.

BENDING the cable—the operation of clinching, or tying the cable to the ring of its anchor.

BENDING a sail—fastening it to its yard or stay.

BENDS—the thickest and strongest planks in a ship's side, on which men set their feet in climbing up. They are more properly called wales, or walls. They are reckoned from the water, and are distinguished by the titles of first, second, or third Bend. They are the chief strength of a ship's sides, and have the beams, knees, and and foot-hooks, bolted to them.

BETWEEN DECKS—the space contained between any two whole decks of a ship.

BEVELLING—in ship building, the art of hewing a timber with a proper and regular curve, according to a mould which is laid on one side of its surface. Mr. Murray, in his Treatise on Shipbuilding, gives the following directions respecting bevelling.

“In order to hew any piece of timber to its proper bevel, it will be necessary first to make one side fair and out of winding; a term used to signify that the side of a timber should be a plane. If this side be uppermost and placed horizontally, or upon a level, it is plain; if the timber is to be hewed square, it may be done by a plummet or line; but if the timber is not hewed square, the line will not touch both the upper and lower edge of the piece; or if a square be applied to it, there will

be wood wanting either at the upper or lower side. This is called within or without a square. When the wood is deficient at the under side, it is called under-bevelling, and when it is deficient in the upper side, it is called standing-bevelling; and this deficiency will be more or less according to the depth of the piece, so that before the proper bevellings of the timbers are found, it will sometimes be very convenient to assign the breadth of the timbers; nay, in most cases it will be absolutely necessary, especially afore and abaft: though the breadth of two timbers, or the timber and room, which includes the two timbers and the space between them, may be taken without any sensible error as far as the square body goes. For as one line represents the moulding side of two timbers, the fore-side of the one being supposed to unite with the aft-side of the other, the two may be considered as one entire piece of timber.”

BIGHT—the double part of a rope when it is folded, in contradistinction to the end; as, her anchor hooked the bight of our cable; i. e. caught any part of it between the ends: The bight of his cable has swept our anchor; i. e. the double part of the cable of another ship as she ranged about, has entangled itself about our anchor.

BIGHT—is also a small bay between two points of land.

BILANDER—a small merchant vessel with two masts, and is particularly distinguished from other vessels of two masts by the form of her main-sail, which is bent to the whole length of a yard hanging fore and aft, and inclined to the horizon in an angle about 45 degrees; the foremost lower

corner called the tack, being secured to a ring-bolt in the deck, and the aftermost, or sheet to the taffrel. At present there are few vessels of this description.

BILBOES—long bars or bolts of iron with shackles sliding on them, and a lock at the end, used to confine the feet of prisoners in a manner similar to the punishment of the stocks. The offender is laid in irons, which are more or less ponderous according to the nature of the offence of which he is guilty.

BILGE, or **BILDGE**—that part of a floor in a ship which approaches nearer to an horizontal, than to a perpendicular direction, and on which the ship would rest if laid on the ground: hence, when a ship receives a fracture in this place, she is said to be bilged, or bulged. Bilge, is also the largest circumference of a cask, or that which extends round by the bung-hole.

BILGE-water—the rain or sea-water which occasionally enters the lower apartments of a ship, whence running down to the floor, it remains in the bilge of the ship, till pumped out, by reason of her flat-bottom, which prevents it from going to the well of the pump, and is always (if the ship does not leak) of a dirty colour, and disagreeable smell.

BILL—the point or extremity of the fluke of an anchor. See **ANCHOR**.

BILL—also denotes a point of land.

BILL of lading—an acknowledgment signed by the master of the ship and given to a merchant, containing an account of the goods, which the former has received from the latter, with a promise to deliver them at the in-

tended place for a certain sum of money, and is only used when the goods sent on board are but a part of the cargo; for when a merchant loads a vessel entirely on his own account, the deed passed between him, and the master of the vessel, is called a charter-party.

BINNACLE, (anciently **BITTACLE**)—a wooden case or box which contains the compasses, and lights, to shew the compass at night; there are usually two binnacles on the deck of a ship of war, one being designed for the man who steers, and the other for the person who superintends and directs the steerage, whose office is called conning.

BIRTH—the station in which a ship rides at anchor either alone or in a fleet; as, she lies in a good birth, i. e. in good anchoring ground, well sheltered from the wind and sea, and at a proper distance from the shore and other vessels.

BIRTH—also signifies the room or apartment where any number of the officers or ship's company, mess and reside: in a ship of war there is commonly one of these between every two guns.

To BIRTH a ship's company—is to allot to each man the space in which his hammock is to be hung.

To BITE—is said of the anchor when it holds fast in the ground.

BITTS—a frame composed of two strong pieces of timber, fixed perpendicularly in the fore part of a ship, whereon to fasten the cables as she rides at anchor; in ships of war, there are usually two pair of cable bitts, and when they are both used at once, the cable is said to be double bitted. There are several other smaller bitts; as, the topsail-sheet bitts, paul bitts, carrick bitts, &c.

To **BITT** the cable—is to put it round the bits, in order to fasten it or slacken it out gradually, which last is called veering away.

BITTER—the turn of the cable which is round the bits, in order to its being veered out by little and little at pleasure. A ship stopped by her cable, is said to be brought up to a bitter.

BITTER end—that part of the cable which is abaft the bits, and therefore within board when the ship rides at anchor. They say, bend to the bitter-end, when they would have that end bent to the anchor.

BLACK-STRAKES—a range of planks immediately above the wales in a ship's side; they are always covered with a mixture of tar and lamp black, which not only preserves them from the heat of the sun and weather, but forms an agreeable variety with the painted or varnished parts above them.

BLADE of an Oar—is the flat part of it which they plunge into the water in rowing. The force and effect in a great measure depends on the length of this part.

BLINK OF THE ICE—that dazzling whiteness about the horizon which is occasioned by the reflection of light from fields of ice.

BLOCK, (in mechanics, termed a pulley,)—is used for various purposes in a ship, either to increase the mechanical power of the ropes, or to arrange the ends of them in certain places on the deck, that they may be readily found when wanted; they are consequently of various sizes and powers, and obtain various names according to their form or situation: thus—

A single **BLOCK**—contains only one sheave or wheel.

A double **BLOCK**—has two sheaves.

A long tackle **BLOCK**—has two sheaves, one below the other.

A snatch **BLOCK**—is a single block with an opening on one side, in which the bite of a rope may be laid instead of reeving the end through, which, in some circumstances, would be very inconvenient.

Spring **BLOCK**—an invention of Mr. Hopkinson, of Philadelphia, calculated to assist a vessel in sailing, and particularly intended by him to be applied to the sheets and the dead-eyes; it is composed of a common block or dead-eye, attached to a spiral spring of well tempered steel, within the cavity of which is a chain of suitable strength, called a check-chain; when the spring is not in action, this chain is slack; but, when the spring is extended by the force of the wind as far as it may be without injury, the check-chain begins to bear, and prevents its farther extension.

Top **BLOCK**—is a large single block with an iron strop and hook, by which it is hung to an eye-bolt in the cap, and is used to sway up or lower down the top-masts.

Jear **BLOCKS**—are twofold or threefold blocks, applied to hoist or lower the main and fore-yards.

Viol **BLOCK**, or Voyal Block—is a large block through which the voyal or messenger passes when the anchor is weighed by the fore or jear capstan.

Clue-garnet and Clue-line **BLOCKS**—are distinguished from others by having shoulders upon their upper parts, through which the strop is laid, and is applied to draw up the clues or lower corners

of the square sails to their respective yards.

Cat Block—is a two or three-fold block, with an iron strop and large hook to it, and is employed to draw the anchor up to the cat-head.

Every Block is composed of three, and generally four, parts;

1. The shell, or outside wooden part.

2. The sheave, or wheel, on which the rope runs.

3. The pin, or axle, on which the sheave turns.

4. The strop, or part by which the block is made fast to any particular station, and is usually made either of rope or of iron.

Iron-stropped Blocks—frequently have the hook working in a swivel in order to turn it, that the several parts of the rope of which the tackle is composed, may not be twisted round each other, which would greatly diminish the mechanical power.

Block and Block—is the situation of a tackle when the blocks are drawn close together so that the mechanical power becomes destroyed till the tackle is again over-hauled by drawing the blocks asunder.

BLUFF—an high land projecting almost perpendicularly into the sea.

BLUFF-bowed—applied to a vessel that has broad and flat bows.

BLUFF-headed—is when a ship has but a small rake forward on, being built with her stem too straight up.

BOARD—the space comprehended between any two places where the ship changes her course by tacking; or, it is the line over which she runs between tack and tack when turning to windward,

or, sailing against the direction of the wind.

To make a good **BOARD**—to sail in a straight line when close hauled, without deviating to leeward.

To make short **BOARDS**—is to tack frequently before the ship has run any great length.

To make a stern **BOARD**—is when by a current, or any other accident, the vessel has fallen back from the point she has gained on the last tack, instead of having advanced beyond it.

BOARD—is sometimes used for **ABOARD**.

To heave over **BOARD**—to throw any thing out of a vessel into the sea.

To slip by the **BOARD**—to slip down by the ship's side.

Weather BOARD—that side of the ship which is to windward.

BOARD and BOARD—is when two ships come so near as to touch each other, or to lie side by side.

BOARDERS—sailors appointed to make an attack by boarding, or to repel such attempt from the enemy.

BOARDING—an assault made by one vessel on another, by entering her in battle with a detachment of armed men, and is chiefly practised by privateers upon merchant ships, who are not so well provided with men. This stratagem is seldom made use of in ships of war, the battle being generally decided by the vigorous execution of a close cannonade.

An officer should maturely consider the danger of boarding a ship of war before he attempts it, and be well assured that his adversary is weakly manned; for perhaps he wishes to be boarded; and if so, a great slaughter will necessarily follow.

follow. The swell of the sea ought also to be considered, because it may run so high as to expose both the ships to the danger of sinking.

There is perhaps very little prudence in boarding a ship of equal force; and when it is attempted, it may be either to windward or to leeward, according to the comparative force and situation of the ships. If there be any swell at sea, it may be more advisable to lay the enemy aboard on the lee-side, as the water is there the smoothest; besides, if the boarder is repulsed in that situation, he may more easily withdraw his men and stand off from his adversary. But as the weather-ship can generally fall to leeward at any time, it is perhaps more eligible to keep to windward, by which she will be enabled to rake her antagonist or fire the broadside into her stern, as she crosses it in passing to leeward; which will do great execution amongst her men by scouring the whole length of her deck.

Boarding may be performed in different places of the ship, according to the circumstances, preparation, and position of both; the assailant having previously selected a number of men armed with pistols and cutlasses. A number of powder flasks, or flasks charged with gunpowder and fired with a fuze are also provided, to be thrown upon the enemy's deck immediately before the assault. Besides this, the boarder is generally furnished with an earthen shell, called a stinkpot, which on that occasion is suspended from his yard-arms or bowsprit end. This machine is also charged with powder, mixed with other inflammable and suffocating materials with a lighted fuze at the aperture,

Thus prepared for the action, and having grappled his adversary, the boarder displays his signal to begin the assault. The fuzes of the stinkpot and powder flasks being lighted, they are immediately thrown upon the deck of the enemy where they burst and catch fire, producing an intolerable stench and smoke, and filling the deck with tumult and distraction. Amidst the confusion occasioned by this infernal apparatus, the detachment provided rush aboard sword in hand, under cover of the smoke, on their antagonist, who is in the same predicament with a citadel stormed by besiegers, and generally overpowered, unless he is furnished with extraordinary means of defence, or equipped with close quarters, i. e. places of retreat, furnished with small arms, &c. which may be fired at any time upon the boarders, and frequently with success.

BOATS—small open vessels, conducted on the water by rowing or sailing, and are distinguished by different names according to their size and construction.

The long **BOAT**—is usually the largest boat that accompanies a ship; is generally furnished with a mast and sails, and may be armed and equipped for cruising short distances; her principal employ however, is, to bring heavy stores or provisions on board, and also to go up small rivers to fetch water, wood, &c.

The **Launch**, is a boat, which has greatly superseded the use of the long-boat, particularly by merchant-ships in the Mediterranean; it is longer, more flat-bottomed, and by rowing a greater number of oars, is better adapted for going up narrow and shallow rivers.

The **Barge**, is a long, narrow, and

and light boat, employed to carry the principal officers, as admirals and captains of ships of war, and is very unfit for sea.

A Pinnace—resembles a barge, but is smaller, never rowing more than eight oars, whereas, a barge never rows less than ten; the pinnace is for the accommodation of the lieutenants, &c.

The Cutters of a ship are broader, deeper, and shorter than the barge or pinnace, are fitter for sailing, and commonly employed in carrying light stores, passengers, &c. to and from the ships; they are built differently from the former boats; the lower edge of every plank overlaying the upper edge of the plank below it, which is called clinch work. They generally row six oars, sometimes only four, which last, is termed a jolly-boat.

Yawls—resemble pinnaces, but are generally rowed with six oars.

A Wherry—is a sharp light boat, used in rivers or harbours.

The Wherries allowed to ply about London—are either scullers wrought by a single person with two oars, or oars wrought by two persons, with each an oar.

A Moses—is a flat-bottomed boat used in the West-Indies, for bringing off hogheads of sugar, and is termed single or double, according to its size.

A Punt—is a sort of oblong flat-bottomed boat, nearly resembling a floating stage.

A Felucca—is a large and strong passage boat, used in the Mediterranean, having from 10 to 16 banks of oars.

Trim the BOAT—the order to fit in the boat, in such a manner as that she shall float upright

in the water without leaning to either side.

To bale the BOAT—is to throw out any water which may be in her bottom.

To moor the BOAT—to fasten her with two ropes, so as that the one shall counteract the other, and keep her in a steady position.

BOAT'S crew—the men appointed to conduct any particular boat, as the barge's crew, cutter's crew, &c.

Train of BOATS—are small vessels fastened to each other, ascending up the Loire in France by sails when the wind serves, or else towed by men, sometimes to the number of 70 or 80 to a rope.

BOAT-HOOK—an iron hook with a sharp point on the hinder part thereof; it is fixed upon a long pole, by the help of which, a boat is either pulled to or pushed off from any place.

BOATING—was a severe punishment inflicted by the ancient Persians on capital offenders, in the following manner: the condemned person being laid on his back in a boat, and having his hands stretched out and tied fast on each side of it, had another boat put over him, his head being left out through a place fit for it. In this posture they fed him, till the worms which were bred in the excrements he voided—as he thus lay, eat out his bowels, and so caused his death, which was usually 20 days in effecting, the criminal lying all this while between the boats in most exquisite torments.

BOATSWAIN—the officer who has the boats, sails, rigging, colours, anchors, cables, and cordage, committed to his charge.

It is the duty of the boatswain particularly to direct whatever relates to the rigging of a ship, after she is equipped from a royal dock-yard. Thus he is to observe, that the masts are properly supported by their shrouds, stays, and back-stays, so that each of these ropes may sustain a proportional effort when the mast is strained by the violence of the wind or the agitation of the ship. He ought also to take care that the blocks and running ropes are regularly placed so as to answer the purposes for which they are intended, and that the sails are properly fitted to their yards and stays, and well furled or reefed when occasion requires. It is likewise his office to summon the crew to their duty, to assist with his mates in the necessary business of the ship, and to relieve the watch when it expires. He ought frequently to examine the condition of the masts, sails, and rigging, and remove whatever may be judged unfit for service, or supply what is deficient, and he is ordered by his instructions to perform his duty "with as little noise as possible."

BOATSWAIN'S-MATE — is an assistant to the Boatwain, who has the peculiar command of the long-boat.

BOBSTAYS — ropes used to confine the bowsprit downward to the stem or cut-water. A bobstay is fixed by thrusting one of its ends through a hole bored in the fore part of the cut-water for this purpose, then splicing both ends together so as to make it two fold or like the link of a chain; a dead eye is then seized into it, and a laniard passing through this and communicating with another dead-eye upon the

bow-sprit, is drawn extremely tight by the help of mechanical powers.

The use of the bobstay is to draw down the bow-sprit, and keep it steady and to counteract the force of the stays of the foremast which draw it upwards. The bow-sprit is also fortified by shrouds from the bows on each side, which are all very necessary as the foremast and the upper part of the mainmast, are stayed and greatly supported by the bow-sprit. For this reason the bobstay is the first part of a ship's rigging which is drawn tight to support the masts. To perform this task more effectually, it is usual to suspend a boat, anchor, or other weighty body at the bow-sprit end, to press it downwards during this operation.

BOCCA — is a term used both in the Levant, and on the North coast of South America, or the Spanish Main for a mouth or channel, into any port or harbour or the entrance into a Sound which has a passage out by a contrary way.

BOLD SHORE — signifies a coast so steep and abrupt, as to admit the approach of shipping without exposing them to the danger of being run aground.

BOLLARD timbers, or Knight-heads — are two pieces of timber rising just within the stem, one to each side of the bow-sprit to secure its inner end.

BOLLOCK - BLOCKS — are blocks secured on the middle of the top-sail yards, and receive the top-sail ties through them, in order to encrease the mechanical power used in hoisting them up.

BOLSTERS — small cushions or bags filled with tarred canvas, used to preserve the stays from being

being chafed or worn by the motion of the masts, as the ship pitches at sea.

BOLT—a cylindrical pin of iron driven into the sides and decks, of which there are various sorts, which are generally distinguished according to the places where they are used: as chain-bolts, both for carriages, &c. ring-bolts, serving for the bringing to of the planks; &c. drive-bolts, used to drive out others; fet-bolts, employed for forcing the planks and other works, bringing them close to one another; rag-bolts, on each side full of jags or barbs, to keep them from flying out of their holes: clench-bolts, those which are clenched or fastened at the ends, where they come through; fore-lock-bolts, made like locks with an eye at each end, which into a large fore-lock of iron is driven to prevent starting out; fend or fender-bolts, made with long and thick heads, struck into the outermost bends or wales of a ship, to save her sides from hurts and bruises.

BOLT rope—a rope to which the edges or skirts of the sails are sewed to strengthen, and prevent them from rending; that part of it which is on the perpendicular parts of the sail, is called the leech-rope, that at the bottom, the foot-rope, and that at the top, the head-rope.

BOMB—in artillery is a large shell of cast-iron, having a great vent to receive the fuze, which is made of wood. The method of preparing a bomb is as follows: a hollow iron globe is cast pretty thick, having a round aperture, by which it may be filled and lighted; and circular anæ of hammered iron fixed in the mould, when they are cast for

the commodious putting it into mortar. In France the handles are cast-iron. To prove whether the shell be found after heating it red-hot on the coals; it is exposed to the air; so as to cool gently; for since fire dilates iron, if there be any chinks or perforations they will thus be opened and enlarged; because of the spring of the included air continually acting within. This done, the cavity of the globe is filled with hot water; the aperture well stopped, and the outer surface well washed with cold water and soap, so that if there be the smallest leak, the air, rarefied by the heat, will now perspire and form bubbles on the surface. If no defect be thus found in the globe, its cavity is filled with whole gunpowder; a little space or liberty is left, that when a fuze, or wooden tube of the figure of a truncated cone is driven through the aperture, and fastened with a cement made of quick lime, ashes, brick-dust, and steel filings worked together in a glutinous water or four parts of pitch, two of colophony, one of turpentine, and one of wax: the powder may not be bruised. This tube is filled with a combustible matter, made of two ounces of nitre, one of sulphur, and three of gunpowder dust, well rammed. This fuze set on fire, burns slowly till it reaches the gunpowder which goes off at once bursting the shell to pieces with incredible violence. There must, however, be special care taken that the fuze be so proportioned as that the powder do not take fire before the shell arrives at the destined place; to prevent which, the fuze is frequently bound round with a wet clammy thread. The fuzes are

are driven into the shell so as that only about an inch and a half comes out beyond the fuze-hole, and then the shell is said to be fixed. They are charged long before there is occasion to use them, and in order to secure the composition, with which they are filled, the two ends are covered with a composition of tallow mixed either with pitch or bees wax. When the fuze is to be put into the shell, the little end is opened or cut off, but the great end is never opened till the mortar is to be fired.

Mr. Muller gives the following proportions from the 13-inch bombs now commonly used, and observes, that they may be easily adjusted to any other calibre, by making the diameter of the shell to 30, as any part expressed in inches, to the same part expressed in parts of the diameter, divided into 30 equal parts:

	IN.	
Diameter of the bore	30	
Diameter of the shell	29	5
Diameter of the hollow sphere	21	
Thickness of the metal at the fuze-hole	3	5
Thickness at the opposite part	5	
Diameter of the fuze-hole	4	
	d	
	—	
Weight of the shell unloaded	11	7
	d	
	—	—
Weight of the powder contained in the shell	236	5
	—	—

N. B.—The letter d denotes the cube of the diameter of the bore.

We shall have occasion to renew this subject in the article MORTARS.

BOMB vessel—a small vessel particularly calculated to throw bombs into a fortress, being built remarkably strong, in order to sustain the violent shocks produced by the discharge of their mortars. They are generally rigged as ketches, and are said to have been invented by M. Reyneau and first used at the bombardment of Algiers.

BONNET—an additional part laced to the foot of the sails in small vessels, in moderate winds. They are commonly one third of the depth of the sails they belong to.

BOOM—in marine fortification, a strong iron chain, fastened to a number of spars, and extending athwart the mouth of a harbour or river, to prevent the enemy's vessels from entering, but may be occasionally sunk or removed.

BOOM—a long pole run out from different places in the ship, to extend the bottoms of particular sails, as jib-boom, flying jib-boom, studding-sail-booms, driver or spanker-boom, ring-tail-boom, main-boom, square-sail-boom, &c.

Fire BOOMS—strong poles occasionally thrust out from a ship's side, &c. to prevent the approach of fire-ships, fire-stages, or vessels accidentally on fire.

BOOM-IRONS—are employed to connect the studding-sail booms to their respective yards, &c. the one circle or rim being driven firmly on the yard-arm, and the boom sliding in the other.

The **BOOMS**—imply a space where the spare booms and top-masts are stowed, their ends being supported by the gallows, and affording

for a receptacle for the barge between them.

BOOMING—among failors, denotes the application of a boom to the sails. Booming of the sails is never used but in quarter winds or before a wind.

When a ship is said to come booming towards us, it signifies that she comes with all the sail she can make.

BOOT-TOPPING—the operation of scraping off the grass, slime, shells, &c. which adhere to the bottom, near the surface of the water, and daubing it over with a mixture of tallow, sulphur, and rosin.

BOOT-TOPPING—is chiefly performed where there is no dock, or other commodious situation for breaming or careening; or when the hurry of a voyage renders it inconvenient to have the whole bottom properly trimmed and cleansed from the filth which gathers to it in the course of a voyage. It is executed by making the ship lean to one side as much as they can with safety, and then scraping off the filth, &c. on the other side, which finished, they change the position of the vessel, and perform the same operation on the other side, which not only preserves the bottom from the worm, but makes the ship slide smoothly through the water.

BORE—among engineers denotes the diameter of the barrel of a gun or cannon, or rather its whole cavity.

BOTH SHEETS AFT—the situation of a ship that sails right before the wind, or with the wind right astern.

BOTTOM—is used to denote either the bottom of a ship, or that of the water; thus, in the former

sense, we say a clean or a foul bottom, a British, French, or Dutch bottom; and in the latter sense, a clayey, rocky, muddy, sandy, stony, or coral bottom.

With respect to the former merchant ships are much broader bottomed than frigates. Ships of war are a mean between the two.

With respect to the latter, Kay observes that the bottom of the sea is level, i. e. the descent from the shore to the deep is equable and uniform, but the bottom of some seas are found higher than others.

Bottom, sometimes implies the whole ship or vessel, as English bottoms, foreign bottoms, &c.

BOTTOMRY—a contract for borrowing money on the keel or bottom of the ship, whereby the commander binds the ship herself, that if the money be not paid at the time appointed, the creditors shall have the ship.

BOTTOMRY—is also the lending money to be paid only on the return of the ship; the interest is therefore much greater than the law commonly allows, because, if the ship perishes, the lender loses the whole of the debt.

It is enacted by stat. 19, Geo. II. that after August 1, 1746, every sum of money lent on bottoms upon the ships of any subjects to or from the East-Indies, shall be lent only on the ship or the merchandizes laden on board her, and so expressed in the condition of the bond; and the benefit of salvage shall be granted to the lender, his agents, &c. who only shall have a right to make assurance on the money lent; and no borrower of money on bottomry shall recover more on any assurance than the value of his interest on the ship or effects, exclu-

five of the money borrowed. And if the value of his interest doth not amount to the money borrowed, he shall be responsible to the lender for the surplus, with lawful interest for the same, together with the assurance, and all charges whatsoever, &c. notwithstanding the ship and merchandize shall be totally lost.

There is a fictitious way of taking up money in the nature of bottomry, upon supposition of a ship and master, when, indeed, there is no such ship or master in being: the condition reciting, if that ship (naming her) shall not arrive at such place within 12 months, the money agreed on to be paid, shall be paid, but if the ship shall arrive, then nothing is to be paid. This unjustifiable method of raising money is a common practice among the Italians, and it is to be feared has been too frequently used by some persons on this side the water.

BOUND—is used in the following terms: wind-bound, prevented from sailing on account of the wind being contrary: ice-bound, totally surrounded with ice, so as to be incapable of advancing: Where are you bound to? i. e. to what place are you going?

BOW—the rounding part of a ship's side forward, beginning where the planks arch inwards, and terminating where they close, at the stem or prow.

It is proved by a variety of experiments, that a ship with a narrow bow is much better calculated for sailing swiftly than one with a broad bow, but is not so well fitted for a high sea, into which she always pitches or plunges her fore-part very deep, for want of sufficient breadth to repel the vo-

lume of water which so easily divides in her fall. The former of these is called by seamen a lean, and the latter a bluff bow.

A French author observes that the bow which meets with the least resistance in a direct course, not only meets with the least resistance in oblique courses, but also has the additional property of driving the least to leeward, which is a double advantage gained by forming the bow so as to give it that figure which will be the least opposed in moving through any medium.

On the Bow—an arch of the horizon, (not exceeding 45 degrees,) comprehended between some distant object, and that point of the compass which is right ahead. See **BEARING**.

BOWER. See **ANCHOR**.

BOWGRACE—a kind of fenders of old junk, laid round the bows and sides of a ship to prevent her receiving injury from floating ice.

BOWLINE—a rope fastened near the middle of the leech, or perpendicular edge of the square sails, by three or four subordinate parts, called bridles; it is used to keep the weather-edge of the sail tight forward and steady when the ship is close hauled to the wind.

To check a **BOWLINE**—is to slacken it when the wind becomes large or free.

BOWMAN—the man who rows the foremost oar in a boat.

To **BOWSE**—to pull upon any body with a tackle, or complication of pullics, in order to remove it, &c

Hauling upon a tack is called **bowling** upon a tack, and when they would have the men pull all together, they cry **bowse** away.

Bowse—is chiefly used by the gunners when they haul upon their tackles to thrust a piece out of port, in which case they cry *Bowse ho*, i. e. pull more upon the tackle, also when there is occasion to pull more on the tackle than otherwise, they say *bowse upon the tackle*.

BOWSPRIT—a large boom or mast, which projects over the stem, to carry sail forward, and counteract the force of the after-sails, or those extended behind.

The **BOWSPRIT** should be two thirds of the length of the main-mast, and its thickness equal to the mizenmast: when it is 12 fathoms five feet long, its yard must be eight fathoms two feet long, and the topmast of the bowsprit three fathoms and one foot.

BOXES of the pump—the materials requisite for repairing the pump.

BOXHAULING—a method of veering a ship when the swell of the sea renders tacking impracticable; this is generally performed when the ship is so near the shore, as not to have room for veering in the usual manner.

BOXING OFF—is performed by laying the head sails aback, to throw the ship's head into the line of her course, after she had inclined to windward of it by the neglect of the helmsman, or otherwise.

Boxing the compass—is a phrase among the sailors for rehearsing the several points of the compass in their proper order.

BRACE—a rope employed to wheel or traverse the sails upon the mast in a direction with the horizon, for which purpose they are fastened to the extremities of the yards.

BRACE—is also a name given

to pieces of iron placed as supports to various machines in a ship, such as the poop lanterns, &c. &c.

To BRACE about—is to turn the yards round for the contrary tack.

To BRACE sharp—to cause the yards to have the smallest possible angle with the keel; for the ship to have head-way.

To BRACE to—is to check or ease off the lee braces, and round in the weather ones, to assist in the manœuvre of tacking.

BRACKETS—short crooked timbers resembling knees, fixed in the frame of a ship's head to support the gratings: they also served to support the gallery.

BRAILS—ropes passing through pulleys on the mizen-mast and yard, and fastened to the aftermost lee-ch of the sail, in different places, to truss it close up, as occasion requires. Several of the stay-sails also have brails.

BRAILS is likewise a general name given to all the ropes employed to haul up the bottoms, lower corners, and skirts of the other great sails, for the more ready furling them, which operation is called *brailing up*, or *hauling up the brails*.

BRAKE—the handle or lever by which a common ship pump is usually worked.

It operates by means of two iron bolts thrust through the inner end of it, one of which rolling across two cheeks or ears, in the upper end of the pump, serves as a fulcrum for the brake, supporting it between the cheeks. The other bolt connects the extremity of the brake to the pump-spear, which draws up the box or piston, charged with the water in the tube,

BREADTH—the measure of a ship from side to side, in any particular place.

Main BREADTH—is that part of every timber which incloses the greatest space from the middle line of the ship's length.

Top-timber BREADTH—is the distance between the upper part of the same timber and the middle line.

Extreme BREADTH—is the distance between her sides at the midship frame.

BREAD—is the usual name given to biscuits.

BREAK of a deck—is that part where it terminates, and the descent on to the next deck below it commences.

To **BREAK-BULK**, to begin to unload a ship.

To **BREAK-SHEER**—when a ship at anchor is laid in a proper position to keep clear of her anchor, but is forced by the wind or current out of that position, she is said to break her sheer.

BREAKERS—a name given by sailors to those rocks which lie so near the surface of the sea as to occasion the waves to break over them in a perpetual foam, and produce a hoarse and terrible roaring, very different from what the waves have in a deeper bottom.

When a ship is unhappily driven among breakers, it is hardly possible to save her, as every billow that heaves her upwards serves to dash her down with additional force, when it breaks over the rocks or sands beneath it.

BREAKING BULK—the act of beginning to unload a ship, or of discharging the first part of the cargo.

To **BREAK-UP**—to take a ship

to pieces when she becomes old and unserviceable.

BREAK-WATER—the hull of an old ship sunk at the entrance of a small harbour, to break off or diminish the force of the waves as they advance towards the vessels moored within.

BREAK-WATER—is also a sort of small buoy fastened to a large one; when the buoy-rope of the latter is not long enough to reach to the surface of the water; and thereby to shew where the large buoy swims.

BREAMING—burning off the filth, such as grass, ooze, shells, or sea-weed, from the ship's bottom, which it has contracted by lying long in harbour; it is performing by holding kindled furze, faggots, or reeds, to the bottom, which, by melting the pitch that formerly covered it, loosens whatever filth may have adhered to the planks; the bottom is then covered anew with a composition of sulphur, tallow, &c. which not only makes it smooth and slippery, so as to divide the fluid more readily, but also poisons and destroys those worms which eat through the planks in the course of a voyage. This operation may be performed either by laying the ship aground after the tide has ebbed from her, or by docking, or careening.

BREAKFAST—a large rope, employed to confine a ship sideways to a wharf or key, or to some other ship, as the head-fast confines her forward, and the stern-fast, abaft.

BREAST-HOOKS—thick pieces of timber, incurvated into the form of knees and used to strengthen the fore part of the ship, where they are placed at different

ferent heights, directly across the stem, so as to unite it with the bows on each side.

The Breasthooks are strongly connected to the stem and hawse-pieces by tree-nails, and by bolts driven from without, through the planks and hawse-pieces, and the whole thickness of the breast-hooks, upon whose inside those bolts are forelocked or clinched upon rings. They are usually about one third thicker and twice longer than the knees of the decks which they support. There are generally four or five of these pieces in the hold, between the keelson and the lower deck, upon the uppermost of which the planks of that deck are rabbeted. There are two placed between the lower and the second decks, one of which is immediately beneath the hawse-holes, and the other under the second deck, whose planks are inlaid thereon, and upon which the inner end of the bowsprit frequently rests.

The fore-side of the breast-hook, which is convex, is formed so as to correspond with the place in which it is stationed, that is to say, it conforms exactly to the interior figure of that part of the bow where it ought to be fayed; accordingly the branches or arms of the breast-hooks make a greater angle, as they are more elevated above the keel, whilst the lower ones are more incurvated, and are almost figured like the crotchets. It not being necessary that the inner or concave side of these pieces should retain a regular form, the artificers frequently let them remain as thick as possible, to give additional support to the ship's forepart, where she sustains the whole shock of resistance in

dividing the fluid; or in plunging into it. It is evident, that the connection and solidity of the ship in this place, will be reinforced in proportion to the strength and extent of the breast-hooks, so that they may cover a greater number of the head timbers across the stem, to strengthen the fore part of the ship and unite the bows on each side.

BREAST-WORK—a sort of balustrade of rails or mouldings, which terminates the quarter-deck and poop at the fore ends, and also encloses the fore-castle both before and behind.

BREECHING—a strong rope, used to secure the cannon, and prevent them from recoiling too much in the time of battle; it is fixed by reeving it through a thimble stropped upon the casca-bel or pummelion of the gun, and the two ends are then clinched on each side of the port, to ring-bolts in the ship's side. The breeching is of sufficient length to let the muzzle of the cannon come within the ship's side to be charged or to be housed.

BREEZE—a shifting wind blowing from sea and land alternately at certain hours, and sensibly only near the coasts.

BREWING—the appearance of a collection of black and tempestuous clouds, arising gradually from a particular part of the hemisphere, as the forerunner of a storm.

BRIDLES—the upper part of the moorings, laid in the King's harbours, to ride ships or vessels of war. See **MOORINGS**.

BRIDLES of the Bowline—short legs, or pieces of rope, running through iron thimbles, by which the bowline attaches to different

ferent places on the leech, or edge of a large sail. As the current of air enters the cavity of the sail in a direction nearly parallel to its surface, it follows, that the ridge of the sail must necessarily be shaken by the wind, unless it is kept tight forward; but as a single rope has not been found sufficient to confine the whole skirt of the sail, inasmuch, as it only draws upon one part thereof, it became necessary to apply bridles or legs, spreading out from the bowline.

BRIG, or BRIGANTINE—a small merchant vessel with two masts, rigged as a ship's main and fore-masts, except that the main-sail, instead of being fastened to the main-yard which hangs athwart or at right angles to the ship's keel, is, in a brig, fore and aft, or in a direction with the keel, the fore-edge being fastened in different places to hoops, which encircle the main-mast, and slide up and down it, as the sail is hoisted or lowered; it is extended by a gaff above, and by a boom below. This term is, however, variously applied by the mariners of different European nations.

To BRING BY THE LEE—to incline so rapidly to leeward of the course when the ship sails large, as to bring the lee-side unexpectedly to windward, and, by laying all the sails aback, expose her to the danger of oversetting. See to **BROACH** to.

To BRING TO—to check the course of a ship, by arranging the sails in such a manner as that they shall counteract each other, and keep her nearly stationary, when she is said to lie by, or lie to, having, according to the sea phrase, some of her sails aback to oppose the force of those which are full;

or having them otherwise shortened, by being furled or hauled up in the brails.

BRING TO—the order from one ship to another to put herself in that situation, or to stop in order to her being examined, &c.

BRING TO—is also used in applying a rope to the capstan; as, "bring to the messenger."

To BRING UP—to cast anchor, is a provincial phrase peculiar to the seamen in the coal trade.

To BROACH TO—differs from **To bring** by the lee, in that it is a rapid inclination to windward of her course; in other respects the effects and danger are nearly the same: these accidents may happen by the negligence or incapacity of the helmsman, by the force of the sea, by carrying away some of the sails, or by disabling the rudder or its appendages.

It is easy to conceive that a ship will carry much more sail before the wind than when she makes progress with her side to its direction, because when the current of wind acts nearly endways on her hull, the pressure of it on the mast must be considerably diminished, as she yields to its impulse, and flies before it; and that if she carries a great sail at this time, it can only press her fore part lower down in the water. But if, when she carries great extension of sail, her side is suddenly brought to the wind, it may be attended with the most fatal consequences, as the whole force of it then pours like a torrent into the cavities of the sails. The masts, therefore, unavoidably yield to this strong impression acting like levers on the ship side-ways, so as nearly to overturn her, unless she is relieved by some other

other event which may also be extremely pernicious, such as the sails rending to pieces, or the masts being carried away.

BROADSIDE, in a naval engagement—the whole discharge of the artillery on one side of a ship of war, above and below, as,

“ We poured a broadside into the enemy’s ship,” i. e. discharged all the ship’s cannon on one side upon her.

BROADSIDE—also implies all that part of a ship above the water which is situate between the bow and quarter, and is in a position nearly perpendicular to the horizon.

“ She brought her broadside to bear on the castle: i. e. disposed the ship so as to point all her cannon on one side to it within point-blank range.

“ A squall of wind laid the ship on her broadside; i. e. pressed her down in the water, so as nearly to overset her.

BROKEN-BACKED — the state of a ship, so loosened in her frame, either by age, weakness, or some great strain, as to droop at each end. This circumstance is more common among the French than the English or Dutch ships, owing partly to their great length, and to the sharpness of their floor, whose breadth is not sufficiently carried from the middle towards each end, and partly from being frequently obliged to have a great weight on both ends, when they are empty in the middle at the time of discharging one cargo and taking in another.

BUCCANEERS—a name given to certain practical rovers, of various European nations, who formerly infested the coasts of Spanish America. They were

originally inoffensive settlers in Hispaniola, but were inhumanly driven from their habitations by the jealous policy of the Spaniards; whence originated their implacable hatred to that nation.

BUCKETS—are made either of canvass, of leather, or of wood; the latter are used principally for washing the decks, and therefore answer the purposes of pails.

BUCKLERS—two pieces of wood, fitted together, to stop the hawse-holes, leaving only sufficient space between them for the cable to pass, and thereby preventing the ship taking in much water in a heavy sea.

Ship-BUILDING—the work of constructing ships, as distinguished from **NAVAL ARCHITECTURE**, which may rather be considered as the art or theory of delineating ships on a plane. The pieces by which this complicated machine is framed, are joined together in various places by scarfing, rabbetting, tenanting, and scoring.

During the construction of a ship, she is supported in the dock or upon a wharf, by a number of solid blocks of timber, placed at equal distances, from and parallel to each other, she is then said to be on the stocks.

The first piece of timber laid upon the blocks is generally the keel: generally, because of late a different method has been adopted in some of the royal dock-yards, by beginning with the floor timbers: the artists having found that the keel is often apt to rot during the long period of building a large ship of war. The pieces of the keel are scarfed together and bolted, forming one entire piece, which constitutes the length of the vessel below. At one extremity

extremity of the keel is erected a stem; which is a strong piece of timber incurvated nearly into a circular arch, or according to the technical term compassing, so as to project outwards at the upper end, forming what is called the rake forward. In small vessels this is framed of one piece, but in large ships it is composed of several pieces, scarfed and bolted together. At the other extremity of the keel is elevated the stern-post, which is always of one entire strait piece. The heel of it is let into a mortise in the keel, and its upper end hangs outwards, making an obtuse angle with the keel, like that of the stem: this projection is called the rake abaft. The stern-post, which ought to support the stern, contains the iron work or hinges of the rudder, which are called googings, and unite the lower part of the ship's sides abaft.

Towards the upper end of the stern-post, and at right angles with its length, is fixed the middle of the wing-transom, where it is firmly bolted. Under this is placed another piece parallel thereto, and called the deck-transom, upon which the after end of the lower deck is supported. Parallel to the deck-transom, and at a proper distance under it, another piece is fixed to the stern-post, called the first transom, all of which serve to connect the stern-post to the fashion-pieces. Two more transoms called the second and third, are also placed under these, being likewise attached to fashion-pieces, into which the extremities of all the transoms are let. The fashion-pieces are formed like the other timbers of the ship, and have their heels resting on the

upper part of the keelson, at the after extremity of the floor-ribbands.

All these pieces, viz. the transoms, the fashion-pieces, and their top-timbers, being strongly united into one frame, are elevated upon the stern-post, and the whole forms the structure of the stern, upon which the galleries and windows, with all their appropriate ornaments, are afterwards built.

When the stem and stern-post are thus elevated upon the keel, to which they are securely connected by knees and arched pieces of timber, bolted to both, and when the keel is raised at its two extremities by pieces of dead wood, then the midship floor-timber is placed across the keel, whereto it is bolted through the middle. The floor-timbers before and abaft the midship-frame are likewise stationed in their proper places upon the keel; after which the keelson, which like the keel is composed of several pieces scarfed together, is fixed across the middle of the floor-timbers, to which it is attached by bolts driven through the keel and clinched on the upper part of the keelson. The futtocks are then raised upon the floor-timbers, and the hawse-pieces erected upon the cant-timbers in the fore part of the ship. The top-timbers on each side are next attached to the head of the futtocks, and the frames of the principal timbers being thus completed, are supported by ribbands.

As soon as the ribs of the ship are stationed, they proceed to fix on the planks, of which the wales are the principal, being much thicker and stronger than the rest. The harplings which may be con-

sidered as a continuation of the wales at their fore ends are fixed across the hawse-pieces, and surround the fore part of the ship. The planks that inclose the ship's side are then brought about the timbers, and the clumps which are of equal thickness with the wales, fixed opposite to the wales within the ship; these are used to support the ends of the beams, and accordingly stretch from one end of the ship to the other. The thick stuff, or strong planks of the bottom within board, are then placed opposite to the several scarfs of the timbers, to reinforce them throughout the ship's length. The planks employed to line the ship, called the ceiling or foot-waling is next fixed in the intervals between the thick stuff of the hold. The beams are afterwards laid across the ship to support the decks, and are connected to the side, by lodging and hanging knees. The cable bits being next erected, the carlings and ledges are disposed between the beams to strengthen the deck. The water-ways are then laid on the ends of the beams throughout the ship's length, and the spirketting fixed close above them. The upper deck is afterwards planked, and the string placed under the gunwale or plan-sheer in the waist. They proceed next to plank the quarter-deck and fore-castle, and to fix the partners of the masts and capstans, with the coamings of the hatches. The breast-hooks are then bolted across the stem and bow, within board, the step of the foremast placed on the keelson, and the riders fayed on the inside of the timbers to reinforce the sides in different places of the ship's length. The pointers, if any, are afterwards fixed across

the hole diagonally to support the beams, and the crotches stationed in the after-hold, to unite the half-timbers. The steps of the mainmast and the capstans are next placed; the planks of the lower decks, and orlop laid; the navel-hoods fayed on the hawse-holes, and the knee of the head, or cutwater connected to the stem. The figure of the head is then erected, and the rail-board and cheeks fixed on the sides of the knee.

The taffrel and quarter-pieces which terminate the ship abaft, the former above, and the latter on each side, are then disposed, and the stern and quarter galleries framed and supported by their brackets. The pumps with their well, are next fixed in the hold; the timber boards laid on each side of the keelson, and the garboard-strake fixed on the ship's bottom next to the keel without.

When the hull is thus fabricated, they proceed to separate the apartments by bulk heads or partitions, to frame the portlids, to fix the cat-heads, and ches trees, to form the hatchways and scuttles, and fit them with proper covers or gratings. They next fix the ladders, whereby to mount or descend the different hatchways, and build the manger on the lower deck to carry off the water that runs in at the hawse-holes, when the ship rides at anchor in a sea. The bread room and magazines are then lined, and the gunnel, rails, and gangways fixed on the upper part of the ship. The cleats, kevels and ranges, by which the ropes are fastened, are afterwards bolted or nailed to the sides in different places. The rudder being fitted with its irons

next hung to the stern-post and the tiller or bar, by which it is managed, let into a mortise at its upper end. The scuppers or leaden tubes, that carry the water off from the decks, are then placed in holes cut through the ship's sides, and the standards bolted to the beams and sides above the decks, to which they belong. The poop-lanterns are last fixed upon their cranes over the stern, and the bilgeways or cradles placed under the bottom to conduct the ship steadily into the water, whilst launching.

Many of our shipwrights have considered it extremely difficult, if not impracticable, to make a ship carry her cannon well, bear a competent sail, and advance swiftly through the water; because a very full bottom is necessary to acquire the two first qualities, whereas, a sharp floor is better fitted to procure the latter. But when it is remembered that a full ship will carry a much greater force of sail than a sharp one, a good artist may form the body so as to unite all these three qualities with the additional one of steering easily by paying a proper attention to the following general rules:

1st. In order to make a ship carry a good sail, there should be a flat floor-timber, somewhat long, or the lower futtocks pretty round, a straight upper futtock, the top-timber to throw out the breadth aloft, a long rake to carry the main breadth as high as the lower deck. If the rigging be well adapted to such a body, and the upper works lightened as much as possible, so that the whole contributes to lower the centre of gravity, there will be

no reason to doubt of the ship's carrying a good sail.

2d. To make a ship steer well and answer the helm readily, will be greatly facilitated, if the fashion-pieces be well formed, the tuck or spreading parts under the stern carried pretty high; the midship-frame well forward; a considerable additional depth in the draught of water abaft more than forward; a great rake forward and none abaft, a snug quarter-deck and fore-castle.

N. B. A ship that sails well will always steer easily.

3d. In order to make a ship carry her guns well out of water, provide a long floor-timber, not of great rising; a very full midship-frame, and low tuck, with light upper works.

4th. To make a ship go smoothly through the water, and prevent her from pitching heavy, she should have a long keel, a long floor, not to rise too high afore and abaft, but the area or space contained in the fore body, should be according to the respective weight it is destined to carry.

And 5th. To make a ship keep a good wind and drive little to leeward, there should be a good length by the keel, not too broad, but pretty deep in the hold, which will occasion her to have a short floor-timber and a very great rising. As such a ship will meet with great resistance in driving sideways, and feel very little in advancing or going a-head, so she will fall very little to leeward.

Being thus furnished with the methods to qualify a ship for the different purposes of navigation, the only difficulty remains to apply them properly in the construction, which must, in a great measure,

measure, be left to the judgment of the artist. The whole art then is evidently to form the body in such a manner as that none of these qualities shall be entirely destroyed, and in giving the preference to that which is principally required in the service, for which the ship is destined. As it therefore appears possible to unite them all in one vessel, so that each of them may be easily discerned, a neglect of this circumstance ought to be attributed to the incapacity of the shipwright, who has not studied the principles of his art with proper application.

With respect to ancient ship-building, there have been various opinions; we shall therefore content ourselves with an extract from the observations of a modern writer on this subject:

“Historians and others have been so extremely vague, irregular, and contradictory in the accounts they have offered us, not only as to the date of its origin, but also of the particular form in which the galley was constructed, that investigation, were we to rely implicitly on them, would, if not impracticable, be at least extremely difficult. In aid of this enquiry the curious have had recourse to the very indeterminate information of coins, and such remnants of sculpture as the ravages of times, and the barbarous fury of invaders, have left to be treasured up in the cabinets of the curious. The information they afford us, though founded perhaps on the most respectable evidence now existing, is at best extremely imperfect; we may almost as well imagine the whimsical figure intended to represent a

ship, which is impressed on the gold noble of Edward III. can convey to us an idea of the kind of vessels composing the fleet with which that monarch invaded France, as to suppose that of the galley, exhibited on the coins of Rome, is to be considered a perfect, or in any degree proper semblance of one.

“The most probable, the most rational explanation we have ever seen is given by a modern French author, M. L'Éscalier. It solves many of those strange assertions made by the ancients of the magnitude of particular vessels, which throwing an air of fiction and romance on their descriptions, consequently induce us to doubt, if not totally discredit them. ‘We have for a long time (says he) treated as a kind of visionary chimaera, the account of three, four, five, and even eight tiers of oars, one above the other, by which the curious, who are unacquainted with naval matters, wish to explain the different appellations bestowed on ancient galleys, called Triremes, Quadriremes, Quinquiremes and Octoremes: whoever has the smallest idea of, or will give himself the least trouble to reflect on the subject, will very easily perceive the absolute impossibility of any vessel being able to carry even four rows, or ranks, of oars thus disposed. In the modern galleys, which have only one tier, and are in length equal to a ship carrying 64 guns, the oars, though the supporting point or rowlock is as near the water-line as possible, are 44 feet long. Allowing a space of four feet and a half between the lower tier of row-ports, and that immediately above it, the oars of the
second

second must, pursuing this rule, be 77 feet in length, those of the third 110, those of the fourth 143, &c. Where can we, as is judiciously remarked by this author, either find wood proper for the formation of these oars, or men powerful enough to use them? Even the third tier could not be managed well, were not the vessel perfectly strait, or, according to the English term, wall-sided, and the oars of the lower rank extremely short, so as to act on the surface of the water at a very small distance from the side of the vessel, in which case we must beg to remark it is very evident they could not be of any service except in a dead calm.

“Snelling, in his account of the celebrated galley built by Philopater, King of Egypt, informs us, “*Remi longiores ad puppim inferti: horum maximi cubitorum triginta octo, tractatu et remigio in usu faciles, ob plumbum ad manubium additum: The oars which were near the stern of the vessel, were considerably longer than those in the midships, the largest being 38 cubits, or about 57 feet in length: they were rendered more manageable by a quantity of lead attached to the handle.*” As to the *Quadragesimæ*, or vessels usually described as having 40 ranks or tiers of oars, we cannot reconcile the report to our understandings, except by supposing them nothing more than galleys fitted with as many oars in each rank. Those who pretend to impose the former interpretations are certainly as ridiculous as an author in future ages would be, who attempted to prove, that a modern ship of war, mounting 80 guns, had as many

tiers of cannon one above the other.

“Some persons who imagine they can solve this problem by supposing the oars of ancient galleys, were disposed in diagonal ranks, or, to speak more intelligibly, that the seats on which the rowers sat, resembled a flight of stairs, (the French call it *en échiquier*, like the chequers, on a chess board,) and that they were not, strictly speaking, one above the other, can understand nothing either of the construction of vessels, or the mode of working them. Do they recollect that the oars in the lower tier, or row, being placed as close to each other as is possible to be effected in any given space, allowing room to work them, it is impossible to introduce one at the intervallum, in the upper tier, or, according to the French phrase, *chequer-wise*, without losing the advantage of that first rank, or tier? consequently nothing would be gained by this pretended discovery. A circumstance which militates still more strongly against this supposed mode of construction is, that such a distribution of the stages, or what may be called the decks of the vessel, is incompatible both with its strength, and those communications through the several parts of the hull, or body, which are absolutely necessary.”

Another writer on the same subject observes:

“The accounts of our navy are but few until the reign of Henry VIII.; but as the office of Admiral was established so early as the reign of Edward I. and perhaps of John, and we find Fitz Allan appointed Admiral of England by Richard II. and Spelman hath

hath given us a list of admirals from Henry III. we may infer that our princes had some ships of their own, besides the occasional ones furnished by the Cinque Ports, &c. The first instance I know of, and that a curious one, as it mentions cannon employed on board a ship, occurs in Rymer's *Fœdera*, Vol. VIII. p. 447. It is an order to Henry Somer, keeper of the private wardrobe in the Tower, to deliver to Mr. Lovoney, treasurer of Queen Phillippa, Queen of Sweden, Denmark, and Norway, who was then sent by her uncle Henry IV. to her husband in the ship called the Queen's Hall, the following military stores: 11 guns, 40 libras pulveris pro gunnes, 40 petras pro gunnes, 40 tampons, 4 touches, 1 mallet, 2 fire-pans, 40 pavys, 24 bows, 40 sheaves of arrows, pro stufura ejusdem navis, ordinata pro aula ejusdem Reginæ.

“ Henry V. at his first invasion of France, appears to have had two large and beautiful ships of his own, with purple sails, the one called the King's chamber, the other his hall.

“ Edward IV. had several ships of his own, which he employed sometimes in war and often for trade, in which he dealt largely. It appears from Canning's monument in Redcliff church at Bristol, that he at one time furnished this Prince with 2470 tons of shipping to purchase his peace, among which were the Mary and John of 900 tons, and the Mary Radcliffe of 500 tons, being two of the largest ships belonging to any Englishmen in that early period that I know of, though many of that size, and larger, are to be found among the

Genoese and Venetians at that time.

“ In 1481, he issued the following order: “ Rex dilecto sibi Ricardo Symonds, magistro navis nostræ vocatæ Le Grace de Dieu, salutem. Cum nos quandam armatam potentiam ad proficiscendum supra mare in resistentiam illius infidelis et antiqui inimici nostri regis Scotorum ordinavimus, assignavimus te ad tot marinariorum quot pro gubernatione et conductione navis prædictæ necessarij fuerint et opportuni, ubicunque inveniri poterunt, tam infra libertates quam extra, arrestandum et capiendum, et eos in nave prædicta, nobis ad vadia nostra deservituros, ponendum et poni faciendum. Consimiles litteræ regis patentes diriguntur personis subscriptis sub eadem data, viz. Roberto Michelson magistro navis regis vocatæ Le Henry; Ricardo Hubbard magistro navis regis vocatæ Le Anthony; Johanni Stevens magistro navis vocatæ le Great Portingale; Johanni Hamond magistro navis regis le Spagnard; Waltero Cokke magistro navis regis vocatæ le Henry Ashe; and to five other commanders who had not ships belonging to the King, but seem to have been hired.” Rymer, Vol. XII. p. 139.—N. B. We find that pressing of seamen for the King's service was practised at this time, perhaps even earlier.

“ It appears that our ships were now built larger; for in the earlier stages of them I am apt to suspect they were much smaller, and even consisted, for the most part, of single decked vessels, with one mast only. In the famous armada of Edward III. though it consisted of 1100 vessels, the men

on board them were only 11,166; very little more than ten per vessel; and though, in the proportion of those furnished by London, we find them a little bigger, they do not exceed 26 men per vessel even in that class.

“It is therefore to the reign of Henry VIII. that we must look for the establishment of a regular navy. Before his reign ships were hired occasionally from the Venetians, the Genoese, the Hanse towns, and other trading people. These, with the others supplied by the Cinque Ports, formed the strength of our English fleets. As soon as the service was performed for which they were hired, they were dismissed.

“Henry, aware of the incon-
venience of suddenly collecting
such a sea force as his frequent
wars on the Continent required,
resolved to form such a permanent
strength at sea as his political
views, and the growing state of
trade, at that time so much in-
creased by the discoveries of the
East and West Indies, and the
enlarged communications with our
neighbours on the Continent,
seemed to make necessary.

“The recent introduction of
cannon on board ships of war
had also made it necessary that
the size of them should be en-
larged.

“And though there were some
few at that time employed in the
business of commerce that were
pretty considerable, as we see in
the case of those belonging to
Canning, the number of them
was small, and their general size
made them very incompetent to
the purposes of war in the man-
ner it began to be carried on.

“To execute this plan, Hen-
ry established building-yards at

Woolwich, Deptford, and Chat-
ham. He was at first obliged to
hire foreign artificers, as we find
by a curious report made to James
I. in the year 1618, in answer to
a commission issued by that Prince
to his several master-builders.
The report is as followeth: ‘In
former times our Kings have en-
larged their dominions rather by
land than sea forces, whereat even
strangers have marvelled, consi-
dering the many advantages of a
navy; but since the change of
weapons and fight, Henry VIII.
making use of Italian shipwrights,
and encouraging his own people
to build strong ships of war, to
carry great ordnance, by that
means established a puissant navy,
which in the end of his reign
consisted of 70 vessels, whereof
30 were ships of burthen, and
contained in all 10,550 tons, and
two galleys; the rest were small
barks and row-barges, from 80
tons downwards to 15 tons, which
served in rivers and for landing of
men. Edward VI. in the sixth
year of his reign, had but 53
ships, containing in all 11,005
tons, with 7995 men, whereof
only 28 vessels were above 80
tons each. Queen Mary had but
46 of all sorts.’

“Though we are not acquaint-
ed with all the particular ships
that formed the navy of Henry
VIII. we know that amongst
them were two very large ones,
viz. the Regent and the Harry
Grace de Dieu; the former being
burnt in 1512, in an engagement
with the French, occasioned Hen-
ry to build the latter. However,
if we consider the ships that form-
ed the navy in the first year of
Edward VI. as the navy left
by his father, which I think
we fairly may do, we shall be
surprized

surprized at the state to which he had raised it."

With respect to the improvements which have been made, and still might be made in ship-building, the same ingenious writer remarks:

"Sir Walter Raleigh recommended that the ships should carry their midship guns four feet from the water. We have improved what he seemed to think was sufficient; for even our three-deckers carry them 15 inches higher, and our two-deckers, except the forties, about 20 inches higher out of the water. Perhaps this would be sufficient, if we could depend on their truth in practice; but that is not the case, for our present *Victory*, although such an excellent ship in every other respect, carries those guns only about four feet six inches, being nine inches less than the calculation from her draft should give her. These nine inches are material, not only by disabling her often from using her lower-deck guns; but, by immersing that quantity of her body in the water, must permanently affect her sailing and working.

"As we continued to take, both from the French and Spaniards, a great many ships, we found that we were still very short of the magnitudes to which they had increased theirs. We found that the weight of our guns was too great, and that we must either lessen their calibres, or build ships more able to carry them. To meet our enemy on equal terms we could not do the former; the latter hath therefore been chosen; for it was ridiculous, surely, to put on board vessels of 1414 tons, calibres that the

French and Spaniards only used in vessels of above 1700 tons.

"It is possible, however, to exceed the limits that experience seems to tell us should be observed in the calibre of our guns for sea service; for we may be assured, that all weight above water, that is not strictly useful, is detrimental to a ship, and injurious to the service. This was, perhaps, the case of our 42-pounders; they were unmanageable guns, and loaded the vessel unnecessarily; for a calibre of 32lb. could be loaded and fired, at least thrice as soon as that of 42lb. could twice. These reflections induced the late Lord Keppel to confine himself to 32-pounders on board the *Victory*, and to establish it generally through the navy. This calibre is surely equal to any service at sea; 24-pounders are almost the only calibres employed in the land service. The sides of a ship are not stronger than stone walls; and the force that can demolish and reduce them to a mere heap of rubbish must be very sufficient to batter the sides of any ship whatever. The Admiral seemed to hope, that by this reduction of the lower-deck guns, he could have substituted 32-pounders on the middle deck instead of 42-pounders; but they were found too heavy on trial; and he was contented to preserve the old calibres in that as well as in the upper-deck; but, instead of the 61-pounders on the quarter-deck and fore-castle, he placed 12-pounders. It would take some time to calculate whether this addition of weight, so high out of the water, would not overbalance the advantage gained by the reduction below. Perhaps,

it would have been a more eligible trial whether the same ship could not have supported 18-pounders on the upper-deck instead of 12 pounders, especially if the guns on that deck had been of brass, in which case the difference would not have been very great. It certainly would be worth the trial, if the attempt was made with the two first-rates now building, the *Ville de Paris*, and the *Hibernia*, which being almost 200 tons bigger than the *Victory*, might succeed with more real advantage than the addition of 10 smaller guns intended for them, especially if the guns on the quarter-deck and fore-castle were reduced to nine-pounders or even six-pounders, the old calibres on those decks, instead of the 12-pounders now allotted to them. As the chief use of those smaller guns is to cut and destroy the rigging, they might be found as efficient for those purposes as the 12-pounders. The only farther improvement (if I am not guilty of presumption in proposing it) is to add to the importance of our second rates by introducing 24-pounders on their middle deck instead of 18-pounders. It is plain, from what I have said, that I am not a friend to overloading a ship with guns; but I really think this addition may be made with perfect safety to those ships; for our present second-rates are vessels of above 2000 tons. The old *Britannia* and *Royal Sovereign* were under 1900 tons; and even the *Royal George*, so unfortunately sunk at Portsmouth, was only 2045. These ships carried 42-pounders, 24-pounders, and 12-pounders. Surely the trial may be made, therefore, with ships of the same size, car-

rying 10 guns less. I should hope to see the 50-gun ships either made bigger, or the calibres of their guns made less; for I must be allowed to think them too small for the latter at present. The surveyor of the navy, sensible that the one or the other must be done, seems inclined to recommend the reduction of the calibre, by employing guns only of 18-pounders on the lower-deck: as the French continue to employ guns of 24-pound and 12-pound only in their 64-gun ships, I should rather (with great deference I say it) wish the ships were enlarged, and made fit to carry the guns which they have now done for almost 50 years, though with inconveniency. The 50-gun ships have always been line of battle ships, and still take their stations in that service occasionally. In our distant services, they are very able to cope with a very large proportion of the ships used by our enemies, both French and Spaniards, and take a much less number of men; an article of the greatest importance at a time when our other line of battle ships are so much enlarged, and want so many. I think it may be noted here (though it might have been done with more propriety sooner) that we have lessened our proportion of men for the respective tonnages of our ships considerably. In the earlier parts of our service their number was generally one half the tonnage; it is now, and hath long been, only about one third.

“ Much hath been done, and our ancestors would be surprized at the several improvements that have been made in our navy. Perhaps all hath not been done that would accomplish it; but the

bigotry of old practice opposes every thing that looks like innovation. I do not recommend the adoption of every new whim; it is only from experiment that I wish to see the adoption taken; but even experience is sometimes too weak to combat old prejudices. Speculative men may propose, but till trials have been made of the utility and practicability of what they propose, it is wisdom not to receive them. Du Hamel, in his excellent treatise, 'Sur la Corderie,' hath given a remarkable instance of this strong opposition, even to experiment. This old philosopher, on very philosophical principles, imagined, that in the common practice of twisting cordage away one third, viz. 180 fathoms to 120, in the instance of cables, &c. the cordage was only weakened by this extraordinary tension, many of the strands being broken by it, a great consumption of hemp incurred, a greater weight added to it aloft, and a greater difficulty occasioned in passing through the pulleys by the hardness of the twisted body."

We shall conclude this article with a few extracts from some recent observations on modern ship-building: the following are by a naval officer of rank.

"The perfection of a ship of war, and indeed of every kind of ship, may be comprized in three words, capacity, swiftness, and stability; as all the secondary qualities of steering well, working well, rolling and pitching easily, are naturally comprized in these three principal ones.

"As the first and most essential property of a ship is to float under a determined weight, her capacity becomes the first object of consi-

deration.—In ships destined for commerce, an exact estimation of their capacity is more wanted to regulate the port duties and the contracts between the merchants, owners, and builders, than to ensure them stiffness, a fixed line of flotation, and fast sailing; as their charge may be regulated by their ability to support it, and their line of flotation may be considerably varied without any hurtful interference with other essential requisites; but in ships of war the capacity should be simply adequate to its purpose, neither more nor less; it should not be more, to avoid the expence of construction, and the additional number of men required to navigate; nor should it be less, from an obvious general insufficiency to answer the required purposes; the bias should rather lead to increase than diminish in capacity though surely there is little room for error in either extreme, if common attention be paid to the subject.

"In all ships of war, of two or three decks, let there be a fixed height of the lower cell of the midship-port, with six months stores and provisions on board, determined on by the judgment of experienced officers; suppose, for example, five feet was the determined height above the line of flotation with the above charge.

"As it is a known law in hydrostatics, that every floating body displaces a quantity of whatever fluid it is placed in equal to its entire weight, nothing more is required to determine the capacity of a ship of war, of a particular rate, than by observing the draft of water of a similar ship with a known quantity of ballast on board.

" A 74-gun ship, with her ballast in ordinary, which floats at a certain draft of water on an even keel, measures, from the plan of her construction, at the line of her flotation downwards, a certain number of cubic feet. If she floats in salt water, divide the number of cubic feet contained in the immersed body by 35, and the quotient is the number of tons the ship in ballast weights. I suppose her ballast sufficient to cause her line of flotation to be within five feet of the lower fill of the midship-port; and as the stores, provisions, &c. for a 74-gun ship have a known weight, as the number of men, artillery, stores, &c. of this class are, or should be the same, it is but adding their weight together, when provided for six months, and comparing with the number of tons of ballast used; if greater than the ballast the capacity of the ship is too small, if less she is larger than necessary.

" All the variety that can arise in different plans, will be from the quantity of timber, more or less, used in their construction, which can always be estimated with sufficient accuracy; and the capacity being once determined, no plan should be adopted that varied much from the established regulation, particularly if it measured less. As the means are so simple that a child may acquire a knowledge of them, there is no excuse for any material error in this most essential part of the construction of ships of war; though if one may judge from the strange variety in the capacities of our ships in the same class, and the absurd mode of casting their tonnage, as it is called, which determines no one thing whatever,

it is reasonable to presume, that either the constructor is ignorant, or will not take the trouble to measure the solid contents of the immersed body; in either instance, the fact is equally injurious and disgraceful to the nation."

Mr. Clifford on the construction of ships, and on the manner of fitting and sailing them, observes:

" It has been said, that the form of a fish that swims fast would in some measure be a proper model for the bottom of a fast sailing vessel, and that the Dolphin, one of the swiftest fishes, has its extreme breadth far forward. Although a fish that swims fast is undoubtedly formed proper for the purpose, yet as the passage of a fish through the water is occasioned by the movement of its tail, it is probable the fish that has its extreme breadth far forward, may be enabled thereby to give more play or vibration to its tail, and by that means accelerate its passage more than from any advantage of that particular form in dividing the water. The dolphin is in other respects well formed for the purpose, being of a considerable length in proportion to its breadth or bulk. Although, from what has been said, you will conclude I think it a material point to give the ship a fair entrance forward; there are other circumstances which make it proper that her extreme breadth should be before the midship, particularly on account of her steering; and I should think if it was placed at about one third of her length from the stern, it might probably be as advantageous as any other position.

" In order to find out the mould that best unites the two properties of sailing fast and carrying most, I think no better means can be used than by models drawn through the water, by means of weights and pulleys; although I am aware, that the swell of the sea and the rolling of the vessel will make a difference, and prevent its being a certain rule to determine by; there will be a difference in the sailing of two vessels in a rough sea, that sail equally alike in smooth water. If the best model can be ascertained for uniting those two properties, sailing fast and carrying most, it will be no difficult matter to find out the variation that will increase the swiftness of sailing, with the least diminution of what she is to carry.

" It has been a general custom for all merchant ships that are employed where dispatch or fast sailing is not considered an object of consequence, to be constructed so as to carry the most goods for their dimensions; and in order to make such vessels sail tolerably well, to give them large masts and yards and a great deal of canvass, by which means the expence of rigging and canvass is very considerably encreased, as well as that such vessels require more men to navigate them, and of course more provisions, water, stores, &c. and the constant daily expence of such ships, with the wear and tear of their materials, is much greater than need be, were they rigged light and sailed with fewer hands.

" I have been an eye-witness to a sloop of war, with only her three top-sails set, leading the way, and, as far as I could see, kept before a loaded merchant

ship that carried all her sails, except studding sails, the wind being about two points abaft the beam. This shews how material a matter the mould of a ship's bottom is to make her pass quick through the water; and though there is no occasion for constructing a common merchant ship to sail equally fast, yet if a vessel designed for a trade where dispatch was not an object, had a bottom formed for sailing fast, I think it probable that such a vessel, with about half the canvass usually given to full built vessels, would, upon the average, make her passage in the same time; the light rigged vessel would be able to carry sail much longer than the heavy rigged one, and would probably make up in blowing weather, all the other gained on her in moderate weather.

" Admitting that this calculation may be carried too far, I think it must be evident that great advantages would result to the merchant, from constructing his vessel to sail fast, and rigging her suitable for her intended trade. Suppose a sharp built vessel of dimensions to carry 300 tons of goods, a little extra in the cost of her hull would be the only additional expence beyond that of a common merchant ship to carry the same; her masts, yards, and spars, should be about the same dimensions as are usual for a full built ship that carries but 200 tons, except their being somewhat stouter; the rigging and sails would be nearly the same as for the ship of 200 tons, only the standing rigging of a larger size, to enable her to carry sail the longer in blowing weather; the anchors and cables nearly the same as usual for ships of her dimensions;

menfions; but all other expences of masts, yards, rigging, and fails, would be but little more for the fhip that carries 300 tons, than for the full one that carries but 200 tons; and if fome machinery is made ufe of to affift in weighing the anchor, the fame number of men would navigate the large vefel that does the fmall one; of courfe, the firft coft (excepting the hull), the wear and tear of rigging and fails, feamen's wages, provifions, and other ftores, would be but little more for the large than the fmall vefel; the large fhip would fteer eafier, ftrain lefs in blowing weather, and in every refpect be a fafer vefel. Cast-iron cog-wheels fixed to the windlafs, with pinion wheels to work in them, would give fo great an additional purchafe, that a few hands would weigh the anchor in lefs time than is ufually done. The additional Custom Houfe expences on account of extra tonnage, with the fmall additional expence of keeping the hull of a larger fhip in repair, would be no confideration compared to the advantage in other refpects; and I fhould have no doubt but that fhe would, upon the average, make her paffages as quick, if not fooner than the fmall vefel, having greatly the advantage of her in blowing weather and when clofe upon a wind."

Marine BUILDINGS — are thofe conftituted for making or preferving fhips and other vefels, as docks, arfenals, ftoreshoufes, &c.

BUILT — the particular form or conftituted of a fhip, by which fhe is diftinguifhed from others of a different clafs, conftituted, or nation; thus we fay,

a fhip is frigate-built, galley-built, &c. carvel-work-built, clincher-work-built; or, Englifh-built, French-built, American-built, &c.

BULK of a Ship — implies the whole cargo ftowed in the hold.

BULK-HEADS — partitions, built up in feveral parts of a fhip, to form and feparate the various apartments; fome of which are particularly ftrong. Others are light, and removable at pleafure, to clear the fhip for action.

The **BULK-HEAD** — afore, is the partition between the fore-castle and gratings in the head, and in which are the chafe ports.

BULL'S-EYE — a piece of wood in the form of a ring, and answers the purpofe of an iron thimble; it is feldom ufed by the Englifh feamen, and then only for the main and fore bowline bridles.

BUM-BOAT — a fmall boat, employed to carry vegetables, &c. for fale, to fhips lying at a diftance from the fhore.

BUMKIN or **BOOMKIN** — a fhort boom, or beam of timber, projefting from each bow of a fhip, to extend the clue or lower corner of the fore-fail to windward; for which purpofe there is a large block fixed on its outer end, through which the tack is paffed, which being drawn tight down, the tack is faid to be aboard.

BUMKIN of a boat — is a fmall outrigger over the ftern, ufually ferving to extend the mizen.

BUNT — the middle part or cavity of the fquare fails, as the main-fail, fore-fail, topfail, and top-gallant fails. If one of thofe fails is fuppofed to be divided into four equal parts from one fide to the other, then may the two

two middle divisions, which comprehend half of the sail, &c. properly called the limits of the bunt.

BUNTINE—a thin wooden stuff, of which the colours, or flags, and signals of a ship, are usually formed.

BUNT-LINES—ropes fastened to cringles on the bottoms of the square sails, to draw them up to their yards; they are inserted through certain blocks above, or on the upper part of the yard, whence passing downwards on the fore part of the sail, they are fastened below to the lower edge, in several places of the bolt rope.

BUNT-LINE-cloth—the lining, sewed up the sail in the direction of the bunt-line, to prevent that rope from chafing the sail.

BUOY—a sort of close cask, or block of wood, fastened by a rope to the anchor, to point out its situation.

BUOYS—are of various kinds, as,

Can-Buoys—are in the form of a cone. Of this kind are the buoys which are floated over sands, &c. as marks for ships to avoid them: they are made very large, that they may be seen at a distance; where there are several near each other, they are distinguished by the colour, as black, red, and white.

Nun-Buoys—are large in the middle, and taper nearly to a point at each end.

Wooden-Buoys—are solid pieces of light timber, having one or two holes through the ends, in which is fixed a ring of rope called the stop.

Cable-Buoys—are common casks, employed to buoy up the cables in rocky anchorage, to

prevent their rubbing against the rocks.

In the harbour of Alexandria in Egypt, every ship is moored with at least three cables, and has three or four of these buoys on each cable for this purpose.

Life-Buoy—is generally of the Can kind, though sometimes it is made of cork. It is furnished with a small flag on the top, and is used to throw overboard for a person who has fallen into the sea to lay hold of: while the flag serves to direct a boat to the spot, and thereby frequently saves the life of a fellow-creature.

BUOY-ROPE—the rope which fastens the buoy to the anchor, and should be always of sufficient strength to draw up the anchor; it should also be little more in length than equal to the depth of the water where the anchor lies.

Slings of the Buoy—the ropes which are fastened about it, and by which it is made fast to the buoy-rope, &c.

To stream the Buoy—is to let it fall from the ship's side into the water, preparatory to letting go the anchor, that it may not be retarded by the buoy-rope, as it sinks to the bottom.

BURTHEN, or BURDEN—the weight or measure of any species of merchandize that a ship will carry when fit for sea; the general rule for finding which, is, to multiply the length of the keel, the inner midship breadth, and depth from the main deck to the plank joining the keelson, together, which product divided by 94 gives the tonnage, or burthen required in tons.

BURTON—a small tackle, formed by two blocks or pullies; it is generally used to set up or tighten the topmast shrouds, whence

whence it is frequently termed a Top-BURTON-tackle: but it is equally useful to move or draw along any weighty body in the hold, or on the deck, as anchors, bales of goods, large casks, &c.

BUSH—a circle of metal, usually of brass, let into the lignum vitæ sheaves of such blocks as have iron pins, thereby preventing the sheave from wearing, without adding much to its weight.

BUSS—a small vessel with two masts, used in the herring fisheries, being generally from 50 to 70 tons burthen.

BUTT—the end of any plank in a ship's side or bottom, which unites with the end of another.

To start or spring a BUTT—is to loosen the end of a plank by the ship's weakness or labouring.

BUTT AND BUTT—a term denoting that the butt ends of two planks come together, but do not overlay each other. See HOOK AND BUTT.

BUTTOCK—the convexity of a ship behind, under the stern; it is terminated by the counter above, by the bilge below, by the rudder in the middle, and by the quarter on the side.

BUTTONS—are sometimes used in fastening a bonnet upon a sail.

BY THE BOARD—over the ship's side.

BY THE HEAD—is when a ship is deeper sunk in the water forward than aft.

BY THE WIND—is when a ship sails as nearly in the direction of the wind as possible.

CABIN—a room or apartment in a ship, where any of the officers usually reside. In a large

ship there are several cabins, the principal of which, distinguished by the name of great cabin, is designed for the captain or commander. In ships of the line, this chamber is furnished with an open gallery in the ship's stern, as also a little gallery on each quarter. The apartments where the inferior officers or sailors sleep and mess, are generally called births, which see.

CABIN—is also the name given to the bed places built up at the ship's side between decks in merchantmen, for the officers, passengers, and sailors.

CABIN-boy—a boy whose duty it is to attend and serve the officers and passengers in the cabin.

CABLE—a large strong rope of a considerable length, used to retain the ship at anchor. All ships ought to be furnished with at least three cables, viz. the chief cable, or cable of the sheet-anchor, and the two bowers, being a common cable, and a smaller one. And all cables ought to be 120 fathoms in length, for which purpose the threads or yarns must be 180 fathoms, inasmuch as they are diminished one third in length by twisting. Besides this length, it is necessary to splice at least two cables together, in order to double the length when a ship is obliged to anchor in deep water. For although it is not common to anchor in a greater depth than 40 fathoms, yet if there is only one cable, and the ship rides in a stormy and tempestuous sea, the anchor will, of necessity, sustain the whole weight and violent jerking of the ship, in a direction too nearly perpendicular. By this effort it will unavoidably be loosened from its hold and dragged

dragged by the ship, which, thus driven from her station, is in immediate danger of being wrecked on the nearest rocks or shallows; whereas it is evident, that if the cable by its great length, were to draw more horizontally on the anchor, it would bear a much greater force.

The long cable is not so apt to break as the short one, because it will bear a great deal more stretching before it comes to the greatest strain: it therefore resembles a sort of spring, which may be very easily extended, and afterwards recovers its first state, as soon as the force which extended it is removed. Besides all this, a ship will ride much smoother with a long cable, and be less apt to pitch or plunge deep in the water with her fore part. On the contrary, the short cable, being too nearly vertical to the anchor, cannot bear such a strain, because it is charged with a greater effort; and, as it will not bear stretching, may break the first violent tug. The ship also rides with much greater difficulty, labours extremely, and often plunges all her fore part under water.

Every ship should be furnished with sufficiency of cables, or what is called ground-tackle; for owing to a deficiency of this necessary article, many excellent vessels have been lost, and it is an inconsiderate policy indeed, in merchants, to expose their ships to such evident dangers for the want of them.

Cables are of various sorts and sizes: in Europe they are commonly manufactured of hemp: in Africa of bass, which is a kind of long straw or rushes, and in Asia of a peculiar sort of Indian grass. Every cable, of whatever

thickness it be, is generally composed of three ropes, twisted together, which are then called strands — every strand of three smaller strands or ropes, and every rope of three rope-yarns or twists: the twist is made of more or less threads, according as the cable is to be thicker or thinner. There are some cables manufactured of four strands, which are chiefly the production of Italy or Provence.

In the manufacture of cables, after the ropes are made, they use sticks, which they pass first between the ropes, of which they make the strands, and afterwards between the strands, of which they make the cable, to the end that they may all twist the better, and be more regularly wound together; and also to prevent them from twining and entangling, they hang, at the end of each strand, and of each rope, a weight of lead or stone.

A cable ought neither to be twisted too much nor too little, as in the former state it will be extremely stiff and difficult to manage, and in the latter it will be weak and unserviceable. All cables are to each other as the cubes of their diameters. The number of threads also, of which each cable is composed, being always proportioned to its length and thickness, the weight and value of it are determined by this number; thus a cable of three inches circumference, or one inch diameter, ought to consist of 48 ordinary threads, and weigh 192 pounds, and on this foundation is calculated the following table of the number of threads and weight of cables of different circumferences, very useful for all people engaged in marine commerce,

who fit out merchantmen on their own account, or freight them on account of others :

Circumference.	Threads.	Weight.	
4 Inches .	77	308	pounds
5 —	121	484	
6 —	174	696	
7 —	238	952	
8 —	311	1244	
9 —	393	1572	
10 —	485	1940	
11 —	598	2392	
12 —	699	2796	
13 —	821	3284	
14 —	952	3808	
15 —	1093	4372	
16 —	1244	4976	
17 —	1404	5616	
18 —	1574	6296	
19 —	1754	7016	
20 —	1943	7772	

Stream-CABLE — a hawser or rope, smaller than the lower cables, and used with the stream-anchor to moor the ship in a river or haven, sheltered from the wind and sea, &c.

To bitt the CABLE—See BITTS.

To serve or plait the CABLE—to bind it round with ropes, canvass, &c. to prevent it from being galled or worn in the hawse by friction.

Heave in the CABLE—the order to draw it into the ship, by means of the capstan or windlafs.

Pay more out, or away the CABLE, pay cheap the CABLE, or veer more, or away the CABLE—the order to slacken it, that it may run out of the ship.

To shoot the CABLE—to splice two pieces of timber together.

To slip the CABLE—to let it run out end for end.

CABLE'S length—a measure of 120 fathoms, by which the dis-

tances of ships in a fleet are frequently estimated.

CABLET—a small cable; a word seldom used.

CABLE-TIER—the place where the cables are coiled away.

CABOOSE—the cook-room or kitchen of merchantmen.

CALK. See CAULK.

CALL—a silver pipe or whistle of a peculiar construction, used by the boatswain and his mates to summon the sailors to their duty, and direct them in the different employments of the ship; as the call can be sounded to various strains, each of them is appropriated to some particular exercise, such as hoisting, heaving, lowering, veering away, belaying, letting go a tackle-fall, sweeping, &c. all which are as attentively observed by sailors, as the beat of the drum is by soldiers.

CALLIPERS—curved compasses, used to measure masts, shot, and other circular substances.

CALM—the state of rest which appears in the air and sea when there is no wind stirring.

A dead CALM, stark CALM, flat CALM—are used to denote the greatest possible calm.

A long CALM—is often more fatal to a ship than the severest tempest, for if tight and in good condition, she may sustain the latter without much injury, whereas in a long calm, the provision and water may be entirely consumed, without any opportunity of obtaining a fresh supply.

Calms are never so great on the Ocean as on the Mediterranean, because the flux and reflux of the former, keep the water in continual agitation, even where there is

no wind, whereas, there being no tides in the latter, the calm is sometimes so dead, that the surface of the water is as clear as a looking-glass; but such calms are almost constant presages of an approaching storm. On the coasts about Smyrna, a long calm is reputed a prognostic of an earthquake.

When the weather is perfectly calm, and no wind at all stirring, the sailors try which way the current sets, by means of a boat, which they send out, and which will ride at anchor, though there is no bottom to be found. The method is this; they row the boat to a little distance from the ship, and then throw over their plummet, which is about 40 pounds weight: they let this sink to about 200 fathom, and then, though it never reaches the bottom the boat will turn head against the current, and ride as firmly as can be.

CALM latitudes—the tract of the Atlantic Ocean, situated between the tropic of Cancer and the latitude of 29° north, or the space between the trade and variable winds: this being frequently subject to calms of a very long continuance, has therefore justly acquired the name of the calm latitude.

CAMBERED—the deck or keel of a ship is said to be cambered, or to lie cambering, when they are higher in the middle of the length than toward the stem and stern. See BROKEN-BACKED.

CAMEL—a machine used at Amsterdam, to bear large vessels over shallows, or flats, where there is not so much water as the ships draw.

CAN—a vessel used by sailors to drink out of.

CAN buoy. See BUOY.

CANHOOKS—an instrument used to sling a cask by the ends of its staves, and is formed by reeving a piece of rope through the eyes of two flat hooks, and then splicing its ends together.

CANNISTER or CASE-SHOT. See SHOT.

CANNON—a well known piece of artillery, mounted in battery on the decks of a ship, to be used in naval engagements, and is made either of brass or iron.

The principal parts of a cannon are,

1st. The breech, and its button or cascabel, called by seamen, the pomelion. The breech is generally understood to be the solid metal from the bottom of the concave cylinder to the cascabel, which is the extremity of the cannon opposite to its muzzle.

2d. The trunnions, which project on each side like arms, and serve to support the cannon near the middle of its length, holding it almost in equilibrio. As the metal is thicker at the breech than towards the mouth, the trunnions are placed nearer to that end than the other.

3d. The bore or calibre is the interior or concave cylinder, wherein the powder and shot are lodged when the cannon is charged or loaded.

The entrance of the bore is called the mouth or muzzle.

The other parts are as follow:

The length.

The 1st reinforce.

The 2d reinforce.

The chafe.

The ventfield.

The chace girdle.

The breech mouldings.

The swelling of the muzzle.

The

The base ring and ogee.

The vent astragal and fillets.

The 1st reinforce ring and ogee.

The 2d do.—do.

The chace astragal and fillets.

The muzzle do.—do.

The muzzle mouldings.

The swelling of the muzzle.

The use of these machines, is to discharge upon the enemy globes or balls of iron, which are of various sizes, in proportion to the calibre of the cannon. The diameter of the ball is always somewhat less than the bore of the piece, that it may be discharged with the greater ease, and not damage the piece by rubbing it too forcibly in its passage, and the difference between these diameters is called the windage of the cannon.

The length of any cannon is always reckoned from the hind part of the base ring, or beginning of the cascabel, to the extremity of the muzzle. The second reinforce, begins at the same circle where the first terminates, and the chace at the same circle where the second reinforce ends.

The first reinforce, therefore, includes the base ring, the ogee nearest thereto; the vent-field; the vent-astragal; and first reinforce ring. The second reinforce contains the ogee next to the first reinforce ring, and the second reinforce ring. The chace comprehends the ogee nearest to the second reinforce ring; the chace girdle and astragal, and the muzzle and astragal. The trunnions are always placed on the second reinforce, so that the breech part of the cannon may weigh something more than the muzzle part,

to prevent the piece from starting up behind when it is fired.

A variety of experiments made with great care and accuracy, prove that the powder, when on fire, possesses at least 4000 times more space than when in grains. Therefore, if we suppose that the quantity of powder with which a cannon is charged, possesses one fourth of a cubical foot in grain, it will, when on fire, occupy the space of about 1000 cubical feet. The same experiments evince also, that the powder when inflamed, is dilated equally round its centre. One grain of powder fired in the centre of different concentric circles, round which grains of powder are placed, shall therefore set fire to all those grains at once. From this principle, it necessarily follows, that powder when fired in a cannon, makes at the same instant, an equal effort on every part of the inside of the piece, in order to expand itself about its centre every way. But as the resistance from the sides of the piece turns the action of the powder so as to follow the direction of the bore of the cannon, when it presses upon the ball, so as to force it outwards, it presses also on the breech of the cannon, and this gives the piece a motion backwards, that is called the recoil, which is restrained by the breeching, and the convexity of the decks. The recoil in some degree diminishes the action of the powder upon the shot. But this cannot be avoided, for if the carriages were fixed so as not to give way to this motion, the action of the powder or the effort that causes the recoil, would tear them to pieces in a very short time.

The metal of the cannon is not equally thick in all parts, but is in some measure proportioned to the force of the powder, which it is to resist. At the breech where the effort is strongest, the thickness of the metal is equal to the diameter of the corresponding shot. At the first reinforce, when this begins to slacken, the thickness is somewhat less than at the breech; at the second where the force is still further diminished, the thickness is more reduced than at the first; and by the same rule, the chace has less thickness than the second reinforce. The thickness of the chace gradually diminishes from the trunnions to the mouth of the piece; so that if a cannon was without a cascabel, trunnion and mouldings, it would exactly resemble the frustrum of a cone or a cone deprived of the small end.

Cannons are charged by putting down into the bottom first a quantity of powder, one third or one half the weight of the ball. This is done with an instrument termed a ladle, which is a kind of cylindrical spoon, generally made of copper, and fixed to the end of a staff called its handle. Upon the powder is put in a wad of rope-yarn, formed like a ball, which is pressed down upon the powder with an instrument called a rammer, upon this wad is put the ball or shot, and to secure it in its proper place, another wad is firmly pressed down upon it, which operation is called ramming home the wad and shot. The touch-hole of the piece is then filled with powder, from the upper part of which a little train is laid that communicates with it.

The use of this train is to prevent the explosion of the powder from operating directly upon the instrument employed to fire the piece, which, in that case, might be forced out of the hand of the gunner.

In the modern pieces, a little gutter or channel is framed on the upper part of the breech, to prevent the train from being dispersed by the wind. This channel reaches from the touch-hole to the base ring.

The cannon being pointed to its object, or the place which it is intended to strike, the train is fired, and the flame immediately conveyed to the powder in the touch-hole, by which it is further communicated to that in the piece. The powder being kindled, immediately expands, so as to occupy a much greater space than when in grains, and thus dilated, it makes an effort on every side to force itself out. The ball making less resistance than the sides of the piece, upon which the powder presses at the same time, is driven out by its whole effort, and acquires that violent motion which is well known to the world. After firing, there is a sponge used to clean the piece, and extinguish any sparks that may remain behind. In the land service, the handle of the sponge is a long wooden staff, but in ships of war, this handle, which usually contains the rammer at its other end, is a piece of rope well stiffened by spun-yarn, which is for this purpose, firmly wound about it. By this convenience the rammer becomes flexible, so that the piece is charged within the ship, as the person who loads it may bend and accommodate the

the length of the rammer to the distance between the muzzle and the ship's side: being at the same time sheltered from the enemy's musquetry, to which he would be exposed, in using a wooden rammer without the ship. To sponge a piece therefore, is to introduce this instrument into the bore, and thrusting it home to the further end thereof, to clean the whole cavity.

The worm, of which there are different kinds, is used to draw the charge when necessary.

The bit, or priming-iron, is a kind of large needle, whose lower end is formed into a gimblet, serving to clear the inside of the touch-hole, and render it fit to receive the prime.

The lint-stock is a kind of staff, about three feet long, to the end of which a match is occasionally fastened to fire the piece.

We shall here subjoin some judicious remarks from the proposal of the late ingenious Mr. Robins (which has been since partly adopted) for encreasing the strength of the British navy, by changing the cannon used in ships of war into others of equal weight, but of greater bore. The advantage of large cannon, over those of a smaller bore, is so generally acknowledged, that it requires no particular discussion:

"The most important advantage of heavy bullets is this, that with the same velocity they break holes out in all solid bodies, in a greater proportion than their weight; that is, for instance, a 24-pounder shot will, with the same velocity, break out a hole in any wall, rampart, or solid beam, in which it lodges, about eight times larger than will be

made by a three-pound shot; for its diameter being double it will make a superficial fracture above four times as great as the three-pounder (more of a smaller hole being closed up by the springing of the solid body than of a great one) and it will penetrate to more than twice the depth: by this means the firmest walls of masonry are easily cut through their whole substance by heavy shot, which could never be effected by those of a smaller calibre; and in ships, the strongest beams and masts are hereby fractured, which a very great number of small bullets would scarcely injure.

"To this last advantage of large cannon, which is, indeed, a capital one, there must be that of carrying the weight of their bullet in grape or lead shot, and thereby annoying the enemy more effectually than could be done by ten times the number of small pieces.

"These are the principal advantages of large cannon, and hence it is no wonder that those entrusted with the care of the British navy, have always endeavoured to arm all the ships with the largest cannon they could with safety bear; and indeed, within these last hundred years, great improvements have been made on this head, by reducing the weight of many of the species of cannon, and thereby enabling the same ships to carry guns of a larger bore; and very lately, the six-pounder in some of the smaller ships have been changed for nine-pounders of a larger fabric than usual, which has been justly esteemed a very great addition to the strength of those ships.

"The importance then of allotting

lotting to all ships the largest cannon they can with safety bear, being granted, it remains to shew on what foundation a change is proposed to be made in the fabric of all pieces, from the present 18-pounders downwards, so that they may be changed for others of the same or less weight, but if a larger bore. This proportion turns on the following considerations:—The species of cannon proper for each ship is limited by the weight of the pieces; and when the charge and effort of the bullet are aligned, this weight in each species is, or ought to be, determined by the following circumstances:

“ That they shall not be in danger of bursting.

“ That they shall not recoil too boisterously.

“ And that they shall not heat too much by frequent firing.

“ All this is to be done by a proper quantity of metal properly disposed; and when the pieces are secured from these accidents, all additional weight of metal is not only useless, but prejudicial.

“ Now what dimensions and weight of metal are more than sufficient for these purposes, we may learn from the present practice of the navy, in the fabric of the 32-pounders, the heaviest guns in common use; these are made to weigh from 52 to 53 hundred weight; that is somewhat less than 100 and two-thirds, for each pound of bullet.”

From this then the author concludes, that any smaller piece made upon the model of these 32-pounders, and having their weight proportioned in the same manner to the weight of their bullet, will fully answer all the

purposes recited above, and will be of unexceptionable service.

And he founds his opinion on these two principles; first, that the strength of iron or of any other metal is in proportion to its substance; so that, for instance, where it has one half the substance, it has one half the strength; and this supposition he presumes, will be scarcely contested. Secondly, that the force of different quantities of powder, fired in spaces which they respectively fill, is not exactly in proportion of those quantities, but the lesser quantity has in proportion the least force: that is, for instance, the force of one pound of powder, in like circumstances, is less than one half of the force of two pounds. And this principle the author has deduced from many repeated and diversified trials of his own; and he believes it will be found agreeable to all the observations which have been made or shall be made on this subject.

“ From these two considerations, he hopes it will be granted him, that if two pieces, a large one and a small one, are made with all their dimensions in proportion to the diameter of their respective bullets, and consequently their weights in the same proportion with the weights of their bullets, then the larger piece with the same proportion of powder will be more strained, will heat more, and recoil more than the smaller.

“ Hence then, as we are assured that the present 32-pounders are of a sufficient strength and weight for all marine purposes, we have the greatest reason to suppose, that if all the pieces of an inferior calibre were formed upon the
same

same model, measuring by the diameter of the bullet, these smaller pieces would not be defective either in strength or in weight, but would be to the full as serviceable on shipboard as the present pieces which are so much overloaded with metal.

The author's scheme, then, for augmenting the force of the present sea batteries, is not more than this plain principle; that all ship-guns should be cast upon the model of the 32-pounders, measuring by the diameter of the respective bullet; so that for each pound of bullet there should be allowed one hundred and two-thirds of metal only.

The advantages of this scheme will appear by the following comparison of the weight of the

present pieces, with their weight proposed by this new fabric.

Pieces.	Weight now in hundreds.	Ditto by new fabric.
24	48 to 46	40
18	41 to 39	30
12	34 to 31	20
9	29 to 26	15
6	34 to 18	10

"Hence then, it appears that the 24-pounders will be eased of 6 or 8 cwt. of useless metal; and instead of inferior calibre now used, much larger ones of the same weight may be borne, especially when it is remembered that this computation exceeds even the present proportion of the 32-pounders; so that from the above projected 18-pounders, for instance, 2 or 300 weight may be safely taken.

The changes then proposed by the author are these:

Pounders.		Hundreds.		Pounders.		Hundreds.	
For	6	of	24 and 18	New	12	of	20
	9	—	29 and 26		18	—	28
	12	—	34 and 31		24	—	40
	18	—	41 and 39				

"The nine-pounders lately cast, being still lighter than what is here represented, they may, perhaps, be only transformed into 12-pounders: but this will be a very great addition of strength, and the 12-pounders thus borne, will be considerably lighter than the smallest nine-pounders now in use. The weight of the present three-pounders are not remembered exactly by the author, but he doubts not, but they are heavier than the proposed six-pounders, and may therefore be changed for them.

"That many objections will be made to the present proposal is not to be questioned; but as they will equally hold against the use

of the present 32-pounders, which are known to be guns of unexceptionable service, that alone, it is conceived, will be an answer.

If it be supposed (as ancient practice is always favourably heard) that the excesses in the proportionate weight of the small pieces must have been originally founded on some approved principle, or otherwise they could not have been brought into use; it may be answered, that 100 years since, there were four-pounders made use of which were heavier than some of the present nine-pounders, and had the same prescription to plead in their behalf. Perhaps the origin of this excess

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in the smaller pieces may be accounted for, by supposing that when guns are used in the batteries on shore, their length cannot be in proportion to the diameter of their bore; because the parapet being of a considerable thickness, a short piece would by its blast ruin the embrasures, and the smaller pieces, being for this reason made nearly of the same length with the larger, did hence receive their additional weight of metal. But this reason holds not at sea, where there is no other exception to the shortness of a piece but the loss of force, which, in the instances here proposed, is altogether inconsiderable: for the old 12-pounders, for example, being in length from nine feet to nine feet and a half, the new ones here proposed, will be from seven feet to seven and a half long. The difference in the force of the bullet, fired from these different pieces, is but little, and it will hereafter appear that in the present subject, much greater differences than these are of no consequence.

If it should be said that the new fabric here proposed must have the present allowance of powder (which, in the smaller pieces, is half the weight of the ball) diminished, and that it must be reduced to the rate of the 32-pounders, which is only seven sixteenths of the weight of the ball; it is answered, that if the powder in all ship-cannon whatever was still further reduced to one third of the weight of the ball or even less, it would be a considerable advantage, not only by the saving of ammunition, but by keeping the guns cooler and more quiet, and at the same time more effectually injuring the ships of the enemy; for with the pre-

sent allowance of powder, the guns are heated and their tackles and furniture strained, and this only to render the bullet less efficacious than it would prove, if impelled by a smaller charge. Indeed in battering of walls, which are not to be penetrated by a single shot from any piece whatever, the velocity of the bullet, how much soever augmented, still produces a proportionate effect by augmenting the depth to which it penetrates: but the sides of the strongest ships and the greater part of her timbers, are of a limited thickness insufficient to stop the generality of cannon bullets. And it is a matter of experiment that a bullet which can but just pass through a piece of timber and loses almost all its motion thereby, has much better chance of rending and fracturing it, than if it passed through it with greater velocity.

“ That a much better judgment may be made of the reasonableness of this speculation, the author thinks proper to add (and he believes future experience will not contradict him) that a 12-pounder as here proposed, which is one of the smallest pieces at present under consideration, when charged with one third of the weight of the bullet in powder, will penetrate a beam of the best seasoned toughest oak, to more than 20 inches depth, and if, instead of one solid beam, there are a number of small ones, or of planks laid together, then allowing for rending and tearing frequent in such cases, he doubts not but it will often go through near double that thickness, and this any where within 100 yards distance: that is any where within that distance, which the most experienced

experienced officers have recommended for naval engagements. In the same distance a bullet from the 12 pounders now in use, charged with half the weight of powder, will penetrate about one third part deeper: but if the efforts of each piece are compared together at 500 yards distance, the differences of their forces will not be considerable. If this be so, it will not be asserted, I imagine, that the 12-pounder here proposed, is less useful or less efficacious for all naval purposes than the weightier 12-pounder hitherto made use of.

“ The author has in this proposal fixed on the 32-pounders as the standard for the rest, because experience has long authorized them. But from the trials he has made, he is well satisfied a much greater reduction of weight than is here proposed might safely take place; and that one-fourth or even one-fifth of the weight of the bullet in powder, if properly disposed, is abundantly sufficient for every species of ship-guns. However, the author is far from desiring that his speculations should be relied on in an affair of this nature, where he pretends not to have tried the very matter he proposes, but founds his opinion on certain general principles and collateral experiments, which he conceives he may apply to the present case without error. There is an obvious method of determining how far his allegations are conclusive: and that is by desiring one of these pieces to be cast, a 12 pounder, for instance, and letting it be proved with the same proportion of powder allotted for the proof of the 32-pounders: then, if this piece be fired a number of times successively on a

carriage, and its recoil and degree of heat be attended to, and if the penetration of its bullet into a thick butt of oak-beams or planks be likewise examined, a judgment may thence be formed of what may be expected from the piece in real service, and the result of these trials will be the most incontestible confutation or confirmation of this proposal.”

