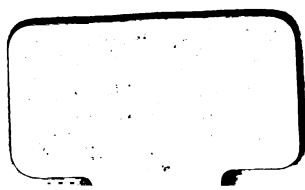
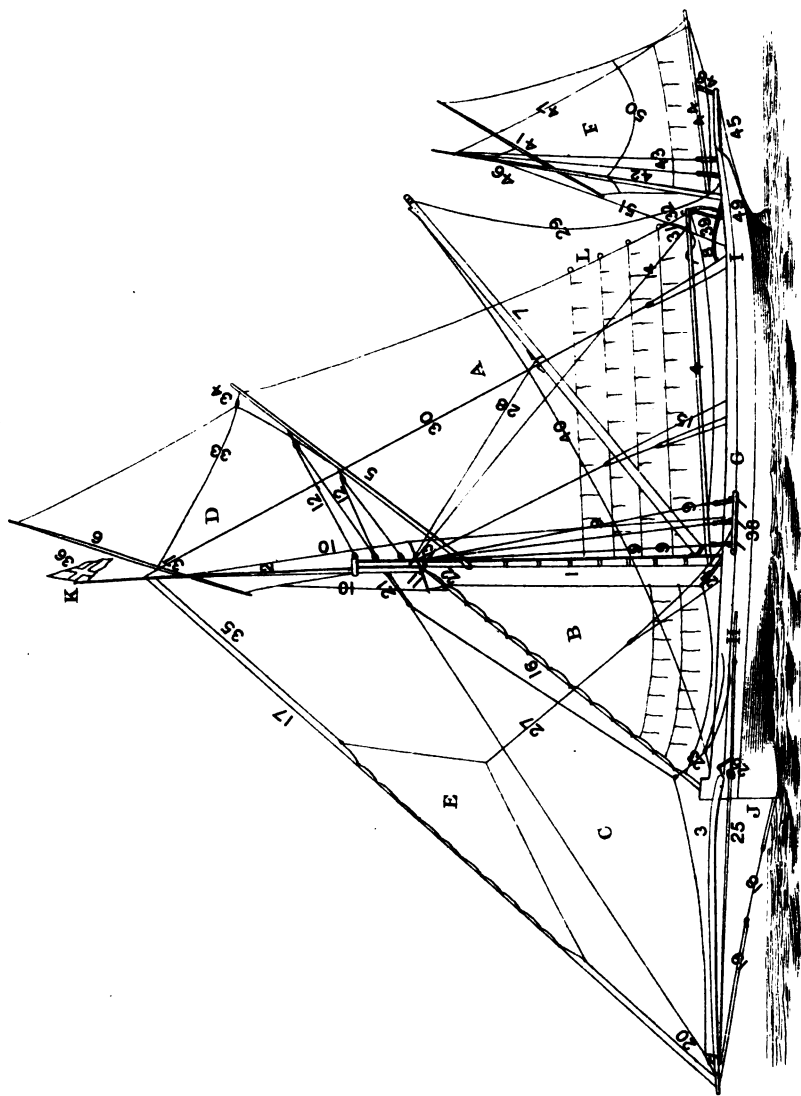


THE
CORINTHIAN
YACHTSMAN



OR
HINTS ON
YACHTING.





THE
CORINTHIAN YACHTSMAN,
OR
HINTS ON YACHTING,
BY
TYRREL E. BIDDLE.

*Author of "Model Yacht Building and Sailing," "How to Make Knots, Bends,
and Splices as Used at Sea," &c.*



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PREFACE.

THE success that has attended my former work on "MODEL YACHT BUILDING AND SAILING" has emboldened me to place the present little Book before those youthful aspirants, who wish to become Yacht Owners, or who desire to go afloat for the first time, with some little knowledge of the Build and Equipment of a Yacht, and the routine on board.

T. E. B.

London, 1881.

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YAWL'S SPARS AND ROPES.

- | | |
|-------------------------------|----------------------------------|
| 1. Lower mast and hoops. | 27. Jib topsail sheet. |
| 2. Topmast. | 28. Spinnaker boom topping lift. |
| 3. Bowsprit. | 29. Spinnaker boom brace. |
| 4. Main boom. | 30. Maintopmast backstay. |
| 5. Gaff. | 31. Reef Pennant. |
| 6. Topsail yard. | 32. Main outhaul. |
| 7. Spinnaker boom. | 33. Gaff topsail clew line. |
| 8. Tiller. | 34. Gaff topsail sheet. |
| 9. Shrouds. | 35. Jib topsail halliards. |
| 10. Topmast shrouds. | 36. Burgee. |
| 11. Crosstrees. | 37. Gaff topsail halliards. |
| 12. Peak halliards. | 38. Channels. |
| 13. Throat or Main halliards. | 39. Main sheet. |
| 14. Boom Topping lift. | 40. Spinnaker boom guy. |
| 15. Runners and tackles. | 41. Yard. |
| 16. Forestay. | 42. Mizzen Mast. |
| 17. Topmast stay. | 43. Mizzen Shrouds. |
| 18. Bobstay. | 44. Mizzen boom. |
| 19. Bobstay fall. | 45. Bumpkin and Bumpkin shrouds. |
| 20. Jib traveller. | 46. Mizzen halliards. |
| 21. Jib halliards. | 47. Mizzen Topping Lift. |
| 22. Fore halliards. | 48. Mizzen sheet. |
| 23. Jib sheets. | 49. Counter. |
| 24. Fore sheet. | 50. Brails. |
| 25. Bowsprit shrouds. | 51