We shall here beg leave to observe that the sentiments of the above proposal have, with little variation, been adopted by Mr. Muller and strongly recommended.

Windage of a CANNON—is the difference between the diameter of the shot, and that of the bore of the cannon. Pieces of artillery were formerly distinguished into the names of sakers, culverins, cannon, demi-cannon, &c. but at present, their names are derived from the weight of the ball they discharge, and are as follow: 42—32—24—18—9—6—4—3—&c.

CANNONADE, in the marine—is the application of artillery to the purposes of naval war; or, the direction of its efforts against some distant objects intended to be seized or destroyed; as a ship, battery, or fortress.

CANNONADING—in a vessel of war cannonading is used to take, sink, or burn the ships of an enemy, or to drive them from their defences ashore, and to batter and ruin their fortifications.

As a large vessel of war may be considered as a combination of floating batteries, it is evident that the efforts of her artillery must be generally greatly superior to those of a fortress on the sea-coast; but this is not always the case, for on some particular occasions

sions her situation may be extremely dangerous, and her cannonading ineffectual. There are several circumstances in which her superiority consists, viz. the power of bringing her different batteries to converge to one point; of shifting the line of her attack so as to do the greatest possible execution against the enemy, or to lie where she will be the least exposed to his shot: and chiefly because, by employing a much greater number of cannon against a fort than it can possibly return, the impression of her artillery against stone walls becomes decisive and irresistible. Besides these advantages in the attack, she is also greatly superior in point of defence; because the cannon shot passing with rapidity through her sides, seldom do any execution out of the line of their flight, or occasion much mischief by their splinters; whereas, they very soon shatter and destroy the faces of a parapet, and produce incredible havock amongst the men by the fragments of the stones, &c. A ship may also retreat when she finds it too dangerous to remain longer exposed to the enemy's fire, or when her own fire cannot produce the desired effect. Finally, the fluctuating situation of a ship, and of the element on which she rests render the efforts of shells very uncertain, and altogether destroys the effect of the ricochet or rolling and bounding shot, whose execution is so pernicious and destructive to a fortress in land engagements: both of which, however, a ship of war may apply with great success. On the contrary, the chief inconveniency to which she is exposed, is, that the

low laid cannon in a fort near the brink of the sea, may strike her repeatedly on or under the surface of the water; so as to sink her before her cannonade can have any considerably efficacy.

CANOE — a sort of Indian boat or vessel, formed of the trunk of a tree hollowed, and sometimes of several pieces of the bark fastened together; they are used on various occasions as fishing, passage, trade, &c. and are of several sizes according to the different uses for which they are designed in different countries. They are generally rowed with paddles, instead of oars, which are pieces of light wood, nearly resembling a corn shovel, and instead of moving the paddle horizontally like an oar, they row perpendicularly, the small ones are very narrow, having only room for one person in breadth, and eight or ten lengthways. They very easily carry sail, unless when going before the wind, and their sails are made of a sort of rushes or silk grass; they seldom have any rudder, the want of which is supplied by a dexterous management of the hind oars. The Indians who navigate them, are very expert in rowing uniformly, and in balancing them properly with their bodies, which would be difficult for a stranger to do, however well accustomed soever to the conducting of our boats, on account of the extreme lightness of the canoes, and their aptness to be overturned. The Negroes in Guinea, and even many in the East-Indies use them. The American Indians when they are necessitated to land on account of a water fall or other occasion, carry their canoes on their heads

or shoulders till they arrive at some place where they may again be launched.

The canoe of the Esquemaux Indians in Labrador has a light wooden frame, and the shell instead of a plank is made with seal-skins sewed together, which are not only extended round the bottom and sides, but likewise over the top, forming a complete deck, and having only one opening conveniently framed, and situated to admit the Indian into his seat. A flat hoop is fitted to this hole rising about four inches, to which the surrounding skin is sewed. The Indian's calf skin jacket being of a proper length, he can occasionally bind the skirt of it round the outside of this hoop, by which means he keeps the canoe free from water, and is enabled to pursue his game far from land, and in stormy seas. His paddle is about 10 feet long, light, and flat at each end, with which he both rows and steers with great velocity and exactness.

In the repository of the Royal Society, is the model of a Greenland canoe, covered with seal-skins and resembling a great bladder, so that, however the waves dash over it, the person who manages it, sits in safety.

To CANT—is to turn any thing about.

CANT timbers—those timbers which are situated at the two ends of a ship. They derive their name from being canted or raised obliquely from the keel in contra-distinction to those whose planes are perpendicular to it. The upper ends of those on the bow or fore part of the ship are inclined to the stem, as those in the after or hind part incline to the stern-post above.

CANVASS—a strong kind of cloth, of which the sails are made.

CAP—a strong thick block of wood, having two large holes through it, the one square, the other round, used to confine two masts together, when one is erected at the head of the other, in order to lengthen it. The principal caps of a ship are those of the lower masts, which are fitted with a strong eye-bolt on each side, wherein to hook the block by which the topmast is drawn up through the cap. The breadth of all the caps is equal to twice the diameter of the topmast, and the length to twice the breadth. The thickness of the main and fore-caps is half the diameter of their breadths; the mizen-cap three sevenths, and the topmast caps two fifths of their respective breadths. In the same manner as the topmast slides up through the cap of the lower mast, the top-gallant-mast slides up through the cap of the topmasts.

CAPE—a promontory or headland, which projects into the sea, farther than the rest of the coast.

CAPPANUS—the worm which adheres to, and gnaws the bottom of a ship; to prevent which, all ships in the royal navy, and many others, are now sheathed with copper.

CAPSIZE—to upset, or turn over any thing.

CAPSQUARE, —or CLAMP, part of a gun-carriage. See CARRIAGE.

CAPSTERN, CAPSTAN, CAPSTAND, or CAPSTOW—a strong massy column of timber, formed like a truncated cone, and having its upper extremity pierced to receive the bars or levers; it is let down perpendicularly through the decks of a ship,

and is fixed in such a manner, that the men by turning it horizontally with the bars, may perform any work which requires an extraordinary effort; its parts are, the barrel, the whelps, the down-head, and the spindle; its appurtenances are, the bars, the pins, the pauls, and the swifter. There are commonly two capstans in large ships of war; the main, and the gear capstan; the former of which, has two drum-heads, and may be called a double one, it has also hanging pauls.

The whelps rise out of the main body of the capstan like buttresses to enlarge the sweep; so that a greater portion of the cable, or whatever rope encircles the barrel, may be wound about it at one turn without adding much to the weight of the capstan. The whelps reach downwards from the lower part of the drum-head to the deck.

The drum-head is a broad cylindrical piece of wood, resembling a mill-stone, and fixed immediately above the barrel and whelps. On the outside of this piece are cut a number of square holes parallel to the deck to receive the bars.

The spindle or pivot which is shod with iron is the axis or foot, upon which the capstan rests and turns round in the saucer, which is a sort of iron socket, let into a wooden stock or standard, called the step, resting upon and bolted to the beams.

The bars are long pieces of wood, or arms thrust into a number of square holes in the drum-head all round, in which they are as the radii of a circle, or the spokes to the nave of a wheel. They are used to heave the capstan round, which is done by the men setting their breasts against

them, and walking about, like the machinery of a horse-mill, till the operation is finished.

The pins are little bolts of iron thrust perpendicularly through the holes of the drum-head, and through a correspondent hole in the end of the bars made to receive the pins when the bars are fixed. They are used to confine the bars and prevent them from working out as the men heave, or when the ship labours. Every pin is fastened to the drum-head with a small iron chain, and that the bars may all fit their respective holes they are all numbered.

The pauls are situated on each side of the capstan, being two short bars of iron, bolted at one end through the deck to the beams close to the lower part of the whelps; the other end which occasionally turns round on the deck, being placed at the intervals of the whelps as the capstan turns, prevents it from recoiling or turning back by any sudden jerk of the cable as the ship rises on the sea, which might greatly endanger the men who heave.

The hanging pauls are used for the same purposes, reaching from the deck above to the drum-head, immediately beneath it.

The swifter is a rope passed horizontally through holes in the outer ends of the bars, and drawn very tight: the intent of this is to keep the men steady as they walk round, when the ship rolls, and to give room for a greater number to assist, by pulling upon the swifter itself.

N. B. Though this word is commonly called capstern, its proper pronunciation is capstan, being derived from the French *cabestan*.

The French call that an English capitan,

capstan, where there are only half bars used, and which for that reason is only half perforated: this is thicker than the other.

There is also a flying capstan which may be moved from place to place.

To rig the CAPSTAN—is to fix the bars in their respective holes, thrust in the pins to confine them, and reeve the swifter through the ends.

To man the CAPSTAN—is to place the sailors at it, in readiness to heave.

To heave at the CAPSTAN—is to go round with it by pushing with the breast against the bars as already observed.

To surge the CAPSTAN—is the order to slacken the rope, which is wound round upon it.

To come up the CAPSTAN—is to turn the capstan the contrary way, thereby letting out some of the rope on which they had been heaving.

To paul the CAPSTAN—is to fix the pauls to prevent it from recoiling during any pause of heaving.

CAPTAIN, in the navy, or Post CAPTAIN—an officer who commands a ship carrying 20 or more cannon.

CAPTAIN of a ship of war—is the commanding officer.

CAPTAIN of a merchant ship—is he who has the direction of the ship's crew and cargo. In small ships and short voyages he is more commonly called master, and on the Mediterranean the patron or patron.

CAPTAIN—is also a title generally, though improperly, given to the master or chief officer of all vessels whatever. It is also applied in the navy, to the chief sailor of particular gangs of men,

as captain of the after-guard, of the fore-castle, of the mast, of a top, or of a gun.

The charge of a captain in his Majesty's navy is very comprehensive, inasmuch, as he is not only answerable for any bad conduct in the military government, navigation, and equipment of the ship he commands, but also for any neglect of duty, or ill management in his inferior officers, whose several charges he is appointed to superintend and regulate.

On his first receiving information of the condition and quality of the ship he is appointed to command, he must attend her constantly and hasten the necessary preparations to fit her for sea. So strict, indeed, are the injunctions laid on him by the Lord High Admiral or Commissioners of the Admiralty, that he is forbid to be out of his ship, from his arrival on board, till the day of his discharge, unless by particular leave from the Admiralty or his commander in chief. He is enjoined to shew a laudable example of honour and virtue to the officers and men, and to discountenance all dissolute, immoral, and disorderly practices, and such as are contrary to the rules of discipline and subordination, as well as to correct those who are guilty of such offences as are punishable according to the usage of the sea.

He is ordered particularly to survey all the military stores which are sent on board, and to return whatever is deemed unfit for service. His diligence and application are required to procure his complement of men; observing carefully to enter only such as are fit for the necessary duty

duty, that the government may not be put to improper expence. When his ship is fully manned, he is expected to keep the established number of his men complete, and superintend the muster himself, if there is no clerk of the check at the port.

When his ship is employed on a cruising station, he is expected to keep the sea the whole length of time previously appointed; but if he is compelled by some unexpected accident to return to port sooner than the limited time, he ought to be very cautious of a good situation of anchoring, ordering the master, or other careful officers to sound and discover the depths of water and dangers of the coast.

Previous to any possibility of engagement with an enemy, he is to quarter the officers and men to the necessary stations, according to their office or abilities, and to exercise them in the management of the artillery, that they may be more expert in the time of battle. His station in an engagement is on the quarter-deck; at which time he is expected to take all opportunities of annoying his enemy and improving every advantage over him; to exhibit an example of courage and fortitude to his officers and crew; and to place his ship opposite to his adversary, in such a position as that every cannon shall do effectual execution.

At the time of his arrival in port after his return from abroad, he is to assemble his officers and draw up a detail of the observations that have been made during the voyage; of the qualities of the ship as to her trim, ballast, stowage, and manner of sailing, for the information and direction

of those who may succeed in command; and this account is to be signed by himself and officers, and to be returned to the resident commissioner of the navy at the port where the ship is discharged.

By an establishment made in 1700, near one third was retrenched from the sea pay, and that of a first rate fixed at 11. of a second rate at 16s. of a third rate at 13s. 6d. of a fourth rate at 10s. of a fifth rate at 8s. and of a sixth rate at 6s. per day.

In admirals ships and all ships of the first rate, the French have two captains, two lieutenants, and two ensigns.

CAPTAINS of port — are, among the French, officers established in some considerable sea-ports, where there are arsenals, as at Brest, Toulon, Dunkirk, &c.

CAPTURE — a prize taken by a ship of war at sea.

Vessels are looked on as prizes if they fight under any other standard than that of the state from which they have their commission, if they have no charter party, invoice, or bill of lading aboard; if loaded with effects belonging to the King's enemies, or even contraband goods. Those of the King's subjects recovered from the enemy, after remaining 24 hours in their hands are deemed lawful prizes. Vessels that refuse to strike may be constrained; and if they make resistance and fight, become lawful prizes if taken.

In ships of war the prizes are to be divided among the captors, i. e. officers, seamen, &c. as his Majesty shall appoint by proclamation: but among privateers the division is according to agreement among the owners.

By stat. 13 Geo. 2. c. 4. Judges and officers, sailing of their duty

duty in respect to the condemnation of prizes, forfeit 500*l.* with full costs of suit, one moiety to the King, and the other to the informer.

We shall say more on this subject in the article of PRIZE.

CARCASS—a composition of combustible substances, made up in proper dimensions to be placed instead of the shell, in a mortar. It is thrown into towns, in order to set fire to the buildings. It has two or three apertures, through which the fire is to blaze, and serves by its light while burning, as a direction in throwing the shells, and to deter persons from approaching to put it out, it is equipped with several pistol barrels loaded with powder and balls to the muzzles, which explode at various times as the composition burns down to them. See BOMB, &c.

CAREENING—the operation of heaving the ship down on one side, by the application of a strong purchase to her masts, which are properly supported for the occasion, to prevent their breaking with so great a strain; by which means one side of the bottom, being elevated above the surface of the water, may be cleaned or repaired. See Breaming. When a ship is laid on a careen every thing is taken out of her: but this operation is now nearly superseded by sheathing the ships with copper, whereby they keep a clean bottom for several years.

A ship is also said to careen, when she inclines to one side at sea by a press of sail.

CARGO—the lading, or whole quantity of merchandize a ship is freighted with.

CARGO—also denotes an invoice of the goods put on board.

CARLINGS—short pieces of timber ranging fore and aft from one deck beam to another, into which their ends are scored; they are used to sustain and fortify the smaller beams of the ship.

CARPENTER—an officer appointed to examine and keep in order the frame of the ship, together with her masts, yards, boats, and all other wooden machinery, likewise the stores committed to him by indenture from the surveyor of the dock-yard.

It is the carpenter's duty in particular, to keep the ship tight, for which purpose he ought frequently to review the decks and sides, and to caulk them when it is found necessary. In the time of battle, he is to examine up and down with all possible attention in the lower apartments of the ship, to stop any holes that may be made in the sides by shot, with wooden plugs, provided of several sizes for that purpose.

CARRIAGE of a gun—a strong frame of wood fixed on four solid wheels, or trucks, on which the cannon is placed: its chief parts are, as follow:

1. The sides or checks.
 2. The axle-trees.
 3. The trucks or wheels.
 4. The transom.
 5. The sole or bottom.
 6. The bed.
 7. The quoin.
- These are all of wood.
8. The cap-squares, or clamps.
 9. The eye-bolts.
 10. Joint bolts.
 11. The transom-bolt.
 12. The bed-bolt.
 13. Hind axle-tree bolts.
 14. The breeching-bolts.
 15. Loops, or eye-bolts, to which the gun tackle are hooked.
- These are all of iron.

In a vessel of war the carriage on which the cannon is placed, is a kind of wheeled sledge, composed of two large pieces of plank, called as above, sides or cheeks, connected together by means of cross pieces, which are axle trees, transoms, or bolts. The two axle-trees are fixed across under the fore and hinder parts of the carriage, being supported at their extremities by solid wooden wheels called trucks. The transom is placed directly over the fore axle-tree, and exactly in the middle of the height of the cheeks or side-pieces. The height of the transom is equal to two diameters of the shot, and the breadth to one diameter. The wheels are firmly retained upon their axle-trees, by means of iron bolts passing through the latter without the wheels: these bolts are called lynch-pins. The breadth of the wheels is always equal to that of the cheeks, but the height of the cheeks and diameter of the trucks must conform to the height of the gun-ports above the deck. The carriages of the lower tiers should, therefore, be so formed, that when the breech of the cannon lies upon the hind axle-tree, the muzzle of the piece should touch above the port, and the cannon be moreover so secured by its tackles and breechings, as to prevent it from straining the ship as she rolls in a stormy sea.

CARRICK BEND—a kind of knot. See **BEND**.

CARRICK BITTS—the bits which support the windlass.

CARRONADE—a cannon of peculiar construction, being much shorter and lighter than the common cannon, and having a chamber for the powder like a mortar; they are generally of large calibre,

and carried on the upper works, as the poop, and fore-castle. They derive their name from Carron in Scotland.

To CARRY AWAY—is to break; as, "That ship has carried away her fore-top-mast," i. e. has broken it off.

CARTEL—a ship commissioned in time of war to exchange the prisoners of any two hostile powers, or to carry a proposal, &c. from one to the other; for this reason she has only one gun on board, which is for the purpose of firing signals, as the officer who commands her is particularly ordered to carry no cargo, ammunition, or implements of war.

CARTRIDGE—a large paper bag which contains the charge of powder for a cannon.

CARTRIDGE BOX—a circular wooden box, with a lid sliding upon the two parts of a small rope, in a similar manner to the top of a lady's snuff-box. It contains one cartridge, and its use is to preserve it from bursting and from fire.

CARVED WORK—the ornaments of a ship which are wrought by the carver.

CARVEL WORK—in contradistinction to clinker work; is the common method of planking vessels, by laying the edges close to each other, and caulking them to make them water-tight.

CASE-shot, or CANNISTER-shot—a great number of small bullets put into a cylindrical tin box.

To CAST—is to fall off, so as to bring the direction of the wind on one side of the ship, which before was right ahead. This term is particularly applied to a ship riding head to wind; when
her



ADM: KEMPENFELT

her anchor first loosens from the ground.

CAST away—the state of a ship which is lost, or wrecked on a lee-shore, bank, rock, &c.

To **CAST** off, or to **CAST** loose—to untie.

CAST off the lead—the act of once heaving the lead into the sea, to find what depth of water there is.

CAT—a ship formed on the Norwegian model, and usually employed in the coal trade. These vessels are generally built remarkably strong, and carry from four to six hundred tons; or in the language of their own mariners, from twenty to thirty keels of coals. A cat is distinguished by a narrow stern, projecting quarters, a deep waist, and by having no ornamental figure on the prows.

CAT—is also a sort of strong tackle, used to draw the anchor perpendicularly up to the cat-head.

CAT block. See **BLOCK**.

CATAMARAN—a sort of a raft or float formed by the fastening a number of poles to each other sideways, and laying boards, planks, &c. on the top, so as to convey goods or passengers to some distant place by water, when no boat can be procured: this, however, can only be performed when the surface of the water is not much agitated.

CATAMARAN is also a name given by the sailors to a kind of boat used in the East-Indies.

CAT-HARPINGS—ropes serving to brace in the shrouds of the lower masts behind their respective yards, for the double purpose of making the shrouds more tight, and of affording room

to brace the yards more obliquely when the ship is close hauled.

CAT-HEADS—two strong short beams of timber, projecting almost horizontally over the ship's bows on each side of the bowsprit.

That part of the cat-head which rests upon the forecastle, is securely bolted to the beams; the other projecting part carries in its extremity two or three small wheels, or sheaves of brass or strong wood, about which a rope called the **CAT-FALL** passes, and communicates with the cat-block, which also contains three sheaves.

The cat-head also serves to suspend the anchor clear of the bow, when it is necessary to let it go: it is supported by a sort of knee, which is generally ornamented with sculpture.

CAT-hook—is a strong hook, fitted to the cat-block, to hook the ring of the anchor when it is to be drawn up, or catted.

CAT-O'NINE TAILS—an instrument of punishment used on board ships in the navy; it is composed of nine pieces of line or cord about a half a yard long, fixed upon a piece of thick rope for a handle, and having three knots on each at small intervals, nearest one end; with this the seamen who transgress are flogged upon the bare back.

Thieves CAT—a cat-o-nine-tails having larger and harder knots upon it than those generally employed, and is only used for the punishment of theft.

CATSPAW—a light air of wind perceived at a distance in a calm, by the impression made on the surface of the sea, which it sweeps very lightly, and then decays.

CATSPAW—is also a name given to a particular turn made in the bight of a rope, in order to hook a tackle on it.

To **CAULK** or **CALK**—to drive a quantity of oakum or old ropes untwisted and pulled asunder, into the seams of the planks in the ship's decks or sides, in order to prevent the entrance of water. After the oakum is driven very hard into these seams, it is covered with hot melted pitch or rosin, to keep it from rotting.

CAYS—in the West-Indies are meant of little islands and rocks, that are almost every where dispersed amongst those islands.

CEILING—the inside planks of a ship.

CENTRE—the division of a fleet between the van and the rear in the line of battle, and between the weather division and lee one, in the order of sailing.

CENTRY—an armed man placed as a guard, at particular places in the ship for security or state.

To **CHAFE**—to rub or fret the surface of a cable, mast, or yard, by the motion of the ship, or otherwise.

CHAIN-PUMP—part of the **PUMP**, which see.

CHAINS—strong links or plates of iron, the lower ends of which are bolted through the ship's side to the timbers: they are placed at short distances from each other on the ship's outside, as being used to contain the blocks, called dead-eyes, by which the shrouds of the masts are extended.

CHAIN-shot—particular kind of shot, formed by fastening two cannon-balls together, with a short chain, and designed to mangle and ruin a ship's sails and

rigging, or to destroy her masts and yards.

Top CHAIN—a chain to sling the lower yards in time of battle, to prevent them from falling down when the ropes by which they are hung are shot away.

CHAIN wales, or CHANNELS,—broad and thick planks projecting horizontally from the ship's outside, beginning abreast of, and continuing somewhat abaft each mast. They are formed to extend the shrouds from each other, and from the axis, or middle of the ship, so as to give a greater security and support to the masts, and to prevent the shrouds from rubbing against the gun-wale. Every mast has its chain-wales, which are either built above or below the second-deck ports in a ship of the line: they are strongly connected to the side by knees, bolts, and standards, besides being confined thereto by the chains, whose upper ends pass through notches on the outer edge of the chain-wales, so as to unite with the shrouds above.

CHANNEL—in Hydrography, the deepest part of a river, harbour, or strait, which is most convenient for the track of shipping; also, an arm of the sea running between an island and the main or continent, as the British channel, &c.

CHAPELLING a ship—the act of turning her round in a light breeze of wind, when she is close hauled, so that she will lie the same way she did before. This is commonly occasioned by the negligence of the steersman, or by a sudden change of the wind.

CHAPLAIN—the priest appointed to perform divine service

vice on board ships in the royal navy.

CHARGE of a cannon—the quantity of powder put in to be fired at one time, which is usually near one-half the weight of the ball, except in carronades, where it is considerably less.

CHART—a marine map or draught, upon which are represented the coasts, isles, banks, rocks, and dangers of the sea, together with the points of the wind, and the entrance of bays and rivers, whereby to regulate the various courses of a ship in her voyage.

CHARTER-PARTY—a deed or writing made between merchants and sea-faring men concerning their merchandise and maritime affairs.

A **CHARTER-PARTY** of af-freightment—settles the agreement in relation to the freight and cargo of a ship, between the merchant and master or commander of the vessel; it binds the master to deliver the cargo in good condition at the place where his ship is to be discharged, &c.

In those **CHARTER PARTIES**, if the dangers of the sea are excepted, it has been adjudged that such exception extends as well to any danger upon sea from ships of war or pirates as to common hazards of shipwreck, tempests, &c.

CHASE or **CHACE**—the vessel pursued by some other.

Bow-CHASE—cannon situated in the fore part of the ship, to fire upon any object ahead of her.

Stern-CHASE—the cannon which are placed in the after part of a ship, pointing astern, and intended to annoy any ship which is in pursuit of her.

To CHASE—to pursue a ship or fleet in fight.

A general **CHASE**—is when all the ships of a fleet or squadron are ordered by signal to pursue some other fleet in fight.

To CHECK—is to ease off a little of a rope which is found to be too fliffly extended; it is also used in a contrary sense when applied to the cable running out, and then implies to stopper the cable.

Clerk of the CHECK—an officer in the royal dock-yards, who goes on board the ships of the navy to muster the ship's company, of whom he keeps a register.

To CHEER—to salute a ship en passant, by the people all coming upon deck and huzzaing three times, called three cheers; it also implies to encourage or animate.

CHEERLY—implies heartily, cheerfully, or quickly, as, "row cheerly in the boats, lower away cheerly," &c. that is, row heartily, lower speedily, &c.

CHEEKS of the Mast—the faces or projecting parts on each side of the masts, formed to sustain the trestle-trees upon which the frame of the top, together with the top-mast, immediately rests.

CHEEKS, or sides of a gun-carriage. See **CARRIAGE.**

Ammunition-CHESTS—are chests placed in the tops of ships of war to contain the ammunition for the swivels, &c.

Arm-CHESTS—are chests placed in various parts of the ship, to afford a ready supply of muskets, pistols, cutlasses, &c.

Color-CHESTS—are chests appropriated to the reception of flags for making signals.

CHESS TREES—two pieces of wood bolted perpendicularly, one on each side of the ship; they are

used to confine the clues of the main-sail, for which purpose there is a hole in the upper part, through which the tack passes that extends the clue of the sail to windward.

CHEST-ROPE—is the same with the guff or gift-rope, and is added to the boat-rope, when the boat is towed at the stern of the ship, to keep her from sheering, i. e. from swinging to and fro.

CHICO—on the W. coast of New Mexico on the Pacific Ocean, is a term which signifies little.

To CHINSE—is to thrust oakum into a seam or chink with the point of a knife or chisel, and is chiefly used as a temporary expedient in lieu of caulking.

CHITTLE—a term signifying little in the East-Indies.

CHOCK—a sort of wedge, used to confine a cask or other weighty body in a certain place, and to prevent it from fetching way when the ship is in motion.

CHOCKS of the rudder—are large pieces of timber kept in readiness to stop the motion of the rudder in case of any accident and while a new tiller is shipped, &c.

CHOCK-A-BLOCK—is the same with **BLOCK-A-BLOCK**, which see.

To CHOP-ABOUT—is applied to the wind when it varies frequently and suddenly.

CISTERN—a large wooden trough, placed in the well just below the orlop, and having a leaden pipe, which goes through the ship's side whereby it is occasionally filled with sea-water, which is thence pumped up to wash the decks, &c.

CLAMPS—thick planks on

the inner part of a ship's side, used to sustain the ends of the beams, and extending from stem to stern, including the whole interior range of the side. They are placed close under each deck, so as to be securely fayed to all the timbers, to which they are fastened by nails through the clamp, and penetrating two thirds of the thickness of the timbers.

The clamps of the lower and second decks ought to be equal in thickness to half the corresponding timbers in that part, and as broad as can be procured. In their disposition it is essentially necessary to avoid their being wounded by the ports, as the strength and firmness of a ship greatly depend on the substance and solidity of those pieces which lie horizontally in her frame.

CLAMPS—are also smooth crooked plates of iron fore-locked upon the trunnions of the cannon to keep them fast upon their carriages; these, however, are more properly termed cap-squares. See **CARRIAGE**.

CLAMPS, of the latter kind—are likewise frequently used to fasten the masts or bowsprits of small vessels, and of boats.

To CLAP ON—is to fasten or to lay hold of, as, "Clap on the stoppers before the bits," i. e. fasten the stoppers; "Clap on the cat-fall," i. e. lay hold of the cat-fall.

To CLAW, or CLAW OFF—to beat, or turn to windward from a lee-shore, so as to be at sufficient distance from it, to avoid shipwreck, &c.

CLEAR—as a naval term, is applied to the weather, the sea coasts, cordage, navigation, &c.

CLEAR weather—as opposed to cloudy or foggy.

CLEAR coast—when the navigation is not rendered dangerous by rocks, sands, or breakers.

CLEAR—is expressed of cordage, cables, &c. when they are disentangled so as to be ready for immediate service. It is usually opposed to **FOUL** in all these cases.

To **CLEAR**—has several significations, particularly to escape from, to unload, to empty, to prepare, &c. as,

To **CLEAR** the land—to escape from the land.

To **CLEAR** a lighter, or the hold—to empty the hold.

To **CLEAR** for action—to prepare for action.

To **CLEAR** a ship—is to obtain leave for sailing or filling the cargo by paying the customs.

CLEATS—pieces of wood of different shapes, used occasionally in a ship to fasten ropes upon: some have one and some two arms; others are without arms, being hollowed in the middle to tie any thing to, and are called belaying cleats, a deck cleat, and a thumb cleat.

CLICKS—are small pieces of iron falling into a notched wheel attached to the winches in cutters, &c. and thereby serving the office of pauls.

CLINCH—a particular method of fastening large ropes by a kind of knot, and seizings instead of splicing, and is chiefly used to fasten the cable to the ring of the anchor, and the breechings of guns to the ring-bolts in the ship's side.

CLINCHER-WORK—the disposition of the planks in the side of any boat or vessel, when the lower edge of every plank overlays that next below it, like

slates on the roof of a house. See **CARVEL-WORK**.

CLINCHER-BUILT—made of clincher-work.

CLOSE-HAULED—the arrangement or trim of a ship's sails when she endeavours to make a progress in the nearest direction possible towards that point of the compass from which the wind blows; in this manner of sailing the keel of square-rigged vessels commonly makes an angle of six points with the line of the wind, but cutters, luggers, and other fore and aft rigged vessels will sail much nearer.

All vessels, indeed, are supposed to make nearly a point of lee-way when close-hauled, even when they have the advantage of a good sailing breeze and smooth water. The angle of lee-way, however, enlarges in proportion to the increase of the wind and sea.

In this disposition of the sails they are all extended sideways on the ship, so that the wind, as it crosses the ship obliquely towards the stern from forwards, may fill their cavities. But as the current of wind also unties the cavities of the sails, in an oblique direction, the effort of it, to make the ship advance, is considerably diminished: she will, therefore, make the least progress when sailing in this manner.

The ship is said to be close-hauled, because at this time her tacks, or lower corners of the principal sails are drawn close down to her side to windward; the sheets hauled close aft; and all the bowlines drawn to their greatest extension, in order to keep the sails ready.

CLOSE QUARTERS—certain

tain strong barriers of wood stretching across a merchant ship, in several places; they are used as a place of retreat when a ship is boarded by her adversary, and are therefore fitted with loop-holes through which to fire the small arms; they are likewise furnished with caissons or powder-chests fixed upon the deck, which may be fired at any time from the close quarters upon the boarders.

An English merchant ship of 16 guns by being properly fitted with close quarters, has been known lately to defeat the united efforts of three French privateers who boarded her, after having engaged at some distance nearly a day and a half, with very few intervals of rest. Two of the cruisers were equipped with 12 guns each, and the other with 8. The French sailors were after boarding, so much exposed to the continued fire of musquetry, and cohorts charged with grenades, that a dreadful scene of carnage ensued, in which the decks were soon covered with the dead bodies of the enemy, several of which the boarders, in their hurry to escape, had left behind.

CLOTHS—in a sail are the breadths of canvass in its whole width.

CLOVE-HITCH—a knot or noose by which a rope is fastened to another. See **HITCH**.

To **CLUB-HAUL**—is a method of tacking a ship, by letting go the lee-anchor as soon as the wind is out of the sails, which brings her head to wind, and as soon as she pays off, the cable is cut, and the sails trimmed; this is never had recourse to but in perilous situations, and when

it is expected the ship will miss stays.

CLUE of a sail—the lower corners of square sails; but the aftmost only of stay sails, &c. the other lower corner being called the tack.

CLUES of a hammock—the combination of small lines by which it is suspended, being formed of knittles, grommets, and lariards, and are termed double or single clues, according as there are one or two at each end.

A Spanish **CLUE**—is formed by fixing the knittles at equal distances upon a piece of rope instead of a grommet, which having an eye spliced, and a lariard placed at each end, extends the hammock similar to a double clue.

From **CLUE** to earing—a phrase implying from the bottom to the top, or synonymous with “from top to toe.”

CLUE garnets—are a sort of tackle fastened to the clues of the main and fore sails to truss them up to the yard, which is termed clueing up those sails.

CLUE-lines—are for the same purpose as clue-garnets, only that the latter term is solely appropriated to the courses, while the word clue-line is applied to those ropes on all the other square sails.

COACH, or **COUCH**—a sort of chamber or apartment in a large ship of war near the stern. The floor of it is formed by the aft-most part of the quarter-deck, and the roof of it by the poop: it is generally the habitation of the captain.

COAMINGS of the hatches—certain raised borders about the edges of the hatches of a ship, to prevent

prevent the water on the deck from running down into the lower apartments.

COAST—the sea shore.

COASTER—a vessel employed going from one port to another on the same coast, and therefore seldom losing sight of the land.

COASTING, or to **COAST** along—the act of making a progress along the sea coast of any country, for which purpose it is necessary to observe the time and direction of the tide, to know the reigning winds, the roads and havens, the different depths of water and the qualities of the ground.

COASTING pilot—a pilot who by long experience has become sufficiently acquainted with the nature of any particular coast, and the requisites mentioned in the preceding article, to conduct a ship or fleet from one part of it to another.

COAT—a piece of tarred canvas nailed round that part of the masts and bowsprit which joins to the deck, or lies over the stem: its use is to prevent the water from running down between decks. There is also a coat for the rudder, nailed round the hole where the rudder traverses in the ship's counter.

COAT—also implies the stuff with which the ship's sides or masts are varnished to preserve them from the sun and weather, as turpentine, tar, &c. in this sense we say, "Give her a coat of tar."

COBBING—a punishment sometimes inflicted at sea: it is performed by striking the offender a certain number of blows on the breech, with a flat piece of wood called the cobbing board.

COBOOSE—the place where the victuals is cooked on board merchant ships.

COCKBILL, See **ANCHOR**.

COCK-BOAT—a small boat used on rivers or near the shore. In ancient days a cock was the general name of a yawl.

COCK-PIT—is near the apartments of the surgeon and his mates, being the place where the wounded men are dressed. It is situated near the after-hatchway, and under the lower gun-deck.

Fore COCKPIT—a place leading to the magazine-passage, and the boatswain's, gunner's, and carpenter's store rooms; in large ships, and during war time, the boatswain and carpenter generally have their cabbins in the fore cockpit, instead of being under the fore-castle.

COCKSWAIN, pronounced **COXSON**—the officer who steers a boat, and has the command of the boat's crew, and all things belonging to it. He has a whistle to call and encourage his men, and must be ready with his crew to man the boat on all occasions. He sits at the stern of the boat and steers.

COIL—the manner in which all ropes are disposed aboard ships, for the conveniency of stowage.

COILING—is a sort of serpentine winding the ropes, by which they occupy a small space, and are not liable to be entangled amongst one another in working the sails. Each winding of this sort in a cable is called a fake, and one range of fakes is called a tier; there are generally from five to seven fakes in a tier, and three or four tiers in a cable's length: the small ropes are frequently coiled by hand and hung upon cleats to prevent their being entangled amongst

mongst one another, in traversing, contracting, or extending the sails.

Flemish COIL—is a rope coiled up in a spiral manner, forming but one tier, and laying flat on the deck, the end being in the middle of it.

COLLAR—the upper part of a stay; also, a rope formed into a wreath, with a heart or dead-eye seized in the bight, to which the stay is confined at the lower part.

COLLIERS—vessels employed to carry coals from one port to another, chiefly from the northern parts of England to the capital, the more southern parts, and foreign markets. This trade is known to be an excellent nursery for seamen, although they are often found, from the constitution of their climate to be not so well calculated for southern navigation.

COLOURS—the flags or banners which distinguish the ships of different nations. We shall be more explicit on this subject under the articles of **ENSIGN**, **JACK**, and **PENDANT**.

COMING TO, or **COMING UP**—that part where a vessel stops in approaching the direction of the wind.

COME NO NEAR—the order to the helmsman not to steer the ship so close to the wind.

COME UP the capstan—is to turn it the contrary way to that which it was heaving, so as to slacken or let out some of the rope which is about it.

COME UP the tackle fall—is to slacken it gently.

To COME UP with—to overtake.

COMMANDER—an officer in the Royal Navy, who has the

command of a ship of war under twenty guns, a sloop of war, armed ships, or bomb vessels. He is entitled Master and Commander, and ranks with a Major of the Army.

COMMANDER—is also the name of a large wooden mallet used on sundry occasions in a ship.

COMMANDER in chief—is the chief admiral in any port, or on any station, appointed to hold command over all other admirals within that jurisdiction.

The origin and denomination of this important office, which seems to have been established in most countries that border on the sea, have given rise to a great variety of opinions. Some have borrowed them from the Greek, others from the Arabic, while others again with greater probability, derive both the title of admiral and the dignity from the Saracens.—*In regno Sarracenorum quatuor prætors statuit, qui Admiralli vocabantur*, SIGEBERT. But since no certain conclusions have been deduced from these elaborate researches, and as it is here more necessary to point out the office and duty of a Commander in Chief, than to furnish an historical or chronological detail of the rank and power with which admirals have been invested in different nations, we shall contentedly resign the task to the ingenious lexicographers, who have so repeatedly entertained us with such critical investigations.

The Commander in Chief, or Admiral of a squadron, being frequently invested with a great charge, on which the fate of a kingdom may depend, ought certainly to be possessed of abilities equal to so important a station, and so extensive a command. His squadron is unavoidably exposed

to a variety of perplexing situations in a precarious element. A train of dangerous incidents necessarily arise from those situations. The health, order, and discipline of his people are not less the objects of his consideration, than the condition and qualities of his ships. A sudden change of climate, a rank and infectious air, a scarcity or unwholesomeness of provisions may be as pernicious to the former, as tempestuous weather, or dangerous navigation, to the latter. A lee-shore, an injudicious engagement with an enemy greatly superior, may be equally fatal to both. He ought to have sufficient experience to anticipate all the probable events that may happen to his Squadron during an expedition, and by consequence to provide against them. His skill should be able to counteract the various disasters which his Squadron may suffer from different causes. His vigilance and presence of mind are necessary to seize every favourable opportunity that his situation may offer, to prosecute his principal design; to extricate himself from any difficulty or distress; to check unfortunate events in the beginning, and retard the progress of any great calamity. He should be endued with resolution and fortitude, to animate his officers by the force of example, and promote a sense of emulation in those who are under his command, as well as to improve any advantage, as to frustrate or defeat the efforts of his ill fortune.

Military conduct, however, is the most essential part of his duty. As soon as the Squadron under his command shall put to sea, he is to form it into the proper order of battle, called the Line. In this

arrangement he is to make a judicious distribution of strength from the van to the rear, throwing the principal force into the centre, to resist the impression of the enemy's fleet; which might otherwise at some favourable opportunity, break through his line, and throw the van and rear into confusion.

It is also necessary that he should have a competent knowledge of the seas, weather, and reigning winds of the coast or region where he is stationed; which will not only greatly facilitate his plans on the enemy, but likewise enable him to avoid being improperly embayed, where he might be surprized in a disadvantageous situation; and to judge whether it will be most expedient to attack his enemy, or lie prepared to receive his assault. When his Squadron is forced by stress of weather, or otherwise to take shelter in a road or bay, it will likewise suggest the necessary conduct of keeping a sufficient number of cruizers at sea to bring him early intelligence, that they may be ready to cut or slip their cables, when they shall be too much hurried to weigh their anchors.

It also behoves the Commander in Chief, as the forming a complete, strong, and uniform line is a very material article in naval war, frequently to arrange his Squadron into this order, that the inferior officers may observe to bring their ships with greater dexterity and alertness into their several stations, and maintain the regularity of the line when they tack, veer, or sail abreast.

When the Commander in Chief intends a descent on an enemy's coast, or other attack which may be attended with complicated and unforeseen incidents, his orders

should be delivered or drawn up with the greatest accuracy and precision; they should be simple, perspicuous, direct, and comprehensive; they should collect a number of objects into one point of view; and foreseeing the effects of success or defeat, appoint the proper measures to be adopted in either event. History and experience confirm the necessity of this observation, and present us with a variety of disasters which have happened on such occasions, merely by a deficiency in this material article. In the commanding officer, inattention, barrenness of expedient, or a circumscribed view of the necessary effects of his enterprise, may prove equally pernicious. And general orders ought to be utterly free from pedantry and ambiguity, which always betray a false taste and confused imagination, besides the probability of producing many fatal consequences.

When a Commander in Chief shall conquer in battle, he should endeavour to improve his victory by pushing the acquired advantages as far as prudence directs; a conduct that merits his attention as much as any in the action. When he shall be defeated, he ought to embrace every opportunity of saving as many of his ships as possible, and endeavour principally to assist those which have been disabled. In short, it is his duty to avail himself of every practicable expedient, rather than sink under his misfortune, and suffer himself to become an easy prey to an enemy.

He should be sufficiently acquainted with civil law to judge with propriety of the proceedings of courts-martial, and to correct the errors, and restrain the abuses,

which may happen therein by mistake, inattention, or ignorance.

He should likewise have a competent knowledge of the modern languages, or at least those of the countries against whom his military operations are directed, so as to be able to comprehend with facility the full scope and purport of any secret papers, treaties, propositions, or schemes of the enemy, which may occasionally be submitted to his inspection, or fall into his possession by capture, and which it might be imprudent to communicate to any person near him.

Moreover, he should be versed in geometry, so as to be capable of ordering proper and correct surveys of unknown coasts, roads, or harbours to be made, and to judge of their accuracy, and detect their errors. To ascertain the situation and longitude of different places, he should be also sufficiently skilled in astronomy, and the method of taking observations, which, indeed, is essentially necessary to the profession of a sea-officer, although too much neglected.

By his instructions the Admiral, or Commander in Chief, should assist at all councils of war that relate to naval affairs; he should visit, as often as convenient, the other ships of his Squadron; he should enquire particularly into their condition, and observe the men mustered, taking care that no supernumeraries are borne on the books. He is directed to acquaint the secretary of the admiral with all his proceedings relative to the service, for the information of the lord high admiral, or lords commissioners of the admiralty; and to attend him or them on his return home, with an account of his voyage or expedition, and to deliver

deliver a copy of his journal to the secretary.

Such, and much more, are the necessary qualifications of a Commander in Chief; so that the office and duty of an Admiral require greater skill and more comprehensive abilities than are generally supposed essential to the command of a naval armament. It is further necessary that he should be duly qualified, at least in this kingdom, to assist at the councils of his Sovereign, and enter into the enlarged system of protecting his country from an invasion, or of meditating a descent on an enemy's coast; as well as to improve navigation, and open new channels of commerce.

Lords COMMISSIONERS of the Admiralty—In general the crown appoints five or seven commissioners, under the title of "Lords Commissioners for executing the office of Lord High Admiral," &c. for this important and high office has seldom been entrusted to any single person, except princes of the blood, or to some nobleman meriting such distinction for his eminent services. All maritime affairs are entrusted to their jurisdiction. They govern and direct the whole royal navy, with power decisive in all marine cases, civil, military, and criminal, transacted upon or beyond the sea, in harbours, on coasts, or upon all rivers below the first bridge sea-wards.

COMMISSIONERS of the navy—certain officers appointed to superintend the affairs of the marine, under the direction of the lords commissioners of the admiralty. Their duty is more immediately concerned in the building, docking, and repairing the ships in the dock-yards; they have also the

appointment of some of the warrant officers, as surgeons, masters, &c. They are generally eight in number, viz.

1. The Comptroller.
- 2 and 3. Two surveyors, who are shipwrights.
4. Clerk of the acts.
5. Comptroller of the treasurer's accounts.
6. Comptroller of the victualling accounts.
7. Comptroller of the house-keeper's accounts: and

8. An extraordinary commissioner besides the Resident Commissioners, who are three in number: these latter severally reside at and manage the affairs of the three dock-yards at Chatham, Portsmouth, and Plymouth, under the direction of the navy-board in London.

COMMISSIONERS of the victualling—officers appointed to superintend the supply of provisions for the royal navy.

COMMODORE—a general officer in the British navy, invested with the command of a detachment of ships of war, destined on any particular enterprize; during which time he bears the rank of brigadier-general in the army, and is distinguished from the inferior ships of his squadron by a broad red flag or pendant, tapering towards the outer end, and sometimes forked.

COMMODORE—is also a title given by courtesy to the senior captain, where three or more ships of war are cruising in company.

COMMODORE—also denotes the convoy ship in a fleet of merchantmen, who carries a light in his top to conduct the rest, and keep them together.

COMPANION—a sort of wooden porch placed over the entrance,

trance, or stair-case of the master's cabin in merchant ships; whence

COMPANION-ladder—in ships of war, denotes the ladder by which the officers ascend to and descend from the quarter-deck.

COMPANY—the whole crew of any ship, including her officers.

COMPASS—an instrument employed by pilots to ascertain the ship's course at sea, consisting of a circular box, containing a paper card. The card, which represents the horizon, is divided into 32 equal parts, by lines drawn from the centre to the circumference, called points or rhumbs; the intervals between the points are also subdivided into halves and quarters, and also the whole circumference into equal parts called degrees, 360 of which complete the circle, and consequently the distance, or angle, comprehended between any two rhumbs, is equal to eleven degrees and $\frac{1}{4}$, or 15 minutes. The four principal points are called the cardinal points, two of which, opposite to each other are called the North and South points; that which is toward the right-hand when we look North, is termed the East, and its opposite the West point; the names of all the inferior ones are compounded of these according to their situation. Along the North and South line is fixed a small bar of steel, termed the needle, which, being touched by the loadstone, acquires a certain virtue whereby it hangs nearly in the plane of the meridian, and consequently, determines the direction of the other points towards the horizon. This card and needle having a small socket in the centre, is supported on the point of a fine pin of steel, the whole being confined in the cir-

cular box, with a glass cover, which box is hung in gimbals to counteract the motion of the ship. A square box, with a moveable lid, serves to support the gimbals and secures the compass from accident in removals.

The compass being at all times of the utmost importance to the purposes of navigation, it is reasonable to expect, that the greatest attention should be used in its construction, and every attempt to improve it carefully examined, and adopted if proper. Great errors and irregularities, however, have been found, incident to the construction of common compasses, arising from the shape of their needles, by which they have not only turned from their true direction, but from that of each other. The wires of which the needle has hitherto been generally composed, were only hardened at their ends; and if these ends are not equally hard, or if one end be hardened up higher than the other, when they come to be put together, in fixing them to the card, that end which is hardest will destroy much of the virtue of the other, by which means the hardest end will have the greatest power in directing the card, and consequently make it vary towards its own direction; and as the wires are disposed in the form of a lozenge, these cards can have but little force: so that they will often, when drawn aside, stand at the distance of several degrees on either side the point, from whence they are drawn: for all magnetic bodies receive additional strength, by being placed in the direction of the earth's magnetism, and act proportionably less vigorously, when turned out of it. Therefore, when these kind of needles

needles are drawn aside from their true point, two of the parallel sides of the lozengè will conspire more directly than before with the earth's magnetism, and the other two will be less in that direction; by these means the two former sides will very much impede its return, and the two latter will have that impediment to overcome, as well as the friction, by their own force alone.

To remedy the several inconveniences attending the construction of common compasses, the learned Dr. Goom Knight was induced to contrive a new one, which, with Mr. Smeaton's farther emendation, is now used on board all our vessels of war. The needles of the other instruments were generally composed of two pieces of steel wire, bent in the middle, and approaching each other towards the end, where they meet. Others were made of one piece of steel of a spring temper, and broad towards the ends, but tapering towards the middle. Needles of this construction, after vibrating a long time, will always point exactly in the same direction; and if drawn ever so little on one side, will return to it again without any sensible difference. Here it should be remarked, that the principal, and indeed the only circumstance in which Knight's compasses are superior to those which were formerly used, is, that their needles being tempered much higher than usual are thereby enabled to contain a much greater quantity of the magnetical stream, which is certainly a real advantage. But on the other hand, experience sufficiently proves that the methods he has taken to balance the cards with more accuracy than has been formerly at-

tempted, have rendered it by far too delicate to encounter the shock of a tempestuous sea.

The use of the sea compass is as follows; the course a ship is to sail in, being known by the chart and the compass so placed, as that the two parallel sides of the square box be disposed according to the length of the ship, i. e. parallel to a line drawn from the head to the stern; the rudder is to be divided accordingly: e. gr. if the course be found on the chart between the south-west and south-south-west, i. e. south-west $\frac{3}{4}$ to the south; turn the stern so as that a line from the south-west $\frac{1}{4}$ south, exactly answer the mark on the middle of the side of the box. This is all that is required.

Hanging COMPASS—an instrument resembling the last article, except that the point which supports the card, is fixed in the centre of the glass, and the gimbals are attached to a beam over the observer's head. There is usually one hung in the cabin, that by looking up to it, the ship's course may be observed without the trouble of going upon deck.

The points of the compass are as follow :

- North.
- North by East.
- North North East.
- North East by North.
- North East.
- North East by East.
- East North East.
- East by North.
- East.
- East by South.
- East South East.
- South East by East.
- South East.
- South East by South.
- South South East.

South

South by East.
 South.
 South by West.
 South South West.
 South West by South.
 South West.
 South West by West.
 West South West.
 West by South.
 West.
 West by North.
 West North West.
 North West by West.
 North West.
 North West by North.
 North North West.
 North by West.

The difference in the azimuth compass is this: the brass edge originally designed to support the card and throw the weight thereof, as near the circumference as possible, is itself divided into degrees and halves, which may be easily estimated into smaller parts if necessary. The divisions are determined by means of a catgut line, stretched perpendicularly with the box, as near the brass edge as may be, that the parallax arising from a different position of the observer may be as little as possible. There is also added an index at the top of the inner box, which may be fixed on or taken off at pleasure, and serves for all attitudes of the object. It consists of a bar, equal in length to the diameter of the inner box, each end being furnished with a perpendicular style, with a slit parallel to the sides thereof: one of the slits is narrow to which the eye is applied, and the other is wider, with a small catgut stretched up the middle of it, and from thence continued horizontally from the top of one style to the top of the other. There is also a

line drawn along the upper surface of the bar. These four, viz. the narrow slit, the horizontal catgut thread, the perpendicular one, and the line on the bar, are in the same plane which disposes itself perpendicularly to the horizon, where the inner box is at rest and hangs freely. This index does not move round, but is always placed on, so as to answer the same side of the box.

Captain Middleton mentions an azimuth compass of his own contrivance, by which the variation may be determined with greater ease and exactness than any others in use before the year 1738. He has given no particular description of it, but only shews the manner of using it. It carries a telescope with a vertical hair in it, and may be conveniently used for taking the sun's altitude by reflection.

The use of the azimuth compass is as follows:

1st. To find the sun or stars' magnetic amplitude: turn the whole compass box to and fro, till each point of the brass compass lies directly above the corresponding point of the compass card; and let the ship be kept stemming the same point: turn the index towards the sun or star, at its rising or setting, till the two threads of the index be in a right line with the object, and that side of the index corresponding with the centre of the instrument, will cut on the brass circle the degree, &c. of the object's magnetic amplitude in quantity and quality, which is best counted from the nearest meridian point easterly or westerly.

2dly. To find the sun or stars' magnetic azimuth, or what point of the compass the object is upon after

after it is above the horizon: turn the whole compass box to and fro till the points of the brass compass coincide with those on the compass card, and let the ship be stemming that point; turn the index towards the object till the shadow of the thread fall on the backside of the index, or you see the two threads in a right line with the object: then will that side of the index, respecting the centre, cut in the brass circle the object's magnetic azimuth.

This instrument serves the purposes of an azimuth and amplitude compass. The sun's azimuth is known to be an angle contained between the meridian and the centre of the sun. When therefore, the sun's azimuth is required and his rays are strong enough to cast a shadow, the box is turned about till the shadow of the horizontal thread, or, if the sun be too low, till that of the perpendicular thread, in one style, or the slit through the other, falls upon the line in the index bar, or vibrates to an equal distance on each side of it, the box being gently touched if it vibrates too far: at the same time they observe the degree marked upon the brass edge of the catgut line. In counting, the degree for the azimuth, or any other angle that is reckoned from the meridian, the outward circle of figures upon the brass edge is used; and the situation of the index, with respect to the card and needle, will always direct upon what quarter of the compass the object is placed.

But if the sun does not shine out sufficiently strong, the eye is placed behind the narrow slit in one of the styles and the wooden box turned about till

some part of the horizontal or perpendicular thread appears to intersect the centre of the sun, or vibrate to an equal distance on each side of it: smoked glass being used near the eye, if the sun's light is too strong. In this method another observer is necessary to note the degree cut by the nonius, at the same time the first gives notice that the thread appears to split the object.

COMPASSING—a name given by shipwrights, to such pieces of timber as are much incurvated or arched.

COMPTROLLER of the navy—one of the commissioners of the navy-board, at which he presides.

COMPLEMENT—the limited number of men employed in any ship, either for navigation or battle.

CONDUCTOR—a thick metal wire, generally of copper, extending from above the maintop-gallant truck downwards into the water. Its use is to defend the ship from the effects of lightning.

CONSORT—any vessel keeping company with another.

CONSUL—an officer established by virtue of a commission from the King, in all foreign countries of any considerable trade, to facilitate and dispatch business, and to protect the merchants of his nation.

CONTINENT—in geography a large tract of land which is not surrounded by water. Late navigators count four continents, of which there are but two well known. The first comprehends Europe, Asia, and Africa; the second is the new continent called America; the third or northern continent comprehends Greenland, the lands of Spitsbergen, Nova Zembla,

Zembla, and the lands of Jesso: and the fourth comprehends New Guinea, New Zealand, New Holland, and several others hitherto little known. Some authors think the two first continents are in reality only one, imagining the northern parts of Tartary to join with those of North America.

CONVOY—a fleet of merchant ships bound on a voyage to some particular part, and protected by an armed force.

CONVOY—also implies the ship or ships appointed to conduct and defend them on their passage.

COOK-ROOM—the galley or caboose, where victuals is dressed.

COPPERED, or COPPER-BOTTOMED—sheathed with thin sheets of copper, which prevents the worm eating into the planks, or filth accumulating on the bottom, whereby a ship is made to sail heavily.

COPPER-fastened—the bolts and other metal work in the exterior of the bottom, made of copper instead of iron; the advantage of which is, that the vessel may afterwards be coppered without danger of the sheathing corroding the heads of the bolts, which it is found to do, if they are made of iron.

CORDAGE—a general term for the running-rigging of a ship, as also for the rope which is kept in reserve to supply the place of such as may be rendered unserviceable.

Cable-laid CORDAGE—ropes, the three strands of which are composed of three other strands, as are cables.

CORPORAL of a ship of war—an officer under the master at arms, employed to teach the sailors the use of small arms or mus-

quetry; to attend at the gangways or entering ports, and observe that no spirituous liquors are brought into the ship, unless by particular leave of the officers. He is also to extinguish the fire and candles at eight o'clock in winter, and nine o'clock in summer, when the evening gun is fired, and to walk frequently down on the lower decks in his watch, to see that there are no lights but such as are under the charge of proper centinels.

CORPOSANT—a name given to the luminous appearance often beheld in a dark tempestuous night about the decks and rigging of a ship, but particularly at the extremities, as the mast-heads and yard-arms, and is most frequent in heavy rain accompanied with lightning. This appearance, which is nothing more than the electric fluid, passing silently from the clouds to the water, or the contrary; by means of the humidity on the masts and rigging, was, in dark ages of superstition, esteemed by some a good omen, and by others an evil one; but modern philosophy has so happily explored its cause, that none but the most ignorant are now intimidated by it.

The following is a description of those motions by Varenus.—“ They usually wander with uncertain motion from place to place, sometimes appearing to cleave close to the sails and masts, but they frequently leap up and down with intermission, affording an obscure flame, like that of a candle burning faintly. They are produced by some sulphurous and bituminous matter, which being beat down by the motion of the air above, and gathering together, is kindled by the agitation

of the air, as butter is gathered together by the agitation of the cream. And from this appearance we infer, that storms come from sulphurous spirits that rarify the air and fuel it into motion."

CORSAIR—a name commonly given to the piratical cruizers of Barbary, who frequently plunder the merchant ships of European nations with whom they are at peace.

COT—a particular sort of bed-frame suspended from the beams of a ship for the officers to sleep in. It is made of canvass, sewed in the form of a chest, about six feet long, one foot deep, and two or three feet wide, and is extended by a square wooden frame with a canvas bottom, on which the bed, or matras is laid. It is reckoned much more convenient at sea than either the hammocks or fixed cabins.

COVE—a small inlet; also a harbour for shipping: as the Cove of Cork.

COVER—protection; as under cover of the ship's guns.

COUNTER—an arch or vault, whose upper part is terminated by the bottom of the stern, and the lower part by the wing transom and buttock.

The upper or second **COUNTER**—is above the preceding, and parallel to it, but not vaulted, and extends from the top of the lower counter to the bottom moulding of the cabin, or ward-room windows.

COUNTER-BRACE—the lee-brace of the fore-top-sail yard: it is only distinguished by this name at the time of the ship's going about, called tacking, at which time, when the sail begins to shiver in the wind, this brace is hauled

in to flatten the sail against the lee-side of the top-mast, and increase the effort of the wind in forcing her to turn round. See the article **TACKING**.

COURSE—the angle combined between the nearest meridian and that point of the compass on which a ship sails in any particular direction.

COURSES—a name by which the principal sails of a ship are usually distinguished; viz. the main-sail, fore-sail, and mizen: the stay-sails upon the lower masts are sometimes also comprehended in this denomination, as are the main stay-sails of all brigs and schooners.

COURT-MARTIAL—a court composed of admirals and captains of the navy, for the trial of offenders against the articles of war.

CRAB—a wooden pillar, somewhat resembling a small capstan, but is not furnished with a drum-head; instead of which, two, three, or four holes are made one above another through the middle of its upper end, into which long bars are thrust, whose length is nearly equal to the breadth of the deck. It is employed for the same purposes as the capstan, but not being so convenient, is now generally laid aside, except in rope walks, &c.

The **CRAB** with three claws—is used to launch ships, and to heave them into the dock or off the key.

CRADLE—a frame placed under the bottom of a ship, in order to conduct her steadily and smoothly into the water when she is to be launched, at which time it supports her weight while she slides down the descent or sloping

passage, called the ways, which are for this purpose daubed with soap or tallow.

CRADLES—are also standing bedsteads made up for the wounded seamen, that they may be more comfortable than it is possible to be in a hammock.

CRAFT—a general name for all sorts of vessels employed to load or discharge merchant ships, or to carry along-side, or return the guns, stores, or provisions of a man of war; such are lighters, hoys, barges, &c.

CRAFT—is also a sea term, signifying all manner of nets, lines, hooks, &c. used in fishing.

Small **CRAFT**—is a term used to denote the small vessels of war attendant on a fleet, such as cutters, schooners, gun-boats, &c. which are generally commanded by lieutenants.

CRANK, or CRANK-SIDED—the quality of a ship, which, for want of a sufficient quantity of ballast or cargo is rendered incapable of carrying sail, without being exposed to the danger of overturning. See **BALLAST**.

CRANK by the ground—is also the quality of a ship, whose floor it so narrow, that she cannot be brought on the ground without danger.

CRANK—is also an iron brace, which supports the lanterns on the poop, quarters, &c.

CRAWL—a sort of pen or place of confinement, formed by a barrier of stakes and hurdles on the sea coast to contain fish.

CREEK—the port of the haven where any thing is landed from the sea.

CREEK—is also defined by some to be a shore or bank, on which the water beats, running

in a small channel from any part of the sea.

CREEPER—an instrument of iron resembling a grapplin, having a shank and four hooks or claws. It is used to drag along the bottom of any river or harbour with a rope fastened to it, to hook and draw up any thing from the bottom which may have been lost.

CREW—the company of sailors belonging to a ship, boat, or other vessel. The sailors who are to work and manage a ship are regulated by the number of lasts it may carry, each last making two ton. The crew of a Dutch ship, from 40 to 50 lasts, are seven sailors and a swabber; from 50 to 60 lasts, the crew consists of eight men and a swabber, and thus increased at the rate of one man every ten lasts.

English and French crews are usually stronger than Dutch, but always in about the same proportion.

There are in a ship several particular crews or gangs, as the gun-room crew, the carpenter's crew, &c.

CREW of a ship—comprehends generally all aboard, but exclusive of the captain and lieutenants in the French service.

CRINGLE—a small hole formed on the bolt-rope of a sail, by intertwisting the strand of a rope alternately round itself, and through the strands of the bolt-rope till it becomes threefold, and assumes the shape of a ring. The use of the cringle is to receive the ends of ropes which are fastened thereto, for the purpose of drawing up the sail to its yard, or extending the leech by the bow-line bridles, &c.

Iron CRINGLES, or hanks—are open rings running upon the stays, to which the heads of the stay sails are made fast.

CROSS in the hawse—is when a ship moored with two anchors from the bows, has swung the wrong way once, whereby the two cables lie across each other. See **HAWSE**.

CROSS JACK, pronounced cro-jack-yard—the lower yard on the mizen mast, to the arms of which the clues of the mizen topsail are extended;

CROSS JACK sail—is a sail bent to that yard, but is scarcely ever used. This sail has been found of little service, and is therefore very seldom used.

CROSS-piece—a rail of timber extending over the windlass of a merchant ship from the knight-heads to the belfry. It is furnished with wooden pins to fasten the running rigging to, as occasion requires.

CROSS-trees—certain pieces of timber supported by the cheeks and tressle trees at the upper ends of the lower and topmasts, athwart which they are laid to sustain the frame of the tops on the one, and to extend the top-gallant shrouds on the other.

CROTCHES—the crooked timbers that are placed upon the keel in the fore and hind parts of a ship, upon which the frame of her hull grows narrower below as it approaches, the stem afore and the stern-post abaft.

CROTCHES—are also pieces of wood or iron, whose upper part opens into two horns or arms like a half moon. They are fixed in different parts of a ship, according to the uses for which they are designed, which is usually to sup-

port booms, spare topmasts, yards, &c.

CROW—an iron lever furnished with a sharp point at one end and two claws at the other. It is used for various purposes by shipwrights and mariners; as to remove weighty bodies like pieces of timber, to draw spike nails, &c. also to direct and manage the great guns, by moving them into their ports, and levelling or pointing them to any particular object.

To CROWD—to carry an extraordinary force of sail upon a ship, in order to accelerate her course on some important occasion: as in pursuit of, or flight from an enemy, &c.

CROW-FOOT—a complication of small cords, spreading out from a kind of long block. It is used to suspend the awnings, or to keep the topsails from fretting against the edge of the tops.

CROWN of an anchor—See **ANCHOR**.

CROWNING—the finishing part of some knots made on the end of a rope, to prevent the ends of the strands becoming loose or untwisted.

It is performed by interweaving the ends of the different strands artfully amongst each other. The design of these knots is to keep the ends of the rope fast in some place assigned for it: they are more particularly useful in all kinds of stoppers.

CRUIZE—a voyage or expedition in quest of vessels or fleets of an enemy, which may be expected to sail through any particular tract of the sea at a certain season of the year; it is performed by traversing that particular tract which is called the cruising latitude.

tude, under an easy sail backward and forward.

CRUIZERS—vessels employed on a cruize. They are small men-of-war, made use of to and fro in the channel and elsewhere, to secure our merchant ships and vessels from the enemy's small frigates and privateers. They are generally such as sail well, and are commonly well manned; and, indeed, the safety of the trade in the channel, and up and down the soundings and other places, absolutely require the constant keeping out of such ships at sea. When the ships employed for this purpose have arrived at their destined station, they traverse the sea backward and forward under an easy sail, and within a limited space, conjectured to be nearly in the track of their expected adversaries.

CRUTCH, or CROTCH—a support for the main boom of a sloop, brig, or cutter, &c. and for the driver boom of a ship when their respective sails are furled. See **CROTCHES**.

CUDDY—a sort of cabin or cook-room, generally in the fore part, but sometimes near the stern of particular vessels, such as lighters and barges of burthen.

CUDDY—in East-India ships, denotes the great cabin under the poop.

CUNNING, or CONNING—the art of directing the steersman to guide the ship in her proper course; the officer who performs this duty is usually the pilot or a quarter-master.

CUNT-LINE—the space left by laying two casks end to end; thus, we say to stow bilge and cunt-line; that is, to put the bilge of one cask in the vacancy made

by the narrow ends of two others coming together.

CURRENT—a certain progressive movement of the sea, by which all bodies floating therein are compelled to alter their course or velocity, or both, and submit to the laws imposed upon them by the current.

The setting of the current is that point of the compass towards which the waters run, and the drift of the current is the rate it runs at in an hour.

Currents in the sea are either natural or general, as arising from the diurnal relation of the earth on its axis; or accidental, and particularly caused by the waters being driven against promontories, or into gulphs and straights, where, wanting room to spread, they are driven back, and thus disturb the ordinary flux of the sea.

The following observations are made by Varenus:

“Currents are various, and directed towards different parts of the ocean, of which some are constant and others periodical. The most extraordinary current of the sea, is that by which part of the Atlantic or African ocean moves about by Guinea, from Cape Verd, towards the curvature or bay of Africa, which they call Fernando Poo, viz. from west to east, contrary to the general motion. And such is the force of this current, that when ships approach too near the shore, it carries them violently towards the bay, and deceives the mariners in their reckoning.

“There is a great variety of shifting currents, which do not last, but return at certain periods; and these do, most of them, depend

depend upon, and follow the anniversary winds or monsoons, which by blowing in one place may cause a current in another.

“ At Java, in the Straights of Sunda, when the monsoons blow from the west, viz. in the month of May, the currents set to the eastward, contrary to the general motion.

“ Also between the island of Celebes and Madura, when the western monsoons set in, viz. in December, January, and February, where the winds blow from the north-west, or between the north and west, the currents set to the south-east, or between the south and east.

“ At Ceylon, from the middle of March to October, the currents set to the southward, and in the other parts of the year to the northward: because at this time, the southern monsoons blow, and at the other the northern.

“ Between Cochin-China and Malacca, when the western monsoons blow, viz. from April to August, the currents set eastward against the general motion, but the rest of the year set westward; the monsoon conspiring with the general motion. They run so strongly in those seas, that inexperienced sailors mistake them for waves that beat upon the rocks, known by the names of breakers.

“ So for some months after the 15th of February, the currents set from the Maldives towards India on the east, against the general motion of the sea.

“ On the shore of China and Cambodia, in the months of October, November, and December, the currents set to the north-west, and from January to the south-west, when they run with

such a rapidity of motion about the shoals of Parcel, as to seem swifter than an arrow.

“ At Pulo Condore, upon the coast of Cambodia, though the monsoons are shifting, yet the currents set strongly towards the east, even when they blow to a contrary point.

“ Along the coasts of the bay of Bengal as far as the Cape Romania, at the extreme point of Malacca, the current runs southward in November and December.

“ When the monsoons blow from China to Malacca, the sea runs swiftly from Pulo Cambi to Pulo Condore, on the coast of Cambodia.

“ In the bay of Sans Bras, not far from the Cape of Good Hope, there is a current particularly remarkable, where the sea runs from east to west to the landward; and this more vehemently, as it becomes opposed by the winds, from a contrary direction. The cause is undoubtedly owing to some adjacent shore, which is higher than this.”

These currents constantly follow the winds, and set to the same point with the monsoon, or trade-wind at sea.

Under the equator, where the motion of the earth is the greatest, the currents are so violent, that they carry vessels very speedily from Africa to America; but absolutely prevent their return the same way; so that the ships are forced to run as far as the fortieth degree of latitude, to find a passage into Europe.

The currents in the Straights of Gibraltar almost constantly drive to the eastward, and carry ships into the Mediterranean: they are also usually found to drive the
same

same way in St. George's Channel. The great violence and danger of the sea in the Straights of Magellan, is attributed to two contrary currents setting in, one from the south and the other from the north sea.

Currents, as they relate to navigation, may be defined, certain progressive motions of the water of the sea in several places; by which a ship may happen to be carried forward more swiftly, or retarded in her course, according to the direction or setting of the current in, with, or against the course or way of the ship.

The setting or progressive motion of the current, may be either quite down to the bottom, or to a certain determinate depth.

As the knowledge of the direction and velocity of currents is a very material article in navigation, it is highly necessary to discover both, in order to ascertain the ship's situation and course, with as much accuracy as possible. This, some do by the rippings of the water, and by the driving of the froth along the shore, when in sight of it; but the most successful method which has been hitherto attempted by the mariners, is the following: A common iron pot, which may contain four or five gallons, is suspended by a small rope, fastened to its ears or handles, so as to hang directly upright, as when placed upon the fire. This rope, which may be from 70 to 100 fathoms in length, being prepared for the experiment, is coiled in the boat, which is hoisted out of the ship at a proper opportunity, when there is little or no wind to ruffle the surface of the sea. The pot being then thrown overboard into the water and immediately sinking,

the line is slackened till about 70 or 80 fathoms run out, after which the line is fastened to the boat's stern, by which she is accordingly restrained and rides as at anchor. The velocity of the current is then easily tried by the log and half minute glass, the usual method of discovering the rate of a ship's sailing at sea. (See the article CAEM). The course of the stream is next obtained by means of the compass, provided for this operation.

This shews whether there be any current or none; and if any, which way it sets, and at what rate it drives: observing, however, to add something to the drift, for the boat's drift, for though she appear to stand still, yet, in reality, she is found to move. This addition experience has thus determined; if the line she rides by be 60 fathom, a third part of the drift is to be added, if 80 fathom a fourth, if a hundred a fifth.

If a ship sail along the direction of the current, it is evident the velocity of the current must be added to that of the vessel: if her course be directly against the current, it must be subtracted: if she sail athwart the current her motion, will be compounded with that of the current; and her velocity augmented or retarded according to the angle of her direction, with that of the direction of the current: i. e. she will proceed in the diagonal of the two lines of direction, and will describe or pass through that diagonal in the same time, wherein she would have described either of the sides by the separate forces.

Hence it is plain, 1. If the velocity of the current be less than that of the ship, then the ship will advance

advance so much as is the difference of these velocities. 2. If the velocity of the current be more than that of the ship, then will the ship fall as much astern as is the difference of these velocities. 3. If the velocity of the current be more than that of the ship, then will the ship remain stationary, the one velocity destroying the other.

If the current thwarts the course of a ship, it not only diminishes or increases her velocity, but gives her a new direction compounded of the course she steers, and the setting of the current.

UNDER-CURRENTS—are distinct from the upper or apparent, and in different places set or drive a contrary way. Dr. T. Smith makes it highly probable, that in the Downs, in the Straights of Gibraltar, &c. there is an under-current, whereby as much water is carried out as is brought in by the upper current. This was confirmed by an experiment made in the Baltic Sound, by the seamen on board one of the King's frigates: they went with the pinnace into the midstream, and were carried violently by the current. Soon after that, they sunk a basket with a large cannon bullet, to a certain depth of water, which gave check to the boat's motion; and sinking it still lower and lower, the boat was driven ahead to the windward, against the upper current, the current aloft not being above four or five fathom deep, and the lower the basket was let down, the stronger the under current was found.

Dr. Halley solves the currents setting in at the Straights without overflowing the banks by the

great evaporation, without supposing any under current.

CUSTOM—is the tribute or toll paid by the merchants to the King for goods exported or imported: they are otherwise called duties.

It was enacted Anno 6. Edw. III. That no new custom could be levied, nor old ones increased, but by authority of parliament, which was afterwards confirmed by 16 Car. 1. c. 8.

The duty of tonnage and poundage was granted to Charles II. for his life, and to his two immediate successors; but now by three several statutes, 9 Ann. c. 6. 1 Geo. 1. c. 12. and 3 Geo. 1. c. 7. it is made perpetual, and mortgaged for the debt of the public. The customs imposed by parliament are chiefly contained in two books of rates, to which many subsequent additions have been made. Aliens pay a larger proportion than natural subjects.

In case goods and merchandise are brought to a port, and part of the goods are sold there, but never landed, they must pay the customs. Ships outward bound, and coming from beyond sea, having goods and merchandise on board, are to be entered at the custom-house, and the customs paid or agreed for under penalties or forfeiture of the goods, one moiety to the King, and another to the feizer, &c. 13 and 14. Car. 11. Officers of the customs may search ships. By other statutes foreign goods, taken in at sea by any coasting vessel, shall be forfeited and treble value: and for prevention of clandestine running of goods, if any foreign brandy, &c. is imported in vessels under 40 tons, the importer shall forfeit the vessel and brandy. Run goods concealed

concealed or offered for sale, are liable to forfeiture and treble value, 8 and 11 Geo. 1. When three persons are assembled and armed with fire arms, &c. to be assisting in running goods, they shall be adjudged guilty of felony. And two or more found in company within five miles of the sea coast, with any horses, carts, &c. on which are put above six pounds of tea or five gallons of brandy, or other foreign goods of 30*l.* value, landed without entry, and not having permits, who shall carry any offensive weapons, &c. or assault any officer of the customs, shall be deemed runners of goods and treated as felons, and the goods shall be seized and forfeited. If any person offers tea, brandy, &c. to sale without a permit, the persons to whom it is offered, may seize and carry it to the next warehouse belonging to the customs or excise, and be entitled to the third part of the produce on condemnation. And persons offering any bribe to officers of the customs, to connive at the running of goods, are liable to a forfeiture of 50*l.* Obstructing such officers in entering and searching ships, incurs a forfeiture of 100*l.* and if the officers are wounded or beaten on board any ship, the offenders incur the penalty of transportation, &c. 9 Geo. 2.

CUSTOM-HOUSE—an office established on the frontiers of a state, or in some chief city or port, for the receipt of the customs and duties of importation and exportation, imposed on merchandises by the authority of the sovereign, and regulated by writs or books of rates.

There are several custom-houses in the different ports of Eng-

land: the most considerable is that of London. It is under the direction of commissioners, appointed by patent, who have the charge and management of the customs in the several ports of England. Other officers are a secretary, solicitor, receiver-general, comptroller-general, surveyor-general, &c. all holding their places by patents, with other inferior officers, appointed by warrant from the board of the treasury. These officers shall have no ship of their own, nor use merchandise factorage, &c. under penalty of 40*l.* They are also prohibited to trade in any exciseable liquor on pain of 50*l.* and forfeiture of office; for taking a bribe they shall forfeit 100*l.* and 500*l.* for making collusive seizures.

The new Custom-house of Dublin is reckoned a most convenient as well as elegant building.

CUT A FEATHER—is a sea phrase. It is common, when a ship has too broad a bow, to say she will not cut a feather, meaning that she will not pass through the water so swift as to make it foam or froth.

CUT THE SAIL—is to unfurl it and let it fall down.

CUTTER—a small vessel commonly navigated in the channel of England, furnished with one mast and a stait running bowsprit, or which can be run in on the deck occasionally; except which, and the largeness of the sails, they are rigged much like sloops.

Many of these vessels are used on an illicit trade, and others employed by the government to seize them: the latter of which are either under the direction of the Admiralty or Custom-house.

CUTTER

CUTTER—is also a boat used by ships of war, usually employed in carrying stores, provisions, &c. to and from the ship. See **BOAT**.

CUTTING-DOWN LINE—a curve line used by shipwrights in the delineation of ships; it determines the thickness of all the floor timbers, and likewise the height of the dead wood afore and abaft. It is limited in the middle of the ship by the thickness of the floor timber, and abaft by the breadth of the keelson, and must be carried up so high upon the stern as to leave sufficient substance for the breeches of the rising timbers.

CUT-WATER—the foremost part of the ship's prow, formed of an assemblage of several pieces of timber to render it broad at the upper part, where it projects forward from the stem to open the column of water as the ship sails along, and also to make her keep to windward better when she is close-hauled; it is otherwise called the knee of the head.

DAM—is a piece of water confined within banks.

DAVIT—a long beam of timber used as a crane, whereby to hoist the flukes of the anchor to the top of the bow, without injuring the planks of the ship's side as it ascends; an operation which, by seamen, is called fisting the anchor; the lower end of the davit rests on the fore chains, the upper end being properly secured by a tackle from the mast-head; upon the other end is hung a large block, through which a strong rope is reeved called the fish-pondant, to whose outer end is fitted a large hook, and to its in-

ner end a tackle; the former is called the fish-hook, the latter the fish-tackle.

The anchor being first catted, the fish-hook is fastened on its flukes, and is, by means of the fish-pondant and tackle, drawn up sufficiently high upon the bow to be made fast by the shank-painter. Thus the davit, according to the sea phrase, is employed to fish the anchor.

There is also a davit of a smaller kind, occasionally fixed in the long-boat, and, with the assistance of a small windlass, used to weigh the anchor by the buoy-rope, &c.

DAY'S WORK—the reckoning or account of a ship's course and distance run during 24 hours, or from noon to noon, according to the rules of **TRIGONOMETRY**. See **DEAD RECKONING**.

DEAD EYE, OR DEAD MAN'S EYE—a sort of round flattish wooden block encircled with a rope, or with an iron band, and pierced with three holes through the flat part, in order to receive a rope called the laniard, which, corresponding with three holes in another dead eye, creates a purchase employed for various uses, but chiefly to extend the throuds and stays, otherwise called the standing rigging.

In order to form this purchase, one of the dead eyes is fastened in the upper link of each chain on the ship's side, which is made round to receive and encompass the hollowed outer edge of the dead eye. After this the laniard is passed ultimately through the holes in the upper and lower dead eyes, till it becomes six-fold, and is then drawn tight by the application of mechanical

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powers.

powers. In merchant ships they are generally fitted with iron plates, in the room of chains.

The dead eyes used for the stays have only one hole, which, however, is large enough to receive 10 or 12 turns of the lanyard; these are generally termed **HEARTS**.

The crowfeet **DEAD EYES**—are long cylindrical blocks, with a number of small holes in them, to receive the legs or lines of which the crowfoot is composed.

DEAD LIGHTS—strong wooden ports made exactly to fit the cabin windows, in which they are fixed on the approach of a storm, the glass frames being taken out, which would otherwise be shattered by the violence of the waves, and let great quantities of the water pour into the ship.

DEAD RECKONING—the judgment or estimation which is made of the place where a ship is situated, without any observation of the heavenly bodies; it is discovered by keeping an account of the distance she has run by the log, and of her course steered by the compass, and by rectifying these data by the usual allowances for drift, lee-away, &c. according to the ship's known trim; this reckoning is, however, always to be corrected as often as any good observation of the sun can be obtained.

DEAD RISING, or **RISING LINE** of the floor—those parts of a ship's floor or bottom throughout her whole length, where the floor timber is terminated on the lower futtock.

DEAD ROPES—are those which do not run in any block.

DEAD WATER—the eddy of water which appears like little

whirlpools closing in with the ship's stern as she sails through it.

DEAD WOOD—certain blocks of timber laid upon the keel, particularly at the extremities afore and abaft, where these pieces are placed upon each other to a considerable height, because the ship is there so narrow as not to admit of the two half timbers, which are therefore scored into this dead wood, when the angle of the floor timbers gradually diminishes as approaching the stem and stern post.

In the fore part of the ship, the deadwood generally extends from the stemson, upon which it is scarfed, to the loof-frame; and in the after end from the sternpost, where it is confined by the knee to the after balance-frame. It is connected to the keel by strong spike nails.

The dead wood afore and abaft is equal in depth to two thirds of the depth of the keel, and as broad as can be procured, so as not to exceed the breadth of the keel.

DEAD WORKS—all that part of the ship which is above water when she is laden. The same as **UPPER WORK**.

To **DEADEN** a ship's way—to lessen her velocity through the water.

DECKER—relates to the rate of a ship of force, as a two-decker, a three-decker, i. e. carrying two entire tiers or ranges of cannon, or three such tiers.

DECKS—the planked floors of a ship which connect the sides together, and serve as different platforms to support the artillery and lodge the men, as also to preserve the cargo from the sea and rain.

As all ships are broader at the lower deck than on the next above it, and as the cannon thereof are always heaviest, it is necessary that the frame of it should be much stronger than that of the others, and for the same reason; the second or middle-deck ought to be stronger than the upper-deck or fore-castle.

Ships of the first and second rate are furnished with three whole decks, reaching from the stem to the stern, besides a fore-castle and a quarter-deck, the former extending aft from the stem to the belfry, and the latter forward from the stern to the mainmast, a vacancy being left in the middle, which opens to the upper-deck, and forms what is called the waist; there is yet another deck above the hinder part of the quarter-deck called the poop, which also serves as a roof for the captain's cabin or couch; and another deck below the lower gun-deck called the orlop, whereon the cables are coiled and the sails stowed, &c.

Other ships of the line with 50 gun ships, and some of 40 guns have two gun-decks and a quarter-deck, a fore-castle, a poop, and orlop. Frigates and sloops have one gun-deck, a half-deck, and fore-castle, with a spar-deck below to lodge the crew, but no poop; brigs, cutters, and such small vessels have no half-deck or fore-castle, and are then said to be flush fore and aft: the decks are formed of and sustained by the beams, the clamps, or water-ways, the carlings, the ledges, the knees, and two rows of small pillars called stanchions, &c. See those articles.

The number of beams by which the decks of ships are supported,

is often very different, according to the practice of different countries; the strength of the timber of which the beams are framed, and the services for which the ships are calculated.

The deck which contains the train of a fire-ship is furnished with an equipage peculiar to itself, a description of which will be found under that article (**FIRE-SHIP**).

Flush DECK or **DECK** flush fore and aft, implies a continued floor laid from stem to stern, upon one line, without any stops or intervals.

Half-DECK—the under part of the quarter-deck of a ship of war contained between the foremost bulk-head of the cabin or ward-room, and the break of the quarter-deck.

In the colliers of Northumberland, the steerage itself, is called the half-deck, and is usually the habitation of the ship's crew.

Main-DECK—that part of the upper-deck which extends from the break of the fore-castle to the break of the quarter-deck; also called the waist.

DECLINATION — is the sun's distance from the equator, either north or south.

DECOY—a stratagem employed by a small ship of war to betray a vessel of inferior force into an incautious pursuit till she has drawn her within the range of her cannon, or what is called within gun-shot.

It is usually performed by painting the stern and sides, in such a manner as to disguise the ship, and represent her either much smaller and of inferior force, or as a friend to the hostile vessel, which she endeavours to ensnare, by assuming the emblems

and ornaments of the nation to which the stranger is supposed to belong. When she has thus provoked the adversary to chase, in hopes of acquiring a prize (in the former case) she continues the decoy by spreading a great sail, as endeavouring to escape, at the same time that her course is considerably retarded by an artful alteration of her trim, till the enemy approaches.

DECOYING—is sometimes used by a single ship to induce an enemy's squadron to follow her into the view of her own fleet.

It is also performed to elude the chase of a ship of superior force in a dark night, by throwing out a lighted cask of pitch into the sea, which will burn for a considerable time, and misguide the enemy. Immediately after the cask is thrown out, the ship changes her course, and may easily escape, if at any tolerable distance from the foe.

DEEP—on the coast of Germany to the northward of Friesland, is of the same import as Gulf on the coasts of France, Spain, Italy, &c.

DEEP-SEA-LEAD—See the article **LEAD**.

DEEP-WAISTED—the distinguishing fabric of a ship's decks when the quarter-deck and fore-castle are elevated from four to six feet above the level of the upper or main-deck, so as to leave a vacant space, called the waist, on the middle of the upper-deck.

DEMURRAGE—an allowance given to the commander of a trading ship by the merchants, for having detained him longer in port than the time previously appointed for his departure.

DEPARTURE—the distance of any two places lying on the

same parallel, counted in miles of the equator, or the distance of one place from the meridian of another, counted on the parallel passing over that place.

DEPTH of a sail—the extent of the square sails from the head-rope to the foot-rope, or the length of the after-leech of a stay-sail or boom-sail; in other words, it is the extent of the longest cloth of canvas in any sail.

DETACHMENT—of a fleet or squadron, a certain number of ships chosen by an admiral or commodore from the rest of the fleet to execute some particular service.

DIFFERENCE of latitude—the distance between any two places lying on the same meridian, or the difference between the parallels of latitude of any two places, expressed in miles of the equator.

DIFFERENCE of longitude—is the distance of any place from another eastward or westward, counted in degrees of the equator.

DINNAGE. See the article **DUNNAGE**.

DIP of the horizon—is an allowance made in all astronomical observations of altitude for the height of the eye above the level of the sea.

DIPPING NEEDLE, or **INCLINATORY NEEDLE**—is a magnetic needle, so hung, as that, instead of playing horizontally and pointing out north and south, one end dips or inclines to the horizon, and the other points to a certain degree of elevation above it. Or, according to Mr. Whiston, a dipping needle may be defined to be a long frate piece of steel, every way equally poised on its centre, and afterwards touched

touched with a loadstone; but so continued, as not to play on the point of a pin, as does the common horizontal needle, but to swing in a vertical plane, about an axis parallel to the horizon; and this, in order to discover the exact tendency of the power of magnetism.

The inventor of the dipping needle, Mr. Whiston observes, was without all question an Englishman, Robert Norman by name, a compass maker at Wapping, about the year 1576; this is not only testified by his own account, in his *New Attractive*, but was allowed by Dr. Gilbert and other writers of that time. The occasion of the discovery, he himself relates; viz. that it being his custom to finish and hang the needles of his compasses before he touched them, he always found that, immediately after the touch, the north point would bend, or decline downward, under the horizon, insomuch that, to balance the needle again, he was always forced to put a piece of wax on the south end, as a counterpoise.

The constancy of this effect led him at length to observe the precise quantity of the dip, or to measure the greatest angle which the needle would make with the horizon.

This, in the above mentioned year (1576) he found at London to be $71^{\circ} 50'$. Mr. Whiston being furnished with the further observations of Colonel Windham, Dr. Halley, Mr. Pound, Mr. Cunningham, Pere Noel, Pere Feuille, and his own, has improved very much, on the doctrine and use of the dipping needle; brought it to more certain rules, and endeavoured in

good earnest to find the longitude thereby. In order to this, he observes:

1st, That the true tendency of the north or south end of every magnetic needle, is not to that point of the horizon, to which the horizontal needle points, but towards another, directly under it, in the same vertical, and in different degrees under it, in different ages, and at different places.

2dly, That the power by which an horizontal needle is governed, and all our navigation ordinarily directed, is proved to be but one quarter of the power by which the dipping needle is moved; which should render the latter for the more effectual and accurate instrument.

3dly, That a dipping needle, a foot long, will plainly shew an alteration of the angle of inclination in these parts of the world in half a quarter of degree, or $7\frac{1}{2}$ geographical miles; i. e. supposing that distance taken along or near a meridian; and a needle of four feet, in two or three miles.

4thly, A dipping needle, four feet long, in these parts of the world, will shew an equal alteration along a parallel, as one of a foot long will show along a meridian; i. e. this will, with equal exactness, shew the longitude, as that will the latitude.

This depends on the position of the lines of equal dip in these parts of the world, which are found to lie about 14 or 15 degrees from the parallel.

Hence, he argues, that as we can have needles of five, six, seven, eight, or more feet long, which will move with strength sufficient for exact observation; and since microscopes may be applied

plied to the viewing the smallest divisions of degrees on the limb of the instrument, it is evident, the longitude at land may be found thereby to be less than four miles.

In order to find the longitude or latitude by the dipping needle.—If the lines of equal dip, below the horizon, be drawn on maps, or sea charts, from good observations it will be easy, from the longitude known, to find the latitude; and from the latitude known, to find the longitude.

Suppose, for example, you were travelling or sailing along the meridian of London, and found the angle of dip, with a needle of one foot, to be 75° , the chart will shew, that this meridian and the line of deep meet in the latitude of $53^{\circ} 11'$; which therefore is the latitude sought.

Or suppose you were travelling or sailing along the parallel of London, i. e. in $51^{\circ} 32'$ north latitude, and you find the angle of dip to be 74° . This parallel, and the line of this dip will meet in the map in $1^{\circ} 46'$ of east longitude from London; which is therefore the longitude sought.

Mr. Nairne, an ingenious instrument maker in London, made a dipping needle in 1772, for the board of longitude, which was used in the voyage towards the north pole. The needle was 12 inches long, and its axis, the ends of which were made of gold alloyed with copper, rested on friction wheels of four inches diameter, each end on two friction wheels, which wheels were balanced with great care. The ends of the axis of the friction wheels, were likewise of gold alloyed with copper, and moved in small holes made in bell-metal; and

opposite to the ends of the axis of the needle and the friction wheels, were flat agates, finely polished. The magnetic needle vibrated within a circle of bell-metal, divided into degrees and half degrees; and a line, passing through the middle of the needle to the ends pointed to the divisions. The needle of this instrument was balanced before it was made magnetical; but by means of a cross, the ends of which (contrived by the Rev. Mr. Mitchell) were fixed on the axis of the needle, on the arms of which were cut very fine screws to receive small buttons, that might be screwed nearer or farther from the axis, the needle could be adjusted both ways to a great nicety, after being made magnetical by reversing the poles, and changing the sides of the needle. When this needle is constructed for sea, it is suspended by an universal joint on a triangular stand and adjusted vertically by a plumb-line and button, above the divided circle and the dove-tail work; and the divisions on the circle are adjusted so as to be perpendicular to the horizon, by the same plumb-line, and an adjoining screw; and when it is adjusted, a pointer annexed to a screw is fixed, which serves to move the divided circle. Whenever the instrument is used to find the dip, it must be so placed that the needle may vibrate exactly in the magnetic meridian.

DISABLED—the state of a ship when, by the loss of her masts, sails, yards, or rigging, by springing a leak, receiving some fracture in the hull, or other disaster she is rendered incapable of prosecuting her voyage without great difficulty and danger.

DISCHARGED

DISCHARGED—when applied to a ship, signifies when she is unladen, or her stores, ammunition, &c. taken out. When expressed of the officers or crew, it implies when they are disbanded from immediate service. When spoken of cannon it means when it is fired off.

DISCIPLINARIAN—an officer who maintains strict and rigorous discipline.

DISMANTLED—the state of a ship unrigged, and all her stores, guns, &c. taken out in readiness for being laid up in ordinary, or for any other purpose.

DISMASTED—the state of a ship deprived of her masts, whether by design or accident.

DISMOUNTED—the state of a cannon taken off a carriage, or when, by the enemy's shot, the carriage is so broken as that the gun is rendered unmanageable.

DISPARTING a gun—setting a mark on the muzzle-ring of a cannon or thereabouts, so that a sight-line taken from the top of the base-ring against the touch-hole, by the mark-set on or near the muzzle, may be parallel to the axis of the concave cylinder. See **GUN**.

DIVING—the act or art of descending under water to considerable depths and abiding there a competent time for several purposes—viz. to recover wrecks of ships—fish for pearls, corals, sponges, &c.

There have been various engines contrived to render the business of diving safe and easy; the great point is to furnish the diver with fresh air, without which he must either make but a short stay or perish. Those who dive for sponges in the Mediterranean, carry down sponges dipped in oil in

their mouths. But considering the small quantity of air that can be contained in the pores of a sponge, and how much that little will be contracted by the pressure of the incumbent water, such a supply cannot subsist a diver long, since a gallon of air is not fit for respiration above a minutes. Dr. Halley assures us, a naked diver cannot subsist above two minutes under water with or without a sponge; besides, if the depth be considerable, the pressure of the water makes the eyes blood-shot and frequently occasions a spitting of blood.

An experiment was lately tried at Rouen upon a new invented diving machine called *batteau-poisson* or *Fishboat*. This boat sunk of itself seven or eight minutes and then rose of itself. The longest time it remained under water was eight minutes. The descent into the inside of this machine was by an opening made in the form of a tunnel, which was about a demi-metre above the surface of the water. When those who conducted the experiment wished to descend altogether in the river and disappear, they let down this opening, sunk entirely under the water and lost all communication with the external air. The inventors of this ingenious machine were Americans, the principal of whom was called *Fulton*. Three of them went into the boat and remained during the experiment. The prefect and a vast concourse of spectators were present.

DIVING BLADDER—is a term used by *Borelli*, for a machine which he contrived for diving under the water to great depths, with great facility, and which is preferred to the common diving bell. The vesica, or bladder, as it

it is usually called, is to be of brass or copper, and about two feet in diameter. This is to contain the diver's head, and is to be fixed to a goat-skin habit, exactly fitted to the shape of the body of the person. Within this vesica there are pipes, by means of which a circulation of air is contrived, and the person carries an air pump by his side, by means of which he may make himself heavier or lighter, as the fishes do, by constructing or dilating their air bladder.

DIVISION—a select number of ships in a fleet or squadron of men of war, distinguished by a particular flag, pendant, or vane, and sometimes commanded by a general officer. A squadron is commonly ranged into three divisions, the commanding officer of which is always stationed in the centre. In a large fleet the admiral divides it into three squadrons, each of which is commanded by an admiral, and is again divided into three divisions; each squadron has its proper colours according to the rank of the admiral who commands it; and each division its proper mast. The private ships carry pendants of the same colour with their respective squadrons at the masts of their particular divisions, so that the ships in the last division of the blue squadron carry a blue pendant at their mizen top-gallant-mast-head. These distinctions of divisions are not, however, constantly practised.

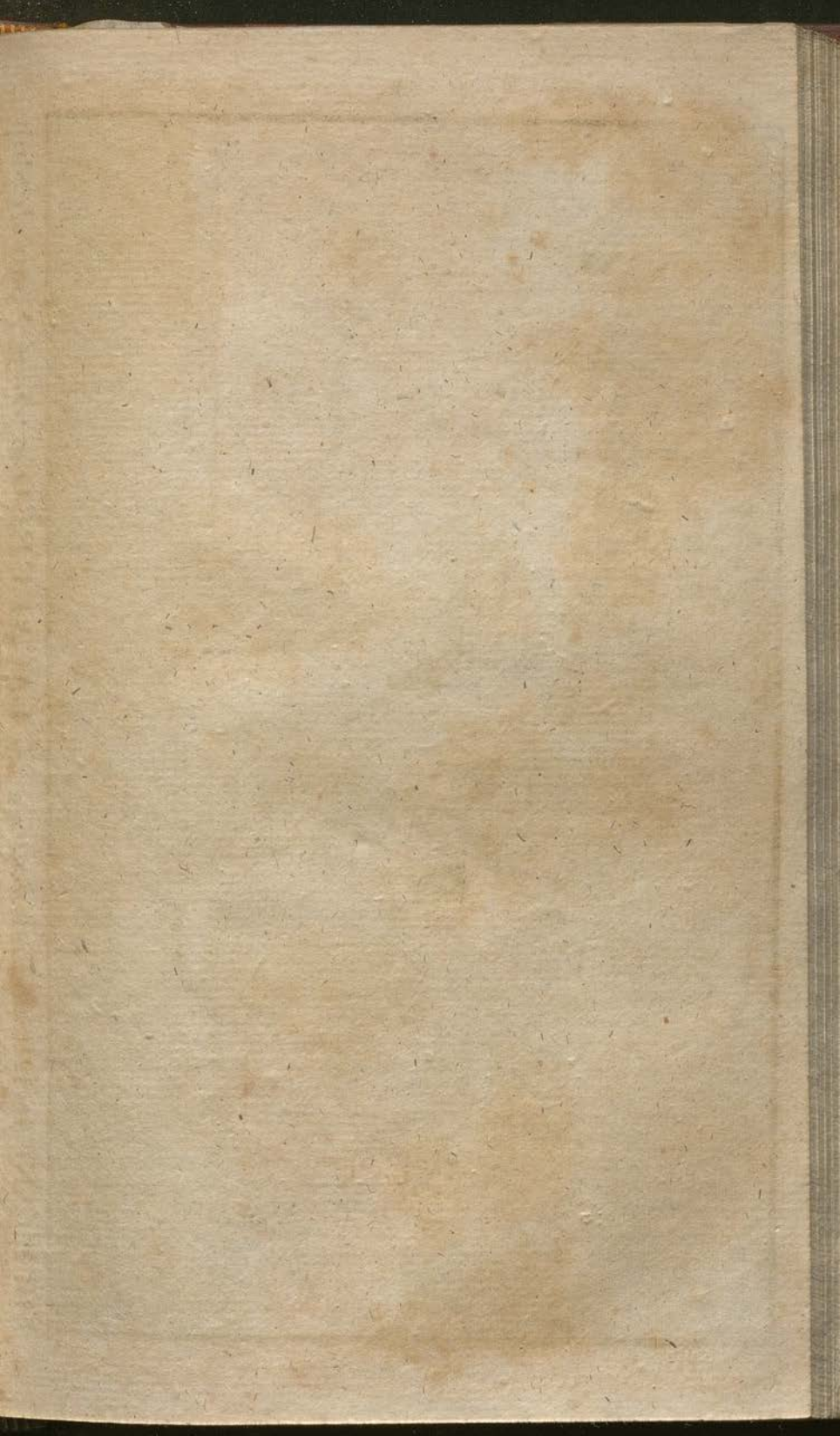
The general officers or commanders of divisions, place themselves in the centre of the divisions: the three commanding admirals excepted, who, in a sailing position, lead their respective squadrons,

DOCK—a broad and deep trench formed on the side of a harbour, or the banks of a river, and commodiously fitted, either to build ships to receive them to be repaired; these docks have generally strong flood-gates to prevent the flux of the tide from entering the dock.

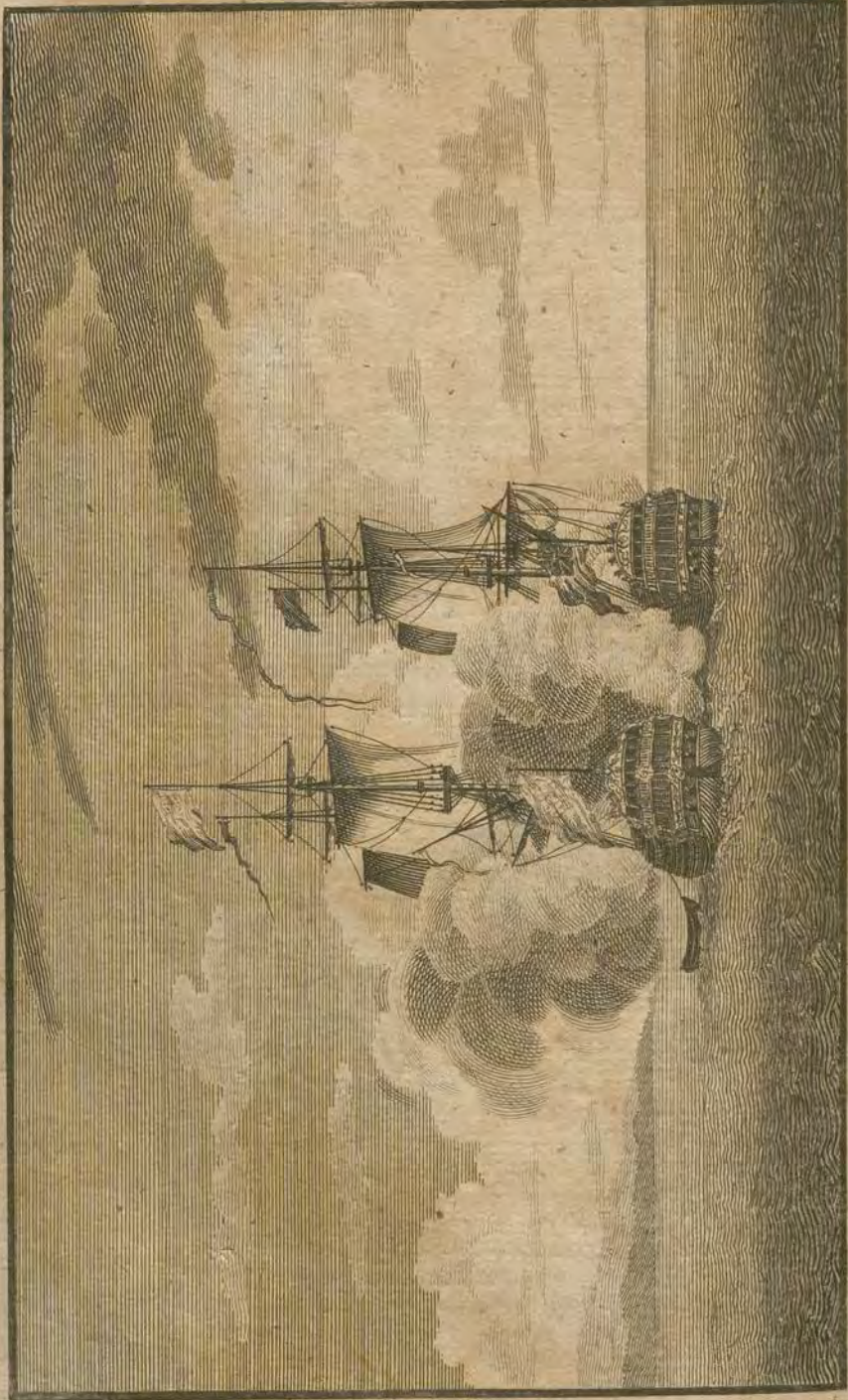
There are likewise wet docks, without flood-gates where a ship can be cleaned during the recess of the tide, or between the times when the tide leaves her dry aground, and the period when it reaches her again.

DOCKING a ship—the act of drawing her into dock in order to give her a proper repair, cleanse the bottom and cover it anew. See the Article **BREAMING**.

DOCK-YARDS—arsenals containing all sorts of naval stores and timber for ship-building. In England the Royal dock-yards are at Chatham, Portsmouth, Plymouth, Deptford, Woolwich, and Sheerness, where his Majesty's ships and vessels of war are generally moored during peace, and such as want repairing are taken into the docks, examined and refitted for service. These yards are generally supplied from the northern crowns, with hemp; pitch, tar, rosin, canvas, oak plank, and several other species of stores. With regard to the masts, particularly those of the largest size, they are usually imported from New England. The three first of these yards are governed by a commissioner resident at the port, who superintends all the musters of the officers, artificers, and labourers, employed in the dock-yard and ordinary; he also controls their payment therein, examines their accounts, contracts and draws bills on the navy-office



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SIR FRANCIS DRAKE engaging the CACAFUEGO a Rich Spanish Ship.

to supply the deficiency of stores; and, finally, regulates whatever belongs to the dock-yard, maintaining due order in the respective offices. These yards are generally supplied from the northern crowns with hemp, pitch, tar, rosin, canvas, oak plank, and several other species of stores. With regard to the masts, particularly those of the largest size, they are usually imported from New England.

DOG, a sort of iron hook or bar with a sharp fang at one end, so formed as to be easily driven into a piece of timber; it is used to drag it along by means of a rope fastened to it, upon which any number of men can pull, and so draw the plank towards the place where it is to be stowed. It is also used for the same purpose in unlading the ship.

DOGGER — a Dutch vessel navigated in the German Ocean; it is equipped with two masts, a main and a mizen-mast, and somewhat resembles a ketch. It is principally used for fishing on the Dogger Bank.

DOGGER-MEN — fishermen belonging to doggers.

DOG-VANE — a small vane composed of thread, cork, and feathers, fastened on the end of a half-pike, and placed on the weather gun-wale to steer the ship by, when sailing on a wind.

DOG-WATCH — See the article **WATCH**.

DOLPHIN of the mast — a kind of wreath formed of plaited cordage, to be fastened occasionally round the mast as a support to the puddening; the use of which is to sustain the weight of the fore and main-yards by the jears, in case the rigging or chains, by which those yards are suspended, should be

shot away in the time of battle. See the article **PUDDENING**.

DOUBLE-BANKED — the situation of the oars of a boat, when two opposite ones are managed by rowers seated on the same bench or thwart; the oars are also said to be double-banked when there are two men labouring upon each oar.

DOUBLING A CAPE — is to sail round or pass beyond it, so that the point of land separates the ship from her former situation, or lies between her and any distant observer.

DOUBLING-NAILS — the nails commonly used to fasten the lining of the gun-ports, &c.

DOUVELING UPON — in a naval engagement, the act of inclosing any part of a hostile fleet between two fires, or of cannonading it on both sides. It is usually performed by the van or rear of that fleet which is superior in number, taking the advantage of the wind, or of its situation and circumstances, and tacking or running round the van or rear of the enemy, who will thereby be exposed to great danger, and can scarcely avoid being thrown into a general confusion.

DOUBLE-HEADED SHOT — See **SHOT**.

To DOUSE — to lower or slacken suddenly; expressed of a sail in a squall of wind, an extended hawser, &c.

DOWN-HAUL — a rope passing up along a stay, through the cringles of the stay-sails or jib, and made fast to the upper corner of the sail to pull it down when shortening sail.

DOWN-HAUL TACKLES — a complication of tackles employed to pull down the main or fore yard

yard in a tempest, in order to reef the sail, because the violence of the wind prevents the weight of the yard from having its natural effect of descending.

DOWN ALL CHESTS — the order to get all the officers' and seamen's chests down below from off the gun-decks, when clearing the ship for an engagement.

DOWN ALL HAMMOCKS — the order for the sailors to carry their hammocks down, and hang them up in their respective births in readiness to go to bed.

DOWN FORE-SAIL — the command to set the fore-sail.

DOWN JIB and STAY-SAILS — the order to take in those sails. It is also applied in this sense to the fudding-sails.

DOWNS — a bank or elevation of sand, which the sea gathers and forms along its shores, and which serves it as a barrier.

DOWNS — is particularly used for a famous road for ships along the eastern coast of Kent, from Dover to the North Foreland. This road has excellent anchorage, and is well defended by the castles of Sandwich, Deal, and Dover. The English fleets usually meet here.

DOWSE — See **DOUSE**.

DRAPLER — an additional part of a sail, sometimes laced to the bottom of a bonnet on a square sail, in floops and schooners.

DRAG — a machine consisting of a sharp square frame of iron incircled with a net, and commonly used to rake the mud off from the platform or bottom of the docks, or to clean rivers.

DRAGGING the anchor — the act of trailing it along the bottom, after it is loosened from the ground

by the effort of the wind or current.

DRAUGHT — the depth of a body of water necessary to float a ship; hence a ship is said to draw so many feet of water, when she is borne up by a column of water of that particular depth; for instance, if it requires a body of water whose depth is equal to 12 feet, to float or buoy up a ship on its surface, she is said to draw 12 feet water: and that this draught may be more readily known, the feet are marked on the stem and stern-post from the keel upwards.

DRAWING — the state of a sail when it is inflated by the wind, so as to advance the vessel in her course.

TO DRAW. See **DRAUGHT**.

TO DRAW upon a ship — is to gain upon a vessel, when in pursuit of her.

DREDGE — a kind of drag used with a long rope to catch oysters in deep water.

TO DRESS a ship — to ornament her with a variety of colours, as ensigns, flags, pendants, &c. of various nations, displayed from different parts of her masts, rigging, &c. on a day of festivity.

DRIFT — the angle which the line of a ship's motion makes with the nearest meridian, when she drives with her side to the winds and waves, and is not governed by the power of the helm. It also implies the distance which the ship drives on that line. A ship's way is only called drift in a storm, and then when it blows so vehemently as to prevent her from carrying any sail, or at least restrain her to such a portion of sail as may be necessary to keep her sufficiently inclined to one side, that she may not be dismasted by her violent labouring,

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bouring, produced by the turbulence of the sea.

DRIFT of a current—is its angle and velocity. See the article **CURRENT**.

To DRIVE—to be carried at random along the surface of the water, as impelled by a storm or impetuous current. It is generally expressed of a ship, when accidentally broke loose from her anchors or moorings.

DRIVER—a large sail occasionally set upon the mizen-yard or gaff, the foot being extended by a boom considerably over the stern, in the manner of a cutter's main-sail. It is sometimes fitted to hoist with a half-yard to the peak, like a lower fludding-sail, and the fore-leech is laced down the mizen-mast.

DRIVER BOOM—the boom on which the preceding article is extended.

DROP — a name sometimes given to the depth of the square sails; as, "Her main top-sail drops seventeen yards."

To DROP astern—to cause one vessel to slacken her velocity, to as to suffer another to pass beyond her.

To DROP anchor—is to fasten the ship by letting go an anchor into the ground.

DUCK—the finest canvas for sails is sometimes so called.

DUCKING at the Yard-Arm—a kind of marine punishment unknown, except by name, in the British Navy. It used to be inflicted by the French on those who were convicted of desertion, blasphemy, or exciting sedition, and was thus performed; the criminal was placed astride of a short thick batten, fastened to the end of a rope which passes through a block hanging at one of the yard

arms. Thus fixed, he was hoisted suddenly up to the yard, and the rope being slackened at once, he was plunged into the sea. This chastisement was repeated several times, conformable to the purport of the sentence pronounced against the culprit, who had at that time several cannon shot fastened to his feet during the punishment, which was rendered public by firing of a gun, to advertise the other ships of the fleet thereof, that their crews might become spectators. If the offence was very great, he was drawn underneath the keel of the ship, which was called keel-hauling. See that article.

DRY DUCKING—was the suspending a person by a rope a few yards above the surface of the water.

DUCKING—is a penalty which veteran sailors inflict on those who for the first time pass the tropics, the equator, or Straights of Gibraltar, and is usually performed in a match tub or half butt, with the assistance of a few buckets of water: the usual fine will, however, always prevent the penalty being inflicted.

DUCK-UP—is a term used by the steersman, when the main-sail, fore-sail, or sprit-sail, hinders his seeing to steer by a land-mark, upon which he calls out, "Duck-up the clue-lines of those sails;" that is, haul the sails out of the way. Also, when a shot is made by a chase-piece, if the clue of the sprit-sail hinders the sight, they call out, "Duck-up, &c."

DUNNAGE — a quantity of faggots, boughs of trees, or other loose wood, laid in the bottom of a ship, either to raise the heavy goods which might make her too stiff, or to keep the cargo sufficiently above the bottom, that it may sustain

sustain no damage from the water, if the ship should prove leaky.

DUTIES—See CUSTOMS.

E ARINGS—are certain small ropes employed to fasten the upper corners of a sail to its respective yard, for which purpose one end of the earing is spliced to the cringle fixed in that part of the sail, and the other end is passed five or six times round the yard-arm and through the cringle; the two first turns which are intended to stretch the head of the sail tight along the yard, are passed beyond the lift and rigging on the yard-arm, and are called outer turns, while the rest which draw it close up to the yard, and are passed within the lift, &c. are called inner turns. N. B. Every reef on a yard has its respective earings which are passed in the same manner.

EASE the ship—the command given to the steersman to put the helm close to the lee side; or, in the sea-phrase, hard-a-lee, when the ship is expected to pitch or plunge her fore part deep in the water, while close-hauled. The reason usually given for this practice is that the sudden movement of the helm prevents the ship's head from falling with so much weight and rapidity into the hollow of the sea, as it would do otherwise; which is presuming that the slow and uncertain effect of the helm is sufficient to retard the certain and violent action of gravity: a position that necessarily infers a very singular theory of mechanics. We shall not endeavour to advance any argument in favour of this practice, only to remark that it is most religiously observed both in merchants' ships and his Majesty's Navy.

To **EASE** off, or **EASE** away—to slacken any rope gradually.

EBB—the reflux of the tide, or the return of it back from the highest of the flood, usually termed full sea, or high water.

EDDY—the water that by some interruption in its course, runs contrary to the direction of the tide or current, and appears like the motion of a whirlpool.

To **EDGE** away—to decline gradually from the shore, or from the line of the course which the ship formerly steered; it is particularly applied when a ship changes her course by sailing larger or more aloft the wind than she had done before.

ELBOW in the hawse—is when a ship being moored in a tideway; swings twice the wrong way, thereby causing the cables to take half a round turn on each other. See the article **HAWSE**.

St. **ELMO**'s fire—See the article **CORPOSANT**.

EMBARGO—an arrest laid on ships or merchandize by public authority, or a prohibition of state, sometimes general, to prevent all ships departing, and sometimes partial or particular, as upon foreign ships only, or to prevent their coming in.

EMBAYED—the situation of a ship when she is inclosed between two capes or promontories; it is particularly applied when the wind, by blowing strong into any bay or gulph, makes it extremely difficult and perhaps impracticable for the vessel thus inclosed to draw off from the shore, so as to weather the capes and gain the offing.

To let a rope run **END FOR END**—is to let it pass entirely out of the block through which it was reeved.

To

To shift a rope **END FOR END**—is to change the ends to contrary uses; as in a tackle the fall is made the standing part, and the standing part becomes the fall.

END-ON — spoken of a ship when only her bows and head sails are to be seen.

ENGAGEMENT—in a naval sense, implies a battle at sea, or an action of hostility between single ships, squadrons, or fleets of men of war. The reader who wishes to be thoroughly acquainted with this subject must consult all the articles which have any tendency thereto, viz. **BATTLE, CANNON, DIVISION, EXERCISE, FLEET, &c.**

The engagements of the ancients were usually carried on in two different manners. Advanced by the force of their oars, the galleys ran violently aboard of each other, and by the mutual encounter of their beaks and prows, and sometimes of their stems, endeavoured to dash to pieces or sink their enemies. For this purpose the prow was commonly armed with a brazen point or trident, nearly as low as the surface of the water. Some of the galleys were furnished with large turrets and other accessions of building, either for attack or defence. The soldiers also annoyed their enemies with darts and slings, and on their nearer approach with swords and javelins; and in order that their missile weapons might be directed with greater force and certainty, the ships were equipped with several platforms or elevations above the level of the deck. The sides of the ships were fortified with a thick fence of hides which served to repel the darts of their adversaries and to cover their own sol-

diers, who thereby annoyed the enemy with greater security.

As to bore and sink the enemy's ships with the rostra was the chief manner of sea-engagements among the ancients; high and bulky ships had accordingly a great advantage over their adversaries by the force of the stroke of a large ship. The height was likewise no small convenience in boarding and throwing of missile weapons, so that it was much more true among them than among us that a little ship durst not lay her side to a great one; and though great ships were commonly bad sea boats, they had a superior force in a sea engagement, the shock of them being sometimes so violent that it would throw the crew on the upper deck of lesser ships overboard. This occasioned the ancients gradually to increase the bulk of their ships, till they came at last to an enormous size.

Several of the machines which were employed by the ancients in their naval engagements are now unknown: the following are a few which we find recorded by the ancient writers:

The **Dolphin**, which was a large massy piece of lead or iron cast in the form of a dolphin, and being suspended by blocks at the mast heads or yard-arms, ready for a proper occasion, was let down violently from thence into the adverse ships, and either penetrated through their bottom and opened a passage for the entering water, or by its weight immediately sunk the vessel.

The **Drepanan** was an engine of iron, crooked like a sickle, and fixed in the top of a long pole; the use of which was to cut asunder the slings of the sail yards, and thereby letting the sails fall down,

to disable the vessel from escaping, and incommode her greatly during the action. Similar to this was another instrument armed at the head with a broad two-edged blade of iron, wherewith they usually cut away the ropes that fastened the rudder in the vessel.

They had also a sort of spears or maces of an extraordinary length, sometimes exceeding 20 cubits—also certain machines for throwing large stones into the enemy's ships.

Vegetius mentions another engine, which was suspended to the main mast, and resembled a battering ram, for it consisted of a long beam and an head of iron, and was with great violence pushed against the sides of the enemy's galleys. They had also a grappling iron, which was usually thrown into the adverse ship by means of an engine; this instrument facilitated the entrance of the soldiers appointed to board, which was done by means of wooden bridges that were generally kept ready for this purpose in the fore part of the vessel.

The arms used by the ancients rendered the disposition of their fleets very different, according to the time, place, and circumstances. They generally considered it an advantage to be to windward, and to have the sun shining directly on the front of their enemy. The order of battle chiefly depended on their power of managing the ships, or of drawing them readily into form; and on the schemes which their officers had concerted. The fleet being composed of rowing vessels, they lowered their sails previous to the action: they presented their prows to the enemy, and advanced against each other by the force of their oars.

Before they joined battle, the admirals went from ship to ship, and exhorted their soldiers to behave gallantly. All things being in readiness, the signal was displayed by hanging out of the admiral's galley a gilded shield or a red garment or banner. During the elevation of this the action continued, and by its depression or inclination towards the right or left the rest of the ships were directed how to attack or retreat from their enemies. To this was added the sound of trumpets, which began in the admiral's galley, and continued round the whole navy. The fight was also begun by the admiral's galley, by grappling, boarding, and endeavouring to overset, sink, or destroy the adversary. Sometimes, for want of grappling irons, they fixed their oars in such a manner as to hinder the enemy from retreating. If they could not manage their oars as dexterously as their antagonist, or fall alongside so as to board him, they penetrated his vessel with the brazen prow. The vessels approached each other as well as their circumstances would permit, and the soldiers were obliged to fight hand to hand till the battle was decided; nor, indeed, could they fight otherwise with any certainty, since the shortest distance rendered their slings and arrows, and almost all their offensive weapons, ineffectual, if not useless. The squadrons were sometimes ranged in two or three lines parallel to each other; being seldom drawn up in one line, unless when formed into a half moon. This order indeed appears to be the most convenient for rowing vessels that engage by advancing their prows towards the enemy.

The famous machine called the *Corvus*, was framed after the following

lowing manner: they erected on the prow of their vessels a round piece of timber of about a foot and a half diameter, and about 12 feet long; on the top whereof they had a block or pulley. Round this piece of timber they laid a stage or platform of boards, four feet broad, and about 18 feet long, which was well framed and fastened with iron. The entrance was long-wise, and it moved about the aforesaid upright piece of timber, as on a spindle, and could be hoisted up within six feet of the top; about this was a sort of a parapet, knee-high, which was defended with upright bars of iron, sharpened at the end; towards the top whereof there was a ring: through this ring, fastening a rope by the help of the pulley, they hoisted or lowered the engine at pleasure, and so with it attacked the enemy's vessels, sometimes on their bow, and sometimes on their broadside, as occasion best served. When they had grappled the enemy with those iron spikes, if they happened to swing broadside to broadside, then they entered from all parts; but in case they attacked them on the bow, they entered, two and two, by the help of this machine, the foremost defending the fore part, and those that followed, the flanks; keeping the top of their bucklers level with the top of the parapet.

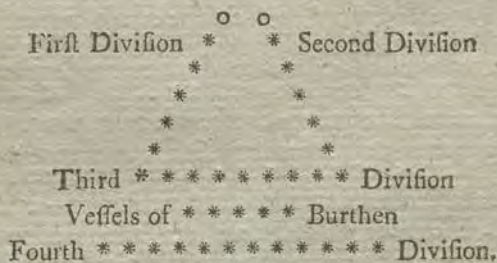
The first warlike preparations which the Romans made by sea, and the order which they observed in drawing up their fleet for battle, are recorded by Polybius.— Soon after the expulsion of Tarquin, Brutus and Horatius being consuls, the Romans were restrained by a treaty with Carthage from sailing beyond the Fair Promontory, &c. and indeed they had

then such ordinary vessels, that when they resolved to contend for the dominion of the sea with the Carthaginians, who had held it uncontested from their ancestors, they began anew by building a whole fleet, after the model of one of their enemy's gallees that was stranded on their coast; and as they never wanted expedients in their military concerns, they placed banks of rowers on-board, in the same form as those of the gallees, and instructed their men to strike and recover their oars by a proper signal, till they were so perfect in the exercise, and so expert in the discipline and management of their fleet (which was improved with the *Corvus*, for the purpose of boarding, as already described) that they soon defeated their enemies. The two consuls were in the two admiral-gallees, in the front of their two distinct squadrons, each of them just ahead of their own divisions, and abreast of each other: the first division being posted on the right, and the second on the left, making two long files or lines of battle. And whenever it was necessary to give to each galley a due space to ply their oars and keep clear one of another, and to have their heads or prows looking somewhat outwards; this manner of drawing up did therefore naturally form an angle, the point whereof was at the two admirals' gallees, which were near together; and as their two lines were prolonged, so the distance grew consequently wider and wider towards the rear. And because the naval as well as the land army consisted of four legions, the ships accordingly made four divisions, two of which were behind: of these, the third fleet or the third legion was drawn up
front-

frontwise, in the rear of the first and second, and so stretching along from point to point, composed a triangle, whereof the third line was the base. Their vessels of burden that carried their horses, baggage, &c. were in the rear of these, and by the help of small boats provided for that purpose, were towed or drawn after them. In the rear of all was the fourth fleet, called the Triarians, drawn up likewise in rank or frontwise, parallel to the third; but these

made a longer line, by which means the extremities stretched beyond the two angles at the base. This was a body of great strength, not easily broken, and excellently disposed for the ships in the rear to succour, relieve, and come in the place of, any that should fail in front.

For the reader's more immediate conception of these preparations, we shall here annex a rude sketch of the order of battle.



At the battle of Ecnomus, between the Romans and Carthaginians, the fleet of the former was thus ranged into a triangle or fort of wedge in front, and towards the middle of its depth of two right parallel lines. That of the latter was formed into a rectangle or two sides of a square, of which one branch extended behind, and as the opening of the other prosecuted the attack, was ready to fall upon the flank of such of the Roman gallees as should attempt to break their line. Ancient history has preserved many of these orders, of which some have been followed in latter times. Thus, in a battle in 1340 the English fleet was formed in two lines, the first of which contained the larger ships, and the second consisted of all the smaller vessels used as a reserve to support the former where-

ever necessary. In 1545 the French fleet, under the command of the Marechal d'Armebault, in an engagement with the English in the Channel, was arranged in the form of a crescent. The whole of it was divided into three bodies, the centre being composed of 36 ships, and each of the wings of 30. He had also many gallees, but these fell not into the line, being designed to attack the enemy occasionally. This last disposition was continued down to the reigns of James I. and Louis XII.

The invention of gun-powder took place in 1330, and the use of fire arms was gradually introduced into naval war, without finally superseding the ancient method of engagement. The Spaniards were armed with cannon in a sea fight against the English and the people of Poitou a breast of Rochelle,

Rochelle, in 1372; and this battle is the first wherein mention is made of artillery in our navies. Many years elapsed before the marine armaments were sufficiently provided with fire arms: indeed, the use of powder in battle was not established till the long wars of Francis I. and Charles V. From its invention to this period, both the machines in use before that discovery, and those which that discovery introduced, were used in war at the same time; and even some time after this period both sorts of machines were continued in use. So great a revolution in the manner of fighting, and which necessarily introduced a total change in the construction of ships, could not be suddenly effected. In short the squadrons of men-of-war are no longer formed of rowing-vessels, or composed of gallees and ships of the line, but entirely of the latter, which engage under sail, and discharge the whole force of artillery from their sides. Accordingly they are now disposed in no other form than that of a right line parallel to the enemy; every ship keeping close hauled upon a wind on the same tack. Indeed the difference between the force and manner of fighting of ships and gallees rendered their service in the same line incompatible. When we consider, therefore, the change introduced both in the construction and working of ships, occasioned by the use of cannon, it necessarily follows that squadrons of men-of-war must appear in the order that is now generally adopted. Finally, the ships ought to present their broadsides to the enemy, and to sail close upon a wind in the wake of each other; as well to retain their own uniformity, as to pre-

serve or acquire the advantage which the weather-gage gives them over their adversary.

Of all the weapons used by the ancients there is scarce any but the sword now remaining, having been totally supplanted by those machines which originated with the invention of gunpowder. Our naval engagements are, therefore, almost generally decided by fire arms, of which there are several kinds, known by the general name of artillery.

The fire arms of a ship of war are distinguished into cannon mounted on carriages, swivel cannon, grenadoes, and musquetry.

For a description of the first, See CANNON and CARRIAGES.

The swivel cannon is a small piece of artillery, carrying a shot of half a pound, and fixed in a socket on the top of the ship's side, stern, or bow, and also in her tops. The trunnions of this piece are contained in a sort of iron crotch, whose lower end terminates in a cylindrical pivot resting in the socket, so as to support the weight of the cannon. The socket is bored in a strong piece of oak, reinforced with iron hoops, in order to enable it to sustain the recoil. By means of this frame, which is called the swivel, and an iron handle on its cascabel, the gun may be directed by hand to any object. It is, therefore, very necessary in the tops, particularly when loaded with musquet balls, to fire down on the upper decks of the adversary, in action.

The grenadoe is a kind of little shell, of the same diameter as a four-pound bullet; it weighs about two pounds, being charged with four or five ounces of powder. Grenadoes are thrown from the tops by the hands of the seamen.

men. They have a touch-hole in the same manner as a shell, and a fuse of the same composition. See the article MORTAR. The sailor fires the fuse with a match, and throws the grenadoe as he is directed; the powder being inflamed, the shell instantly bursts into splinters that kill or maim whomsoever they reach on the decks of the enemy. As this instrument cannot be thrown by hand above 15 or 16 fathoms, the ship must be rather near to render it useful in battle.

As to the musquet or firelock, it is so well known that a description of it would be unnecessary.

Besides these machines, there are several others used in merchant ships and privateers, as carabines, cohorns, fire-arrows, powder-flasks, flink-pots, organs, &c.

The carabine is a sort of a musquetoon, the barrel of which is rifled spirally from the breech, so that when the ball, which is forced into it, is again driven out by the strength of the powder, it is lengthened about the breadth of a finger, and marked with the riffe of the bore. This piece has an iron rammer; the barrel, including the stock, is three feet long. It has a much greater range than the fusil or musquet; because the riffe of the barrel impedes the ball, which thereby makes the greater resistance at the first inflammation of the powder, and giving time for the whole charge to take fire before it goes out of the bore, it is at length thrown out with greater force than from the common musquet.

The cohorn is a sort of small mortar, fixed on a swivel, and particularly used to discharge gre-

nadoes or cast bullets into merchant vessels, when boarded.

The fire-arrow is a small iron dart, furnished with springs and bars, together with a match impregnated with powder and sulphur, which is wound about its shaft. It is intended to fire the sails of the enemy, and is, for this purpose, discharged from a musquetoon or swivel-gun. The match being kindled by the explosion, communicates the flame to the sail against which it is directed, where the arrow is fastened by means of its bars and springs. This is peculiar to hot climates, particularly the West-Indies; the sails, being extremely dry, are instantly inflamed, and, of course, convey the fire to the masts and rigging, and finally to the vessel itself.

For a description of the powder-flask and flink-pot, See the article BOARDING.

The organ is a machine consisting of six or seven musquet barrels fixed upon one stock, so as to be fired all at once.

As a general engagement of fleets or squadrons of ships of war is nothing else than a variety of particular actions of single ships with each other in line of battle, it will be necessary first to describe the latter, and then proceed to represent the usual manner of conducting the former.

The whole economy of a naval engagement may be arranged under the following heads:

1. The preparation,
2. The action, and
3. The repair, or refitting for the purposes of navigation.

The preparation is begun by issuing an order to clear the ship for action, which is repeated by
the

the boatswain and his mates at all the hatchways or stair-cases leading to the different batteries. In a vessel of war the management of the artillery requiring a considerable number of men, the officers and sailors are consequently restrained to a narrow space in their usual habitations, in order to preserve the internal regularity of the ship. Accordingly the hammocks, or hanging beds, of the latter are crowded together as close as possible between the decks, each of them being limited to the breadth of 14 inches, and are hung parallel to each other in rows stretching from one side of the ship to the other, nearly throughout her whole length, so as to admit of no passage but by stooping under them. While suspended in this situation, it would be impossible to work the cannon, and therefore they must be removed with the greatest expedition. Accordingly, at the summons of the boatswain, who cries, "Up all hammocks," every sailor repairs to his own, and having stowed his bedding properly, cords it firmly with a lashing or line provided for that purpose, and carries it to the quarter-deck, poop, fore-castle, or whatever other place is most convenient. As each side of the quarter-deck and poop is furnished with a double net-work, supported by iron cranes fixed immediately above the gunwale or top of the ship's side; the hammocks thus corded are firmly stowed by the quarter-masters between the two parts of the netting, so as to form an excellent barrier. The tops, waists, and fore-castle, are then fenced in the same manner. By thus disposing of the hammocks, a double advantage is obtained: the batteries of cannon are immedi-

ately cleared of an incumbrance, and the hammocks are converted into a sort of parapet to prevent the execution of small shot on the quarter-deck, tops, and fore-castle.

During the performance of these offices below, the boatswain and mates are employed in securing the sails and yards, to prevent them from tumbling down when the ship is cannonaded, as she might thereby be disabled and rendered incapable of attack, retreat, or pursuit. The yards are likewise secured by strong chains or ropes, in addition to those by which they are usually suspended. The boatswain also provides the necessary materials to repair the rigging, wherever it may be damaged by the shot of the enemy: and to supply whatever parts of it may be entirely destroyed. The carpenter and his crew, in the mean time, prepare their shot-plugs and mauls to close up any dangerous breaches that may be made near the surface of the water, and provide the iron work necessary to resist the chain pumps, in case their machinery should be injured in the engagement. The gunner, with his mates and quarter-gunners, are busied in examining the cannon of the different batteries, to see that their charges are thoroughly dry and fit for execution: to have every thing ready for furnishing the great guns and small arms with powder, as soon as the action begins; and to keep a sufficient number of cartridges continually filled, to supply the place of those expended in battle. The master and his mates are attentive to have the sails properly trimmed, according to the situation of the ship, and to reduce or multiply them, as occasion requires, with all possible expedition. The lieutenants

tenants visit the different decks, to see that they are effectually cleared of all incumbrance, so that nothing may retard the execution of the artillery, and to enjoin the other officers to diligence and alertness in making the necessary dispositions for the expected engagement, so that every thing may be in readiness at a moment's warning.

When the hostile ships have approached each other to a competent distance, the drums beat to arms; and the boatswain and his mates pipe "All hands to quarters" at every hatch-way. The persons appointed to manage the great guns immediately repair to their respective stations; and crow's, handspikes, rammers, sponges, powder-horns, matches, train-tackles, &c. are placed in order by the side of every cannon. The hatches are laid, to prevent any one from escaping into the lower apartments. The marines are drawn up in rank and file on the quarter deck, poop, and fore-castle. The lashings of the great guns are let loose, and the tom-pions withdrawn: the whole artillery above and below is run out at the ports, and levelled to the point-blank range, ready for firing.

When these necessary preparations are finished, and the officers and crew are all ready at their respective stations, to obey every occasional order, the commencement of the action is determined by the mutual distance and situation of the adverse ships, or by the signal from the commander in chief of the fleet or squadron. The cannon being levelled in parallel rows, projecting from the ship's side, the most natural order of battle is evidently to range the ships abreast of each other, especi-

ally if the engagement is general. The most convenient distance is probably within the point-blank range of a musquet, so that all the artillery may do effectual execution.

The combat usually begins by a vigorous cannonade, accompanied by the united efforts of all the swivel guns and small arms. As the method of firing platoons or volleys of cannon at once is generally found injurious in the sea service, it should seldom or never be attempted, unless in the battering of a fortification; for the sides and decks of the ship, altho' sufficiently strong for all the purposes of war, would be too much shaken by so violent an explosion and recoil. Instead thereof the general practice on this occasion throughout the ship is to load, fire, and sponge the guns with all possible expedition, yet without confusion or precipitation. The captain of each gun is particularly enjoined to fire only when the piece is properly directed to its object, that the shot may not be fruitlessly expended. The lieutenants who command the different batteries, traverse the deck, to see that the battle is prosecuted with vigour, and to exhort and animate the men in their duty. The midshipmen second these injunctions, and give assistance, where it is required, at the guns committed to their charge. The gunner takes care that all the artillery is sufficiently supplied with powder, and that the cartridges are carefully conveyed along the decks in covered boxes.

The havoc produced by a continuation of this mutual assault, can be more easily imagined than described; battering, penetrating, and splintering the sides and decks; that

scattering or dismounting the cannon; mangling and destroying the rigging; cutting asunder, or carrying away the masts and yards; piercing and tearing the sails so as to render them useless; and wounding, disabling, or killing the ship's company. The comparative vigour and resolution of the assailants to effect these dreadful consequences, generally determine their success or defeat; but sometimes the fate of the combat may be decided by some unforeseen incident, which may be as fortunate for the one as fatal to the other.

The ship that is defeated acknowledges the victory by striking her colours, and is immediately taken possession of by the conqueror, who secures her officers and crew as prisoners in his own ship, and invests two principal officers with the command of the prize till a captain is appointed by the commander in chief.

When the engagement is concluded they begin the repair, or refitting, for the purposes of navigation. Accordingly, the cannon are secured by their breechings and tackles with all convenient expedition. Whatever sails have been rendered unserviceable are unbent, and the wounded masts and yards struck upon the deck, and fished, or replaced by others; the standing rigging is knotted, and the running rigging spliced wherever this is necessary. Proper sails are bent in the room of those which have been removed as useless. The carpenter and his crew are employed in repairing the breaches made in the ship's hull, by shot-plugs, pieces of plank, and sheet lead. The gunner and his assistants are busied in replenishing the allotted number of charged cartridges, to supply the

place of those which have been expended, and in refitting whatever furniture of the cannon may have been damaged by the late action.

Such are the usual consequences and process of an engagement between two ships of war, which may be considered as an epitome of a general battle between fleets or squadrons. The latter, however, involves a greater variety of incidents, and necessarily requires more comprehensive skill and judgment in the commanding officer.

When the commander in chief, or admiral of a naval armament, has discovered an enemy's fleet, his principal concern is usually to approach it, and endeavour to come to action as soon as possible. Every inferior consideration must be sacrificed to this important object, and every rule of action should tend to hasten and prepare for so material an event. The state of the wind, and the situation of his adversary, will, in some measure, dictate the conduct necessary to be pursued with regard to the disposition of his ships on this occasion. To facilitate the execution of the admiral's orders, the whole fleet is ranged into three squadrons, each of which is classed into three divisions, under the command of different officers. Before the action begins, the adverse fleets are commonly drawn up in two lines, parallel to each other and close hauled. As soon as the admiral displays the signal for the line of battle, the several divisions separate from the columns, in which they were disposed in the usual order of sailing, and every ship crowds into its station in the wake of the next a-head: a proper distance from each other (which is generally about fifty fathom) being

being regularly observed from the van to the rear. The admiral, however, will occasionally contract or extend his line, so as to conform to the length of that of his adversary, whose neglect, or inferior skill in this respect he will naturally convert to his own advantage, as well as to prevent his own line from being doubled upon; a circumstance which might cause great confusion among his van and rear.

When the adverse fleets approach each other the courses are commonly hauled up in the brails, and the top-gallant-sails and stay-sails furled. The movement of each ship is chiefly regulated by the main and fore-top-sails and the jibs; the mizen-top-sail being reserved to hasten or retard the course of the ship, and, in fine, by filling or backing, hoisting or lowering it, to determine her velocity. The frigates, tenders, and fire-ships being also hauled upon a wind, lie at some distance, ready to execute the admiral's orders or those of his second's, leaving the line of battle between them and the enemy. If there are any transports or storeships attendant on the fleet, these are disposed at a still farther distance from the scene of action. If the fleet is superior in number to that of the enemy, the admiral usually selects a body of reserve from the different squadrons, which will be always of use to cover the fire-ships, bomb-vessels, &c. and may fall into the line in any case of necessity: these also are stationed at a convenient distance from the line, and should evidently be opposite to the weakest parts thereof.

Monsieur de Morogues, a French author, observes, that order and discipline give additional strength and activity to a fleet. If thus a

double advantage is acquired by every fleet, it is certainly more favourable to the inferior, which may thereby change its disposition with greater facility and dispatch than one more numerous, yet without being separated. When courage is equal to both, good order is then the only resource of the smaller number. Hence we may infer that a smaller squadron of ships of war, whose officers are perfectly disciplined in working their ships, may, by its superior dexterity vanquish a more powerful one, even at the commencement of the engagement; because the latter being less expert in the order of battle, will, by its separation, suffer many of the ships to remain useless, or not sufficiently near to protect each other.

It is remarked by Vegetius that the Gauls had the advantage of the Romans in their numbers; the Germans in their stature; the Spaniards in their strength and numbers united; the Africans in their artifice and opulence; the Greeks in their policy and prudence; but the Romans triumphed over all by their discipline.

The signal for a general engagement is usually displayed when the opposite fleets are sufficiently within the range of point-blank shot, so that they may level the artillery with certainty of execution, which is near enough for a line of battle. The action is begun and carried on throughout the fleet in the manner (as described) between single ships, at which time the admiral carries little sail, observing however to regulate his own motions by those of the enemy. The ships of the line meanwhile keep close in their station, none of which should hesitate to advance in their order, although

although interrupted by the situation of some ship a-head which has negligently fallen a-stern of her station.

Such is now the practice of naval war, that the necessary order of battle, and the fabric of our ships, very seldom permit the assault of boarding unless in single actions. No captain ought therefore to abandon his station in the line, under any pretence whatsoever, unless his ship is too much disabled to continue the combat. The small quantity of sail carried on this occasion will permit the bulk of the fleet, although somewhat impaired, to continue their cannonade a long time without quitting the line.

No captain should be induced to break the line through a false ambition to distinguish himself, or with the hope of achieving any distant enterprize, however flattering the prospect may be. He ought to wait the signal of the admiral, or commanding officer; because it is more essential to preserve the regularity of a close line, which constitutes the principal force of the fleet, than to prosecute a particular action, which, although brilliant in itself, has seldom any material consequences, unless his object is to seize a flag ship, and even this can only be justified by success.

The various exigences of the engagement call forth the skill and resources of the admiral to keep his line as complete as possible, notwithstanding unequal attacks and damage. He must order ships from those in reserve, to supply the place of those which may have been rendered unqualified by the action: he must direct his fire-ships at a convenient time to fall aboard the enemy, and he must attack ships from one part of

the line, or wing which is stronger, to another which is greatly pressed by superior force, and requires assistance. His vigilance is ever necessary to review the situation of the enemy from van to rear, every motion of whom he should, if possible, anticipate and disappoint. He should seize the favourable moments of occasion, which are rapid in their progress, and never return: an opportunity lost may lose the victory. Far from being disconcerted by any unforeseen incident, however distressing it may be, he should endeavour to overcome all difficulties, and make them, if possible, subservient to his designs. His experience and reflection will naturally furnish him with every method of intelligence to discover the state of his different squadrons and divisions. Signals of inquiry and answer—of request and assent—of command and obedience—must be displayed and repeated on this occasion. (See the article SIGNAL.) Tenders and boats must also be continually detached between the admiral and the commanders of the several squadrons or divisions.

When danger presses, he should be fortified by resolution and presence of mind, because the whole fleet is committed to his charge, and the conduct of his officers may, in a great degree, be influenced by his intrepidity and perseverance. In short, his fame or infamy may depend upon the fate of a day.

If he proves victorious he should prosecute that victory as much as possible by seizing, burning, or otherwise destroying the enemy's ships. If he is defeated, he should endeavour by every resource his experience can suggest to save as many of his fleet as possible by employing his tenders, &c. to
take

take out the wounded, and put fresh men in their places, by towing the disabled ships to a competent distance, and by preventing the execution of the enemy's fire-ships. In order to retreat with more security, he may judge it expedient to range his fleet into the form of a half moon or crescent, placing himself in the center. By this disposition the enemy's ships which attempt to fall upon his rear, will at once expose themselves to the fire of the admiral and his seconds, in an advantageous situation: a circumstance which will serve to facilitate the escape of his own ships and retard the pursuit of those of his adversary. Should his fleet be too much extended by this arrangement, the wings, or quarters, are easily closed, and the half moon rendered more complete; in the midst of which may be placed his store-ships, tenders, &c. In retreating, the uncertainty of the weather is to be considered: it may become calm, or the wind may shift in his favour. His schemes may be assisted by the approach of night, or the proximity of land, and he ought rather to run the ships ashore, if practicable, than suffer them to be taken afloat, and thereby transfer additional strength to the enemy. In short, nothing should be neglected that may contribute to the preservation of his fleet, or prevent any part of it from falling into the hands of the conqueror.

Upon the whole it appears, the real force or superiority of a fleet consists less in the number of vessels and the vivacity of the action, than in good order, dexterity in working the ships, presence of mind, and skillful conduct in the admiral and captains.

ENIS or **INNIS**—a term for island on the west coast of Ireland, and in some parts of Scotland.

ENSENADO—on the coasts of Chili and Peru on the south Pacific Ocean, is a term for bay.

ENSIGN—a large flag or banner, hoisted on a long pole, erected over the stern, and called the ensign-staff; the ensign is used to distinguish the ships of different nations from each other, as also to characterise the different squadrons of the navy: it was formerly written **ANCIENT**.

To ENTER—to enrol, or to engage for service.

ENTERING PORTS—ports cut down on the middle gun-deck of three-deckers, to serve as doors for persons going in or out of the ship.

ENTERING ROPES, or SIDE ROPES—three ropes hanging from the upper part of the ship's side, or from the entering ports on the right, left, and middle of the steps. See **GANGWAY**.

ENTRANCE—a name frequently given to the foremost part of the ship under the surface of the sea.

EPHEMERIS—a nautical almanack.

EQUATOR—an imaginary line on the earth, dividing the globe into two equal parts, and equally distant from both poles.

EQUINOCTIAL—See the preceding article.

EQUINOCTIAL GALES—storms which are observed generally to take place about the time of the sun's crossing the equator or equinoctial line, at which time there is equal day and night throughout the world.

To EQUIP—a term frequently applied to the business of fitting a ship

a ship for sea, or arming her for war. See FITTING.

ESCUTCHEON—the compartment in the middle of the ship's stern where her name is written.

EXERCISE—the preparatory practice of managing the artillery and small arms, in order to make the ship's crew perfectly skilled therein, so as to direct its execution successfully in the time of battle.

The exercise of the great guns in our navy, has been, as well as all others, very complicated, and abounding with superfluities, but the following concise method has been lately introduced by an officer of distinguished abilities with much success.

N. B. As these instructions abound with several technical terms, the reader, whenever at a loss, may look for any of those articles which are ably explained in this work.

Exercise of the Great Guns.

- 1st. Silence.
- 2d. Cast loose your guns.
- 3d. Level your guns.
- 4th. Take out your tompions.
- 5th. Run out your guns.
- 6th. Prime.
- 7th. Point your guns.
- 8th. Fire.
- 9th. Sponge your guns.
- 10th. Load with cartridge.
- 11th. Shot your guns.
- 12th. Put in your tompions.
- 13th. Hoist your guns.
- 14th. Secure your guns.

“ Upon beating to arms (every person having immediately repaired to his quarters) the midshipman, commanding a number of guns, is to see that they are not without every necessary article, as (at every gun) a sponge, powder-horn, with its priming-wires, and

a sufficient quantity of powder, shot, crow, handspike, bed, quoin, train-tackle, &c. sending, without delay, for a supply of any thing that may be missing; and for the greater certainty of not overlooking any deficiency, he is to give strict orders to every captain under him to make the like examination at his respective gun, and to take care that every requisite is in a serviceable condition, which he is to report accordingly. And besides the other advantages of this regulation for the still more certain and speedy account of being taken upon these occasions, the midshipman is to give each man his charge at quarters, (as expressed in the form of the monthly report) who is to search for his particular implements, and not finding them, is immediately to acquaint his captain, that upon his report to the midshipman they may be replaced.

“ The man who takes care of the powder is to place himself on the opposite side of the deck from that where we engage, except when fighting both sides at once, when he is to be amid-ships. He is not to suffer any other man to take a cartridge from him but he who is appointed to serve the gun with that article, either in time of a real engagement or at exercise.

“ Lanterns are not to be brought to quarters in the night, until the midshipman gives his orders for so doing to the person he charges with that article. Every thing being in its place, and not the least lumber in the way of the guns: the exercise begins with

1st. Silence.

“ At this word every one is to observe a silent attention to the officers.

2d. Cast

2d. *Cast loose your Guns.*

"The muzzle-lashing is to be taken off from the guns, and (being coiled up in a small compass) is to be made fast to the eye-bolt above the ports. The lashing-tackles at the same time to be cast on, and the middle of the breechings seized to the thimble of the pomillion. The sponge to be taken down, and, with the crow, handspike, &c. laid upon the deck by the gun.

"N. B. When prepared for engaging an enemy, the seizing within the clinch of the breeching is to be cut, that the gun may come sufficiently within board for loading, and that the force of the recoil may be more spent before it acts upon the breeching.

3d. *Level your Guns.*

"The breech of your metal is to be seized so as to admit the foot of the bed's being placed upon the axle-tree of the carriage with the quoin upon the bed, both the ends being even one with the other.

"N. B. When levelled for firing, the bed is to be lashed to the bolt which supports the inner end of it, that it may not be thrown out of its place by the violence of the gun's motion when hot with frequent discharges.

4th. *Take out your Tompions.*

"The tompion is to be taken out of the gun's mouth, and left hanging by its laniard.

5th. *Run out your Guns.*

"With the tackles hooked to the upper bolts of the carriage, the gun is to be bowled out as close as possible, without the assistance of crows or handspikes, taking care at the same time to keep the breeching clear of the trucks by hauling it through the rings; it is then to be bent so as to run clear when the gun is

fired. When the gun is run out, the tackle-falls are to be laid alongside the carriages in neat fakes, that when the gun, by recoiling, overhauls them, they may not be subject to get foul, as they would if in a common coil.

6th. *Prime.*

"If the cartridge is to be pierced with the priming-wire, and the vent filled with powder, the pan also is to be filled, and the flat space, having a score through it at the end of the pan, is to be covered; and this part of the priming is to be bruised with the round part of the horn. The apron is to be laid over, and the horn hung up out of danger from the flash of the priming.

7th. *Point your Guns.*

"At this command the gun is, in the first place, to be elevated to the height of the object by means of the side-sights; and then the person pointing is to direct his fire by the upper-sight, having a crow on one side, and a handspike on the other, to heave the gun by his direction till he catches the object.

"N. B. The men who heave the gun for pointing, are to stand between the ship's side, and their crows or handspikes, to escape the injury they might otherwise receive from their being struck against them, or splintered by a shot; and the man who attends the captain with a match is to bring it at the word "Point your Guns," and kneeling upon one knee opposite the train-truck of the carriage, and at such distance as to be able to touch the priming, is to turn his head from the gun, and keep blowing gently upon the lighted match to keep it clear from ashes. And as the missing of an enemy in action, by neglect, or want of coolness, is most inexcusable,

fable, it is particularly recommended to have the people thoroughly instructed in pointing well, and taught to know the ill consequences of not taking proper means to hit their mark; wherefore they should be made to elevate their guns to the utmost necessity, and then to point with the same exactness; and having caught the object through the upper sight at the word

8th. *Fire,*

“The match is instantly to be put to the bruised part of the priming, and when the gun is discharged, the vent is to be closed, in order to smother any spark of fire that may remain in the chamber of the gun; and the man who sponges is immediately to place himself by the muzzle of the gun in readiness, when, at the next word

9th. *Sponge your Gun,*

“The sponge is to be rammed down to the bottom of the chamber, and then twisted round, to extinguish effectually any remains of fire: and when drawn out, to be struck against the outside of the muzzle, to shake off any sparks or scraps of the cartridge that may have come out with it; and next its end is to be shifted ready for loading; and while this is doing, the man appointed to provide a cartridge is to go to the box, and by the time the sponge is out of the gun, he is to have it ready; and at the word

10th. *Load with Cartridge.*

“The cartridge (with bottom-end first, seam downwards, and a wad after it) is to be put into the gun, and thrust a little way within the mouth when the rammer is to be entered; the cartridge is then to be rammed down, and the captain, at the same time, is

to keep his priming-wire in the vent, and, feeling the cartridge, is to give the word “Home,” when the rammer is to be drawn, and not before. While this is doing, the man appointed to provide a shot is to provide one (or two, according to the order at that time) ready at the muzzle, with a wad likewise; and when the rammer is drawn, at the word

11th. *Shot your Guns,*

“The shot, and wad upon it, are to be put into the gun, and thrust a little way down, when the rammer is to be entered as before. The shot and wad are to be rammed down to the cartridge, and there have a couple of forcible strokes, when the rammer is to be drawn, and laid out of the way of the guns and tackles, if the exercise or action is continued; but if it is over, the sponge is to be secured in the place it is at all times kept in.

12th. *Put in your Tompions.*

“The tompions to be put into the muzzle of the cannon.

13th. *Hoist your Guns.*

“The seizing is to be put on again upon the clinched end of the breeching, leaving it no slack-er than to admit of the gun's being hoisted with ease. The quoin is to be taken from under the breech of the gun and the bed, still resting upon the bolt within the carriage, thrust under till the foot of it falls off the axle-tree, leaving it to rest upon the end which projects out from the foot. The metal is to be let down upon this. The gun is not to be placed exactly square, and the muzzle is to be close to the wood, in its proper place for passing the muzzle-lashings.

14th. *Secure your Guns.*

“The muzzle-lashings must

first be made secure, and then with one tackle, having all its parts equally taught with the breeching, the gun is to be lashed. The other tackle is to be bowfed taught, and by itself made fast that it may be ready to cast off for lashing a second breeching.

“ N. B. Care must be taken to hook the first tackle to the upper bolt of the carriage, that it may not otherwise obstruct the reeving of the second breeching, and to give the greater length to the end-part of the fall.

“ No pains must be spared in bowfing the lashing very taught, that the gun may have the least play that is possible, as their being loose may be productive of very dangerous consequences.

“ The quoin, crow, and hand-spike, are to be put under the gun; the powder-horn hung up in its place, &c.

“ Being engaged at any time when there is a large swell, a rough sea, or in squally weather, &c. as the ship may be liable to be suddenly much heeled, the port-tackle-fall is to be kept clear, and whenever the working of the gun will admit of it, the man charged with that office is to keep it in his hand; at the same time the muzzle-lashing is to be kept fast to the ring of the port, and being hauled taught is to be fastened to the eye-bolt over the port-hole, so as to be out of the gun's way in firing, in order to haul it in at any time of danger.

“ This precaution is not to be omitted when engaging to the windward, any more than when to the leeward, those situations being very subject to alter at too short a warning.

“ A train tackle is always to be made use of with the lee guns, and the man stationed to attend it

is to be very careful in preventing the gun's running out at an improper time.”

EXERCISE may also be applied with propriety to the forming a fleet into order of sailing, line of battle, &c. an art which the French have termed evolutions or tactiques. In this sense, Exercise may be defined the execution of the movements which the different orders and dispositions of fleets occasionally require, and which the several ships are directed to perform by means of signals. See the article SIGNAL.

EYE OF A BLOCK STROP—is that part by which it is fastened or suspended to any particular place upon the sails, masts, or rigging; the eye is sometimes formed by making two eye-splices on the ends of the strop, and then fastening them together with a small line, so as to bind round a mast, yard, or boom, as is deemed necessary.

EYE OF A STAY—that part of a stay which is formed into a sort of collar to go round the mast-head.

FLEMISH-EYE— is a phrase particularly applied to the eye of a stay, which is either formed at the making of the rope, or by dividing the yarns into two equal parts, knotting each pair separately and pointing the whole over.

EYE-BOLT—a long bar of iron, with an eye in one end of it, formed to be driven into the decks, sides, &c. for the purpose of fastening ropes or hooking tackles to.

EYELET-HOLES— round holes worked in a sail to admit a small rope through, chiefly the robins (or rope bands), and the points or reef-line. See the article SAIL.

EYES OF A SHIP—a name frequently given to those parts which lie near the hawse holes, particularly

larly in the lower apartments within the vessel.

EYE-SPLICE—See the article **SPLICE**.

FACTOR—in commerce, an agent residing beyond the seas, or in some remote part, commissioned by merchants to buy or sell goods on their account; hence,

FACTORY—is a place where a considerable number of factors reside; as the factories of Lisbon, of Leghorn, of Calcutta, &c.

FAG-END, the end of any rope which is become untwisted and loosened by frequent use; to prevent which the ends of ropes are wound round with a piece of twine or packbread, which operation is called whipping.

To FAG-OUT—to become untwisted and loosened.

FAIR, a general term for the disposition of the wind when it is favourable to a ship's course, in opposition to what is contrary or foul:

This term, when applied to the wind, is much more comprehensive than **Large**, since the former seems to include about eighteen points of the compass, or, at least, sixteen; whereas **Large** is confined to the beam or quarter; that is, to a wind which crosses the keel at right angles, or obliquely from the stern, but never to one right astern. See the articles **LARGE** and **SCANT**.

FAIR—is also applied to ropes as suffering the least friction in a pulley, when they are said to lead fair.

FAIR-CURVE—in delineating ships, is a winding-line whose shape is varied according to the part of the ship it is intended to describe. This curve is not answerable to any of the figures of

conic sections, although it occasionally partakes of them all.

FAIR-WAY—the channel of a narrow bay, river, or harbour, in which ships usually pass in their way up and down; so that if any vessels are anchored therein they are said to lie in the fair way.

FAKE—one of the circles or windings of a cable or hawser, as it lies disposed in a coil. See **COILING**.

The Fakes are greater or smaller in proportion to the extent or space which a cable is allowed to occupy where it lies.

FALCONETS—short cannon which were formerly used at sea.

FALL—the loose end of a tackle, or that part on which the people pull to produce the desired effect.

To FALL ABOARD—See **A-BOARD**.

To FALL ASTERN—to be driven backwards: also spoken of two ships sailing together, if one goes faster than the other the latter is said to fall astern.

To FALL CALM—speaking of the weather, implies a state of rest by a total cessation of the wind.

To FALL DOWN—to sail or be conducted from any part of a river to some other part nearer to its mouth or opening.

FALLING-OFF—the movement or direction of the ship's head to leeward of the point whither it was lately directed, particularly when she sails near the wind, or lies by.

When a ship is under sail, and keeps not so near the wind as she should do, it is said she falls off.

FALLING OFF—is also the angle contained between her nearest approach to the direction of the wind, and her farthest declination from it when **TRYING**.

To FALL IN WITH—to meet, when

when speaking of a ship; to discover, when of the land.

CAT FALL—See the article **CAT**.

FALLS—when a ship is not flush, is the term which is given to those risings of some parts of her decks (which she may have) more than others.

FALSE FIRE, BLUE FLAMES—a composition of combustibles, filled into a wooden tube, which, upon being set fire to, burns with a light blue flame for half a minute; they are principally used as signals during the night.

FALSE KEEL—is a kind of supplemental or temporary keel to save the other should the ship happen to strike or touch the ground.

FASHION-PIECES—the utmost or hindmost timbers of a ship, which terminate the breadth, and form the shape of the stern; they are united to the stern-post and to the extremity of the wing transom by a rabbit, and a number of strong nails or spikes driven from without.

To **FASTEN**—to tie a rope or to make it secure.

FATHOM—a measure of six feet, used to regulate the length of the cables, rigging, &c. and to divide the lead (or sounding) lines, &c.

To **FAVOUR**—to be careful of, also to be fair for.

To **FAY**—to fit any two pieces of wood so as to join close together; the plank is said to fay to the timbers when it bears or lies close to them all.

FELUCCA—a small vessel navigated in the Mediterranean, with from ten to sixteen oars and lateen sails.

To **FEND-OFF**—is, by the application of a boat-hook (or any other such means of decreasing the

velocity) to prevent a boat or vessel running against another, or against a wharf, &c. with too much violence. Fend, in the sea language, imports the same as defend. And hence

FENDERS—certain pieces of old cable, timber, or other materials, hung over the side of a vessel to prevent it from striking or rubbing against a wharf or key; as also to preserve a small vessel from being damaged by a large one.

To **FETCH**—to attain; as “we shall fetch to windward of the light-house this tack.”

To **FETCH WAY**—to be shaken or agitated from one side to another; it is usually applied to a mast, bowsprit, &c. when it is not sufficiently wedged, being loose in the partners; it is also said of a box, cask, or such body, which moves by the rocking of the ship at sea, as not being well secured and inclosed.

FETCHING THE PUMP—the act of pouring a can of water into the upper part of it, in order to expel the air which is contained between the lower box and the piston, and the lower end of the pump, that rests on the ship's floor; and, accordingly, to make the water poured into the chamber communicate with that in the bottom of the pump-well, so as to be thrown out above by striking with the brake or handle. See the article **PUMP**.

FID—a square bar of wood or iron, with a shoulder at one end, used to support the weight of the top-mast when erected at the head of the lower-mast, by passing through a mortise or hole at the lower end of the former, and resting its ends on the trestle-trees which are sustained by the head

of the latter; the fid, therefore, must be withdrawn every time the mast is lowered; the top-gallant-mast is retained at the head of the top-mast in the same manner. See the article **MAST**.

FID—is also a pin of hard wood, tapering to a point, used to open the strands of a rope in splicing: of these some are large for splicing cables, and some small for bolt-ropes of sails, &c.

FIELD OF ICE—a large body of ice floating at sea.

FIFE-RAILS—See the article **RAILS**.

SEA FIGHT—See the articles **BATTLE**, **ENGAGEMENT**, **EXERCISE**, &c.

TO FILL—to brace the sails in such a manner as that the wind, entering their cavities from behind, dilates them so as to advance the ship in her course, after the sails had for some time been shivering, or braced aback.

It may appear something remarkable, but it is certainly true, that a ship may be forced backward or forward, or may remain in her place, with any wind, while her stern is all the while directed to one part of the horizon; and these different states of motion or rest, may be communicated by backing, filling, or shivering the sails, by drawing the braces on one side and loosening them on the other. See the articles **BRACE**, **BACK**, and **SHIVER**.

FILLING A SHIP'S BOTTOM—implies the driving a number of nails with broad heads into her so as to give her a sheathing of iron, to prevent the worms from getting into the wood; this operation is now much disused, the sheathing with sheets of copper being found superior to it.

FIRE—the order to put the

match to the priming, or pull the trigger of a cannon or other firearm, so as to discharge it.

FIRE-ARROW—a steel or iron dart used by privateers and pirates, to set fire to the sails of the enemy in battle.

FIRE-BARRELS—used in fire-ships, and ought to be of a cylindrical form, as best adapted to contain the reeds with which they are filled, and more convenient for stowing them between the troughs in the fire-room. Their inside diameters should not be less than 21 inches, and 30 inches are sufficient for their length. The bottom parts are first well stowed with short double-dipped reeds placed upright, and the remaining vacancy is filled with fire-brand composition, well mixed and melted, and then poured over them. The composition used for this purpose is a mass of sulphur, pitch, tar, and tallow. There are five holes of 3-4 inch in diameter, and three inches deep, formed in the top of the composition while it is yet warm; one being in the center, and the other four at equal distances round the sides of the barrel. When the composition is cold and hard, the barrel is primed by filling those holes with fuze composition, which is firmly driven into them so as to leave a little vacancy at the top to admit a strand of quick-match twice doubled. The center hole contains two strands at their whole length, and every strand must be driven home with mealed powder. The loose ends of the quick-match being then laid within the barrel, the whole is covered with a dipped curtain, fastened on with a hoop that slips over the head of the barrel to which it is nailed.

The barrels should be made very

very strong, not only to support the weight of the composition before firing, when they are moved or carried from place, but to keep them together whilst burning: for if the staves are too light and thin, so as to burn very soon, the remaining composition will tumble out and be dissipated, and the intention of the barrels to carry the flame aloft, will accordingly be frustrated.

The curtain is a piece of canvas, nearly a yard in breadth and length, thickened with melted composition and covered with saw-dust on both sides.

FIRE-SHIP—a vessel filled with combustible materials, and fitted with grappling-irons, to hook and set fire to the enemy's ships.

Some English vessels, filled with combustible matter, and sent among the Spanish ships composing the Invincible Armada in 1588, are said to have given rise to the terrible invention of fireships. However, Livy informs us, that the Rhodians had invented a kind of fireships which were used in junction with the Roman fleet in their engagements with the Syrians, in the year before Christ 190. Cauldrons of combustible and burning materials were hung out at their prows, so that none of the enemy's ships durst approach them; these fell on the enemy's galleys, stuck their beaks into them, and at the same time set them on fire.

As there is nothing peculiar in the construction of a modern fire-ship except the apparatus by which the fire is instantly conveyed from one part to another, and from thence to the enemy, it will be sufficient to describe the fire-room in which the combustibles are inclosed, together with the instru-

ments necessary to grapple the ship intended to be destroyed.

The fire-room is built between decks, and extends from the bulk-head at the fore-castle to a bulk-head raised behind the main mast. The train inclosed in this apartment is contained in a number of wooden troughs which intersect each other in different parts of the ship's length, being supported at proper distances by cross-pieces and stanchions. On each side of the ship are six or seven ports about eighteen inches broad, and fifteen inches high, and having their lids to open downward, contrary to the usual method.

Against every port is placed an iron chamber. These iron chambers are ten inches long and 3-5 in diameter. They are breeched against a piece of wood fixed across the ports, and let into another a little higher. When loaded, they are almost filled with corn-powder, and have a wooden tom-pion well driven into their muzzles. They are primed with a small piece of quick-match thrust through their vents into the powder, with a part of it hanging out. When the ports are blown open by means of the iron chambers, the port-lids either fall downwards or are carried away by the explosion. At the time of firing the ship, the iron chamber blows out the port-lid, and opens a passage for the flame. Immediately under the main and fore-shrouds is fixed a wooden funnel, whose lower end communicates with a fire-barrel (See the article **FIRE-BARRELS** preceding this) by which the flame passing through the funnel is conducted to the shrouds. Between the funnels, which are likewise called fire-trunks, are two scuttles, or small holes, in the upper

upper deck, serving also to let out the flames. Both funnels must be stopped with plugs, and have sail-cloth or canvas nailed close over them to prevent any accident happening from above to the combustibles laid below.

The ports, funnels, and scuttles, not only communicate the flames to the outside and upper-works of the ship, and her rigging, but likewise open a passage for the inward air confined in the fire-room, which is thereby expanded so as to force impetuously through those outlets, and prevent the blowing up of the decks, which must of necessity happen from such sudden and violent rarefaction of the air as will then be produced.

On each side of the bulk-head behind is cut a hole of sufficient size to admit a trough of the same dimensions as the others. A leading trough, whose foremost end communicates with another trough within the fire-room, is laid close to this opening, from whence it extends obliquely to a sally-port

cut in the ship's side. The decks and troughs are well covered with melted rosin. At the time of firing either of the leading troughs the flame is immediately conveyed to the opposite side of the ship, whereby both sides burn together.

The lieutenant's cabin is on the starboard-side, and the master's cabin on the larboard; the captain's cabin is separated from these by the bulk-head.

The stores for a fire-ship of 150 tons are

- 8 Fire-barrels.
- 12 Iron Chambers.
- 209 Bavins, single dipped.
- 24 Port-fires.
- 3½ Priming Composition Barrels.
- 1 Quick-match Barrel.
- 30 Dipped Curtains.
- 150 Long Reeds, single dipped.
- 75 Short Reeds, single dipped.
- 75 Short Reeds, double dipped.
- 60 Hand Grenadoes.

The quantity of composition for preparing the stores of a fire-ship is exhibited in the following table.

	Salt Petre.	Sulphur.	Corn Powder.	Pitch	Resin.	Tallow.	Tar.	Oil.
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	pts.
For 8 Barrels	0	0	960	480	0	80	0	0
For 3½ ditto } priming com- } position.	175	140	350	0	21	0	0	11
For the Cur- } tains, Bavins, } and Reeds for } the Ship, and } Sulphur for } salting them.	0	200	0	350	175	50	25	0
Total	175	340	1310	830	196	130	25	11

For reeds for the barrels, 160lb. being one-fifth of the whole of the last article.

The reeds are made up in small bundles of about a foot in circumference, cut even at both ends and tied together in two places. They are distinguished into two kinds, viz. the long and short; the former of which are four feet, and the latter two feet five inches in length. One part of them are singly dipped, i. e. at one end; the rest are dipped at both ends in a kettle of melted composition, and being immersed about seven or eight inches in this preparation and then drained, they are sprinkled over with pulverised sulphur upon a tanned hide.

The bavins are made of birch, heath, or other brush wood, which is tough and readily kindled. They are usually two or three feet in length, and have all their bushways lying one way, the other ends being tied together with small cords. They are dipped in composition at the bush ends, whose branches are afterwards confined by the hand to prevent them from breaking off by moving about; and also to make them burn more fiercely. After being dipped in the same manner as the reeds they are also sprinkled with sulphur.

Quick-match is formed of three strands, drawn into length and dipped in a boiling composition of white-wine-vinegar, saltpetre, and meal or corn-powder. After this immersion it is taken out hot and laid in a trough where some mealed powder, moistened with spirits of wine, is thoroughly incorporated with the twists of the cotton, by rolling it about therein. Thus prepared they are taken separately and drawn through mealed powder, then hung upon a line till dried, by which they are fit for immediate service.

Port-fires are frequently used by the artillery-men in preference to matches, to set fire to the powder or composition. They are distinguished into wet and dry port-fires. The composition of the former is saltpetre four, sulphur one, and mealed powder four. When these materials are thoroughly mixed and sifted, the whole is to be moistened with a little linseed oil, and rubbed between the hands till the oil is imbibed by the composition. The preparation for dry port-fires is saltpetre four, sulphur one, mealed powder two, and antimony one. These compositions are driven into small paper cases, to be used whenever necessary.

Four of the eight fire-barrels (according to the stores mentioned above for a fire-ship of 150 tons) are placed under the four fire-trunks and the other four between them, two on each side of the fire-scuttles where they are securely elevated to the deck. The longest reeds are put into the fore and aft troughs and tied down; the shortest reeds are laid in the troughs athwart, and tied down also. The bavins, dipped at one end, are tied fast to the troughs over the reeds, and the curtains are nailed up to the beams in equal quantities on each side of the fire-room. The remainder of the reeds are placed in a position nearly upright, at all the angles of every square in the fire-room, and there laid down. If any reeds are left they are to be put round the fire-barrels and other vacant places, and there tied fast.

Instructions to Prime.

Take up all your reeds, one after another, and strew a little composition at the bottom of all the troughs under the reeds, and then
tie

tie them gently down again: next strew composition upon the upper part of the reeds throughout the fire-room, and upon the laid composition lay double quick-match upon all the reeds in all the troughs: the remainder of the composition strew over all the fire-room, and then lay your bavins loose.

Cast off all the covers of the fire-barrels, and hang the quick-match loose over their sides, and place leaders of quick-match from the ends into the barrels, and from thence into the vent of the chambers in such a manner as to be certain of their blowing open their ports, and setting fire to the barrels. Two troughs of communication from each door of the fire-room to the sally-ports, must be laid with a strong leader of quick-match four or five times double; also a cross piece to go from the sally-port, when the ship is fixed, to the communication-trough, laid with leaders of quick-match that the fire may be communicated to both sides at once.

What quick-match is left place so that the fire may be communicated to all parts of the room at once, especially about the ports and fire-barrels, and see that the chambers are well and fresh primed.

The port-fires used for firing the ship, burn about twelve minutes; great care must therefore be taken to have no powder on board when the ship is fired.

The sheer-hooks are fitted so as to fasten on the yard-arms of the fire-ship where they hook the enemy's rigging. The fire-grapplings are either fixed on the yard-arms or thrown by hand, having a chain to confine the ships together or

fasten those instruments wherever necessary.

When the commanding officer of a fleet displays the signal to prepare for action, the fire-ships fix their sheer-hooks, and dispose their grapplings in readinets. The battle being begun, they proceed immediately to prime and prepare their fire-works. When they are ready for grappling they inform the admiral thereof by a particular signal.

To avoid being disabled by the enemy's cannon during a general engagement, the fire-ships continue sufficiently distant from their line of battle, either to windward or to leeward.

They cautiously shun the openings or intervals of the line where they would be directly exposed to the enemy's fire, from which they are covered by lying on the opposite side of their own ships. They are attentively to observe the signals of the admiral or his seconds, in order to put their designs immediately in execution.

Although no ship of the line should be previously appointed to protect any fire-ship except a few of the smallest particularly destined to this service, yet the ship before whom she passes in order to approach the enemy, should escort her thither, and assist her with an armed boat, or whatever succour may be necessary in her situation.

The captain of the fire-ship should himself be particularly attentive that the above instructions are punctually executed, and that the yards may be so braced, when he falls alongside the ship intended to be destroyed, that the sheer-hooks and grapplings fastened to the yard-arms, &c. may effectually hook the enemy. He is ex-

pected to be the last person who quits the vessel, and being furnished with every necessary assistance and support, his reputation will greatly depend on the success of his enterprize.

FISH—a machine employed to hoist and draw up the flukes of a ship's anchor towards the top of the bow, in order to stow it after it has been catted; it is composed of four parts, viz, the pendant, the block, the hook, and the tackle, which, with their uses, are described under the article **DAVIT**.

FISH—is also a long piece of timber, convex on one side and concave on the other, used to strengthen the lower masts, or the yards when they are sprung, or have received some damage in battle, or in tempestuous weather, &c. to effect which they are well secured by stout rope called **woolding**.

FISH-GIG—an instrument used to strike fish at sea; it consists of a staff with three, four, or more barbed prongs of steel, and a line fastened to the end on which the prongs are fixed; to the other end is fitted a piece of lead, which gives additional force to the stroke, and causes the points to turn upwards after the fish is penetrated.

FISH-ROOM—a space between the after-hold and the spirit-room.

FITTING-OUT—the act of furnishing a ship with sufficient masts, sails, yards, ammunition, artillery, cordage, anchors, provisions, stores, and men, for the voyage or purpose to which she is appointed.

FLAG—a certain banner by which an admiral is distinguished at sea from the inferior ships of his squadron; also the colours by which one nation is distinguished from another.

In the British navy, flags are either red, white, or blue, and are displayed from the top of the main-mast, fore-mast, or mizen-mast, according to the rank of the admiral.

The first flag in Great-Britain is the royal standard, which is only to be hoisted when the King or Queen is on board the vessel; the second is that of the anchor of hope, which characterises the Lord High Admiral, or lords commissioners of the admiralty; and the third is the union flag, appropriated to the admiral of the fleet, who is the first military officer under the Lord High Admiral. The Navy-Board, Custom-House, &c. have each their respective flags.

When the flag is displayed at the main-top-gallant-mast-head, the officer distinguished thereby is known to be an admiral; when from the fore-top-gallant-mast-head, a vice-admiral; and when from the mizen-top-gallant-mast-head, a rear-admiral; the next flag after the union is white at the main; and the last, which characterizes an admiral, is blue at the same mast-head.

For a vice-admiral the first flag is red, the second white, and the third blue, at the fore-top-gallant-mast-head.

The same order is observed with regard to rear-admirals, whose flags are displayed at the mizen-top-gallant-mast-head; the lowest flag in our navy is accordingly blue at the mizen.

All the white flags have a red St. George's cross in them, in order the more readily to be distinguished from the French white flag with a white cross.

Besides the national flag, merchant ships frequently bear lesser on the mizen-masts, with the arms of

of the city where the master ordinarily resides, and on the fore-mast with the arms of the place where the person who freights them lives.

When a council of war is held at sea, if it be on board the admiral, they hang a flag on the main-shrouds; if in the vice-admiral, in the fore-shrouds; and if in the rear-admiral, in the mizen-shrouds.

The flags borne on the mizen are particularly called Gallants.—See the article MAST.

To heave out the Flag is to put out or hang abroad the flag.

To hang out the White Flag is to call for quarter; or it shews when a vessel arrives on a coast that it has no hostile intention, but comes to trade, or the like.

To hang out the Red Flag is to give a signal of defiance and battle.

To lower, or strike the Flag, is to pull it down upon the cap, or to take it in, out of the respect or submission due from all ships or fleets inferior to those any way justly their superiors. To lower or strike the Flag in an engagement is a sign of yielding.

The way to lead a ship in triumph is to tie the flags to the shrouds, or the gallery in the hind part of the ship, and let them hang down towards the water, and tow the vessels by the stern. Livy relates that this was the way the Romans used those of Carthage.

FLAG-OFFICER—a term synonymous to admiral.

FLAG-SHIP—a ship in which an admiral's flag is displayed.

FLAG-STAFF—is generally a continuation of the top-gallant-mast above the top gallant rigging, but is sometimes, especially in guard-ships, a spar, occupying the place of the top-gallant-mast, and is only of use to display the

flag or pendant; when it is a continuation of the top-gallant-mast it is frequently termed the royal mast.

FLAIR—is a phrase at sea: when a ship being hoisted in near the water so that the work hangs over a little too much, and thus is let out broader aloft than the due proportion will allow, the seamen say that the work doth flair over.

FLAKE—a sort of platform made of hurdles, used for drying codfish in Newfoundland; they are usually placed near the shores of fishing-harbours.

Flake signifies also a small stage hung over a ship's side to caulk or repair any breach.

FLAT—a level ground lying at a small depth under the surface of the sea; otherwise called a SHOAL, or SHALLOW.

To FLAT IN—the action of drawing in the utmost clue of a sail towards the middle of a ship, to give the sail the greater power of turning the vessel; thus, if the mizen or after sails are flatted in, it is evident that the intention is to carry the stern to leeward, and turn the head nearer to the wind; and if the head-sails are flatted in, the intention is accordingly to make the ship fall off, when, by design or accident, she has come so near the wind as to make the sails flatter; hence—

FLAT IN FORWARD—is the order to draw in the jib and fore-top-mast stay-sail sheets towards the middle of the ship; this operation is seldom necessary, except in light breezes of wind, when the helm has not sufficient government of the ship.

FLAW—a sudden breeze or gust of wind.

FLEET—a general name given to the British navy; it also denotes

denotes any number of ships, whether designed for war or commerce, keeping company together.

The admirals of his majesty's fleet are classed into three squadrons, viz. the red, white, and blue. When any of these officers are invested with the command of a squadron or detachment of ships of war, the particular ships are distinguished by the colours of their respective squadron: that is to say, the ships of the red squadron wear an ensign whose union is displayed on a red field; the ensigns of the white squadron have a white field, and those of the blue squadron a blue field; the union being common to all three. The ships of war, therefore, are occasionally annexed to any of the three squadrons, or shifted from one to another.

Of whatsoever number a fleet of ships of war is composed, it is usually divided into three squadrons; and these, if numerous, are again separated into divisions. The admiral, or principal officer, commands the centre; the vice-admiral, or second in command, superintends the van-guard; and the operations of the rear are directed by the rear-admiral, or the officer next in rank. See the article **DIVISION**.

The disposition of a fleet while proceeding on a voyage will, in some measure, depend on particular circumstances; as the difficulty of navigation; the necessity of dispatch, according to the urgency or importance of the expedition; or the expectation of an enemy in the passage. The most convenient order is probably to range it into three lines or columns, each of which is parallel to a line close hauled, according to the tack on which the line of battle is design-

ed to be formed. This arrangement is more used than any because it contains the advantages of every other form without their inconveniences. The fleet being thus more inclosed will more readily observe the signals, and with greater facility form itself into the line of battle; a circumstance which should be observed in every order of sailing. See the article **ENGAGEMENT**.

Merchant-fleets generally take their denomination from the place they are bound to, as the Turkey fleet, the East-India fleet, &c. These in times of peace go in fleets for their mutual protection and assistance: in times of war, besides this security, they likewise procure convoys of men of war, either to escort them to the places whither they are bound, or only a part of the way, to a certain point or latitude, beyond which they are judged out of danger of privateers, &c.

FLEETING — the act of changing the situation of a tackle when the blocks are drawn together; also of changing the position of the dead-eyes, when the shrouds are become too long, which is done by shortening the shroud and turning in the dead-eye again higher up; the use of fleeting is accordingly to replace the mechanical powers in a state of action, the force by which they operated being destroyed by the meeting of the blocks or dead-eyes.

Fleeting, therefore, is nearly similar to the winding up of a watch or clock. See the article **TACKLE**.

FLOAT—a raft or quantity of timber fastened together, to be driven along a river by the tide or current.

FLOATING—the state of being

ing borne up or wafted along with the tide on the surface of the water. See the article TRIM.

FLOOD—the flux of the tide, or the time the water continues rising.

When the water begins to rise it is called a young Flood; after which it is quarter-flood, half-flood, and high-flood.

FLOOR—the bottom of a ship, or all that part on each side of the keel which approaches nearer to an horizontal than a perpendicular situation, and whereon she rests when aground; thus we say, "a sharp floor, a flat floor, a long floor," &c.

FLOOR-TIMBERS—are those parts of the ship's timbers which are placed immediately across the keel, and upon which the bottom of the ship is framed; to these the upper parts of the timbers are united, being only a continuation of floor-timbers upwards.

FLOTA—a Spanish fleet.—See the article GALLEON.

FLOWING—the position of the sheets or lower corners of the principal sails when they are loosened to the wind, so as to receive it more nearly perpendicular than when they are close hauled, although more obliquely than when going before the wind; a ship is therefore said to have a flowing sheet, when the wind crosses the line of her course nearly at right angles; that is to say, a ship steering due north with the wind at the east, or directly on her side, will have a flowing sheet; whereas, if the sheets were extended close aft she would fail two points nearer the wind, viz. N.N.E.—See the articles LARGE, TRIM, &c.

FLUKES—see the article ANCHOR.

FLURRY—a light breeze of wind shifting to different places, and causing a little ruffling on the calm surface of the sea.

FLUSH—see the article DECK.

FLY OF AN ENSIGN, PENDANT, &c. the breadth or extent from the staff to the extreme edge or end that flutters loose in the wind.

FLY-BOAT, or FLIGHT—a large flat-bottomed Dutch vessel whose burthen is generally from 4 to 600 tons; it is distinguished by a stern remarkably high, and by very broad buttocks below.

TO LET FLY THE SHEETS—is to let them go suddenly.

FOG—a mist at sea, consisting of gross vapours.

FOG-BANK—an appearance in hazy weather, which frequently resembles land at a distance, but which vanishes as you approach it.

FOOT OF A SAIL—the lower edge, or bottom.

FOOT-ROPE—the rope to which the lower edge of a sail is sewed. See the article BOLT-ROPE.

FOOT-ROPEs—are also the same with HORSES OF THE YARDS, which see.

FOOT WALEING—the whole inside planks or lining of a ship, used to prevent any part of her ballast or cargo from falling between her floor timbers.

FOOT OF A MAST—the lowest end, or that which goes into the step.

TO FOOT—to push with the feet, as "Foot the topfail out of the top."

FORE—the distinguishing character of all that part of a ship's frame and machinery which lies near the stem.

FORE AND AFT—throughout the ship's whole length, or from end

end to end; it also implies, in a line with the keel.

FORE BOW-LINE—the bow-line of the fore-sail. See **BOW-LINE**.

FORECASTLE—a short deck placed in the fore part of a ship above the upper-deck; it is usually terminated both before and behind in vessels of war by a breast-work, the foremost part forming the top of the beak-head, and the hind part reaching to the after part of the fore chains.

FORE-CASTLE MEN—sailors who are stationed on the fore-castle, and are generally prime seamen.

FORE CAT-HARPINGS—a complication of ropes used to brace in the upper part of the fore-shrouds. See the article **CAT-HARPINGS**.

FORE BRACES—ropes applied to the fore yard-arms to change the position of the fore-sail occasionally.

FORE-FOOT—a piece of timber which terminates the keel at the fore end; it is connected by a scarf to the extremity of the keel, and the other end of it which is incurvated upwards into a sort of knee, is attached to the lower end of the stem; it is also called a gripe.

As the lower arm of the fore-foot lies on the same level with the keel, so the upper one coincides with the middle line of the stem; its breadth and thickness therefore correspond with the dimensions of those pieces, and the heel of the cutwater is scarfed to its upper end.

FORE-HOOKS—the same with **BREAST-HOOKS**, which see.

FORE-LAND—a cape or promontory projecting into the sea; as the North and South Forelands.

FORE-LOCK—a little flat pointed wedge of iron, used to drive through a hole in the end of a bolt, to retain it firmly in its place.

FORE-JEARS—See the article **JEARS**.

FORE-MAST—See the article **MAST**.

FORE-SAIL—See the article **SAIL**.

FORE-SHROUDS—See the article **SHROUDS**.

FORE-STAY—See the article **STAY**.

FORE-TOP—See the article **TOP**.

FORE-TOP-MAST—See the article **TOP-MAST**.

FORE-TOP-GALLANT-MAST—See the article **TOP-GALLANT-MAST**.

FORE-TYE—See the article **TYE**.

FORE-YARD, &c. &c.—See the article **YARD, &c. &c.**

N. B. For the yards, sails, rigging, &c. of the **TOP-MAST**, and **TOP-GALLANT-MAST**. See those two articles.

FORE-TACKLE—a tackle on the fore-mast, similar to the **MAIN-TACKLE**, which see. It is used for similar purposes, and also in stowing the anchor, &c.

FORE-TOP-MEN—men stationed in the fore-top in readiness to set, or take in the smaller sails, and to keep the upper rigging in order.

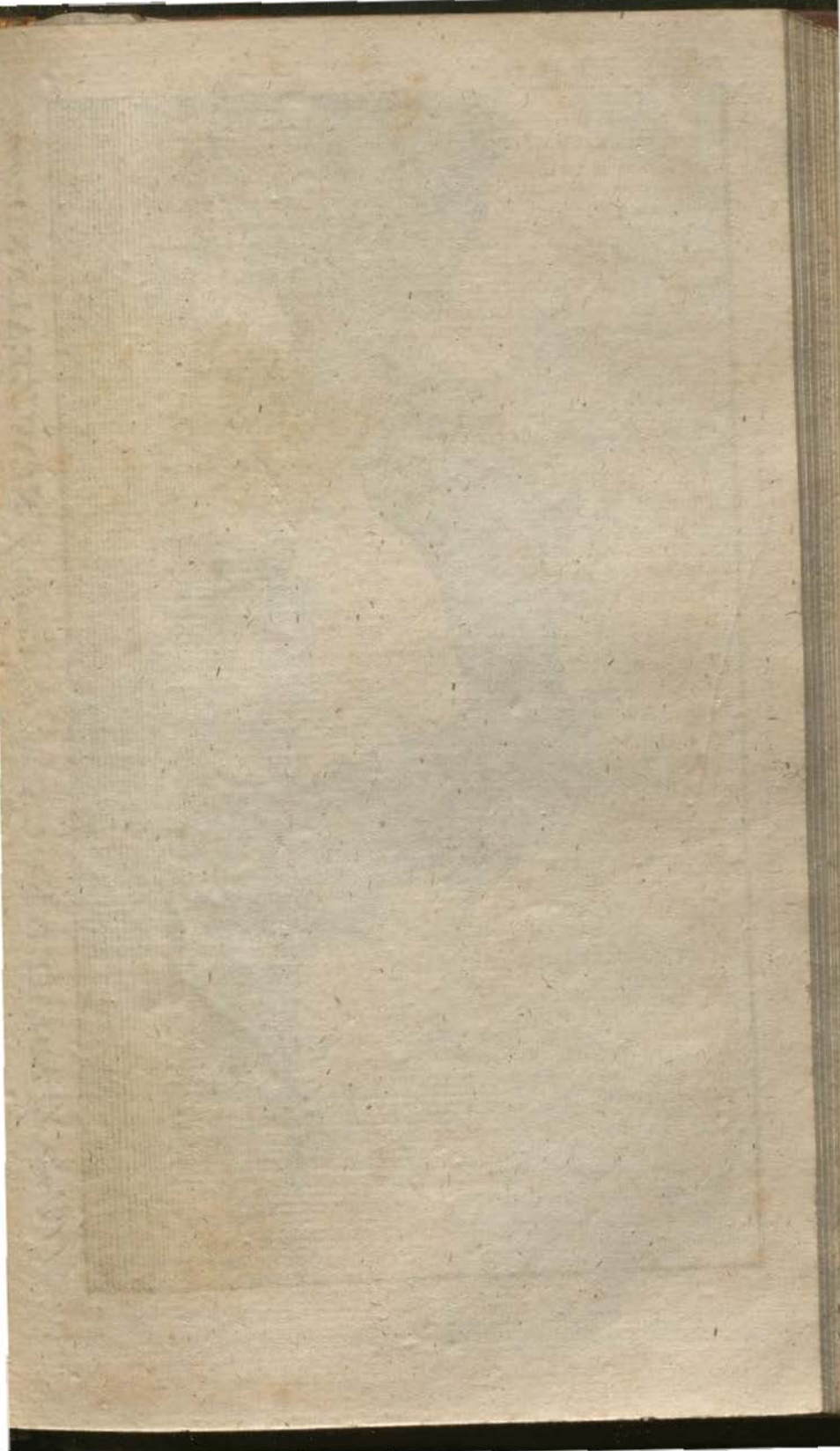
FORE-COCKPIT—See the article **COCKPIT**.

FORE-LIGHT-ROOM—See the article **LIGHT-ROOM**.

FORE-MAGAZINE—See the article **MAGAZINE**.

FORE-REACHING UPON—the act of advancing upon, or gaining ground of, some other ship or ships in company.

FORE-RUNNER OF THE LOG-LINE



London: Published by Allan & Hoop, at the Foreign Office, No. 6, Pall Mall, in the Strand.



A Curiously ARCHED ROCK, on the Coast of NEW ZEALAND, with
South Sea

LINE—a small piece of red bunting, laid into that line at a certain distance from the log, the space between them being called the *stray-line*, which is usually from twelve to fifteen fathoms, and is an allowance for the log to be entirely out of the ship's dead water, before they begin to estimate the ship's velocity; consequently the knots begin from that point.—See the article **LOG**.

FORE-STAFF—is an instrument used at sea for taking the altitudes of heavenly bodies.

The *Fore-staff*, called also *Cross-staff*, takes its denomination hence, that the observer in using it turns his face towards the object, in contradistinction to the *Back-staff*, where he turns his back to the object.

The *Fore*, or *Cross-staff*, consists of a strait square staff, graduated like a line of tangents and four crosses, or vanes which slide thereon. The first and shortest of these vanes is called the *ten cross* or *vane*, and belongs to that side of the instrument whereon the divisions begin at three degrees, and end at ten. The next longer vane is called the *thirty cross* belonging to that side of the staff whereon the divisions begin at ten degrees and end at thirty, called the *thirty scale*. The next vane is called the *sixty cross*, and belongs to that side where the divisions begin at twenty degrees and end at sixty; the last and longest, called the *ninety cross*, belongs to that side whereon the divisions begin at thirty degrees and end at ninety.

The great use of this instrument is to take the height of the sun and stars by the distance of two stars, and the ten, thirty, sixty, or ninety crosses are to be used according as the altitude is greater

or less; that is, if the altitude be less than ten degrees the *ten cross* is to be used; if above ten, but less than thirty, the *thirty cross* is to be used, and so on.

N. B. For altitudes greater than thirty degrees this instrument is not so convenient as a quadrant or semi-circle.

In order to observe an altitude by the *Fore-staff*, apply the flat end of the staff to your eye and look at the upper end of the cross for the centre of the sun or star, and at the lower end for the horizon. If you see the sky instead of the horizon, slide the cross a little nearer the eye; and if you see the sea instead of the horizon slide the cross farther from the eye, and thus continue moving till you see exactly the sun or star's centre by the top of the cross, and the horizon by the bottom thereof.

Then the degrees and minutes, cut by the inner edge of the cross upon the side of the staff, peculiar to the cross you use, give the altitude of the sun or star.

If it be the meridian altitude you want, continue your observation as long as you find the altitude increase, still moving the cross nearer to the eye.

By subtracting the meridian altitude thus found, from ninety degrees, you will have the zenith distance.

To work accurately an allowance must be made for the height of the eye above the surface of the sea; viz. for one English foot 1 minute, for five feet $2\frac{1}{4}$, for ten feet $3\frac{1}{4}$, for twenty feet 5, for forty feet, 7, &c.

These minutes subtracted from the altitude observed, and added to the zenith distance observed, give the true altitude and zenith distance.

In order to observe the distance of two stars, or the moon's distance from a star by the forestaff, apply the instrument to the eye, and looking to both ends of the cross, move it nearer or farther from the eye till you see the two stars; the one on the one end, and the other on the other end of the cross; then the degrees and minutes cut by the cross on the side proper to the vane in use, give the stars' distance.

FORGING OVER—the act of forcing a ship violently over a shoal, by the effort of a great quantity of sail.

FORMING THE LINE—See the article **LINE**.

FORMING THE ORDER OF SAILING—See the article **SAILING**.

FORMER—a small cylindrical piece of wood, on which musket or pistol cartridges are made.

FORT—a small fortified place environed on all sides with a moat, rampart, and parapet.

Fortaleza on the coast of Brazil in South America is the same as Fort.

FORWARD — towards the fore part of the ship. See the article **AFORE**.

FOTHERING — a peculiar method of endeavouring to stop a leak in the bottom of a ship, while she is afloat either at sea or at anchor, which is performed by fastening a sail at the four corners, letting it down under the ship's bottom, and then putting a quantity of chopped rope-yarns, oakum, wool, cotton, &c. between it and the ship's side; by repeating the latter part of this operation several times, the leak generally sucks in a portion of the loose stuff, and thereby becomes partly and sometimes wholly stopped. Some persons prefer thrumming

the sail instead of letting down the loose stuff, but in this mode the sail is soon chafed through by the hole, if the leak is considerable, without affording sufficient substance to stop it.

FOUL—is generally used in opposition to clear and implies entangled, embarrassed, or contrary to; as "a ship ran foul of us," that is "entangled herself among our rigging."

FOUL ANCHOR—implies that the cable is twisted round the stock, or one of the flukes, and thereby endangers the ship's drifting.

FOUL BOTTOM—denotes a bottom covered with grass, sea-weed, shells, or other filth, which gathers and adheres to it.

FOUL GROUND and **FOUL COAST** — signifies rocky or abounding with shallows, or otherwise dangerous.

FOUL HAWSE — means that the cables are turned round each other, by the ship having swung the wrong way when moored. See the articles **ELBOW** and **HAWSE**.

FOUL ROPE—a rope entangled and unfit for immediate use.

FOUL WATER—is water troubled and rendered turbid by the ship's bottom rubbing on the ground.

FOUL WIND—is used to express that the wind is unfavourable, or contrary to the ship's course, as opposed to large or fair.

To **FOUNDER**—to sink or go down. The fatal situation of a ship which is no longer able to keep above water, through accident, or the violence and continuation of a storm and the excess of the leaks.

FOX—is formed by twisting several rope-yarns together, and is used for a seizing, or to weave a paunch, or mat, &c.

SPANISH FOX—is a single rope-yarn untwisted, and then twisted up the contrary way and rubbed smooth. It is used for small seizings.

FRAME—see the article **TIMBER**.

FRAPPING—the act of crossing and drawing together the several parts of a tackle, or other complication of ropes, which had already been strained to their utmost extent: in this sense, it exactly resembles the operation of bracing up a drum. The frapping increases tension, and consequently adds to the security acquired by the purchase: hence the catharpings are no other than frappings to the shrouds.

FRAPPING A SHIP—the act of passing four or five turns of a large cable-laid rope, round the hull or frame of a ship in the middle, when it is apprehended that she is not strong enough to resist the violent efforts of the sea.

This expedient is only made use of for very old ships which their owners are willing to venture to sea as long as possible by insuring them deeply.

GOING FREE.—See **SAILING** large.

FREEING—the act of pumping, or otherwise throwing out the water which has leaked into a ship's bottom, at sea, &c.

FREEZING—ornamental painting or sculpture on the upper part of a ship's quarter, stern, or bow. It consists generally of armour, instruments of war, marine emblems, &c.

FREIGHT OF A SHIP—the hire or part thereof, usually paid for the carriage and conveyance of goods; or the sum agreed upon between the owner and the merchant for the hire and use of a vessel.

FREIGHT—The freight of a vessel is usually agreed on either at the rate of so much for the voyage, or by the month, or per ton.

FREIGHTING or letting out vessels on freight or hire, is one of principal articles in the trade of the Hollanders. They are the carriers of all the nations of Europe, and their purveyors, notwithstanding that their country produces little or nothing, and that they are forced to have every thing necessary for the building of a vessel from other countries.

The principal laws and rules relating to freighting are,

That if a whole vessel be hired, and the merchant or person who hires it, do not give it its full load or burthen, the master of the vessel cannot without his consent take in any other goods without accounting to him for freight.

That though the merchant do not load the full quantity of goods agreed on in the charter-party, yet he shall pay the whole freight; and if he load more he shall pay for the excess.

If a time be appointed by charter-party, and either the ship be not ready to take in, or the merchant to put on board, the parties are at liberty, with remedy by action for the detriment.

If part be on board, and some misfortune prevent the merchant's landing the whole in time, the master may contract with another, and have freight as damage for the time longer than limited.

On the other hand, if the vessel be ready, the merchant may ship the remainder of the goods aboard another, and recover damages against the first master or owners: therefore, by the law marine, charter or other notes

rious necessity, will excuse the master, but he loses his freight till he breaks ground. But if the merchant be in fault he must answer the damage or be liable to maintain the crew ten days; and if after that, the full freight: if damage afterwards, it is the merchant's risk: but by the common law, while the goods are on board, the master must see them forth coming.

If goods are fully laded, and the ship hath broken ground, but the merchant afterwards declines the adventure, and unloads again, by the law marine the freight is due.

If a set time be agreed on between the merchant and master to begin and end the voyage, it may not be altered by the supercargo without special commission; and if a master shall sail on his voyage after the time agreed on for his departure, and damage happens afterwards, he shall make it good. If a ship be freighted from one port to another, thence to a third, &c. and so home to the port whence she first sailed (commonly called a trading voyage) the whole is one and the same voyage, if performed according to the charter-party. If the ship be freighted out and in, no freight is due till the voyage is performed; if, therefore, the ship perish coming home, the whole freight is lost.

The master may set ashore such goods as he finds in his vessel which were not notified to him; or take them at a higher rate than was agreed on for the rest. But if the master freight his ship, and afterwards secretly take in other goods, he loses his freight; and if any of the freighter's goods should, for the ship's safety, be cast overboard, the rest shall not

be subject to average, but the master must make it good.

If a ship be stopped or detained in its course, either through the master's or merchant's default, the delinquent shall be accountable to the other. Thus, if the freighter load the ship with prohibited goods, he shall answer the freight contracted; but if the ship put into any other port than she is freighted to, the master shall answer damage to the merchant; but if forced in by storm, enemy, or pirates, he must then sail to the stipulated port at his own costs.

If the master be obliged to re-fit his vessel during his voyage, the merchant shall wait, or else pay the whole freight; if the vessel could not be refitted, the master is obliged to hire another immediately, otherwise only to be paid his freight in proportion to the part of the voyage performed; though, in case the merchant prove that the vessel, at the time it set sail, was not capable of the voyage, the master must lose his freight, and account for damages to the merchant.

Freight shall be paid for merchandises which the master was obliged to sell for victuals, or refitting, or other necessary occasions, paying for the goods at the rate the rest were sold at where they were landed.

In case of a prohibition of commerce with the country whither the vessel is bound, so that it is obliged to be brought back again, the master only shall be paid freight for going.

And if a ship be stopped or detained in its voyage by an embargo by order of the prince, there shall neither be any freight paid for the time of the detention in case it be hired per month;

nor shall the freight be encreased, if hired for the voyage; but the pay and the victuals of the sailors during the detention shall be deemed average. See the article AVERAGE.

FREIGHT—is also used for the burthen or lading of a ship, or the cargo of goods, &c. which she has on board.

FREIGHT—is also a duty of fifty sols per ton paid to the government of France by the masters of foreign vessels going in or out of the several ports of the kingdom.

It is to be observed, that all vessels not built in France are accounted foreign, though belonging to that government, and as such are liable to the payment of this impost, unless otherwise exempted, or that two thirds of the crew are French. The Dutch and the Hanse Towns are exempted from the duty of freight.

FRESH—when applied to the wind, signifies strong, but not violent or dangerous; hence, when the gale increaseth, it is said to *freshen*.

FRESH SHOT—signifies the falling down of any great river into the sea, by means whereof the sea hath fresh water a good way from the mouth of the river. As this is more or less, they call it a great or small fresh shot.

FRESH-SPELL—a fresh gang to relieve the rowers in the long-boat.

FRESH WATER—implies water fit to drink, in opposition to sea or salt water.

FRESH WAY OF A SHIP—implies a considerable velocity.

TO FRESHEN HAWSE—to relieve that part of the cable which has for some time been exposed to friction in one of the hawse-holes, when the ship rocks and pitches at

anchor in a high sea; this is done by applying fresh service to the cable within board, and then veering it into the hawse. See SERVICE.

FRESHES—imply the impetuosity of an ebb-tide, increasing by heavy rains and flowing out into the sea, which it often discolours to a considerable distance from the shore, insomuch as the line which divides the two colours may be perceived distinctly for a great length along the coast.

FRIGATE—in the Navy, a light nimble ship built for the purpose of sailing swiftly. These vessels mount from twenty to forty-four guns, and make excellent cruizers.

FRIGATE-BUILT—the disposition of the decks of such merchant ships as have a descent of four or five steps from the quarter-deck and fore-castle into the waist, in contradistinction to those whose decks are on a continued line for the whole length of the ship, which are called galley-built. See the article DECK.

Formerly the name of frigate was only known in the Mediterranean, and applied to a kind of long vessels navigated in that sea with sails and oars. The English were the first who appeared on the Ocean with those ships, and equipped them for war as well as commerce.

FULL AND BY—the situation of a ship with regard to the wind, when she is close-hauled, and sailing in such a manner as neither to steer too nigh the direction of the wind, nor to deviate from it: or it is when a ship is as close as she will lie to the wind without suffering the sails to shiver; hence, **KEEP HER FULL**, is the order to the helmsman, not to incline

too

too much to windward, and thereby shake the sails which would retard the ship's velocity.

FUNNEL. See the article **FIRESHIP.**

FURLING—the operation of wrapping or rolling a sail close up to the yard, stay, or mast, to which it belongs, and winding a gasket or cord about it, to fasten it thereto.

FURLING IN A BODY—is a particular method of rolling up a top-sail only practised in harbour, and is performed by gathering all the loose part of the sail into the top about the heel of the top-mast, whereby the yard having as little rolled on it as possible, appears much thinner and lighter than when the sail is furled in the usual manner, which is sometimes termed, for distinction sake, *furling in the bunt.*

FURLING-LINE—denotes a cord employed in this operation; they are generally flat, and are known by the name of *Gaskets.*

FUSE. See the article **MORTAR.**

FUTTOCKS—the middle division of a ship's timbers, or those parts which are situated between the floor and the top timbers. Those next the keel are called *ground futtocks*, and the rest *upper futtocks.*

FUTTOCK-SHROUDS, or FOOT-HOOK SHROUDS. See the article **SHROUDS.**

The epithet *hook* is frequently applied in common language to any thing bent or incurvated, and particularly to several crooked timbers in a ship, as the *breast-hooks, fore-hooks, after-hooks, &c.* This term is evidently derived from the lowest part or foot of the timber, and from the shape of the piece.

G.

GAFF—a sort of boom, used in small ships, to extend the upper edge of the mizen, and employed for the same purpose on those sails whose foremost edges are joined to the masts by hoops or lacings, and which are usually extended by a boom below; such are the main-sails of sloops, brigs, and schooners.

The foremost end of the gaff is furnished with two cheeks forming a semi-circle, which enclose the after part of the mast, and is secured in this position by a rope passing from one of the cheeks to the other on the fore side of the mast, on which are strung several small wooden balls, called *trucks*, to lessen the friction of the rope on the mast when the sail is hoisting or lowering. It is further secured in this situation by a rope passing from one of the cheeks to the other on the fore side of the mast, and to prevent the friction of this rope upon the mast, by hoisting or lowering, several little wooden balls, called *trucks*, are hung upon it, in the same manner as beads are hung upon a catholic's rosary.

GAFF HALIARDS. See **HALIARDS.**

GAFF TOP-SAIL—is a light quadrilateral sail, the head being extended on a small gaff, which hoists on the top-mast, and the foot spreading from the throat to the peak, or the extent of the lower gaff.

GAGE. See **WEATHER-GAGE.**

TO GAIN THE WIND, to arrive on the weather side, or to windward of some other vessel, when both are plying to windward, or sailing as near the wind as possible.

GALE OF WIND—implies a storm or tempest, more particularly termed a

HARD GALE, OR STRONG GALE.

A STIFF GALE—is rather the diminutive of the preceding article.

A FRESH GALE—is a still further diminutive, and may be considered as not too strong for a ship to carry single reefed top-sails in it when close hauled.

A TOP-GALLANT GALE, is a wind in which a ship may carry her top-gallant sails.

GALLED—the state of a mast, yard, cable, or other rope, when it is deprived of its surface by friction; to prevent which it is usual to cover them with skins, mats, canvas, or such materials, in the places where they are most exposed to it. See the article **SERVICE**.

GALLEON, OR GALLION—a name formerly given to ships of war furnished with three or four batteries of cannon. It is now retained only by the Spaniards, and applied to the largest size of their merchant ships employed in West-Indian voyages, and usually furnished with four decks. They likewise bestow the same name on those vessels, whether great or small, which proceed annually to La Vera Cruz. The Portuguese also have several ships which they send to India and the Brazils, nearly resembling the galleons, and by them caravages.

The Spaniards send every year two fleets; the one for Mexico, which they call the flota; and the other for Peru, which they call the galleons.

The galleons are loaded at Cadiz, from whence they may put out at any time. They were formerly appointed to be out in January, that they might coast along the

firm land, and come about the middle of April to Porto Bello; where, the fair being over, they might take aboard the plate, and be at the Havannah with it about the middle of June, where the New Spain fleet would soon join them, and they might come together more safely to Spain. For this purpose, the viceroy of Peru was to take care that the plate should be at Panama by the middle of March. The plate is fifteen days in removing from Potosi to Arica; eight days generally from thence, by sea, to Callao, and twenty from Callao to Panama, taking in by the way the plate at Paita and Truxillo. But it has been found by experience, that the month of September is the safest for the fleet to sail: they are about two years in the whole voyage. However often or seldom the galleons go out, the next fleet never go out till the last are returned. When the galleons and flota put out together, they separate about the Antilles Islands; the galleons for Carthagena and Porto Bello, and the flota for Vera Cruz. At their return, they rejoin at the Havannah, in the isle of Cuba.

The loading of the galleons is always the richest: an estimate of the yearly returns or cargoes, both of the flota and galleons, was formerly as follows:

Of gold, the galleons bring yearly about two or three millions of crowns, and the flota about one. Of silver, the galleons bring 18 or 20,000 crowns, and the flota 10 or 12. Of precious stones, the galleons bring as follow: 200,000 crowns worth of pearls, 2 or 300,000 crowns worth of emeralds, and 20 or 30,000 crowns worth of bezour, amethysts, and
other

other stones of less value; the flota brings none at all. Of wools, the galleons bring 40 or 50,000 crowns, the flota none. Of quinquina, the galleons bring the value of 20,000 crowns, the flota none. Of skins and leather, the galleons bring 70,000 crowns worth; the flota as much. Of Campeachy wood, the galleons bring 60,000 crowns worth; the flota none. Of skins and leather from Buenos Ayres, the register ships may bring to about 200,000 crowns; of cochineal about a million of crowns, and of indigo, about 600,000.

By a general ordonance in Spain, it has been established that there should be twelve men of war and five tenders fitted out annually for the armade of galleons; eight ships of 600 tons burthen each; and three tenders, one of 100 tons, for the island Margarita, and two of 80 each, to follow the armada. For the New Spain fleet, two ships of 600 tons each; and for the Honduras fleet, two ships of 500 tons each; and in case no flota happened to sail any year, three galleons and a tender should be sent to New Spain for the plate.

But the number of galleons has been different at different times; it has increased in time of war, and diminished in time of peace.

GALLERY—a balcony, projecting from the stern or quarter of a ship of war, or of a large merchantman.

STERN-GALLERY—that part of the preceding article which is wholly at the stern of the ship, and is usually decorated with a balustrade extending from one side of the ship to the other; the fore-part is limited by a partition, called the *screen-bulkhead*, in which are framed the cabin-windows, and

the roof of it is formed by a sort of vault, termed the *cove*, which is frequently ornamented with sculpture. See the article **STERN**.

QUARTER-GALLERY—is that part which projects on each quarter, and is generally fitted up as a water-closet.

Ships of twenty guns and upwards, on one deck, have quarter-galleries, but no stern-gallery; two and three deckers have two or three of these conveniences on each side, one under the other, and one or two stern-galleries. See the article **QUARTER**.

GALLEY—a kind of low flat-built vessel, furnished with one deck, and navigated with sails and oars, particularly in the Mediterranean.

The largest sort of these vessels, called galleasses, were formerly ployed by the Venetians; they were about 162 feet long above, and 133 feet by the keel, 32 feet wide, and 23 feet length of stern-post. They were furnished with three masts, and thirty-two banks of oars, each bank containing two oars, and every oar being managed by six or seven slaves, who were usually chained thereto. In the fore part they had three small batteries of cannon, viz. two 36-pounders, two 24-pounders, and two 2-pounders; they had also three 18-pounders on each quarter, and carried from 1000 to 1200 men. They were found, however, by experience, to be of little utility, except in fine weather; notwithstanding they were deemed extremely convenient for bombardment, or making a descent upon an enemy's coast, as drawing but little water, and having by their oars frequently the advantage of a ship of war in light winds or calms, by cannonading the latter

near

near the surface of the water, by scouring her whole length with their shot, and at the same time keeping on her quarter or bow, so as to be in the direction of her cannon.

The gallies next in size to these are called half-gallies, and are from 120 to 130 feet long, 18 feet broad, and 9 or 10 feet deep. They have two masts, which may be struck at pleasure, and are furnished with two large lateen sails, and five pieces of cannon. They have commonly twenty-five banks of oars, as described above. A size still less than these are called quarter-gallies, carrying from 12 to 16 banks of oars. They generally keep close under the shore, but sometimes venture out to sea to perform a summer cruise. See the article BUILDING (Ship).

M. Deslandes, a French author, in 1748, treats as a fable those amazing accounts transmitted to us in histories, of large fleets, in ancient times, run up in a short space. He is certain that it is magnifying their dispatch beyond all probability.

The question is, how the gallies of the ancients were built? The author reduces all the different systems on this head to three. The first places the tiers of oars above one another, as so many stories. The second supposes that the gallies are distinguished in their appellation, according to the number of rowers posted at every oar, whence a biremis had two men to each oar, a triremis three, and so on. According to the third, there were three different decks, or floors, and a certain number of oars fitted for each floor, of which the longest were for the aftermost deck, as being the uppermost; the shortest for the midship, which

was the lowest; and a mean sort for the fore-deck. The number of oars was also answerable to the number of seats; thus a biremis had six oars on each side, two to each deck, whereas a triremis had nine, three on every seat. These are the three different plans, and all of them have their respective difficulties, and those insoluble. First, that seats should be raised above one another, and sometimes, as we are told, to 20, 30, 40, and 50 tier, is a supposition so impracticable as not to deserve an examination. The second system must require a galley of a prodigious bulk to have fifteen or twenty tier of oars on a side, as it amounts to thirty or forty rowers on each side of the galley. The more prodigious length of the galley, according to the third system, quite overthrows it; for a galley of twenty tiers of oars must have had sixty rowers on each side, another of thirty, ninety rowers, and so on, the number of rowers increasing according to the number of oars on the three decks or seats.

Among all the historians who so often mention the biremes, triremes, &c. not one affords any precise idea of them. We are equally at a loss about their construction on antique medals and basso relievos.

M. Deslandes looks upon the stupendous galley of Ptolemy Philopatris as a fiction; or, if there ever was such a vessel, it, and Hiero's galley, must have been built upon piles, and only in the shape of a galley. The like may be said of other enormous masses, fashioned like a galley, and made fast to keys with cables or chains, either to serve at public spectacles or particular entertainments. The like are to be seen at Constantino-

ple and Venice for the diversion of the people.

Several had two rudders, one at the prow, and the other at the stern, to tack about the more readily. The Roman gallees were but lightly ballasted, nor did they want much, being only employed in smooth seas; whereas, the Gaulish ships were flat-bottomed, and very unweildy; besides, being very lofty toward the head and stern, they required to be well ballasted. The barks of trees supplied them with tackling; they carried only one very small mast, with two long yards on it; the sails of Mediterranean ships were of flax, whereas those which sailed on the ocean, always had them of supple skins, well fanned. These sails were diversely painted, for the better observing orders, something like to what is this day used. They had pumps to clear the ships of water, and leads to sound the bottoms for safe anchorage.

The author, after an explicit description of the proportions observed by the ancients in their ships and gallees, proceeds to examine the position and bigness of the oars, which very probably are of ancients date than sails. It is not certainly known what were the dimensions of the ancient galley oars, but those used in our largest gallees do not exceed 36 or 40 feet in length: they are one whole stick, and in length about two breadths of the galley. Three feet is the fixed distance between each oar, that the rowers may not encumber each other, but their arms have free scope.

Supposing, he says, only a distance of five feet betwixt each stage, the author infers that the oars of the third row must have been above 100 feet long; which

being a palpable impossibility, he concludes, that historians, for want of being duly informed themselves (which is too often the case) have missed us; or that these ships, which did contain so great a number of rowers, were built only for pomp and parade, without any view to usefulness in war or commerce. All these argumentations may be further strengthened by others, drawn from the equilibrium, which must be punctually kept up in a ship, as well when at rest, as when under sail. If the question in debate be brought to the test in hydrostatics, it will be evident that in the structure, which authors attribute to them, the ships of the ancients could not keep the sea. To the objection, that the secret of the ancients in building their biremes and triremes may have been lost, Deslandes very plausibly shows, that mathematical arts, far from decaying, improve from age to age, though any particular knack, or secret, in drugs, &c. may be lost.

The argument drawn from the basso relievos, upon the Columna Trajana at Rome, appears a very slight one to M. Deslandes, on account of the irregularity and confusion in what is looked upon as biremes and triremes; and the like may be said of those medals, on which some will pretend to discern several tier of oars; the respective differences can hardly be expressed within the compass of a medal. He at length comes to lay down his own conjecture, about the frame of the ancient gallees, and, particularly of the triremis, which was their most usual fighting ship. The structure of a triremis exhibits several rows, or tiers, of oars, without having recourse to any alteration in the frame

frame of the galley. According to him, the first row reached from the prow to the mast; the second from the mast to the after castle and the third row was along the after castle and poop, and this was the disposition in a complete triremis. The three stories were raised above each other, amphitheatrewise, and all communication betwixt them was blinded, in the time of action, that if any misfortune befel one of the tiers, the others might not be disheartened at it. The rowers in every story were intermixed with soldiers, called *Classarii*, who had their particular function in fight. The *Thalamites*, whose post was upon the prow, were to do their utmost to disable the enemy's ships, in which they made use of large pieces of a pointed steel, and iron or brass crows, of which the prow was full. The *Zygites* were continually plying their oars, to work the ship to the best advantage. The *Thranites*, who were placed on the upper story, were for a close engagement, galling the enemy with arrows, stones, and fiery darts; and above these stood the pilots. There appears to have been ten benches on each story, which makes thirty oars, or rowers, of a side, a number which answers to the modern practice. M. Deslandes judges that a tartane, as to the head and stern, is not very unlike an antique galley. Were the triremes the largest ships, very few passages in the ancient authors would remain obscure; but the difficulty lies in the quadriremes, quinqueremes, deciremes, &c. with regard to which, our author thinks the historians must have amplified.

All the galleys, both ancient and modern, are of a finer and slender-

er make than ships. Formerly they made divers kinds, at present the galleys are all alike, the only difference being with respect to size, but nothing as to figure.

In France are forty galleys for the use of the Mediterranean, the arsenal thereof being at Marseilles. The general of the galley bears a double anchor placed in pale behind the escutcheon of his arms, as a mark of his office.

The captain galley is the principal galley of a state, commanded by the captain-general of the galleys. In France, before the Revolution, the royal galley was the first.

GALLEY—is also a name given to an open boat, rowing six or eight oars, and used on the river Thames by custom-house officers, press gangs, and also for pleasure; hence the appellation of custom-house-galley, press-galley, &c.

GALLEY, or **GALLY**—is also the name of the kitchen of a ship of war, or the place where the grates are put up, fires lighted, and the victuals generally boiled or roasted.

In East-India ships, it is generally termed the cook-room, and on board of merchantmen it is called the caboose.

GALLEY-SLAVE—a person condemned to work at the oar on board a galley, being chained to the deck.

Condemnation to the galleys is a punishment particularly in France, whereby criminals and delinquents are adjudged to serve as slaves on board the galleys, either during life, or for a limited time. A man condemned for perpetuity is dead in a civil sense; he cannot dispose of any of his effects; cannot inherit; and if he be married, his marriage is null, nor can his widow have any of her dower out of his goods,

which, with his lands, are hereby confiscated.

GALLING-FIRE—a repeated discharge of cannon, or small arms which, by its execution, greatly annoys the enemy.

GALLIOT—a Dutch vessel, carrying a main and a mizen-mast, and a large gaff-main-sail.

A galliot is a sort of a brigantine, or small galley, built very slightly, and designed only for chase. She can both sail and row, and usually carries about two or three pedreros, and has sixteen or twenty oars. All the seamen on board are soldiers, and each has a musquet by him on quitting his oar.

Some also call the bomb-ketches galliots.

GALLOWS-BITS—a strong frame of timber, in form of a gallows, forming a support for the spare top-masts, yards, and booms.

GAMMONING—Seven or eight turns of a rope, passed over the bowsprit and through a large hole in the stem or knee of the head, alternately, and serving to bind the inner quarter of the bowsprit close down to the ship's stem, in order to enable it the better to support the stays of the fore-mast; after all the turns are drawn as firm as possible, the opposite ones are braced together under the bowsprit by a frapping.

GANG—a select number of a ship's crew appointed on any particular service, and commanded by an officer suitable to the occasion.

GANG-BOARD—a plank or board, with several cleats or steps nailed to it, for the convenience of walking into or out of a boat upon the shore, where the water is not deep enough to float the boat close to the landing-place.

GANGES. See the article **GONGA.**

GANGWAY—a narrow platform, or range of planks, laid horizontally along the upper part of a ship's side, from the quarter-deck to the fore-castle, and is peculiar to ships that are deep waisted, for the convenience of walking more expeditiously fore and aft than by descending into the waist; it is fenced on the outside by iron stanchions, and ropes or rails, and in vessels of war with a netting, in which part of the hammocks are stowed. In merchant ships it is frequently called the Gang-board.

GANGWAY is also that part of a ship's side, both within and without, by which persons enter and depart; it is provided with a sufficient number of steps or cleats, nailed upon the ship's side, nearly as low as the surface of the water, and sometimes furnished with a railed accommodation ladder, resembling a flight of stairs projecting from the ship's side, and secured by iron braces.

GANGWAY—is also used to signify a narrow passage left in the hold, when a ship is laden, in order to enter any particular place as occasion may require, whether to examine the situation of the provisions or cargo; to discover and stop a leak, or to bring out any article that is wanted. Finally,

GANGWAY implies a thoroughfare or narrow passage of any kind.

TO BRING TO THE GANGWAY—a phrase, signifying to punish a seaman by seizing him up and flogging him with a cat-o'-nine-tails.

GANTLOPE, or GAUNTLOPE, vulgarly pronounced **GANTLET**—a race which a criminal is sentenced to run in a vessel of war, for felony, or some other heinous offence.

offence. It is executed in the following manner:—the whole ship's crew is disposed in two rows, standing face to face on both sides the deck, so as to form a line whereby to go forward on one side and aft on the other, each person being furnished with a small twisted cord called a *knittle*, having two or three knots upon it; the delinquent is then stripped naked above the waist, and ordered to pass forward between the two rows of men on one side and aft on the other side, a certain number of times, rarely exceeding three, during which every person gives him stripes as he runs along; in his passage he is sometimes tripped up and severely handled while incapable of proceeding; this punishment, which is called *running the gantlet*, is seldom inflicted except for such crimes as naturally excite general antipathy amongst the seamen.

GARLAND—a sort of net, whose opening is extended by a wooden hoop, of sufficient size to admit a bowl or platter within it; it is accordingly used by sailors as a locker or cupboard, to contain their provisions, being hung up to the beams within the birth, where they commonly meet between decks.

SHOT GARLAND—a piece of timber nailed horizontally along the ship's side from one gun-port to another, and fitted with several hemispherical cavities to contain the round-shot ready for charging the great guns in battle.

GARNET—a sort of tackle fixed to the main-stay of a merchant ship, and used to hoist the cargo in and out at the time of lading and delivering her.

CLUE GARNET. See the article **CLUE**.

GARBOARD-STREAK—the first range or streak of planks laid upon a ship's bottom, next the keel, throughout the whole length of the floor.

The edge of this plank is let into a groove or channel in the side of the keel, which is called the rabbit of the garboard-streak.

GASKET—a sort of plaited cord fastened to the sail-yards of a ship, and used to furl or tie up the sail firmly to the yard by wrapping it round both, six or seven times, the turns being at a competent distance from each other.

BUNT GASKET—is that which supports or ties up the bunt of the sail, and should consequently be the strongest, as having the greatest weight to support; it is sometimes made in a peculiar manner.

QUARTER GASKET—used only for large sails, and is fastened about half-way out upon the yard, which part is called the quarter.

THE YARD-ARM GASKET—is made fast to the yard-arm, and serves to bind the sail as far as the quarter-gasket on large yards, but extend quite into the bunt of small sails.

TO GATHER AFT A SHEET—is a phrase signifying to pull it tight in.

TO GATHER WAY—to increase the velocity.

GATT—is the same as Channel, and is a term constantly used on the Flemish coast and in the Baltic for that purpose.

GAUT—a term made use of in the East Indies to denote a passage or road from the coast to the mountainous or upland country.

GEARS.

GEARS. See the article **JEARS**, which is the more general way of spelling it.

GIMBALS—the brass rings by which a sea-compass is suspended in its box, so as to counteract the effect of the ship's motion, and keep the card horizontal. See the article **COMPASS**.

GIMBLETING—a term applied to the anchor to denote the action of turning it round by the stock, so that the motion of the stock appears similar to that of the handle of a gimblet when it is employed to turn the wire.

GIRT—the situation of a ship which is moored so tight by her cables, extending from the hawse to two distant anchors, as to be prevented from swinging or turning about according to any change of the wind or tide, to the current of which her head would otherwise be directed.

The cables are extended in this manner by a strong application of mechanical powers within the ship; so that, as the veers or endeavours to swing about, her side bears upon one of the cables, which catches on her heel, and interrupts her in the act of traversing. In this position she must ride with her broadside or stern to the wind or current, till one or both of the cables are slackened so as to sink under the keel; after which, the ship will readily yield to the effort of the wind or current, and turn her head thither. See the article **RIDING**.

GIRT-LINE—a rope passing through a single block on the head of the lower masts, to hoist up the rigging thereof, and the persons employed to place the rigging and cross-trees on the mast-heads; the girt-line is, therefore, the first rope employed to rig a ship, after which

it is removed till the ship is to be unrigged.

GIVE WAY—is the order to a boat's crew to row after having ceased for a short time, or to increase their exertions if they were before rowing.

GIVE WAY TOGETHER—implies that men should keep time together in rowing, so as that the oars should all dip and rise together, whereby their several forces are exerted as one.

GLASS—the usual appellation for a telescope.

NIGHT-GLASS—a telescope made for viewing objects at night.

HALF-HOUR-GLASS—frequently called the **WATCH-GLASS**, is used to measure the time which each watch has to stay upon deck.

HALF-MINUTE AND QUARTER-MINUTE-GLASSES are used to ascertain the rate of the ship's velocity, measured by the log; these glasses should be frequently compared with a good stop watch, to determine exactly how many seconds they run.

TO FLOG OR SWEAT THE GLASS—is, to turn it before the sand has quite run out, and thereby gaining a few minutes in each half hour, make the watch too short.

GLASS is used in the plural, to denote the duration of any action; as, they fought yard-arm and yard-arm three glasses, i. e. three half-hours, or an hour and a half.

GONDOLA—a sort of barge, curiously ornamented and navigated on the canals of Venice.

The middle-sized gondolas are upwards of thirty-feet long, and four broad; they always terminate at each end in a very sharp point, which is raised perpendicularly to the full height of a man.

Gondola is also a passage-boat of six or eight oars, used on other parts of the coast of Italy.

GONDOLIER—a man who works or navigates a gondola.

GONGA—from whence comes Ganges, a general name for a river.

GOOGINGS—certain clamps of iron or other metal, bolted on the stern-post of a ship, whereon to hang the rudder, for which purpose there is a hole in each of them to receive a correspondent spindle, bolted on the back of the rudder, which turns thereby as upon hinges. There are generally four, five, or six googings on a ship's stern posts and rudder, according to her size, and upon these the rudder is supported, and traverses from side to side as upon an axis. See the article HELM.

GOOSE-NECK—a sort of iron hook fitted on the inner end of a boom, and introduced into a clamp of iron or eye-bolt, which encircles the mast, or is fitted to some other place in the ship, so that it may be unhooked at pleasure.

GOOSE WINGS OF A SAIL—the clues or lower corners of a ship's main-sail or fore-sail, when the middle part is furled or tied up to the yard.

The GOOSE WINGS are only used in a storm to feud before the wind, when the sail, even diminished by a reef, would be too great a press on the ship in that situation.

GORING, or GORING-CLOTH, that part of the skirts of a sail where it gradually widens from the upper part or head, towards the bottom or foot; the goring-cloths are, therefore, those which are cut obliquely and added to the breadth. See the article SAIL.

GRAPE-SHOT. See the article SHOT.

GRAPNEL, or GRAPLING—a sort of small anchor, fitted with four or five flukes or claws, and commonly used to fasten boats or other small vessels.

FIRE GRAPLIN—an instrument nearly resembling the former, but differing in the construction of its flukes, which are furnished with strong barbs on its points; these are usually fixed by a chain on the yard-arms of a ship, to grapple any adversary whom she intends to board, and are particularly requisite in fire-ships.

GRATINGS—a sort of open cover for the hatches, resembling lattice-work, serving to give light to the lower apartments, and to permit a circulation of air; both of which are particularly necessary, when, from the turbulence of the sea, the ports between decks are obliged to be shut.

GRAVING—the act of cleaning a ship's bottom when she is laid aground during the recess of the tide. See the article BREAMING.

GRENADO, or GRENADO—is a kind of small bomb or shell, being furnished with a touch-hole and fuse, and is thrown by hand from the tops, &c. whence they are most generally styled *hand-grenades*. See the article ENGAGEMENT.

Thuanus observes, that the first time grenadoes were used was at the siege of Wacklindonek, a town near Gueldres; and that the inventor was an inhabitant of Venice, who, in making an experiment of the effect thereof, occasioned two-thirds of that city to be burnt, the fire having been kindled by the fall of a grenado.

The

The best way to secure a man's body from the effect of a grenado is to lie flat down on the ground before it bursts.

GRIPE—a piece of timber faced against the lower piece of the stern from the foremost end of the keel, joining with the knee of the head: its use is to defend the lower part of the stern from injury, but is often made the larger, that the ship may keep a good wind. See the article **FORE-FOOT**.

GRIPE of a ship—is the compass or sharpness of her stern under water, chiefly towards the bottom of her stern.

The design of shaping her so is to make her gripe the more, or keep a good wind, for which purpose, sometimes a false stern is put on upon the true one.

GRIPEs—a machine formed by an assemblage of ropes, hooks, and dead-eyes, and used to secure the boats upon the deck of a ship at sea, and prevent them from being shaken by the labouring of the vessel. The hooks, which are fastened at their ends, are fixed in ring bolts in the deck on each side of the boat; whence, passing over her middle and extremities, they are extended by means of the dead eyes, so as to render the boats firm and secure.

GRIPING—the inclination of a ship to run to windward of her course, particularly when she sails with the wind on her beam or quarter: this effect is partly occasioned by the shock of the waves that strike the ship perpetually on the weather quarter, and force the stern to leeward; but principally by the arrangement of the sails which disposes the ship continually to edge to windward, while

in this situation of sailing: in such case they say, she gripes or is griping.

GROG—a general name for any spirituous liquor and water mixed together; but is more particularly applied to rum and water cold without sugar.

GROMMET—a sort of ring or small wreath formed of a strand of rope laid in three times round; used to fasten the upper edge of a sail to its stay in different places, by means of which the sail is accordingly hoisted or lowered. Instead of grommets, hanks have been lately introduced. See the article **HANKS**.

GROUNDING—the act of laying a ship on shore, in order to bream or repair her: it is also applied to running aground accidentally when under sail.

GROUND TACKLE—a general name given to all sorts of ropes and furniture which belong to the anchors, or which are employed in securing a ship in a road or harbour; as cables, anchors, bow lines, &c.

GROWING—implies the direction of the cable from the ship towards the anchors, as the cable grows on the starboard-bow, i. e. stretches out forwards toward the board or right side.

GUARD-BOAT—a boat appointed to row the rounds amongst the ships of war in any harbour, &c. to observe that their officers keep a good look out, calling to the guard-boat as she passes, and not suffering her crew to come on board without having previously communicated the watch-word of the night.

GUARD-IRONS—curved bars of iron placed over the ornamental figures on a ship's head or quarter.

ter, to defend them from injury.

GUARD-SHIP—a vessel of war appointed to superintend the marine affairs in a harbour or river, and to see that the ships which are not commissioned have their proper watch duly kept, by sending her guard-boats aboard them every night; she is also to receive seamen who are impressed in time of war; she generally has an admiral's flag at one of her mast-heads.

GUDGEONS—are the eyes driven into the stern-post, into which the pintles of the rudder go, to hang it on.

GUESS-ROPE, or GUEST-ROPE—a rope used to tow, or to make fast a boat. See **CHEST-ROPE**.

GULF, or GULPH—a broad and capacious bay, comprehended between two promontories, and sometimes taking the name of a sea, when it is very extensive, but particularly when it only communicates with the ocean by means of a strait; such are the Euxine or Black Sea, otherwise called the gulf of Constantinople; the Adriatic Sea, called also the gulf of Venice; the gulf of Sidra, near Barbary; and the gulf of Lyons, near France; all these gulfs are in the Mediterranean. There are besides the gulf of Mexico, the gulf of St. Lawrence, and the gulf of California, which are in North America. There are also the gulf of Persia, otherwise called the Red Sea, between Persia and Arabia; the gulf of Bengal, in India; and the gulf of Cochin China and Kamichatka, near the countries of the same name.

Some will have it essential to a gulf to run into the land through a strait and narrow passage, and,

except at the communication of the sea, to be surrounded by the land, as the gulf of Corinth, the gulf of Lepanto, &c. A very large gulf (such as above-mentioned) being in their opinion an inland sea.

A gulf is strictly distinguished from a sea in being smaller, and from a bay in being larger.

It is observed, that the sea is always most dangerous near gulfs, by reason of the currents being penned up by the shores.

GUN—called by the general name of Cannon (see that article) and distinguished by the epithet Great Gun from the small guns, firelocks, muskets, blunderbusses, &c.

A truly fortified great iron gun ought to measure eleven diameters of the bore at the circumference of the base ring, nine diameters at the trunnions, and seven at the circumference of the muzzle ring.

A truly fortified great brass gun should measure two diameters less at each place of measurement than the iron gun; that is to say, nine diameters of the bore at the circumference of the base ring; seven at the trunnions, and five at the muzzle ring.

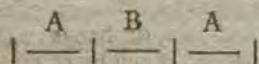
In order to discover when a gun quadrates or hangs well in the carriage, it ought to measure in length seven times her own diameter at the neat; the trunnions ought to be placed at the distance of three diameters from the base ring; then there will remain four diameters in distance from the muzzle.

In order to discover whether the carriage is proper and of due length for the gun, it ought to be five-eighths the length of the gun, and then the eye will easily dis-

cover if it be wide enough, and high enough, or too high.

To dispart a gun in order to take proper aim at a given object, insert a priming wire into the vent, and let it touch the lower part of the metal of the bore; mark the wire close to the vent, take it out and rest it on the lower metal of the rose at the muzzle, and the distance between the muzzle-ring and marked part of the wire is the height of the dispart.

In order to find the thickness of the metal at the vent, trunnions, and muzzle, take the diameter of the gun at the vent and lay it down thus | — |, which will express the diameter; then insert a priming wire into the vent, and let it rest on the lower metal; mark it close to the vent, and, taking it out, lay the mark on the line of the diameter, thus: | — | — |. Crook then the end of the wire a little, that it may enter the vent, and, inserting it a second time, turn it round till it catches the upper metal of the bore; then mark it again close to the vent, set off the distance on the same line of the diameter, and mark how far it reaches from the end of the line, thus:



Then will A and A represent the thickness of the metal, and B the bore of the gun; and if the portions A A of the line are equal to each other, the thickness of the metal is equal, and, of course, the gun centrally bored. Girt then the gun at the trunnions with waxed twine, and if it measures nine diameters of the bore the gun is so far truly fortified. Observing the same operation at the muz-

zle, where it is to measure seven diameters, the process is complete.

In order to discover whether a gun is truly bored, take a spare sponge-staff and fix on it a rammer-head, strike a chalk-line on it, from one end to the other, and put it into the gun as far as it will go, keeping the chalk-line uppermost, and exactly in the centre; then prick down the vent with a priming wire, and if you find, on taking out the rammer, you have pricked into the chalk-line, you may reasonably conclude the gun is truly bored; but if you miss the chalk-line, that it is not.

In order to discover when a gun is honey-combed, take a spring searcher with five prongs and a reliever: muzzle the searcher, and ram it home in the gun; take off the reliever, and keep turning the searcher backwards and forwards; you will easily discover whether it catches; when it does, mark the staff close to the muzzle; then turn the searcher again as before, and whenever it catches again, mark the staff as in the former instance; so that by laying the staff when drawn out on the outside of the gun, you may nearly judge where the honey-combs are.

In order to discover the depth of the honey-combs, take a searcher with one prong and a reliever: arm the end of the prong with wax, then ram it home in the gun; take off the reliever, and turn the searcher till it catches; then will the impression made in the wax shew the shape and depth of the honey-comb.

If the honey-comb on either side, or on the lower metal, between the breech and the reinforce ring is three-tenths of an inch deep,

deep, the gun is to be condemn-
ed; if on the upper metal, four-
tenths; if on any part without,
or beyond the reinforce ring, five-
tenths are sufficient.

N. B. A most ingenious instru-
ment, invented by the late Gene-
ral Desaguliers, and since brought
to the greatest perfection, has to-
tally superseded the use of this
contrivance. All guns intended
for sea service are now previously
examined by proper officers be-
longing to the ordnance board,
who, by means of this instrument,
being able to ascertain with the
greatest precision the state and de-
fects of any gun, after a very
short examination: of course re-
ject all those which either from
natural defect, or subsequent in-
jury, appear unfit for his majesty's
service.

To discover whether a gun is
found or cracked, strike a smart
blow on it with a hammer; if it
rings clear it may be concluded
the gun is found; if it jars, or
emits a hoarse sound, it is most pro-
bable the gun is cracked. Or the
following method may be taken:
stop the vent, and take a piece of
touchwood; put it into the gun
and stop the muzzle securely;
let the touchwood remain in the
gun four or five minutes; if the
gun is cracked the touch-wood
will burn out; if the gun is found,
it will be extinguished.

In fitting a shot to a gun, di-
vide the diameter of the bore
into twenty equal parts, and the
diameters of the shot ought to be
nineteen of those parts.

With respect to the proper
proportion of powder, eighteen-
pounders and all inferior cali-
bres, require, half the weight of
the shot; for all above there are

certain rules to find the proper
proportion by.

In order to secure a gun, if it
break loose, cut down the ham-
mocks, trip the gun and lash it to
the ring-bolts of the side till fine
weather. To clear it when a bit
is broke in it, draw the gun, and
sprinkle powder with a ladle from
the breech to the muzzle; this
done, drive in a tight tom-pion
with a small score in it, and blow
the gun off.

If a shot has fetched way in
the gun, in order to secure it,
damp the powder or split the tom-
pion; then insert a rope-sponge
of a small size, and drive the wad
home.

If in loading the gun the shot
sticks by the way, and if in firing
it it splits, and you cannot draw
the gun, in order to free it, the
powder must be damped, and
while that is soaking some pow-
der must be mealed, and the gun
primed, getting as much powder
down the touch-hole as possible;
then the gun must be fired off.

When a ship is going to sea
immediately, the articles which
should be ready for action are, the
powder filled, the powder-horns
and partridge or grape-shot be-
tween the guns, hammered shot
in the buckets, crows and hand-
crows, levers at the guns; nets
and cheefes of wads fore and aft;
the match-tubs in their proper
places, the matches ready, the
lockers full of shot, the spare
tackles and breechings ready, wet
swabs at the door of the magazine
and heads of the ladders; the
boxes of hand-grenades ready for
the tops.

The thickness of the metal of
a gun at the vent should be one
diameter and a quarter of the

bore, and in an engagement there should be one man to every five hundred weight of metal.

The pointing of a gun, so as to strike distant objects, depends on two things, viz. 1. Tracing on the outside of the piece a visual line parallel to the axis, which is called *disparting*, and is performed by taking half the difference of the diameters of the muzzle and base-ring and setting it perpendicularly on the muzzle-ring directly over the centre; for then a line which passes from that point in the base-ring, will, when the piece is truly bored, be parallel to its axis. 2. The other operation is the determining the allowance to be made in distant shot for the incurvation of the flight of the bullet; this is greater or less (*ceteris paribus*) according to the different charges of powder made use of.

THE MORNING GUN—a gun fired by an admiral or commodore at day-break every morning.

THE EVENING GUN—one fired by the above at nine o'clock in summer, and eight o'clock in winter, every night.

GUN-BOAT—a boat fitted to carry one or more cannon in the bow, so as to cannonade an enemy while she is end on, or advancing towards him; they are principally useful in fine weather, smooth water, and shallow ground, to cover the landing of troops, or on such occasions.

GUN HARPOON—see the article HARPOON.

GUNNER OF A SHIP OF WAR—an officer appointed to take charge of the ammunition and artillery aboard, to keep the latter properly fitted and in order, and to teach the sailors the exercise of the cannon,

GUNNER'S-MATE—a petty officer appointed to assist the gunner.

QUARTER-GUNNERS—men placed under the direction of the gunner to perform any work relating to the cannon, &c. which he may command; their number is always proportioned to the number of the ship's artillery, one quarter-gunner being allowed to every four guns.

GUN-ROOM—an apartment on the after end of the lower gun-deck of large ships of war, partly occupied by the gunner, but in frigates and smaller vessels, where it is below, it is used by the lieutenants as a mess-room.

GUN-SHOT—implies the distance of the point-blank range of a cannon-shot; a ship is therefore said to be within gun-shot when she is within that distance.

GUN-TACKLES—are pulleys affixed to each side of the carriage; their use is to run the gun out of the port, or to secure it when at sea.

GUNNERY—the art of managing artillery.

GUNTER'S LINE—called also the Line of Numbers, and the Line of Lines, is a graduated line usually placed upon scales, sectors, &c. so called from its inventor Mr. Edmund Gunter, and of great use in navigation.

This line is no other than a logarithmic scale of proportionals, wherein the distance between each division is equal to the number of mean proportionals contained between the two terms, in such parts as the distance between 1 and 10 is 10,000, &c.—wherefore

If the distance between 1 and 10 upon the scale be made equal to 10,000, &c. equal parts, and

.954, &c. the logarithm of 9 of the same parts be set off from 1 to 9, it will give the division standing against the number 9. In like manner, if .903, .845, .778, which are the logarithms of 8, 7, and 6, of the same equal parts, be set off from 1, to 8, 7, and 6, they will give the divisions answering to the numbers 8, 7, 6, upon the line. And after the same manner may the whole line be divided.

This line has been contrived various ways for the advantage of having it as long as possible. It was first placed by its inventor Edmund Gunter, on a two-foot scale, and called Gunter's Scale. After this Wingate doubled the line in order to render it susceptible of working right on or across. Then the learned Oughtred projected it in a circle, and also made it to slide; and lastly it was projected in a kind of spiral by Brown.

But the method of using or applying it in all is not very different. In Gunter's and Wingate's projection, common compasses are used; in Oughtred's and Brown's flat compasses, or an opening index; and in the sliding rule no compasses at all, the slider supplying the place of the compasses.

Gunter's Line is also usually divided into an hundred parts, every tenth whereof is numbered, beginning with 1 and ending with 10. So that if the first great division 1 represent one-tenth of any integer or whole number, the next 2 will represent two-tenths, 3, three-tenths, &c. and the intermediate divisions so many 100th parts of the same integer. Or, if these subdivisions represent 10 integers, then each of the larger divisions will represent 100, and

the whole line will be 1000. In like manner it may be extended to 1000, by making each subdivision 100. Hence it is easy to conceive, that any number whatsoever may be found upon the rule, by increasing or decreasing the large divisions, and, consequently, this single line will represent the whole table of logarithms.

Use of Gunter's Line.

1. One number being given to be multiplied by another to find their product.—Suppose the numbers given were 8 and 4, extend the compasses from 1 to 4, and that extent laid from 8, the same way will reach to 32, the product required. Or if you work by the sliding rule, set 1 at the beginning of the sliding piece against 4, on the upper or fixed piece, and against 4 on the slider stands 32 on the upper or fixed piece, which is the product required. Whence it is abundantly evident that the sliding piece performs the office of the compasses, and therefore when the method of solving any problem by the compasses is understood, there will be no difficulty of solving the same by the sliding rule.

2. One number being given to be divided by another to find the quotient; suppose it were required to divide 64 by 4. Extend the compasses from 4 to 1, and the same extent, laid the same way, will reach from 64 to 16, the quotient required.

3. Three numbers being given to find a fourth in direct proportion; let the numbers given be 7, 22, and 14. Extend the compasses from 7 to 22, which extent, laid the same way, will reach from 14 to 44, the fourth proportional required.

4. To find a mean proportion between two given numbers; bisect the distance between the two given numbers, and the point of bisection will fall on the proportional sought. Thus, if the numbers given be 32, and 8 the middle point between them will be 16; which is the mean proportional required.

5. To extract the Square Root of any number; bisect the distance between 1 on the line, and the point representing the given number; the half whereof being laid from one, will give the root required. Thus the square root of 9 will be found to be 3, of 81, 9, &c. The reason of these operations will be easily conceived by considering the nature of logarithms, this line being no other than a projection of logarithms.

GUNTER'S QUADRANT—is a quadrant made of wood or brass, or some other substance, being a kind of stereographic projection on the plane of the equinoctial, the eye supposed in one of the poles, so that the tropic, ecliptic, and horizon, form the arches of the circles; but the hour-circles, all curves, drawn by means of several altitudes of the sun, for some particular latitude, for every day in the year.

The use of this instrument is to find the hour of the day, the sun's azimuth, and other common problems of the globe; as also to take the altitude of an object in degrees. It has been considerably improved by others. See the article **QUADRANT**.

GUNWALE OR GUNNEL OF A SHIP—is that piece of timber which reaches on either side of the ship, from the half-deck to the fore-castle, being the upper-

most bend, which finishes the upper works of the hull in that part, and wherein they put the stanchions which support the waist-trees. This is called the Gunwale, whether there be guns in the ship or not. The lower part of any port, where any ordnance are, is also termed the Gunwale.

GUST—a sudden and violent squall of wind, bursting from the hills upon the sea, so as to endanger the shipping near the shore. These are peculiar to some coasts, as those of South Barbary and Guinea.

GUTT—in the West-India islands, particularly in the island of Christopher's, or St. Kitts, is a term for the opening of a river or brook, such river or brook also being frequently so called.

GUTTER-LEDGE—a cross-bar laid along the middle of a large hatchway in some vessels, to support the covers, and enable them the better to sustain any weighty body which may be laid on them.

GUY—a rope used to keep steady any weighty body from bearing or falling against the ship's side while it is hoisting or lowering, particularly when the ship is shaken by a tempestuous sea.

GUY—is also the name of a tackle, used to confine a boom forward when a vessel is going large, and to prevent the sail from gybing, by any accidental change of the wind or course, which would endanger the springing of the boom, or, perhaps, the upsetting of the vessel.

GUY—is likewise a large flack rope, extending from the head of the main-mast to the head of the fore-mast, and having two or three large blocks fastened to it; it is used

used to sustain a tackle to load or unload a ship with, and is accordingly removed as soon as that operation is finished.

GYBING — the art of shifting any boom-sail from one side of the vessel to the other.

In order to understand this operation more clearly, it is necessary to remark, that by a boom-sail is meant any sail whose bottom is extended by a boom, the fore-end of which is hooked to its respective mast, so as to swing occasionally on either side of the vessel, describing an arch, of which the mast will be the centre. As the wind, or the course changes, it also becomes frequently necessary to change the position of the boom, together with its sail, which is accordingly shifted to the other side of the vessel, as a door turns upon its hinges. The boom is pushed out by the effort of the wind upon the sail, and is restrained in a proper situation by a strong tackle communicating with the vessel's stern, and called the Sheet. It is also confined on the fore-part by another tackle called the Guy.—See the preceding article.

H.

HAGS-TEETH, or HAKES-TEETH, those parts of a matting, pointing, &c. which are interwoven with the rest in an erroneous and irregular manner, so as to spoil the general uniformity of the work. See the article **POINTING**.

HAKES-TEETH — is also a phrase used to describe some parts of the soundings in the British channel.

HAILING — the salutation or addressing of a ship at a distance, which is usually performed with

a speaking trumpet; the first expression is hoa, the ship aboa, to which the answers holloa; then follow the requisite questions and replies, &c.

HALE A SHIP — signifies to pull her on shore. To over-hale a rope, is to hale it too stiff, or the contrary way.

HALF-PIKE — a defensive weapon, composed of an iron spike, fixed on an ashen staff; its use is to repel the assault of boarders in a manner similar to the defence of the charged bayonet among infantry; hence, it is frequently termed a **BOARDING-PIKE**; it takes the epithet of half from its having a much shorter staff than the whole pike.

HALLIARDS — the ropes or tackles usually employed to hoist or lower any sail upon its respective masts or stay, except the cross-jack and sprit-sail-yard, which are always slung; but in small craft the sprit-sail-yard has halliards. See the article **JEARS**.

HAMMOCK — a piece of hempen cloth, six feet long and three feet wide, gathered together at the two ends by means of a cluc, and hung horizontally under the deck, forming a receptacle for a bed.

There are usually from fourteen to twenty inches in breadth allowed between decks for every hammock in a ship of war; this space however must, in some measure, depend on the number of the crew, &c. in proportion to the room of the vessel.

In preparing for battle, the hammocks, together with their contents, are all firmly corded, taken upon deck, and fixed in various nettings, so as to form a barricade against small shot. See the article **ENGAGEMENT**.

HANDING

HANDING THE SAILS—is synonymous with **FURLING** them, which see.

HAND—is a phrase sometimes used for the word man, as, a hand to the lead; clap more hands, &c.

HAND-GRENADE—a small cast-iron shell, filled with powder, and equipped with a fuze, which being set fire to, is thrown from the hand upon the enemy's decks, where by its bursting, it causes dreadful carnage; it is, however, now much less used than formerly. See the article **GRENADO**.

HAND-LEAD—See the article **LEAD**.

HAND-OVER-HAND—the order to the man who pull upon any rope, to pass their hands alternately one before the other, or one above the other if they are hoisting, for the sake of expedition.

A sailor is said to go **hand-over-hand**, when by the dexterity of throwing one hand above the other, and lifting his weight along with it, he ascends a single rope as a shroud or back-stay, without the help of the ratlines.

HAND-OVER-HAND—also implies rapidly, as we are coming up with the chase **hand-over-hand**.

HANDSOMELY—signifies moderately, as lower away **handsomely**.

HAND-SPIKE—a wooden bar, used as a lever to heave about the windlafs in order to draw up the anchor from the bottom, particularly in merchant-ships: for this purpose, the handle or small end, is round and tapering, and the other end is square, in order to conform to the shape of the holes in the windlafs. It is also employed as a lever

on many other occasions, as stowing the anchors, provisions, cargo, &c. in the ship's hold.

GUNNER'S HAND-SPIKE—is shorter and flatter than the above, and is armed with iron claws for the purpose of managing the artillery.

TO HANG ON A ROPE OR TACKLE-FALL—is to hold it fast without belaying; also to pull forcibly.

TO HANG—spoken of a mast, implies to incline.

HANK-FOR-HANK—a phrase expressed of two ships which tack and make a progress to windward together.

HANKS, wooden rings fixed upon the stays to confine the stay-sails thereto at different distances; they are used in lieu of grommets, being much more convenient, and of a later invention. They are framed by the bending of a tough piece of wood into the form of a wreath, and fastened at the two ends by means of notches, thereby retaining their circular figure and elasticity; whereas the grommets, which are formed of rope, are apt to relax in warm weather, and adhere to the stays, so as to prevent the sails from being readily hoisted or lowered. See the articles **GROMMETS** and **CRINGLES**.

HARBOUR—a general name given to any sea-port or haven; as also to any place convenient for mooring shipping, although at some distance from the sea.

The qualities requisite in a good harbour are, that the bottom be entirely free from rocks or shallows; that the opening be of sufficient extent to admit the entrance or departure of large ships without difficulty; that it should have good anchoring ground, and be

easy of access; that it should have room and convenience to receive the shipping of different nations, and those which are laden with different merchandises; that it be furnished with a good light-house, and have variety of proper rings, pults, moorings, &c. in order to remove or secure the vessels contained therein; and finally, that it have plenty of wood and other materials for firing, besides hemp, iron, smiths, &c. See the article **ROAD**.

HARBOUR-MASTER—an officer appointed to inspect the moorings, and to see that the regulations of the harbour are strictly attended to by the different ships in it.

HARD-A-LEE—the situation of the helm when it is pushed close to the lee-side of the ship, either to tack or keep her head to the wind when lying to or trying; also the order to put the helm in this position.

HARD A-PORT—is the order to put the helm close to the larboard or left side of the ship.

HARD A STARBOARD—is the order to put the helm close to the right side of the ship.

HARD A WEATHER—the order to put the helm close to the weather, or windward side of the ship, in order to bear away; it is likewise the position of the helm in consequence of that order being in both senses opposed to hard-a-lee.

HARPINGS—the fore-parts of the wales, which encompass the bow of a ship, and are fastened to the stem, being thicker than the after part of the wales, in order to reinforce the ship in this place, where she sustains the greatest shock in plunging into the sea, or

dividing it, under a great pressure of sail.

CAT HARPINGS. See **CAT HARPINGS**.

HARPOON, HARPING-IRON, or HARPAGO—a spear or javelin, used to strike the whales in the Greenland and South Sea fisheries.

The harpoon is furnished with a long shank, and has, at one end, a broad and flat triangular head, sharpened at both edges so as to penetrate the whale with facility: to the other end of this weapon is fastened a long cord called the whale-line, which lies carefully coiled in the boat in such a manner as to run out without being interrupted or intangled.

As soon as the boat has rowed within a competent distance of the whale, the harpooner launches his instrument (on the upper end of which, near the ring, his name is generally engraved) and the fish being wounded, immediately descends under the ice with amazing rapidity, carrying the harpoon along with him and a considerable length of the line, which is purposely let down to give him room to dive. Being soon exhausted with the fatigue and loss of blood, he re-ascends in order to breathe, where he presently expires, and floats upon the surface of the water, when they approach the carcass by drawing in the whale-line. The line is sixty to seventy fathoms long, and made of the finest and softest hemp, that it may slip the easier; if not well watered, by its friction against the boat, it would be soon set on fire, and if not sufficiently long, it would be soon overfet, as it frequently is. With the harpoon they also catch other large fish, as sturgeons, &c.

GUN HARPOON—a weapon used for the same purpose as the preceding, but is fired out of a gun, instead of being thrown by hand: it is made entirely of steel, and has a chain attached to it to which the line is fastened.

HARPOONER, HARPONEER, or HARPINEER,—a kind of officer in a whale-boat, whose duty it is to throw, or fire the harpoon.

HATCH or HATCHWAY—a square or oblong opening in the deck of a ship, of which there are several, forming the passages from one deck to another, and into the hold, or lower apartments.

Hatches are, in fact, a sort of trap-doors in the midship, or between the main-mast and fore-mast, through which goods of bulk are let down into the hold; and hatchway, properly speaking, is that place where the hatches are.

To lay any thing in the hatchway is to put it so that the hatches cannot be approached or opened.

The **FORE HATCHWAY**—stands a little abaft the fore-mast, or in large vessels, at the break of the fore-castle.

The **MAIN HATCHWAY**—is just before the main-mast, and is the largest in the ship.

The **AFTER HATCHWAY**—is placed between the main and mizen-masts.

The hatches of a smaller kind are distinguished by the name of **SCUTTLES**.

HATCHES—is also a name improperly applied by sailors to the covers or lids of the hatches.

HATCHES—are also flood-gates set in a river, &c. to stop the current of water.

HATCH-BARS—are bars of wood or iron used to lay fore and aft over the hatches, being fitted

with a padlock at one end, by which the contents of the hold may be secured from plunder.

HAVEN—See the article **HARBOUR**.

To **HAUL**—an expression peculiar to seamen implying to pull a single rope without the assistance of blocks or other mechanical powers upon it; as “haul in,” “haul down,” “haul up,” “haul aft,” “haul together.” See the articles **BOWSE, HOIST, and ROWSE**.

To **HAUL THE WIND**—to direct the ship's course nearer to that point of the compass from which the wind arises: for instance—suppose a ship sails south-west, with the wind northerly, and some particular occasion renders it necessary to haul the wind further to the westward: to perform this operation it is necessary to arrange the sails more obliquely with her keel; to brace the yards more forward by slackening the starboard, and pulling in the larboard, braces, and to haul the lower sheets further aft, and finally to put the helm a port, i. e. over the larboard side of the vessel. As soon as her head is turned directly to the westward, and her sails are trimmed accordingly, she is said to have hauled the wind four points, that is to say from S. W. to W. She may still go two points nearer to the direction of the wind, by disposing her sails according to the greatest obliquity, or, in the seaphrase, by trimming all sharp; and in this situation she is said to be close-hauled as sailing W. N. W.—See the articles **CLOSE-HAULED** and **SAILING**.

HAWSE—is generally understood to imply the situation of the cables afore the ship's stem, when she is moored with two anchors

out from the bows, viz. one on the starboard and the other on the larboard bow; hence it is usual to say, she has a clear hawse, or a foul hawse. It also denotes any small distance a-head of the ship, or between her head and the anchor by which she rides; as, He has anchored in our hawse, &c.

A CLEAR HAWSE—is when the cables are directed to their anchors without lying athwart the stem, or crossing, or being twisted round each other by the ship's winding about.

A FOUL HAWSE—on the contrary, implies that the cables lie across the stem, or bear upon each other, so as to be rubbed and chafed by the motion of the vessel.

The hawse may be foul by having either a cross, an elbow, or a round turn. If the larboard cable lying across the stem points out on the starboard side, while the starboard cable at the same time grows out on the larboard side, there is a cross in the hawse. If after this the ship, without returning to her former position, continues to wind about the same way, so as to perform an entire revolution, each of the cables will be twisted round the other, and then directed out from the opposite bow, forming what is called a round turn. An elbow is produced when a ship stops in the middle of that revolution, after having had a cross; or, in other words, if she rides with her head northward with a clear hawse, and afterwards turns quite round so as to direct her head northward, again she will have an elbow. If the cables happen to be more twisted than a round turn, it is expressed by two of these terms, as a round turn and an elbow, two round

turns, &c. See the articles **CROSS**, **ELBOW**, and **RIDING**.

Some terms in the sea language have also an immediate relation to the hawses; as a bold hawse is when the holes are high above the water. "Fresh the hawse," or "Veer out more cable," is used when part of the cable that lies in the hawse is fretted or chafed, and it is ordered that more cable may be veered out, so that another part of it may rest in the hawse. "Fresh the Hawse," also means, lay new pieces upon the cable in the hawses to preserve it from fretting. "Burning in the hawses" is when the cables endure a violent stress. "Clearing the Hawses," is disentangling two cables that come through different hawses. "To ride Hawse-full," is when in stress of weather the ship falls with her head deep in the sea so that the water runs in at the hawses.

HAWSE-BAGS—canvas bags filled with oakum, used in a heavy sea to stop the hawse holes, and prevent the water coming in.

HAWSE-PLUGS—are plugs to stop the hawses to prevent the water from washing into the manger.

HAWSE-HOLES—certain cylindrical holes cut through the bows of a ship on each side of the stem, through which the cables pass, in order to be drawn into, or let out of the vessel, as occasion requires.

HAWSE-PIECES—a name given to the foremost timbers of a ship, whose lower ends rest upon the knuckle timber, or the foremost of the cant-timbers. They are generally parallel to the stem, having their upper ends sometimes terminated by the lower part of

the beak head and otherwise, particularly in small ships, by the top of the bow.

HAWSER—a kind of small cable used on various occasions.

HEAD—an ornamental figure erected on the continuation of a ship's stem, as being expressive of her name, and emblematical of war, navigation, commerce, &c.

The heads which have any affinity to war, or navigation, are in general either historical, as referring to some of the deities or heroes of antiquity; or allegorical, as alluding to some of the natural consequences of battle, or the virtues most essential to life exposed to perpetual danger. Thus, in the former sense, they represent a Neptune, an Alcides; a Mars, an Achilles; a Minerva, or a Jason, and in the latter they produce a Magnanimous, an Intrepid, a Revenge, or a Victory.

The head of a ship however has not always an immediate relation to her name, at least in the British navy. Various instances might be produced to show that our artists, as it suits their conveniency or judgment, can dispense with this supposed idea of proficiency. Hence we sometimes observe the place of a Jason supplied by a Medea; or a beast of prey made the representative of an illustrious lady. The same liberty of design may therefore with equal propriety be allowed to symbolize the successes of our arms by a group of heterogeneous figures, of sundry shapes and sizes, according to the artist's opinion of their superiority or subordination. Their altitude and situation, as well as their size, must accordingly depend, in a great measure, on the space into which they are to be crowded; for

although the figures may be of equal importance in themselves, yet as there is not room for them all, as large as the life on a ship's head, it becomes expedient to diminish a few in order to give place to others. The emblems by which allegorical figures are usually characterized in painting, poetry, and sculpture, are not always thought necessary in a work of this kind, nor even the postures in which these figures are exhibited. And indeed if we reflect with how much labour and application the workman has endeavoured to fill up every vacancy with some little figure of a convenient form and size, we ought rather to admire his ingenuity than censure him for a violation of those general rules of art by which it is supposed necessary on such occasions to relieve the eye from a scene of perplexity and confusion.

The heads of many of our ships of war have undoubtedly great beauty and propriety, and candour must acknowledge that some of our most elegant and judicious have been borrowed from the French designs, which are never left to the invention of illiterate mechanics. A multitude of ornaments appear rather unnecessary in any building calculated for the purposes of war. If there be any general rule to determine the subjects and the quantity of sculpture employed in ship building, it seems to be connected with the ideas of dignity and simplicity. These two are the genuine characteristics of the Grecian and Roman orders of architecture, as opposed to that perplexity and rage for embellishment which peculiarly distinguish the Gothic. It is hardly possible for us to re-

collect

collect the various disasters to which a single hero or goddess on the head of a ship, is exposed by tempestuous weather, battle, and the unexpected encounter of ships, without trembling for the havoc and indecency that may happen in an assemblage of conch-shells, princesses and satyrs, heroes, blunderbusses, sea-monsters, little children, globes, and thunderbolts, and all the apparatus necessary to constitute the head of a ship of the first class of our navy.

Image heads are those founded on practical fiction, and should be bold, warlike, and classical—such as, Hercules brandishing his club over the heads of Cerberus—Jupiter riding on his eagle, and armed with his thunders, &c. Emblematic heads consist of appropriate figures—such as an eagle, denoting dignity, force, and velocity—a dragon, denoting power, vigilance, &c.

HEAD—is also used in a more enlarged sense, to signify the whole front or forepart of a ship, including the bows on each side; the head therefore opens the column of water through which the ship passes, when advancing; hence we say, HEAD-SAILS, HEAD-WAY, HEAD-SEA, &c.

It is evident that the fore part of a ship is called its head, from the assuity of motion, and position it bears to a fish, and in general to the horizontal situation of all animals while swimming.

HEAD—in a confined sense also signifies that part on each side of the stem, which is appropriated to the use of the sailors for relieving nature.

HEAD OF A MAST, OR MAST-HEAD—the upper part of any mast, or that whereon the caps or trucks are fitted.

BY THE HEAD—the state of a ship which is laden deeper at the fore-end than the after-end.

HEAD-FAST—a rope employed to fasten the head of a ship or boat to a wharf, chain, or buoy, or to some other vessel along side.

HEAD-LAND—a name frequently given to a high cape or promontory.

HEAD-LINES—those ropes of all sails which are next to the yards, and by which the sails are made fast to the yards.

HEAD-MOST—the situation of any ship or ships which are the most advanced in a fleet, or line of battle.

HEAD-ROPE—that part of the bolt-rope which terminates any sail on the upper edge, and to which it is accordingly sewed. See the article BOLT-ROPE.

HEAD-SAILS—a general name for all those sails which are extended on the fore-mast and bowsprit, and employed to command the fore part of the ship, such are the fore-sail, fore-top-sail, fore-top-gallant-sail, and royal; the jib, fore-top-mast, and fore-stay-sails, and the sprit-sail with its top-sail. This term is used in opposition to after-sails, which see.

HEAD-SEA—a phrase denoting that the waves meet the head of a ship in her course.

HEAD-STICK—a short round stick with a hole at each end, through which the head-rope of some triangular sails is thrust, before it is sewed on. Its use is, to prevent the head of the sail from twisting.

HEAD TO WIND—the situation of a ship or boat when her head is turned to the direction of the wind.

HEAD-WAY—the motion of
advanc-

advancing: it is generally used when a ship first begins to advance, or in calm weather, when it is doubtful whether she is in a state of rest or motion. It is, in both senses, opposed to retreating, or moving with the stern foremost. See the article **STERNWAY**.

THE WIND HEADS US—that is, veers round to the direction of the ship's course so as to become more contrary.

HEART—a peculiar sort of dead-eye, somewhat resembling the shape of a heart; it is furnished with only one large hole in the middle, whereas a common dead-eye has always three holes; and is principally used to the stays, as the dead-eyes are to the shrouds. See the article **DEAD-EYE**.

To HEAVE—is to throw away or sling any thing overboard.

To HEAVE A FLAG ABOARD—is to hang it out.

HEAVE AND RALLY—a cheering order given to the men at the capstan to heave quickly and with spirit.

HEAVE AND A WEIGH—signifies that the next effort will weigh the anchor.

HEAVE AND IN SIGHT—a notice given by the boatswain to the crew when the anchor is drawn up so near the surface of the water as to be distinctly seen.

HEAVE AND PAUL—is the order to turn the capstan or windlass till the paul may be put in, by which it is prevented from coming up, and is something similar to belay, when applied to a running rope.

HEAVER—a wooden staff employed as a lever on many occasions, such as setting up the topmast shrouds, stopping large blocks, seizing the standing rigging, &c.

HEAVING—the act of turning about a capstan, or windlass, or such like machine, by means of bars or handspikes.

HEAVING THE LEAD. See the article **SOUNDING**.

HEAVING AHEAD—is drawing a ship forwards by the cable, or other rope fastened to some fixed point before her.

HEAVING ASTERN—is causing her to recede or go backwards by a similar operation.

HEAVING DOWN. See the article **CAREENING**.

HEAVING OUT—the act of loosing or unfurling a sail; particularly applied to the stay-sails.

HEAVING KEEL OUT—is the utmost effect to be produced by careening, viz. to raise the keel out of the water in order to repair or clean it.

HEAVING IN STAYS—is the act of tacking or putting about.

HEAVING SHORT—is the drawing so much of a cable into the ship, as that she is almost perpendicularly above the anchor, and in a proper situation to set sail.

HEAVING A STRAIN—is the working at the windlass or capstan with more than usual exertion.

HEAVING TAUGHT—the act of turning the capstan, &c. till the rope applied thereto becomes straight and ready for action.

HEAVY METAL—implies guns of a large calibre.

HEAVY SEA—signifies strong and high waves.

HEEL—a name usually given to the after end of a ship's keel, as also to the lower end of the sternpost to which it is connected.

HEEL OF A MAST—the lower end which either fits into the step attached

attached to the keel, or in top-masts is sustained by the fid upon the trestle trees.

To HEEL—to stoop or incline to either side. It is usually applied to a ship when she is forced into this position by the wind acting upon her sails, or by being ballasted more on one side than the other. See the articles **CRANK**, **STIFF**, and **TRIM**.

HELM—a long and flat piece of timber, or an assemblage of several pieces suspended down the hind part of a ship's stern-post, where it turns upon a kind of hinges to the right or left, serving to direct the course of a vessel, as the tail of a fish guides the body.

The helm is usually composed of three parts, viz. the rudder, the tiller, and the wheel, except in small vessels, where the wheel is unnecessary.

The rudder becomes gradually broader in proportion to its distance from the top, or its depth under water; the back or inner part of it which joins the stern-post, is diminished into the form of a wedge, throughout its whole length, so as that it may be more easily turned from one side to the other when it makes an obtuse angle with the keel. For a description of the hinges which support it, see the articles **GOOINGS** and **PINTLES**. The length and thickness of the rudder is nearly equal to that of the stern-post.

The tiller is a long bar of timber, fixed horizontally in the upper end of the rudder, within the vessel; the movements of the tiller to the right and left accordingly direct the efforts of the rudder to the government of the ship's course, as she advances; which is

called steering. The operations of the tiller are guided and assisted by a sort of tackle, communicating with the ship's side, called the tiller-rope, which is usually composed of untarred rope yarns, for the purpose of traversing more readily through the blocks or pulleys.

In order to facilitate the management of the helm, the tiller-rope, in all large vessels, is wound about a wheel, which acts upon it with the powers of a windlass; the rope employed in this service being conveyed from the fore end of the tiller to a single block on each side the ship, forms a communication with the wheel, by means of two blocks suspended near the mizen-mast, and two holes immediately above, leading up to the wheel, which is fixed upon an axis on the quarter-deck almost perpendicularly over the fore end of the tiller. Five turns of the rope are usually wound about the barrel of the wheel, and when the helm is a-midship, the middle turn is nailed to the top of the barrel with a mark, by which the helmsman readily discovers the situation of the helm; the spokes of the wheel generally reach about eight inches beyond the rim or circumference, serving as handles to the person who steers the vessel; as the effect of a lever increases in proportion to the length of its arm, it is evident that the power of the helmsman to turn the wheel will be increased according to the length of the spokes beyond the circumference of the barrel: so that if the helmsman employs a force of thirty pounds, it will produce an effect of from ninety to one hundred and twenty pounds upon

upon the tiller, (the barrel being one-fourth or one-fifth the radius of the spokes), which again forming the long arm of a lever, ten or fifteen times the length of its shorter arm, the force of the rudder will by consequence be from 10 times 90, to 15 times 120, or from 900 to 1800 pounds.

When the helm operates by itself, the centre of rotation of the ship, and her movement, are determined by estimating the force of the rudder, that is to say, by multiplying the surface of the rudder by the square of the ship's velocity. See the articles RUDDER SAILING, STEERING, TRIM, and WORKING.

There are several phrases relating to the helm, particularly

A-LEE THE HELM—that is, push it down to the lee-side of the ship, in order to put the ship about, or lay her to the windward.

Bear up the HELM, or ease the **HELM**—that is, let the ship go more large before the wind.

HELM a midship, or right the **HELM**—that is, keep it even with the middle of the ship.

Port the HELM—that is, put it over the left side of the ship.

Starboard the HELM—that is, put it on the right side of the ship.

Instead of helms, steering-wheels have been used.

HELMSMAN—the man who is charged with the management of the helm.

HIGH-AND DRY—a phrase, implying the situation of a ship which is run-aground, so as to be seen dry upon the strand when the tide ebbs upon her.

HIGH-WATER—the greatest height of the flood-tide. See the article **TIDE**.

HIGH-WATER-MARK—the line made by the water upon the shore when at its greatest height.

HIGH-SEA—the same as **HEAVY-SEA**, which see.

HITCH—a sort of knot or noose, by which one rope is fastened to another, or to some other object, as a ring, post, timber-head, mast, &c. They are distinguished by several names, as Clove-Hitch, Racking-Hitch, Timber-Hitch (stopped), Rolling-Hitch, and Half-Hitch, Black-wall-Hitch, &c. See the articles **BEND** and **KNOT**.

To HITCH—is to make fast a rope, &c.

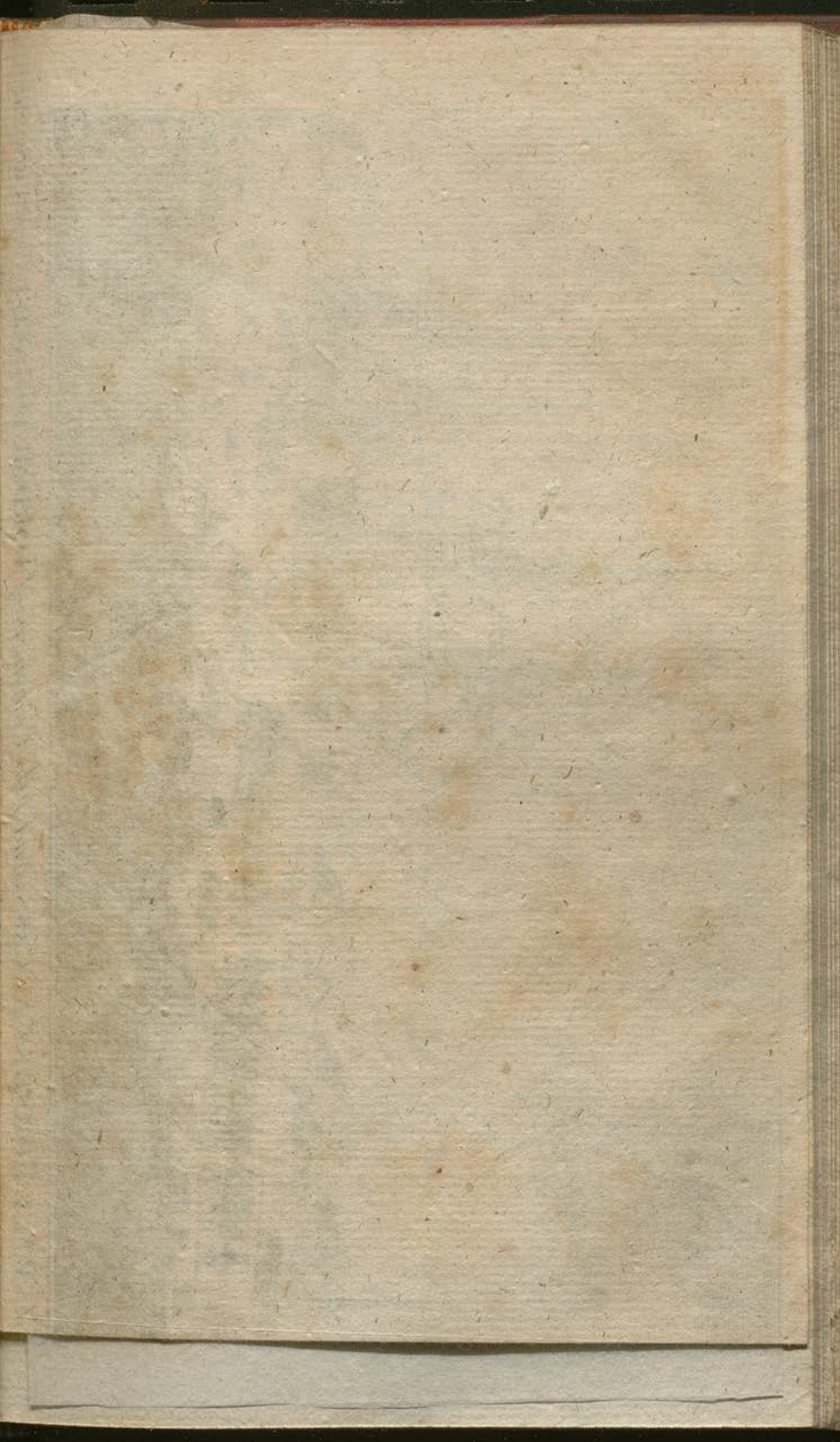
Thus, when a boat is to be hoisted in, they say, hitch the tackles into the rings of the boat; and when about to weigh anchor, hitch the fish-hook to the fluke of the anchor.

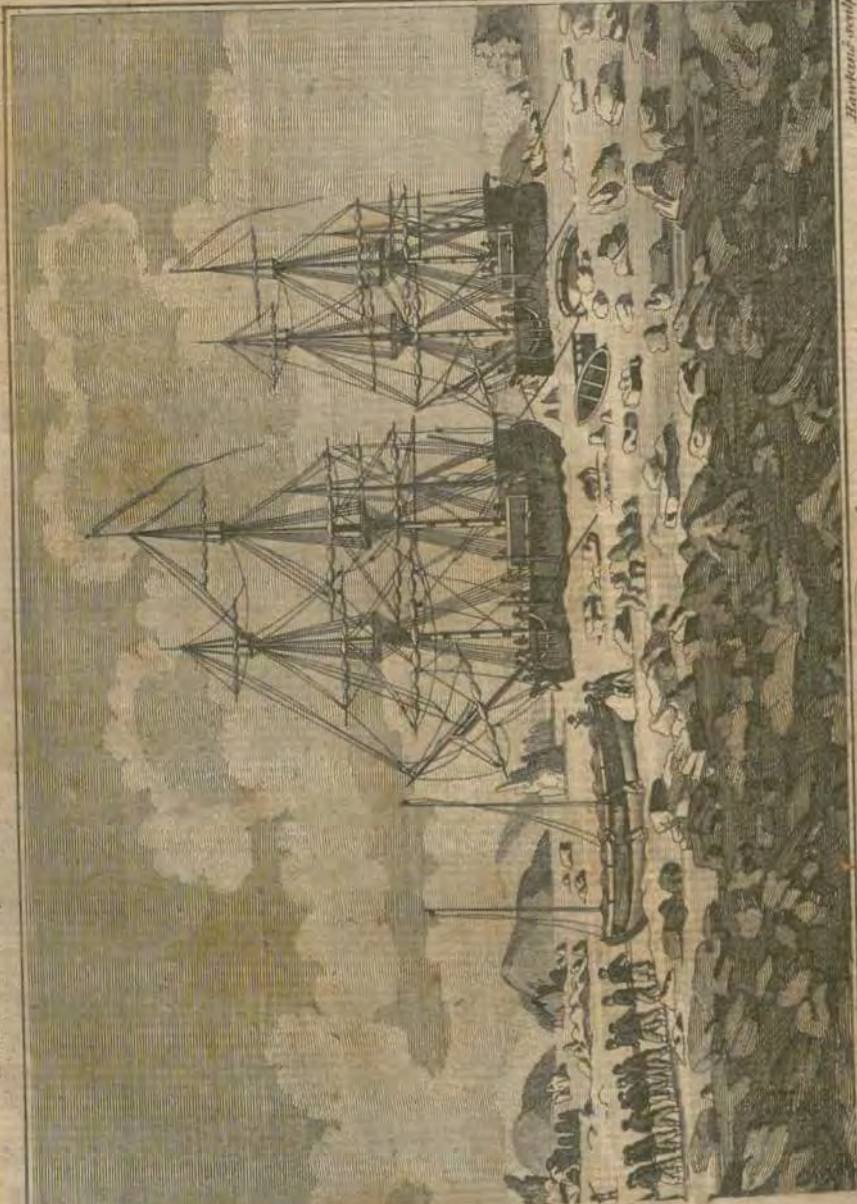
HOASE—a long flexible tube, formed of leather or canvas, but chiefly of the latter, and used to conduct water from the main-deck to the casks in the hold, or by the assistance of a pump from one cask to another.

HOAY—a word frequently added to an exclamation, bespeaking attention, as, "Main-top, Hoay!" and is chiefly used to persons aloft, or without the ship.

HOG—a sort of flat scrubbing-broom, serving to scrape off the filth from a ship's bottom under water, particularly in the act of boot-topping, which see.

This instrument is formed by inclosing a multitude of short twigs of birch, or such wood, between two pieces of plank, which are firmly attached to each other, after which the ends of the twigs or branches are cut off even, so





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THE WHALING STATION OF LORD MULGRAVE & CAPTⁿ LUTWYCHE AT THE NORTH POLE

as to form a sort of brush of considerable extent. To this machine is fitted a long staff, together with two ropes, the former of which is used to thrust the hog under the ship's bottom, and the latter to guide and pull it up again close to the planks thereof, so as to rub off all the filth effectually. This exercise is usually performed in the ship's boat, which is accordingly confined as close as possible to the vessel's side during the operation, and shifted from one part of the side to another till the whole is completed.

N. B. Since the invention of coppering a ship's bottom is become so general, the hog is greatly disused.

HOGGED—implies that the two ends of a ship's decks lie lower than the middle part about the main-mast. See the article **BROKEN-BACKED**.

HOIST—the perpendicular height of a sail or flag; in the latter it is opposed to the fly, which implies its breadth from the staff to the outer edge.

To **HOIST**, or **HOISE**—is the operation of drawing up any body by the assistance of tackles; it is also invariably applied to the drawing up the sails along the masts or stays, and displaying of flags and pendants, though by the help of a single block only. See the articles **SWAYING**, **TRACING UP**, and **WHIPPING**.

HOLD—the whole interior cavity or belly of a ship, or all that part of her inside which is comprehended between the floor and the lower deck, throughout her length.

This capacious apartment usually contains the ballast, provisions,

and stores of a ship of war, and the principal part of the cargo in a merchantman; in the former it is divided into several apartments (by bulk-heads) which are denominated according to the articles which they contain, as, the fish-room, the spirit-room, the magazine, the bread-room, &c. See the article **STOWAGE**.

The **AFTER-HOLD**—is that which lies abaft the main-mast, and is usually set apart for the stowage of the provisions in ships of war.

The **FORE-HOLD**—denotes that part of the hold which is situated in the fore part of the ship, or about the fore-hatchway. It is usually in continuation with the main-hold, and serves the same purposes.

The **MAIN-HOLD**—that part which is just before the main-mast, and which generally contains the fresh water and beer for the use of the ship's company.

To **RUMMAGE THE HOLD**—is to examine its contents.

To **STOW THE HOLD**—is to arrange its contents in the most secure and commodious manner possible.

To **TRIM THE HOLD**. See the article **TRIM**.

HOLD is generally understood to signify a particular situation of a ship with regard to the land or to another ship; hence we say, "Keep a good hold of the land," or "Keep the shore well aboard," which are synonymous phrases, implying to keep near the land; when applied to a ship, we say, "She holds her own;" i. e. goes as fast as the other ship.

HOLDING-ON—the act of pulling back the hind part of any cable or other rope, which is heav-

sifts in a well-polished metal speculum about three inches and a half in diameter, inclosed within a circular rim of brass; so filled, that the centre of gravity of the whole shall fall near the point whereon it spins. This is the end of a steel axis running through the centre of the speculum, above which it finishes in a square for the conveniency of fitting a roller on it, by which it is set in motion by means of a piece of tape wound round the roller. The cup in which it spins is made of agate, flint, or other hard substance; and a pyramidal cover may be made to the whole, composed of glass panes; by this means an observation may be made with it as well covered as opened; and it will thereby be prevented from tarnishing by the moist air and spray of the sea.

These specula are as useful by night as by day; for as the images of the smaller stars may be seen in the speculum, consequently any object that can be seen reflected from the glasses of the quadrants may be observed by the speculum, and these are all the stars of the first magnitude, the planets Venus, Mars, Jupiter, Saturn, and the moon; so that, by having the declinations of these bodies in an ephemeris, they may be used in observations as well as the sun.

HORSE—a rope reaching from the middle of a yard to its arms or extremities, and depending about two or three feet under the yard, for the sailors to tread on while they are loosing, reefing, or furling the sails; rigging out the studding-sail booms, &c. In order to keep the horse more parallel to the yard, it is usually attached thereto at proper distances, by certain ropes called stirrups, which hang

about two feet below the yard, having an iron thimble spliced into their lower ends, through which the horse passes. See the article **STIRRUP**.

FLEMISH HORSE—is a smaller kind of horse, placed at the top-fail-yard-arms, on which the man who passes the eaving usually stands.

HORSE—is also a thick rope, extending in a perpendicular direction near the fore or after-side of a mast, for the purpose of hoisting some yard or extending a sail thereon; when before the mast it is used for the square-sail, whose yard is attached to the horse by means of a traveller or bull's-eye, which slides up and down. When it is abaft the mast, it is intended for the try-sail of a snow, but is seldom used in this position except in those sloops of war which occasionally assume the appearance of snows to deceive the enemy.

HORSE—is also the name of the sawyer's frame or trifle.

HOSPITAL-SHIP. See the article **SHIP**.

HOUNDS—a name given to those parts of a mast-head which gradually project on the right and left side beyond the cylindrical or conical surface, which it preserves from the partners upwards. The hounds, whose upper parts are also called cheeks, are used as shutters to support the frame of the top, together with the top-mast and the rigging of the lower-mast.

HOUSED—the situation of the great guns upon the middle and lower gun-decks when they are run in, and the breech being let down, the muzzle rests against the side above the port; they are then secured by their tackles, muzzle-lashings, and breechings.

N. B. A gun is sometimes housed fore and aft, to make room, as in the cabin, &c.

HOUSING, or **HOUSE-LINE**—a small line, formed of three fine strands, smaller than rope-yarn, and is principally used for seizings of block-strops, fastening sails to their bolt-ropes, &c. See the article **BOLT-ROPE**.

HOWITZER. See the article **MORTAR**.

HOWKER—a Dutch vessel, commonly navigated with two masts, viz. a main and a mizen-mast, and being from 60 to 200 tons burthen. It is also the name of a fishing-boat used on the southern coasts of Ireland, and carrying only one mast.

HOWLE—among ship carpenters, is said of a ship whose foot-hooks or futtocks are scarped and bolted into the ground limbers, and the plank laid on them to the orlop.

HOY—a small vessel, usually rigged as a sloop, and employed in carrying passengers and goods from one place to another, particularly on the sea-coast, where ordinary lighters cannot be managed with safety or convenience.

It would be very difficult to describe precisely the marks of distinction between this vessel and some others of the same size which are also rigged in the same manner; because, what is called a hoy in one place, would assume the name of a sloop or smack in another, and even the people who navigate these vessels have, upon examination, very vague ideas of the marks by which they are distinguished from the above-mentioned. In Holland, the hoy has two masts; in England but one, where the main-sail is sometimes

extended by a boom, and sometimes without it.

To **HUG THE LAND**—to sail as near it as possible.

To **HUG THE WIND**—to keep the ship close-hauled.

HULK—a name given to any old vessel laid by as unfit for further sea service. In the royal ports they are used for the accommodation of a ship's company while their own vessel is in dock under repair.

SHEER-HULK—an old ship of war, fitted with an apparatus to fix or take out the masts of his Majesty's ships, as occasion requires.

The mast of this vessel is very high, and properly strengthened by shrouds and stays, in order to secure the sheers, which serve as the arm of a crane to hoist out or in the masts of any ship lying along-side. The sheers are composed of several long masts, whose heels rest upon the side of the hulk, and having their heads inclining outwards, so as to hang over the vessel whose masts are to be fixed or displaced, which is effected by means of several large tackles and two capstans. The gun-deck is from 113 to 150 feet long, and from 31 to 40 feet broad; and they will carry from 400 to 1000 tons.

HULL—the frame or body of a ship, exclusive of her masts, yards, sails, and rigging.

It is usually expressed of a ship either before she is furnished with masts, &c. or after she is stripped and dismantled.

To **HULL A SHIP**—is to fire cannon-balls into her hull within the point-blank-range.

HULL-DOWN—is spoken of a ship when she is at such a distance
as

as that only her masts and sails are to be seen.

HULL-TO—the situation of a ship when she is trying a hull, or with all her sails furled. See the article **TRYING**.

HULLOCK OF A SAIL—is when in a great storm some small part is cut and left loose. It is chiefly used in the mizen-sail, to keep the ship's head to the sea; then all the rest of the sail is made up, except a little at the mizen-yard-arm.

HURRICANE—a violent and prodigious tempest, accompanied with lightning, in which the wind blows from every point of the compass, causing a dangerous agitation in the sea, when the waves break and dash against each other with astonishing fury. Hurricanes are most frequent between the tropics, where they sometimes produce the greatest devastation. They generally take place about the time of the sun's passing the equinox, i. e. 21st of March and 21st of September.

Hurricanes are frequent in the West Indies, where they make prodigious ravages by rooting up trees, destroying houses, shipping, and the like. The natives, it is said, can foretel hurricanes by the following prognostics.

1. All hurricanes happen either on the day of the full change or quarter of the moon. 2. From the unusual redness of the sun, great stillness, and at the same time, turbulence of the skies, swelling of the sea, &c. happening at the change of the moon, the Caribbees conclude there will be a hurricane next full moon; and if the same signs be observed on the full moon, they may expect one next new moon.

As to the cause of hurricanes, they undoubtedly rise from the violent struggle of two opposite winds. Now as the wind betwixt the tropics is generally easterly, and upon the sun's going back from the northern tropic, the western winds pour down with violence upon those parts, the opposition of these contrary winds cannot fail to produce a hurricane. Hurricanes do not shift through all the points of the compass, but begin always with a north wind, veer to the south-west, and then cease; and their shifting between these two points is so sudden and violent, that it is impossible for any ship to veer with it; whence it happens, that the sails are carried away, yards and all, and sometimes the masts themselves wreathed round like an osier.

Switzerland is subject to very violent hurricanes, which do great mischief, and that in a very singular manner.

SHIP'S HUSBAND—the owner, who takes the direction and management of a ship's concerns upon himself, the other owners paying him a commission for his trouble.

J,

JACK—a sort of flag, or colours, displayed from a staff erected on the outer end of a ship's bowsprit. In the British navy, the jack is a small union flag, but in merchant-ships the union is bordered with red.

JACK IN THE BOX—a large wooden male screw, turning in a female one, which forms the upper part of a strong wooden box, shaped like the frustum of a pyramid. It is used by means of levers passing through holes in it, as a press

in packing, and for other purposes.

JACK IN THE BREAD-ROOM—an assistant to the purser or ship's steward.

JACK-BLOCK—a block occasionally attached to the top-gallantie, and through which the top-gallant top-rope is reeved to sway up or to strike the yard.

CORK-JACKET—a machine made somewhat in form of a seaman's jacket, lined with a particular kind of select cork in pieces, so artfully shaped and disposed as to give it the strongest buoyancy, and also to preserve an easy degree of flexibility, so that the activity of the wearer is not impeded.

Dr. Wilkinon devised, and in his "Testamen Nauticum, or Seaman's preservation, recommended this machine or apparatus to all seafaring people, as an easy and indubitable means to escape drowning in shipwreck, and many other accidents to which seamen are liable. The Doctor has shewed the futility of, and fully refuted every argument which could be advanced against the general reception of these jackets on shipboard. Adverting many instances on the solid foundation of certain, well authenticated facts, that shipwrecked seamen would in general save their lives, if accommodated with these floating vehicles, he observes that sometimes there are instances of shipwrecked seamen whose lives have been saved by swimming; but those who confide in swimming alone for security, in those calamitous cases, are frequently lost, from various causes; as the cramp seizing them, violent blows or wounds received from floating fragments of the wreck, or by being driven with great force on the pointed asperities of rocks. From

all which accidents the cork-jacket is certainly an undoubted security, and may be considered as a floating panoply. And, indeed, had not the Admiralty sanctioned their use in the navy, and the Society of Arts, Manufactures, and Commerce, most strenuously recommended them to all who go to sea, we should suppose the self-evident security afforded by this simple invention is sufficient to operate an universal conviction in its favour. He adds, a seaman who commits himself to the sea without having first so provided himself against drowning in shipwreck, seems to merit the same title to prudence as one who sets sail without either anchor or compass on board.

JACOB'S-STAFF, or CROSS-STAFF—a mathematical instrument to take altitudes at sea, consisting of a brass circle, divided into four equal parts by two lines cutting each other in the centre; a each extremity of either line is fixed a sight perpendicular over the lines, with holes below each slit for the better discovery of distant objects. The cross is mounted on a staff or stand for use. Sometimes instead of four sights there are eight.

N. B. This instrument is but little known or used among us; but abroad it is of more account.

JAMMING—the act of inclosing any object between two bodies, so as to render it immovable; whilst they continued in the same position; this expression is usually applied to a running rope when it is so compressed by other bodies as to be incapable of traversing in the blocks; in this sense jamming is opposed to **RENDERING**, which see.

A cask, box, &c. is also said

to be jammed in when it cannot be dislodged from its confinement without great difficulty.

ICE BOUND—See the article **BOUND**.

IDLER—a general name given to all those on board a ship of war, who, from being liable to constant day duty, are not subjected to keep the night watch; but must, nevertheless, go upon deck if all hands are called during the night.

JEERS, or JEARS—an assemblage of tackles by which the lower yards are hoisted up along the mast, or lowered down as occasion requires; the former of which operations is called **SWAYING**, and the latter **STRIKING**. See the articles **SWAYING** and **STRIKING**.

In a ship of war the jeers are usually composed of two strong tackles, each of which has two blocks, viz one fastened to the lower mast-head, and the other to the middle of the yard. The two blocks which are lashed to the middle slings of the yard, are retained in this situation by means of two cleats, nailed on each side, whose arms inclose the ropes by which the blocks are fastened to the yard. The two ropes which communicate with these tackles lead down to the deck on the opposite side of the mast, according to the situation of the upper jeer-blocks.

In merchant ships the jeers have usually two large single blocks on the opposite side of the mast-head, and another of the same size in the middle of the yard. The rope which communicates with these, passes through one of the blocks hanging on the mast-head, then through the block on the yard, and afterwards through the other hanging block on the mast.

To the two lower ends of this rope, on the opposite sides of the mast, are fixed two tackles, each of which is formed of two double blocks, the lower one being hooked to a ring-bolt in the deck, and the upper one spliced or seized, into the lower end of the great rope, above which is called the tye (See the article **TYE**.) By this contrivance the mechanical power of the tackle below is transmitted to the tye, which communicating with blocks on the yard, readily sways up, or lowers it, either by the effort of both jeers at once on the opposite sides of the mast, or by each of them separately, one after the other.

They say a man is brought to the jeers, when going to be punished at the jeer-captain. This is done in the following manner: a captain-bar being thrust through the hole of the barrel, the offender's arms are extended at full length cross-wise, and so tied to the bar, having sometimes a basket of bullets, or some other like weight, hanging by his neck. In this posture he continues till he be either brought to confess some plot or crime whereof he is suspected, or that he has suffered what he is sentenced to undergo at the discretion of the captain.

JETTY-HEAD—a name given to that part of a wharf which projects beyond the rest, but more particularly the front of a wharf, whose side forms one of the cheeks of a wet or dry dock.

JEWEL BLOCKS—two small blocks, which are suspended at the extremity of the main and fore-top-sail-yards, by means of an eye-bolt driven from without into the middle of the yard-arm parallel to its axis. The use of these blocks is to retain the upper part of the top-mast studding-sails beyond

beyond the sheets of the top-sails, so that each of these sails may have its full force of action, which would be diminished by the encroachment of the other over its surface.

The halliards, by which those studding-sails are hoisted, are passed through the jewel-block, whence, communicating with a block on the top-mast-head, they lead downwards to the top or decks, where they may be conveniently hoisted. See the article **SAIL**.

JIB — the foremost sail of a ship, being a large stay-sail extended from the outer end of the bowsprit, prolonged by the jib-boom, towards the fore-top-mast-head. In cutters and sloops the jib is on the bowsprit, and extends towards the lower mast-head. See the article **SAIL**.

The jib is a sail of great command with any side wind, but especially when the ship is close-hauled, or has the wind upon her beam; and its effort in casting the ship, or turning her head to leeward, is very powerful and of great utility, particularly when the ship is working through a narrow channel.

CLEAR AWAY THE JIB—is the order to loose it preparatory to its being set.

FLYING JIB—a sail sometimes set upon a boom, rigged out beyond the **JIB-BOOM**, which see.

MIDDLE JIB — a similar sail, sometimes set between the two preceding, being extended from the end of the jib-boom, while the inner jib-tack is near half way down or on the boom.

JIB-BOOM—is a continuation of the bowsprit forward, being run out from the extremity in a similar manner to a top-mast on a

lower mast, and serving to extend the bottom of the jibs and the stay of the fore-top-gallant-mast. It is usually attached to the bowsprit by means of two large boom-irons, or by one boom-iron and a cap on the outer end of the bowsprit, or by a cap without, and a strong lashing within, instead of a boom-iron, which is generally the method of securing it in small merchant ships: when it can be drawn in upon the bowsprit as occasion requires, which is frequently practised when the ship enters a harbour, where it might very soon be broken or carried away, by the vessels which are moored therein or passing by under sail.

FLYING JIB-BOOM—is a boom extended beyond the preceding by means of two boom-irons, and to the fore-most end of which the tack of the flying-jib is hauled out.

JIBING—See the article **GY-BING**.

JIGGER — a machine consisting of a piece of rope about five feet long, with a block at one end, and a sheave at the other, used to hold on the cable when it is heaved into the ship by the revolution of the windlafs. See the article **HOLDING-ON**.

The Jigger is particularly useful when the cable is either slippery with mud or ooze, or when it is stiff or unwieldy; in both of which cases it is very difficult to stretch it back from the windlafs by hand, which however is done with facility and expedition by means of the Jigger, in the following manner: the end of the rope to which the sheave is fastened by a knot, is passed round the cable close to the windlafs, and the hind part of the rope coming over the sheave, is stretched aft

by means of another rope passing through the Jigger-block. As soon as the last rope is extended, the turn of the former about the cable is firmly retained in its position by the compression of its hind part under the sheave, acting upon what may be called the neck of the Jigger.

FLEET JIGGER—a term used by the man who holds on the jigger, when, by its distance from the windlafs, it becomes necessary to fleet or replace it in a proper state of action, for as the cable continues to be heaved into the ship, it is evident that the Jigger which is fastened on a particular part thereof, stretching it back, will be removed further aft, by every turn of the windlafs, and the effort of the Jigger will be lessened in proportion to its distance from the windlafs; accordingly, when the man gives the above notice, another at the windlafs immediately fixes his hand-spike between the deck and the cable, so as to jam the latter to the windlafs, and prevent it from running out till the jigger is replaced near the windlafs.

JIGGER-TACKLE—a light small tackle consisting of a double and a single block, and used by seamen on sundry occasions.

IN—the state of any sails in a ship when they are furled or stowed, in opposition to out, which implies that they are set, or extended to assist the ship's course.

IN—is also used as an order to shorten sail, where the word take is understood, and is usually applied to the square upper-sails; as, In top gallant-sails. See the articles Down and Up.

INCH, or INNIS—a general name for an island.

INSURANCE—a certain con-

tract by which an individual, or a company agree to indemnify whatever losses or damages may happen to a ship or cargo during a voyage. For this agreement the latter pays a certain sum in advance, called the premium, which accordingly falls to the insurer in case the ship arrives safe in a specified harbour, but if the ship is lost, or taken by any enemy, or burnt, the insurer renders the stipulated sum to the merchant. There are, however, certain provisions to be observed, particularly if the ship or cargo be lost by default of the person insured, the insurer shall not be accountable.

JOLLY-BOAT—See the article BOAT.

JONK, JONQUE, or JUNK—a kind of small ship, very common in the East-Indies.

These vessels are about the size of fly-boats, and differ in the form of their building, according to the different methods of naval architecture used there. The sails are frequently made of mats, and the anchors of wood.

JOURNAL—a sort of diary, or daily register of the ship's course and distance, the winds and weather, together with a general account of whatever is material to be remarked in the period of a sea voyage, such as the shifting, reducing, or enlarging the quantity of sail, the condition of the ship, and her crew, the discovery of other ships or fleets, lands, shoals, breakers, soundings, &c.

In sea journals, the day, or twenty-four hours, terminate at noon, because the errors of the dead reckoning are at that period generally corrected by a solar observation. The first twelve hours, from noon to midnight, are marked with P. M. signifying after mid-

mid-day; and the second twelve hours, from midnight to noon, are marked with A. M. signifying after midnight; so that the ship account is twelve hours earlier than the shore account of time.

There are various ways of keeping journals according to the different notions of mariners concerning the articles that are to be entered. Some keep such a kind of journal as is only an abstract of each day's transactions; specifying the weather, what ships or lands were seen, accidents on board, the latitude, longitude, the meridional distance, course, and run. These particulars are to be drawn from the ship's log-book, or from that kept by the person himself. Others keep only one account, including the log-book, and all the work of each day, with the deductions drawn from it. Notwithstanding the form of keeping journals is very different in merchant ships, yet one method appears to be invariably pursued in the navy, which however admits of much improvement, for no form can be properly called perfect that leaves as great a space for one day's work which may not be interesting, and can therefore be told in a few lines, as for another, which may probably abound with important incidents, and consequently require much room. According to circumstances the matter must be greater or less, and the appropriated space should admit of all.

IRON CHAMBERS—See the article **FRESHIP**.

IRON GARTERS—a cant word for bilboes or fetters.

IRON-WORK—a general name for all the pieces of iron of whatever figure or size, which are used in the construction and equipment

of a ship, as bolts, boom-irons, nails, spikes, chains, and chain-plates, block-frops, cranks, braces, pinules, googings, &c. which articles see.

IRON-SICK—is said of old vessels when the iron work becomes loose in the timbers.

ISLAND, or ISLE—is a quantity of land entirely surrounded with water.

Some conclude that islands are as ancient as the world, and it is by no means probable that the large islands far remote from the continent are new, or that they either arose out of the sea, or were torn from the main land. Nor is it less certain that there have been new islands formed by the casting up of vast heaps of clay, mud, sand, &c. as that for instance, of Tsongning in the province of Nanquin in China; or by the violence of the sea which has torn off large promontories from the continent, as the ancients imagined Sicily, and even Great Britain, to have formed. It is also certain that some have emerged above the waves, as Santorini formerly, and three other isles near it lately; the last in 1707, which rose from the bottom of the sea, after an earthquake that was supposed to have loosened it from its hold.

Several naturalists are of opinion that islands were formed at the deluge: others think they have been rent and separated from the continent by violent storms, inundations, and earthquakes. These last have observed that the East-Indies, which abound in islands more than any other part of the world, are likewise more annoyed with earthquakes, tempests, lightnings, volcanoes, &c. than any other part.

Varenius thinks most of these opinions true in some instances, and believes that there have been islands produced each of these ways. St. Helena, Ascension, and other steep rocky islands, he supposes to have become so, by the seas overflowing their neighbouring champaigns. By the heaping up huge quantities of sand and other terrestrial matters, he thinks the islands of Zealand, Japan, &c. were formed. Sumatra and Ceylon, and most of the East Indian islands, he rather thinks were rent off from the main land; and concludes, that the islands of the Archipelago were formed in the same way; imagining it probable that Deucalion's flood might have contributed towards it.

The ancients had a notion that Delos and some other islands rose from the bottom of the sea, which how fabulous soever it might appear, agrees very well with some later observations. Seneca takes notice that the island Thuaasia rose out of the Ægean sea in his time, of which the mariners were eye-witnesses.

Seneca mentions several floating islands in Italy; and later writers have described not a few of them in other places; but how true soever the histories of these might have been at the time they were written, there remain very few proofs of their truth at present, these islands having either disappeared again, or been fixed to the sides, in some places, so as to have made a part of the shore.

ISLAND OF ICE, a name given to a great quantity of ice collected into one solid mass, and floating upon the seas, near, or within the polar circles.

Many of these fluctating islands are met with on the coasts of

Spitzbergen, to the great danger of the shipping employed in the Greenland fishery.

JUNK—any remnants or pieces of old cable, which are usually cut into small portions for the purpose of making **POINTS**, **MATS**, **GASKETS**, **SENNIT**, &c. which see.

JUNK—See **JONK**.

JURY-MAST, a temporary or occasional mast erected in a ship in the place of one which has been carried away by tempest, battle, &c. Jury-masts are sometimes erected in a new ship to navigate her down a river, or to a neighbouring port, where her proper masts are prepared for her.

JUTTY-HEADS—platforms standing on piles near the docks, and projecting without the wharfs for the more convenient docking and undocking ships.

K.

KECKLING, or **KAICK-LING**—the art of winding or worming old rope, &c. about a cable to preserve its surface from being fretted when it rubs against a ship's bow or fore foot, but more particularly it implies the winding of iron chains round the cable to defend it from the friction of a rocky bottom, or from the ice.

KEDGE, or **KEDGER**—a small anchor used to keep a ship steady and clear from her bower-anchor while she rides in an harbour or river, particularly at the turn of the tide, when she might otherwise drive over her principal anchor, and entangle the stock or flukes with her slack cable, so as to loosen it from the ground. The kedge anchors are also used to transport

transport a ship, or remove her from one part of an harbour to another, being carried out from her in the long boat, and let go by means of ropes fastened to these anchors. They are also generally furnished with an iron stock which is easily displaced for the convenience of flowing. See the articles ANCHOR, WARP, &c.

TO KEDGE—to bring a ship up or down a narrow river by the wind, though the tide be contrary, by means of the kedge-anchor.

KEDGE-ROPE—the rope which belongs to the kedge-anchor, and restrains the vessel from approaching her bower-anchor.

KEEL—the principal piece of timber in a ship, which is usually first laid on the blocks in building.

By comparing the carcase of a ship to the skeleton of a human body, the keel appears as the back bone, and the timbers as the ribs. Accordingly the keel supports and unites the whole fabric, since the stem and stern posts which are elevated on its ends, are, in some measure, a continuation of the keel, and serve to connect and inclose the extremities of the sides by transoms, as the keel forms and unites the bottom by timbers.

The keel is generally composed of several thick pieces placed lengthways, which, after being scarfed together, are bolted and clinched upon the upper side.

FALSE KEEL—a strong thick piece of timber bolted to the bottom of the keel, which is very useful in preserving its lower side. The false keel is provided when the thick pieces which form the real keel cannot be procured large enough to give a sufficient depth thereto. In large ships of war the false keel is composed of two

pieces called the upper and lower false keels.

The lowest plank in a ship's bottom called the Garboard Streak, has its inner edge let into a groove or channel, cut longitudinally on the side of the keel; the depth of this channel is therefore regulated by the thickness of the Garboard Streak.

KEEL—is also a name given to a low flat-bottomed vessel used in the river Tyne, to bring the coals down from Newcastle for loading the colliers; hence, a collier is said to carry so many keels of coals.

UPON AN EVEN KEEL—the position of a ship when her keel is parallel to the plane of the horizon, so that she is equally deep in the water at both ends.

KEEL-HAULING—a punishment inflicted for various offences in the Dutch navy. It is performed by suspending the culprit by a rope from one yard-arm, with a weight of lead or iron upon his legs, and having another rope fastened to him, leading under the ship's bottom and through a block at its opposite yard-arm; he is then repeatedly and suddenly let fall from the one yard-arm into the sea, where passing under the ship's bottom, he is hoisted up on the opposite side of the vessel to the other.

As this extraordinary sentence is executed with a serenity of temper peculiar to the Dutch, the culprit is allowed sufficient intervals to recover the sense of pain, of which indeed he is frequently deprived during the operation. In truth, a temporary insensibility to his sufferings ought by no means to be construed into a disrespect for his judges, when we consider

sider that this punishment is supposed to have peculiar propriety in the depth of winter, whilst the flakes of ice are floating on the stream; and that it is continued till the culprit is almost suffocated for want of air, benumbed with the cold of the water, or stunned with the blows his head receives by striking the ship's bottom.

KEELSON, or **KELSON**—a piece of timber forming the interior or counterpart of the keel, being laid upon the middle of the floor timbers immediately over the keel, and serving to bind and unite the former to the latter, by means of long bolts driven from without, and clinched on the upper side of the keelson.

The keelson, like the keel, is composed of several pieces scarfed together; and in order to fit with more security upon the floor timbers and crotches, it is notched about an inch and a half deep, opposite to each of those pieces, thereby scored down upon them to that depth, where it is secured by spikenails. The pieces of which it is formed are only half the breadth and thickness of those of the keel.

To **KEEP**—a term used on several occasions in navigation, as,

To **KEEP THE LAND ABOARD**—is to keep within sight of land as much as possible.

To **KEEP THE LUFF**, or **THE WIND**—to continue close to the wind; i. e. sailing with a course inclined to the direction of the wind as much as possible. See the article **CLOSE-HAULED**.

To **KEEP OFF**—to sail at a distance from the shore or a ship, &c. See the article **OFFING**.

BOAT KEEPER—one of the boat's crew who remains as a cen-

tinel in his turn, to take care of the boat and her contents when she is ashore, or alongside of a ship, or is towed astern of her.

KENTLEDGE—pigs of iron for ballast, laid upon the floor near the keelson, fore and aft.

LIMBER KENTLEDGE—pigs of iron or lead, cast to fit between the floor timbers, or in the limbers.

KETCH—a vessel equipped with two masts, viz. the main-mast and the mizen-mast, and usually from 100 to 250 tons burthen.

Ketches are principally used as yachts for conveying princes of the blood, ambassadors, or other great personages, from one place to another. See the article **YACHT**.

Ketches are likewise used as bomb-vessels, and are therefore furnished with all the apparatus necessary for a vigorous bombardment.

BOMB-KETCHES—are built remarkably strong, as being fitted with a greater number of riders than any other vessel of war; and indeed this reinforcement is absolutely necessary to sustain the violent shock produced by the discharge of their mortars, which would otherwise in a very short time shatter them all to pieces. See the articles **BOMB-VESSEL**, **MORTAR**, and **SHELL**.

KEVELS, or **CHEVILS**—a frame composed of two pieces of timber, whose lower end rests in a sort of step or foot, nailed to the ship's side, from whence the upper ends branch outward into arms or horns, serving to belay the sheets or great ropes by which the bottoms of the main-sail and fore-sail are extended.

KEVEL HEADS—the ends of the

the top timbers, which rising above the gunnel serve to belay the ropes, or take a round turn to hold on.

KEY, or QUAY—a long wharf by the side of a harbour or river, usually built of stone, and having several store-houses for the convenience of lading and discharging merchant ships. It is furnished with posts and rings, whereby ships may be secured, as also with cranes, capstans, &c. to load or unload the vessels which lie alongside.

KEYS—are also certain sunken rocks, lying near the surface of the water, particularly in the West-Indies.

KINK—a sort of twist or turn in any cable or rope, occasioned by its being very stiff, or close laid, or by being drawn too hastily out of the roll or tier in which it was coiled. See the article **COILING**.

KNAVE-LINE—See the article **LINE**.

KNECK—the twisting of a rope or cable as it is veering out.

KNEE—a crooked piece of timber having two branches or arms, and generally used to connect the beams of a ship with her sides or timbers.

The branches of the knees form an angle of greater or smaller extent, according to the mutual situation of the pieces which they are designed to unite. One branch is securely bolted to one of the deck-beams, and the other in the same manner strongly attached to a corresponding timber in the ship's side.

Besides the great utility of knees in connecting the beams and timbers into one compact frame, they contribute greatly to the strength and solidity of the ship, in the different parts of her

frame to which they are bolted, and thereby enable her, with great firmness, to resist the effects of a turbulent sea.

In fixing of these pieces it is occasionally necessary to give an oblique direction to the vertical or side branch, in order to avoid the range of an adjacent gun-port, or because the knee may be so shaped as to require this disposition, it being sometimes difficult to procure so great a variety of knees as may be necessary in the construction of a number of ships of war. In France the scarcity of these pieces has frequently obliged their shipwrights to form their knees of iron.

DAGGER KNEES—are those which are fixed rather obliquely to avoid, as above mentioned, an adjacent gun-port, or where, from the vicinity of the next beam, there is not space for the arms of two lodging knees.

HANGING KNEES—are those which, from their situation under a deck, appear to support the beams.

IRON KNEES—are frequently used in all the various applications instead of wooden ones, particularly in the French ships, on account of the scarcity of timber fit for the purpose.

LODGING KNEES—are fixed horizontally in the ship's frame, having one arm bolted to the beam, and the other across two or three of the timbers.

STANDARD KNEES—are those which, being upon a deck, have one arm bolted down to it, and the other pointing upwards secured to the ship's side; such, also, are the bits and channels.

TRANSOM KNEES—See the article **TRANSOM**.

KNEE OF THE HEAD—a large flat

flat piece of timber, fixed edge-ways upon the foremost part of a ship's stem, and supporting the ornamental figure or image, placed under the bow-sprit. See the article **HEAD**.

The knee of the head, which may properly be defined a continuation of the stem, as being prolonged from the stem forwards, is extremely broad at the upper part, and accordingly composed of several pieces united into one. It is let into the head, and secured to the ship's bows by strong knees fixed horizontally upon both, and called the cheeks of the head. The heel of it is scarfed to the upper end of the fore-top, and it is fastened to the stem above by a standard knee. Besides supporting the figure of the head, this piece is otherwise useful as serving to secure the boom or bumkin, by which the fore-tack is extended to windward, and by its great breadth preventing the ship from falling to leeward when close-hauled, so much as she would otherwise do. It also affords a greater security to the bow-sprit by increasing the angle of the bobstay, so as to make it act more perpendicularly on the bowsprit.

The knee of the head is a phrase peculiar to shipwrights; but by seamen it is called the cut-water, which article see.

KNIGHT-HEADS, or **BOLLARD-TIMBERS**—See **BOLLARD-TIMBERS**.

KNIGHT-HEADS—also denote in a merchant ship two strong frames of timber, fixed on the opposite side of the main-deck, a little behind the fore-mast, which support and inclose the ends of the windlafs, which accordingly is turned therein as upon an axis: as each of these is formed of two

pieces, they may be occasionally separated, in order to take off the turns of the cable from the windlafs, or replace them upon it. They are frequently called the bits, and then their upper parts only are denominated knight-heads, which being formerly embellished with a figure, designed to resemble a human head, gave rise to a name they have ever since retained. See the article **WIND-LASS**.

KNIGHT-HEADS—was formerly a name given to the lower jear-blocks, which were then no other than bits, containing several sheaves, and nearly resembling our present top-sail sheet-bits.

KNITTLE—a small line composed of two or three rope-yarns, either plaited or twisted, and used for various purposes, particularly to fasten the service on the cable, to sling the sailors' hammocks, to reef the sails by the bottom, &c.

KNITTLE—is also a name given to the loops or buttons of a bonnet.

KNOCK-OFF—an order to cease any work.

KNOT—a large knob formed on the extremity of a rope, generally by untwisting the ends thereof, and interweaving them regularly among each other: of these there are several sorts, differing in form, size, and name, as

SHROUD KNOT.

STOPPER KNOT.

OVERHAND KNOT.

SINGLE WALL KNOT, WALE-KNOT, or WALNUT.

DOUBLE WALL KNOT, WALE KNOT, or WALNUT.

DIAMOND KNOT.

KOP KNOT.

REEF KNOT.

The Bow-line knot is so firmly made and fastened to the crengles of the sails, that they must break,

or the sails split, before it will slip.

The sheep-shank knot serves to shorten a rope without cutting it, which may be presently loosened.

The wale-knot is so made with the lays of a rope, that it cannot slip, and serves for sheals, tacks, and stoppers.

The knots are generally used to act as a button in preventing the end of the rope from slipping through an eye, or through the turns of a laniard, by which they are sometimes made fast to other ropes.

KNOT—also signifies the manner of tying two ropes together, or the end of a rope to a bight in the same. See the articles **BEND** and **HITCH**.

KNOT—also implies a division of the log-line, which answers to half a minute, as a mile does to an hour, i. e. it is $\frac{1}{120}$ of a mile; hence we say, the ship was going eight knots, which signifies eight miles per hour.

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LABOURING — implies pitching or rolling heavily in a turbulent sea, an effect by which the masts and hull of the ship are greatly endangered; because, by the rolling motion, the masts strain upon their shrouds with an effort which increases as the sine of their obliquity; and the continual agitation of the vessel gradually loosens her joints, and often makes her extremely leaky.

LADDER—a well-known convenience, of which there are a great number in a ship, serving as stairs whereby to ascend or descend from one deck to another; the ladders are distinguished by epithets according to the several

hatchways, or other parts of a ship wherein they are situated:—

ACCOMMODATION LADDER—a sort of light stair-case occasionally fixed on the gangway of the admiral or commander in chief of a fleet. It is furnished with rails and entering ropes, covered with red baize, and the lower end of it is kept at a proper distance from the ship's side by iron bars or braces to render the passage for entrance or departure more convenient. See the article **GANGWAY**.

QUARTER OF STERN LADDERS—two ladders of rope depending from the right and left side of a ship's stern, whereby to descend into the boats which are moored astern, in order to bring them up along-side of the ship, or to use them for any other occasion.

LADEN—the state of a ship when she is charged with a weight or quantity of materials equal to her tonnage or burthen. If the goods, with which she is laden, be extremely heavy, her burthen is determined by the weight thereof; but if light, she carries as much as she can stow for the purposes of navigation. As a ton in measure is generally estimated at 2000lbs in weight, a vessel of 200 tons ought accordingly to carry a weight equal to 400,000 pounds; therefore, when the matter of which the cargo is composed is specifically heavier than the water in which she floats; or, in other words, when the cargo is so heavy that she cannot float high enough with so great a quantity of it as her hold will contain, a diminution thereof becomes absolutely necessary.

LADEN IN BULK—the state of being loaded with a cargo which is neither in casks, boxes, hales, or cases, but lies loose in the hold,

being defended from the moisture or wet of the hold by a number of mats, and a quantity of dunnage; such are usually the cargoes of salt, corn, &c.

LADLE—in gunnery, an instrument used to draw the charge of a great gun, being made of copper, something in the form of an apple-scoop, and fixed on a long staff.

PAYING LADLE—an iron ladle with a long spout opposite to the handle; it is used to pour melted pitch into the seams after they are caulked. See the article **CAULKING**.

LAGOON—a name given to large ponds in some parts of America and the West Indies.

LAI D UP—the situation of a ship when she is unrigged, during a winter, or for want of employment; or when, from age, &c. she is unfit for further service.

LAKE—a large collection of water entirely surrounded by the land, and stands opposed to island.

A lake, strictly considered, has no visible communication with the sea: but this is not always attended to; for many of the loughs of Ireland and the northern parts of Scotland are exceptions to this rule, and partake of the nature of havens or gulfs.

Lakes may be divided into four kinds. 1. Such as neither receive nor send forth rivers; 2. Such as emit rivers without receiving any; 3. Such as receive rivers without emitting any; and 4. Such as both receive and send forth rivers.

Of the first kind, some are temporary, and others perennial; most of those that are temporary owe their origin to the rain, and the cavity or depression of the place in which they are lodged; thus in

India there are several such lakes made by the industry of the natives, of which some are a mile and some two in circuit. These are surrounded with stone walls, and being filled in the rainy months, supply the inhabitants in dry seasons. There are also several of this kind formed by the inundations of the Nile and the Niger, and in Muscovy, Finland, and Lapland, there are many lakes formed partly by the rains, and partly by the melting of the ice and snow; but most of the perennial lakes, which neither emit nor receive rivers, probably owe their rise to springs at the bottom, by which they are constantly supplied.

The second kind of lakes which emit without receiving rivers is very numerous. Many rivers flow from these as out of cisterns, where these springs being situated low within a hollow place, first fill the cavity and make it a lake, which not being capacious enough to hold all the water, it overflows and forms a river. Of this kind is the Wolga; the lake Odium, at the head of the Tanais; the Adack, from whence one branch of the river Tigris flows; the Ozero, or White Lake, in Muscovy, is the source of the river Shackina. The great lake Chaamay, which emits four very large rivers which water the countries of Siam, Pegu, &c. viz. the Menau, the Afa, the Caipoumo, and the Laquia, &c.

The third species of lakes which receive rivers, but emit none, apparently owe their origin to those rivers which, in their progress from their source, falling into some extensive cavity, are collected together, and form a lake of such dimensions as may lose as much by exhalations as it continually

ally receives from its sources. Of this kind is that great lake improperly called the Caspian Sea; the lake Asphaltites, also called the Dead Sea; the lake of Geneva, &c.

Of the fourth species, which both receive and emit rivers, we reckon three kinds, as the quantity they emit is greater, equal, or less than they receive. If it be greater, it is plain that they must be supplied by springs at the bottom; if less, the surplus of the water is probably spent in exhalation; and if it be equal, their springs just supply what is evaporated by the sun.

Lakes are also divided into those of fresh water and those of salt. Large lakes answer the most valuable purposes in the northern regions.

LAND BREEZE—a current of air, which, in many parts within the tropics, particularly in the West Indies, regularly sets from the land towards the sea during the night, and this even on opposite points of the coast.

LAND-FALL—the first land discovered after a sea-voyage; hence, a good land-fall implies a discovery of the land at or near the place to which the course was directed; and a bad land-fall implies the contrary.

LAND-LOCKED—is said of a harbour which is environed by land on all sides, so as to exclude the prospect of the sea, unless over some intervening land.

TO MAKE THE LAND—is, to discover it after having been out of sight of it some time.

LAND-TO—is when a ship lies so far from the shore that she can but just ken land.

LAND-TURN—is a wind that blows in the night, at certain times, in most hot countries.

LAND-MARK—any mountain, rock, steeple, or the like, near the sea-side, which serves to direct ships passing by how to steer, so as to avoid certain dangers, rocks, shoals, whirlpools, &c.

For other particulars relative to Land, see the articles **LAYING**, **SET**, **SMUT IN**, **HEAD LAND**, &c.

LANDSMEN—the distinctive appellation of those on board a ship who have never before been at sea.

LANGREL, or **LANGRAGE**—a particular kind of shot formed of bolts, nails, and other pieces of iron tied together, and forming a sort of cylinder, which corresponds with the bore of the cannon from which it is discharged, in order to wound or carry away the masts or tear the sails and rigging of the adversary. It is seldom used but by privateers or merchantmen.

LANIARD, or **LANNIERS**—a short piece of rope or line, fastened to several machines in a ship, and serving to secure them in a particular place, or to manage them more conveniently; such are the laniards of the gun-ports, the laniard of the buoy, the laniard of the cat-hook, &c. The principal laniards used in a ship are those employed to extend the shrouds and stays of the masts by their communication with the dead-eyes and hearts, so as to form a sort of mechanical power, resembling that of a tackle. See article **DEAD-EYES** and **HEARTS**.

The following is the manner in which these laniards are fixed in the dead-eyes; one end of the laniard is thrust through one of the holes in the upper dead-eye, and then knotted to prevent it from drawing out; the other end is then
A 2 passed

passed through one of the holes in the lower dead-eye, whence, returning upward, it is inserted through the second hole in the upper dead-eye, and next through the second in the lower dead-eye, and finally through the third holes in both dead-eyes. The end of the laniard being then directed upwards from the lowest dead-eye, is stretched as stiff as possible by the application of tackles, and that the several parts of it may slide with more facility through the holes in the dead-eyes, it is well smeared with hog's-lard or tallow, so that the strain is immediately communicated to all the turns at once.

LANIARDS OF THE STOPPERS.
See the article **STOPPERS**.

LANTERN—a well-known machine, of which there are many used in a ship, such as poop-lanterns, top-lanterns, signal-lanterns, store-room-lanterns, powder-room lanterns, &c.

LAP-SIDED—the state of a ship which is built in such a manner as to have one side heavier than the other, and, by consequence, to retain a constant heel or inclination towards the heaviest side; unless when she is brought upright by placing a greater quantity of the cargo or ballast on the other side.

LARBOARD—a name given by seamen to the left side of a ship when the spectator's face is turned towards the head.

LARBOARD-TACK—is when a ship is close-hauled, with the wind blowing on her larboard side.

LARBOARD-WATCH, a division of a ship's company on duty while the other is relieved from it. See the article **WATCH**.

LARBOWLINES, a cant term used by the boatswain's mates, implying the larboard watch.

LARGE—a phrase applied to

the wind when it crosses the line of a ship's course in a favourable direction, particularly on the beam or quarter: for instance, if a ship is flooring west, the wind in any point of the compass to the eastward of the south or north, may be called large, unless it is directly east, and then it is said to be right aft.

SAILING LARGE—is therefore the act of advancing with a large wind, so as that the sheets are slackened and flowing, and the bowlines entirely disused. This phrase is generally opposed to sailing close-hauled, or with a scant wind, in which situation the sheets and bowlines are extended as much as possible.

LASH, or **LACE**—to bind or make fast.

LASHERS—are properly those ropes only which bind fast the tackles and the breeches of the ordnance, when they are haled or made fast within board.

LASHING—which denotes a piece of rope used to fasten or secure any moveable body in a ship, or about her masts, sails, and rigging, is chiefly used for binding up to the ship's side muskets, butts of water or beer, or pieces of timber, to make spare top-masts.

LASKETS—small lines like hoops, sewed to the bonnets and drabblers of a ship, to lash or lace the bonnets to the courns, or the drabblers to the bonnets.

LASKING—is much the same with going larger or veering; that is, going with a quarterly wind. See the article **VEER**.

LASTAGE—signifies the ballast or lading of a ship.

LATEEN SAIL—a triangular sail, frequently used by xebecs, polacres, settees, and other vessels navigated in the Mediterranean Sea.

LATEEN

LATEEN YARD—a long yard, used to extend the preceding sail upon it, is slung about one-quarter from the lower end, which is brought down as the tack, while the upper end is raised in the air, in an angle of about 45 degrees. See the article **YARD**.

LATITUDE—the distance of a place from the equator, or an arc of the meridian intercepted between the zenith of the place and the equator. Hence latitude is either northern or southern, according as the place, whose latitude is spoken of, is on this or that side of the equator. Thus London is said to be in 51 degrees 32 minutes north latitude.

Circles parallel to the equator are called parallels of latitude, because they shew the latitudes of places by their intersection with the meridian.

If through the poles of the world we conceive innumerable great circles drawn, these are called secondaries of the equator, and by their help, the position of every point, either on earth or in the heavens, with regard to the equinoctial, that is, the latitude of any point, is determined. One of the secondaries, passing through any place on the earth's surface, is called the meridian of that place, and on it the latitude of that place is measured.

The latitude of a place, and the elevation of the pole of that place above the horizon, are terms used indifferently for each other, because the latitude and elevation of the pole are always equal.

The knowledge of the latitude of a place is of the utmost consequence in navigation, and the methods of determining it both at sea and land are generally the same.

As the altitude of the pole is always equal to the latitude, the

latitude is consequently best found by observing the pole's height; but as the pole is only a mathematical point, and no ways to be observed by our senses, its height cannot be determined in the same manner as that of the sun and stars, &c. for which reason another manner has been contrived. A meridian line is first drawn, on which is placed a quadrant, so that its plane may be in the plane of the meridian; then some star near the pole is taken, for example, the pole star (which never sets) and observation is made of both its greatest and least altitude. The latitude may also be found by having the sun or a star's declination and meridian altitude, taken with a quadrant or astrolabe. The method is this: observe the meridian and distance of the sun from the vertex or zenith, which is always the complement of his meridian altitude; correct for the dip of the horizon, refraction, and add to this the sun's declination, when the sun and the place are on the same side of the equator; and subtract the declination when they are of different sides; the sum, in the former case, and the difference in the latter, will be the latitude required. But when the declination of the sun is greater than the latitude of the place, which is known from the sun's being nearer to the elevated pole than the vertex of the place is, as it frequently happens in the torrid zone, then the difference between the sun's declination and his zenith distance is the latitude of the place.

If the sun or star have no declination, but move in the equinoctial that day, then the elevation of the equator will be equal to his meridian altitude, and consequently his meridian altitude is the
com

complement of the latitude to 90.

The latter method is best accommodated to the uses of navigation, as being practicable at sea; but circumstances frequently occur, which render it impossible to observe the meridian altitude of a celestial object. In such cases, recourse must be had to the readiest and most approved practical methods of determining the latitude. See the article **TIME-KEEPER**.

LATITUDE BY ACCOUNT—the distance from the equator, north or south, estimated by the log-board.

LATITUDE BY OBSERVATION—the latitude determined by an observation of the sun or a star.

LAUNCH—a peculiar kind of boat. See the article **BOAT**.

The principal superiority of the launch to the long boat, consists in being, by its construction, much fitter to undertake the cable, which is a very necessary employment in the harbours of the Levant Sea, where the cables of different ships are fastened across each other, and frequently render this exercise extremely necessary.

LAUNCH—is also the movement by which a ship or boat descends into the water; hence, to **LAUNCH**.

To facilitate the operation of launching, and prevent any interruption therein, the ship is supported with two strong platforms, laid with a gradual inclination to the water on the opposite sides of her keel, to which they are parallel. Upon the surface of this declivity are placed two corresponding ranges of planks, which compose the base of a frame called the cradle, whose upper part envelop the ship's bottom;

whereto it is securely attached. Thus the lower surface of the cradle conforming exactly to that of the frame below, lies flat upon it, lengthways, under the opposite sides of the ship's bottom, and as the former is intended to slide downwards upon the latter, carrying the ship along with it, the planes or faces of both are well daubed with soap and tallow.

The necessary preparations for the launch being made, all the blocks and wedges by which the ship was formerly supported are driven out from under her keel, till her whole weight gradually subsides upon her platform above described, which are accordingly called the Ways. The shores and stanchions by which she is retained upon the stocks till the period approaches for launching, are at length cut away, and the screws applied to move her if necessary. The motion usually begins on the instant when the shores are cut, and the ship slides downward along the ways, which are generally prolonged under the surface of the water to a sufficient depth to float her as soon as she arrives at the furthest end thereof.

When a ship is to be launched, the ensign, jack, and pendant, are always hoisted, the last being displayed from a shaft erected in the middle of the ship.

Ships of the first rate are commonly constructed in dry docks, and afterwards floated out by throwing open the flood-gates, and suffering the tide to enter, as soon as they are finished.

LAUNCH HO—is the order to let go the top-rope after the top-mast is fidded.

LAYING THE LAND, the state of

of motion which increases the distance from the coast, so as to make it appear lower and smaller: a circumstance which evidently arises from the intervening convexity of the surface of the sea. It is used in contradistinction to raising the land which is produced by the opposite motion of approach towards it.

TO LAY-IN OFF A YARD—to come from the yard-arms towards the mast, so as to quit it at the rigging.

LAYING OUT ON A YARD—is to go out towards the yard-arms.

LAZARETTO—a building, or vessel, fitted up and appointed for the performance of quarantine, in which all persons are confined who are suspected to have come from places infected with the plague.

LEAD—an instrument for discovering the depth of water; it is composed of a large piece of lead, from seven to eleven pounds weight, and is attached, by means of a stop, to a long line called the lead-line, which is marked at certain distances to ascertain the fathoms.

TO HEAVE THE LEAD—is to throw it into the sea in a manner calculated to produce the desired effect.

DEEP-SEA-LEAD—a lead of a larger size, being from 25 to 30 pounds weight; and attached to a much longer line than the former, which is called a hand-lead.

LEADSMAN—the man who heaves the lead.

LEADING WIND—a free or fair wind, and is used in contradistinction to a scant wind. See the article **WIND**.

LEAGUE—a measure of three

miles, much used in estimating sea distances.

LEAK—a chink or breach in the deck, sides, or bottom of a ship, through which the water passes into her hull. When a leak first commences, a vessel is said to have sprung a leak.

LEAKAGE—is the quantity which runs out of a cask through a leak.

LEAKY—the state of a ship when abounding with leaks: also of a cask which suffers the liquor within it to run out.

LEDGE—a long ridge of rocks near the surface of the sea.

LEDGES—small pieces of timber placed athwart ships, under the decks, in the intervals between the beams.

LEE—an epithet to distinguish that half of the horizon to which the wind is directed from the other part whence it arises, which latter is accordingly called to windward. This expression is chiefly used when the wind crosses the line of a ship's course, so that all on one side of her is called to windward, and all on the opposite side to leeward; and hence

UNDER THE LEE—implies farther from that part of the horizon from whence the wind blows, as,

Under the lee of the land, i. e. at a short distance from the shore which lies in the direction of the wind. This phrase is commonly understood to express the situation of a vessel anchored or sailing near the weather shore, where there is always smoother water than at a great distance from it.

To lay a ship by the lee, or to come up by the lee, is to bring her so that all her sails lie flat against her masts and shrouds, and
that

that the wind may come right upon her broadside.

LEE-BOARDS—strong frames of plank affixed to the sides of flat-bottomed vessels, such as river barges, &c, which draw but little water; these, by being let down into the water when the vessel is close-hauled, prevent her from falling to leeward.

LEE-FANGS—are ropes reeved into the cringles of a yacht or hoy's sails.

THE LEE-GAGE—implies further from the point whence the wind blows than another vessel.

TAKE CARE OF THE LEE-HATCH—is a word of command to the man at the helm to take care that the ship do not go to the leeward of her course.

LEE-LURCHES—the sudden and violent rolls which a ship often takes to leeward in a high sea, particularly when a large wave strikes her on the weather side.

A LEE-SHORE—a ship is said to be on a lee-shore when she is near the land, with the wind blowing right upon it.

LEE-SIDE—all that part of a ship or boat which lies between the mast and the side farthest from the direction of the wind; or that half of a ship which is pressed down towards the water by the effort of the sails, as separated from the other half by a line drawn through the middle of her length: that part of the ship which lies to the windward of this line is accordingly called the weather side. Thus, if a ship sail southward with the wind at east, then is her starboard or right side the lee-side; and the larboard or left the weather-side.

LEE-TIDE—is a tide running in the same direction that the

wind blows, and is directly contrary to a tide under the lee, which implies a stream in an opposite direction to the wind.

TO LEEWARD, denotes towards that part of the horizon which lies under the lee, or whither the wind bloweth.

LEEWARD SHIP—is one that is not fast by the wind, or which does not sail so near the wind, nor make so good way as she should; or which is much to leeward of her course when sailing close-hauled.

LEE-WAY, OR LEEWARD-WAY—is the lateral movement of a ship to the leeward of her course, or the angle which the line of her way makes with her keel when she is close hauled. This movement is produced by the mutual effort of the wind and sea upon her side, forcing her to leeward of the line upon which she appears to sail, and in this situation her course is necessarily a compound of the two motions by which she is impelled. All ships are apt to make some lee-way; so that in casting up the log-book, something must be allowed for lee-way. But the lee-way made by different ships, under the same circumstances, will be different; and even the same ship, with different lading, and having more or less sail on board, will make more or less lee-way. The ordinary rules of allowing for it, as given by Mr. John Buckler to Mr. William Jones, who first published them about the year 1702, are these:

1. When a ship is close-hauled, has all her sails set, the water smooth, and a moderate gale of wind, she is then supposed to make little or no lee-way.

2. Allow one point when it blows so fresh that the small sails are taken in.

3. Allow two points when the top-sail must be close reefed.

4. Allow two points and a half when one top-sail must be handed.

5. Allow three points and a half when both top-sails are to be taken in.

6. Allow four points when the fore-course is handed.

7. Allow five points when trying under the main-sail only.

8. Allow six points when both main and fore-courses are taken in.

9. Allow seven points when the ship tries a-hull, or all sails are handed. When the wind has blown hard in either quarter, and shifts across the meridian into the next quarter, the lee-way will be lessened. But in all these cases respect must be had to the roughness of the sea with the trim of the ship; and hence the mariner will be able to correct his course.

LEECHES — the borders or edges of a sail, which are either sloping or perpendicular; those of the square-sails, i. e. the sails whose tops and bottoms are parallel to the deck, or at right angles with the mast, are denominated from the ship's side, as the star-board-leech of the main-sail, the lee-leech of the fore-top-sail; but the sails which are fixed obliquely on the masts have their leeches named from their situation with regard to the ship's length, as the fore-leech of the mizen, the after-leech of the jib, &c.

LEECH-LINES — ropes fastened to the middle of the leeches of the main-sail and fore-sail, and communicating with blocks under the opposite sides of the top, whence they pass downwards to the deck,

serving to truss those sails up to the yards.

HARBOUR LEECH-LINES — ropes made fast at the middle of the top-sail-yards, then passing round the leeches of the top-sails, and through blocks upon the top-sail-tye, serving to truss the sails very close up to the yard, previous to their being furled in a body.

LEECH-ROPE — a name given to that part of the bolt-rope to which the border or edge of a sail is sewed. In all-sails whose opposite leeches are of the same length, it is terminated above by the earing, and below by the clue. See the articles **BOLT-ROPE**, **CLUE**, and **EARING**.

LEITH — on the coast of Sweden, particularly the passage round the point of Landsfoort to the city of Stockholm, means a channel, and is used as a general appellation for that purpose; but we have not met with any other instance of such an application of the word.

LENGTHENING — the operation of cutting a ship down across the middle, and adding a certain portion to her length.

This is performed by sawing her planks asunder in different parts of her length, on each side of the midship frame, to prevent her from being weakened too much in one place. The two ends are then drawn apart to a limited distance, which must be equal to the proposed addition of length. An intermediate piece of timber is next added to the keel, upon which a sufficient number of timbers are erected to fill up the vacancy produced by the separation. The two parts of the keelson are afterwards united by an additional piece which is scored down upon the floor timbers; and

as many beams as may be necessary are fixed across the ship in the interval. Finally, the planks of the side are prolonged, so as to unite each other, and those of the ceiling refitted in the same manner by which the whole process is completed.

LET IN—is to fix a diminished part of one plank or piece of timber into a vacancy formed in another for this purpose.

LET-FALL—the word of command for putting out a sail, when the yards are aloft, and the sail is to come down from the yard; but when the yards are stricken down, then the sail is loosed below before they hoist the yard.

LET OUT A REEF—is to increase the dimensions of a sail, by untying the points of a reef in it.

LETTER OF MART—a commission granted by the lords of the admiralty, or by the vice-admiral of any distant province, to the commander of a merchant ship or privateer to cruize against and make prizes of the enemy's ships and vessels, either at sea or in their harbours. The ship so commissioned is also called a Letter of Mart or Marque.

LEVANTER—a name given to an easterly wind up the Mediterranean.

TO LIE ALONG, or LIE OVER.
—See the article **ALONG**.

TO LIE TO—See the article **TRYING**.

LIEUTENANT OF A SHIP OF WAR—the officer next in rank and power to the captain; of these there are several in a large ship, who take precedence according to the dates of their first commissions. The oldest lieutenant, during the absence of the captain, is charged with the command of the ship, as also the execution of what-

ever orders he may have received from the commander, relating to the king's service.

The lieutenant who commands the watch at sea, keeps a list of all the officers and men therein belonging, in order to muster them when he judges it expedient, and report to the captain the names of those who are absent from their duty. During the night-watch he occasionally visits the lower decks, or sends thither a careful officer to see that the proper sentinels are at their duty, and that there is no disorder amongst the men; no tobacco smoked between decks, nor any fire or candles burning there, except the lights which are in lanterns, under the care of a proper watch, for particular purposes. He is expected to be always on deck in his watch, as well to give the necessary orders with regard to trimming the sails, and superintending the navigation, as to prevent any noise and confusion; but he is never to change the ship's course without the captain's directions, unless to avoid an immediate danger.

In time of battle, the lieutenant is particularly to see that all the men are present at their quarters, where they have been previously stationed, according to the regulations made by the captain. He orders and exhorts them every where to perform their duty, and acquaints the captain at all other times of the misbehaviour of any persons in the ship, and of whatever else concerns the service or discipline.

LIEUTENANT AT ARMS—is the youngest, with respect to the date of his commission, in the ship; he is particularly ordered, by his instructions, to train the seamen to the use of small arms,
and

and accordingly in time of battle, generally commands a party upon the upper decks.

LIFTS — certain ropes, descending from the cap and mast-head. Their use is to keep the yard in equilibrio, or to pull one of its extremities higher than the other, if occasion requires; but particularly to support the weight of it when a number of seamen are employed thereon to furl or reef the sail.

In some merchant-vessels, the lifts of the top-sail-yards, called the top-sail-lifts, are also used as sheets to extend the clues of the top-gallant-sail.

The yards are said to be squared by the lifts, when they hang at right angles with the mast; i. e. parallel with the horizon when the vessel is upright in the water.

TOPPING LIFTS—See the article **TOPPING**.

LIGHT—is used in contradistinction to laden; a ship is therefore said to be light, when she has no cargo, or is not sufficiently ballasted.

To **LIGHT**—is sometimes used instead of to help; as, "Light along that rope."

LIGHTER—a large open flat-bottomed vessel, employed to carry goods to or from a ship.

BALLAST LIGHTER—is a vessel fitted up to heave ballast from the bottom of a harbour or river, and to carry it to or from ships.

COVERED OR CLOSE LIGHTER—is one furnished with a deck throughout her whole length, in order to contain those merchandises which would be damaged by accidental wet, as also to prevent pillage.

LIGHT-HOUSE—a sort of tower erected upon a head-land or point on the sea-coast, or upon some

rock in the sea, and having a great fire, or light formed by candles, &c. upon its top, in the night-time, which is constantly attended by some careful person, so as to be seen at a great distance from the land. Its use is to direct the shipping on the coast that might otherwise run ashore, or steer an improper course.

FLOATING LIGHT—differs from the preceding by its being erected on board a vessel which is strongly moored upon a sand or shallow, to warn ships from approaching too near it.

LIGHT-ROOM—in a ship of war, a small apartment, having double glass windows towards the magazine. It is used to contain the lights by which the gunner and his assistants are enabled to fill their cartridges with powder, to be ready for action. Large ships of war generally have two light-rooms, viz.

The **AFTER LIGHT-ROOM**—which is attached to the after magazine; and

The **FORE LIGHT-ROOM**—which gives light to the fore or great magazine.

LIMB—in astronomy, is the edge of the sun, or of the moon, in which sense we say, the upper limb, the lower limb, the sun and moon's nearest limbs, &c.

LIMBERS, OR LIMBER-HOLES—square holes cut through the lower part of a ship's floor-timbers, very near the keel, forming a channel for water, and communicating with the pump-well throughout the whole length of the floor. Every floor-timber has two such holes cut through it, one on each side of the keelson.

LIMBER-BOARDS—short pieces of plank, which form a part of the lining of a ship's floor, close

to the keelson, and immediately above the limbers. They are occasionally removed, to clear the limbers of any filth by which they may be clogged, so as to interrupt the passage of the water to the pump-well.

LIMBER-ROPE—a long rope, frequently retained in the limber-holes of a ship in order to clear them, by pulling the rope backwards and forwards, so as to loosen any dirt by which they may be choked.

LIMBER-KENTLEDGE—See the article **KENTLEDGE**.

LINE—a general name given to the arrangement or order in which a fleet of ships of war are disposed to engage an enemy.

This disposition, which is the best calculated for the operations of naval war, is formed by drawing up the ships in a long file, or right line, prolonged from the keel of the hindmost to that of the foremost, and passing longitudinally through the keels of all the others from the van to the rear; so that they are, according to the sea phrase, in the wake of each other.

In the line, or order of battle, all the ships of which it is composed are close-hauled upon the starboard or larboard tack, about fifty fathoms distant from each other.

A fleet is more particularly drawn up in the line when in presence of an enemy. It ought to be formed in such a manner as that the ships should mutually sustain and reinforce each other, and yet preserve a sufficient space in their stations, to work or direct their movements with facility during the action. Thus they will be enabled effectually to cannonade the enemy, without incur-

ring the ships of their own squadron.

In a line of battle, the weathermost fleet, or that which, in sea language, has the weather-gage, is generally allowed to have the advantage, although there are several arguments, on the other hand, in favour of the lee-side; accordingly we shall endeavour to state the mutual advantages and disadvantages.

Advantages of the Weather-gage.

1. The weather-gage is the sooner clear of smoke; and of course, that line can better observe the signals which are spread, than the ships to leeward can, which must have the continuance of both its own and of the enemy longer.

2. If the weather-ships are more in number than the enemy's, they can detach some from their squadron, which bearing down upon the rear of the enemy, must infallibly throw them into disorder.

3. The fire-ships of the weather-line can, when they are ordered, more easily bear down upon the enemy, than those of the lee can ply to windward, which can never be done against a line in action; but the weather fire-ships can bear down against all the resistance that can be made by the enemy.

Advantages of the Lee-line.

1. If one, two, or more of the ships to windward should be disabled, they must inevitably drive to leeward, and become a prey to the enemy.

2. The ships of the lee-line can more readily bear away before the wind, and have their places supplied by ships from the corps-de-reserve, in case of being disabled or meeting with any disaster.

3. The line to leeward can keep their

their ports longer open in a strong wind with a high sea, when those to windward, in all probability, may be obliged to shut the ports of their lower tier of guns, to prevent the water from rushing in between decks, which may be attended with the most fatal consequences.

4. The lee-line can more easily observe the men on the decks of the ships to windward, as they heel, and when the smoke does not intercept their sight: at which time the marines and top-men may easily take aim at and destroy them with muskets and carabines.

The disadvantages of the weather-line sometimes counterbalances the advantages above recited, viz.

1. If the sea is rough, and the wind boisterous, it cannot readily fight with the lower deck guns.

2. The weather-line cannot decline the action without the dangerous expedient of forcing thro' the enemy's line, and if it keeps the wind, the lee-line may inclose and totally destroy it, especially if it is inferior in numbers to the latter; or if the ships thereof are in a bad condition, for it then can find no other resource but in the dexterity of its manœuvres, unless it is favoured by the wind, or any oversight of the enemy.

3. The disabled ships of the weather-line must tack to avoid falling into the enemy's fleet; and if they are much scattered they may be altogether separated from their own fleet; particularly if they are in the rear of the line.

The defects of the Lee-line are,

1. It cannot decide the time and distance of the battle, which may commence before it is sufficiently formed, and it will perhaps be attacked by an enemy

who bears away upon it in regular order.

2. It suffers much inconvenience from the fire and smoke of the weather-line, as remarked in the advantages of the weather-line (1.)

3. It cannot easily break the enemy's line with its fire-ships which are very slowly and with great difficulty conveyed to windward. On the contrary, the fire-ships of the weather-line have a considerable advantage (3.)

The line of a fleet, which has abundance of capital ships, need not be so much inclosed as that of an enemy who has fewer. An open line will, on many occasions, work more easily than one which is more inclosed; and if it is less numerous, the movements thereof are more expeditious; the signals better attended to, the general orders more exactly observed, and the ships less liable to be separated. Hence it will be less embarrassed by a change of wind, and the order will be sooner re-established.

A less numerous line will more readily approach or escape from an enemy or an hostile shore, and finally, when cruising in a smaller space, it will not be so much contracted.

It must be remarked, that the admiral's ship attentively preserves her station in the centre of the line; for if the commander in chief should give way to the caprice or inattention of any of those under his direction, it would introduce an endless disorder into his Squadron.

LINE ABREAST—See the article ABREAST.

LINE—is also the general appellation of a number of small ropes in a ship, as

CONCLUDING

CONCLUDING LINE—a small rope, which is hitched to the middle of every step of a stern ladder.

DEEP-SEA LINE—a long line, marked at every five fathoms with small strands of line, knotted. It is used with the deep sea-lead.

FISHING LINE—a particular kind of line, generally used for fishing.

HAND LINE—a line about 20 fathoms long, marked with black leather, white rag, and red bunting, at different distances. It is made fast to a hand lead, and used to determine the depth of water in going in or out of a harbour, river, channel, &c.

HAULING LINE—any rope let down out of a top, &c. to haul up some light body by hand.

KNAVE-LINE—a rope fastened to the cross-trees, under the main or fore-top, whence it comes down by the ties to the ram-head, and there it is reeved through a piece of wood of about two feet long, and so is brought to the ship's side and there hauled up taught to the rails.

LIFE LINE—a rope occasionally extended in several situations for persons to lay hold of, to prevent their falling.

NAVEL LINE—a rope depending from the heads of the main and fore-masts, and fastened to the middle of the truss to keep it up, whilst the yard is being swayed up.

SPILLING LINES—ropes fixed occasionally to the square-sails, particularly the main and fore-courses of a ship in tempestuous weather, for reefing or furling them more conveniently; they are reeved through blocks upon the yard, whence leading round the sail, they are fastened behind

to the yard, so that the sail is, by their efforts, very closely confined.

WHITE LINE—implies that which has not been tarred, in contradistinction to tarred **LINE**.

MAR-LINE—is a particular kind of small line, composed of two strands very little twitted; there is both tarred and white mar-line.

LINE OF NUMBERS, OR LINE OF LINES—See **GUNTER'S LINE**.

LINSTOCK—a staff about three feet long, having a sharp point at one end, and a sort of fork or crotch in the other; the latter serves to contain a lighted match, and by the former, the linstock is occasionally stuck in the deck in an upright position. It is frequently used in small vessels in an engagement where there is commonly one fixed between every two guns, by which the match is always kept dry and ready for firing.

LIST—implies an inclination to one side; as, The ship has a list to port; i. e. is depressed more in the water on that side.

LOADING OF A GUN—is the act of charging it, or the charge itself.

LOADING OF A SHIP—See the articles **CARGO** and **LADING**.

LOADSMAN—a pilot or person that conducts into or out of harbours.

LOADSTONE—See the article **DIPPING NEEDLE**.

The loadstone, or magnet, as some say, was first found in Magnesia, a country of Lydia; but according to others, the Magnetians were only the first who discovered its property of attracting iron. It is well known to have two poles, which constantly incline to those of the world, if nothing

nothing intervenes to alter their direction. This property is found to be communicable, and hence the nautical needle, on a property touched, points constantly to the pole, unless some mass of interposing iron, or somewhat of a magnetic nature, prevents its ordinary direction. The cause of this wonderful effect is one of those secrets which it has pleased Heaven hitherto to conceal from the prying searcher into the volume of nature. This wonder is augmented by another, namely, the different variations of the compass, which are found by observing the sun and stars, and appear not to be guided by parallels of latitude, nor regulated by meridians. Some have attributed this to certain magnetic qualities in certain mountains; some in a principle of magnetism in the earth communicable from the pole in different degrees at different distances: but what tends to overthrow these various opinions, and seems almost to mock conjecture, is a variation of the variation itself, as it continues not the same at all times, even in the same situations. See the article VARIATION. On the whole, from whatsoever hidden powers in nature the cause of magnetism originates, it is to its effects, as employed in framing the mariner's compass, that mankind have been indebted for many great and useful discoveries.

LOBLOLLY-BOY — a name given to the man who attends the surgeon and his mates to summon the sick, and to perform any service in their attendance on them.

LOBLOLLY is a seafaring dish, otherwise called Burgoo.

LOCK, or WEIR—the general names for all those works of

wood or stone made to confine or raise the water of a river: the banks also which are made to divert the course of a river are called by these names in some places. But the term Lock is more particularly appropriated to express a kind of canal inclosed between two gates; the upper called by workmen the sluice-gate, and the lower called the flood-gate. These serve in artificial navigations to confine the water, and render the passage of boats easy both in passing up and down the stream.

LOCKER—a kind of box or chest made along the side of a ship, to put or stow any thing in.

SHOT LOCKERS—strong frames of plank near the pump-well in the hold, in which the shot are put.

LOG—a machine used to measure the rate of a ship's velocity through the water. For this purpose, there are several various inventions, but the one most generally used is the following, called the common log. It is a piece of thin board, forming the quadrant of a circle of about six inches radius, and balanced by a small plate of lead nailed on the circular part, so as to swim perpendicular in the water, with the greater part immersed. The log-line is fastened to the log, by means of two legs, one of which is knotted through a hole at one corner, while the other is attached to a pin fixed in a hole at the other corner, so as to draw out occasionally. The log-line being divided into certain spaces, (which are in proportion to an equal number of geographical miles, as a half, or quarter minute, is to an hour of time), is wound about a reel.

The whole is employed to measure the ship's head-way in the following

lowing manner: the reel being held by one man, and the half minute-glass by another, the mate of the watch fixes the pin, and throws the log over the stern, which, swimming perpendicularly, feels an immediate resistance, and is considered as fixed, the line being slackened over the stern to prevent the pin coming out. The knots are measured from a mark on the line, at the distance of twelve or fifteen fathoms from the log; the glass is therefore turned at the instant that the mark passes over the stern; and as soon as the sand in the glass has run out, the line is stopped; the water then being on the log dislodges the pin, so that the board now presenting only its edge to the water is easily drawn aboard. The number of knots and fathoms which had run off at the expiration of the glass determines the ship's velocity. The half-minute-glasses and divisions on the line should be frequently measured to determine any variation in either of them, and to make allowance accordingly.

If the glass runs thirty seconds, the distance between the knots should be 50 feet. When it runs more or less, it should, therefore, be corrected by the following analogy. As 30 is to 50, so is the number of seconds of the glass to the distance between the knots upon the line. As the heat or moisture of the weather has often a considerable effect on the glass, so as to make it run slower or faster, it should be frequently tried by the vibrations of a pendulum. As many accidents attend a ship during a day's sailing, such as the variableness of winds, the different quantity of sail carried, &c. it will be necessary to heave the log at

every alteration; but if none of these alterations be perceptible, yet it ought to be constantly heaved.

In ships of war and East India-men, it is usual to heave the log once every hour, and in all other vessels once in two hours; and if at any time of the watch the wind has increased or abated in the intervals, so as to affect the ship's velocity, the officer generally makes a suitable allowance for it at the close of the watch.

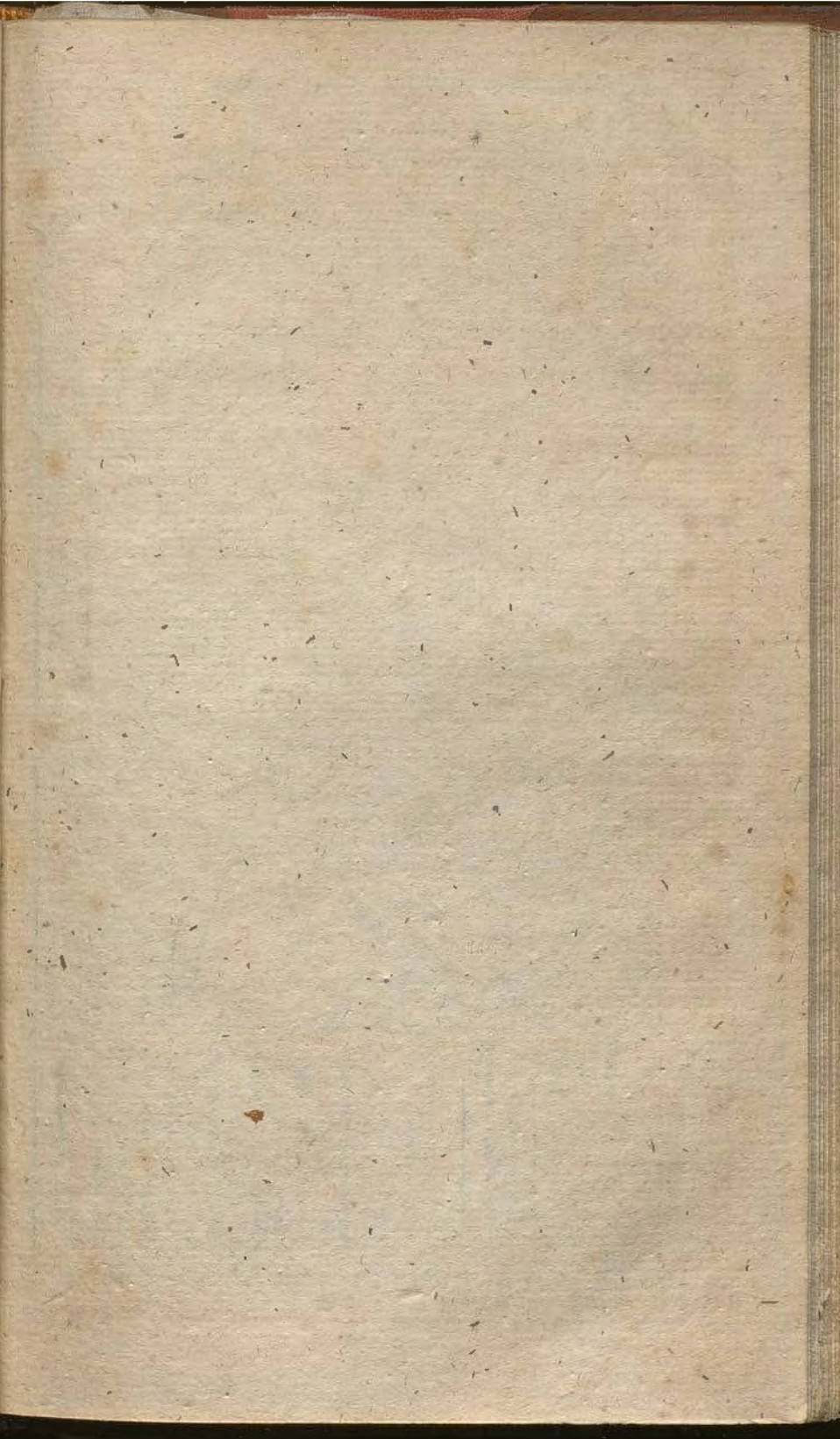
LOG-BOARD—two boards shutting together like a book, and divided into several columns, containing the hours of the day and night, the direction of the winds, and the course of the ship, with all the material occurrences that happen during the twenty-four hours, or from noon to noon, together with the latitude by observation. From this table, the officers work the ship's way, and compile their journals. The whole being written with chalk, is rubbed out every day at noon.

LOG-BOOK—a book into which the contents of the log-board is daily transcribed at noon, together with every circumstance deserving notice that may happen to the ship, or within her cognizance, either at sea, or in a harbour, &c. The intermediate divisions or watches of a log-book, containing four hours each, are usually signed by the commanding officer thereof in ships of war or East India-men.

LOG-LINE—the line which is fastened to the log. See the article **LOG**.

LOG-REEL. See the article **REEL**.

LOGGERHEAD—a spherical mass of iron with a long handle.



A Plan of
FORT ST. GEORGE
 and the City of
MADRAS

References
 for the White Town

- a. Governours House.
- b. Store House.
- c. Guards House.
- d. New Hospital.
- e. Carpenters Yard.
- f. The Mines.
- g. English Church
- h. Town Hall.
- i. Portuguese Church
- k. Choultry Street.
- l. Middle Gate Street.
- m. James Street.
- n. Charles Street.
- o. Church Street.
- p. St. Thomas Street.
- q. The Parade



- References
 for of Corner Peter Town
- a. Pigons Burying Place.
 - b. Jews Burying Place.
 - c. Fishing Street.
 - d. Buckleys Garden.
 - e. Heavens Street.
 - f. St. Ambrose Street.
 - g. Peter Ariques Street.
 - h. Great Bazar.
 - i. Bazar Street.
 - k. River Street.
 - l. Elephants Street.

- References
 for of Black Town
- m. Armenian Church
 - n. Bridges Street.
 - o. Clarks Gate.
 - p. English Burying Place
 - q. Piles Street.
 - r. Arch Market.
 - s. Great Pagoda.
 - t. Armenian Burying Pl.
 - u. Portuguese Burying Pl.
 - v. Middle Gate.
 - w. Chites Street.
 - x. Moor Street.
 - y. Camaltes Street.
 - z. Malbas Street.
 - 1. Chites Street.
 - 2. Fisher Street.
 - 3. Moor Burying Place.

Its use is to heat tar, by making the iron hot in the fire, and then plunging it into the tar.

LONG-BOAT—the largest and strongest boat belonging to a ship. See the article **BOAT**.

LONGITUDE — is the distance of a ship or place, east or west, from another, counted in degrees of the meridian, and not in those proper to the parallel of latitude: it is usually called departure. See that article.

Since the difference of longitude between any two places is equal to the arch of the equator, intercepted between the meridian's passing through the two places; which is analogous to the quantity of time that the sun requires to move from the meridian of one place to that of another; or, in the language of the Copernicans, that is elapsed between the application of the meridian of one of the places to the sun, and the meridian of the other; for since the sun finishes his diurnal revolution in the space of 24 hours, or, which is the same thing, since the revolution of the earth about her own axis is performed in the same time, it follows, that in every hour there passes over the meridian $\frac{1}{24}$ th part of 360° , or of the whole circumference of the equator, equal to 15° , in two hours $\frac{1}{12}$ th part, or 30° , and in any greater or less part of time a proportional greater or less part of the equator; whence it follows, that if the difference of longitude, or arch of the equator, intercepted between the meridian's passing through any two places be known, the difference of the times of the day in those two places is known also; and consequently, the hour in one place being known, the hour in the other place

is known also; and, on the contrary, if the difference between the times at any two places be known, the difference of longitude between those two places is known also, by reducing the difference of the times into degrees and minutes, allowing 15° to an hour, &c. Hence it is, that if two or more places lie under the same meridian, the hour in one will be the same with the hour in the other; and, on the contrary, if in two or more places the hour be the same, those places lie under the same meridian.

And because the sun in all places constantly rises in the east, he must necessarily apply himself to the meridian of the easternmost place first, and consequently in that place that lies to the easternmost the noon happens soonest; and the hours of the day, or distance of the sun from the meridian at any other time must be greatest. Whence it appears, that, if by any contrivance whatever, the hour of the day at the same point of absolute time in two different places can be obtained, the difference of longitude between those places is also known; and, by comparing the times together, it is easy to pronounce which place of the two lies to the eastward or westward of the other.

Wherefore, if two or more persons can view the same appearance at two or more places, and pronounce the time at each place when such appearance was visible: or if the time when any notable appearance shall happen at any place be predicted, and the time when that appearance was visible at any other place, was determined, these times being compared together, will give the difference

directions for adjusting of them, and keeping a journal by them: which account the curious reader may see at large in the above-mentioned Transactions; in the reading of which, if he be ignorant of these matters, he will meet with some things worthy of his notice.

These discoveries, and the great desire of discovering a method of solving a problem of such importance to navigation, induced the British parliament during queen Anne's reign, to offer the following rewards, as an encouragement to any person who should make such a noble discovery. "The author or authors of any such method shall be entitled to the sum of ten thousand pounds if it determines the longitude to one degree of a great circle; to fifteen thousand pounds, if it determines the same to two-thirds of that distance; and to twenty thousand pounds if it determines the same to one-half of the same distance; and that half of the reward shall be due and paid when the commissioners of the navy, or the major part of them, agree that any such method extends to the security of ships within eighty geographical miles of the shores, which are places of the greatest danger; and the other half, when a ship, by the appointment of the said commissioners, or the major part of them, shall thereby actually sail over the ocean from Great Britain to any such port in the West Indies as those commissioners, or the major part of them, shall choose for the experiment, without losing their longitude beyond the limits before mentioned." The French, Dutch, Spaniards, and other nations, likewise offered rewards for the same purpose.

A number of ingenious men,

animated by these great rewards, applied themselves to solve this useful problem; some by means of time-keepers, and others by improving the lunar theory. Among the former, the only successful candidate was the celebrated and accurate mechanic, Mr. John Harrison, who, in 1728, came up to London with the drawings of a machine for determining the longitude at sea, in expectation of being enabled to execute one by the Board of Longitude. Upon application to Dr. Halley, he referred him to Mr. George Graham, who, discovering he had uncommon merit, advised him to make his machine before he applied to the Board of Longitude. He returned home to perform this task, and, in 1735, came to London again with his first machine; with which he was sent to Lisbon the next year for a trial of its properties. In this short voyage he corrected the dead reckoning about a degree and a half, a success that proved the means of his receiving both public and private encouragement. About the year 1739, he completed his second machine, of a construction much more simple than the former, and which answered much better: this, though not sent to sea, recommended Mr. Harrison yet stronger to the patronage of his private friends and of the public. His third machine, which he produced in 1749, was still less complicated than the second, and superior in accuracy, as erring only three or four seconds in a week. This he conceived to be the *me plus ultra* of his attempts; but, in an endeavour to improve pocket-watches, he found the principles he applied to surpass his expectations so much, as to encourage him to make his fourth Time-keeper,

keeper, which is in the form of a pocket-watch, about six inches in diameter. With this Time-keeper his son made two voyages, the one to Jamaica, and the other to Barbadoes; in both which experiments it corrected the longitude within the nearest limits required by the act: and the inventor therefore, at different times, though not without infinite trouble, received the proposed reward of twenty thousand pounds. These four machines were given up to the Board of Longitude. The three former were not of any use, as all the advantages, gained by making them, were comprehended in the last: they were worthy, however, of being carefully preserved as mechanical curiosities, in which might be traced the gradations of ingenuity, executed with the most delicate workmanship! whereas they now lie totally neglected in the royal observatory at Greenwich. The fourth machine, emphatically distinguished by the name of the Time-keeper, has been copied by the ingenious Mr. Kendal; and that duplicate, during a three years circumnavigation of the globe, in the southern hemisphere with Captain Cook, answered as well as the original. The latter part of Mr. Harrison's life was employed in making a fifth improved Time-keeper, on the same principles with the preceding one; which at the end of a ten weeks trial, in 1772, at the king's private observatory at Richmond, erred only $4\frac{1}{2}$ seconds. See the article **TIME-KEEPER**.

LONGITUDE BY ACCOUNT—is the distance east or west as computed from the ship's course and distance-run.

LONGITUDE BY LUNAR OBSERVATION—is the above calcu-

lated from observing the moon's distance from the sun, or a fixed star.

LONGITUDE BY TIME-KEEPER—is estimated by the difference between the time at the place, and the time indicated by one of those improved watches called time-keepers.

LOOF—the after part of a ship's bow, or that where the planks begin to be incurvated as they approach the stem. Hence, the guns which lie here, are called **LOOF-PIECES**.

LOOF—usually pronounced **LUFF**—See the article **LUFF**.

LOOK-OUT—a watchful attention to some important object or event which is expected to arise from the present situation of a ship; there is always a look-out kept on a ship's fore-castle at sea, to watch for any dangerous object lying near her track, or for any strange sail heaving in sight, &c. the officer of the watch accordingly calls frequently from the quarter-deck, to the persons appointed for this service, "look out afore there."

LOOM OF AN OAR. See the article **OAR**.

LOOMING—an indistinct appearance of any distant object, as the sea-coast, ships, mountains, &c. "that ship looms large," "the land looms high, &c."

LOOP-HOLES—certain small apertures formed in the bulk-heads and other parts of a merchant ship, through which the small arms are fired on an enemy who boards her.

To LOOSE—to unfurl, or cast loose any sail in order to its being set, or dried after rainy weather.

To LOOSE A ROPE—is to cast it off or let it go.

LOST—the state of being foundered or cast away; expressed of a ship

a ship when she has either sunk by means of some disaster, or struck upon a rock, shelf, or lee-shore, where she has beat to pieces by the violence of the sea.

LOUGH, or LOCH—the former is the Irish, and the latter the Scotch term for lake.—See that article.

LOW WATER — the lowest point to which the tide ebbs. See the article **TIDE**.

To **LOWER** — to ease down gradually, expressed of some weighty body suspended by tackles or ropes, which being slackened, suffer the said body to descend as slowly or expeditiously as occasion requires; hence

LOWER HANDSOMELY and **LOWER CHEERLY**—are opposed to each other, the former being the order to lower gradually, and the latter to lower expeditiously.

LUBBER — a contemptuous name given by sailors to those who know not the duty of a seaman.

LUBBER'S-HOLE—is the vacant space between the head of a lower-mast and the edge of the top; it is so termed from a supposition that a lubber, not caring to trust himself up the futtock shrouds will prefer that way of getting in to the top.

LUFF—the order to the helmsman to put the tiller towards the lee-side of the ship, in order to make the ship sail nearer the direction of the wind, hence

LUFF ROUND, or LUFF-A-LEE —is the extreme of this movement, by which it is intended to throw the ship's head up in the wind.

LUFF UP — is to bid the steersman keep nearer to the wind.

LUFF INTO A HARBOUR—is to sail into it close by the wind.

A ship is accordingly said to spring her luff when she yields to the effort of the helm by sailing nearer to the wind than she did before.

LUFF-TACKLE—a name given to any large tackle that is not destined for a particular place, but may be variously employed as occasion requires. It is generally somewhat larger than the jingle-tackle, although smaller than those which serve to hoist the heavier materials into and out of the vessel, which latter are the main and fore-tackles, the stay and quarter-tackles, &c.

LUGGER— a vessel carrying three masts with a running bowsprit, upon which she sets lug-sails, and sometimes has top-sails adapted to them.

LUG-SAIL — a quadrilateral sail, bent upon a yard which hangs obliquely to the mast at one-third of its length. These are more particularly used in the *Barca longas*, navigated by the Spaniards in the Mediterranean.

LUG-SAIL-BOAT—a boat carrying sails of the preceding description.

LUMPERS — labourers employed to load and unload a merchant ship when in harbour.

LURCH—See **LEE LURCHES**.

LYING-TO—the situation of a ship when she is retarded in her course by arranging the sails in such a manner as to counteract each other with nearly equal effort, and render the ship almost stationary with respect to her headway; a ship is usually brought to by laying either her main-top-sail, or her fore-top-sail, aback, the helm being put close down to leeward. This is particularly practised in a general engagement, when the hostile fleets are drawn

up in two lines of battle opposite each other. It is also used to wait for some other ship, either approaching or expected; or, to avoid pursuing a dangerous course, especially in foggy weather, &c.

LYING-TO IN A STORM. See the article **TRYING**.

M.

MAGAZINE—a close room, or store-house, built in the fore or after-part in a ship's hold to contain the gunpowder; it is lighted occasionally by means of candles fixed in the light-room contiguous to it. It is strongly secured against fire, and no person is allowed to enter it with a lamp or candle. See the article **LIGHT-ROOM**.

Large ships of war generally have two magazines, each furnished with a light-room; the hanging, or after magazine, which is usually the smallest, contains only a sufficient supply of cartridges for the after-guns during an action; but the fore magazine contains a quantity of powder sufficient to supply the ship for a length of time.

MAGNET. See the article **COMPASS**.

MAGNETICAL NEEDLE. See **DIPPING NEEDLE**.

MAIN—an epithet applied to whatever is principal, as opposed to what is inferior, or secondary; thus, the main-land is used in contradistinction to an island, and the main-mast, the main-wale, the main-keel, and the main-hatchway, are in like manner distinguished from the fore and mizen masts, the channel wales, the false keel, and the fore and after hatchways.

For the sails, yards, and rigging of the main-mast, see those particular articles.

MAIN-TACKLE—a large and strong tackle, hooked occasionally upon the main pendant, and used for various purposes, particularly in securing the mast, by setting up the rigging, stays, &c. See the article **PENDANT**.

To **MAKE**—is variously applied in the sea-language, as,

To **MAKE A GOOD BOARD.** See the article **BOARD**.

To **MAKE THE LAND**—to discover it from a distant situation, in consequence of approaching it after a sea voyage.

To **MAKE SAIL**—is to increase the quantity of sail already extended, either by letting out the reefs, and by hoisting an additional number of sails, or by performing either of those exercises separately.

To **MAKE STERNWAY**—to retreat or move with the stern foremost.

To **MAKE WATER**—usually signifies to leak, unless the epithet foul be added. See the article **FOUL WATER**.

MALLET—a sort of wooden hammer, of which there are several sorts, used for different purposes on ship-board, as,

CALKING MALLET—an instrument chiefly employed to drive the oakum into the seams of a ship, where the edges of the planks are joined to each other in the sides, decks, or bottom; the head of this mallet is long and cylindrical, being hooped with iron to prevent it from splitting.

SERVING MALLET—a mallet used in serving the rigging which binds the spun-yarn more firmly about it than could possibly be done by hand. The following is
The

the manner of performing it: two or three turns of the spun-yarn, which has been previously rolled up in a large ball or clue, are passed about the rope, and about the body of the mallet, which for this purpose is furnished with a round channel in its surface, that conforms to the convexity of the rope intended to be sewed. The turns of the spun-yarn being strained round the smallest, so as to confine it firmly to the rope, which is extended above the deck, one man passes the ball continually about the rope, whilst the other, at the same time, winds on the spun-yarn by means of the mallet, whose handle, acting as a lever, strains every turn about the rope as firm as possible, which conforms to the convexity of the rope intended to be served.

MAN—by this word, used in the sea language, a ship is frequently understood as a man of war, a merchantman, a Guineaman, an East-Indiaman, a Greenlandman, &c. in all which instances the word ship is implied.

TO MAN—is to place men sufficient for any particular exercise at the proper station, as,

MAN THE CAPSTAN—that is, place the men to the bars in readiness to heave.

MAN THE TOP-SAIL SHEETS—that is, let the men lay hold of and be ready to pull up the top-sail sheets,

TO MAN THE SHIP, is to range the people on the yards and rigging in readiness to give three cheers, as a salute.

TO MAN THE YARDS—to send a sufficient number of men upon the yards to reef or furl the sails.

TO MAN A PRIZE—to send a proper number of men on board to navigate her.

MANGER—a small space extending athwart the deck of a ship of war immediately within the hawse-holes, and separated on the after-part from the other part of the deck by the

MANGER-BOARD—a strong bulk head, built as high as, and serving to stop the water which sometimes rushes in at the hawse-holes, and would otherwise run aft in great streams on the deck; the water, thus stopped, is again returned into the sea through the **SCUPPERS**, which see.

MANIFEST—an inventory of the whole cargo of a merchant ship.

MARINE—a general name for the navy of a kingdom or state; as also the whole oeconomy of naval affairs, or whatever respects the building, rigging, arming, equipping, navigating, and fighting ships. It comprehends also the government of naval armaments, and the state of all the persons employed therein, whether civil or military.

MARINER—a person who gets his living on the sea.

MARINES—a body of forces employed in the sea service under the direction of the lords of the admiralty.

MARITIME—something relating to, bounded by, or near the sea.

MARITIME POWERS—those states which possess harbours, &c. on the sea coasts, and a powerful navy to defend them.

MAR-LINE. See the article **LINE**.

MARLING, the act of winding any small line, as mar-line, spun-yarn, twine, &c. about a rope, so that every turn is secured by a kind of knot, and remains fixed in case the rest should be cut through
by

by friction. It is commonly used to fasten slips of canvas called parrelling, upon the surface of a rope to prevent its being galled, or to attach the foot of a sail to its bolt-rope, &c.

This expedient is much preferable to the winding a line spirally about a rope for the same purpose, because as the turns are at some distance from each other, the same quantity of line will serve for the one method as the other; with this difference, that if one of the spiral turns are cut through, the whole will be rendered uselefs, whereas by marling this is entirely prevented.

MARLINE-SPIKE—an iron pin tapering to a point, and principally used to separate the strands of a rope, in order to introduce the ends of some other through the intervals in the act of knotting or splicing; it is also used as a lever in fixing seizings, &c.

To **MAROON**—to put one or more sailors on shore upon a desolate island, under pretence of their having committed some great crime. This detestable expedient has been too often practised by some inhuman commanders of merchant ships.

To **MARRY TWO ROPES**—is to knot the yarns together in a kind of splice, so as not to be thicker at the juncture than at any other part.

MARTINGALE—a rope extending downwards from the jib-boom end to a kind of bumpkin fixed perpendicularly under the cap of the bowsprit; its use is to confine the jib-boom down in the same manner as the bobstays retain the bowsprit.

MAST—a long round piece of timber elevated perpendicularly upon the keel of a ship, upon which

are attached the yards, the sails, and the rigging, in order to their receiving the wind necessary for navigation.

A mast, according to its length, is either formed of one single piece, which is called a pole-mast, or composed of several pieces joined together, each of which retains the name of mast separately.

A lower mast, being the lowest, is accordingly so called. It is fixed in the ship by an apparatus. (See the articles **HULK** and **SHREERS**), and the foot or keel of it rests in a block of timber called the Step, which is fixed upon the keelson.

A top-mast is raised at the head or top of the lower-mast through a cap, and supported by the trestle trees. It is composed of two strong bars of timber supported by two prominences, which are as shoulders on the opposite sides of the masts, a little under its upper end: athwart these bars are fixed the cross-trees, upon which the frame of the top is supported. Between the lower mast-head and the fore-most of the cross-trees, a square space remains vacant, the sides of which are bounded by the two trestle trees. Perpendicularly above this is the foremost hole in the cap, whose after-hole is solidly fixed on the head of the lower-mast. The top-mast is erected by a tackle, whose effort is communicated from the head of the lower-mast to the foot of the top-mast, and the upper end of the latter is accordingly guided into and conveyed up through the holes between the trestle-trees and the cap as above-mentioned; the machinery by which it is elevated, or according to the sea-phrafe, swayed up, is fixed in the following manner. The top rope, passing

ring through a block, which is hooked on one side of the cap, and afterwards through a hole, furnished with a sheave or pulley on the lower end of the top-mast, is again brought upwards on the other side of the mast, where it is at length fastened to an eye-bolt in the cap, which is always on the side opposite to the top-block. To the lower end of the top rope is fixed the top-tackle, the effort of which being transmitted to the top rope, and thence to the heel of the top-mast, necessarily lifts the latter upwards parallel to the lower mast. When the top-mast is raised to its proper height, the lower end of it becomes firmly wedged in the square hole (above described) between the trestle-trees. A bar of wood or iron, called the fid, is then thrust through a hole in the heel of it, across the trestle-trees, by which the whole weight of the top-mast is supported. See the articles CAP and TRESTLE-TREES.

TOP-GALLANT-MAST — is a mast smaller than the preceding, and raised and secured to its head in the same manner.

TOP-GALLANT-ROYAL-MAST is sometimes a yet smaller mast, elevated through irons at the head of the top-gallant-mast; but it is more generally a continuation of the latter above the rigging. It is then termed a pole-top-gallant-mast, to distinguish it from a stump top-gallant-mast, which terminates just above the rigging.

MAIN-MAST — the largest mast in a ship, and stands nearly in the middle between the stem and stern.

FORE-MAST — is that which stands near the stem, and is next in size to the main-mast.

MIZEN-MAST — the smallest mast, and stands about half way between the main-mast and the stern.

MADE-MAST — a mast built or composed of several pieces of timber in contradistinction to one consisting of a single stick or piece. The counter-mizen, in large vessels and galleons, is in the stern.

JURY-MAST. See the article JURY.

ROUGH-MAST — denotes a spar fit for making a mast. See the articles BOW-SPRIT and JIB-BOOM.

Besides the parts already mentioned in the construction of masts with respect to their length, the lower masts of the largest ships are composed of several pieces united into one body. As these are generally the most substantial parts of various tiers; a mast, formed by this assemblage, is justly esteemed much stronger than one consisting of any single trunk whose internal solidity may be very uncertain. The whole is secured, with their sides or faces close to each other, by several strong hoops of iron, driven on the outside of the mast, where they remain at proper distances.

The principal articles to be considered in equipping a ship with masts are, 1st, The number; 2d, Their situation in the vessel; and 3d, Their height above the water.

The masts being used to extend their sails by means of their yards, it is evident that if their number were multiplied beyond what is necessary, the yards must be extremely short, that they may not entangle each other in working the ship, and by consequence their sails will be very narrow, and receive a small portion of wind. If,

on the contrary, there is not a sufficient number of masts in the vessel, the yards will be too large and heavy, so as to be managed without difficulty. There is a mean between these extremes which experience and the general practice of the sea have determined; by which it appears, that in large ships every advantage of sailing is retained by three masts and a bowsprit.

Among the ancient Grecians, every ship had several masts: we are nevertheless informed by Aristotle, that at first there was only one mast, which being fixed in the middle of the ship, the hole into which the foot of it was inserted they called *μεσόδμη*, in Latin, *modius*, and in English the *step*. The parts of the mast were these: *πτερυγα*, or the foot. *Λωας*, to which the sail was fixed; *Καρκινισιον*, the pulley by which the ropes were turned round; *Θωρακισιον*, built in the manner of a turret for soldiers to stand upon and cast their darts. Above this was a piece of wood called *κεριον*, on the extremity of which hung a ribband which was in continual motion, turning round with the wind, and termed in English the *Vane*.

With regard to the moderns, all ships, properly so called, are, as already observed, furnished with three masts. Those which have only two or one mast are not called ships by seamen, but vary their names according to the method of rigging. Of two masts, there are *snaws*, *brigs*, *bilanders*, *ketches*, *busses*, *schooners*, and *hermaphrodites*, among the English. Among the Spaniards and Italians, *settees*, *barco-longas*, *seluccas*, &c. Those of one mast are *sloops*, *tartans*, *bean-cods*, *shallops*, &c.

The most advantageous position of the masts is undoubtedly that from whence there results an equilibrium between the resistance of the water on the body of the ship on one part, and of the direction of their effort on the other. By every other position this equilibrium is destroyed, and the greatest effort of the masts will operate to turn the ship horizontally about its direction, a circumstance which retards her velocity. It is counterbalanced indeed by the helm, but the same inconvenience still continues; for the force of the wind, having the resistance of the helm to overcome, is not entirely employed to push the vessel forward. The axis of the resistance of the water should then be previously determined to discover the place of the main-mast, in order to suspend the efforts of the water equally, and place the other masts so as that their particular direction will coincide with that of the main-mast. The whole of this would be capable of a solution, if the figure of the vessel were regular, because the point, about which the resistance of the water would be in equilibrium, might be discovered by calculation; but when the real figure of the ship is considered, these flattering ideas will instantly vanish. This observation induced M. Saverien to employ a mechanical method to discover the axis of resistance of the water, which he apprehended might be used with success.

The exact height of the masts in proportion to the form and size of the ship, remains yet a problem to be determined. The more the masts are elevated above the centre of gravity, the greater will be

the surface of sail which they are enabled to present to the wind; so far an additional height seems to be advantageous. But this advantage is diminished by the circular movement of the mast, which operates to make the vessel sloop to its effort; and this inclination is increased in proportion to the additional height of the masts; an inconvenience which it is necessary to guard against. Thus what is gained upon one hand is lost upon the other. To reconcile these differences, it is certain, that the height of the mast ought to be determined by the inclination of the vessel, and that the point of her greatest inclination should be the turn of this height above the centre of gravity. See the article TRIM. With regard

to the general practice of determining the height of the masts, according to the different rates of the ships in the royal navy, see also the article SAIL.

In order to secure the masts, and counterbalance the strain they receive from the effort of the sails impressed by the wind and the agitation of the ship at sea, they are suspended by several strong ropes extended from their upper ends to the outside of the vessel, called shrouds, (see that article.). They are further supported by other ropes, stretched from their heads towards the fore-part of the vessel. See the article RIGGING.

In the British navy, masts are proportioned to the extreme breadth of the ship from out to out.

General Proportion for the Length of Masts.

		<i>Guns.</i>	
1000: breadth in feet ::	$\left. \begin{array}{l} 748: \\ 756: \\ 753: \\ 741: \\ 740: \\ 747: \\ 760: \end{array} \right\}$	Main-mast in yards	{ 100
			{ 90
			{ 80
			{ 70 and 60.
			{ 50
			{ 44
1000: main-mast ::	$\left. \begin{array}{l} 895: \\ 901: \end{array} \right\}$	fore-mast	{ 100, 90, 80,
			{ & all the rest.
1000: main-mast ::	$\left. \begin{array}{l} 870: \\ 866: \end{array} \right\}$	mizen-mast	{ 100, 90, 80,
			{ & all the rest.
1000: main-mast ::	$\left. \begin{array}{l} 640: \\ 613: \end{array} \right\}$	bowsprit	{ 100, 90, 80,
			{ & all the rest.
1000: main-mast ::	$\left. \begin{array}{l} 600: \\ 605: \\ 613: \end{array} \right\}$	main-top-mast	{ 100, 90, 80,
			{ 70, 60, 50,
			{ 40, 24.
1000: main-top-mast ::	$\left. \begin{array}{l} 900: \\ 910: \end{array} \right\}$	fore-top-mast	{ 100, 90, 80,
			{ & all the rest.
1000: main-top-mast ::	$\left. \begin{array}{l} 710: \\ 717: \end{array} \right\}$	mizen-top-mast	{ 100, 90, 80,
			{ & all the rest.
1000: main-top-mast ::	$\left. \begin{array}{l} 480: \\ 508: \end{array} \right\}$	main-top-gallant-mast	{ 100, 90, 80,
			{ & all the rest.
1000: fore-top-mast ::	$\left. \begin{array}{l} 480: \\ 505: \end{array} \right\}$	fore-top-gallant-mast	{ 100, 90, 80,
			{ & all the rest.

The

The main and fore-mast in all ships down to 60 guns, one inch diameter to every yard in length. For 50 and 40 guns, twenty-seven twenty-eighths of an inch diameter to one yard in length. For 24 guns, twelve-thirteenths of an inch in diameter to one yard in length.

All top-masts are nine-tenths of an inch in diameter to one yard in length. The fore-top-mast as large as the main-top-mast. The top-gallant-mast one

inch to a yard. The mizen-mast $\frac{1}{2}$ of an inch to one yard in length. The mizen-top-mast five-sixths of an inch to one yard in length. The bowsprit an inch and an half to one yard. The jib-boom seven-eighths of an inch to a yard.

The proportion for masting ships in the merchant's service is generally regulated by the judgment and experience of the commander.

The Dimensions of Masts for East-India Ships are,

	<i>Length</i>	<i>Diameter</i>
	FEET.	INCHES.
MAIN-MAST — — —	80	$24\frac{1}{2}$
Top-mast — — —	50	15
Top-gallant-mast — — —	28	8
FORE-MAST — — —	72	24
Top-mast — — —	48	15
Top-gallant-mast — — —	25	$7\frac{1}{2}$
MIZEN-MAST — — —	70	17
Top-mast — — —	36	10
Bowsprit — — —	50	25

ARMED MAST—is a mast that is made of more than one tree.

TO MAST A SHIP—to hoist her masts into her by means of a sheer, or of a sheer-hulk. See these articles.

SPENDING A MAST is when it is broken by foul weather.

SPRINGING A MAST is when it is cracked in any place.

OVER-MASTED, or TAUT-MASTED—is said of a ship whose masts are too tall or too heavy, which makes her lie too much down by the wind, and labour too much a-hull.

UNDER-MASTED, or LOW-MASTED SHIPS—are such whose

masts on the contrary are too short or light; in which case she cannot bear to great a sail as should give her true way.

MASTER OF A SHIP OF WAR—an officer ranking immediately after the lieutenants, and appointed by the commissioners of the navy, to take charge of the navigating and conducting a ship from port to port, under the direction of the captain. The management and disposition of the sails, the working the ship into her station in the order of battle, and the direction of her movements in time of battle, are also particularly under his inspection; and he

he is moreover charged with the stowage of the hold. He is to be careful that the rigging, sails, and stores, be duly preserved; to see that the log and log-book be regularly and correctly kept; accurately to observe the appearances of coasts, rocks, and shoals, with their depths of water and bearings, noting them in his journal. He is to keep the hawser clear when the ship is at anchor, and to provide himself with proper instruments, maps, and books of navigation. It is likewise his duty to examine the provisions, and accordingly to admit none into the ship but such as are sound, sweet, and wholesome. When the ship shall be laid up he is to deposit a copy of the log-book and journal with the commissioners of the navy; and to enable him the better to perform these services, he is allowed several assistants, who are termed **MATES** and **QUARTER-MASTERS**, which see.

MASTER OF A MERCHANT-SHIP—the commanding officer, who is appointed by the owners to manage the navigation, and every thing relating to the cargo, voyage, sailors, &c. He is generally, though improperly, denominated captain.

MASTER at ARMS—an officer appointed to teach the officers and crew of a ship of war the exercise of small arms; he is also to plant centinels over prisoners, and superintend them while in confinement; he is to see that the fire and lights are extinguished at proper hours, and to attend the gangways to prevent spirituous liquors being conveyed into the ship, unless by permission of the commanding officer. He is to see

that the small arms be kept in proper order. He is to visit all vessels coming to, or going from, the ship without leave. He is also to acquaint the officer of the watch with all irregularities in the ship which shall come to his knowledge. His assistants in these several duties are called **SHIP'S CORPORALS**, which see.

MASTER ATTENDANT—an officer in the royal dock-yards appointed to assist in the fitting or dismantling, removing or securing vessels of war, &c. at the port where he resides; he is frequently to inspect the moorings which are sunk in the harbour, to visit all the ships in ordinary to see that they are kept in order, and to attend at the general musters in the dock-yard, taking care that all the officers, artificers, and labourers registered in the navy-book are present at their duty.

MASTER—in most other applications, denotes chief; as Maller boat-builder, Master calker, Master sail-maker, &c.

MAT—a sort of thick web, or texture, formed of spun-yarn or of foxes, containing each a greater or lesser number of rope-yarns, in proportion to the thickness of the mat intended to be woven. Mats are used to fasten upon the outside of such parts of the standing rigging as are exposed to the friction of the yards, bolt-ropes of sails, or other ropes, in extending, shifting, or trussing up the sails, particularly the lower ones. The largest and strongest sort of these mats are called **Panches**.

MATCH—a substance prepared for keeping alight and burning away slowly, and is used to fire the cannon.

MATE OF A SHIP OF WAR—

an officer under the direction of the master, to assist him in the several branches of his duty; accordingly he is to pay particular attention to the log-line, and glass; he is to see that the cables are well coiled in the tiers, and sufficiently served when employed to ride the ship; and, finally, he is, to superintend the stowage of the hold.

MATE OF A MERCHANT-SHIP—the officer who commands in the absence of the master, and shares the duty with him at sea. The first, second, and third mates of East-India ships may indeed, with great propriety, be compared to lieutenants in the navy, particularly with regard to their duty: the third takes also the care of the hold, and in this respect performs part of the master's duty in the navy.

The number of mates allowed to ships of war and merchantmen is always in proportion to the size of the vessel. Thus, a first-rate man of war has six mates, and an East Indiaman the same number: a frigate of twenty guns, and a small merchant-ship have only one in each, and the intermediate ships have a greater or smaller number, according to their several sizes, or to the services on which they are employed.

MATE—generally implies adjunct or assistant, as Quarter-master's mate, &c.

MAUL—a large iron hammer, used for various purposes.

TOP-MAUL—is distinguished by having an iron handle with an eye at the end, by which it is tied fast to the mast-head, to prevent accidents by its falling out of the top; it is principally used to drive the fid in or out of the top-mast.

MERCATOR'S CHART, or

PROJECTION—is a sea chart, or projection of the surface of the earth in plans.

The tables of meridional parts in books of navigation are to be made by a conditional addition of secants, calculated for every degree and minute of latitude; and these will serve either to make or graduate a Mercator's Chart, or to work the

MERCATOR'S SAILING—performed loxodromically, by means of Mercator's Charts.

MERCHANT-MAN—a trading ship employed in importing and exporting goods to and from foreign countries.

The captain of a merchant-ship should know the relation between the money, weights, and measures of several countries—the goodness and value of every thing requisite for the construction or refitting of vessels; the prices of wood, cordage, masts, anchors, sails, &c. He should also have a knowledge of foreign languages, and the laws, customs, &c. of different countries.

MERIDIAN—any line supposed to be drawn from the north to the south pole, through any given point; therefore a place being under the meridian of another place, is either due north or south of it.

ANTE MERIDIAN, or A. M.—before noon.

POST MERIDIAN, or P. M.—after noon.

MESS—any company of the officers or crew of a ship who eat drink, and associate together.

MESS-MATE—a companion or associate in such a company.

MESSENGER—a large rope, used to unmoor or heave up the anchors of a ship, by transmitting the efforts of the capstan to the cable. This is performed by fastening

tening one part of the messenger to the cable, in several places, by a particular kind of rope called nippers, and by winding another part thereof three or four times about the capstan, which answers the same purpose as if the cable itself were in that manner wound about the capstan; and the messenger being much lighter and more pliant, is infinitely more convenient. The messenger has an eyesplice at each end, through which several turns of a strong lashing are passed, forming a continuation, whereby a quantity passes forward on one side equal to what is hove in on the other. See the article VOYAL.

LIGHT FORWARD THE MESSENGER—is the order to pull the slack of it towards the hawle-holes, so as to be ready to fasten upon the cable which is being hove in.

METEOR — See the articles LARPOSANT, WATER-SPOUT, &c.

MID-CHANNEL—implies away across, or in the middle of any channel, river, &c.

MIDSHIP—a term applied by shipwrights to several pieces of timber which lie in the broadest part of the vessel, as,

MIDSHIP-BEAM — the beam upon which the extreme breadth of a ship is formed, and which is situated in the midship frame; nearly in the middle of her length, serving as a standard from whence the dimensions of the masts and yards are to be taken.

MIDSHIP-FRAME — a name given to that timber, or combination of pieces formed into one timber, which determines the extreme breadth of the ship, as well as the figure and dimensions of all the inferior timbers.

MIDSHIPS—See the article A-MIDSHIPS.

MIDSHIPMAN—a sort of naval cadet, appointed by the captain of a ship of war to second the orders of the superior officers, and assist in the necessary business of the vessel, either aboard or on shore. No person can be appointed lieutenant without having previously served two years in the royal navy in this capacity, or in that of mate, besides having been at least four years in actual service at sea.

Midshipman is accordingly the station in which a young volunteer is trained in the several exercises necessary to attain a knowledge of the machinery, discipline, movements, and military operations of a ship, to qualify him for a sea officer.

The number of Midshipmen, like that of several other officers, is always in proportion to the size of the ship to which they belong. Thus a first-rate man of war has twenty-four, and the inferior rates a suitable number in proportion.

Every Midshipman, on his first entrance in a ship of war, has several disadvantageous circumstances to encounter. These are partly occasioned by the nature of the sea service, and partly by the mistaken prejudices of people in general, respecting naval discipline, and the genius of sailors and their officers: for it is the general supposition, that common sailors are all honest, worthy characters, and treated in general with great and unmerited severity by the officers. The Midshipman accordingly comes aboard tinctured with these prejudices, especially if his education should be amongst the higher rank of people; and should the officers happen to an-

fer his opinion, he conceives an early disgust to the service from a very partial and incompetent view of its operations. Blinded by these prepossessions he is thrown off his guard, and very soon surprised to find that many of those honest, worthy characters, whom he expected to meet with are only deterred from the commission of crimes by the terror of severe punishment. He also soon discovers the absolute necessity officers are under of being severe; for if the reins of discipline are too much relaxed, the pernicious example of a few of the vilest might soon corrupt the principles of the greatest number. If, as it may be required on many occasions, the Midshipman is obliged to mix with the most abandoned, particularly in the exercises of extending or reducing the sails in the tops, he ought resolutely to guard against the contagion of vice. But availing himself of their knowledge, acquire, as much as possible, their expertness in managing and fixing the sails and rigging, and never suffer himself to be excelled by an inferior. While obliged to associate with his inferiors, he will often hear a number of scurrilous jests at the expense of his superiors, and probably witness them sneering in private at the execution of orders which may seem, or perhaps are, improper, awkward, and unlike a seaman. Hence he will learn the advantages of attaining a competent skill of extending or reducing the sails; for a timely application to those exercises can only prevent him from appearing in the same despicable point of view which others may do from having neglected those favourable opportunities.

But if not employed in these services, which are undoubtedly necessary to give him a clearer idea of the different parts of his occupation, a variety of other objects present themselves to his attention. Without presuming to dictate the studies which are most essential to his improvement, let it suffice to recommend such as are most suitable to the bent of his inclination. Astronomy, geometry, and mechanics, which are in the first rank of science, are the materials which form the skilful pilot, and the superior mariner. The theory of navigation is entirely derived from the two former, and all the machinery and improvements of a ship are founded upon the latter. The action of the wind upon the sails, and the resistance of the water at the stem, naturally dictate an enquiry into the property of solids and fluids; and the state of the ship floating on the water, seems to direct his application to the study of hydrostatics, and the effects of gravity. A proficiency in these branches of science will equally enlarge his views with regard to the operations of naval war, as directed by the efforts of powder, and the knowledge of projectiles. The most essential method to excite his application to those studies, is, perhaps, by looking round the navy to observe the characters of individuals. By this inquiry he will probably discover that the officer who is eminently skilled in the sciences, will command universal respect and approbation; unless indeed, he has an unconquerable aversion to the acquisition of those qualifications which are so essential to his improvement, he will very rarely want opportunities of making a progress therein. Every

step he advances in those meritorious employments, will facilitate his accession to the next in order.

MIZEN—the aftermost or hindmost of the fixed sails of a ship, extended sometimes by a gaff and sometimes by a yard which crosses the mast obliquely, the fore end reaching almost down to the deck, and the after end being pecked up as high above the middle of the yard, which is attached to the mast; the head and fore-leech or the mizen are laced upon the gaff (or yard) and mast, and the sheet hauls out near the taffel.

MIZEN-MAST—the mast which supports all the after-sails. The explanations of the rigging, yards, and sails of this mast being in general applicable also to the same furniture of both the other masts, the reader is referred to the articles **SHROUD, STAY, YARD, &c.** observing only that the epithet of Fore, Main, or Mizen, is added to each term, to distinguish them from each other.

MOLE—a name given in the Mediterranean to a long pier or artificial bulwark of masonry, extending obliquely across the entrance of a harbour, in order to break the force of the sea from the vessels that are anchored within.

MOLE—is also applied to the harbour or haven which is formed by the bulwark above described, which latter is then denominated the mole head.

MONSOON—a name given to the periodical trade winds which blow regularly in certain latitudes of the Indian Ocean. They continue five or six months invariably in one direction, and then alter their course and blow during an equal space of time from an opposite point of the compass; with

the same uniformity. See the article **WIND.**

To MOOR—to confine or secure a ship in a particular station by chains or cables, which are either fastened to the adjacent shore or to anchors in the bottom: a ship is never said to be moored when she rides by a single anchor.

To MOOR ACROSS—is to lay out one of the anchors in one side.

To MOOR ALONG—is to have an anchor, a river, and a hawse on shore.

To MOOR A CABLE EACH WAY—is performed by dropping one anchor, veering out two cables lengths, and letting go another anchor from the opposite bow; the first is then hove in to one cable, while the latter is veered out as much, whereby the ship rides between the two anchors, equally distant from both. This is usually practised in a tide way, in such manner that the ship rides by one during the flood, and by the other during the ebb.

To MOOR HEAD, OR HEAD AND STERN—This operation may be performed by two methods. A ship may be secured by anchors before her, without any behind; or she may have anchors out, both before and behind her; or her cables may be attached to posts, rings, or moorings, which answer the same purpose.

When a ship is moored by the head with her own anchors, they are disposed according to the circumstances of the place where she lies, and the time she is to continue therein. Thus, whenever a tide ebbs and flows, it is usual to carry one anchor out towards the flood, and another towards the ebb, particularly where there is little room to range about; and

and the anchors are laid in the same manner, if the vessel is moored head and stern in the same place. The situation of the anchors in a road or bay, is usually opposed to the reigning winds, or to those which are most dangerous, so that the ship rides therein with the effort of both her cables. Thus, if she rides in a bay or road which is exposed to a northerly wind and heavy sea from the same quarter, the anchors passing from the opposite bows, ought to lie east and west from each other; hence both the cables will retain the ship in her station with equal effort against the action of the wind and sea.

To MOOR QUARTER SHOT—is to moor quartering between the two ways of across and along.

To MOOR WITH A SPRING ON THE CABLE — See the article SPRING.

MOORINGS — are an assemblage of anchors, chains, and bridles, laid athwart the bottom of a river or harbour to ride the shipping therein. These anchors have generally but one fluke, which is sunk in the river near low-water mark. Two anchors, being thus fixed, on the opposite sides of the river, are furnished with a chain extending across from one to the other; in the middle of which is a large square link whose lower end terminates in a swivel, to which are attached the bridles, which are short pieces of cables well served, whose upper ends are drawn into the ship and secured to the bits, &c. By this means the vessel veers round very readily, according to the change of the wind or tide; in some places, however, particularly in rivers, each ship takes in a bridle astern,

also, by which she becomes moored head and stern.

MORRO—is a term for head-land or promontory on the coasts of Chili and Peru in South America, and on the South Pacific Ocean.

MORTAR—a piece of artillery, shorter and wider than a cannon, and having a chamber less than the size of its bore. It is used to discharge bombs, or shells, and carcasses into a fortified place. The bomb, or shell, is a great hollow ball filled with powder, which falling into a fortification, &c. destroys the most substantial buildings by its weight, and bursting asunder creates the greatest mischief and disorder by its splinters. To prevent the shell from bursting at the first moment of discharge, it is furnished with a fuse, which continues burning during its flight; and to increase the weight of its fall, the mortar is elevated to a considerable angle above the horizon.

The interior part of this piece of artillery is called the bore, wherein the bomb is lodged; the inner part of the bore, which is diminished towards the breech, and contains the powder, is termed the chamber.

The chambers of mortars are extremely different in their figures, and each of those figures is defended by better or worse arguments. Thus they are spherical, cylindrical, conical, bottled, or concave. Indeed, nothing appears to be less determined upon true principles or experiments than the proportions of the several parts of a mortar.

As the sea mortars, or those which are placed in the bomb-vessels, are generally fixed at a much

greater distance from the object than is required at shore, they are made somewhat longer and much heavier than the land-mortars.

Mr. Muhler, in his Treatise of Artillery, very justly observes, that the breech of our thirteen inch sea-mortars is loaded with an unnecessary weight of metal: the chamber thereof contains thirty-two pounds of powder, and at the same time they are never charged with more than twelve or fifteen pounds by the most expert officers, because the bomb-vessel is unable to bear the violent shock of their full charge. Thus the action of the powder is diminished by the vacancy left in the chamber, which is never half filled. As a charge of twelve or fifteen pounds at most is therefore sufficient, it is evidently proved, by the theory of powder, that this will produce the greatest effect when discharged from a mortar with a cylindrical chamber. He also proves, by a variety of experiments made by Captain Desaguiliers and himself, that the conical chamber, now used, is considerably inferior to the cylindrical one with the last discharge of powder.

To facilitate the use of the mortar, it is placed in a solid carriage of timber called the bed, whose different parts are strongly bolted together. By means of this it is firmly secured in its situation, so that the explosion of the powder may not alter its direction. In the middle of the upper side of this carriage are two semi-circular notches to receive the trunnions; over these are fixed two very strong bands of iron, called the cap squares, the middle of which is bent into a semi-circle, to embrace the trunnions, and keep them fast in the mortar bed. The cap-

squares are confined to the timber work by strong pins of iron, called the eye-bolts, into whose upper ends are driven the keys, chained beneath them. On the fore-part of the bed a piece of timber is placed transversely, upon which rests the belly of the mortar on that part which contains the chamber. The elevation of this piece, which is called the bed bolster, is used to elevate and support the mortar whilst firing. These beds are placed upon very strong beds of timber, which are fixed in the bomb-ketch. They are securely attached to the frames by means of a strong bolt of iron called the pintle, passing perpendicularly through both, and afterwards through one of the beams of the vessel. Thus the pintle which passes through the whole in the centre, serves as an axis to the bed, so that the mortar may be turned about horizontally as occasion requires.

The shell, as already observed, is a great hollow ball, charged with powder. The lower part of the shell is thickest, by which it becomes heavier on that side, and accordingly falls thereon, and never on the fuse. It is also the better enabled thereby to resist the impression of the powder, by which it is discharged from the mortar. Both of these reasons, however, Mr. Muhler conceives to be immaterial, because nothing but an absolute stoppage of the air can exhaust the sales as their composition enables them to burn in water as well as air or earth, and the explosion of the mortar would not, in his opinion, be able to break them, if they are equally thick every where. The most proper quantity of powder to charge a shell is probably two-thirds

thirds of the weight which would fill the cavity,

The fuse is generally a conical tube formed of birch, willow, or some dry wood, and filled with a composition of sulphur, salt-petre, and mealed powder. The shell being charged, this fuse is inserted in the cavity through the fuse-hole, and when fired, communicates the fire to the powder in the shell.

The fuses are charged with great care, that nothing may prevent them from communicating the fire to the powder in the centre of the bomb. They are driven into it so as that only an inch and a half comes out beyond the fuse hole, and then the shell is said to be fixed.

These fuses are also charged long before there is occasion to use them; and that the composition with which they are filled may not fall out or be damaged by growing damp, the two cords are covered with a composition of tallow mixed either with pitch or bees-wax. When the fuse is to be put into the shell, the little end is opened or cut off, but the great end is never opened till the mortar is to be fired.

The proper quantity of gun-powder being put into the chamber, if there be any vacant place, they fill it up with hay: some choose a wooden plug; over this they lay a turf, some a tompon fitted to the bore of the piece, and lastly the bomb; taking care that the fire be in the axis thereof, and the orifice be turned from the muzzle of the piece. What space remains is to be filled up with hay, straw, turf, &c. so as that the load may not be exploded without the utmost violence.

This done, the charge is covered with a wad well beat down with the rammer. After this the fixed shell is placed upon the wad, as near the middle of the mortar as possible, with the fuse hole uppermost, and another wad pressed down close upon it, so as to keep the shell firm in its position. The officer then points the mortar, or gives it the inclination necessary to throw the shell to the place designed. When the mortar is thus fixed, the fuse is opened; the priming-iron is also thrust into the touch-hole of the mortar to clear it, after which it is primed with the finest powder. This done, two of the matrosses or sailors, taking each one of the matches, the first lights the fuse, and the other fires the mortar. The shell thrown out by the explosion of the powder, is thrown to the place intended; and the fuse, which ought to be exhausted at the instant of the shell's falling, inflames the powder contained therein, and bursts it into splinters; which, flying off circularly, occasion incredible mischief where-soever they reach.

The following are the necessary orders before a bombardment by sea.

When any fixed shells are issued from the tenders, the artillery people on board are immediately to fix others in their room, and are always to keep in their tenders the same number they had at first.

2. The shells are to be fixed in the boats appointed to carry them, provided the weather permits; otherwise, in the safest place on deck, and to be kited or lowered down into a spare rack, which must be in each boat for that purpose. While the shells are fixing,
the

the powder-room is to be shut, the hatches laid and well secured against fire, and the place where they are fixed is to be well watered.

3. The shells being carefully examined, in order that no spike is left therein, by which the fuse may be split, the fuses are to be cut the whole length, and to be set home into the shells very strongly.

4. No shells fixed during the service are to be kited; but if any should be left when the service is over, they are immediately to be kited.

5. The powder in the bomb-vessels is to be used first, and none to be opened or measured out except in the captain's cabin, the door of which is to be kept shut during the whole time, and covered with tanned hides to make it as secure as possible.

6. The fixed shells in the boats are to be likewise covered from fire or wet, with hair-cloth and tanned hides with the utmost care.

7. If the service is carried on at night, all the powder is to be ready measured out in cartridges, which may be kept in the powder-magazine and captain's cabin in the empty powder barrels and powder bags; and all the shells requisite to be ready. The tin tubes, one powder horn, and the port-fires, also the punches and bits for the vents are to be kept in the captain's cabin.

8. No fire, nor light, except match and port-fires, to be on board either bomb-vessel or tender during the service.

9. The captain's cabin and the passage to it, also the way to the magazine and decks, are to be constantly watered.

10. The sponges for the mortars are to be all examined and tried, and if too large, they are to be cut so as to enter easily.

11. The vents of the mortar are to be examined, and the punches and tubes tried in them.

12. A laboratory chest is to be on board each bomb vessel in the captain's cabin, in which all the small stores are to be kept.

13. Two tubs of water are to be on deck for the lightest port-fires and match, which must be constantly held in them till ordered to fire.

14. Two careful men are also to be appointed for this service, who are to do nothing else on any account.

15. Two careful men of the artillery are to be left on board each tender for the filling and fixing of the shells.

16. Application must be made to the admiral for two men of war's boats to attend on each bomb-ketch and tender for carrying shells and stores.

One of these is to be loaded with fixed shells, which, when sent to the bomb-vessel, must remain with her until they are all taken out, which should be only as they are wanted for loading the mortars: it is then to return to the tender. The other boats, meanwhile, will be receiving more fixed shells, and on the signal given from the bomb-ketch for more shells, must immediately repair to her with them.

17. A gang of warrant officers and eight seamen are to be at each mortar, and to give whatever assistance may be required.

18. A gang from the navy, with a careful warrant officer and non-commissioned officer of the artillery, are to have the charge between

tween decks on board each bomb-
vessel and tender, to get up the
fixed shells that are in the rack,
and a careful person is to remain
constantly at the powder-room
door, which must be kept shut as
much as possible.

19. When any powder is want-
ed from the tender for loading the
mortar, it should be measured out
in the tender, and a proper charge
put into paper cartridges, upon
which should be written the quan-
tity and the mortar for which it is
allotted.

In shooting with mortars, the
following general rules should be
always observed.

1. To measure the distance of
the object aimed at.
2. That the bombs be of equal
weight, otherwise the shots will
vary.
3. That the carriage be on an
exact level to prevent its leaping.
4. That the powder with which
the piece is charged be always of
the same strength and quantity.
5. That the charge be always

equally rammed down.

6. That the wads be always of
wood, tompions, or oakum.

7. That the fuses be fresh made
the days on which they are to be
used, and that they be of a com-
position proportionable to the
range of the shot in the air, so that
the bomb may break at the very
moment of, or soon after its fall;
which composition must be such as
not to be extinguished though it
fall in water, but continue burning
till the bomb breaks.

If the service of mortars should
render it necessary to use pound
shots two hundred of them, with a
wooden bottom, are to be put into
the thirteen inch mortar, and a
quantity of powder not exceeding
five pounds; and one hundred of
the above shot, with two pounds
and a half of powder for the ten
inch mortar, or three pounds at
most. One inch of fuse burns
four seconds and 48 parts.

The following table exhibits
the weight of the sea mortars and
shells, and also of their full charge.

Nature of the mortar.	Powder con- tained in the chamber when full,		Weight of the mortar.	Weight of the shell when fixed.	Weight of powder contained in the shell.			
	lb.	oz.				C.	qr.	lb.
10 inch howitzer - -	12	0	31	2	26	0	0	0
13 inch mortar - - -	30	0	81	2	1	198	7	0
10 inch mortar - - -	12	0	34	2	11	93	0	0

The howitzer is a sort of mor-
tar, which is to be fixed horizon-
tally like a cannon, and has, like
the cannon, a wheel carriage.

These pieces are very rarely used
in the sea service. For farther
particulars see the articles BOMB,
RANGE, &c.

MOULD

MOULD—a thin flexible piece of timber, used by shipwrights as a pattern whereby to form the different curves of the timbers, and other compassing pieces in a ship's frame; of these there are two sorts, the bend-mould, and the hollow mould. The former of these determines the convexity of the timbers, and the latter the concavity on the outside, where they approach the keel, particularly towards the extremities of the vessel. The figure given to the timbers by this pattern is called the Beveling. See that article.

To **MOUNT**—expressed of a vessel of war, implies to carry; as, She mounts twenty guns.

MOUNTED—said of a gun when placed on its carriage.

MOUSE — a sort of knob, wrought on the outside of a rope by means of spun-yarn, parling, &c. See the article **PUDDENING**. It is particularly used on the stays to prevent it from unhooking when the tackle is slackened.

To **MUFFLE THE OARS** — is to put some matting, &c. round that part of the oar which lies on the edge or gunnel of the boat, when rowing, to prevent its making a noise against the tholes.

MUSTERING — the act of calling over a list of the whole ship's company, or any particular detachment thereof, who are accordingly to answer to their names.

MUTINEER—one who mutinies.

MUTINY—revolt and disobedience of orders.

N.

NADIR — that point in the heavens which is perpendicularly under our feet, and is therefore diametrically opposite to

the zenith, or point directly over our heads. See the article **ZENITH**.

NAVAL—of or belonging to a ship, or to the royal navy; hence naval stores, naval officers, &c.

NAVEL HOODS — See the article **HOODS**.

NAVEL LINE—See the article **LINE**.

NAVIGATION — the art of directing the movements of a ship by the action of the wind upon the sails.

NAVIGATION—is applied with equal propriety to the arrangement of the sails according to the state of the wind, and to the directing and measuring a ship's course by the laws of Geometry; or it may comprehend both, being then considered as the theory and practice thereof.

NAVIGATOR—a person who understands the art of Navigation.

In navigation the rules of trigonometry must be well considered and understood; the course of a ship, and the distance she has run thereon, being measured by the angles and sides of a right-angled plain triangle, in which the hypotenuse is converted into the distance; the perpendicular into the difference of latitude; the base into the departure from the meridian; the angle, formed by the perpendicular and hypotenuse, into the course; and the opposite angle contained between the hypotenuse and base, into its complement of the course. The course of the ship is determined by the compass; and the log-line, or a solar observation, ascertains the distance. Hence the hypotenuse and angles are given to find the base and perpendicular, a problem well known in trigonometry.

That

That part of navigation which regards the piloting, or conducting a ship along the sea-coast, can only be acquired by a thorough knowledge of that particular coast after repeated voyages: let it suffice here to observe, that the bearings and distances, from various parts of the shore, are generally ascertained in the night, either by light-houses, or by the different depths of the water, and the various sorts of ground at the bottom; as shells of different sizes and colours, sand, gravel, clay, stones, ooze, or shingle. In the day, the ship's place is known by the appearance of the land, which is set by the compass, while the distance is estimated by the master or pilot.

Navigation and ship-building are such complicated arts, that they require the ingenuity, as well as experience, of many successive ages, to bring them to any degree of perfection. From the raft or canoe, which first served to carry a savage over the river that obstructed him in the chase, to the construction of a vessel capable of containing a numerous crew, with safety, to a distant coast, the progress in improvement is immense. Many efforts must have been made, many experiments tried, and much labour and invention employed, before men could accomplish this arduous and important undertaking. The rude and imperfect state in which navigation is still found, among all nations which are not considerably civilized, corresponds with this account of its progress, and demonstrates that, in early times, the art was not so far improved as to enable men to undertake distant voyages, or to attempt remote discoveries.

There will ever be speculators, fond to conjecture concerning the origin of things, however remote in time, and enveloped in obscurity. Various, in course, have been the conjectures concerning navigation; conjectures, which however unsatisfactory, are yet so far interesting, as they furnish some pleasing scope for ingenious, as well as fanciful reflections. Among the ancients, the poets refer the invention of the art of navigation to Neptune; others to Bacchus, others to Hercules, others to Jason, and others to Janus, who is said to have constructed the first ship. Historians ascribe it to the *Ægeetes*, the Phœnicians, and the ancient inhabitants of Britain. Some will have it, that the first hint was taken from the flight of the kite; others from the motion of fishes in general; and others, to that of the nautilus, a curious shell-fish; in particular; while a learned editor of Virgil's *Georgics* believes, that an alder-tree, grown hollow with age, and falling into the river on which it was planted, (for this tree delights in a moist soil and the banks of rivers) gave the first hint towards navigation.

Scripture refers the origin of so useful an invention to God himself, who gave the first specimen in the ark built by Noah: for the rallery which that good patriarch underwent on account of his enterprise, is a sufficient demonstration, that the world was then ignorant of any thing like navigation, and that they even thought it impossible.

But whatever be the origin of this art, and whatever nation may claim the honour of inventing it, or of having rendered it subservient to the noble advantages of

commerce, it is certain, that, among all the nations of antiquity, the structure of their vessels was extremely rude, and their method of working them no less defective. They were unacquainted with some of the great principles and operations of navigation, which are now considered as the first elements on which that science is founded. Though that property of the magnet, by which it attracts iron, was well known to the ancients, its most amazing and important virtue of pointing to the poles had escaped their observation. Deslitute of this faithful guide, which now conducts the pilot with so much certainty in the unbounded ocean, during the darkness of night, and when the heavens are covered with clouds, the ancients had no other method of regulating their course, than by observing the sun and stars. Their navigation was, in course, uncertain and timid. They durst seldom quit sight of land, but crept along the coast, exposed to all the dangers, and retarded by all the obstructions, unavoidable in holding such an awkward course. An incredible length of time was requisite for performing voyages, which are now finished in a short space. Even in the mildest climates, and in seas the least tempestuous, it was only during the summer months that the ancients ventured out of their harbours. The remainder of the year was lost in inactivity. It would have been deemed most inconsiderate rashness to brave the fury of the winds and waves during the winter.

Those who have written more diffusively upon the subject, have taken a survey of the progress of discovery and navigation among

the ancients; beginning with the Egyptians, and proceeding successively with the Phœnicians, Jews, Carthaginians, Greeks, and Romans. From this survey, which may be traced from the earliest dawn of historical knowledge to the full establishment of the Roman empire, the progress of the ancients appears to be wonderfully slow. It seems neither adequate to what we might have expected from the activity and enterprise of the human mind, nor to what might have been performed by the powers of the great empires, that successively governed the world. If we reject accounts that are fabulous and obscure; if we adhere steadily to the light and information of authentic history, without substituting in its place the conjectures of fancy, or the dreams of etymologists, we must conclude, that the knowledge which the ancients had acquired of the habitable globe was extremely confined. This would sufficiently appear from a review of such parts of the world as they had never explored. But there is yet a more decisive proof of this, in an opinion which universally prevailed among them, that the earth was divided into five regions, which they distinguished by the name of zones. Two of these, the nearest to the poles, they termed frigid zones; and they believed that the extreme cold which reigned perpetually there, rendered them uninhabitable. Another, seated under the line, and extending on either side toward the tropics, they called the torrid zone; and they imagined it to be so burnt up with unremitting heat, as to be equally destitute of inhabitants. On the other two zones, which occupied the remainder of the

the earth, they bestowed the appellation of temperate; and they taught that these, being the only regions in which life could subsist, were allotted to man for his habitation. This wild opinion was not a conceit of the uninformed vulgar, or a fanciful fiction of the poets, but a system adopted by the most enlightened philosophers, the most accurate historians and geographers, in Greece and Rome. According to this theory, a vast portion of the habitable globe was pronounced to be unfit for sustaining the human species. Those fertile and populous regions within the torrid zone, which are now known not only to yield their own inhabitants the necessaries and comforts of life, with most luxuriant profusion, but to communicate their superfluous stores to the rest of the world, were supposed to be the seat of perpetual sterility and desolation. As all the parts of the globe which the ancients had discovered lay within the northern temperate zone, their opinion that the other temperate zone was inhabited, was founded not on discovery, but on reasoning and conjecture. They even believed that, by the insufferable heat of the torrid zone, such an insuperable barrier had been placed between the two temperate regions of the earth, as would prevent for ever any intercourse between them.

Nevertheless, the discoveries of the Greeks and Romans were still very considerable, when compared to those of remoter times; and, in the second century of the christian æra, geography enriched by new observations, made a very conspicuous figure, under the auspices of Ptolemy the philosopher. The discoveries, subsequent to

these times, would lead us into too wide a field of discussion; we shall conclude, therefore, with some very ingenious and interesting reflections on the present wonderful perfection of navigation, from Foster's History of the Voyages and Discoveries made in the North.

"Of all the arts and professions which have at any time attracted my notice," says he, "none has ever appeared to be more astonishing and marvellous than that of navigation, in the state in which it is at present; an art which doubtless affords one of the most certain irrefragable proofs of the amazing powers of the human understanding. This cannot be made more evident, than when, taking a retrospective view of the tottering, inartificial craft to which navigation owes its origin, we compare it with a noble and majestic edifice, containing a thousand men, together with their provisions, drink, furniture, wearing-apparel, and other necessaries for many months, besides one hundred pieces of heavy ordnance; and bearing all this vast apparatus safely, and as it were on the wings of the wind, across immense seas to the most distant shores. The following example may serve for the present to delineate at full length, as it were, the idea above alluded to. But first I must premise, that a huge, unwieldy log of wood, with the greatest difficulty, and in the most uncouth manner, hollowed out in the inside, and somewhat pointed at both ends, and in this guise set on a river for the purpose of transporting two or three persons belonging to one and the same family across a piece of water a few feet deep, by the assistance of a pole pushed against the ground;

cannot with any propriety be considered as the image of navigation in its first and earliest stage. For it seems evident to me, that people in the beginning only took three or four trunks of trees, and fastened them together, and then, by means of this kind of raft, got across such waters as were too deep for them to ford over, and across which they could not well swim with their children, and various kinds of goods which they might wish to preserve from being wet. The canoe, however, is a specimen of the art in a more advanced state, as this kind of craft is capable of having direction given to it, and even of so capital an improvement as that of having a sail added to it. For this reason I choose this vehicle for a standard, in preference to a mere raft, to which, imperfect as it is, it is so much superior. Let us, then, compare this with a large majestic floating edifice, the result of the ingenuity and united labour of many hundreds of hands, and composed of a great number of well-proportioned pieces, nicely fastened together by means of iron nails and bolts, and rendered so tight with tow and pitch, that no water can penetrate into it. Now, in order to give motion and direction to this enormous machine, some astonishingly lofty pieces of timber have been fixed upright in it, and so many moveable cross pieces have been added to it, together with such a variety of pieces of strong linen cloth, for the purpose of catching the wind, and of receiving its impulse and propelling power, that the number of them amounts to upwards of thirty. For changing the direction of these yards and sails, according to particular circumstances, it has also

been requisite to add a vast quantity of cordage and tackling; and, nevertheless, even all this would not be sufficient for the perfect direction and government of the vessel, if there were not fastened to the hinder part of it, by means of hinges and hooks, a moveable piece of wood, very small indeed in proportion to the whole machine, but the least inclination of which to either side is sufficient to give immediately a different direction to this enormous large mass, and that even in a storm, so that two men may direct and govern this swimming island with the same or with greater ease than a single man can do a boat. But if, besides, we consider that, in a vessel like this, not a single piece is put in at random, but that every part of it has its determined measure and proportion, and is fixed precisely in that place which is the most advantageous for it; that, throughout every part of it, there is distributed an astonishing quantity of blocks, stays, and pullies, for the purpose of diminishing the friction, and of accelerating the motion of these parts; that even the bellying and vaulted part of the fabric, together with its sharp termination underneath, are proportioned according to the nicest calculations, and the most accurately determined rules; that the length and the thickness of the masts, the size of the booms and yards, the length, width, and strength, of the sails and tackling, are all in due proportion to one another, according to certain rules founded upon the principles of motion: when we consider all this, I say, our admiration increases more and more at this great master-piece of human power and understanding. Still, however, there
are

are wanting a few traits to complete this description. A man in health consumes in the space of twenty-four hours, about eight pounds of victuals and drink: consequently, 8000lb. of provisions are required per day in such a ship. Now let us suppose her to be fitted out for three months only, and we shall find that she must be laden with 720,000lb. of provisions. A large forty-two pounder weighs about 6100lb. if made of brass, and about 5500 lb. if of iron; and generally there are twenty-eight or thirty of these on board a ship of 100 guns, the weight of which, exclusive of that of that of their carriages, amounts to 183000lb. On the second deck there are thirty twenty-four pounders, each of which weighs about 5100lb. and therefore all together, 153000lb. and the weight of the twenty-six or twenty-eight twelve pounders on the lower deck amounts to about 75,400lb. that of the fourteen six pounders on the upper deck, to about 26,600lb. and besides that, on the round tops, there are even three pounders and swivels. Now, if to this we add, that the complete charge of a forty-two pounder weighs about 64lb. and that at least upwards of 100 charges are required for each gun, we shall find this to amount nearly to the same weight as the guns themselves. In addition to this we must reflect, that every ship must have, by way of providing against exigencies, at least another set of sails, cables, cordage, and tacklings, which all together amount to a considerable weight. The stores likewise, consisting of planks, pitch, and tow; the chests belonging to the officers

and sailors; the surgeon's stores, and various other articles requisite on a long voyage; as also the small arms, bayonets, swords, and pistols, are no inconsiderable load; to which we must finally add the weight of the crew, which is not very trifling; so that one of these large ships carries at least 2162 tons burthen, or 4,324,000lb. and at the same time is steered and governed with as much ease as the smallest boat. Now, the consideration of these circumstances alone, is sufficient to excite the most serious reflections in a contemplative mind; and yet, if such a ship sailed along the coast only, and never lost sight of the shore, as the navigators of old used to do, we might still be tempted to look upon navigation as an easy and trifling business. But the finding the straightest and shortest way over an ocean of more than 60 or 80 degrees in longitude, and 30 or 40 in latitude; or across a track from 4000 to 6000 miles in extent, by day or by night, in fair weather or in foul, as well when the sky is overcast as when it is clear, and often with no other guide than the compass (which does not even point direct to the North in all places), and the being able to determine the true position of the ship at sea by the height of the sun, though this latter be enveloped in clouds, or to direct one's course by the moon and stars with such exactness and precision, as not to make a mistake of the value of half a degree or thirty miles; this at least shews the progress and great perfection of an art practised by a set of people, of whose understandings many conceited and supercilious landmen have but a mean opinion, and whose plain and

and simple manners they frequently take the liberty of turning into ridicule.

“ A violent storm of wind will make us tremble with fear, even in a strong well-built house, and in the midst of a populous city; yet we have seldom or never either seen or experienced the vast power of the enraged waves, when beat about by the winds, and dashed against each other till they seem transformed into froth and vapour, and the whole surface of the ocean presents to the eye a confused scene of immense watery mountains and bottomless precipices; and yet on such a sea as this the true seaman, provided he has but a good ship, rides with calm and unhaken courage, and thinks himself as safe in the midst of the ocean as in the best fortified castle.”

We have every reason to believe by the authorities of both sacred and profane history, that the Phœnicians were the first, and for a long period of time the most successful of the ancient navigators. We find the king of Tyre, whose subjects were of that nation, assisting king Solomon with gold and curious materials for building the famous temple at Jerusalem. Though the virtue of the magnetic needle was totally unknown in those days, yet it is morally certain that these bold navigators not only coasted along the neighbouring shores of the Mediterranean, but sailed southward to Africa, and north as far as Britain, trading for tin to the coast of Cornwall, at a time when the existence of this island was not known to the greater part of the nations inhabiting the continent. The Assyrians, Egyptians, and other ancient states, are

reported to have had great fleets before the days of David, or even of Moses. The accounts of the naval power of Semiramis are to be suspected as fabulous; that the Egyptians and some other nations have been represented as covering the seas with their fleets, may probably have arisen from the number of Phœnician vessels employed in their service. The Greeks who learned other arts from them, acquired that of navigation among the rest, and almost as soon as they were formed into states, began to think of making themselves respectable for their fleets, with which they repeatedly defeated those of the Persians, and made themselves masters of the eastern coasts of the Mediterranean, while the Phœnicians were employed in trading and planting colonies in various other parts of the world.

The famous Carthage, a colony from Tyre, from small beginnings rose to high estimation for her naval power, by which means, in a great measure she was enabled to contend with Rome for the empire of the world. But the indefatigable industry, unwearied application, and boundless thirst of conquest which marked the character of the Romans, caused them at last to triumph. Though at first they were little skilled in maritime affairs, to which their ancient genius had not led them, yet finding themselves thus powerfully supported by a people whose great resources were in trade, and whose naval strength contributed chiefly to their support: they resolved on manning great fleets, in which, though at first they were unsuccessful, they were at length enabled to combat their enemies, as it were, upon their own element,

and finally gave them such a terrible overthrow as induced them to accept of such a peace as the conquerors were disposed to grant.—The fleets at this time consisted of galleys of various sizes, with several benches of rowers, and were filled with soldiers who fought with their usual weapons of war, to which were added various engines peculiar to their situation; and some of the galleys had towers, from whence they shot or threw darts, stones, and other missiles. By the help of these, they could make safe approaches to the walls of towns in offensive war, and when attacked in their own vessels could carry on a defensive with as great security as if they were on shore.

Though by perseverance and assiduity the Romans had overcome great obstacles, and were become masters at sea, yet we do not find that their genius led them towards discovery and commerce.—Conquest engrossed their ideas, and as the then known world had furnished sufficient employment for their arms, and put them in possession of an empire which was at last too extensive for them to preserve entire, they were little solicitous of penetrating farther, and exploring unknown regions in the manner of the more modern Europeans for the satisfaction of a laudable curiosity.

That distinguished power, which the Romans thus wrestled from the Greeks and Carthaginians, they preserved till the division of the empire, after which it began to decline.—The distant provinces revolted.—The nations shook off the yoke of the conquerors; barbarians, whose names were almost unknown, poured in upon the various parts of the divided

empire. Rome, sinking under her own weight, was at last sacked by the Goths, and Constantinople taken by the Saracens, which event put an end to the Eastern empire, in the reign of Michael Palæologus.

Hence originated that consequence which the Arabs derived.—Though at first apparently enemies to learning and the arts, yet as they extended their power, they became encouragers of them, and, while the destruction of the Western empire had involved Europe in ignorance and distraction, these people began to cultivate useful knowledge, and to carry on an extensive trade with divers nations, though in ships of a very slight construction. Nor did the division of the Arabian empire prove the extinction of this commerce, which long survived the destruction of the Khalifate, and the remains of which were yet visible to the Portuguese when they entered the Indian seas; along whose coast the pilots, it is said, were found to have the use of sea charts, and even that of the compass, the discovery of which was then so recent in Europe.

During this period the rival republics of Genoa and Venice were almost the only powers that attended to trade and navigation in the western world, the crusades abroad, and the feudal system which prevailed amongst the most respectable powers at home, joined to their intestine divisions, proving most unfavourable to the arts, and prolonging that night of ignorance, whose shades began to be dispelled about the fifteenth century. The conquests of Jenghiz Khan, and the wars of the successors of Saladin, as well as those of Tamerlane, had successively

kept

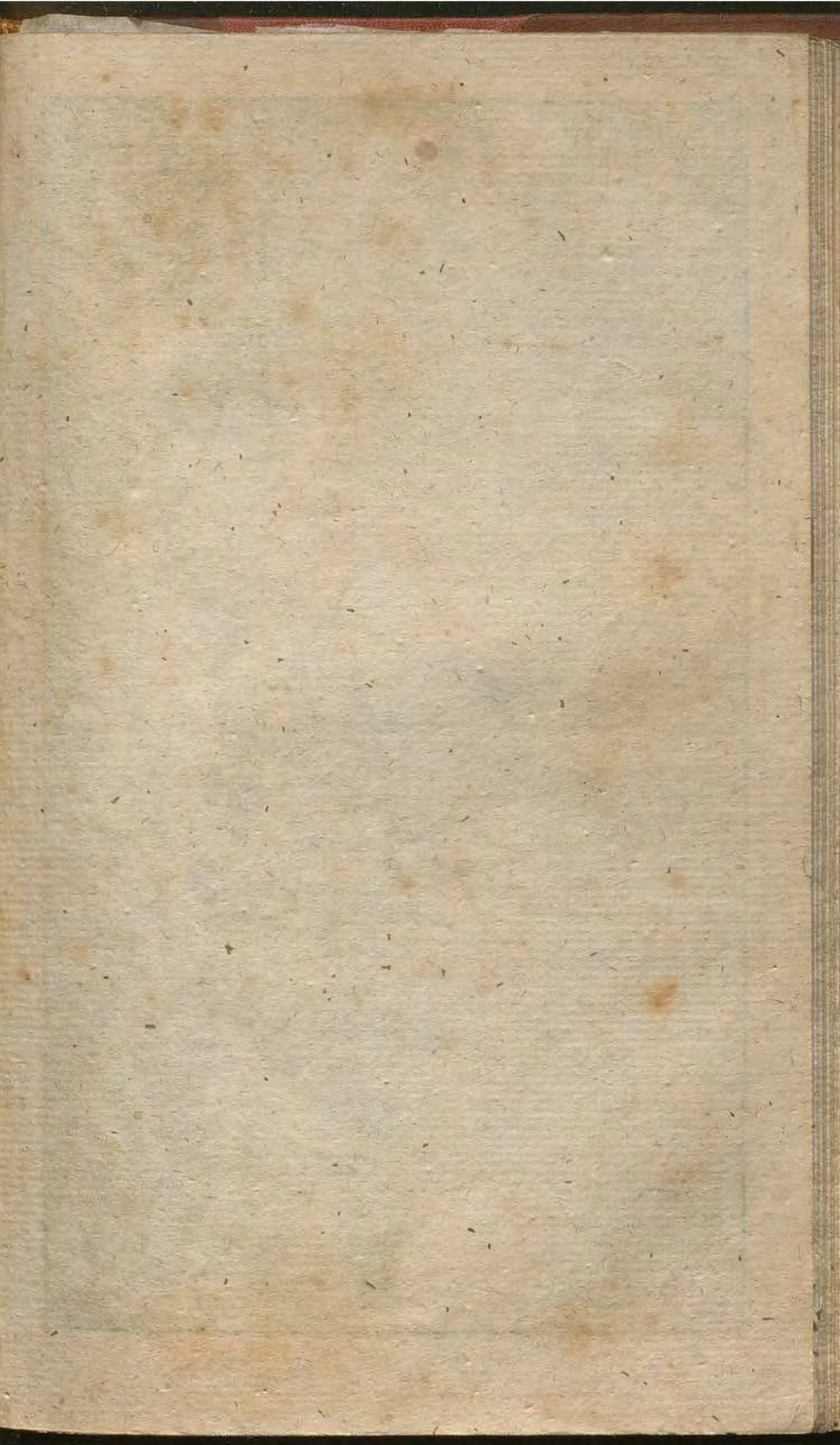
kept Asia in a ferment: and the two republics maintained their naval consequence, till the Venetians at length prevailed, and secured to themselves the sovereignty of the inner seas. — Before a way to India was opened by the Cape of Good Hope, the great market for spices, drugs, and other valuable commodities of the east, was fixed at the city of Malacca, from whence they were fetched for the use of the western nations as far as the Red Sea. — But the discoveries of the Portuguese turned the channel of this trade, and in effect proved fatal to the wealth and power of the Venetians, which had been the wonder, nay, the envy of Europe for a long succession of years.

This change may properly be attributed to the directive power of the magnetic needle, first discovered about the year 1300. Who was the author of this discovery is uncertain; but it is generally ascribed to an inhabitant of Amalfi, in the kingdom of Naples, of whose name there is no authentic account. — Indeed, whoever the person was, his claim could be only as a mere discoverer of this property, which was not applied by the Portuguese for the purposes of navigation till about the year 1405.

When Prince Henry, third son of King John of Portugal, returned from the siege of Ceuta, he conceived such a violent desire of making new discoveries, that he spent near ten years in causing attempts of that nature to be made, in the prosecution of which he appeared to have at heart a scheme for restoring the trade with Asia, by finding out a passage round Africa to the West Indies, which must necessarily divert it from its

old channel, and prove most beneficial to those who first accomplished an undertaking so arduous and enterprising.

This prince, it is said, was the more encouraged to proceed in his scheme by the information of certain Moors, concerning the situation of the southern coasts of Africa, of which no European adventurers had any knowledge, none of them having ventured beyond Cape Nao, so called from being considered as the utmost boundary of their navigation toward that quarter of the globe. But no obstacles appearing sufficient in the eyes of Prince Henry, who every day grew more bent upon his design, in the year 1417, he caused two vessels to be fitted out for the purpose of discovery; they ran sixty leagues beyond Cape Nao to Cape Bojador, where being discouraged by a swelling sea breaking on the sands, they returned, and the prince sent out, in 1418, Juan Gonzales Zarco; and Tristan Vaz Teixeira, gentlemen of his household, in a small ship, with orders to coast along the coast of Barbary, till they had passed the Cape, and discover all the land which the Arabs said reached beyond the equinoctial line: but their vessel was driven by a storm out of her course, till, accidentally, they made an island which they called Puerto Santo, or Holy Island, on account of their deliverance. The prince, on their return, pleased with their discovery, sent them thither again, together with Bartholomew Perestrello, with cattle; as also corn and plants; but the intention was defeated by the fecundity of a couple of rabbits, these animals multiplying so exceedingly, as to destroy what was planted;



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The Distressed Situation of the SHIP, between the Fire of the Spanish Fort at UMATA, and the SUCCESS, between the HARBOUR and the ROYAL

planted; and thus a circumstance so trifling rendered the project of a settlement abortive. The year following, the same gentlemen made another voyage, in which they discovered the island of Madeira, where they found a chapel, tomb, and stone, erected by an Englishman, who, flying from his country with a woman whom he loved, was driven thither by stress of weather; the ship taking advantage of a favouring gale, having left the young couple behind them. The land being covered with woods, the Portuguese set fire to them, to clear it: these are said to have burnt for seven years, and when the island was at last settled, wood became one of the scarcest articles in the country. — A course of time being necessary for furnishing the new settlements, it was not till fifteen years afterwards that Gilianez passed the dreadful Cape Bojador, beyond which he sailed thirty leagues, and the year following, proceeded twelve leagues farther, returning with a quantity of sea-wolf skins; but, on their landing, the inhabitants fled for fear of them, nor would they return, though every persuasive means to retain them were made use of.

The prince still continuing to pursue his plan, Antony Gonzales, in the year 1442, by his order, coasted as far as Cape Blanco. Nunho Tristan, passing still further, discovered one of the islands of Arguim, called Adeget, and another, to which the name De Los Garzas was given.

In 1447, Dinis Fernandez discovered Cabo Verde, or Cape Verde; but venturing up the river which the Spaniards call Rio Grande, he was cut off by the natives, as were also the chief part of his company.

After this, Alvaro Fernandez sailed forty leagues farther; and thus Prince Henry had the satisfaction of seeing his plans successively executed, till death removed him in the midst of them; after which they were pursued by his nephew Alfonso V. in whose reign Gonzalo de Vello discovered the islands called Azores, which are eight in number, viz. St. Michael, St. Mary, Jesus, or Teresa, Graciosa, Pico, Fayal, Flores, and Corvo, lying nearly in the same latitude with Lisbon.

The succeeding year the islands of Cape Verde were discovered by Antonio Nole, a Genoese, in the service of Portugal. These islands lie about one hundred leagues to the Westward of Cape Verde, and are called Brava, Bonavista, du Sal, St. Nicholas, St. Lucia, St. Vincent, and St. Antonio: the isles Maya and S. Philip and S. Jacob, were also discovered by him.

In 1471, John de Santern and Peter de Escobar, went to the place called Mina, on account of the gold trade there, and proceeded from thence to Cape St. Catharine. The same year Ferdinand Po found out an island which he called Hermosa, a name which it has since lost, but retains that of him who discovered it. The islands of St. Thomas, Anna Bom, and Principe, were discovered about this time.

At this period the King of Portugal took upon him the title of Lord of Guinea. — It had heretofore been the custom to set up wooden crosses in the new discovered countries, but this prince ordered that stone ones should be in future erected by the captains, whereon his own name and theirs were to be inscribed. The first of these captains was called Cam;

passing Cape Catharine, he came to the river Congo; failing up which, he found by the signs of the blacks, that they had a king, who lived at a distance from the sea-coast. This being all the information he could get, he returned home; where being arrived, and bringing some of the natives with him, King John gave them many presents, and ordered Cam to proceed again to Congo, and endeavour the conversion of the people, who were all heathens.— In this he happily succeeded, and returning to Congo, being admitted to the king of that place, persuaded him to send some of the sons of his chief men to Portugal, to be baptized and to be instructed in all the principles of christianity.

After the expiration of a few years, the King of Benin, a territory situate between fort St. George and Congo, pretending a desire to be converted to christianity, sent an embassy to the king of Portugal, desiring to have priests for their instruction. The ambassador, among other things, informed King John, that two hundred and fifty leagues beyond their country reigned a powerful prince, called Ogaue, by whom the kings of Benin were confirmed in their royalty, their messengers receiving from him a staff, with a head and a cross, like that of Malta; but added, that the persons receiving these never were allowed to behold his face, his foot only being put out from behind a curtain, in token of his acquiescence with their wishes.

The surprising relations of a certain prince called Prester John, reigning in those parts, being at that time current in Europe, King John concluded this must be that

very extraordinary personage.— To satisfy himself in this particular, as well as to get some account of India, Peter de Covillam and Alonso de Payva were sent over land for intelligence. By way of Grand Cairo they went to Tor, on the coast of Arabia, where they separated, Covillam setting out for India, and Payva for Ethiopia, both agreeing to meet again at Grand Cairo by a certain appointed time: the former proceeded to Cananore, Calicut, and Goa, passing from thence to Sofola, and afterwards to Aden, at the mouth of the Red Sea, on the side of Arabia; when, coming at last to Grand Cairo, he found the companion of his travels was no more. From hence he sent the king an account of his proceedings by a Jew come from Portugal, and afterwards went into Ethiopia, where he was kindly entertained, but was never permitted to return from thence.

About the same time that these set out by land, Bartholomew Diaz put to sea with three ships: he discovered the mountains called Serra Prada, and passed on in sight of a bay, which he named De los Vaqueros, on account of the great herds of cattle that he saw there; he touched afterward at the island of Santa Cruz, entered the mouth of the river Del Infante, and at last came to the famous cape which is the utmost southern boundary of Africa. To this cape he gave the name of Tormentoso, on account of the storms which he there met with. But King John changed the appellation to that of Cabo de Buena Esperanza, on account of the hopes he entertained of discovering a passage round it by sea to the East Indies. However this (which was of more consequence

sequence than finding out Prester John's dominions,) did not take place in the reign of King John, who, having fixed the Portuguese dominion in Guinea, died, and King Emanuel succeeded him.

As soon as this monarch began his reign, Vasquez de Gama, being intrusted with the command of three ships and a tender, passed the Cape, and made his way to India by sea: previous to which Christopher Columbus had sailed to the West Indies; the new world was thus discovered, and the conquest of Mexico and Peru was the attendant consequence.

In 1494, Sebastian Cabot discovered North America, in the reign of Henry VII. of England. In the year 1500, Brazil was first found out by Peter Alvarez Cabral, who was sent on an expedition with 1200 men, to gain footing in India, but was driven by a storm on that part of the coast of South America; and in 1519, Ferdinand Magellan found a passage from the Western to the Southern ocean, by those straits to which the name of their unfortunate discoverer was afterwards given.

These happy beginnings caused happier continuations, each succeeding period furnished new discoveries of the English, the Dutch, French, and in effect all the nations of Europe, whose situation would permit them, eagerly followed the example of the successful Portuguese and Spaniards, who, equally jealous of them, and of each other, took all manner of pains to preserve their dominion where they had gained footing, and as much as possible to thwart all those who adopted the plan of making new discoveries. But notwithstanding this, we find the

Dutch, at various periods, busy in settling themselves in India, and securing the possession of the spice trade. In 1600, an English East-India company was established by Queen Elizabeth; settlements in Asia were also obtained. A great part of the continent of North America, first discovered by Sebastian Cabot, was also peopled after that time by British subjects: nor were the French idle, they also got footing in Asia, the West Indies, and North America, in spite of all the obstacles that at first appeared to hinder them; while the Portuguese and Spaniards, especially the latter, often found themselves much embarrassed to preserve their new possessions. A passage being opened from the Atlantic to the South Sea, by Cape Horn and the Straits of Magellan, and the possibility of circumnavigating the globe, which before existed in idea, confirmed by experience, the settlements on the coasts of the Pacific Ocean were exposed to assaults from enemies whom whom the Spaniards little expected to visit them in those seas, the riches of the new world being alone sufficient to excite them to such an undertaking. Drake, Cavendish, and others, following the track, afterwards sailed round the world, and to their discoveries much has been added by modern navigators.

We are told that Edgar, king of this island, had four thousand ships, by the terror of which he subdued Norway, Denmark, all the islands of the ocean, and the greatest part of Ireland. These instances of his power are specified in a record cited by that great lawyer Sir Edward Coke, in the preface to his fourth report. This monarch made a naval pro-

gress yearly round this island, and once caused eight conquered kings to row his barge on the river Dee. But it seems that some of his successors have had such ministers as either neglected to keep our fleets in repair, or were afraid to make use of them; for, at several periods of time since the days of King Edgar, we find that this kingdom has been miserably insulted on the seas, and even successfully invaded by other nations.

The British Neptune slept, or slumbered, most part of the time from the reign of King Edgar to that of Queen Elizabeth. In her days he sprung up with vigour, being roused by Spain, which was then the greatest maritime power on earth. From Queen Elizabeth to our time, our naval strength has gradually increased, inasmuch that at this day the Spanish fleets, opposed to ours, would make a very contemptible figure on the ocean: we now have it in our power to lord it over the watery world. It may be worth our enquiry to know how these fluctuations have happened in the dominion of the seas.

The talks and course of life of seafaring men are not to be learned in an instant; their employment is a laborious and dextrous employment, to be acquired only by application and industry. Money will buy all naval stores except mariners; but, unless a succession of them be preserved, no wealth will be able to purchase them. The surest, cheapest, and only profitable method of supporting such a succession, is to have perpetual occasion for a multitude of seamen in a course of foreign traffic. It is indeed probable that Edgar's amazing power at sea was, for the

most part, owing to his own great genius, attended with indefatigable endeavours in training up, and year by year augmenting the number of his mariners; for, in those days, England had no great share in foreign commerce, people generally contenting themselves with the produce and manufactures of their native country. This great prince must, therefore, have grievously oppressed his vassals to enable him to keep up so great an armament: and it is no wonder that it dwindled in succeeding reigns, because it had not that solid aliment, trade, to nourish it.

The success of the Spaniards in America caused their shipping to increase beyond all their neighbours. In this flourishing condition they continued for a great part of the long reigns of their Philip II. and of our Elizabeth. She had not a fleet able to give their armada battle: her ships, indeed, were light and nimble; the Spanish, though larger and more numerous, were unweildy; therefore the lighter vessels, being in no danger of a chace, fought or stood off as they saw occasion. But this advantage would not have been sufficient, if Providence had not interposed a tempest for the protection of England.

The nations recorded in history to have been at any time possessed of the empire of the sea, have always esteemed a neighbouring prince's offering to set up a naval power, by building more ships of war than were requisite to secure the trade of his subjects, to be as just a foundation of political jealousy as the raising of new forts upon his frontiers, or the levying of a formidable army in a time of profound peace; and therefore they have always taken measures
either

to prevent such attempts, or to destroy them in their birth. This was the practice of the Romans; and this has been the policy of the kings of England.

The Romans, as soon as they had acquired the sovereignty of the sea, which they thought not dearly purchased with the loss of above seven hundred ships, immediately entered upon measures to preserve so valuable an acquisition. They grew watchful over their new dominions, and were soon alarmed by the smallest umbrages from any power that did but seem to interfere with them in naval affairs. It was from these political considerations that they would not admit the Carthaginians to fit out any fleets, and that they forbade Antiochus, at that time the greatest king in the east, to build more than twelve ships of war.

It is not an empty title which the kings of England have always taken to themselves, of being supreme lords and governors of the ocean surrounding the British shore; but a right which they have constantly maintained, at the expence of numerous fleets. In that famous accord made between our great King Edward I. and Philip the Fair of France, it appears that the French King was by him called to an account for piracies committed by his subjects within the British seas; and, by that memorable ordinance made at Hastings, in the reign of King John of England, the honour of the flag, ever claimed by the English, is decreed to take place universally, not barely as a civility, but as a right to be paid (*cum debita reverentia*) with due deference.

A detail of examples to the present purpose is unnecessary,

since nothing is more known in our English history than that our kings have ever been jealous of their neighbours making use of any pretext to increase their naval strength; and have accordingly judged it of the greatest importance to frustrate such designs, though at the risque of a war; for what less did Queen Elizabeth risque, when she sent to the French King to prohibit his building any more ships of war than what he then had, without her leave first obtained? This was an instance of wisdom and resolution worthy a princess who claimed the sovereignty of the sea.

Navigation, which is the soul of commerce, procures always a vast profit to the state. The building of ships, their victualling and stores, though considerable articles of expence, being laid out within the state, furnish several inhabitants with the means of living and enriching themselves. It employs all the inhabitants of the sea-coasts who can hardly be useful in any other way; and, for want of this navigation, are in a manner necessitated to serve in foreign countries. This has happened, whenever we gave over our sea-trade. By losing them we sustain a double loss; our coasts become desolate, our navigation languishes, and that of our foreign neighbours increases at our expence. Prohibitions against sailors going out of the kingdom are useless; they are born only for sailing, the sea is their element; if we do not use them that way ourselves, no prohibitions will prevent their going elsewhere to seek for employment.

NAVY—implies, in general, any fleet, or assembly of ships. It

is,

is, however, more particularly understood of the fleet of vessels of war which belong to a kingdom or state.

The royal navy of Great Britain is conducted under the direction of the Lords of the Admiralty by the following principal officers, who are commissioners, and compose the board for managing the business thereof. 1. Comptroller of the navy, who attends and controls the payment of all wages, as to know the rates of stores, &c. 2. Supervisor of the navy, who is to know the state of all stores, to supply what is wanting, to estimate repairs, charge boatswains, &c. with the stores they receive, &c. There have been generally two joint surveyors. 3. Clerk of the acts, whose business is to record all orders, contracts, bills, warrants, &c. 4. Comptroller of the treasurer's accounts. 5. Comptroller of the victualling accounts. 6. Comptroller of the store-keeper's accounts. 7. One extra-commissioner. The annual appointment of each commissioner is 500*l*. In time of war, or great naval exertion, there are other extra-commissioners, and commissioners are then appointed to reside at some of the principal yards abroad. The treasurer of the navy has an appointment of 2000 per annum. His business is to receive money out of the exchequer, and to pay all the charges of the navy by warrant from the principal officers. Each of these commissioners and officers has a number of subordinate clerks with various salaries.

NAVY—is also used to denote the collective body of officers employed in his majesty's sea service.

NAVY-BEARD — the commissioners of the navy collectively considered.

NAVY-OFFICE, the office where the accounts of the navy are kept.

NAUTICAL—relating to sailors or sailing.

NEAP-TIDES—are those which happen when the moon is nearly at the second and fourth quarters, the neap-tides are low tides, in respect to their opposites, the spring tides.

NEAPED—the situation of a ship which is left aground on the height of a spring tide, so that she cannot be floated off till the return of the next spring.

NEEDLE. See the article DIPPING-NEEDLE.

BOLT-ROPE NEEDLE—a large needle with a triangular point, used to sew the bolt-rope upon the sails.

SAIL NEEDLES — are needles used for sewing the seams of sails.

NESS—implies a point, cape, or headland.

NETTING—a sort of fence, formed of an assemblage of ropes fastened across each other, so as to leave uniform intervals between. These are usually stretched along the upper part of a ship's quarter, to contain some of the seamen's hammocks, and secured in this position by rails and stanchions. Nettings are also used for containing the fore and main top-mast stay-sails when stowed.

BOARDING NETTING—a netting extending fore and aft from the gunwale to a proper height up the rigging. Its use is, to prevent an enemy jumping aboard on to the decks in an engagement, &c.

OVERHEAD NETTING — is stretched from the main-mast aft

to the mizen shrouds, in an horizontal position, about twelve feet above the quarter-deck. Its use is to secure the officers from accidents of blocks, &c. falling from the mast-heads.

To NIP—to tie, or secure with a seizing.

NIPPERS—certain pieces of cordage used to fasten the cable to the messenger, or voyal, in a ship of war, when the former is drawn into the ship by mechanical powers applied to the latter. They are usually six or eight feet in length, according to the size of the cable, and five or six of them are commonly fastened about the cable and voyal at once; those which are farthest aft are always taken off as the cable approaches the main-hatchway, and others are at the same time fastened on in the fore part of the ship to supply their places, the boys of the ship receiving the ends to walk aft with them, and carrying them forward again when cast off from the cable.

NIPPER-MEN, persons employed to bind the nippers about the cables and voyal, and to whom the boys return the nippers when they are taken off.

SELVAGEE NIPPERS—are used, when from a very great strain the common nippers are not found sufficiently secure, selvagees are then put on and held fast, by means of tree-nails. See the articles SELVAGEE and TREE-NAILS.

NETTLES. See the article KNITTLES.

NOCTURNAL, or NOCTURNALBIUM—is an instrument chiefly used at sea, to take the altitude or depression of some of the stars about the pole, in order to find the latitude and the hour of the night.

There are nocturnals of various contrivances, some of them projections of the sphere; such as the hemispheres or planispheres, on the plane of the equinoctial; those ordinarily used by seamen are two: the one adapted to the polar star, and the first of the guards of the Little Bear: the other to the pole star, and the pointers of the Great Bear.

The instrument consists of two circular plates applied to each other. The greater, which has a handle to hold the instrument, is about two and a half inches diameter, and is divided into twelve parts, agreeing to the twelve months, and each month is subdivided into every fifth day; and so, as that the middle of the handle corresponds to that day of the year, wherein the star here regarded has the same right ascension with the sun.

If the instrument be fitted for two stars, the handle is made moveable. The upper left circle is divided into twenty-four equal parts for the twenty-four hours of the day, and each hour subdivided into quarters. These twenty-four hours are noted by twenty-four teeth, to be told in the night. Those at the hour twelve are distinguished by their length. In the centre of the two circular plates is adjusted a long index moveable upon the upper plate; and the three pieces, viz. the two circles and index, are joined by a rivet, which is pierced through the centre with a hole two inches in diameter, for the star to be observed through.

In using the nocturnal, you must turn the upper plate till the longest tooth (12) be against the day of the month on the under plate: then bringing the instru-

ment

ment near the eye, suspend it by the handle, with the plane nearly parallel to the equinoctial, and viewing the pole star through the hole of the centre, turn the index about, till, by the edge coming from the centre, you see the bright star or guard of the Little Bear (if the instrument be fitted to that star), then that tooth of the upper circle under the edge of the index, is at the hour of the night on the edge of the hour circle, which may be known without a light by counting the teeth from the longest, which is for the hour 12.

NO-MAN'S-LAND—a space in midships between the after-part of the belfry, and the fore-part of a boat when she is stowed upon the booms, as in a deep waisted vessel. These booms are laid upon the fore-castle nearly to the quarter-deck, where their after-ends are usually sustained by a frame called the gallows, which consists of two strong posts about six feet high, with a cross piece reaching from one to the other athwart ships, and serving to support the ends of those booms, masts, and yards, which lie in reserve to supply the place of others carried away &c. The above-named space is used to contain any blocks, ropes, tackles, &c. which may be necessary on the fore-castle, and probably derives the name of No Man's Land from its situation, as being neither on the starboard nor larboard side of the ship, nor on the waist nor fore-castle, but being situated in the middle, partakes equally of all those places.

NO-NEAR—the order to the helmsman, when the ship is close-hauled, to put the tiller a little to the windward side, in order to keep the sails full.

NORMAN—a name given to a short wooden bar, thrust into one of the holes of the windlafs in a merchantman, whereon to fasten the cable. It is only used when there is very little strain upon the cable.

NORTH - CASTING, or NORTH-WESTING. See the article **VARIATION.**

NORTH-EAST PASSAGE,—This navigation has been divided into three parts, and the advocates for it have endeavoured to shew that these three parts have been passed at different times, concluding from thence, that the whole taken collectively is practicable. These three parts are, 1. From Archangel to the river Lena; 2. From the Lena round Tschukotkoi Nofs (or the north-eastern promontory of Asia) to Kamtschatka; and 3. From Kamtschatka to Japan. With respect to the first part, no one has ever asserted that it has been performed in one voyage. From an account of the several voyages that have been made in these seas, it appears that there is a cape between the rivers Chalanja and Pisida, that has never yet been doubled. As to the second division, it has been affirmed that a passage has been effected by several vessels which have at different times sailed round the northern extremity of Asia. But from the Russian accounts, it is inferred that it has been performed but once, viz. by one Deshneff, who, in 1648, is said to have doubled this formidable cape. Of the third or remaining part of this passage, no doubt can be entertained. The connection between the seas of Kamtschatka and Japan has been established by many voyages.

NORTH-WEST PASSAGE,
by

by Hudson's Bay into the Pacific Ocean, has been more than once attempted of late years, but hitherto without success. Some greatly doubt of the practicability of such an enterprize, and think the observations made by the Russians give us small hopes; but as they have not yet published the particulars of their discoveries, little can be said about them. It appears (from Phil. Trans. No. 482) that the Russians have passed between the land of Nova Zembla and the coast of Asia; and as the Dutch did formerly discover the northern coasts of Nova Zembla, we may be now well assured that that country is really an island.

NORTHING—the difference of latitude which a ship makes in sailing towards the north pole.

NUTS OF AN ANCHOR—See the article **ANCHOR**.

O.

OAKUM—the substance into which old ropes are reduced when they are untwisted, loosened, and drawn asunder. It is principally used in caulking the seams, tree nails, and bends of a ship, for stopping or preventing leaks.

WHITE-OAKUM—is that which is formed from untarred ropes.

OAKUM-BOY—a boy who attends a caulker to bring him oakum, pitch, &c.

OAR—a long piece of timber, flat at one end, and round or square at the other, used to make a vessel advance upon the water.

The flat part which is dipped into the water, is called the blade, and that which is within the board is termed the loom, whose extremity being small enough to be grasped by the rowers, is called the handle.

To push the boat or vessel forwards, by means of this instrument, the rowers turn their backs forwards, and dipping the blade of the oar in the water, pull the handle forward so that the blade at the same time may move aft in the water. But since the blade cannot be so moved without striking the water, this impulsion is the same as if the water were to strike the blade from the stern towards the head: the vessel is therefore necessarily moved according to the direction. Hence it follows that she will advance with the greater rapidity, by as much as the oar strikes the water more forcibly. Consequently an oar acts upon the side of a boat or vessel like a lever of the second class, whose fulcrum is the station upon which the oar rests on the boat's gunwale. In large vessels this station is usually called the row-port, but in lighters and boats it is always termed the row-lock. Oars for ships are generally cut out of fir timber; those for barges are made out of New England, or Dantzick rafters, and those for boats, either out of English ash, or fir rafters from Norway.

TO BOAT THE OARS—is to cease rowing, and lay the oars in the boat.

GET YOUR OARS TO PASS—the order to prepare them for rowing.

TO SHIP THE OARS—is to place them in the row-locks, as

TO UNSHIP THEM—is to take them out of the row-locks, and is frequently practised in passing very near a vessel, to prevent breaking the oars, &c.

DOUBLE-BANKED OARS—See the article **BANK**.

OBLIQUE SAILING—See the article **SAILING**.

OCEAN—that vast collection of salt and navigable waters, in which the two continents, the first including Europe, Asia, and Africa, and the last America, are inclosed like islands. The ocean is distinguished into three grand divisions, viz. the Atlantic Ocean, which divides Europe and Africa from America, which is generally about three thousand miles wide. 2. The Pacific Ocean, or South Sea, which divides America from Asia, and is generally about ten thousand miles over. And 3. The Indian Ocean, which separates the East Indies from Africa, which is three thousand miles over. The other Seas which are called Oceans, are only parts or branches of these, and usually receive their names from the countries they border upon.

OBSERVATION—the art of measuring the altitude of the sun, or a star, in order to determine the latitude, or the sun's azimuth, &c.

OFF—is applied to the movement of a ship, when she sails out from the shore towards the distant sea: it also implies abreast of, or near; as, We were off Cape Finisterre.

OFF AND ON—when a ship heaving to windward approaches the shore by one board, and by the other sails out to leeward, she is said to stand off and on.

NOTHING OFF—the order to the helmsman not to suffer the ship to bear away, or fall off from the wind.

OFFICER OF THE WATCH—the lieutenant or mate who commands the watch. See the article **WATCH**.

OFFING—implies out at sea, or at a competent distance from the shore. If a ship from shore

be seen sailing out to sea-ward, they say she stands for the offing. And if a ship having the shore near her, have another a good way without her, or towards the sea, they say, that ship is in the offing.

OFFWARD—the situation of a ship which lies aground, and leans from the shore: thus they say, "The ship heels offward" when being aground she heels towards the water side; and "The ship lies with her stern to the offward, and the head to the shoreward" when her stern is towards the sea and head to the shore.

OKER, or OCHRE—red chalk used by shipwrights in marking timber for hewing, sawing, &c.

OLERON—a name given to certain laws of the navy or marine, which were framed and drawn up by Richard I. at the island of Oleron, near the coast of Poitou, the inhabitants of which have been deemed able mariners for these seven hundred years past. These sea-laws, which are reckoned the most excellent of the kind, are recorded in the Black Book of the Admiralty.

OPEN—the situation of a place which is exposed to the wind and sea.

OPEN—is also expressed of any distant object, the sight or passage to which is not intercepted by any thing lying or coming between. Thus to be open to any place is to be opposite to it, as the entry of a port, road, or haven.

OPENING—a passage or freight, between two adjacent coasts, &c.

ORDER OF SAILING—See the article **SAILING**.

ORDINARY—the establishment of the persons employed by the government to take charge of the ships of war which are laid up in

in the several harbours adjacent to the royal dock-yards. These are principally composed of the warrant officers of each ship, as the gunner, boatswain, carpenter, deputy purser, and cook, and their servants. There is besides a crew of labourers, who pass from ship to ship, occasionally to pump, moor, remove, or clean them.

ORDINARY SEAMAN — implies one who can make himself useful on board, but is not an expert or skilful sailer; the latter being termed an able seaman. Able seamen have consequently more wages than the ordinary.

SHIPS IN ORDINARY — are those which being laid up, are under the direction of the master attendant.

ORLOP — a platform of planks laid over the beams in the hold of a ship of war, whereon the cables are usually coiled. It also contains the sail-rooms, the purser's, surgeon's, boatswain's, and carpenter's cabins, and the several officers' store-rooms. In three-deck ships the second and lowest decks are sometimes called Orlops.

OVER-BLOW — is when the wind blows so very hard that the ship can bear no top-sails.

OVERBOARD — the state of being thrown out, or the act of falling from a ship or boat into the water on which she swims; as, There is a man overboard. — She threw her guns overboard, &c.

OVERCAST — in speaking of the weather, implies cloudy, dull.

OVERCAST STAFF — a scale, or measure, employed by shipwrights, to determine the difference between the curves of those timbers, which are placed near the greatest breadth, and those which are situ-

ated near the extremities of the keel, where the floor rises and grows narrower.

OVERGROWN — is said of the sea when the surges and billows are unusually high; but when the waves are no more than commonly high, it is called a rough sea.

OVER-HALE — See the article **HALF**.

OVERHAULING — the act of opening and extending the several parts of a tackle, or other assemblage of ropes, communicating with blocks or dead-eyes, so that they may be again placed in a state of action.

OVERHAULING — also implies an examination of a ship, person, or thing.

One ship is said to **OVERHAUL** another, when she gains sail upon her in chace.

OVER-MASTED — the state of a ship whose masts are too high, or too heavy, for the weight of her keel to counterbalance.

OVER-RAKE — when a ship rides at anchor in a head-sea, the waves of which frequently break in upon her, they are said to **over-rake** her.

OVERSETTING — the act of turning any thing upside down; also the movement of a ship when her keel turns upwards: which misfortune happens either by bearing too much sail, or by grounding her so that she falls on one side.

OUTFIT — implies the expences of equipping a ship out for sea.

OUT OF TRIM — the state of a ship when she is not properly balanced for the purposes of navigation, which may be occasioned by a defect in the rigging, or in the stowage of the hold.

OUT-LICKER—a small piece of timber made fast to the top of the poop, and standing out right aftern.

OUT-RIGGER—a strong beam of timber, of which there are several, fixed on the side of a ship, and projecting from it, in order to secure the masts in the act of careening, by counteracting the strain it suffers from the effort of the careening tackles, which, being applied to the mast-head draw it downwards, so as to act upon the vessel with the power of a lever, whose fulcrum is in her centre of gravity.

OUT-RIGGER—is also a small boom, occasionally used in the tops to thrust out the breast back-stays to windward, in order to increase the angle of tension, and thereby give an additional security to the top-mast. It is usually furnished with a tackle at its inner end, communicating with one of the top-mast strouds, and has a notch on the outer end to contain the back-stay, and keep it steady therein. As soon as the back-stay is drawn tight by means of its tackles in the chains, the out-rigger is applied aloft, which it forces out to windward, beyond the circle of the top, so as to increase the angle which the mast makes with the back-stay, and accordingly enables the latter the better to support the former. This machine is sometimes applied without any tackle; it is then thrust out to its usual distance beyond the top-rim wherein it is securely fastened; after which the back-stay is placed in the notch and extended below.

TO OUT-SAIL A SHIP — to sail faster than another.

OUTWARD—implies out of the port, or kingdom; as “The

outward-bound ships, as by my last letter.”

OWNER—the proprietor of a ship by whom she is freighted to the merchant for a sea voyage.

OX-EYE—a small cloud or meteor, seen at the Cape of Good Hope, which presages a dreadful storm. It appears at first in the form or size of an ox's eye, but descends with such celerity that it seems suddenly to overspread the whole hemisphere, and at the same time forces the air with such violence that ships are sometimes scattered several ways, some directly contrary, and many sunk downright.

P.

PACKET, or **PACKET-BOAT**, a vessel appointed by the government to carry the mail of letters, packets, and expresses from one kingdom to another by sea, in the most expeditious manner.

PADDLE—a sort of oar used by the natives of Africa and America, to navigate their canoes. It is much shorter and broader in the blade than an oar, and is equally employed in rowing and steering. See the article **CANOE**.

PAINTER—a rope employed to fasten a boat along-side of a ship, wharf, or key, &c.

SHANK-PAINTER—See the article **SHANK**.

PALLET—a room within the hold, close parted from it, in which, by laying some pigs of lead, &c. a ship may be sufficiently ballasted without losing room in the hold, which therefore will serve for stowing the more goods.

PALM—an instrument used instead of a thimble in sewing of canvas, sails, &c. It is composed of a round piece of iron, an inch

inch in diameter, whose surface is full of cavities, to receive the head of the needle, and is fixed upon a piece of canvas or leather, which incircles the hand, keeping the iron in the palm of the hand, whence it has its name.

PANCH—a sort of thick and strong mat, formed by interweaving twists of rope-yarn as close as possible; it is chiefly used to fasten on the outside of the yards or rigging, to prevent their surfaces from being rubbed by the friction of some other contiguous object, and particularly when the vessel is rocked by a tempestuous sea.

PARALLAX—is the difference in altitude of a celestial object, as seen from the surface and from the centre of the earth at the same instant.

PARALLEL—is sometimes used instead of latitude, which is then understood, as, "Our orders were to cruise in the parallel of Madeira."

PARBUCKLE—is a contrivance to haul up or lower down a cask, &c. where there is no crane or tackle; it is formed by passing the middle of a rope round a post or ring, or under a boat's thwart; the two parts of the rope are then passed under the two quarters of the cask, bringing the two ends back again over it, which being both hauled or slackened together, either raise or lower the barrel, &c. as may be required.

PARCELING—long narrow slips of canvas daubed with tar, and frequently bound about a rope in the manner of bandages, previous to its being served. It is laid in spiral twines as smoothly upon the surface as possible that the rope may not become uneven and full of ridges, Parcelling is

also used to raise a mouse on the stays, &c. and is firmly fastened by marline from one end to the other.

PARCELING A SEAM—is the laying a slip of canvas upon and daubing it over with melted pitch.

PARLIAMENT-HEEL—the causing a ship to incline a little on one side so as to clean the upper part of her bottom on the other, and cover it with fresh composition, which latter operation is called boot-topping. See the article **BOOT-TOPPING**.

PARREL—a machine used to fasten the sail-yards of a ship to the mast, in such manner as that they may be easily hoisted and lowered thereon; there are four different kinds of parrels, viz.

PARREL-ROPE—is formed of a single rope well served and furnished with an eye at each end; this being passed round the yard is seized fast on, the two ends are passed round the after part of the mast, and one of them being brought under, and the other over the yard, the two eyes are lashed together with a piece of spun-yarn; this is seldom used but for the top-gallant and smaller yards.

PARREL WITH RIBS AND TRUCKS—is formed by passing the two parts of the parrel-rope through the two holes in the ribs, observing that between every two ribs is strung a truck on each part of the rope. See the articles **RIB** and **TRUCK**. The ends of the parrel-rope are made fast with seizings; these are chiefly used on the top-sail yards.

PARREL WITH TRUCKS—is composed of a single rope passing through a number of trucks sufficient to embrace the mast; these are principally used for the cheeks of a gaff.

TRUSS.

TRUSS-PARREL—is formed by fixing a rope upon the middle of the yard, which, passing at the back of the mast, is reeved thro' an iron thimble, spliced into another rope, (also fastened upon the yard) and communicates with a tackle reaching to the deck, whereby it may be occasionally slackened or straitened; ships of war generally have two of these, one leading from each side, and they are peculiar to the lower yards.

PARSLING—See the article **PARCELING**.

PARTING—the state of being driven from the anchors, by breaking the cables, through the violence of the wind, waves, &c.

PARTNERS—pieces of plank nailed round the several scuttles or holes in a ship's decks, wherein are contained the masts and capstans; they are used to strengthen the deck where it is weakened by those breaches, but particularly to support it when the mast leans against it.

PARTNERS—is also a name given to the scuttles themselves, where the masts and capstans are fixed.

To PASS—to give from one to another: also to take certain turns of a rope round a yard, &c. as, "pass the line along," "pass the gasket," "pass a heel lashing," "pass a seizing," &c.

PASS, or **PASSPORT**—a permission granted by any state to navigate in some particular sea without hindrance or molestation; it contains the name of the vessel, and that of her master, together with her tonnage, and the number of her crew, certifying that she belongs to the subjects of a particular state, and requiring all persons at peace with that state to suf-

fer her to proceed in her voyage without interruption.

PASSAGE—a voyage from one place to another by sea.

OUTWARD-BOUND PASSAGE—See the article **OUTWARD**.

HOMEWARD-BOUND PASSAGE—See the article **HOMEWARD**.

PASSAGE-BOAT—a small vessel, employed in carrying persons or luggage from one port to another.

PASSAREE—a rope to confine the tacks towards the ship when she is going large in light breezes; it is, however, very rarely used.

PASSENGER—a person who pays for his passage in any vessel, and therefore is not expected to assist either in working or fighting her.

PATRON—is a name given to the commanders of small vessels, such as passage-boats, &c. and is particularly applied to the man who steers a ship's long-boat.

PAUL—a short bar of wood or iron fixed close to the capstan or windlass of a ship, to prevent those engines from rolling back, or giving way when they are charged with any great effort.

PAUL-BITS—are pieces of timber fixed perpendicularly before the windlasses, near the middle of it, and serving as supports to the pauls which are pinned into them.

PAUNCH—See the article **PANCH**.

To PAY—as a naval term, implies to daub or anoint the surface of any body in order to preserve it from the injuries of the water, weather, &c.

To PAY A VESSEL'S BOTTOM—to cover it with a composition of tallow, sulphur, rosin, &c. See the article **BREAMING**.

To PAY A MAST OR YARD—to anoint it with tar, turpentine, rosin,

rosin, tallow, or varnish; tallow is particularly useful for those masts upon which the sails are frequently hoisted and lowered, such as top-masts, sloops and schooners lower masts, &c.

TO PAY A SEAM—is to pour melted pitch along it so as to defend the oakum, with which it is caulked, from the wet.

PAYING-OFF—the movement by which a ship's head falls to leeward, particularly when, by neglect of the helmsman, she had inclined to windward of her course, so as to make the head-sails shiver in the wind.

PAYING-OFF—also implies the payment of the ship's officers and crew, and the discharge of the ship from actual service.

PAYING-OUT, or PAYING-AWAY—the act of slackening a cable or other rope, so as to let it run out of the vessel.

PEAK—a name given to the upper corner of those sails which are extended by a gaff, or by a yard, which crosses the mast obliquely, as the mizen-yard of a ship, the main-yard of a bylander, &c. The upper extremity of those yards and gaffs are also denominated the peak.

PEAK-HALIARDS, are the ropes or tackles by which the outer-end of a gaff is hoisted, as opposed to the **THROAT-HALIARDS**, which article see.

TO PEAK—is to raise a gaff or yard more obliquely to the mast.

PEDRERO, PEDERERO, PETERERO, or PATERERO—a small piece of ordnance used on board ships for the discharging of nails, broken iron, or partridge shot, on an enemy attempting to board. They are generally open at the breech, and their chamber

made to take out to be loaded that way, instead of at the muzzle.

PEEK—is a term used in various senses. An anchor is said to be a-peak when the ship being about to weigh, comes over her anchor, so that the cable hangs perpendicularly between the hawse and the anchor. (See the articles **ANCHOR** and **A-PEEK**.) Also the bringing a ship into the above position is called heaving a-peek. She is likewise said to ride a-peek when lying with her main and fore yards hoisted up, one end of her yards is brought down to the shrouds, and the other raised up on end; which is chiefly done when she lies at rest in rivers, lest other ships, falling foul of her, should break her yards.

PEEK is also used for the room in the hold, from the bits forward to the stern. In this place men of war keep their powder, and merchantmen their victuals.

PEN—a place enclosed by hurdles for fishing on the sea-coast.

PENDANT, or PENNANT—a sort of long narrow banner displayed from the mast-head of a ship of war, and usually terminating in two ends or points, called the swallow's-tail. It denotes that a vessel is in actual service.

BROAD-PENDANT—is a kind of flag terminating in one or two points, used to distinguish the chief of a squadron. See the article **COMMODORE**.

PENDANT—is also a short piece of rope, fixed on each side, under the shrouds, upon the heads of the main and fore-masts, from which it depends, as low as the cat-harpings, having an iron thimble spliced into an eye at the lower end, to receive the hooks of the main and fore-tackles. There are, besides, many

many other pendants of this latter kind, which are generally single or double ropes, to whose lower extremity is attached a block or tackle; such are the fish-*pendant*, stay-tackle *pendant*, yard-tackle-*pendant*, reef-tackle-*pendant*, &c. all of which are employed to transmit the efforts of their respective tackles to some distant object.

RUDDER-PENDANT, is a strong rope made fast by means of a chain to a rudder. Its use is to prevent the loss of the rudder, if, by any accident, it should get unshipped or disengaged from the gudgeons.

PENINSULA—is a tract of land joined to the continent by a narrow neck called an *isthmus*.

PERIAGUA—a sort of large canoe, composed of the trunks of two trees, hollowed and united in one fabric; whereas canoes in general are formed of only the body of one tree. The *periagua* is used in South America and the Gulf of Mexico. See the article **CANOE**.

PIER—a strong mound or fence projecting into the sea, to break off the violence of the waves from the entrance of a harbour.

PIG OF BALLAST, a large mass of cast-iron or lead, used for ballast.

PIKE. See the article **HALF-PIKE**.

PILLOW—a block of timber whereon the inner end of the bowsprit is supported.

PILOT—the officer who superintends the navigation, either upon the sea coast or upon the main ocean. It is, however, more particularly applied to the person charged with the ship's course on or near the sea-coast, and into the roads, rivers, bays, havens, &c. within his particular district.

The regulations with regard to

pilots in the royal navy are as follow:

“The commanders of the king's ships, in order to give all reasonable encouragement to so useful a body of men as pilots, and to remove all their objections to his majesty's service, are strictly charged to treat them with good usage and an equal respect with warrant officers.

“The purser of the ship is always to have a set of bedding provided on board for the pilots, and the captain is to order the boatswain to supply them with hammocks, and a convenient place to lie in near their duty, and apart from the common men; which bedding and hammocks are to be returned when the pilots leave the ship.

“A pilot, when conducting one of his majesty's ships in pilot-water, shall have the sole charge and command of the ship, and may give orders for steering; setting, trimming, or furling the sails; tacking the ship, or whatever concerns the navigation; and the captain is to take care that all the officers and crew obey his orders. But the captain is diligently to observe the conduct of the pilot, and if he judges him to behave so ill as to bring the ship into danger, he may remove him from the command and charge of the ship, and take such measures for her preservation as shall be judged necessary; remarking upon the log-book the exact hour and time when the pilot was removed from his office, and the reasons assigned for it.

“Captains of the king's ships employing pilots in foreign parts of his majesty's dominions, shall, after performance of the service, give

give a certificate thereof to the pilot, which being produced to the proper naval officer, he shall cause the same to be immediately paid; but if there be no naval officer there, the captain of his majesty's ship shall pay him, and send him the proper vouchers, with his bill to the navy board, in order to be paid as bills of exchange,

“Captains of his majesty's ships employing foreign pilots to carry the ships they command into or out of foreign ports, shall pay them the rates due by the establishment or custom of the country, before they discharge them; whose receipts being duly vouched and sent with a certificate of the service performed to the navy board, they shall cause them to be paid with the same exactness as they do bills of exchange.”

COASTING PILOT. See the preceding article.

BRANCH PILOT—is one who is duly authorized by the Trinity-Board to pilot ships up particular channels and rivers.

PIN OF A BLOCK—is the axis on which the sheaves revolve, being supported by the shell. See the article **BLOCK**.

BELAYING PINS—pieces of wood or iron fixed in a kind of rail for making fast the small running rigging.

PINK—a name given to a ship with a very narrow stern, whence all vessels, however small, whose sterns are fashioned in this manner are called **PINK-STERNED**. See **STERN**.

PINNACE—a small vessel, navigated with oars and sails, and having generally two masts rigged like those of a schooner.

PINNACE—is also a boat usually rowed with eight oars. See the article **BOAT**.

PINTLES—certain pins or hooks fastened upon the back part of the rudder, with their points downwards in order to enter into and rest upon the googings fixed on the stern-post to support the rudder. See the article **HELM**.

PIQUINO—on the west coast of Africa, in the North Atlantic Ocean, is a term that is used for Little, as “*Affine Grande*,” and “*Affine Piquino*,” Great *Affine* and Little *Affine*.

PIRATE—a sea-robber, or an armed ship that roams the seas without any legal commission, and seizes or plunders every vessel she meets indiscriminately; the colours usually displayed by pirates are said to be a black field with a death's head, a battle-axe and hour-glass. The last instrument is generally supposed to determine the time allowed to prisoners to consider whether they will join the conquerors in their felonious combination, or suffer speedy death, which is often perpetrated in the most cruel manner. See the article **PROA**.

PIRACY—is the seizing or plundering a vessel on the high seas, without having a commission for that purpose.

PISS-DALE—a place set apart on each side of a ship of war, for the people to piss in, to prevent the decks being wetted in other places.

PITCH, is a resinous substance of a yellow colour, more or less inclining to brown, and is produced from a particular kind of fir. It is used in caulking the ship to fill the chinks or intervals between the planks of her sides, decks, or bottom.

TO PITCH THE SEAMS. See the article **PAY**.

PITCHING—is the vertical

vibration which the length of a ship makes about her centre of gravity, or the moment by which she plunges her head and after-part alternately into the hollow of the sea.

This motion may proceed from two causes; the waves, which agitate the vessel, and the wind upon the sails, which makes her stoop at every blast. The first absolutely depends upon the agitation of the sea, and is not susceptible of inquiry; and the second is occasioned by the inclination of the masts, and may be submitted to certain established maxims. When the wind acts upon the sails, the masts yield to its effort with an inclination which increases in proportion to the length of the mast to the augmentation of the wind, and to the comparative weight and distribution of the ship's loading. The repulsion of the water to the effort of gravity, opposes itself to this inclination, or at least retains it by as much as the repulsion exceeds the momentum or absolute effort of the mast, upon which the wind operates. At the end of each blast, when the wind suspends its action, this repulsion lifts the vessel: and these successive inclinations and repulsions produce the movement of pitching, which is very inconvenient; and when it is considerable, will greatly retard the course, as well as endanger the mast and strain the vessel.

PLANE—is a term used by shipwrights, implying the area, or imaginary surface contained within any particular outlines, as, the plane of elevation, the plane of projection, the horizontal plane.

PLANKING—the act of covering and lining the sides of a ship with planks, which is sometimes

by the artificers called, laying on the skin. This completes the process of ship-building. See the article **BUILDING**.

PLAT—a sort of plaited cordage formed of the yarns of old rope twisted into foxes. It is used to wind about that part of the cable which lies in the hawse-hole, where it would otherwise be greatly injured by the continual friction produced by the agitation of the ship in stormy weather. See the articles **FRESHEN** and **SERVICE**.

PLATE—is a flat piece of iron used on various occasions.

BACK-STAY PLATE—is a piece of iron used instead of a chain to confine the lower dead-eye of the back-stay.

FOOT-HOOK, or FUTTOCK-PLATES—are iron bands fitted to the lower dead-eyes of the top-mast shrouds, which, passing through holes in the edge of the top, are attached to the upper ends of the futtock-shrouds.

PLATFORM—is a number of planks laid together, forming a kind of floor for any temporary or particular purpose.

PLEASURE-BOAT—a boat fitted up for receiving company to sail up and down a river, harbour, or lake, &c.

PLUG—a piece of timber formed like the frustrum of a cone, and is used for different purposes, as,

HAWSE-PLUGS—are made to stop the hawse-holes when the cables are unbent, or not in them. Their use is to prevent the water coming in when the ship pitches.

SHOT-PLUGS—are used to stop the breaches made in the body of a ship by cannon-balls, and are formed of various sizes, according to the different sizes of shot.

PLUN-

PLUNDER—a name given to the effects of the officers and crew of a prize, when pillaged by the captors.

PLYING—the act of making, or endeavouring to make, a progress against the direction of the wind, hence—

A GOOD PLYER—is a vessel that makes great advances in this manner of sailing.

POINT—a low arm of the shore which projects into the sea, or into a river beyond the contiguous part of the beach.

POINT-BLANK. See the article **RANGE.**

TO POINT A GUN—to direct it towards any particular object or point.

TO POINT A SAIL—to affix points through the eyelet holes of the reefs. See the article **POINTS.**

POINTING—is the operation of tapering the end of a rope, and weaving some of its yarns into a kind of mat about the diminished part of it, so as to thrust it more easily through any hole, and prevent it from being untwisted. Thus the end of a reef-line is pointed so, that being stiffer, it may more readily penetrate the eyelet holes of the reef; and the ends of the strands of a cable are occasionally pointed for the greater conveniency of splicing it to another cable, especially when this task is frequently performed. The extremities of the splice of a cable are also pointed, that it may pass with more facility through the hawse-holes. In ships of war it is customary to point the ends of almost all the ropes.

POINTS—flat pieces of braided cordage, tapering from the middle towards each end, whose lengths are nearly double the circumfe-

rence of the yard, and used to reef the courses and top-sails of a square rigged vessel; they are fixed to the sails by passing one through every eyelet hole in the reef-bands, and making two knots upon it, one on each side of the sail, to prevent its falling out. See the article **REEF.**

POLACRE—a ship with three masts, usually navigated in the Mediterranean; each of the masts are commonly formed of one piece, so that they have neither tops or cross-trees, neither have they any horses to their upper yards, because the men stand upon the top-sail yards to loose or furl the top-gallant-sails, and upon the lower yards to loose, reef, or furl the top-sails, the yards being lowered sufficiently down for that purpose.

These vessels are generally furnished with square sails upon the main-mast and lateen-sails upon the fore-mast and mizen-mast. Some of them, however, carry square sails upon all the three masts, particularly those of Provence in France.

POLE-AXE—a sort of hatchet, nearly resembling a battle-axe, having a handle about fifteen inches long, and being furnished with a sharp point, bending downwards from the back of its head. It is principally used to cut away the rigging of an adversary who endeavours to board. They have also been sometimes employed in boarding an enemy whose hull was more lofty than that of the boarders, by driving the points into her side, one above another, and thereby forming a kind of scaling-ladder; whence they are sometimes called **Boarding-axes.**

POLE-MAST. See the article **MAST.**

UNDER BARE POLES—the situation of a ship at sea, when all her sails are furled. See the articles **SCUDDING** and **TRYING**.

POMELION—a name given by seamen to the catcabel, or hindmost knob of a cannon. See the article **CANNON**.

PONTOON—a large low flat vessel, nearly resembling a barge of burthen, and furnished with cranes, capstans, tackles, and other machinery necessary for careening ships; these are principally used in the Mediterranean, but very seldom in the northern parts of England.

PONTOON, or PONTON—a kind of flat-bottomed boat, whose carcase of wood is lined within and without with tin. They are generally twenty-one feet long, five feet broad, and two feet one inch and a half deep within.

POOP—the highest and aftmost deck of a ship. See the article **DECK**.

TO HAVE THE WIND IN POOP—is to have it behind or favourable.

POOP-ROYAL—short deck, or platform, placed over the aftmost part of the poop in the largest of the French and Spanish men of war, and serving as a cabin for their masters and pilots. This is usually called the top-gallant-poop by our shipwrights.

POOPING—the shock of a high and heavy sea upon the stern or quarter of a ship, when she scuds before the wind in a tempest. This circumstance is extremely dangerous to the vessel, which is thereby exposed to the risk of having her whole stern beat in, by which she would be laid open to the entrance of the sea, and most probably founder.

PO PING—implies also the ac-

tion of one ship running her stem against another's stern.

A POOPING-SEA—a heavy stern sea.

PORT—a harbour or haven on the sea-coast. See the article **HARBOUR**.

BAR-PORT—is such as can only be entered with the tide.

CLOSE-PORT—is one within the body of a city, as the ports of Rhodes, of Venice, Amsterdam, Rochelle, Bayonne, and St. Jean de Luz.

FREE-PORT—is one open and free for merchants of all nations to load and unload their vessels in, without paying any duty or customs; such are the ports of Genoa and Leghorn.

FREE-PORT—is also used for a total exemption and franchise which any set of merchants enjoy, for goods imported into a state, or these of the growth of the country exported. Such was the privilege the English enjoyed for several years after their discovery of the port of Archangel, and which was taken from them on account of the regicide in 1648.

PORT is also used for the burthen of a ship.

PORT is also a name given, on some occasions, to the larboard or left side of the ship, as in the following instances:

THE SHIP HEELS TO PORT—i. e. floops or inclines to the larboard side.

TOP THE MAIN-YARD TO PORT—the order to sway the larboard extremity of that yard higher than the other. See the article **TOPPING**.

PORT THE HELM—the order to put the helm over to the larboard side of the vessel, when going large.

In all these cases, this word appears

pears intended to prevent any mistakes happening from the similarity of sounds in the words starboard and larboard, particularly when they relate to the helm, where a misapprehension might be attended with very dangerous consequences: accordingly the word larboard is never used in conning.

HALF PORT—a kind of shutter, with a circular hole in the centre, large enough to go over the muzzle of the gun, and furnished with a piece of canvas, nailed round its edge, to tie upon the gun, whereby the water is prevented entering at the port, although the gun remains run out. They are principally used upon the main-deck, and particularly in ships carrying one tier of cannon.

PORTLAST, or PORTOISE—is synonymous with **GUNWALE**; as,

LOWER THE YARDS A PORTLAST—that is, down to the gunwale.

TO RIDE A PORTOISE—is to have the lower-yards and top-mast struck, or lowered down, when at anchor in a gale of wind.

PORTLIDS—a sort of hanging doors, to shut in the ports at sea; they are fastened by hinges to the upper edges, so as to let down when the cannon are drawn into the ship, whereby the water is prevented entering the lower decks. They are more generally termed **Ports**.

PORTS—the embasures or openings in the side of a ship of war, wherein the artillery is ranged in battery upon the decks, above and below.

GUN-ROOM PORTS—are situated in the ship's counter, and are used for stern-chases, and also for

passing a small cable or a hawser out, either to moor, head and stern, or to spring upon the cable, &c. See the articles **MOOR** and **SPRING**.

LOWER-DECK PORTS are those on the lowest gun-deck.

MIDDLE-DECK PORTS—are those on the second or middle gun-deck of three-deckers.

PORT-BARS—strong pieces of oak, furnished with two lanyards or ropes, by which the ports are secured from flying open in a gale of wind, the bar resting against the inside of the ship, and the port being firmly lashed to it by its two ring-bolts.

PORT-FIRES. See the article **FIRESHIP**.

PORT-ROPE—ropes made fast to the outside of the portlids, and communicating with a tackle within, by which the portlids are occasionally drawn up.

PORT-TACKLES—are those mentioned in the preceding article, as serving to haul up or open the ports.

PONCHES—small bulk heads made in the hold to stow corn, goods, &c.

POWDER-CHESTS—certain small boxes charged with powder and old nails, &c. and fastened occasionally on the decks or sides of merchant-ships, when furnished with close-quarters, having a train of powder which communicates with the inner apartments, so as to be fired at pleasure to annoy the enemy.

These chests are usually from 12 to 18 inches in length, and about 8 or 10 in breadth, having their outer or upper terminating in an edge. They are nailed to several places of the quarter-deck and bulk-head of the waist, having

ing a train of powder which communicates with the inner apartments of the ship.

PRAM, or PRAME—a sort of lighter used in Holland and the ports of the Baltic Sea, for loading and unloading ships.

PRATIC, or PRATIQUE—a term used in the European ports of the Mediterranean Sea, which implies the permission to trade and communicate with the natives of any place, after having performed the required quarantine.

PRESS OF SAIL—signifies as much sail as the then state of the wind, &c. will permit a ship to carry.

PRESSED-MAN—one who has been impressed into the king's service, in contradistinction to a volunteer.

PRESS-GANG—a detachment of seamen, who (under the command of a lieutenant) are empowered, in time of war, to take any seafaring men, and oblige them to serve on board the king's ships.

PREVENTER—an additional rope employed at times to support any other, when the latter suffers an unusual strain, particularly in a strong gale of wind.

PREVENTER-BRACE—a temporary brace, fixed occasionally to succour the main or fore-yard, or to supply the place of the usual braces, in the event of their being shot away in action.

PREVENTER-STAY—is a smaller stay, fixed above the standing one, and serves to relieve the latter, or to supply its place.

PREVENTER-SHROUDS are applied to serve the same purposes.

PRICK—is a term applied to a roll of small rope, &c. as a prick of spun yarn, a prick of tobacco.

PRICKING A CHART—the act of tracing a ship's course upon a

marine chart, by the help of a scale and compasses, so as to discover her present situation.

PRICKING A SAIL—is the running a middle seam between the two seams which unite every cloth of a sail to the next adjoining, and is rarely performed till the sails have been worn some time.

TO PRIME A FIRE-SHIP—is to lay the train, and get her in readiness for being set on fire.

PRIMING—the train of powder which is laid from the opening of the touch-hole of a cannon, &c. in order to fire the piece.

PRIMING-WIRE, or PRIMING-IRON—a sort of iron needle employed to penetrate the touch-hole of a cannon when it is loaded, in order to pierce the cartridge, and as a rammer to charge the touch-hole with powder.

PRIVATEER—a vessel of war, armed and equipped by particular merchants, and furnished with a military commission from the state, to cruize against and annoy the enemy, by taking, sinking, or burning their shipping.

PRIZE—a vessel taken from the enemy.

Vessels are looked on as prizes if they fight under any other standard than that of the state from which they have their commission, if they have no charter-party, invoice, or bill of lading aboard; if loaded with effects belonging to the king's enemies, or even contraband goods. Those of the king's subjects recovered from the enemy, after remaining four-and-twenty-hours in their hands, are deemed lawful prize. Vessels that refuse to strike may be constrained, and if they make resistance and fight, become lawful prize if taken.

By stat. 13. Geo. 2. ch. 4, judges

judges and officers failing of their duty in respect to the condemnation of prizes, forfeit 500*l.* with full costs of suit, one moiety to the king, and the other to the informer.

The regulations with regard to prizes in the royal navy are as follow :

1. When any ship or vessel is taken from the enemy, the hatches are to be immediately spiked up, and her lading and furniture secured from embezzlement, till sentence is passed upon her in some court of admiralty empowered to take cognizance of causes of that nature.

2. The captain is to cause the officers of the prize to be examined: three or more of the company, who can give best evidence, to be brought to the said court of admiralty together with the charter parties, bills of lading, and other shi*s'* papers found on board.

Articles 3 and 4 relate to the finding any of the king's subjects in the prizes.

5. When a privateer is taken, great care is to be had to secure all the ships papers, especially the commission: but if there be no legal commission found on board, then all the prisoners are to be carried before some magistrate, in order to their being examined and committed as pirates.

PRIZE-MONEY — the profits arising from the sale of such prize.

In ships of war, the prize-money is to be divided among the officers, seamen, &c. as his majesty shall appoint by proclamation; but among privateers, the division is according to the agreement between the owners.

PRIZING—the application of a

lever to move any weighty body, as an anchor, &c.

PROD—is a vessel used in the South Seas. This name, which signifies flying, it has obtained on account of the swiftness with which it sails, being, with a brisk trade wind, near twenty miles an hour. It is chiefly used by pirates.

PROMONTORY, a high cape, or head-land.

PROTEST — an instrument drawn up in writing, and attested before a justice of the peace (or a consul or vice-consul in foreign parts), by the master of a merchant-ship and a part of the ship's crew, after the expiration of a voyage, describing the severity of the voyage, whereby the ship has suffered, or may suffer, in her hull, rigging, or cargo. It is chiefly intended to shew that such damages did not happen through any neglect or misconduct of the master or his officers, &c.

PROVOST-MARSHAL—an officer appointed to take charge of prisoners at a court-martial.

PROW—a name given by seamen to the beak or pointed cut-water of a kebec, galley, or pol-aore. The upper part of the prow is usually furnished with a grating platform for the convenience of the seamen who walk out to perform whatever is necessary about the sails or rigging in the bowsprit.

PUDDING, or PUDDEN-ING—a thick wreath or circle of cordage, tapering from the middle towards the ends, pointed all over, and fastened about the main or fore-masts of a ship, directly below the trusses, to prevent the yards from falling down, when the ropes by which they are usually suspended are shot away in battle.

PUD-

PUDDENING is also sometimes placed on a boat's stem as a kind of fender.

PULLING—implies the act of rowing with the oars; as, "Pull the starboard oars," "Pull together."

PULO—is a general term for island on the coasts of Siam and the island of Sumatra, in the East Indies, and in the Eastern Indian Ocean.

PUMP—a well-known machine, used to discharge the water from the ship's bottom into the sea.

COMMON PUMP—is a long wooden tube, whose lower end rests upon the ship's bottom, between the timbers, in an apartment called the well, inclosed for this purpose near the middle of the ship's length. This pump is managed by means of the brake, and the two boxes or pistons. Near the middle of the tube, near the chamber of the pump, is fixed the lower box, which is furnished with a staple, by which it may at any time be hooked and drawn up in order to examine it. To the upper box is fixed a long bar of iron, called the spear, whose upper end is fastened to the end of the brake, by means of an iron bolt passing through both. At a small distance from this bolt, the brake is confined by another bolt between two cheeks or ears, fixed perpendicularly on the top of the pump. Thus the brake acts upon the spear as a lever whose fulcrum is the bolt between the two cheeks, and discharges the water by means of the valves or clappers fixed on the upper and lower boxes. These sorts of pumps are rarely used in ships of war.

CHAIN-PUMP—consists of a long chain, equipped with a suf-

ficient number of valves, at proper distances, which working upon two wheels, one above and the other below, passes downward through a wooden tube, and returns upward through another. It is managed by a long winch or roller, whereon several men may be employed at once, and thus it discharges, in a limited time, a much greater quantity of water than the common pump, and with less fatigue and inconvenience to the labourers.

This machine was formerly exposed to several disagreeable accidents, by nature of its then construction. The chain was of too complicated a fabric, and the sprocket wheels, employed to wind it up from the ship's bottom, were deficient in a very material circumstance, viz. some contrivance to prevent the chain from sliding or jerking back upon the surface of the wheel, which frequently happened when the valves were charged with a considerable weight of water, or when the pump was violently worked. The links were evidently too short, and the unmechanical manner in which they were connected, exposed them to a great friction in passing round the wheels. Hence they were sometimes apt to break or burst asunder in very dangerous situations, when it was extremely difficult, and sometimes impracticable to repair the chain. Of late, however, some considerable improvements have been made by Mr. Cole, under the direction of Captain Bentinck. The chain of this machine is more simple and mechanical, and less exposed to danger. It appears to have been first applied to the pump by Mr. Mylne, to exhaust the water from the caissons at Blackfriar's Bridge.

It was thence transferred to the marine by Captain Bentinck, after having received some material additions to answer that service. The principal superiority of this pump to the former is, 1. That the chain is more simple and easily worked, and consequently less exposed to injuries by friction. 2. That the chain is secured upon the wheel, and thereby prevented from jerking back when charged with a column of water. 3. That it may be easily taken up and repaired when broken or choked with ballast, &c. And 4. That it discharges a much greater quantity of water with an inferior number of men.—This has been proved by experience, when two men (instead of four) discharged a tun of water in 55 seconds.

HAND-PUMP, is the distinctive appellation of the common small pump.

HEAD-PUMP — a moveable pump, to put over the bows or side. These were formerly used in the navy, to pump water into the ship for washing the decks, &c. but since the invention of a cistern in the well, they are quite disused. See the article **CISTERN**.

PUMP-HOOD. See the article **HOOD**.

PUMP-BRAKE—the wooden lever or handle by which a hand-pump is worked. See the article **PUMP**.

PUMP-BOLTS—two pieces of iron, with a knob at one end, and a hole for a pin or forelock in the other; one serves to fasten the pump-spear to the brake, and the other as a fulcrum for the brake to work upon. See the article **PUMP**.

PUMP-DALES — long wooden tubes, extending from the chain-pumps across the ship, and through

the side, serving to discharge the water without wetting the decks.

PUMP-GEAR—any materials requisite for fitting or repairing the pumps, as boxes, leather, &c.

PUMP-SPEAR—that bar of iron, which, communicating with the upper box, is also attached to the end of the brake, whereby the former is put in motion. See the article **PUMP**.

The **PUMP-SUCKS** is said of the pump when the water is drawn out, and there comes up nothing but froth and wind.

PUNT—a sort of flat-bottomed boat, whose floor resembles the platform of a floating stage. They are used in caulking, breaming, or repairing the bottom of a ship, and in shallow rivers.

PURCHASE—a name given to any sort of mechanical power employed in raising or removing heavy bodies, or in fixing or extending the ship's rigging; such are the tackles, windlasses, winches, capstans, screws, and handspikes.

PURSER—an officer appointed by the Lords of the Admiralty to take charge of the provisions of a ship of war, and to see that they are carefully distributed to the officers and crew, according to the general printed naval instructions.

PURSER'S STEWARD. See the article **STEWARD**.

Q.

QUADRANT, an instrument used to take the altitude of the sun or stars at sea, and thereby to determine the latitude of the place, or the sun's azimuth, so as to ascertain the magnetical variation; and also to take horizontal angles for various purposes.

The quadrant is so denominated
K k from

from its serving to measure any angle, not exceeding 90 degrees, although its arc is only the eighth part of a circle, whence some have termed it an octant.

There are different kinds of instruments known by this name, particularly

HADLEY'S QUADRANT—which was so called, being the ingenious invention of John Hadley, Esq. This, as it is now constructed and used, consists of an arc, which is an octant, or eighth part of a circle, though a sextant, or sixth part of a circle, renders it more useful; an index, with its Vernier's scale; a speculum; two horizontal glasses with their adjusters; two screens, and two sight vanes. The octant consists of two radii, or bars; the arc or limb, and the two braces which strengthen and prevent it from warping. The arc contains only the eighth part of the circumference of a circle, or 45 degrees, which is divided into 90 primary divisions, each of which represents degrees, and numbered 0, 10, 20, 30, &c. to 90, beginning at each end of the arc for the convenience of numbering both ways, either for altitudes or zenith distances. Every degree is subdivided into two or three parts, and these either by the method of diagonals, or by Vernier's division or scale (which is much better), are so divided as to shew one or two minutes. The index is a flat rod or bar, moveable round the center of the instrument. That part of the index which slides over the graduated arc having either a sharp edge to cut the diagonal divisions, when so divided, or having upon it a Vernier's scale. From the bottom of the index turns up, against the back of the instrument, a piece

of brass with a screw in it, serving to fasten the index against any division. The index, when moved along the arc, should be taken hold of by the bottom part, and not by the middle.

In order to understand the use of Vernier's scale in this instrument, it should be observed, that Hadley's quadrant being generally of eighteen inches radius, having each degree on the limb divided into three parts of twenty minutes each, and the breadth of the Vernier's scale equal to seven degrees; and, as these seven degrees are divided into twenty-one parts on the limb, each of 20 minutes, the scale is divided into 20 equal parts; consequently each division on the scale is larger than each division on the limb by one twentieth part of a division on the limb, or one twentieth of twenty minutes; that is, each division on the scale exceeds each on the limb by one minute of a degree; consequently, in whatever place the Vernier's scale stands, one of its divisions will always stand against, or close to a division on the limb. The middle line of the index, which is the moveable radius of the quadrant, gives the index or pointer of the Vernier's scale, which is usually its middle line, having ten divisions of minutes on each side, and numbered 5, 10 to the right, and 15, 10 to the left; that is, the first ten minutes of the scale are reckoned in order from the middle line, or index to the right, and the latter ten minutes are to be reckoned from the left-hand of the scale towards the right, and end at the middle. If the middle line, or index of the Vernier stood against 48°, one division and less than half of another division, and on examining the

right-

right-hand-side of the scale, the seventh division stood against a division on the limb, the index in this case is reckoned to stand against $48^{\circ} 27'$. If the index of the scale stood against 34° , two divisions, and more than half of another, and on examining the left-hand-side of the scale, it was found that the 16th division thereof stood against a division on the limb, it is to be read $34^{\circ} 56'$, and so of others. The exact coincidence of the divisions on the limb and scale is best discovered by a magnifying-glass or double convex lens.

The speculum of the quadrant is a piece of flat glass, quick-silvered on one side, and set in a brass box, with the surface of the speculum perpendicular to the plane of the instrument, against whose centre stands the middle of the glass, its surface coinciding with the middle line of the index. As the index slides along the arch, the position of the speculum is altered, it being fixed to the index. The use of the speculum is to receive the rays from the object observed, and to reflect them on the horizon-glasses, which are small pieces of looking-glass placed on one side of the radii, with their faces turned obliquely to the speculum. One of these glasses has only its lower part quick-silvered and set in brass-work, the upper part being left transparent to see the horizon through it. In the middle of the other glass is a transparent slip, through which the horizon is to be seen. Both these glasses are so mounted, as to have their positions set truly by their adjusters at their back, if the frame of the instrument should be warped.

The screens are two pieces of

coloured glass, set in frames, and intended to prevent the sun's rays from injuring the eyes of the observer. When they are used with the first glass, they are to be where the figure shews them; but when they are used with the second glass, they are to be set at an allotted hole. The sight vane used with the first glass in fore-observations, or when the face is turned towards the object, has two holes: but the sight vane used with the second in back observations, when the face is turned from the object, has but one.

Expert mariners have complained of some defects in Hadley's quadrants, and different workmen have applied sundry articles to remedy the inconveniencies complained of, some of which are,

1. A screw to the lower end of the index, to regulate its motion. When brought by the hand to a division nearly shewing the contact required; and a magnifying glass to read off the divisions between the limb and the Vernier.

2. A small tube, or telescope, instead of the sight vanes, to direct the line of sight in a position parallel to the plane of the quadrant; which tube was screwed into a ring fixed to a square stem that slid in the socket made for the sight vane, and by the help of a screw in its bottom (at the back of the quadrant), the stem could be raised or lowered so as to move the axis of the telescope, to point to any part of the horizon glass judged fittest for the observation.

3. The extending the arch from an extant to a sextant, or sixth part of a circle, whereby angles exceeding 90 degree may be observed; as is sometimes wanted in taking the angular distance between the moon and the sun, or the moon

and stars; also, for the convenience of holding the instrument easily in such observations, a stout handle was fixed to the back, which was a very necessary addition.

But other errors or inconveniences still attended these instruments; namely,

1. The speculum being liable, in the ordinary way of fitting it, to be bent; and, consequently, the same observation would have different measures, according as the object happened to be reflected from different parts of the speculum. This has been lately rectified by a new manner of settling the speculum in its frame.

2. The adjustment of the horizon glasses. Both these glasses are to stand perpendicular to the plane of the instrument, and when 0 on the index stands against 0 on the arc, the plane of the fore-horizon glass is to be parallel to the plane of the speculum; and the plane of the back horizon glass is to be at right angles to the speculum. A new method of adjusting these glasses has been lately discovered, very accurate in principle, and ready in practice; particularly for the back observation, which hitherto has been but little used, on account of the difficulty of adjusting its horizon glass, which has lately been happily removed by the ingenious Mr. Peter Dollond, optician to His Majesty; and he also thought of the method of preventing the index speculum from being bent in its frame. By his adjustments, angles of any magnitude, under 180 degrees, may be taken; viz. by the fore observation, all under 120° with a sextant; and by the back observation, all between 90 and 180 degrees.

3. Although Mr. Hadley at first directed that the line of sight should be parallel to the plane of the instrument, and for preserving it so, proposed that in the telescope should be fixed two parallel wires, which, in using, should be parallel to the quadrant, and the contact of the objects should be observed in the middle between the two wires, yet these circumstances were not sufficiently attended to; therefore the two parallel wires are now placed in the focus of the eye-glass, and divide the diameter of the field of view into three equal parts; and when the telescope is adjusted parallel to the plane of the instrument, it will remain so during the observation.

4. As every glass mirror has two reflections, viz. one from the face, and one from the silvered back, these double reflections not only cause some confusion among the reflected rays, but considerable errors might arise should the face and back of the glass be not parallel planes; none of these could happen from a plane mirror which has but one reflection, and therefore the upper part of the index speculum has its back rough ground and blacked; whereby this part will reflect the rays only which fall on its face, and these sufficiently strong when the object observed is bright; but when otherwise, the object may be observed from the lower part of the speculum, which is silvered: the line limiting these two parts is parallel to the plane of the quadrant. This improvement was directed by the Reverend Mr. Maskelyne, astronomer royal.

One great inconvenience, however, which mariners have to struggle with at sea, is the frequent
want

want of an horizon, arising from the haziness of the atmosphere, and tremulous motion of the surface of the water. To remedy this many methods have been proposed, among which Serfon's whirling Speculum, or top, was for some time thought a proper instrument, but it has been found imperfect.

Some artists, says Mr. Robertson, use the following method: into a wooden, or iron circular box, of about two and a half, or three inches diameter, and about half an inch deep, pour about a pound or more of quicksilver, and on this lay a metal speculum, or piece of plain glass, whose diameter is about one-third of an inch less than that of the box; this will float in the quicksilver, and shew the image of the sun very steady. This apparatus being slung in jimbals, will preserve a tolerable good horizon. The speculum or glass, should be homogeneous and have parallel sides. There are some workmen who can work the two planes of a piece of glass, so that they shall be demonstratively parallel. Or, the fine surface of the quicksilver will answer the purpose of itself. In all observations with these artificial horizons, a piece of coloured glass should be fixed before the vane that is used to preserve the eye, and the screens may be taken off.

Mr. Mitchel has recommended Hadley's quadrant for surveying, and especially the surveying of harbours; also for piloting ships into harbours.

Mr. Wales, in captain Cook's voyage, applied it to measuring the quantity eclipsed in an eclipse of the sun; in which operation it answers the purpose of a micrometer, to a great degree of certainty.

DAVIS'S QUADRANT — is much used in navigation, and its theory is very intelligible; but when the horizon is obscured by hazy weather it is of no use, and this often occasions melancholy consequences. Means have therefore been sought after to remedy this defect. Mr. Hadley recommended and described a spirit-level for this purpose. Mr. Leigh proposes a water-level to be fixed to the quadrant, and he has likewise given the description and use of an apparatus, to be added to this instrument, consisting of a mercurial level, which he prefers, no doubt justly, to a water-level.

It has been observed that one great objection against this instrument is the trouble and time lost in sliding the sight-vane up or down, which sometimes cannot be conveniently done without taking the quadrant from the eye, whereby an opportunity may be lost of making the observation. But this defect is easily removed by having a long index, or ruler, fixed to the quadrant; one end moving round the centre to which the horizon-vane is fixed, and having the sight-vane fixed to the other end. By this contrivance the sight-vane may be readily raised higher, or lowered, by the motion of the index about its centre, which may be done without taking the instrument from the eye.

SENICAL QUADRANT — is an instrument of use in navigation, and consists of several concentric quadrantal arcs, divided into eight equal parts by radii, with parallel right lines crossing each other at right angles.

There are formed triangles upon this instrument similar to those made by a ship's way with the meridians and parallels; the sides

of which triangles are measured by the equal intervals between the concentric quadrants and the lines N. and S. E. and W. The lines and arcs are distinguished, every fifth, by a broader line; so that if each interval be taken for one league, there will be five between one broad line and another; and if every interval be taken for four leagues, then there will be twenty leagues, which make a sea-degree, from one broad line to the other.

SUTTON'S QUADRANT—is sometimes called **COLLINS'S POCKET QUADRANT**. The best of this kind is the stereographic projection of one quarter of the sphere between the tropics, upon the plane of the equinoctial, the eye being in the north pole. This is fixed to the latitude of London. The lines running from the right hand to the left are parallels of altitude, and those crossing them are azimuths: the less of the two circles, bounding the projection, is one-fourth of the tropic of Capricorn; the greater, one-fourth of that of Cancer. The two eclipses are drawn from a point on the left edge of the quadrant, with the characters of the signs upon them; and the two horizons are drawn from the same points. The limb is divided both into degrees and time, and by having the sun's altitude, the hour of the day may be here found to a minute.

The quadrantal arcs, next the centre, contain the calendar of months, and under them; in another arc, is the sun's declination.

On the projection are placed several of the most noted fixed stars between the tropics, and next below the projection is the quadrat and line of shadows, being only a line of natural tangents to the arcs

of the limb, and by help thereof the heights of towers, &c. may be taken with considerable exactness.

In order to find the time of sun-rising or setting, his amplitude, azimuth, hour of the day, &c. you must lay the thread over the day of the month, and bring the bead to the proper ecliptic, either that of summer or winter, according to the season (which is called rectifying); then, moving the thread, bring the bead to the horizon; in which case the thread will cut the limb in the time of the sun's rising or setting, before or after six; and at the same time the bead will cut the horizon in the degrees of the sun's amplitude.

Again, observing the sun's altitude with the quadrant, and supposing it found 45° on the 24th of April, lay the thread over the 24th of April, bring the bead to the summer ecliptic, and carry it to the parallel of altitude 45° . In which case the thread will cut the limb at $55^{\circ} 15'$, and the hour will be seen among the hour lines to be either forty-one minutes past 9 in the morning, or nineteen past 2 in the afternoon.

Lastly, the bead among the azimuths shews the sun's distance from the south, viz. $50^{\circ} 41'$.

N. B. If the sun's altitude be less than what it is at 6 o'clock, the operation must be performed among those parallels above the upper horizon, the bead being rectified to the winter ecliptic.

QUARANTINE—the state of persons who are prevented from having a free communication with the inhabitants of any country till the expiration of an appointed time, in order to prevent the importation of the plague, or any other infectious disorder. See the article **LAZARETTO**.

QUARTER

QUARTER — that part of a ship's side which lies towards the stern, or which is comprehended between the aft-most end of the main chains, and the sides of the stern, whence it is terminated by the quarter-pieces.

Although the lines by which the quarter and bow of a ship, with respect to her lengths, are only imaginary, yet experience appears sufficiently to have ascertained their limits: so that if we were to divide the ship's sides into five equal portions, the names of each space would be readily enough expressed: thus, the first, from the stern, would be the quarter, the second, abaft the midships; the third, the midships; the fourth, before the midships; and the fifth, the bow.

ON THE QUARTER — may be defined a point in the horizon, considerably abaft the beam, but not in the direction of the ship's stern. See the article **BEARING**.

QUARTER-BILL — a list, containing the different stations to which the officers and crew are quartered in time of battle, with the names of the persons appointed to those stations.

QUARTER-BADGE — See the article **BADGE**.

QUARTER-CLOTHS — long pieces of painted canvass, extended on the outside of the quarter-netting, from the upper part of the gallery to the gangway.

QUARTER-DECK — See the article **DECK**.

QUARTER-GALLERY — a sort of balcony on the quarters of ships, generally communicating by doors with that on the stern. See the article **GALLERY**.

QUARTER-GUNNER — See the article **GUNNER**.

QUARTER-MASTER — an infe-

rior officer, appointed to assist the mates in their several duties, as stowing the hold, coiling the cables, attending the steerage, and keeping time by the watch-glasses.

QUARTER-MASTER'S-MATE — an officer subordinate to the preceding.

QUARTER-NETTING — See the article **NETTING**.

QUARTER-RAILS — are narrow-moulded planks reaching from the top of the stern to the gangway, and serving as a fence to the quarter-deck.

QUARTERING WIND — See the article **SAILING**.

QUARTERS — imply the several stations where the officers and crew of a ship of war are posted in time of action. See the articles **BATTLE**, **ENGAGEMENT**, &c.

The lieutenants are generally quartered on the different decks to command the batteries; the master superintends the management of the ship; the boatswain, and a sufficient number of men are stationed to repair the damaged rigging; the gunner, usually on the lower gun-deck; and the carpenter, with his mates and crew, in the wings on the orlop. The maimed are generally quartered on the poop and forecastle, or gangway, under the direction of their officer, although, on some occasions, they assist at the great guns, particularly in distant cannonading; and the great body of the seamen are stationed at the cannon, or in the tops; while the captain is ever on the quarter-deck, giving directions to all around, and animating every one by his example.

The number of men appointed to manage the artillery is always in proportion to the nature of the guns, and the number and condition

tion of the ship's crew. They are in general as follow, when the ship is full manned, so as to fight both sides at once occasionally:

Nature of the Guns.

Pounder	No. of Men.
To a 42	15
— 32	13
— 24	11
— 18	9
— 12	7
— 9	6
— 6	5
— 4	4
— 3	3

This number, to which is often added a boy, to bring powder to every gun, may be occasionally reduced, and the guns, nevertheless, well managed. The number of men appointed to the small arms:

Rate of the Ship.	No. of Men to the Small Arms.
1st. — — —	150
2d. — — —	120
3d. of 80 guns —	100
— of 70 ditto —	80
4th of 60 ditto —	70
— of 50 ditto —	60
5th — — —	50
6th — — —	40
Sloops of War —	30

See the articles CANNON, EXERCISE, &c.

QUARTERS— is also an exclamation to implore mercy from a victorious enemy.

QUARTERS OF THE YARDS — the space comprehended between the flings or middle, and the outer parts or the yard-arms.

QUARTER TACKLE — a strong tackle fixed occasionally upon the quarter of the main-yard, to hoist heavy bodies in or out of the ship.

QUAY, or KEY — a place to land goods upon.

QUICK-MATCH — See the article FIRE-SHIP.

QUICK-SAND—a loose sand into which a ship sinks by her own weight as soon as the water retreats from her bottom.

QUICK WORK—generally signifies all that part of a ship which is under water when she is laden; it is also applied to that part of the side which is above the sheer-rail.

QUILTING — the operation of weaving a kind of coating formed of the strands of rope about the outside of any vessel to contain water, as a jar, bottle, &c.

QUOIN—a wedge, employed to raise the cannon to a proper level, that it may be more truly directed to the object.

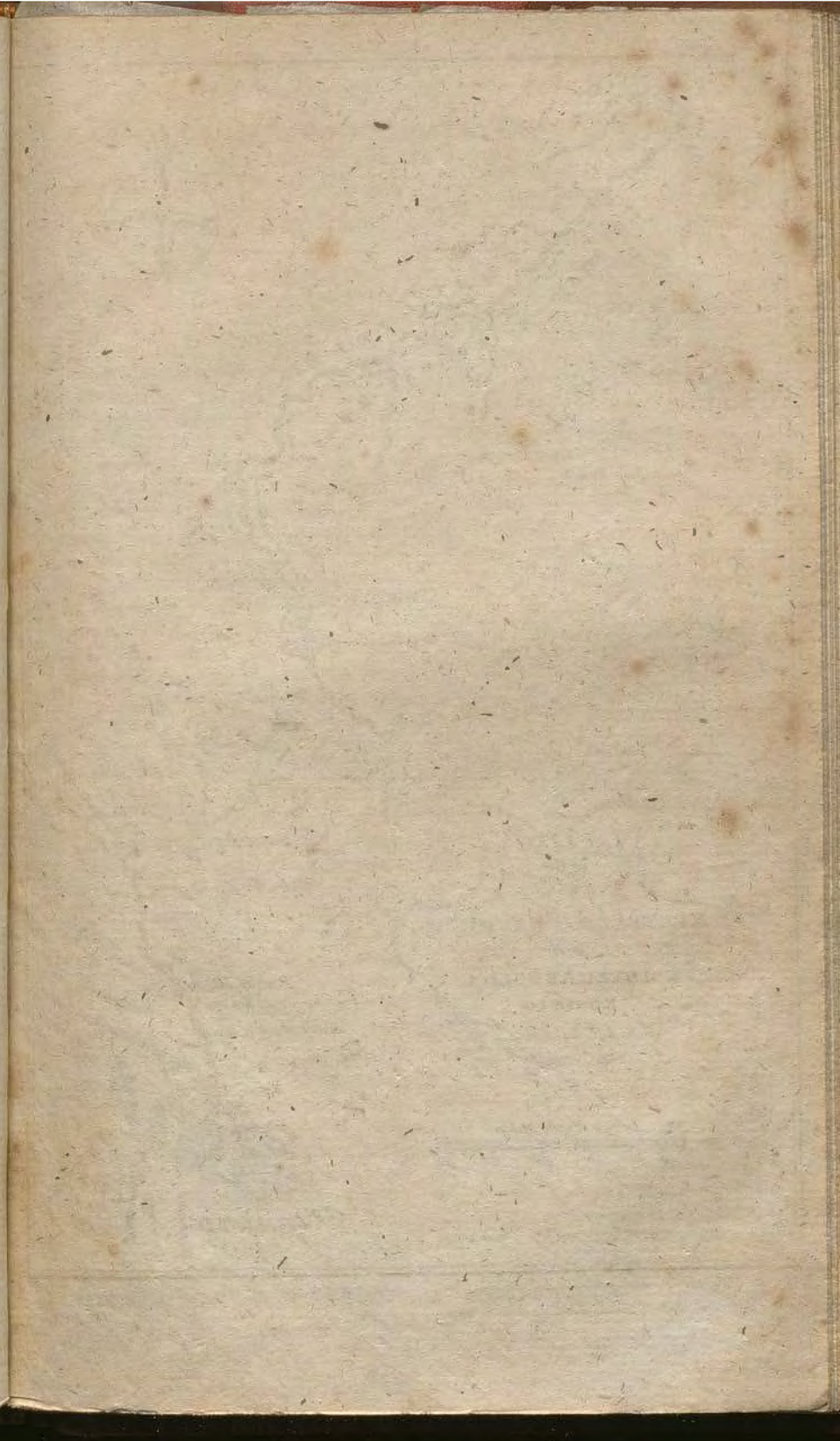
QUOINS—are also employed to wedge off casks of liquids from each other, that their bilges may not rub so as to occasion a leak by the agitation of the ship at sea.

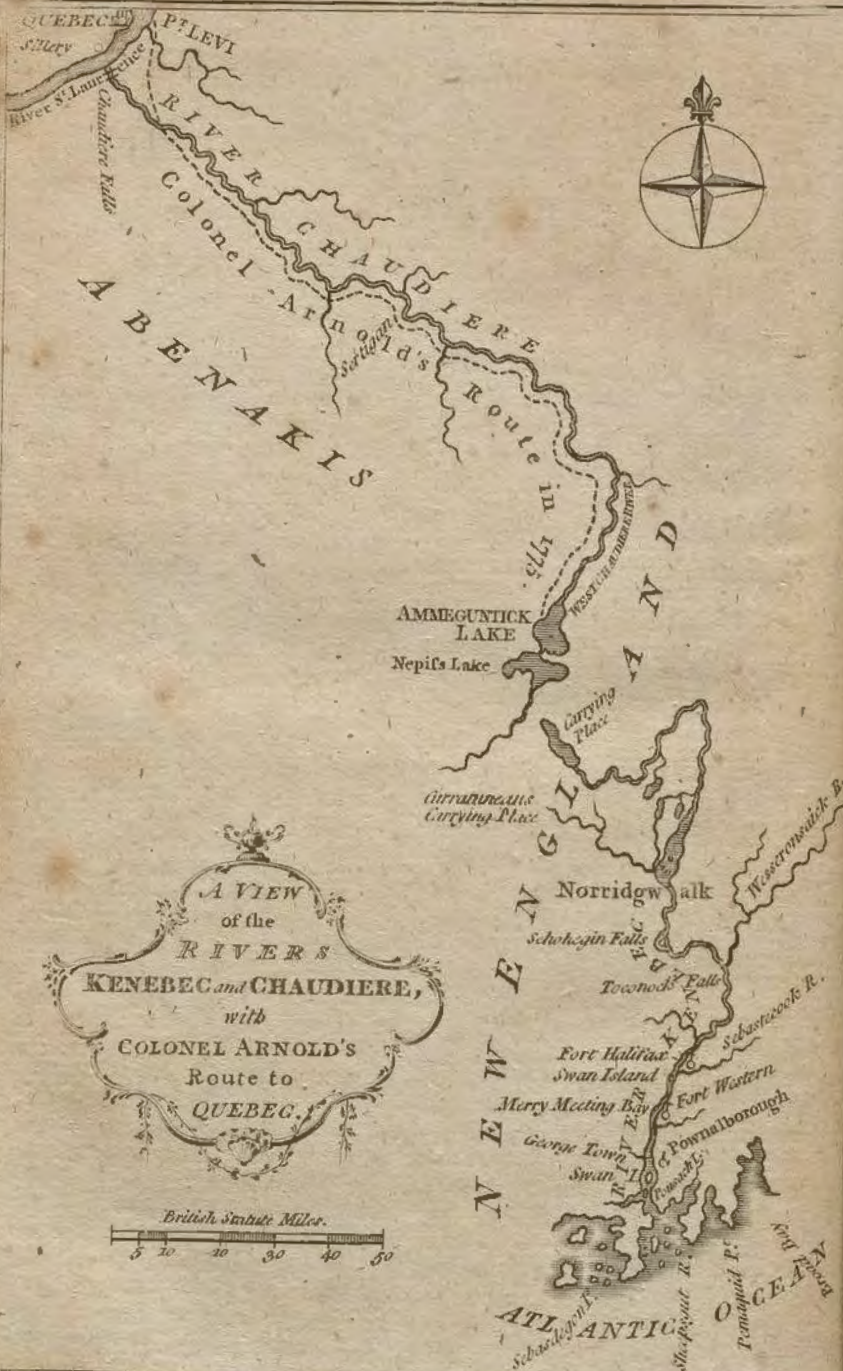
R.

RABBET—a deep groove or channel, cut in a piece of timber longitudinally to receive the edge of a plank, or the ends of a number of planks, which are to be securely fastened therein. The depth of this channel is equal to the thickness of the plank, so that when the end of the latter is let into the rabbit, it will be level with the outside of the piece. Thus the ends of the lower planks of a ship's bottom terminate upon the stem afore and the stern-post abaft, with whose sides their surfaces are even. The surface of the garboard streak, whose edge is let into the keel, is, in the same manner level with the side of the keel at the extremities of the vessel.

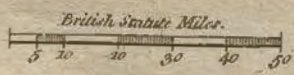
RACE—a particularly strong tide or current.

RACK





A VIEW
of the
RIVERS
KENEBC and CHAUDIERE,
with
COLONEL ARNOLD'S
Route to
QUEBEC.



RACK — a frame of timber containing several sheaves, and usually fixed on the opposite sides of a ship's bowsprit, to direct the sailors to the respective ropes passing through it.

RACKING A TACKLE—the fastening two opposite parts together with a seizing, so as that any weighty body suspended thereby shall not fall down although the tackle-fall should be loosened by accident or inattention.

RAFT—a sort of float formed by an assemblage of various planks or pieces of timber, fastened together side by side, so as to be conveyed more commodiously to any short distance in a harbour or river, than if they were separate. The timber and plank with which merchant ships are laden in the different parts of the Baltic sea, are attached together in this manner, in order to float them off to the shipping.

RAFT-PORT—a square hole cut through the buttocks of some ships immediately under the counter to load or unload the planks and pieces of timber, which, on account of their great length, could not be got in or out otherwise.

RAG-BOLT — an iron pin, having several barbs cut on its shank to retain it in the wood when driven.

RAILS — are narrow planks nailed for ornament on several parts of a ship's upper works, as drift-rails, life-rails, sheer-rails, waist-rails, &c. some of which are also intended as a fence to prevent the sailors from falling overboard.

RAILS OF THE HEAD—curved pieces of timber, extending from the bows on each side to the continuation of the ship's stem, to support the knee of the head, &c.

To RAISE—to elevate any distant object at sea by a gradual approach towards it, which effect is produced by the convex surface of the sea; this term is opposed to **LAYING**, which see.

RAISING A PURCHASE — the act of disposing certain instruments or machines in such a manner as that, by their mutual effects, they may produce a mechanical force sufficient to overcome the weight or resistance of the object to which this machinery is applied.

RAKE—the projection of the upper parts of a ship at the height of the stem and stern beyond the extremities of the keel; thus, if a plummet is hung from the top of a ship's stern so as to be level with the continuation of the keel, the distance between the after-end of the keel and the plummet will be the length of the rake of the stern.

RAKE—is also applied to the masts when they are out of a perpendicular situation, as, that ship's main-mast rakes aft.

RAKING—the act of cannonading a ship on the stern or head, so as that the balls shall range the whole length of the decks, which is one of the most dangerous incidents that can happen in a naval action; this is frequently called raking fore and aft, and is similar to what is termed by engineers enfiling.

RAMMER — is a cylindrical block of wood nearly fitting the bore of a cannon, and fastened on a wooden staff, or on a stiff rope well served with spun-yarn. It is used to drive the charge of a cannon home, or to the innermost part of it; the rope-rammers are most general in ships of war.

RANDOM SHOT — See the following article.

RANGE—a sufficient length of
L 1 the

the cable drawn upon the deck before the anchor is let go, that, by its sinking to the bottom without being interrupted, the flukes may be forced deeper into the ground, therefore the range drawn up out of the tier ought to be equal in length to the depth of the water where the ship anchors.

RANGE—is also the distance to which a bomb or cannon-ball is thrown from a piece of artillery by the explosion of gunpowder.

The flight of a shot is distinguished by artillery-men into two different ranges, of which the first is called the point-blank, and the second the random shot; to these also may be added the ricochet, or rolling and bounding shot.

The point-blank-range is the extent of the apparent right-line described by a ball discharged from a cannon.

The random shot, is, when by letting the breach down upon the bed of the carriage the ball is carried to its greatest possible distance, and describes a curve in its flight.

The ricochet, is fired by elevating the piece from three to six degrees, and only charging it with a quantity of powder sufficient to carry the shot along the face of the works attacked; the shot, thus discharged, so as to go just over the parapet, rolls, and bounds about, killing, maiming, or destroying all it meets in its course, creating much more disorder by going thus slowly than if thrown from the piece with greater violence. As one of the effects of the bomb results from its weight, the range of mortars is extremely different from that of cannon, because the former is not pointed at a certain object like the latter, but inclined to the horizon at a certain angle, so that the bomb being

thrown up obliquely, may fall upon the place intended; hence, it appears that the mortar has no point-blank range, or at least that no use is made of it. To make a bomb fall on a given place, two things are to be considered, viz. the elevation of the mortar and the quantity of powder used to charge it; respecting the former a bomb will be thrown to the greatest distance when the elevation of the mortar is 45 degrees, it being the half of 90 degrees or a right angle, that is equally distant from the horizon and the zenith; hence it follows, that if a mortar is elevated any number of degrees above 45, it will throw the shell to the same distance as if depressed an equal number of degrees below 45; where weight is required, as for the destruction of any building, the mortar should be elevated as much as possible for the distance, but when the business is to fire on a body of men it must be pointed as much below 45, that the bomb may not have force to penetrate far into the ground, and the splinters in the explosion may do more execution.

Ricochet signifies duck and drake, a name given to the bounding of a flat stone thrown almost horizontally into the water.

It was the opinion of engineers formerly, that by charging the pieces high, the ball was thrown to a greater distance. Hence the pieces were charged with two-thirds, or even the whole weight of the shot, in order to impel it with greater velocity; but it has been discovered since, that the half or one-third of the weight of the ball is the fittest charge for the piece.

It may not be amiss to observe here, that the range of cannon is greater

greater in the morning and at night, than at noon; and in cold than in hot weather. The reason is, that at these times the air being less heated, gives less way to the dilatation of the powder, which being by these means confined as it were to a smaller sphere of action, must have a stronger effect in proportion. When the lengths of cannon are proportionable to the height of the charge, the shot will be discharged with the same velocity, whatever the calibre may be.

The greatest distance to which a shell can be thrown, with the strongest charge, is little more than about 1800 or 2000 fathoms.

To RANGE — is to sail in a parallel direction and near to, as, “we ranged the coast;” the enemy came ranging up along side of us.”

RATE — the order or classes into which the ships of war are divided in the navy, according to their force and magnitude; thus, the

FIRST RATE — comprehends all ships of 100 guns and upwards, having 42 pounders on the lower deck, 24 ditto on the middle deck, 12 ditto on the upper deck, and 6 ditto on the quarter-deck and fore-castle. They are manned with 850 to 875 men, including their officers, seamen, marines, servants, &c.

N. B. In general the ships of every rate, besides the captain, have the master, the boatswain, the gunner, the chaplain, the purser, the surgeon, and the carpenter; all of whom, except the chaplain, have their mates or assistants, in which are comprehended the sail-maker, the master at arms, the armourer, the captain's clerk, the gun-smith, &c. The

number of other officers are always in proportion to the rate of the ship.

A first rate has 6 lieutenants, 6 master's mates, 24 midshipmen, and 5 surgeons mates, who are considered as gentlemen; besides, the following petty officers, quarter-masters, and their mates, 14; boatswains-mates, and yeomen, 8; gunners-mates, and assistants, 6; quarter-gunners, 25; carpenters-mates, 2, besides 14 assistants: 1 steward's-mate to the purser, &c.

SECOND RATE — includes all ships carrying from 90 to 98 guns upon three decks, of which those on the lower battery are 32 pounders; those on the middle 18 ditto; on the upper-deck 12 ditto, and those on the quarter-deck 6 ditto; which usually mount to 4 and 6; their complement of men is from 700 to 750. in which are 6 lieutenants, 4 masters-mates, 24 midshipmen, and 4 surgeons-mates; 14 quarter-masters, and their mates; 8 boatswains-mates, and yeomen, with 22 quarter-gunners, 2 carpenters-mates, with 10 assistants, and 1 steward, and 1 steward's-mate.

THIRD RATE — consists of ships from 64 to 80 cannon, which are 32, 18, and 9 pounders. The 80 gun ships however begin to grow out of repute, and give way to those of 74, 70, &c. which have only two whole batteries, whereas the former have three, with 28 guns planted on each, the cannon of their upper deck, being the same as those on the quarter-deck and fore-castle of the latter, which are 9 pounders. The complement in a 74 is 650, and in a 64, 500 men; having in peace, 4 lieutenants; but in war, 5; and when an admiral is aboard, 6. They have 3 masters-mates, 16 midshipmen, 3 surgeons.

surgeons-mates, 10 quarter-masters, and their mates, 6 boatswains-mates and yeomen, 4 gunners-mates and yeomen, with 18 quarter-gunners, 1 carpenters-mate, with 8 assistants, and 1 steward and steward's-mate, under the purser.

FOURTH RATES — consist of ships from 50 to 60 guns upon two decks and the quarter-deck. The lower tier is composed of 24 pounders, the upper tier of 12 ditto, and the quarter-deck and fore-castle 6 ditto. The complement of a 50 gun ship is 350 men, in which there are 3 lieutenants, 2 masters-mates, 10 midshipmen, 2 surgeons-mates, 6 quarter-masters, and their mates, 4 boatswains-mates, and yeomen, 1 gunner, and 1 yeoman, with 12 quarter-gunners, 1 carpenters-mate, and 6 assistants, and a steward and steward's-mate.

All vessels of war under the fourth rate are usually comprehended under the general names of frigates, and never appear in the line of battle. They are divided into two rates, viz.

FIFTH RATES, mounting from 32 to 40 or 44 guns. The latter have two decks of cannon, the lower battery being of 18 pounders, and that of the upper deck 6 ditto; but those of 36, or 32 guns, have only one complete deck of guns, mounting 12 pounders, besides the quarter-deck and fore-castle, which carry 6 ditto. The complement of 44 guns is 280 men, and that of a frigate of 36 guns 240 men. The first has 3, and the second 2 lieutenants, and both have 2 masters-mates, 6 midshipmen, 2 surgeons-mates, 6 quarter-masters, and their mates, 2 boatswains-mates, and 1 yeoman, 1 gunners-mate, and 1 yeo-

man, with 10 or 11 quarter-gunners, and 1 purser's steward.

SIXTH RATES—consist of frigates from 20 to 30 guns, and carry 9-pounders; those of 28 guns having 3 pounders on their quarter-deck with 200 men for their complement: and those of 24, 160 men. The former has 2 lieutenants, the latter 1, and both have 2 masters-mates, 4 midshipmen, 1 surgeons-mate, 4 quarter-masters, and their mates, 1 boatswains-mate, and 1 yeoman, 1 gunners-mate, and 1 yeoman, with 6 or 7 quarter-gunners, and 1 purser's steward.

The whole of these rates are termed post ships, i. e. their commander is a post captain, while those captains commanding vessels under 20 guns are denominated **MASTERS** and **COMMANDERS**, which see. This last rate is generally said to comprehend all brigs, sloops of war, cutters, schooners, &c. carrying from 6 to 18 guns, but it is only true with respect to their pay, the rest of their establishment of officers and crew varying according to their force and magnitude, many of them being commanded by lieutenants, and some, such as gun-boats, &c. by midshipmen, who have passed for lieutenants.

The sloops of war carry from 8 to 18 cannon, the latter having 6 pounders, and the former (those from 8 to 10 guns) 4 pounders. Their officers are generally the same as in the sixth rates, with little variation, and their complement of men are from 120 to 60, in proportion to their force or magnitude.

N. B. Bomb-vessels are on the same establishment as sloops; but fire-ships and hospital-ships are on that of fifth rates.

RATLINES — small lines which traverse the shrouds of a ship

ship horizontally at regular distances from the deck upwards, and forming a variety of ladders whereby to climb or to descend from any of the mast-heads.

TO RATTLE DOWN THE SHROUDS—is to fix the ratlines to them, in order to prevent them from slipping down by the weight of the sailors; they are firmly attached by a knot called a clove-hitch, to all the shrouds except the fore-most or aft-most.

REACH—the distance comprehended between any two points on the banks of a river wherein the current flows, in a straight uninterrupted course.

REAR—a name given to the last division of a squadron, or the last squadron of a fleet, and which is accordingly commanded by a third officer of the said squadron or fleet. See the article **DIVISION**.

RECHANGE—such tackle as is kept in reserve aboard the ship, to serve in case of failure of that already in use.

RECKONING — the art of estimating the quantity of a ship's way, or of the distance run between one place and another. Or, more generally, a ship's reckoning is that account whereby at any time it may be known where the ship is, and on what course or courses she is to steer to gain her port. This is usually performed by means of the log-line. See the article **LOG-LINE**. Yet this is subject to great irregularities. Vitruvius advises an axis to be passed through the sides of the ship with two large heads propending out of the ship, wherein are to be included wheels touching the water, by whose revolution the space passed over in any given time may be measured. The same has been

since recommended by Snelling, but there are few who have written on navigation, but have shewn the insufficiency of this method. See the article **DEAD**, or **DEAD RECKONING**.

RECTIFIER—an instrument used for determining the variation of the compass, in order to rectify the ship's course, &c. It consists of two circles, either laid upon, or let into one another, and so fastened together in their centres, that they represent two compasses, the one fixed, the other moveable; each is divided into 32 points of the compass, and 360 degrees, and numbered both ways from the north and the south, ending at the east and west, in ninety degrees. The fixed compass represents the horizon in which the north, and all the other points, are liable to variation. In the centre of the moveable compass is fastened a silk thread, long enough to reach the outside of the fixed compass; but if the instrument be made of wood, an index is used instead of the thread.

REED—See the article **FIRE-SHIP**.

REEF—a certain portion of a sail comprehended between the top or bottom and a row of eyelet holes generally parallel thereto. The intention of the reef is to reduce the surface of the sail in proportion to the increase of the wind, for which reason there are several reefs parallel to each other in the superior sails; thus the top-sails of ships are generally furnished with three reefs, and sometimes four, and there are always three or four reefs parallel to the foot or bottom, of those main-sails and fore-sails which are extended upon booms.

REEF—also implies a chain of
rocks

rocks lying near the surface of the water.

REEF-BAND—a piece of canvas sewed across the sail to strengthen it in the place where the eyelet holes of the reefs are formed.

REEFING—the operation of reducing a sail by taking in one or more of the reefs, and is either performed with lines, points, or knittles. The top-sails are always and the courses generally reefed with points, which are flat-braided pieces of cordage, whose lengths are nearly double the circumference of the yard. These being inserted in the eyelet holes are fixed in the sail by means of two knots in the middle, one of which is before, and the other behind; the reef band.

In order to reef the top-sails with more facility and expedition, they are lowered down and made to thiver in the wind; the extremities of the reef are then drawn up to the yard-arms by the reef-tackles, where they are securely fastened by the earrings; the space of sail comprehended in the reef is then laid smoothly over the yard in several folds, and the whole is completed by tying the points about the yard so as to bind the reef close up to it. In reefing a course the alter-end of the point should be thrust forward between the head of the sail and the yard, and the fore leg of the same point should come aft, over the head of the sail, and also under the yard, and thus crossed over the head of the sail, the two ends should be tied on the upper side of the yard as tight as possible.

When a sail is reefed at the bottom it is generally done with knittles in the room of points, or in large sails such as the main-sails

of armed cutters, pieces of line termed reef-hanks, are fixed in the eyelet holes; for other methods of reducing a sail see the articles **BALANCE** and **GOOSE-WING**.

REEF-LINE—a small rope, by which they formerly reefed the courses, by passing it spirally thro' the holes of the reef, and over the head of the sail, alternately, from the yard-arms to the slings, and then straining it as tight as possible.

REEF-TACKLE—a tackle upon deck, communicating with its pendant, which passing through a block at the top-mast-head, and through a hole in the top-sail-yard-arm, is attached to a cringle, a little below the lowest reef. Its use is to pull the skirts of the top-sails close up to the extremities of the top-sail-yards, in order to lighten the labour of reefing.

CLOSE-REEFED—is when all the reefs of the top-sails are taken in.

REELS—are machines moving round an axis, and serving to wind various lines upon, as the

DEEP-SEA REEF—that which contains the deep-sea line.

LOG REEL—that appropriated for the log-line.

TWINE REEL, —YARN REEL, &c.

TO REEVE—is to pass the end of a rope through any hole, as the channel of a block, the cavity of a thimble, cleat, ring-bolt, cringle, &c. Hence, to pull a rope out of a block is called unreefing.

REFRACTION—is that property of the atmosphere which, by bending the rays of light in their passage to the eye, causes the altitude of heavenly bodies to appear greater than it really is, especially near the horizon.

REFITTING

REFITTING — is generally understood to imply the repairing any damages which a ship may have sustained in her sails or rigging by battle or tempest, but more particularly by the former. See the articles **ENGAGEMENT**, **REPAIR**, &c.

REGULATING CAPTAIN—an officer whose duty it is to examine the seamen intended for the navy, whether pressed or volunteers.

REIGNING WINDS—a name given to the winds which usually prevail on any particular coast or region. See the article **WIND**.

RELIEVING TACKLES—two strong tackles, furnished each with guys and pendants, which, passing under the ship's bottom to the opposite side, are attached to the lower gun-ports; the tackles being hooked to the wharf or pontoon, by which the vessel is careened. They are used to prevent a ship from overturning on the careen, and to assist in bringing her upright after that operation is finished.

RELIEVING TACKLES—are also those which are occasionally hooked to the tiller in bad weather or in action, when the wheel or tiller-rope is broken or shot away.

RELIEVING TACKLE—is also a name sometimes given to the train-tackle of a gun-carriage.

RENDERING—is usually expressed of a complicated tackle, laniard, or lashing, when the effect of the power applied is communicated with facility to all the parts without being interrupted. It is therefore used in contradistinction to jamming or sticking fast.

RENDEZVOUS—the port or place of destination where the several ships of a fleet or squadron

are appointed to join company, or to rejoin in case of separation.

RENDEZVOUS—is also a name given to any house where a pressing gang resides, and volunteers are invited to enter into the navy.

REPAIR — the operation of repairing any injuries, or supplying any deficiencies which a ship may suffer from age, battle, storm, accident, &c.

The repair is necessarily greater or smaller in proportion to the loss which the vessel has sustained. Accordingly a suitable number of the timbers, beams, or planks, or a sufficient part of either, are removed, and new pieces fixed in their places. The whole is completed by breaming, caulking, and paying the body with a new composition of stuff. See the article **BREAMING**, &c.

TO REPEAT SIGNALS—is to make the same signal with the admiral, in order to its being more readily distinguished at a distance, or through smoke, &c.

TO REPEAT A SIGNAL—sometimes implies to make a signal over again, on account of its not having been attended to the first time. The repeat is usually accompanied with a gun.

REPEATING-SHIP—is a vessel (usually a frigate) appointed to attend each admiral in a fleet, and to repeat every signal he makes, with which she immediately sails the whole length of the fleet or squadron, if the signal is general, or to the ship for which it is intended, if particular, and then returns to her station near the admiral's ship.

REPRISAL, OR REPRISE—is the retaking a vessel from the enemy soon after the first capture, or at least before she has arrived in any neutral or hostile port.

If a vessel thus retaken, has been twenty-four hours in the possession of the enemy, she is deemed a lawful prize; but if retaken within that time, she is to be wholly restored to the owner, upon his allowing one-third of her value for salvage to the recaptors. Also, if a vessel has, from any cause, been abandoned by the enemy, before he has taken her into any port, she is to be restored to the original proprietor. See the article SALVAGE.

RETREAT—the order or disposition in which a fleet or squadron declines engagement, or flies from a pursuing enemy.

RHUMB, RUMB, or RUM—is a verticle circle of any given place, or the intersection of a part of such a circle with the horizon. Rhumbs, therefore, coincide with points of the world, or of the horizon; and hence the mariners distinguish the thumbs by the same names as the points and winds. But we may observe, that the rhumbs are denominated from the points of the compass in a different manner from the winds. Thus at sea, the N. E. wind is that which blows from the north-east point of the horizon towards the ship in which we are; but we are said to sail upon the north-east rhumb when we go towards the north-east. They usually reckon thirty two rhumbs, which are represented by the thirty-two lines in the rose or card of the compass.

Aubin defines a rhumb to be a line on the terrestrial globe, sea-compass, or sea-chart; representing one of the thirty-two winds which serve to conduct a vessel; so that the rhumb a vessel pursues is conceived as its route or course.

Rhumbs are divided and subdivided like points. Thus the whole

rhumb answers to the cardinal point. The half rhumb answers to a collateral point, or makes an angle of 45 degrees with the former. The quarter rhumb makes an angle of 22 degrees 30 minutes therewith; and the half quarter rhumb makes an angle of 11 deg. 15 min.

Sometimes navigators divide the 32 points into four quarters, and call the rhumb next the east the first rhumb, the next to that the second rhumb, &c.

RHUMB-LINE—is a line prolonged from any point of the compass in a nautical chest, except the four cardinal points; or it is a line which a ship, keeping in the same collateral point or rhumb, describes throughout its whole course.

The great property of the rhumb line, or loxodromia, and that from which some authors define it, is, that it cuts all the meridians under the same angle. This angle is called the angle of the rhumb, or the loxodromic angle.

The angle which the rhumb-line makes with any parallel to the equator, is called the complement of the rhumb.

An idea of the origin and properties of the rhumb-line, the great foundation of navigation, may be conceived thus: a vessel beginning its course, the wind wherewith it is driven makes a certain angle with the meridian of the place; and as it is supposed the vessel runs exactly in the direction of the wind, it makes the same angle with the meridian which the wind makes. For example: a wind that is north-east, and which of consequence makes an angle of 45 deg. with the meridian, is equally north-east where-
ever

ever it blows, and makes the same angle of 45 deg. with all the meridians it meets. A vessel, therefore, driven by the same wind, always makes the same angle with all the meridians it meets with on the surface of the earth.

If the vessel sails north and south, it makes an angle infinitely acute with the meridian, i. e. it is parallel to it, or rather sails in it. If it runs east and west, it cuts all the meridians at right angles. In the first case, it describes a great circle; in the second, either a great circle, viz. the equator, or a parallel to it. If its course be between the two, it does not then describe a circle, since a circle, drawn in such a manner, would cut all the meridians at unequal angles, which the vessel cannot do. It describes, therefore, another curve: the essential property whereof is, that it cuts all the meridians under the same angle. This curve is what we call the loxodromic curve, rhumb-line, or loxodromy. It is a kind of spiral, which, like the logarithmic spiral, makes an infinity of circumvolutions without ever arriving at a certain point, to which it yet still tends, and towards which it approaches at every step. This asymptotic point of the rhumb-line is the pole, at which, were it possible for it to arrive, it would find all the meridians conjoined and be lost in them. The course of a vessel, then, except in the two first cases, is always a rhumb-line; which line is the hypotenuse of a reſtangled triangle, whose two other sides are the ship's way or distance run in longitude and latitude. Now the latitude is usually had by observation, and the angle of the rhumb with one or other of the two sides,

by the compass. All, therefore, that is required by calculation in sailing, is the value of the length of the rhumb-line, or the distance run. But as such curve line would prove very perplexing in the calculation, it is necessary to have the ship's way in a right line; which right line, however, must have the essential property of the curve line, viz. toward all the meridians at right angles.

RIBBANDS—in naval architecture, long narrow flexible pieces of timber, nailed upon the outside of the ribs from the stem to the stern-post, so as to encompass the ship lengthways; of these the principal are the

FLOOR-RIBBAND, which terminates at the height of the rising line of the floor; and the

BREADTH-RIBBAND—which coincides with the wing transom, at the height of the lower-deck; all the rest are termed intermediate ribbands.

The ribbands being judiciously arranged with regard to their height and distance from each other, and forming regular sweeps round the ship's body, will compose a kind of frame, whose interior surface will determine the curve of all the intermediate or filling timbers, which are stationed between the principal ones. As the figure of a ship's bottom approaches to that of a conoid, and the ribbands having a limited breadth, it is apparent that they cannot be applied to this convex surface without forming a double curve, which will be partly vertical and partly horizontal, so that the vertical curve will increase by approaching the stem, and still more by drawing near the stern-post. It is also evident, that by deviating from the middle line of

the ship's length, as they approach the extreme breadth at the mid-ship frame, the ribbands will also form an horizontal curve. From this double curve it results that the ribbands will appear in different points of view when delineated on different planes of the same ship.

RIBS OF A SHIP—a figurative expression for the timbers.

RIBS OF A PARREL—are short pieces of plank, each having two holes in it, through which the two parts of the parrel-rope are received, the inner smooth edge of the rib resting against and sliding readily up and down the mast. See the article **PARREL**.

To RIDE—signifies to be held in a particular situation by one or more anchors and cables.

To RIDE A-PEEK. See the article **PEEK**.

To RIDE ATHWART, OR BETWEEN WIND AND TIDE—is when the wind and tide are in opposition, but so nearly equal in their force, that the ship rides with the tide running against one side, and the wind blowing upon the other.

To RIDE HEAD TO WIND—is when the wind is so much more powerful than the tide, as to cause the ship to swing till her head is in the direction of the former.

To RIDE OUT A GALE—signifies that the ship does not drive during the storm.

To RIDE EASY—is said of a ship when she does not labour or feel a great strain upon her cables.

To RIDE HARD—is, on the contrary, to pitch violently in the sea, so as to strain her cables, masts, or hull.

To RIDE A HEAD-ROPE OF A SAIL, &c.—is to shake and stretch it by treading upon it, while a pur-

chase is employed at the end to extend it.

A rope is said to ride, when one of the turns by which it is wound round lies over another, so as to interrupt the operation, or prevent its rendering.

RIDERS—a sort of interior ribs, fixed occasionally in a ship's hold, opposite to some of the principal timbers to which they are bolted, and reaching from the keelson to the beams of the lower-deck, and sometimes higher, in order to strengthen her frame.

They are bolted to the other timbers, to support them when it is apprehended the ship is not sufficiently strong in the part where they are fixed, which is generally a-midships. They have also their floor pieces and futtocks, and sometimes their top-pieces, and being scarfed to each other in the same manner as the timbers, they have similar distinctive appellations, as the

RIDER FUTTOCKS,

LOWER FUTTOCK RIDERS,

MIDDLE FUTTOCK RIDERS,

UPPER FUTTOCK RIDERS,

FLOOR RIDERS. See the article **FLOOR**.

The riders ought to be stationed so as to lie between two ports of the lower deck, and to correspond with the timbers to which they are attached, in such manner as that the scarfs of the riders may be clear of the timbers. They are scored upon the keelson, clamps, and thick stuff of the bottom. They are secured by bolts, which are driven from without, so as to penetrate the outside planks, the timbers, the clamps, and the riders, on the inside of which last they are fore-locked.

These pieces are rarely used in mer-

merchant-ships, on account of the space they occupy in the hold; neither are they generally used in vessels of war, at least till the ship is enfeebled by service.

RIDGE—a long narrow assemblage of rocks, lying near the surface of the sea. See the articles **REEF** and **SHALLOW**.

To **RIG**—is to fit the shrouds, stays, braces, &c. to their respective masts and yards.

To **RIG IN A BOOM**—is to draw it in from a situation upon the end of a yard, bowsprit, or another boom, &c. to extend the foot of a sail.

RIGGERS—men who make a livelihood by going on board ships to fit the standing and running rigging. It is also a name given in the navy to any party of men sent to the rigging-loft or hulk to prepare the standing rigging for putting over the mast-heads.

RIGGING—a general name given to all the ropes employed to support the masts, and to extend or reduce the sails, or arrange them to the disposition of the wind.

STANDING RIGGING—is that which is used to sustain the masts, and remains in a fixed position; as the shrouds, stays, and back-stays.

RUNNING RIGGING—is that which is fitted to arrange the sails, by passing through various blocks in different places about the masts, yards, shrouds, &c. as the braces, sheets, haliards, clew-lines, &c. &c.

LOWER RIGGING, is that which attaches to the lower masts.

TOP-MAST RIGGING—consists of the top-mast shrouds, stays, and back-stays.

TOP-GALLANT RIGGING—is fixed to the top-gallant-masts.

RIGGING-LOFT—a kind of long room or gallery in a dock-yard, where the standing rigging is fitted by stretching, serving, splicing, seizing, &c. to be in readiness for the ship.

RIGHTING—the act of restoring a ship to her upright position after she has been laid upon a careen, which is effected by casting loose the careening tackles, and if necessary, heaving upon the relieving-tackles.

A ship is also said to right at sea, when she rises with her masts erect, after having been pressed down on one side by the effort of the wind upon her sails.

To **RIGHT THE HELM**, implies to replace it in the middle of the ship, after having put it out of that position.

RIM, or **BRIM**—a name given to the circular edge of a top. See the article **TOP**.

RING-BOLT, an iron bolt with an eye at one end, wherein is fitted a circular ring. They are used for various purposes, but more particularly for managing and securing the caannon; and are, for this purpose, fixed in the edges of the gun-ports. They are driven through the plank and the corresponding beam or timber, and retained in this position by a small pin thrust through a hole in the small end.

RING-ROPE—short pieces of rope, tied occasionally to the ring-bolts of the deck, to stopper or fasten the cable more securely when the ship rides with a heavy strain.

RING-TAIL—a quadrilateral sail, extending on a small mast, which is occasionally erected for that purpose on a ship's taffarel, the lower part being stretched out by a boom, which projects over

the stern horizontally.

RING-TAIL—is also the name of a kind of studding-sail hoisted beyond the after-edge of those sails, which are extended by a gaff and a boom over the stern. The two lower corners of this sail are stretched out to a boom called a

RING-TAIL BOOM—which rigs in and out upon the main or driver boom, in the same manner that a studding-sail boom does on the top-sail-yards.

RIPPLING—a broken and interrupted noise, produced by a current on or near the sea-coast; the effect of which is also apparent to the eye, by occasioning an ebullition or bubbling up of the water.

RISING-LINE, a name given by shipwrights to an incurvated line, drawn on the plane of elevation, to determine the height of the ends of all the floor-timbers throughout the ship's length, and which accordingly ascertains the figure of the bottom with regard to sharpness or flatness.

ROAD, or ROAD-STEAD—a bay, or place of anchorage, at some distance from the shore, on the sea-coast, whither ships or vessels occasionally repair, to receive intelligence, orders, or necessary supplies, or to wait for a more favourable wind, &c.

A GOOD ROADSTEAD—is that which is protected from the reigning winds and the swell of the sea, has a good anchoring ground, and is a competent distance from the shore.

AN OPEN ROAD—is one which is not sufficiently inclosed from the wind and sea.

ROADER, or ROADSTER—a vessel riding at anchor in a road,

bay, or river. If a vessel under sail strike against any roader and damage her, the former is obliged by law to make good the damages sustained by the latter; roaders are careful to anchor at a competent distance from each other, so as not to intercept each other's departure.

ROBANDS, or ROPE-BANDS, pronounced **ROBINS**—short flat plaited pieces of rope, having an eye worked in one end; they are used in pairs to tie the upper edges of the square sails to their respective yards, the long leg passing over the yard two or three times round, and the short leg coming under, is tied to it upon the yard.

ROCKY, composed or abounding in stone, slate, &c. as distinguished from sandy, muddy, &c.

A HALF-TIDE ROCK—a rock which appears above water at half-ebb.

ROGUES-YARN, a name given to a rope-yarn which is twisted in a contrary manner to the rest of a rope, and being tarred, if in a white rope, but white if in a tarred rope is easily discovered; it is placed in the middle of the strand in all cables or cordage made for the king's service, to distinguish them from the merchant's cordage.

ROLLER—a cylindrical piece of timber, fixed either horizontally or vertically in different parts of a ship, so as to revolve about an axis; it is used to prevent the cables, hawsers, and running rigging from being chafed by lessening the friction they would otherwise sustain.

ROLLERS—are also moveable pieces of wood of the same figure, which are occasionally placed under boats, pieces of timber, &c.

in order to move them with greater facility.

ROLLING—the motion by which a ship rocks from side to side like a cradle, occasioned by the agitation of the sea.

Rolling is accordingly a sort of revolution about an imaginary axis passing through the centre of gravity of a ship, so that the nearer the centre of gravity is to the keel, the more violent will be the rolling motion; because the centre, about which the vibrations are made, is placed so low in the bottom, that the resistance made by the keel to the volume of water which it displaces in rolling, bears very little proportion to the force of the vibration above the centre of gravity, the radius of which extends as high as the mast-heads. But if the centre of gravity is placed higher above the keel, the radius of vibration will not only be diminished, but an additional force to oppose the motion of rolling will be communicated to that part of a ship's bottom which is below the centre of gravity.

Many fatal disasters have arisen to ships from their violent rolling, as the loss of the masts, loosening the cannon, and straining the decks and sides; it is therefore particularly necessary to guard against it as much as possible, not only in the construction of the bottom, but by causing the centre of gravity of the ship to fall as near the load-water line as possible, which can only be effected by a judicious arrangement of the ballast or cargo.

ROLLING-TACKLE, a purchase occasionally fixed on the weather quarter of a yard, in order to confine it and prevent its chafing when a ship rolls heavily.

ROLLING-HITCH. See the article **HITCH**.

ROOM—a name given to some particular apartment in a ship, as, **THE COOK-ROOM**. See the article **GALLEY**.

THE BREAD-ROOM—is in the aftermost part of the hold, being partitioned off and properly lined, to receive the bread, and keep it dry.

GUN-ROOM. See the article **GUN**.

LIGHT-ROOM. See the article **LIGHT**.

STEWARD-ROOM—the apartment where the steward weighs, measures, and serves out the provisions to the ship's company; it is usually situated on the orlop-deck, adjoining to the bread-room.

SAIL-ROOMS are places on the orlop-deck inclosed for the reception of the sails; they are distinguished according to their relative situation, as, the fore sail-room, the after sail-room, &c.

SLOP-ROOM. See the article **SLOPS**.

STORE-ROOM. See the article **STORES**.

SPIRIT-ROOM—a space in the after-part of a ship's hold, set apart for the reception of wine, brandy, &c.

WARD-ROOM, a room over the gun-room in ships of war, where the lieutenants, and other principal officers sleep and mess.

ROPE-BANDS. See the article **ROBANDS**.

ROPE-HOUSE—a long building in a dock-yard where ropes are made.

ROPES—a general name given to all sorts of cordage above one inch in circumference, used in rigging a ship.

Ropes are of two descriptions, viz.

CABLE-LAID—which are composed of nine strands, the three great strands containing each three small strands, and

HAWSER LAID—which are made with three strands, each composed of a certain number of rope-yarns in proportion to its required thickness.

ROPE-YARN—the smallest and simplest part of any rope, being one of the threads of which a strand is composed, so that the size of the luter and of the rope in which it is twisted are determined by the number of rope-yarns.

ROVER—a pirate or freebooter. See the article **PIRATE**.

ROUGH TREE—a name given in merchant ships to any mast, yard, or boom, placed as a rail or fence above the ship's side, from the quarter deck to the forecastle; it is, however, with more propriety, applied to any mast, &c. which remaining rough and unfinished, is placed in that situation.

ROUND-HOUSE—a name given in East-Indiamen and other large merchant-ships, to a cabin or apartment built on the after-part of the quarter-deck, and having the poop for its roof; this apartment is frequently called the coach in ships of war.

ROUND-HOUSE—is also a name given on board ships of war to certain necessaries built near the head, for the use of the mates, midshipmen, and warrant-officers.

ROUNDING—old ropes wound firmly and closely about that part of a cable which lies in the hawse, or at-vant the stem, &c. It is used to prevent the cable from being chafed. See the articles **KECKLING** and **SERVICE**.

ROUNDING-IN—generally im-

plies the act of pulling upon any slack rope which passes through one or more blocks in a direction nearly horizontal, and is particularly applied to the braces, as, "round in the weather-braces." It is apparently derived from the circular motion of the rope about the sheave or pulley, through which it passes.

ROUNDING-UP—is used nearly in the same sense, only that it is expressed of a tackle which hangs in a perpendicular direction, without sustaining or hoisting any weighty body, and is opposed to over-hauling.

ROUND TURN—the situation of the two cables of a ship, which, when moored, has swung the wrong way three times successively. See the article **HAWSE**.

ROUND TURN—is also the passing a rope once round a timber-head, &c. in order to hold on. See the article **HOLDING ON**.

TO ROUSE—is to pull together upon a cable, &c. without the assistance of tackles, capstans, or other mechanical powers.

TO ROW—to impel a boat or vessel along the surface of the water by oars, which are managed in a direction nearly horizontal. See the article **OAR**.

ROW DRY—the order to those who row, not to splash water into the boat with their oars.

ROW-GALLEY. See the article **GALLEY**.

ROW-LOCKS—those parts of a gun-wale, or upper edge of a boat's side whereon the oars rest in the exercise of rowing.

ROWED-OFF ALL—the order for the rowers to cease and to lay their oars in the boat.

ROWERS—the persons by whom the oars are managed.

Row-

ROWING-GUARD. See the article **GUARD-BOAT.**

ROW-PORTS—little square holes cut in the sides of small vessels of war, parallel to the surface of the water, for the purpose of rowing them in a calm.

ROYAL—the name of a sail spread immediately above the top-gallant-sail, to whose yard arms the lower corners of it are attached; it is sometimes termed top-gallant-royal, and is never used but in fine weather.

RUDDER. See the article **HELM.**

CHOCKS OF THE RUDDER. See the article **CHOCKS.**

RUN—the utmost part of a ship's bottom, where it grows extremely narrow as the floor approaches the stern-post.

RUN—is also the distance sailed by a ship.

RUN—is also used among sailors to imply the agreement to work a single passage from one place to another; as, from Jamaica to England, &c.

To RUN DOWN A COAST—is to sail along by it.

To RUN DOWN A VESSEL—is to pass over her by running against her end-on, so as to sink her.

To RUN OUT THE GUNS—is, by means of the tackles, to force their muzzles out of the port-holes.

To RUN OUT A WARP—is to carry the end of a hawser out from the ship in a boat, and fasten it to some distant place to remove the ship towards that place, or to keep her steady whilst her anchors are lifted, &c.

To LET RUN A ROPE—is to let it quite loose.

A RUN-MAN—implies a deserter from a ship of war.

RUNG-HEADS—a name sometimes given by ship-wrights to the upper ends of the floor-timbers, which are otherwise more properly called floor-heads.

RUNNER—a thick rope used to encrease the mechanical power of a tackle. See the article **TACKLE.**

The runner passes through a large block, and has usually a hook attached to one of its ends, and one of the tackle-blocks to the other: in applying it, the hook of the runner, as well as the lower block of the tackle, is fixed to the object intended to be removed.

RUNNING-FIGHT—a battle in which the enemy endeavours to escape, while the British ships continue to pursue within gunshot.

RUNNING-RIGGING—all that part of a ship's rigging which passes through blocks, &c. and is used in contradistinction to standing-rigging. See the article **RIGGING.**

THE RUNNING PART OF A TACKLE—is synonymous with the fall, and is that part on which the power is applied to produce the intended effect.

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SADDLE—a small cleat or block of wood nailed upon the lower yard-arms, to retain the fludding sail booms in a firm and steady position; for this purpose, the cavity on the lower part of the saddle conforms to the cylindrical surface of the yard to which it is attached, and in like manner the hollow on the upper side answers to the figure of the boom, and serves as a channel whereby it may

run out or in along the yard as occasion requires.

SADDLE—is also a name given to several circular pieces of wood, as the saddle of a bowlprit, saddle of a boom, &c.

SAGGING TO LEeward—the movement by which a ship makes a considerable lee-way, or is driven far to leeward of the course whereon she apparently sails. It is generally expressed of heavy sailing vessels as opposed to keeping well to windward, or, in the sea phrase, holding a good wind.

SAIC—a sort of Grecian ketch, which has no top-gallant sail nor mizen sail.

SAIC—an assemblage of several breadths of canvass, or other texture sewed together, and extended on or between the masts to receive the wind, and impel the vessel through the water.

The edges of the cloths or pieces of which a sail is composed, are generally sewed together with a double seam, and the whole is skirted round at the edges with a cord called the bolt-rope.

SAILS—are all contained either between three or four sides; or, as they are otherwise termed, they are either triangular or quadrilateral.

The former of these are sometimes spread by a yard as lateen sails, or by a stay, as stay-sails, or by a mast as shoulder of mutton sails; in all which cases the foremost leech or edge is attached to the yard, mast, or stay, throughout its whole length. The latter, or those which are four-sided, are either extended by yards, as the principal sails of a ship, or by yards and booms, as the studding sails, drivers, ringtails, and all those sails which are set occasionally: or by gaffs and booms, as

the main-sails of sloops and brigantines.

The principal sails of a ship are the courses or lower sails; the top sails, which are next in order above the courses; and the top-gallant sails, which are extended above the top sails.

The courses are, the main-sail, fore-sail, and mizen; the sprit-sail, main stay-sail, fore-stay-sail, and mizen stay-sail; but more particularly the three first. The main-stay-sail is rarely used, except in small vessels.

In all quadrilateral sails, the upper edge is called the head, the sides or skirts are called leeches, and the bottom or lower edge is termed the foot; if the head is parallel to the foot, the two lower corners are denominated clues, and the upper corners earings.

In all triangular sails, and in those four-sided sails wherein the head is not parallel to the foot, the foremost corner at the foot is called the tack, and the after lower corner the clue; the foremost head is called the fore-leech, and the hindmost the after-leech.

The heads of most four-sided sails, and fore-leeches of lateen sails, are attached to their respective yard or gaff, by a number of small cords called robands, or by a lacing, and the upper extremities are made fast by earings.

The stay-sails are extended upon stays between the masts, whereon they are drawn up or down occasionally, as a curtain slides on its rod, and their lower parts are stretched out by a tack and sheet. The main-sail and fore-sail have a rope and a large single block made fast to each clue; the ropes called tacks lead forward to the ches-trees and bumkins, and the block receives a thick rope from
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ast, which is termed the sheet. The clues of the top-fails are drawn out to the extremities of the lower-yards by two large ropes called top-fail sheets, and the clues of the top-gallant fails are in like manner extended upon the top-fail yard-arms by ropes called top-gallant sheets.

The royals are set above the top-gallant fails, and the studding fails beyond the leeches or skirts of the main-fail and fore-fail, and of the top-fails and top-gallant-fails, their upper and lower edges being extended by small yards, and by poles run out beyond the extremities of the yards for this purpose. These fails are, however, only used in moderate weather.

All fails derive their name from the mast, yard, or stay, upon which they are extended. Thus the principal fail extended upon the main-mast is called the main-fail; the next above, which stands upon the main-top mast, is termed the main-top fail: that which is spread across the main-top-gallant-mast is named the main-top-gallant fail: the fail above it is called the main-royal. In the same manner there are the fore-fail, fore top-fail, fore top-gallant fail, and fore-royal; the mizen, mizen top fail, mizen top-gallant fail, and mizen-royal.

Thus also there are the main-stay fail, main top-mast-stay fail, main top-gallant-stay fail, and a middle-stay fail, (which stands between the two last); all these stay-fails are between the main and fore mast; the stay-fails between the main and mizen masts are the mizen stay-fail, the mizen top-mast stay fail, the mizen top-gallant stay fail, and sometimes a mizen royal-stay fail. The fails between the fore-mast and the

bowsprit are the fore stay-fail, the fore top-mast-stay fail, the jib, and sometimes a flying jib; and even a middle jib; there are besides two, and sometimes three square fails extended by yards under the bowsprit and jib-booms, one called the sprit-fail, the second the sprit-fail top-fail, and the third the sprit-fail top-gallant fail: the studding fails being extended upon the different yards of the main-mast and fore-mast, are also named according to their stations, the lower, top-mast, or top-gallant studding-fails.

For the other fails of a ship, such as the DRIVER, GAFF TOP-SAIL, RINGTAIL, &c. see those articles.

The ropes by which the lower yards of a ship are hoisted up to their proper height on the masts are called the jears; in all other cases the ropes employed for this purpose are called haliards; hence the fails are expanded by haliards, tacks, sheets, and bow-lines; and are drawn up together, or trussed up, by bunt-lines, clue-lines, leech-lines, reef-tackles, slab-lines and spilling-lines, the higher studding fails and the stay-fails are drawn down so as to be taken in by down-hauls, and the courses, top-fails, and top gallant fails, are wheeled about the mast so as to suit the various directions of the wind by braces.

AFTER-SAILS, are those that belong to the main-mast and mizen. They keep the ship to windward: on which account ships sailing on a quarter wind require a head-fail and an after-fail, one to countermand the other. See AFTER and HEAD.

NETTING SAIL—is only a fail laid over the nettings.

SAIL—is also a name applied to a vessel beheld at a distance under

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der sail, as, " We saw three sail in the north-east.

To SET SAIL—is to expand the sails in order to begin the action of sailing.

To LOOSE SAILS—is to unfurl them, and let them hang loose to dry.

To MAKE SAIL—is to extend an additional quantity of sail, so as to increase the ship's velocity.

To SHORTEN SAIL, is to reduce or take in part of the sails.

To STRIKE SAIL—is to lower it suddenly; which is particularly used in saluting or doing homage to a superior force, or to one whom the law of nations acknowledges as superior in certain regions. Thus all foreign vessels strike to an English man of war in the British seas. See the article SALUTE.

SAILING—the movement by which a vessel is impelled through the water by the action of the wind upon her sails. The effect of sailing is produced by a judicious arrangement of the sails to the direction of the wind; accordingly, the various modes of sailing are derived from the different degrees and situations of the wind with regard to the course of the vessel.

All the different methods of sailing may therefore be divided into four, viz. close-hauled, large, quartering, and afore the wind; all which relate to the direction of the wind with regard to the ship's course, and the arrangement of the sails.

SAILING—is also used for the art, or act of navigating (see the article NAVIGATION); or of determining all the cases of a ship's motion by means of sea-charts. And as these charts are constructed either on the supposition that the earth is a large extended flat surface, whence we obtain those that are called plane charts; or on

the supposition that the earth is a sphere, whence we derive globular charts. Sailing, may, therefore, be distinguished into two general kinds, viz. plane or plain, and globular sailing.

I. PLAIN SAILING. This is performed by means of a plane chart; in which case, as is evident from the construction of the chart, the meridians are considered as parallel lines, the parallels of latitude are at right angles to the meridians, the lengths of the degrees on the meridians, equator, and parallels of latitude, are every where equal; and the degrees of longitude are reckoned on the parallels of latitude as well as on the equator. We shall here suppose the terms COURSE, DEPARTURE, DISTANCE, RHUMB-LINE, &c. (see those articles), are perfectly understood; and observe, that if a ship sail either due north or south, the sails on a meridian, makes no departure, and her distance and difference of latitude are the same; and if a ship sail either due east or west, she runs on a parallel of latitude, makes no difference of latitude, and her departure and distance are the same.

It is to be observed farther, that the difference of latitude and departure always makes the legs of a right-angled triangle, whose hypotenuse is the distance the ship has sailed. It is obvious, from the consideration of such triangle, that when the course is 45 degrees or four points, the difference of latitude and departure are equal; when the course is less than forty-five degrees, the difference of latitude is greater than the departure; but when the course is greater than forty-five degrees, the departure is greater than the difference of latitude.

For the ready working of any single course, there is a table called a TRAVERSE Table (which see), usually annexed to treatises of navigation; which is so contrived, that by finding in it a given course, and a distance not exceeding one hundred miles, the difference of latitude and departure are had by inspection. And this table will serve for greater distances by taking their halves, thirds, fourths, &c. and doubling, trebling, quadrupling, &c. the difference of latitude and departure found to those parts of the distance.

RIGHT SAILING — is when a voyage is performed on some one of the four cardinal points.

If a ship sail under the meridian on the north or south points she varies not in longitude. If she sail under the equinoctial on the east or west points, she changes only the longitude. If she sail directly east or west, she only altereth the longitude.

OBLIQUE SAILING — though, in many cases, the bearing and distances of places are determined by the solution of right-angled triangles, yet at sea there are several in which oblique positions can be observed.

The doctrine of plane triangles is also applicable to the method of sailing by windward. It may be observed, in general, that when the wind is directly or partly against the ship's direct course to the place whither she is bound, she reaches her port by a kind of zigzag or Z like course, which is made by sailing with the wind first on one side of the ship and then on the other.

The windward or weather-side of a ship is that side on which the wind blows; the other being called the leeward or lee side.

When a ship sails the same way the wind blows, and the wind is said to be right aft, or right astern, her course is then sixteen points from the wind. When a ship sails with the wind blowing directly across her, she is said to have the wind on the beam, and her course is eight points from the wind. When a ship endeavours to sail towards that point of the compass from whence the wind blows, she is said to sail on the wind, or to ply to windward. A vessel sailing as near as she can to the point from whence the wind blows is said to be close-hauled; most ships will lie within about six points of the wind, but sloops and some other vessels will lie much nearer. When a ship sails on a wind, the windward tacks are always hauled forwards, and the leeward sheets aft. The starboard tacks are aboard when the starboard side is to windward, and the larboard to leeward; the larboard tacks are aboard when the larboard side is to windward, and the starboard to leeward. In order to know how near the wind a ship will lie, observe the course she goes on each tack, when she is close-hauled; then half the number of points between the two courses will shew how near the wind that ship will lie.

The most common cases in turning to windward may be constructed by the following precepts. Having drawn the meridian and parallel of latitude (or east and west line) in a circle representing the horizon of the place, mark in the circumference the place of the wind; draw the rhumb passing through the place bound to, and lay thereon the distance of that place from the centre. On each side of the wind, lay off in the circum-

cumference the points of degrees, shewing how near the wind the ship can lie, and draw these rhumbs; the first course will be on one of these rhumbs, according to the tack the ship leads with; draw a line from the place bound to, parallel to the other rhumb, and meeting the first, and this will shew the course and distance on the other tack.

2. **GLOBULAR SAILING**—is the method of estimating either the difference of latitude, difference of longitude, departure, course, or distance from any two of them being known, upon principles deduced from the figure of the earth; and in this consists the application and use of Mercator's Chart.

Global sailing, in the extensive sense here applied to the term, comprehends parallel sailing, middle latitude sailing, and Mercator's sailing; to which we may also add, circular sailing.

PARALLEL SAILING—is the art of finding what distance a ship should run due east or west in sailing from the meridian of one place, to that of another place in any parallel of latitude; the method of performing which is by sailing to the parallel of latitude the place is in, keeping a good account so as to be certain whether the place is then to the eastward or westward; and also, if possible, to know the longitude arrived at, and then to run due east or west till the ship comes near the longitude of the given place, where she is then sure to make the port required.

MIDDLE LATITUDE SAILING—is a method of solving the several cases of globular sailing by the principles of plane and parallel sailing jointly; and it is founded on the supposition that the depar-

ture is reckoned as a meridional distance in that latitude, which is a middle parallel between the latitude sailed from and the latitude come to. This method is not quite accurate, because the arithmetical mean of the cosines of two distant latitudes is not the cosine of the arithmetical mean of those latitudes; nor is the departure between two places on an oblique rhumb, equal to the distance between their meridians in a mean latitude; yet when the parallels of those places are near the equator, or not far distant from one another in any latitude, the error is inconsiderable.

MERCATOR'S SAILING is the art of resolving the several cases of globular sailing by plane trigonometry, with the assistance of a table of meridional parts, or of logarithmic tangents.

Meridional parts, miles, or minutes, are the parts by which the meridians in a Mercator's Chart do increase, as the parallels of latitude decrease.

The cosine of the latitude of any place being equal to the radius or semi-diameter of that parallel; therefore, in the true sea-chart or nautical planisphere, this radius being the radius of the equinoctial or whole sine of ninety degrees, the meridional parts at each degree of latitude must increase as the secants of the arch contained between that latitude and the equinoctial decrease.

The manner of working with the meridional parts, and logarithmic tangents, will appear from the two following cases.

1. Let the latitudes of two places be given, and the meridional difference of latitude between them be required. By the meridional parts, when they are on the same side

side of the equator, say the difference; when on different sides the sum of the meridional parts answering to each latitude, will give the meridional difference of latitude required.

By logarithmic tangents, when they are on the same side of the equator, say the difference of the logarithmic tangents; when on different sides, the sum of the logarithmic co-tangents, abating the index, of the half co-latitudes, divided by 12, 63, will give the meridional difference of latitude required.

2. Let the latitude of one place and the meridional difference of latitude between that and another place be given, and the latitude of the other place be required.

The sum of the meridional parts of the given latitude, and the given meridional difference of latitude, when they have like names, found in the table of meridional parts, will give the latitude sought. Or, multiply the given meridional differences of latitude by 12, 63, and in the former case subtract, but in the latter case add the product to the logarithmic tangent of the given half co-latitude, the degrees corresponding to the tangent of the remainder, or of the sum, being doubled, will give the co-latitude required.

CIRCULAR, or GREAT CIRCLE SAILING — is the art of finding what places a ship must go thro', and what courses to steer, so that her track shall be in the arc of a great circle, or nearly so, passing through the place sailed from, and that bound to. This method of sailing has been proposed, because the shortest distance between two places on the sphere is an arc of a great circle, intercepted between

them, and not the spiral or rhumb passing through them, unless that rhumb coincides with a great circle, which can only be on a meridian or on the equator. As the solutions of the cases in Mercator's sailing are performed by plane triangles, in this method of sailing they are resolved by the means of spheric triangles.

To bring Sailing to certain rules M. Renau computes the force of the water against the ship's rudder, stern, and side, and that of the wind against her sails. In order to this, he 1. considers all fluid bodies, as the air, water, &c. as composed of little particles, which when they act upon; or move against any surface; do all move parallel to one another, or strike against the surface after the same manner. 2. That the motion of any body, with regard to the surface on which it is to strike, must be either perpendicular, parallel, or oblique. The author then proceeds to illustrate his observations with several examples.

Another author on this subject observes, "When a ship changes her state of rest into that of motion, as in advancing out of an harbour, or from her station at anchor, she acquires her motion very gradually, as a body which arrives not at a certain velocity till after an infinite repetition of the action of its weight. The first impression of the wind greatly affects the velocity, because the resistance of the water might destroy it, since the velocity being but small at first, the resistance of the water which depends upon it, will be very feeble, but as the ship increases her motion the force of the wind on her sails will be diminished; whereas, on the contrary,

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the resistance of the water on the bow will accumulate in proportion to the velocity with which the vessel advances. Thus the repetition of the degrees of force which the action of the sails adds to the motion of the ship, is perpetually decreasing, while, on the contrary, the new degrees added to the effort of resistance on the bow, are always augmenting. The velocity is then accelerated in proportion as the quantity added is greater than that which is subtracted; but when the two powers become equal, when the impression of the wind upon the sails has lost so much of its force as only to act in proportion to the opposite impulse of resistance on the bow, the ship will then acquire no additional velocity, but continue to sail with a constant uniform motion. The great weight of the ship may indeed prevent her from acquiring her greatest velocity, but when she has attained it, she will advance by her own intrinsic motion, without gaining any new degree of velocity, or lessening what she has acquired. She moves then by her own proper force, *in vacuo*, without being afterwards subject either to the effort of the wind on the sails, or to the resistance of the water on the bow. If at any time the impulsion of the water on the bow should destroy any part of the velocity, the effort of the wind on the sails will revive it, so that the motion will continue the same. It must however be observed, that this state will only subsist when these two powers act upon each other in direct opposition, otherwise they will mutually destroy one another. The whole theory of working ships depends on this counter-action, and the perfect equality which should

subsist between the effort of the wind and the impulsion of the water."

ORDER OF SAILING—the general disposition of a fleet of ships when proceeding on a voyage or an expedition. It is generally found most convenient for ships of war to be formed in three parallel lines or columns.

A HEAVY SAILER—a vessel which can advance but slowly.

A PRIME SAILER—is one which is capable of attaining a great velocity.

SAIL-LOFT—a large apartment in dock-yards where the sails are cut out and made.

SAIL-MAKER—a subaltern officer on board ships of war, who, (with his mates,) has the care of repairing or altering the sails, according to the captain's directions.

SAILOR—a person trained in the exercise of fixing the machinery of a ship, and managing her either at sea or in a road or harbour.

FRESHWATER SAILOR—an epithet of derision, applied to those who have never been at sea.

SAIL-YARD—See the article **YARD**.

SALLY-PORT—a large port on each quarter of a fire-ship, out of which the officers and crew make their escape into the boats as soon as the train is fired.

SALT-PITS—reservoirs on a coast, to contain sea water for the purposes of making salt.

The saltness of the sea, lakes, &c. is a thing that has long puzzled and perplexed philo-sophers to account for. The honourable Mr. Boyle believes it to be supplied not only from rocks and masses of salt, which at the beginning were, or, in some countries may yet be found, either at the bottom of the sea, or at the sides,

sides, where the water can reach them, but also from the salt which the rivers, rains, and other waters, dissolve in their passage through divers parts of the earth, and at length carry with them into the sea. Buffon, and most modern philosophers, acquiesce in this opinion.

SALVAGE—a third part of the value of any thing recovered from the enemy, after having remained in his possession twenty-four hours, or of any thing dragged up from the bottom of the sea.

SALVAGE MONEY—is a reward allowed by the civil and statute law, for the saving of ships or goods from the dangers of the sea, pirates, or enemies.

When any ship is in danger of being stranded or driven on shore, justices of the peace are to command the constables to assemble as many persons as are necessary to preserve it; and, on its being preserved by their means, the persons assisting therein shall, in 30 days after, be paid a reasonable reward for the salvage, otherwise the ship or goods shall remain in the custody of the officers of the customs as a security for the same.

SALUTE—a testimony of respect or of homage rendered by the ships of one nation to those of another, or by ships of the same nation to a superior or an equal. This ceremony is variously performed, according to the circumstances, rank, or situation of the parties: it consists in firing a certain number of cannon or volleys of small arms, in striking the colours or top-sails, or in three general shouts of the whole ship's crew mounted upon the yards and rigging for that purpose.

SALUTE—The principal re-

gulations with regard to salutes in the royal navy are as follow:

“When a flag-officer salutes the admiral and commander in chief of the fleet, he is to give him fifteen guns; but when captains salute him they are to give him seventeen guns; the admiral or commander in chief of the fleet, is to return two guns less to flag-officers, and four less to captains. Flag-officers saluting their superior or senior officer, are to give him thirteen guns. Flag-officers are to return an equal number of guns to flag-officers bearing their flags on the same mast, and two guns less to the rest, as also to captains.

“When a captain salutes an admiral of the white or blue, he is to give him fifteen guns; but to vice and rear-admirals, thirteen guns. When a flag-officer is saluted by two or more of his majesty's ships, he is not to return the salute till all have finished, and then to do it with such a reasonable number of guns as he shall judge proper.

“In case of the meeting of two squadrons, the two chiefs only are to exchange salutes. And if single ships meet a squadron consisting of more than one flag, the principal flag only is to be saluted. No salutes shall be repeated by the same ships unless there has been a separation of six months at least.

“None of his majesty's ships of war, commanded only by captains, shall give or receive salutes from one another in whatsoever part of the world they meet.

“A flag-officer, commanding in chief, shall be saluted upon his first hoisting his flag, by all the ships present, with such a number of guns as is allowed by the first, third, or fifth articles.

“When

“ When any of his majesty's ships shall meet with any ship or ships belonging to any foreign prince or state, within his majesty's seas (which extend to Cape Finisterre) it is expected that the said foreign ships do strike their top-sail, and take in their flag, in acknowledgment of his majesty's sovereignty in those seas: and if any shall refuse, or offer to resist, it is enjoined to all flag-officers and commanders, to use their utmost endeavours to compel them thereto, and not suffer any dishonour to be done to his majesty. And if any of his majesty's subjects shall so much forget their duty, as to omit striking their top-sail in passing by his majesty's ships, the name of the ship and master, and from whence, and whither bound, together with affidavits of the facts, are to be sent up to the secretary of the admiralty, in order to their being proceeded against in the admiralty court. And it is to be observed, that in his majesty's seas, his majesty's ships are in no ways to strike to any; and that in no other parts, no ship of his majesty is to strike her flag or top-sail to any foreigner, unless such foreign ship shall have first struck, or at the same time, strike her flag or top-sail, to his majesty's ship.

“ The flag-officers and commanders of his majesty's ships are to be careful to maintain his majesty's honour upon all occasions, giving protection to his subjects, and endeavouring, what in them lies, to secure and encourage them in their lawful commerce; and they are not to injure, in any manner, the subjects of his majesty's friends and allies.

“ If a foreign admiral meets with any of his majesty's ships

and salutes them, he shall receive gun for gun. If he be a vice-admiral, the admiral shall answer with two guns less. If a rear-admiral, the admiral and vice-admiral shall return two less; but if the ship be commanded by a captain only, the flag-officers shall give two guns less, and captains an equal number.

“ When any of his majesty's ships come to an anchor in a foreign port or road, within cannon-shot of its forts, the captain may salute the place with such a number of guns as have been customary, upon good assurance of having the like number returned, but not otherwise. But if the ship bears a flag, the flag-officer shall first carefully inform himself how flags of like rank belonging to other crowned heads, have given or returned salutes, and to insist upon the same terms of respect.

“ It is allowed to the commanders of his majesty's ships in foreign parts, to salute the persons of any admirals, commanders in chief, or captains of ships of war of foreign nations, of foreign noblemen, or strangers of quality; as also the factories of the king's subjects, coming on board to visit the ship; and the number of guns is left to the commander as shall be suitable to the occasion and the quality of the persons visiting; but he is nevertheless to remain accountable for any excess in the abuse of this liberty. If the ship visited be in company with other ships of war, the captain is not to make use of the civilities allowed in the preceding articles but with leave and consent of the commander in chief or the senior captain.

“ Merchant ships, whether foreigners

reigners or belonging to his majesty's subjects, saluting the admiral of the fleet, shall be answered by six guns less; when they salute any other flag ships, they shall be answered by four guns less; and if they salute men of war commanded by captains, they shall be answered by two guns less. If several merchant ships salute in company, no return is to be made till all have finished, and then by such a number of guns as shall be thought proper; but though the merchant ships should answer, there shall be no second return.

"None of his majesty's ships of war shall salute any of his majesty's forts or castles in Great Britain or Ireland on any pretence whatsoever."

SAMPANE — a kind of vessel used by the Chinese.

SAMSON'S-POST — a sort of pillar erected in a ship's hold, between the lower deck and the keelson, under the edge of a hatchway, and furnished with several notches, which serve as steps to ascend or descend.

This post, being firmly driven into its place, not only serves to support the beam and fortify the vessel in that place, but also to prevent the cargo or materials contained in the hold, from shifting to the opposite side, by the rolling of the ship in a turbulent and heavy sea.

SAMSON'S-POST — is also the name of a strong piece of timber used on board ships of war, which being placed in a sloping position, with the upper end resting against a beam, serves, by means of a single block lashed near its middle, to form a return for a tackle-fall, and therefore affords space for a greater number of hands to clap on.

SAUCER OF A CAPSTAN — is a socket of iron let into a wooden stock or standard, called the step, resting upon and bolted to the beams. Its use is to receive the spindle or foot on which the capstan rests and turns round.

SCALING — the act of cleaning the inside of a ship's cannon by the explosion of a small quantity of powder.

SCANT — is a term applied to the wind when it becomes unfavourable to a ship's course, after having been fair. It is distinguished from a foul wind, as in the former a ship is still enabled to sail on her course, although her progress is considerably retarded, but in the latter she is obliged to deviate from it.

SCANTLING — the dimensions of any piece of timber with regard to its breadth and thickness.

SCARFING — a particular method of uniting two pieces of timber together by the extremities, so that the end of one goes over the end of the other, being tapered so that the one may be let into the other, and become even, as the keel-pieces. But when the ends of the two pieces are cut square and put together, they are said to butt to one another (see the article **BUTT**;) and when another piece is laid on and fastened to both, as is the case in all the frame timbers, this is called scarfing the timbers, and half the piece which fastens the two timbers together is reckoned the length of the scarf.

SCHOONER — a small vessel with two masts, whose main-sail and fore-sail are both suspended by gaffs, like a sloop's main-sail.

SCIATIC STAY — a strong rope fixed from the main to the fore-mast heads in merchant ships: when loading or unloading, it

serves to sustain a tackle, which travelling upon it, may be shifted over the main or fore hatchways, as occasion requires.

SCORE OF A BLOCK, OR OF A DEAD EYE—the hole through which the rope passes.

SCOOP—a little hollowed piece of wood employed to throw the water out of a boat, which operation is usually called baling the boat.

SCRAPER—is an iron machine having two or three sharp edges, used to scrape off the dirty surface of the planks on a ship's side, or decks, or to clean the top-masts, &c. When the sides of a ship are thus sufficiently scraped, they are varnished over with turpentine, or a mixture of tar and oil, &c. which prevents the planks from being rent or split by the sun or wind.

SCREEN—is the name given to the pieces of canvass, or hammoc, hung round a birth for warmth and privacy. See the article **BIRTH**.

To **SCRUB THE HAMMOCKS**—to clean them by laying them flat on the deck and rubbing them with a brush in water.

SCUD—a name given by seamen to the low and thin clouds which are most swiftly wafted along by the wind in dull weather.

SCUDDING—the movement by which a ship is carried precipitately before a tempest, and is either performed with a sail extended on her fore-mast, or, if the storm is excessive, without any sail, which is then called scudding under bare poles. In sloops and schooners, and other small vessels, the sail employed for this purpose is called the square sail. In large ships it is either the fore-sail, at large, reefed, or with its

goosewings extended, according to degree of the tempest; or it is the fore-top-sail close-reefed, and lowered on the cap, which last is particularly used when the sea runs so high as to becalm the fore-sail occasionally, a circumstance which exposes the ship to the danger of broaching to.

As a ship flies with amazing rapidity through the water whenever this expedient is put in practice, it is never attempted in a contrary wind, unless when her condition renders her incapable of sustaining the mutual efforts of the wind and waves any longer on her side without being exposed to the most imminent danger.

The hazards to which this operation subjects a vessel are a pooping sea, the difficulty of steering to prevent broaching to, and the want of sufficient sea-room.

A sea striking the ship violently may dash it inwards, by which she must inevitably founder. In broaching to suddenly she is threatened with being immediately over-set, and for want of sea-room she is endangered by shipwreck on a lee-shore.

SCULKER—an idle person who, by keeping below and out of sight, endeavours to avoid his duty.

SCULL—a kind of short oar, the loom of which is only equal in length to half the breadth of the boat, whereby two may be managed by one man, one on each side.

To **SCULL**—is to cause a boat to advance by a particular method of managing a single oar over the boat's stern.

SCULLER—a term denoting a boat rowed by one man with two short oars or rather sculls; it is used in contradistinction to

OARS, which signifies a boat rowed by two men with oars.

SCUPPERS—certain channels cut through the water-ways and sides of a ship at proper distances, and lined with sheet lead in order to carry the water off the deck into the sea.

SCUPPER-HOSE—a leathern pipe or tube nailed round the outside of the scuppers of the lower decks, and which by hanging down prevents the water from entering when the ship inclines under a pressure of sail.

SCUPPER-NAILS—have very broad heads so as to retain a great quantity of the hose under them.

SCUPPER-PLUGS—are used to stop the scuppers occasionally.

SCUTTLE—a small hatchway, or hole, cut for some particular purpose through a ship's decks or sides, or through the coverings of her hatchways; and furnished with a lid which firmly incloses it when necessary. See the article **FIRESHIP**.

SCUTTLING—the act of cutting large holes through the bottom, sides, or decks of a ship, for various occasions, particularly when she is stranded or overset and continues to float on the surface in order to take out the whole or part of the cargo, provisions, stores, &c.

TO SCUTTLE A SHIP—to sink her by making holes through her bottom.

SCUTTLE-BUTT OR CASK—is a cask having a square piece sawn out of its bilge and lashed upon the deck. It is used to contain the fresh water for daily use, whence it is dipped out with a leaden cann.

SEA—is a great collection of water; by sailors, however, this word is variously applied to a sin-

gle wave, to the agitation produced by a multitude of waves in a tempest, or to their particular progress or direction. Thus they say, "We shipped a heavy sea, there is a great sea in the offing, the sea sets to the southward." Hence also a ship is said to head the sea when her course is opposed to the setting or direction of the surges.

A LONG SEA—implies an uniform and steady motion of long and extensive waves.

A SHORT SEA—is when they run irregularly, broken, and interrupted, so as frequently to break over a vessel's bow, side, or quarter.

SEA-BOAT—a vessel that bears the sea firmly, without labouring heavily, or straining her masts, or rigging.

SEA-BREEZE—the current of air which blows during the day from the sea upon the shore in warm climates.

SEA CLOTHES—are jackets, trowsers, &c.

SEA-COAST—the shore of any country, or that part which is washed by the sea.

SEA-LEGS—implies the capacity of walking on a ship's decks when she pitches or rolls about at sea.

SEA-MAN, OR SEA-FARING MAN—a person trained to the occupation of a mariner or sailor.

The principal articles required in a common sailor are, that he should be able to steer, to sound, and to manage the sails, by setting, reefing, or furling them, he is then called an able seaman.

SEA-MARK—a point or conspicuous object distinguished at sea; they are of various kinds, as promontories, steeples, ruins, trees, &c. and are very beneficial by

informing vessels of their situation on the coast.

SEA-PORT—a haven near the sea, as distinguished from one which is situated up a river.

SEA-ROOM—implies a sufficient distance from land, rocks, or shoals, wherein a ship may drive or scud without danger of shipwreck.

SEA-WEED—a sort of herb or tangles floating on the surface of the sea, or washed upon the sea-coast.

SEAMS—the intervals between the edges of the planks in the decks and sides of a ship, or the places where the planks join together; these are always filled with a quantity of oakum, and covered with pitch to prevent the entrance of the water. See the article **CAULKING**.

SEAM also implies that part where two edges of canvass are laid over each other and sewed down.

SEINE—the name of a large fishing-net.

SEIZING—the operation of fastening any two ropes or different parts of one rope together with a small line or cord.

SEIZING implies also the cord which fastens them.

SELVAGEE—a sort of hank or skein of rope-yarn, used to fasten round any rope as a shroud or stay by which to hook a tackle, in order to set it up.

SENDING—the act of pitching precipitately into the hollow or interval between two waves.

SENNIT—a kind of flat braided cordage used for various purposes, and formed by plaiting five or seven rope-yarns together.

SERVING, is the winding any thing round a rope to prevent it from being rubbed; the materials

used for this purpose, which are called service, are generally spun-yarn, small lines, jennit, or ropes varying in thickness, according to the dimensions of the rope to be served; sometimes leather, old canvass, &c. are used.

To **SET**—is to observe the bearings or situation of any distant object by the compass, in order to determine on what point it bears. See the article **BEARING**.

To **SET**—is also used with regard to the direction of the wind, current, or swell of the sea, but particularly the two latter; as, the tide which sets to the south is opposed to a swelling sea setting to the north-west.

To **SET**, applied to the sails, implies the loosing and extending them, so as to force the ship through the water, and is used in contradistinction to taking them in.

To **SET UP**—is to extend the shrouds, stays, and back-stays more firmly than before, to secure the masts, which is performed by the application of mechanical powers, as tackles, &c.

SETTLE, a vessel of two masts equipped with triangular sails, commonly called lateen sails; these vessels are peculiar to the Mediterranean, and are generally navigated by Italians, Greeks, or Mahometans.

To **SETTLE**—to lower, also to sink, as “the deck has settled,” i. e. has sunk below its first plan by the wood drying. “The ship has settled abaft since yesterday.” “We settled the land.” See the article **LAYING**. “Settle the main-top-sail baliards,” i. e. ease off a small portion of them, so as to lower the yard a little.

SEWED—the situation of a ship which rests upon the ground,
and

and while the depth of water around her is not sufficient to float her, she is said to be sewed by as much as is the difference between the surface of the water and the ship's floating-mark, or water-line.

SEXTANT — an instrument for taking altitudes and other angular distances; it is constructed on a principle similar to **HADLEY'S QUADRANT**, but the arc, containing a sixth part of a circle, angles may be taken to 120°. Sextants are generally fitted with apparatus for ascertaining the angular distances, &c. in lunar observations.

SHAKES—a name given by shipwrights to the cracks or rents in any piece of timber, occasioned by the sun or weather.

SHACKLES — semicircular pieces of iron, sliding upon a round bar, in which the legs of prisoners are occasionally confined to the deck.

SHALLOP — a sort of large boat with two masts, and usually rigged like a schooner.

SHANK—the beam or shaft of an anchor. See the article **ANCHOR**.

SHANK-PAINTER—a short rope and chain which sustains the shanks and flukes of an anchor against the ship's side, as the stopper fastens the ring and stock to the cat-head.

TO SHAPE A COURSE—to direct or appoint the track of a ship, in order to prosecute a voyage.

SHARP BOTTOM—is synonymous with a sharp floor, and is used in contradistinction to a flat floor.

TO BRACE UP SHARP — is to turn the yards to the most oblique direction possible, so as that the ship may lie well up to the wind.

SHEATHING—a sort of casing or covering nailed all over the outside of a ship's bottom, to protect the planks from the pernicious effects of the worms; it consists of thin deal boards, or what is far preferable, sheets of copper; this latter is always used in the royal navy, in the East India service, and is coming into general use.

SHEAVE—the wheel on which the rope works in a block; it is generally formed of lignum vitæ, sometimes of brass, and frequently of both; the interior part, or that which sustains the friction against the pin, being of brass, let into the exterior, which is of lignum vitæ, and is then termed a sheave with a brass coak or bush.

SHEAVE-HOLE—is a channel cut in a mast, yard, or timber, in which to fix a sheave, and answering instead of a block.

SHEEPHANK — a kind of knot made on a rope to shorten it, and is particularly used on runners or ties, to prevent the tackle from coming block and block.

By this contrivance, the body to which the tackle is applied may be hoisted much higher, or removed much further in a shorter time. Thus, if any weighty body is to be hoisted into a ship, and it be found that the blocks of the tackle meet before the object reach the top of the side, it will be necessary to lower it again, or hang it by some other method, till the runner of the tackle is sheepshanked, by which the blocks will again be separated to a competent distance.

SHEER — the longitudinal curve of a ship's decks or sides.

SHEER—is also the position in which a ship is sometimes kept when

when at single anchor, in order to keep her clear of it; hence—

TO BREAK SHEER—is to deviate from that position, and thereby risk the fouling the anchor.

SHEERING—the act of deviating or straying from the line of the course so as to form a crooked and irregular path through the water, and may be occasioned by the ship's being difficult to steer, but more frequently arises from the negligence or incapacity of the helmsman.

TO SHEER UP ALONGSIDE—to approach a ship in a parallel direction.

TO SHEER OFF—to remove to a greater distance.

SHEER-HULK. See the article **HULK.**

SHEERS—an engine used to hoist in or get out the lower masts of a ship, and are either placed on the side of a quay or wharf, or are fixed on board of an old ship cut down; or, lastly, they are composed of two masts, or large spars lashed together, and erected in the vessel wherein the mast is to be planted or displaced, the lower ends of the props resting on the opposite sides of the deck, and the upper parts being fastened together across, from which a tackle depends; this sort of sheers is secured by stays extending to the stem and stern of the vessel.

SHEET—a rope fastened to one or both the lower corners of a sail to extend and retain it in a particular situation. When a ship sails with a side wind, the lower corners of the main and fore sails are fastened by a tack and a sheet, the former being to windward, and the latter to leeward; the tack is, however, only disused with a stern wind, whereas the sail is never spread without the

assistance of one or both of the sheets; the stay-sails and studding-sails have only one tack and one sheet each; the stay-sail tacks are fastened forward and the sheets drawn aft, but the studding-sail tacks draw the outer corner of the sail to the extremity of the boom, while the sheet is employed to extend the inner corner.

SHEET-ANCHOR. See the article **ANCHOR.**

TO SHEET HOME—is to haul home a sheet, or to extend the sail till the clue is close to the sheet-block.

SHELL—in artillery. See the article **BOMB, &c.**

SHELL OF A BLOCK—the outer frame, or case, wherein the sheave or wheel is contained, and traverses about its axis.

SHELVES—a general name given to any dangerous shallows, sand-banks, or rocks, lying immediately under the surface of the water.

SHELVING, inclining gradually, as a shelving bottom, a shelving land, &c.

TO SHIFT—to change, or to alter the position of, as, to shift a birth, to shift a top-mast, to shift the helm, &c.

THE WIND SHIFTS—implies that it varies.

SHIFTED—the state of a ship's ballast or cargo when it is shaken from one side to the other, either by the violence of her rolling, or by her too great inclination to one side under a great pressure of sail; this accident, however, rarely happens, unless the cargo is stowed in bulk, as corn, salt, &c.

SHIFTER—a person appointed to assist the ship's cook in washing, steeping, and shifting the salt provisions.

SHIFTING A TACKLE—the act of remov-

removing the blocks of a tackle to a greater distance from each other, in order to give a greater extent to their purchase; this operation is otherwise called **FLEETING**, which article see.

SHIFTING THE HELM—is the alteration of its position by pushing it towards the opposite side of the ship.

SHIFTING THE MESSENGER—changing its position on the capstan from the right to the left, or vice versa.

SHIP—a general name given to all vessels navigated on the ocean; in the sea language, however, it is more particularly applied to a vessel furnished with three masts, each of which is composed of a lower mast, a top-mast, and top-gallant-mast, with the yards and other machinery thereto belonging. See the articles **ARCHITECTURE (Naval)**, **BUILDING (Ship)**, **NAVIGATION**, &c.

A SHIP CUT DOWN—implies one which has had a deck cut off from her, whereby a three-decker is converted into a two-decker, and a two-decker becomes a frigate.

A SHIP RAISED UPON—is one whose dead works have been heightened by additional timbers.

HOSPITAL SHIP—a vessel fitted up to attend a fleet of men of war, and receive their sick or wounded, for which purpose her decks are high, and her ports large.

The gun-deck is entirely appropriated for the reception of the sick, and is flush without cabins or bulk-heads, except one of deal or canvas, for separating those in malignant distempers. Two pair of chequered linen sheets are allowed to each bed, and scuttles cut in the sides for inlets of air. The sick are visited by a physi-

cian, and constantly attended by a surgeon, a proportional number of mates, assistants, baker, and washerwomen. Her cables ought also to run upon the upper deck to the end, that the beds or cradles may be more commodiously placed between decks, and admit a free passage of the air, to disperse that which is offensive or corrupted.

MERCHANT SHIP—a vessel employed in commerce to carry commodities of various sorts from one port to another, the largest of which are those used in trading to the East Indies. See the article **MERCHANT**.

PRISON SHIP—a vessel fitted up to receive prisoners in a port.

PRIVATE SHIP OF WAR. See the article **PRIVATEER**.

RECEIVING SHIP—a ship stationed at any place to receive volunteers and impressed men, and train them to their duty in readiness for any ship of war which may want hands.

SLAVE SHIP—a vessel employed in carrying negro slaves from the coast of Africa to the West-Indies, &c. whence she returns to Europe with a cargo of rum, sugar, coffee, cotton, &c.

SLOP SHIP—a vessel appointed as a depot of clothes for the seamen.

STORE SHIP—a vessel employed to carry artillery and stores for the use of a fleet, fortress, or garrison.

TROOP SHIP—is one appointed to carry troops, and is frequently termed a transport.

To SHIP—to embark any person, or put any thing aboard ship. also to receive into a ship, as, "we shipped a heavy sea."

To SHIP—also implies to fix any

any thing in its place; as, "Ship the oars;" that is, place them in their row-locks.

SHIP-MASTER—is the captain, commander, or patron of a vessel.

SHIPPING—a multitude of vessels.

SHIP-SHAPE—in a seaman-like manner; as, "That mast is not rigged ship-shape;" "Put her about ship-shape," &c.

SHIP-WRECK—the destruction of a vessel by her beating against the rocks, shore, &c.

SHIPWRIGHT—one who builds ships.

SHIVERING—the state of a sail when it shakes or flutters in the wind, as being neither full nor aback, but in a middle degree between both.

SHOAL—a term synonymous with shallow.

SHOAR—a prop or stanchion fixed under a ship's sides or bottom, to support her when laid aground or on the stocks, &c.

SHOE OF THE ANCHOR—a small block of wood, convex on the back, and having a hole sufficiently large to contain the point of the anchor-fluke on the fore side; it is used to prevent the anchor from tearing the planks on the ship's bow, when ascending or descending; for which purpose, the shoe slides up and down along the bow, between the fluke of the anchor and the planks, as being pressed close to the latter by the weight of the former.

To **SHOE AN ANCHOR**—is to cover the flukes with a broad triangular piece of thick plank, whose area is greater than that of the flukes. Its use is to give the anchor a stronger and surer hold in very soft or oozy ground.

To **SHOOT AHEAD**—is to sail beyond another vessel.

SHORE—the general name for the sea-coast of any country.

BOLD SHORE—a coast which is steep and abrupt, so as to admit the near approach of shipping without exposing them to the danger of being stranded; and is used in contradistinction to a shelving Shore.

SHORTEN—expressed of a ship's sails, is used in opposition to make.

SHOT—a missile weapon, discharged by the force of ignited powder from a fire-arm in battle; of these there are various kinds; as,

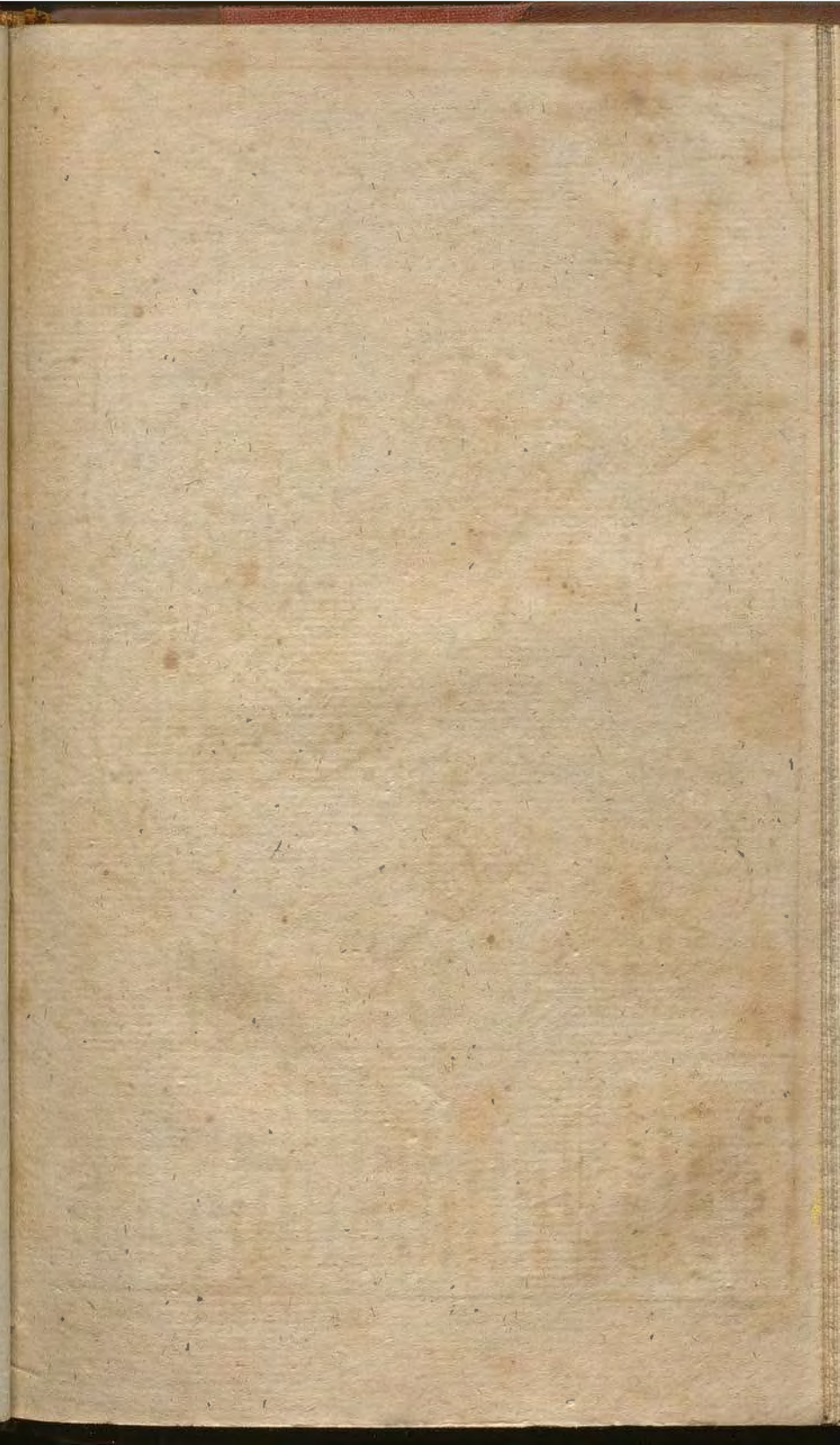
ROUND SHOT, or BULLETS—a ball or globe of iron, whose weight is in proportion to the bore of the cannon.

DOUBLE-HEADED, or BAR SHOT are formed of a bar with a round head at each end, which fits the muzzle of the cannon.

The middle is sometimes filled with a composition, and the whole covered with linen dipped in brimstone; so that the cannon, in firing, inflames the combustibles or composition of this ball, which sets fire to the sails of the enemy. One of the heads of this ball has an hole to receive a fuse, which communicating with the charge of the cannon, sets fire to the bullet.

CHAIN SHOT—consist of two balls chained together, being principally designed to annoy the enemy, by cutting her sails, rigging, &c.

GRAPE SHOT—is a combination of balls strongly corded in caovals upon an iron bottom, so as to form a sort of cylinder, whose diameter is equal to that of the ball





A PLAN
of
QUEBEC,
Metropolis of
CANADA,
in
NORTH AMERICA.

- References.
- A The Palace.
 - B Hotel Dieu.
 - C Jesuits College.
 - D Cathedral.
 - E Seminary.
 - F Bishops Palace.
 - G Place of Arms.
 - H Fort Louis.
 - I { Citadel or Diamond
Battery.
 - K Wandreville Battery.
 - L { Residence of the Govern.
General.
 - M Battery of the Fort.
 - N { Notre Dame de la
Victoire.
 - O Mans of the Congregation.
 - P { Circular of the Wind
Mill.
 - Q Ursulines Convent.
 - R Recollet.

R I V E R S T L A W R E N C E

ball which is adapted to the cannon.

CASE SHOT, or CANNISTER SHOT, are composed of a great number of small bullets, put into a cylindrical tin box. They are principally used when very near, to clear the decks of the enemy.

Besides these, there are others of a more pernicious kind, used by privateers, pirates, &c. such are langrage shot, star shot, fire-arrows, &c.

STAR SHOT consists of four pieces of iron, whose basis, when separate, form the quadrant of a circle; so that the whole being joined, forms a cylinder equal to the shot of the cannon. Each of these pieces is furnished with an iron bar, the extremity of which is attached to a sort of link as keys are strung upon a ring. Being discharged from the gun, the four branches or arms extend every way from the link in the centre. These also are chiefly intended to destroy the sails or rigging; but their flight and execution are very precarious at any tolerable distance. For fire-arrows, &c. &c. see the article **ENGAGEMENT**.

SMALL SHOT—implies musket-balls.

TO SHOT THE GUNS—is to put shot into them.

SHOT-LOCKER. See the article **LOCKER**.

SHROUDS—a range of large ropes extended from the mast-heads to the right and left sides of a ship, to support the masts, and enable them to carry sail, &c. The shrouds are always divided into pairs or couples, that is to say, one piece of rope is doubled, and the parts fastened together at a small distance from the middle, so as to leave a sort of noose or

collar to fix upon the mast-head; the ends which reach to the deck have each a dead-eye turned in or fastened to them, by which they are extended to the channel. See the articles **CHANNEL, DEAD-EYE, and LANIARD**.

The **SHROUDS**, as well as the sails, &c. are denominated from the masts to which they belong; thus there are the main, fore, and mizen shrouds; the main-top-mast, fore-top-mast, and mizen-top-mast shrouds; and the main-top-gallant, fore-top-gallant, and mizen-top-gallant shrouds.

The **TOP-MAST SHROUDS** are extended from the top-mast head to the edges of the tops by the foot-hook-plates. See the article **PLATE**. The upper ends of the futtock-shrouds are furnished with iron hooks, which enter holes in the lower ends of the foot-hook-plates, so that when the top-mast shrouds are set up or extended, the futtock-shrouds require an equal tension.

The **TOP-GALLANT SHROUDS** are extended to the cross-trees, where passing through holes in their ends, they continue over the futtock-staves of the top-mast rigging, and descending almost to the top, are set up by laniards passing through thimbles instead of dead-eyes.

FUTTOCK or FOOTHOOK SHROUDS are pieces of rope, communicating with the futtock-plates above and the catharpings below, and forming ladders, whereby the sailors climb up to the top-brim.

BOWSPRIT SHROUDS are shrouds put over the head of the bowsprit, and extended on each side to the ship's bows to support the former.

BUMKIN SHROUDS—are strong ropes, fixed as stays or supports to the bumkin ends, to prevent their

rising by the efforts of the fore-tacks upon them.

BENTINCK SHROUDS—are strong ropes fixed on the futtock-slaves of the lower rigging, and extending to the opposite channels, where they are set up by means of dead-eyes and lariards, in the same manner as the other shrouds; their use is to relieve or support the masts when the ship rolls.

To **SHUT IN**, is said of landmarks or points of land, when one is brought to cover the other or intercept the view of it.

SICK-BIRTH—a place appointed in a ship of war (generally forward) for the reception of the sick.

SICK-LIST, contains the names of all those who are under the care of the doctor, and is daily sent up by the surgeon to the captain.

SIDE—is a name given to all that part of the ship which is presented to the view between the stem and stern. It is terminated above by the gunwale, and below by the lower edge of the mainwale, which separates it from the bottom; it is inclosed by the stern abaft, and by the bow forward.

The figure of the side is formed by that of the timbers upon which it is constructed. It is covered with planks, extending from one end of the ship to the other. It is also reinforced in different places by beams, clamps, knees, riders, and standards. See these articles.

WALL-SIDED. See the article **WALL SIDED**.

SIGNALS — certain notices used to communicate intelligence to distant objects at sea. They are made by firing artillery, displaying flags and pendants, lanterns or fire-works, as rockets and false-

fires, and these are combined by multiplication and repetition; by which combination of signals, previously known, the admiral conveys orders to his fleet, every squadron, every division, and ship of which has its particular signal. Every ship to which a signal is made immediately answers it by hoisting some particular flag, to shew that she has received and understands the order thereby conveyed.

All signals may be reduced into three different kinds, viz. those which are made by the sound of particular instruments, as the trumpet, horn, or fife; to which may be added, striking the bell, or beating the drum. Those which are made by displaying pendants, ensigns, and flags of different colours; or by lowering or altering the position of sails; and, lastly, those which are executed by rockets of different kinds, by firing cannon or small arms; by artificial fireworks, and by lanterns.

All signals, to be effectual, must be simple, and composed in such a manner as to express the same signification at whatever mast-head or yard-arm they may be displayed from. They should be issued without precipitation, exposed in a conspicuous place so as to be seen at a distance, and sufficient time should be allowed to observe and obey them.

Signals are very numerous and important, being all appointed and determined by order of the lord high admiral or lords of the admiralty, and communicated in the instructions sent to the commander of every ship of the fleet or squadron before their putting out to sea.

Few subjects have more seriously engaged the attention of nau-

nautical men than that of signals; the labour, however, and study that has hitherto been expended on them, appear, even in the opinion of the inventors themselves, not to have been completely productive of that precision and correctness in conveying orders which is certainly the grand desideratum. The object is undoubtedly of the first consequence to a maritime power; the greatest inconveniences have at different times arisen, as well in action as on other occasions, from the imperfect state of the code, and consequently every attempt to improve its effects, and diminish its imperfections, is truly laudable and worthy of consideration. The firing of great guns is common in the day, night, or in a fog, to make or confirm signals; yet it must be confessed, that too great a repetition is apt to introduce mistakes and confusion, as well as to discover the track of the squadron. The report and flight of the rockets is liable to the same objection, when at a short distance from the enemy.

Signals by Day.

When the commander in chief would have them prepare for sailing, he first looses his fore-top sail, and then the whole fleet are to do the same.

When he would have them unmoor, he looses his main-top sail and fires a gun, which in the royal navy is to be answered by every flag-ship.

When he would have them weigh, he looses his fore-top sail and fires a gun, and sometimes hauls home his sheets; the gun is to be answered by every flag-ship, and every ship to get to

fail as soon as she can. If with the leeward side, the sternmost ship is to weigh first.

When he would have the weathermost and headmost ships to tack first, he hoists the union flag at the fore-top-mast head, and fires a gun, which each flag-ship answers; but if he would have the sternmost and leewardmost ships tack first, he hoists the union flag at the mizen-top-mast head, and fires a gun; and when he would have all the whole fleet tack, he hoists an union, both on the fore and mizen-top-mast heads, and fires a gun.

When, in bad weather, he would have them wear and bring to the other tack, he hoists a pendant on the ensign staff and fires a gun, and then the leewardmost and sternmost ships are to wear first and bring on the other tack, and lie by, or go on with an easy sail till he comes a-head: every flag is to answer with the same signal. If they are lying or failing by a wind, and the admiral would have them bear up and sail before the wind, he hoists his ensign and fires a gun, which the flags are to answer; and then the leewardmost ships are to bear up first, and to give room for the weathermost to wear, and sail before the wind with an easy sail, till the admiral comes a-head. But if it should happen, when the admiral hath occasion to wear, and sail upon the wind, that both jack and ensign be abroad, he will haul down the jack before he fires the gun, to wear and keep it down till the fleet is before the wind. When they are failing before the wind, and he would have them bring to, with the starboard tacks aboard, he hoists a red flag at the flag-staff, on the mizen-top-mast-head,

head, and fires a gun. But if they are to bring to with the lar-board tack, he hoists a blue flag at the same place, and fires a gun, and every ship is to answer the gun.

When any ship discovers land, he is to hoist his jack and ensign, and keep it abroad till the admiral or commander in chief answers him by hoisting his; on sight of which he is to haul down his ensign.

If any discovers danger, he is to tack and bear up from it, and to hang his jack abroad from the main-top-mast cross-trees, and fire two guns; but if he should strike or stick fast, then, besides the same signal with his jack, he is to keep firing till he sees all the fleet observe him, and avoid the danger.

When any sees a ship or ships more than the fleet, he is to put abroad his ensign, and there keep it, till the admiral's is out, and then to lower it, as often as he sees ships, and stand in with them; that so the admiral may know which way they are, and how many; but if he be at such a distance that the ensign cannot well be discovered, he is then to lay his head towards the ship or ships so descried, and to brail up his lower sails, and continue hoisting and lowering his top-sails, and making a wait with his top-gallant-sails till he is perceived by the admiral.

When the admiral would have the vice-admiral, or him that commands in the second post of the fleet, to send out ships to chase, he hoists a flag, striped white and red on the flag-staff, at the fore-top-mast-head, and fires a gun. But if he would have the rear admiral do so, he then hoists the same signal on the flag-staff at

the mizen-top-mast head, and fires a gun. When the admiral would have any ship to chase to windward, he makes a signal for speaking with the captain, and he hoists a red flag in the mizen-shrouds, and fires a gun; but, if to chase to leeward, a blue flag; and the same signal is made by the flag in whose division the ship is. When he would have them give over the chase, he hoists a white flag on the flag-staff at the fore-top-mast head, and fires a gun; which signal is to be made also by that flag-ship which is nearest the ship that gives the chase, till the chasing ship sees the signal.

In case of springing a leak, or any other disaster that disables their ship from keeping company, they are to haul up their courses and fire two guns.

When any ship would speak with the admiral, he must spread an English ensign from the head of his main and fore-top-mast downwards on the shrouds, lowering his main or fore-top-sail, and firing guns till the admiral observes him; and if any ship perceive this, and judge the admiral doth not, that ship must make the same signal to acquaint the admiral therewith, who will answer by firing one gun.

When the admiral would have the fleet to prepare to anchor, he hoists an ensign, striped red, blue, and white, on the ensign-staff, and fires a gun, and every flag-ship makes the same signal. If he would have the fleet moor, he hoists his mizen-top-sail with the clue lines hauled up, and fires a gun. If he would have the fleet cut or slip, he looses both his top-sails, and fires two guns; and then the leeward ships are to cut or slip first, to give room to the weather-

most to come to sail. So if he would have any particular ship to cut or slip, and to chase to windward, he makes the signal for speaking with that ship, hoists a red flag in the mizen-throwds, and fires a gun; but if the ship is to chase to leeward, he hoists a blue flag as before. If he would have the fleet exercise their small arms, he hoists a red flag on the ensign staff, and fires a gun; but if the great guns, then he puts up a pendant over the red flag.

Signals by Night.

Night signals should be used as little as possible, since they are frequently misunderstood. Of necessity, they must be composed of either sound or light, or the two blended together. Those to be observed at an anchor, weighing anchor, and sailing, are as follow.

When the admiral would have the fleet to unmoor and ride short, he hangs out three lights, one over another, in the main-top-mast shrouds, over the constant light in the main-top, and fires two guns, which are to be answered by flag-ships; and each private ship hangs out a light in the mizen-throwds.

N. B. All guns, fired for signals in the night, must be fired on the same side, that they may make no alteration in the sound.

When he would have them weigh, he hangs a light in the main-top-mast throwds, and fires a gun, which is to be answered by all the flags, and every private ship must hang out a light in her mizen-throwd.

When he would have them tack, he hoists two flags on the ensign staff, one over another, above the constant light in his

poop, and fires a gun, which is to be answered by all the flags; and every private ship is to hang out a light extraordinary, which is not to be taken in till the admiral takes in his. After the signal is made, the leewardmost and sternmost ships must tack as fast as they can, and the sternmost flag-ship, after she is about on the other tack, is to lead the fleet, and her they are to follow to avoid running foul of one another in the dark. When he is upon a wind, and would have the fleet veer and bring to on the other tack, he hoists up one light on the mizen-tack, and fires three guns, which is to be answered by the flag-ships, and then every private ship must answer with one light at the mizen-peek. The sternmost and leewardmost ships are to bear up as soon as the signal is made.

When he would have them in blowing weather to lie by, short, or a hull, or with the head-sails braced to the mast, he will form lights of equal height, and fire five guns, which are to be answered by the flag-ships, and then every private ship must show four lights, and after this, if he would have them make sail, he then fires ten guns, which are to be answered by all the flags, and then the headmost and weathermost ships are to make sail first.

When the fleet is sailing large or before the wind, and the admiral would bring them to, and lie by with their starboard tacks aboard, he puts out four lights in the fore-throwds, and fires six guns; but if with the larboard tacks aboard, he fires eight guns, which are to be answered by the flag-ships, and every private ship must show four lights. The windward ships must bring to first. When-

ever the admiral alters his course, he fires one gun, without altering his lights, which is to be answered by all the flag-ships. If any ship hath occasion to lie short, or by, after the fleet hath made sail, he is to fire one gun, and shew three lights in the mizen-shrouds.

When any one first discovers land or danger, he is to shew as many signs as he can, to fire one gun, and to tack or bear away from it; and if any one happens to spring a leak, or be disabled from keeping company with the fleet, he hangs out two lights of equal height, and fires guns till he is relieved by some ship of the fleet.

If any one discovers a fleet, he is to fire guns, make false fires, put one light out on the main-top, three on the poop, to steer after them, and to continue firing of guns, unless the admiral calls him off by steering another course, and firing two or three guns; for then he must follow the admiral.

When the admiral anchors, he fires two guns, a small space of time one from the other, which are to be answered by the flag-ships, and every private ship must show two lights.

When the admiral would have the fleet to moor, he puts a light on each top-mast-head, and fires a gun, which is to be answered by the flag-ships, and every private ship is to show one light. If he would have them lower their yards and top-masts, he hoists one light upon his ensign staff, and fires one gun, which is to be answered by the flag-ships, and every private ship is to show one light. And when he would have them hoist their yards and top-masts, he puts out two lights, one under the other, in the mizen-

top-mast shrouds, and fires one gun, which is to be answered by the flag-ships, and each private ship must shew one light in the mizen-shrouds.

If any strange ship be discovered coming into the fleet, the next ship is to endeavour to speak with her, and bring her to an anchor, and not suffer her to pass through the fleet. And if any one discovers a fleet, and it blows so hard that he cannot come to give the admiral timely notice, he is to hang out a great number of lights, and to continue firing gun after gun till the admiral answers him with one.

When the admiral would have the fleet to cut or slip, he hangs out four lights, one at each main-yard-arm and at each fore-yard-arm, and fires two guns, which are to be answered by the flag-ships, and every private ship is to shew one light.

Signals in a Fog.

Fog signals can only be composed of sound at different intervals. When, therefore, the admiral would have them weigh, he fires ten guns, which every flag-ship is to answer. To make them tack, he fires four guns, which are to be answered by the flag-ships, and then the leewardmost and sternmost ships must tack first, and after they are about, to go with the same sail they tacked with, and not to lie by, expecting the admiral to come a-head, and this is to avoid the danger of running foul of one another in thick weather.

When the admiral brings to, and lies with his head-sails to the mast, if with the starboard tack aboard, he fires six guns, but

if with the larboard tack, he fires eight guns, which the flag-ships are to answer. And, after this, if he makes sail, he fires ten guns, which the flag-ships must answer, and then the headmost and weathermost ships are to make sail first. If it grow thick and foggy weather, the admiral will continue sailing with the same sail set that he had before it grew foggy, and will fire a gun every hour, which the flag-ships must answer by firing of muskets, beating of drums, and ringing of bells. But if he be forced to make either more or less sail than he had when the fog began, he will fire a gun every half hour, that the fleet may discern whether they come up with the admiral, or fall astern of him; and the flags and private ships are to answer as before.

If any one discovers danger which he can avoid, by tacking and standing from it, he is to make the signal for tacking in a fog; but if he should chance to strike and stick fast, he is to fire gun after gun till he thinks the rest have avoided the danger. When the admiral would have the fleet to anchor, he fires two guns, which the flags are to answer; and after he hath been half an hour at anchor, he will fire two guns more, to be answered by the flags, as before, that all the fleet may know it.

Signals for calling Officers on board the admiral.

When the admiral puts abroad an union flag in the mizen-shrouds and fires a gun, all the captains are to come aboard him; and if with the same signal there be also a waft made with the ensign, then

the lieutenant of each ship is to come on board. If an ensign be put abroad in the same place, all the masters of the ships of war are to come on board the admiral. If a standard on the flag-staff be hoisted at the mizen-top-mast-head and a gun fired, then all the flag-officers are to come on board the admiral. If the English flags only, then a standard in the mizen-shrouds, and fire a gun; if the flags and land general officers, then the admiral puts abroad a standard at the mizen-top-mast-head, and a pendant at the mizen-peek, and fires a gun. If a red flag be hoisted in the mizen shrouds and a gun fired, then the captains of his own squadron are to come aboard the admiral; and if with the same signal there be also a waft with the ensign, the lieutenant of each ship must come on board. If he hoists a white flag, as before, then the vice-admiral, or he that commands in the second post, and all the captains in his squadron, are to go on board the admiral; if a blue flag, &c. then the rear-admiral, and the captains of his squadron, must come on board; and if a waft, as before, the lieutenants. When a standard is hoisted on the ensign-staff, and a gun fired, the vice and rear-admirals must come on board the admiral's ship. When the admiral would speak with the captains of his own division, he will hoist a pendant on the mizen-peek, and fire a gun; and if with the lieutenants, a waft is made with the ensign, and the same signal; for whenever he would speak with the lieutenants of any particular ship, he makes the signal for the captain, and a waft also with the ensign.

When the admiral would have
all

all the tenders in the fleet come under his stern, and speak with them, he hoists a flag, yellow and white, at the mizen-peek, and fires a gun; but if he would speak with any particular ship's tender, he makes a signal for speaking with the captain she tends upon, and a waft with a jack.

If all the pinnaces and barges are to come on board, manned and armed, the signal is a pendant on the flag-staff hoisted on the mizen-top-mast-head, and a gun fired; and if he would have them chase any ship, vessel, or boat in view, he hoists the pendant, and fires two guns.

The signal for the long-boats to come on board him, manned and armed, is the pendant hoisted on the flag-staff, and the mizen-top-mast-head, and a gun fired; and if he would have them chase any ship, vessel, or boat in open view, without coming on board him, he hoists the pendant as aforesaid, and fires two guns. When the admiral would have all the boats in the fleet to come on board him, manned and armed, he hoists a pendant on the flag-staff, both on the fore-top-mast and mizen-top-mast-head, and fires one gun; but if he would have them chase, he hoists his pendant, as before, and fires two guns.

When the admiral would speak with the victualler or his agent, he puts an English ensign in the mizen-top-mast shrouds; and when with him that hath the charge of the gunner's stores, he will spread an ensign at his main-top-sail yard-arm.

Signals for Battle.

When the admiral would have the fleet form a line of battle, one

ship a-head of another, he hoists an union flag at the mizen-peek, and fires a gun, and every flag-ship does the same. But when they are to form a line of battle, one a-breast of another, he hoists a pendant with the union-flag, &c.

When he would have the admiral of the white, or him that commands in the second post, to tack, and endeavour to gain the wind of the enemy, he spreads a white flag under the flag at the main-top-mast-head, and fires a gun; and when he would have the vice-admiral of the blue do so, he doth the same with the blue flag. If he would have the vice-admiral of the red do so, he spreads a red flag from the cap, on the fore-top-mast-head, downward on the back stay; if the vice-admiral of the blue, he spreads a blue flag, &c. and fires a gun. If he would have the rear-admiral of the red do so, he hoists a red flag at the flag-staff at the mizen-top-mast-head; if the rear-admiral of the white, a white flag; if the rear-admiral of the blue, a blue flag, and under it a pendant of the same colour, with a gun.

If he be to leeward of the fleet, or any part of it, and he would have them bear down into his wake or track, he hoists a blue flag at the mizen-peek, and fires a gun. If he would be to leeward of the enemy, and his fleet, or any part of it, be to leeward of him, in order to bring those ships into a line, he bears down with a blue flag at the mizen-peek, under the union flag, which is the signal for battle, and fires a gun; and then those ships that are to leeward of him, must endeavour to get into his wake or track, according to their station in the line of battle,

When

When the fleet is sailing before the wind, and he would have him who commands in the second post, and the ship of the starboard quarter to clap by the wind and come to the starboard tack, he hoists a red flag at the mizen-top-mast-head; but a blue one, with a gun, if he would have ships of the larboard quarter come to the larboard tack. If the van are to tack first, he spreads the union flag at the flag-staff, on the fore-top-mast head, and fires a gun, if the red flag be not abroad; but if it be, then he lowers the fore-top-sails a little, and the union is spread from the cap of the fore-top-mast downwards, and every flag-ship does the same. If the rear be to tack first, he hoists the union flag on the flag-staff at the mizen-top-mast-head, and fires a gun, which all the flag-ships are to answer. If all the flag-ships are to come into his wake or track, he hoists a red flag at his mizen-peek, and fires a gun, and all the flag-ships must do the same.

If he would have him who commands in the second post of his Squadron to make more sail, though himself shorten sail, he hoists a white flag on the ensign-staff; but if he who commands in the third post be to do so, he hoists a blue flag, and fires a gun, and all the flag-ships must have the same signal.

Whenever he hoists a red flag on the flag-staff at the fore-top-mast-head, and fires a gun, every ship in the fleet must use their utmost endeavour to engage the enemy in the order prescribed them. When he hoists a white flag at his mizen-peek, and fires a gun, then all the small frigates of his Squadron that are not of the line of battle are to come under

the stern. If the fleet be sailing by a wind in the line of battle, and the admiral would have them brace their head-sails to the mast, he hoists up a yellow flag on the flag-staff at the mizen-top-mast-head, and fires a gun, which the flag-ships are to answer, and then the ships in the rear must brace first. After this, if he would have them fall their head-sails and stand on, he hoists a yellow flag on the flag-staff of the fore-top-mast-head, and fires a gun, which the flag-ships must answer, and then the ships in the van must fall first and stand on. If when this signal is made the red flag at the fore-top-mast-head be abroad, he spreads the yellow flag under the red.

If the fleets, being near one another, and the admiral would have all the ships to tack together, the sooner to lie in a posture to engage the enemy, he hoists an union flag on each flag-staff at the fore and mizen-top-mast heads, and fires a gun; and all the flag-ships are to do the same.

The fleet being in a line of battle, if he would have the ship that leads the van hoist, lower, set, or haul up any of the sails, he spreads a yellow flag under that at his mizen-top-mast-head, and fires a gun, which signal the flag-ships are to answer, and then the admiral will hoist, lower, set, or haul up the sail which he would have the ship that leads the van do, which is to be answered by the flag-ships of the fleet.

When the enemy runs, and he would have the whole fleet follow them, he makes all the sail he can after them himself, takes down the signal for the line of battle, and fires two guns out of his bow-chase, which the flag-ships answers;

and then every ship is to endeavour to come up with and board the enemy. When he would have the chase given over, he hoists a white flag at the fore-top-mast-head, and fires a gun.

If he would have the red squadron drawn into a line of battle, one a-breast of another, he puts abroad a flag, striped red and white, on the flag-staff at the main-top-mast-head, with a pendant under it, and fires a gun. If the white, or second squadron, be to do so, the flag is striped, red, white, and blue: if the blue, or third squadron, be to do so, the flag is a Genoese ensign and pendant; if they are to draw into a line of battle, one ahead of another, the same signals are made without a pendant. If they are to draw into the line of battle, one astern of another, with a large wind, and he would have the leaders go with the star-board tacks aboard by the wind, he hoists a red and white flag at the mizen-peak, and fires a gun; but if they should go with the larboard tacks aboard by the wind, he hoists a Genoese flag at the same place, which signals, like others, must be answered by the flag-ships.

Signals in Distress and for Relief.

Signals betokening distress have been already intimated in the foregoing; we shall therefore subjoin an account of signals in case ships or vessels are perceived in distress.

The following are the charitable institutions established at Bembrough Castle, in the county of Northumberland, for the assistance and relief of distressed mariners, published by the direction of the trustees of Nathaniel, late

lord Crewe, with the approbation of the master, pilots, and seamen of the Trinity-House, Newcastle.

1. "A gun (a nine-pounder) placed at the bottom of the tower to be fired as a signal in case any ship or vessel be observed in distress; viz. once, when any ship or vessel is stranded, or wrecked, upon the islands, or any adjacent rock. Twice, when any ship or vessel is stranded or wrecked behind the castle, or to the northward of it. Thrice, when any ship or vessel is stranded or wrecked to the southward of the castle, in order that the custom-house officers and the tenants, with their servants, may hasten to give all possible assistance, as well as to prevent the wreck from being plundered.

2. "In every great storm two men on horseback are sent from the castle to patrol along the coast from sun-set to sun-rise, that in case of any accident one may remain by the ship and the other return to alarm the castle. Whoever brings the first notice of any ship or vessel being in distress, is intitled to a premium in proportion to the distance from the castle; and if between twelve o'clock at night and three o'clock in the morning, the premium to be double.

3. "A large flag is hoisted when there is any ship or vessel seen in distress upon the Fern Islands, or Staples, that the sufferers may have the satisfaction of knowing their distress is perceived from the shore, and that relief will be sent them as soon as possible. In case of bad weather the flag will be kept up, a gun fired morning and evening, and a rocket thrown up every night from the north turret,

till such time as relief can be sent. There are also signals to the Holy Island fishermen, who, from the advantage of their situation can put off for the islands, at times when no boat from the main land can get over the breakers. Premiums are given to the first boats that put off for the islands to give their assistance to ships or vessels in distress, and provisions are sent in the boat.

4. "A bell on the south turret will be rung out in every thick fog, as a signal to the fishing boats, and a large swivel fixed on the east turret, will be fired every fifteen minutes, as a signal to the ships without the islands.

5. "A large weather-cock is fixed on the top of the flag-staff for the use of the pilots.

6. "A large speaking trumpet is provided, to be used when ships are in distress near the shore, or are run a-ground.

7. "An observatory, or watch-tower, is built on the east turret of the castle, where a person is to attend every morning at day break during the winter season, to look out if any ships are in distress.

8. "Masters and commanders of ships and vessels in distress, are desired to make such signals as are usually made by people in their melancholy situation."

Besides these signals for affording relief, stores, provisions, necessary articles for raising ships that are stranded, in order to their being prepared. Coffins for the dead, &c. are also provided.

DAY SIGNALS — are usually made by flags and pendants, sometimes accompanied with one or more guns. See SIGNALS.

NIGHT SIGNALS — are either lanterns disposed in certain figures, as lines, squares, and triangles, or

are made with false fires, &c. See SIGNALS.

FOG SIGNALS—consist of operations which emit sound, as firing cannon or muskets, beating drums, ringing bells, &c. See SIGNALS.

SIERRA—is a word used for hill in various parts of the world, particularly on the west coast of Africa, on the north coast of South America, and on the coasts of Chili and Peru on the South Pacific Ocean.

SIERRILLO—the term for a little hill being a diminutive, from *Sierre*; in which sense it is used on the south-west coast of South America also.

TO SILENCE A BATTERY — is by a vigorous cannonade to annoy the enemy, so as to cause them to cease firing from it.

SKEET—a sort of long scoop used to wet the sides of a ship in order to keep them cool and prevent them from splitting by the heat of the sun. It is also employed in small vessels to wet the sails, to render them more efficacious in light breezes; this operation is sometimes performed in large ships by means of the fire-engine.

SKIDS, or SKEEDS — long compassing pieces of timber, formed to answer the vertical curve of a ship's side. They are notched below, so as to fit closely upon the wales, and extend from the main wale to the gumel, being strongly nailed to the side. Their use is to preserve the plank of the side when any weighty body is hoisted or lowered against it.

SKIFF—a small light boat, resembling a yawl; also a wherry without masts or sails, usually employed to pass a river.

TO SKI UP A SAIL IN THE BUNT—is to make that part of the

canvass which covers the sail, when furled, smooth and neat, by turning the sail well up on the yard.

SKIPPER—a familiar name borrowed from the Dutch, and given to the masters of small merchant vessels.

SKY-SCRAPERS—small triangular sails, sometimes set above the royals; they are, however, very rarely used.

SLAB-LINES—small cords passing up behind a ship's main-sail or fore-sail, and being reeved thro' blocks attached to the lower part of the yard, are thence transmitted each in two branches to the foot of the sail, where they are fastened. They are used to truss up the sail, but more particularly for the convenience of the steersman, that he may look forward beneath it.

TO SLACK—is to decrease in tension or velocity; as "Slacken the laniard of our main-stay." "The tide slackens."

SLACK OF A ROPE—that part which hangs loose, as having no strain or stress upon it.

SLACK RIGGING—implies that the shrouds, stays, &c. are not so firmly extended as they ought to be.

SLACK IN STAYS—signifies slow in going about.

SLACK WATER—the intervals between the flux and reflux of the tide, or that time during which the water apparently remains in a state of rest.

SLATCH—the period of a transitory breeze, or the length of its duration.

SLEEPERS—a name formerly given by shipwrights to the thick stuff placed longitudinally in a ship's hold, opposite to the several seams of the timbers, but now generally applied to the knees

which connect the transoms to the after timbers on the ship's quarter. They are particularly used in Greenland ships, to strengthen the bows and stern-frame, to enable them to resist the shocks of the ice.

SLINGS—a rope fitted to incircle a cask, jar, bale or case, and suspend it while hoisting and lowering. Of these there are various sorts, according to the weight or figure of the object to which they are applied.

SLINGS OF A YARD—ropes fixed round its middle, and serving to suspend it for the greater ease of working, or for security in an engagement; in the latter case they usually add iron chains to the slings of the lower yards. This term also implies the middle, or that part of the yard on which the slings are placed.

BOAT-SLINGS—strong ropes, furnished with hooks and iron-thimbles, whereby to hook the tackles, in order to hoist the boats in or out of the ship, the hooks of the slings be applied to ring-bolts fixed in the keel and extremities of the boat.

BUTT-SLINGS—are those used in lading and delivering ships, and are nearly in the form of a pair of spectacles.

SLINGS OF A BUOY—See the article **BUOY**.

SLIP—a place lying with a gradual descent on the banks of a river, or harbour, convenient for ship-building.

TO SLIP A CABLE—is to veer out, and let go the end.

SLIP-KNOT—is one which will not bear any strain, but will either become untied, or will traverse along the other part of the rope.

SLIPPERING-HITCH—is one which will not bear a stress.

SLOOP

SLOOP—a small vessel, furnished with one mast, the main-sail of which is attached to a gaff above, to the mast on its foremost edge, and to a boom below. It differs from a cutter, by having a fixed steering bowsprit, and a jib-stay; nor are the sails generally so large in proportion to the size of the vessel.

SLOOPS OF WAR—are vessels in the navy commanded by officers in a middle rank, between a lieutenant and a post-captain, and styled masters and commanders. These vessels carry from 10 to 18 guns, and are variously rigged as ships, brigs, schooners, and sometimes as cutters.

SLOPS—a name given to clothes for seamen.

TO SLOVE—is to turn any cylindrical or conical piece of timber, &c. about its axis, without removing it. This term is generally expressed of the movement by which a mast, boom, or spar is turned about in its cap or boom-iron.

SMACK—a small vessel, commonly rigged as a cutter, and used in the coasting and fishing-trade, or as a tender in the king's service.

SMOKE-SAIL—a small sail, hoisted against the fore-mast when a ship rides head to wind, to give the smoke of the galley an opportunity of rising, and to prevent its being blown aft on to the quarter-deck.

SMUGGLER—a vessel employed in a contraband trade.

SNAKING—is the winding small ropes spirally round a large one, the former lying in the intervals between the strands of the latter, and is frequently termed **WORMING**, which article see.

SNATCH-BLOCK—a block

having an opening in one of its sides, wherein to fix the bight of a rope occasionally.—See the article **BLOCK**—This is by some termed a rouse-about-block.

SNOTTER.—See the article **SPIRIT**.

SNOW—a vessel equipped with two masts, resembling the main and fore-masts of a ship, and a third small mast just abaft the main-mast, carrying a sail nearly similar to a ship's mizen; the foot of this mast is fixed in a block of wood, or kind of step, upon the deck, and the head is attached to the afterpart of the main-top. The sail is called a try-sail, and hence the mast is termed a try-sail-mast. When sloops of war are rigged as Snows they are furnished with a strong rope, called a horse, instead of the try-sail-mast, the fore part of the sail being attached by rings to it. This is generally the largest of all two-masted vessels employed by Europeans, and is reckoned the most convenient for navigation.

SOLE OF A GUN-PORT—is the lower part of it, and is more properly called the Port Sill.

SOLE OF THE RUDDER—a piece of timber attached to the lower part of it, to render it nearly level with the false keel.

SOUND—on the coast of Norway, in particular, is used for any opening of a river, or any gulf, or deep inlet of the sea in the same sense as Deep on the coast of Germany. In other parts it is more usually understood of a passage between the main land, to which it is contiguous, and some island, which together form a strait or passage within such island.

SOUNDING—the operation of trying the depth of the water, and the quality of the ground, by means

means of a plummet sunk from a ship to the bottom.

For sounding there are two plummets used, one of which is called the hand-lead, weighing about eight or nine pounds, and the other, the deep-sea lead, weighing from twenty-five to thirty pounds, and both are shaped like the frustrum of a cone or pyramid. The former is used in shallow waters, and the latter at a great distance from the shore, particularly on approaching the land after a sea voyage. Accordingly, the lines employed for this purpose are called the deep-sea lead, and the hand-lead line.

The hand-lead line, which is generally twenty fathoms in length is marked at every two or three fathoms, so that the depth of water may be ascertained either in the day or night. At the depth of two and three fathoms there are marks of black leather; at five fathom there is a white rag; at seven a red rag; at ten black leather; at thirteen black leather; at fifteen a white rag; and at seventeen a red rag.

Sounding with the hand-lead, which is called heaving the lead by seamen, is generally performed by a man who stands in the main-chains to windward. Having the line all ready to run out without interruption, he holds it nearly at the distance of a fathom from the plummet, and having swung the latter backwards and forwards three or four times, in order to acquire the greater velocity, he swings it round his head, and thence as far forward as is necessary; so that by the lead's sinking while the ship advances, the line may be almost perpendicular when it reaches the bottom. The person sounding then proclaims the

depth of the water in a kind of song resembling the cries of London hawkers. Thus if the mark of five fathoms is close to the surface of the water, he calls "By the mark five," and as there is no mark at four, six, eight, &c. he estimates those numbers, and calls "By the dip four." If he judges it to be a quarter or an half more than any particular number, he calls "And a quarter five—and a half four," &c. If he conceives the depth to be three quarters more than a particular number, he calls it a quarter less than the next; then at four fathoms and three quarters, he calls "A quarter less five." &c.

The deep-sea lead is marked with two knots at twenty fathoms, three at forty, four at fifty, and so on to the end.

It is also marked with a single knot in the middle of each interval, as at twenty-five, thirty-five, forty-five fathoms, &c. To use this lead more effectually at sea, or in deep water on the sea coast, it is usual previously to bring to the ship in order to retard her course; the lead is then thrown as far as possible from the ship on the line of her drift, so that as it sinks, the ship drives more perpendicularly over it. The pilot feeling the lead strike the bottom readily, discovers the depth of the water by the mark on the line nearest its surface.—See the articles LEAD and LINE.

IN SOUNDINGS—implies the being so near the land as that a deep-sea lead will attain the bottom, which is seldom practicable in the ocean.

SOUNDINGS — is also a name given to the specimen of the ground; a piece of tallow being stuck upon the base of the deep-

sea lead, brings up distinguishing marks of the bottom, as sand, shells, ooze, &c. which adhere to it.

The **SOUNDINGS**, i. e. the depth of the water and the nature of the ground are carefully marked in the log-book, as well to determine the distance of the place from the shore as to correct the observations of former pilots. See the articles **COASTING** and **NAVIGATION**.

SOUNDING-ROD—a long piece of iron, marked with feet and fathoms, which being let down by a line in a groove by one of the pumps, indicates what water there is in the well, and consequently whether or not the ship leaks.

SOUTHING OF THE MOON, the time at which the moon passes the meridian of any particular place.

SPAN—a small line or cord, the middle of which is usually attached to a stay; whence the two ends branch outwards to the right and left, having either a block or thimble attached to their extremities. It is used to confine some ropes which pass through the corresponding blocks or thimbles.

To **SPAN IN THE RIGGING**—is to draw the upper parts of the shrouds together by tackles, in order to seize on the cathering legs.

SPANKER—a name sometimes given to a ship's driver, which see.

SPARE—an epithet applied to any part of a ship's equipage that lies in reserve, to supply the place of such as may be lost or rendered incapable of service; hence we say, spare tiller, spare top-masts, spare sails, &c.

SPARS—large round pieces of timber, fit for making top-masts, &c.

SPEAKING-TRUMPET—a tube formed to collect the impulses of sound in speaking, and convey them forward to a distance.

PUMP-SPEAR. See the article **PUMP**.

SPELL—the period wherein one or more sailors are employed in a particular exercise, from which they are relieved as soon as the limited time expires; such are the spells to the hand-lead in sounding, to the pump, to look out on the mast-head, &c. and to steer the ship; which last, however, is generally called the trick.

SPELL—also implies the relief or return of duty to those services; thus we say, "Spell the lead," "Spell the pump," &c.

To **SPILL**—to discharge the wind out of the cavity or belly of a sail, in order to furl or reef it. This is either performed by collecting the sail together, or by bracing its edge to the wind, so as to shiver it.

SPILLING-LINES. See the article **LINES**.

SPINDLE—a sort of iron pin, tapering at the upper end to a point. It is fixed into the upper end of the top-gallant-mast, so as to carry a vane, which turning thereon horizontally, shews the direction of the wind. See the article **ACORN**.

SPINDLE is also the name of the lower end or foot of a capstan, which is shod with iron, and becomes the pivot or axis on which it turns in the saucer. See the article **CAPSTAN**.

SPIRIT-ROOM. See the article **ROOM**.

SPIRKETTING, that range of planks which lies between the water-way and the lower edge of the gun-ports within side of a ship of war.

To **SPLICE**, to join the two ends of a rope together, or to unite the end of a rope to any part thereof, by interweaving the strands in a regular manner.

There are several methods of making a splice, according to the services for which it is intended; all of which are distinguished by particular epithets.

The **SHORT SPLICE**—is used upon the cables, slings, block-strops, and in general all ropes which are not intended to run through blocks, or where the splice is not in danger of being loosened. It is made by untwisting the ends of two ropes, or the ends of one rope, and having placed each of the strands of one opposite, and in the interval between two strands of the other, by penetrating the latter with a fid or marline-spike, parallel to the axis or length of the rope.

The **LONG SPLICE**—occupies a greater extent of rope, but by the three joinings being fixed at a distance from each other, the increase of bulk is divided; hence it is much neater and smoother than the short splice, and better adapted to run through the channel of a block, &c. for which use it is generally intended.

The **EYE SPLICE**—forms a sort of eye or circle at the end of a rope, and is used for splicing in thimbles, bulls-eyes, &c. and sometimes on the end of block-strops. The strands are therefore untwisted, and their extremities thrust through the three strands in that part of the rope whereon the splice is to be formed, and thence passing over the surface of the second strand, they are again thrust through the third, which completes the operation.

The **CUNT SPLICE** — is con-

structed in a similar manner to the eye splice, but for a different purpose, being chiefly used in lead-lines, log-lines, and fishing lines, where the short splice would be liable to separation, as being frequently loosened by the water. It is made by splicing the ends of two lines at a short distance from each other, and the extremities of each being interwoven into the bight of the other, the line becomes double in the extent of the splice.

SPLINTERS—the pieces of a ship's sides, masts, decks, &c. which, being knocked off by a shot, acquire great velocity, and frequently do more damage among the men than the shot itself.

SPLINTER-NETTING — finnet made into nets, and nailed upon the inner part of the ship's sides, to lessen the effect of the splinters.

SPLIT—the state of a sail which is rent asunder by the violence of the tempest, or by sustaining a greater effort on one part of its surface than the rest.

SPLIT—when applied to a ship, is the state of being bilged on a rock.

SPOON-DRIFT — a sort of showery sprinkling of the sea-water, swept from the surface of the waves in a tempest, and flying according to the direction of the wind.

SPRAY, the sprinkling or foam of the sea, which is driven from the top of a wave in stormy weather. It differs from the spoon-drift, as being only blown occasionally from the broken surface of a high wave; whereas the latter continues to fly horizontally along the sea, without intermission during the excess of a tempest or hurricane.

hurricane. It is sometimes called *spry*.

SPRING — a crack running transversely or obliquely through any part of a mast or yard, so as to render it unsafe to carry the usual quantity of sail thereon.

SPRING—is also a rope passed out of a ship's stern, and attached to a cable proceeding from her bow, when she lies at anchor. It is usually performed to bring the ship's broadside or battery of cannon to bear upon some distant object, as another ship, a fortress on the coast, &c. When a ship rides by anchors which are only attached to one end, she will move like a weather-cock, according to the direction of the wind or tide. Now if a rope be extended from the other end to the same anchor, it is evident that by slackening one of these ropes, and keeping fast the other, her side will lie more or less obliquely to the wind or tide, as occasion may require, so as to be opposed to any distant object to the right or left. For instance, if a ship ride with her head northerly, and it is required to cannonade a fortress lying on the south or south-east, a hawser is run out of the stern, and being carried forward without her side, is attached to the cable at a competent distance a-head of the ship; the hawser is then tightened by the capstan or tackles, and the cable being slackened, the ship immediately turns her side towards the object intended to be battered.

SPRING— is likewise a rope, extending diagonally from the stern of one ship to the head of another which lies abreast of her at a short distance, and is performed to make one of the ships sheer off to a greater distance from the other. Springs of this kind are occasion-

ally applied to a wharf or pier for the same purposes.

TO SPRING A LEAK. See the article **LEAK**.

TO SPRING A BUTT—to loosen the end of a plank in the ship's bottom. See the article **BUTT**.

TO SPRING THE LUFF. See the article **LUFF**.

TO SPRING A MAST, YARD, &c.—is to crack it transversely or obliquely. See the article **SPRING**.

SPRING-SEARCHER. See the article **GUN**.

SPRING TIDE—the periodical excess of the elevation and depression of the tide, which happens soon after the new and full moon.

SPRIT—a small boom or pole, which crosses the sail of a boat diagonally from the mast to the upper aftmost corner, which it is used to extend and elevate: the lower end of the sprit rests in a sort of wreath, called the *snotter*, which encircles the mast at that place. These kind of sails are accordingly called *Sprit-sails*.

SPRIT-SAIL—is also a sail attached to a yard which hangs under the bowsprit. It is furnished with a large hole towards each of its four corners, to evacuate the water with which the cavity or belly of it is frequently filled by the surge of the sea, when the ship pitches.

SPRIT-SAIL TOP-SAIL — a sail extended above the former by a yard, which hangs under the jib-boom: the clues of this sail are hauled home to the sprit-sail yard arms, after which the sail is drawn out towards the extremity of the boom, as any other top-sail-yard is hoisted upon its mast.

Formerly the sprit-sail top-sails were set on a mast which was erected perpendicularly on the end of the bowsprit; but this method

thod has of late been justly rejected, as inconvenient and dangerous to the bowsprit, although servicable in light breezes.

• **SPRIT-SAIL TOP-GALLANT-SAIL**—is set upon the flying jib-boom, in the same manner that the sprit-sail top-sail is set upon the inner jib-boom: this sail is, however, very rarely used.

SPUNGE—an instrument used to clean the cannon after firing, and to extinguish any sparks that may remain behind. They are sometimes made of bristles, resembling a round brush, but more generally of sheeps-skin, with the wool outwards, nailed upon a block of wood nearly as large as the caliber of the piece. The block is either fixed upon a long wooden staff, or upon a thick piece of rope well stiffened by serving it with spun-yarn. This latter is much more convenient on board of ships, on account of its flexibility; and is generally furnished with a block at the upper end, to use as a rammer.

To SPONGE A GUN—is to clean it out with the sponge; and should be constantly repeated after every explosion.

SPUN-YARN—a small line or cord, formed of two, three, or more rope-yarns twisted together by a winch; the yarns are usually drawn out of the strands of old cables, and knotted together. Spun-yarn is used for various purposes, as seizing and serving-ropes, weaving mats, &c.

SPURLING-LINE—the line which forms the communication between the Wheel and the Tell-Tale. See those articles.

SPURS OF THE BEAMS—are curved pieces of timber, serving as half-beams, to support the decks where a whole beam cannot be

placed on account of the hatch-ways.

SPURS OF THE BITS—the same with Standards.

SQUADRON—either implies a detachment of ships employed on any particular expedition, or one-third part of a naval armament. See the articles **FLAG, CENTRE, FLEET, DIVISION,** &c.

SQUALL—a sudden and violent gust of wind, usually occasioned by the interruption and reverberation of the wind from high mountains. These are very frequent in the Mediterranean, particularly that part of it which is known by the name of the Levant, as produced by the repulsion and new direction which the wind meets with in its passage between the various islands of the Archipelago.

A BLACK SQUALL—one attended with a dark cloud, which occasions a diminution of the usual quantity of light.

A WHITE SQUALL, produces no such diminution.

A THICK SQUALL, is accompanied with rain, sleet, &c.

SQUARE—a term peculiarly appropriated to the yards and their sails, either implying that they are at right-angles with the mast or keel, or that they are of greater extent than usual. Thus, when the yards hang at right-angles with the mast, they are said to be square by the lifts; when they hang perpendicular to the ship's length, they are called square by the braces; but when they lie in a direction perpendicular to the plane of the keel, they are square by the lifts and braces; or, in other words, they hang directly across the ship, and parallel to the horizon.

The yards are said to be very square when they are of extraordinary length, and the same epithet is applied to their sails with respect to their breadth.

SQUARE RIGGED—is a term used in contradistinction to all vessels whose sails are extended by stays, lateen or lug-sail yards, or by gaffs and booms, the usual situation of which is nearly in a plane with the keel.

SQUARE SAIL—is any sail extended to a yard suspended by the middle, and hanging parallel to the horizon, as distinguished from other sails which are extended obliquely.

SQUARE SAIL—is also the name of a sloop's or cutter's sail which hauls out to the lower-yard called the square-sail-yard.

This sail is only used in fair winds, or to scud in a tempest. In the former case, it is furnished with a large additional part called the bonnet, which is then attached to its bottom, and removed when it is necessary to scud.

SQUARE-STERNED—implies a stern like a ship of war.

STAFF—a light pole erected in different parts of a ship, whereon to hoist and display the colours.

The **ENSIGN STAFF**—is reared immediately over the stern to display the ensign.

The **JACK STAFF**—is fixed on the end of the bowsprit to extend the jack.

A **FLAG STAFF**—is erected at each of the mast-heads, or formed by their upper ends to support the flag or pendant of the respective squadron or division to which the ship belongs.

STAGE—a machine composed of planks, let over the sides by ropes, whereon the people may

stand when repairing, caulking, or paying the ship's sides, wales, &c.

A **FLOATING STAGE**—is one which needs not the support of ropes, being sufficiently large and firm to bear upon the water.

STANCHIONS—those pillars, which being set up pillar-wise, support and strengthen the wasterrees, but are chiefly intended to support the weight of the artillery. They are used for various purposes.

STANCHIONS OF THE NETTINGS—are either slender bars of iron whose lower ends are fixed in iron sockets at proper distances; or square wooden pillars let into the upper part of the ship's side.

STANDARD—in ship-building, is an inverted knee, placed upon the deck instead of beneath it, and having its vertical branch pointed upwards from that which lies horizontally.

ROYAL STANDARD—a flag, in which the imperial ensigns of England, Scotland, and Ireland, are quartered, together with the armorial bearings of Hanover. It is never hoisted unless when the king is on board, at which time it is displayed at the main-top-gallant-mast-head.

STANDING—the movement by which a ship advances towards a certain object, or departs from it; as, "The enemy stands in shore;" "The fleet is standing off;" "We saw three sail standing to the southward;" "We stood under easy sail;" "She stood upon the starboard tack;" "The cutter stood off and on," &c. "That ship has not a mast standing," is a phrase implying she has lost all her masts.

TO STAND BY—to attend to; as, "Stand by the top-sail-halliards."

STAND FROM UNDER—a notice given to those below to keep out of the way of any thing being lowered down or let fall from above.

To STAND ON—to continue the course.

The STANDING PART OF A ROPE OR TACKLE—that part which is made fast to the mast, deck, or block; in contradistinction to that which is pulled upon, which is called the fall, or running part.

The STANDING PART OF A SHEET—is that part which is made fast to a ring at the ship's quarter.

STANDING RIGGING. See the article **RIGGING.**

STANDING WATER—water where there is no current or tide.

STARBOARD—the right side of a ship when the eye of a spectator is directed forward.

STARBOARD—is also an order to the helmsman to put the helm a little to the starboard side; and is used only when the ship is going large or free. See the article **HARD-A-STARBOARD.**

To START—applied to liquids, is to empty; but to any weight, as the anchor, &c. implies to move.

STATION-BILL—a list, containing the appointed posts of the ship's company when navigating the ship.

To STAVE—is to break a hole in any vessel.

STAY—a large strong rope, employed to support the mast on the fore-part, by extending from its upper end towards the stem of the ship, as the shrouds are extended on each side.

The **FORE-STAY**, is that which reaches from the fore-mast head towards the bowsprit end.

The **MAIN-STAY**, is that which extends to the ship's stem.

The **MIZEN-STAY**— is that which is stretched to a collar on the main-mast, immediately above the quarter-deck.

The **FORE-TOP-MAST-STAY**— is that which comes to the end of the bowsprit, a little beyond the fore-stay.

The **MAIN-TOP-MAST-STAY** is attached to the hounds of the fore-mast.

The **MIZEN-TOP-MAST-STAY** is that which comes to the hounds of the main-mast.

The **FORE-TOP-GALLANT-STAY** is that which comes to the outer end of the jib-boom.

The **MAIN-TOP-GALLANT-STAY**—is that which is extended to the head of the fore-top-mast.

The **MIZEN-TOP-GALLANT-STAY**—is that which is attached to the head of the main-mast.

The **ROYAL-STAYS**— when used, are those which extend to the jib-boom end, or to the heads of the top or top-gallant-masts next before them.

The whole of these stays are nearly in the directions of the upper edges of the several stay-fails, which derive their names from them. See the article **SAIL.**

SPRING-STAY—is a kind of assistant stay, extending in a direction nearly parallel to the principal stay; it is much thinner than the other, and is only used to the lower-masts and top masts.

STAY-SAIL—any sail extended upon a stay. See the article **SAIL.**

STAY-SAIL-STAY—a rope used solely to extend and support a stay-sail, as the middle stay-sail.

STAYS—a term for going about; hence, "to miss stays," is to fail in the attempt to go about.

STAY-

STAY-TACKLE—a large tackle; attached by means of a pendant to the main-stay. It is used to hoist heavy bodies, such as the boats, or butts of water, beer, &c. in or out of the ship and out of the holds; for which purpose there are generally two, the one over the fore-hatchway, the other perpendicular to the main-hatchway; and they are accordingly distinguished by the epithets main or fore stay-tackles, though both are upon the main-stay.

STEADY, the command given to the helmsman in a fair wind, to steer the ship in the line on which she advances at that instant, without deviating from the right or left; to which the helmsman answers, Steady, to shew his attention to the order.

STEEP-TO—is said of a shore when it descends almost perpendicularly into the water.

STEEERAGE—an apartment before the great cabin, from which it is separated by a partition or bulk-head. In merchant-ships it is generally the habitation of the inferior officers and crew; but in ships of war it serves only as a hall or anti-chamber to the great or captain's cabin.

STEEERAGE—is also used to express the effort of the helm.

STEEERAGE-WAY—implies a sufficient degree of motion communicated to a ship for her to become susceptible of the effects of the helm in governing her course.

STEERING—may be defined the art of directing a ship's way by the movements of the helm, or of applying its efforts to regulate her course when she advances.

The perfection of steering consists in a vigilant attention to the motion of the ship's head, so as to check every deviation from the

line of her course in the first instant of its motion, and in applying as little of the power of the helm as possible. By this she will run more uniformly in a straight path, as declining less to the right and left; whereas, if a greater effort of the helm is employed, it will produce a greater declination from the course, and not only increase the difficulty of steering, but also make a crooked and irregular track through the water. See the following article **STEERS-MAN**.

The phrases used in steering a ship vary according to the relation of the wind to her course. Thus, if the wind is fair or large, the phrases used by the pilot or officer who superintends the steering, are Port, Starboard, and Steady. The first is intended to direct the ship's course further to the right, the second is to guide her further to the left, and the last is designed to keep her exactly in the line, on which she advances according to her prescribed course.

The excess of the first and second movement is called Hard-a-Port, and Hard-a-Starboard; the former of which gives the greatest possible inclination to the right, and the latter an equal tendency to the left. See the articles **PORT**, **STARBOARD**, **STEADY**, **HARD-A-PORT**, &c.

If, on the contrary, the wind is foul and scant, the phrases then used, are Luff, Thus, and No-Near! The first of which is the order to keep her close to the wind; the second, to retain her in her present situation; and the third, to keep her sails full. See the articles **LUFF**, **THUS**, **NO-NEAR**, **FULL-AND-BY**, **CONNING**, &c.

In ships of war, the duties of cunning

conning and steering are divided amongst the quarter-masters, their mates, and the most expert seamen, who attend the helms in turns. The steerage is constantly supervised by the quarter-masters.

In merchant-ships, every seaman takes his turn in steering, being directed therein by the mate of the watch, or some other officer.

As the safety of a ship, and all contained therein, depend in a great measure on the steerage and effects of the helm, the apparatus by which it is managed should often be examined by the proper officers. Indeed, when the fatal effects which may result from negligence in this important duty are duly considered, such inattention must be pronounced unpardonable.

STEERSMAN, the helmsman or timoneer; which latter appellation is derived from the French term, which signifies an helmsman.

He is reckoned the best steer-man who uses the least motion in putting the helm over to and again, and who keeps the ship best from making yaws, that is, from running in and out. See the article **YAW**. For this purpose, he should diligently watch the movements of the head by the land, clouds, moon, or stars; because, although the course is in general regulated by compass, the vibrations of the needle are not so quickly perceived, as the fallies of the ship's head to the right or left, which, if not immediately restrained, will require additional velocity in every instant of their motion, and demand a more powerful impulse of the helm to reduce them; the application of which will operate to turn her

head as far on the contrary side of her course.

STEEVING—the angle of elevation which a ship's bowsprit makes with the horizon.

STEM—a circular piece of timber, into which the two sides of a ship are united at the fore end; the lower end of it is scarfed to the keel, and the bowsprit rests upon its upper end; the ends of the wales and planks of the sides and bottom are let into a groove or channel cut in the middle of its surface, from top to bottom. See the article **RABBITTING**.

The outside of the stem is usually marked with a scale of feet, answering to a perpendicular from the keel. Its use is to ascertain the draught of water at its forepart, when the ship is in preparation for a sea voyage, &c.

The stem at its lower end is of equal breadth and thickness with the keel, but it grows proportionally broader and thicker towards its upper extremity.

FALSE STEM—is that fixed before the right one. When a ship's stem is too flat, so that she cannot keep a wind well, they put a false stem above, which makes her rid more way, and bear a better sail.

TO STEM A TIDE—to acquire a velocity in sailing against the tide equal to the force of the current.

FROM STEM TO STERN—from one end of the ship to the other.

STEMSON—an arching piece of timber fixed within the apron, to reinforce the scarf thereof, in the same manner as the apron supports the scarf of the stem.

STEP—a block of wood fixed on the decks or bottom of a ship, and having a hole in its upper side fitted to receive the heel of a mast or capstan.

TO STEP A BOAT'S MAST — is to erect and secure it in readiness for setting sail.

STERN — the posterior part of a ship, or that part which is presented to the view of a spectator, placed on the continuation of the keel, behind. The stern is terminated by the taffarel above, and by the counters below. It is limited on the sides by the quarter-pieces, and the intermediate space comprehends the galleries and windows of the different cabins.

STERN-CHASE. See the article CHASE.

STERN-BOARD. See the article BOARD.

STERN-FAST — a rope used to confine the stern of a ship, lighter, or boat, to any wharf or jetty-head, &c.

STERN-FRAME — the several pieces of timber which form the stern. See the article TIMBER.

STERNMOST — implies any ship or ships that are in the rear or farthest astern, as opposed to headmost.

STERN-PORTS. See the article PORTS.

STERN-POST — a long straight piece of timber, erected on the extremity of the keel, to sustain the rudder, and terminate the ship behind. It is usually marked like the stem, with a scale of feet, from the keel upwards, in order to ascertain the draught of water abaft.

This piece ought to be well served and supported; because the ends of all the lower planks of the ship's bottom are fixed in a channel cut on its surface, and the whole weight of the rudder is sustained by it. The difficulty of procuring a stern-post of sufficient breadth in one piece, has introduced the practice of fixing an ad-

ditional piece behind it, which is strongly bolted to the former; the hinges which support the rudder are accordingly fixed to this latter, which is also tenanted into the keel, and is denominated the back of the post.

The stern-post is strongly attached to the keel by a knee, of which one branch extends along the keel, being scarfed to the deadwood, and fore-locked under the keel; whilst the other branch inclines upwards, and corresponds with the inside or fore part of the stern-post, to which it is also bolted in the same manner.

STERN-SHEETS — that part of a boat which is contained between the stern and the aftmost seat of the rowers. It is generally furnished with seats to accommodate passengers.

STERN-WAY — the movement by which a ship retreats or goes backward with her stern foremost.

BY THE STERN — the condition of a vessel which is more deeply laden abaft than forward.

STEWARD — an officer in a ship of war, appointed by the purser to distribute the different species of provisions to the officers and crew, for which purpose he is furnished with several assistants. He is generally denominated the purser's steward, or the ship's steward, to distinguish him from the captain's or the ward-room stewards, who are appointed to take care of the sea stock belonging to the captains and lieutenants, &c.

STICK OUT THE CABLE — is the order to slacken and push it out of the hawse-hole, when the anchor is hauling up to the cat-head, &c.

STIFF — the quality by which a ship

a ship is enabled to carry a sufficient quantity of sail without over-setting.

STINK-POT—an earthen jar, charged with powder, grenades, and other materials of an offensive and suffocating smell. It is sometimes used by privateers, to annoy an enemy whom they design to board. See the article **BOARDING**.

STIRRUPS. See the article **HORSE**.

STOCK — generally implies provisions procured by individuals, for the particular accommodation of themselves or messmates; hence we say fresh stock, sea stock, live stock.

STOCK OF AN ANCHOR. See the article **ANCHOR**.

To STOCK TO—in slowing an anchor, is by means of a tackle upon the upper end of the stock, to bowse it into a perpendicular direction, which tackle is hence denominated the stock tackle.

STOCKS—a frame erected on the shore of a river whereon to build shipping. It generally consists of a number of wooden blocks ranged parallel to each other at convenient distances, and with a gradual declivity towards the water.

STOPPERS — certain short pieces of rope, which are usually knotted at one or both ends, according to the purpose for which they are intended.

STOPPER, of the anchor, a strong rope attached to the cat-head, which, passing through the anchor-ring, is afterwards fastened to a timber-head, thereby securing the anchor on the bow.

STOPPERS, of the cables, commonly called deck-stoppers, have a large knot and a laniard at one end, and are fastened to a ring-

bolt in the deck by the other; they are attached to the cable by the laniard, which is fastened securely round both by several turns passed behind the knot, or about the neck of the stopper, by which means the cable is restrained from running out of the ship when she rides at anchor.

DOG-STOPPER, is a strong rope clenched round the main-mast, and used on particular occasions, to relieve and assist the preceding when the ship rides in a heavy sea, or otherwise bears a great strain on the cable.

WING-STOPPERS, similar pieces of rope clenched round one of the beams near the ship's side, and serving the same purpose as the preceding.

STOPPERS OF THE RIGGING have a knot and a laniard at each end, they are used when the shrouds, stays, or back-stays, are cut asunder in battle, or disabled in tempestuous weather, they are then lashed, in the same manner as those of the cables; to the separated parts of the shroud, &c. which are thereby re-united so as to be fit for immediate service. This, however, is only a temporary expedient applied when there is not time or opportunity to re-fit them by a more complete operation.

STOPPERS are also pieces of rope used to prevent the running rigging from coming up whilst being belayed.

STORE-KEEPER an officer in the royal dock-yards, invested with the charge of the principal naval stores, as the sails, anchors, cordage, &c.

STORE-ROOM—an apartment or place of reserve, of which there are several in a ship, to contain the provisions or stores of a ship, toge-

together with those of her officers. See the article ROOM.

STORE SHIP. See the article SHIP.

STOVES—square boxes made of plank, and lined with brick, for burning charcoal in to dress the admiral's victuals.

STOWAGE—the general disposition of the several materials contained in a ship's hold, with regard to their figure, magnitude, or solidity.

In the stowage of different articles, as ballast, casks, cases, bales, or boxes, there are several general rules to be observed, according to the circumstances or qualities of those materials. The casks which contain any liquid are, according to the sea phrase, to be hung up and bilge free, i. e. closely wedged up in an horizontal position, and resting on their quarters, so that their bilges (or where they measure most round) being entirely free, cannot rub against each other, or the ship's side, by the motion of the vessel. Dry goods, or such as may be damaged by the water, are to be carefully enclosed in casks, bales, cases, or wrappers, and wedged off from the bottom or sides of the ship, as well as from the bows, masts, and pump-well, &c. Due attention must likewise be had to their disposition, with regard to each other, and to the trim and centre of gravity of the ship, so that the heaviest may always be nearest the keel, and the lightest gradually above them. See the articles BALLAST, ROLLING, &c.

STRAIT, or STRAIGHT—a narrow channel or arm of the sea, contained between two opposite shores, as the straits of Gibraltar, the straits of Sunda, the straits of Dover, &c.

STRAKES, or STREAKS—the uniform ranges of planks on the bottom or sides of a ship, or the continuation of planks joined to the end of each other, and reaching from the stern, which limits the vessel forward, to the stern-post and fashion-pieces, which terminate her length abaft.

GARBOARD-STREAK, is the lowest streak or range of planks, being let into rabbets in the keel below, and in the stem and stern-post at the ends. See the article KEEL.

STRAND—one of the twists or divisions of which a rope is composed. See the articles ROPE and CABLE.

STRAND—also implies the sea-beach.

STRANDED—speaking of a cable or rope, signifies that one of its strands is broken.

STRANDED—applied to a vessel, means that she has run aground on the sea-shore, either by a tempest, or through ill steering. Where any vessel is stranded, the justices of the peace are empowered to command the constables near the coast to call assistance, in order to preserve the ship, if possible.

To STRETCH ALONG A BRACE, &c.—to lay it along the decks in readiness for a number of men to lay hold of.

To STRETCH OUT—in rowing, is to bend and fall back to the utmost, in order to take longer hold of the water with the oar, and thereby give the boat the greater velocity.

STRETCH—is frequently used instead of tack; as “we shall make a good stretch.”

STRETCHER—a narrow piece of plank placed athwart the bottom of a boat, for the rower to place his feet against, in order

to communicate a greater effort to his oar.

STRETCHING, is generally understood to imply the progression of a ship under a great surface of sail, when close hauled. The difference between this phrase and standing is apparently in the quantity of sail, which, in the latter, may be very moderate, but in stretching generally implies considerable, as "we were standing in shore (under easy sail) when we discovered the enemy stretching to the southward," i. e. under a crowd of sail.

To **STRIKE**—to run ashore, or to beat upon the ground, in passing a bank or shallow.

To **STRIKE** — also implies to lower or let down any thing, as the ensign or top-sail in saluting, or as the yards, top-gallant-masts, and top-masts, in tempestuous weather; it is also particularly used to express a lowering of the colours, in token of surrender to a victorious enemy. See the article **FLAG**.

STRING — in ship-building, the highest range of planks in a ship's ceiling, or that which lies between the gunwale and the upper edge of the upper-deck-ports.

To **STRIP THE MASTS**—to unrig a ship, or deprive the masts of their machinery and furniture.

STROKE—a single sweep of the oars in rowing. Hence we say, "Row a long stroke;" which is intended to move the vessel forward more steadily.

STROKESMAN—the person who rows the aftmost oar in a boat, and gives the stroke which the rest are to follow, so that all the oars may operate together.

STROP—a piece of rope, spliced generally into a circular wreath, and used to surround the body of a

block, so that the latter may be hung to any particular situation about the masts, yards, or rigging.

Strops are also used occasionally to fasten upon any large rope for the purpose of hooking a tackle to the eye or double part of the strop, in order to extend or pull with redoubled effort upon the same rope; as in setting up the rigging, where one hook of the tackle is fixed in a strop applied to the particular shroud, and the other to its laniard.

IRON-STROP—is a hoop of iron, in lieu of rope, round the shell of a block, and is only used to some particular blocks.

STUDDING-SAILS — certain sails, extended in moderate and steady breezes beyond the skirts of the principal sails, where they appear as wings to the yard-arms.

The **TOP-MAST** and **TOP-GALLANT** studding-sails are those which are set on the outside of the top-sails and top-gallant-sails. They are spread at the foot by booms, which slide out on the extremities of the lower and top-sail-yards, and their heads or upper edges are attached to small yards, which are hoisted up to the top-sail and top-gallant yard-arms. See the articles **SADDLE** and **BOOM-IRON**.

The lower studding-sails, which are spread beyond the leeches of the main-sail, are fixed nearly in the same manner, only that the boom which extends the foot is hooked to the chain by means of a goose-neck, or else swings off with the sail to which it is suspended, being kept steady abaft by a rope called the guy.

STUFF, any composition or melted mass, used to smear or daub the sides or bottom of a ship.

The

The stuff, which is chiefly used for the lower masts, is simply turpentine, resin, or varnish of pine; for the top-mast, tallow or butter; for the sides, turpentine, varnish of pine, tar and oil, or tar mixed with oil and red ochre; and for the bottom, a mixture of tallow, sulphur, and resin or tar; whale oil and broken glass; or any part of these ingredients; and this application is called giving a new coat of stuff to the masts, sides, &c.

SUPERCARGO — an officer charged with the accounts of the cargo, and all other commercial affairs in a merchant-ship.

SUPPLY — a fresh recruit of provisions and stores sent to a ship or fleet.

SURF — the swell of the sea, which breaks upon the shore or any rock lying near the surface.

SURGE — the same as **WAVE**.

SURGE implies also an order to let go a portion of a rope suddenly; as, "Surge the messenger."

SURGEON — a medical man, appointed to attend the sick and wounded on board a ship of war; for which purpose he has, according to the rate of the ship, from one to six assistants, called surgeon's mates.

SURVEY — an examination, made by several naval officers, into the state or condition of any stores, provisions, &c. belonging to a ship or a fleet of men of war.

SURVEY — is also applied to the taking the plan of a harbour, as it is on shore to the plotting of land.

SURVEYORS OF THE NAVY — two officers who sit at the navy board, being invested with the charge of building and repairing his majesty's ships at the different dock-yards of the kingdom; for which purpose they are train-

ed to the theory and practice of ship-building.

SWAB — a sort of mop, formed of a large bunch of old rope-yarns, and used to clean the decks and cabins of a ship.

HAND SWAB — a smaller kind, used for wiping dry the stern-sheets of a boat, washing of plates and dishes, &c. &c.

SWABBER — a man appointed to use the swabs in drying up the decks. He is sometimes called ship's sweeper, but more commonly captain's swabber.

SWAB-WRINGERS — people appointed to wash the swabs and keep them dry, ready for use.

To **SWAY** — to hoist; and is particularly applied to the lower-yards and top-masts, and top-gallant-masts and yards.

SWEEPS — large oars used on board ships of war in a calm, either to assist the rudder in turning them round, or to increase the ship's velocity in a chase.

SWEEP OF THE TILLER — the circular frame on which the tiller traverses in large ships.

SWEEPING — the act of dragging the bight, or loose part of a small rope along the surface of the ground, in a harbour or road, in order to hook and recover some anchor, wreck, or other material sunk at the bottom. It is performed by fastening the two ends of the rope to the sides of two boats, abreast of each other, at some distance. To the middle of the rope is suspended a weight, to sink it to the ground, so that as the boats advance by rowing ahead, the rope drags along the bottom, in order to hook any anchor, &c. for which they are searching.

SWEEPERS — persons appointed (sometimes by way of punishment)

nishment) to sweep the decks occasionally with brooms.

CAPTAIN-SWEEPER—a man who has command over the preceding gang. See the article **SWABBER**.

SWEEPER OF THE SKY—a name given by sailors to the N. W. winds of America.

SWELL—generally denotes a heavy and continued agitation of the waves, rolling in any particular direction. It is, however, more particularly applied to the fluctuating motion of the sea, which remains after a storm, as also to that which breaks on the sea-shore, &c.

SWIFTER—a rope used to confine the bars of the capstan in their sockets, while the men are turning it round; for which purpose it is passed through holes in the extremities of the bars, so as to attach them firmly to each other like the felloes of a wheel, which operation is called *swift-ing*. See the article **CAPSTAN**.

SWIFTER, is also a strong rope, sometimes used to encircle a boat lengthwise, as well to strengthen as to defend her sides from the impression of other boats which may run against her. It is usually fixed about nine inches below the boat's gunwale or upper edge.

SWIFTERS are likewise two shrouds, fixed on the starboard and larboard sides of the lower masts above all the other shrouds, as an additional security to the masts, and are never confined, like them, to the catharpings.

To **SWING**—to turn a ship round the anchors or moorings at the change of the wind or tide, and is only applicable when moored by the head, or riding at single anchor.

SWIVEL—a small piece of artillery, carrying a shot of half

a pound, and fixed in a socket on the top of a ship's side, stern, or bow, and also in the tops; the trunnions of this piece are contained in a sort of iron crotch, whose lower end terminates in a cylindrical pivot resting in the socket so as to support the weight of the cannon. By means of this swivel (which gives name to the piece of artillery), and an iron handle on its cascabel, the gun may be directed by hand to any object. See the article **ENGAGEMENT**.

SWIVEL is also a strong link of iron used in mooring-chains, &c. which permits the bridles to be turned repeatedly round, as occasion requires.

T.

TABLE-SHORE—a low level shore.

TABLING—a sort of broad hem, formed on the heads, skirts, and bottoms of a ship's sails, to strengthen them in that part which is attached to the bolt-rope.

TACK—a rope used to confine the foremost lower corners of the courses and stay-sails, in a fixed position, when the wind crosses the ship's course obliquely. The same name is also given to the rope employed to pull out the lower corner of a studding-sail to the extremity of its boom. The main-sail and fore-sail of a ship are furnished with a tack on each side, which is formed of a thick rope, tapering to the end, and having a knot wrought upon the largest end, by which it is firmly retained in the clue of the sail; the tack therefore extends the sail to windward, while the sheet extends it to leeward. See the article **CHESS-TREE**.

TACK,

TACK, is also applied, by analogy, to that part of any sail to which the tack is usually fastened. A ship is said to be on the starboard or larboard tack, when she is close-hauled with the wind on the starboard or larboard side, and in this sense the distance she sails in that position is considered as the length of the tack, although this is more frequently called a board.

To TACK—to change the course from one board to another, or turn the ship about from the starboard to the larboard tack, or *vice versa*, in a contrary wind. It is performed by turning the ship's prow suddenly to the wind, whereby her head-sails being thrown aback, they receive the impression of the wind in a new direction, and cause her to fall off from the wind to the other tack.

TACKING—is also used in a more enlarged sense, to imply that manœuvre by which a ship makes an oblique progression to windward, in a zig-zag direction; this, however, is more usually called beating or turning to windward.

The operation of tacking is thus performed. The helm being put to the lee-side, the commanding officer calls out, "Helm a-lee;" the head-sails are immediately made to shiver in the wind, by casting loose their sheets and bowlines; the officer then calls, "Raise tacks and sheets," which is executed by loosening all the ropes which confine the corners of the lower sails, in order that they may be more readily shifted to the other side. When the ship has turned her head directly to the wind, the order is given to turn about the sails on the mizen-masts, by the exclamation "Haul main-sail, haul;" the bow-

lines and braces are then instantly let go on one side, and as expeditiously drawn in on the other side, so as to wheel the yards about their masts; the lower corner of the main-sail is, by means of its tack, pulled down to its station at the chess-tree, and the after-sails are at the same time adjusted to stand upon the other board. Finally, when the ship has fallen off five or six points, the commanding officer calls, "Haul off all," or "Let go and haul;" then the sails on the foremast are wheeled about by their braces, and as the ship has a tendency to fall off, she is checked by the effort of the helm, which is for that purpose shifted to the now lee-side. The fore-tack, or lower corner of the fore-sail being fixed in its place, the bowlines are hauled, and the other sails are properly arranged to the wind, which is called trimming all sharp.

In order to explain the theory of tacking a ship, it may be necessary to premise a known axiom in natural philosophy, "That every body will persevere in a state of rest, or of moving uniformly in a right line, unless it be compelled to change its state by forces impressed, and that the change of motion is proportional to the moving force impressed, and is made according to the right line in which that force is exerted." By this principle it is easy to conceive how a ship is compelled to turn in any direction by the force of the wind acting upon her sails in horizontal lines. For the sails may be so arranged as to receive the current of air either directly, or more or less obliquely; hence the motion communicated to the sails must of necessity conspire with that

of the wind upon their surfaces. To make the ship tack, or turn round with her head to the windward, it is therefore necessary, after she has received the first impression from the helm, that the head sails should be so disposed as to diminish the effort of the wind, in the first instant of her motion, and that the whole force of the wind should be exerted on the after-sails, which, operating on the ship's stem, carries it round like a weathercock. But since the action of the after-sails to turn the ship will unavoidably cease when her head points to the windward, it then becomes necessary to use the head-sails to prevent her from falling off, and returning to her former situation. These are accordingly laid aback on the lee-side, to push the vessel's forepart towards the appointed side till she has fallen into the line of her course thereon, and fixed her sails to conform with that situation.

TACKLE—a machine formed by the communication of a rope with an assemblage of blocks, and known in mechanics by the name of pulley. Tackles are used in a ship to raise, remove, or secure weighty bodies, to support the masts, or to extend the sails and rigging; they are moveable, as communicating with a runner, or fixed, as being hooked in an immoveable situation; and they are more or less complicated in proportion to the effects which they are intended to produce. The application of the tackle to mechanical purposes is called hoisting or bowling.

GROUND TACKLE—implies the anchors, cables, &c. See the article **GROUND**.

TACK TACKLE—a small tackle used to pull down the tacks of

the principal sails to their respective stations, and particularly attached to the main-sails of brigs, sloops, cutters, and schooners. For the other various tackles, see their particular epithets.

TAFFAREL—the uppermost part of a ship's stern, being a curved piece of wood, and usually ornamented with sculpture.

TAIL OF A GALE—a name given by sailors to the latter part of a storm, wherein its violence is considerably abated.

TAIL-BLOCK—a single block, having a short piece of rope attached to it, by which it may be fastened to any object at pleasure, either for conveyance, or to increase the force applied to the said object.

TAKING IN—the act of brailing up and furling the sails at sea, particularly when the wind increases; and is generally used in opposition to setting. See the articles **FURL** and **SHORTEN**.

TALLYING AFT—a phrase applied to the act of pulling aft the sheets or lower corners of the main-sail and fore-sail.

TAR—a kind of liquid gum, which is procured from pines or fir-trees, and is used to pay the sides of ships and boats, and their rigging and yards, in order to preserve them from the effects of the weather.

TAR is also a figurative expression for a sailor.

TAR-PAWLING—a broad piece of canvass, well daubed with tar, and used to cover the hatchways of a ship at sea, to prevent the penetration of the rain or sea-water which may at times rush over the decks. See the article **PATTERNS**.

TARTAN—a small coasting vessel navigated in the Mediterranean Sea, and having only one

mast and a bowsprit, the principal sail, which is very large, being extended by a lateen-yard. See the article **VESSEL**.

TAUGHT—the state of being extended or stretched out, and is usually applied in opposition to slack.

TAUGHT-SAIL—implies a great quantity of sail set.

TAUNT—an epithet signifying high or tall. It is particularly expressed of the masts, when they are of an extraordinary length, as square is applied to the yards on the same occasion.

TELL-TALE—a small piece of wood, traversing in a groove across the front of the poop-deck, and which, by communicating with a small barrel on the axis of the steering-wheel, indicates the situation of the helm.

TENDER—a small vessel employed to attend a larger one, to supply her with stores, to carry intelligence, &c. Vessels appointed to receive volunteers and impressed men, and to carry them to receiving ships, &c. are also called tenders.

TENDING—the movement by which a ship turns or swings round, when at single anchor, or moored by the head, in a tide-way, at every change of tide.

For instance, if the flood sets northerly, it is evident that the ship, unless when moored head or stern, will fall into the line of the current, turning her head to the southward. But as the reflux will for the same reason set to the southward, the ship will of necessity turn about at the change of the tide, and carry her head to the northward, and the transition from one situation to the other is called tending or swinging.

TENON—the end of a piece

of timber, cut small to enter into a mortise.

THICK-STUFF — planks thicker than those commonly used, which are placed opposite to the several scarfs or joinings in the frame of timbers.

THIMBLE — a sort of iron ring, whose outer surface is hollowed throughout its whole circumference, in order to contain in the channel or cavity a rope which is spliced about it, and by which it may be hung in any particular situation. Its use is to defend the eye of the rope which surrounds it from being injured by another rope which passes through it, or by the hock of a tackle which is hung upon it.

THOLES—small pins driven perpendicularly into the gunwale of a boat, and serving to retain the oars in that space which is called the row-lock; sometimes there is only one pin to each oar, as in the boats navigated in the Mediterranean Sea. In that case the oar is retained upon the pin, by means of a strop or of a cleat, with a hole through it, nailed on the side of the oar.

THROAT—a name given to that end of a gaff which is next the mast, and is opposed to peck, which implies the outer end, hence

THROAT-BRAILS — are those which are attached to the gaff close to the mast. See the article **BRAILS**.

THROAT-HALIARDS — ropes or tackles applied to hoist the inner part of the gaff and its appendant portion of the sail.

To **THRUM**—to insert in a sail or mat, &c. through small holes made by a bolt-rope-needle, or a marline-spike, a number of short pieces of rope-yarn, or spun-yarn.

THUS;

THUS; very well Thus—the order to the helmsman to keep the ship in her present direction when sailing close hauled. See the article STEERING.

THWARDS — the seats or benches of a boat whereon the rowers sit to manage the oars.

THWART-SHIPS — across the ship—See the article ATHWART.

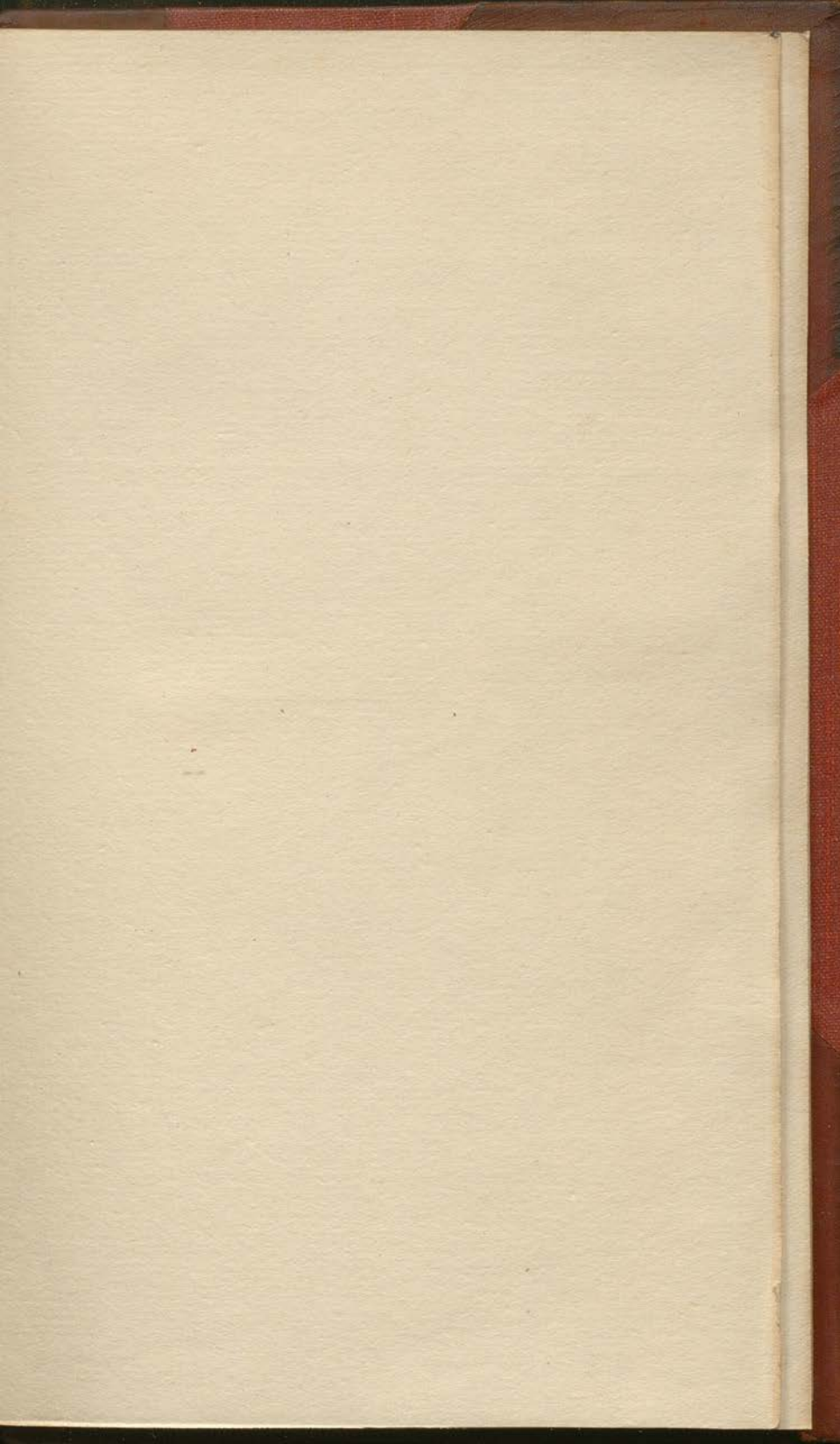
TIDE— a regular periodical current of the water setting alternately in a flux and reflux, and is produced by the influence of the moon.

Locke, in describing the theory of the tides observes, “ That motion of the water, called tides, is a rising and falling of the sea: the cause of this is the attraction of the moon, whereby the part of water in the great ocean which is nearest the moon, being most strongly attracted, is raised higher than the rest; and these two opposite elevations of the surface of the water in the great ocean following the motion of the moon from east to west, and striking against the large coasts of the continents, from thence rebound back again, and so make floods and ebbs in narrows, seas, and rivers.”

The great Sir Isaac Newton undertook to explain the doctrine of the tides upon the two great principles of gravity and attraction. However irregular they might be in certain instances, and with a view to certain objects, it was evident that from the stated intervals of time which they preserved; some common and general cause must exist to produce such a regular effect. Continued observation had ascertained one striking and remarkable fact on all the coasts of the British dominions in Europe, and along the coasts of Holland, France, Spain, and Por-

tugal; that the hour of high water, considered generally, was regularly and uniformly, at a certain interval or portion of time after the moon had passed the meridian of such place. The acute and sagacious mind of this philosopher was from mature deliberation and attention to this fact, soon convinced that the moon had an influence upon the great body of the waters of the ocean, and that the only remaining subject of consideration was, to discover how far this principle would agree with the different quantity of waters which were accumulated at those intervals on different days. On this subject he might thus judiciously argue with himself. If it be true that the moon has an influence on the waters of the ocean so as to occasion their accumulation in a regular and periodical way, which cannot be done by any thing but the force of attraction, it is equally probable, that the other heavenly bodies should have some influence to the same purpose. But the sun alone from his magnitude is capable of doing this in any considerable or sensible degree, and though from his distance that effect and influence be very much lessened, yet, upon calculation it would be found to bear a proportion extremely well suited to obviate the remaining difficulty.

First, it should be observed that the earth has a daily revolution on its axis every twenty-four hours from west to east, which occasions the sun and other heavenly bodies apparently to move from east to west. But the moon, from her actual motion in the heavens towards the east, of a little more than twelve degrees daily, or near forty-nine minutes of time at a medium,



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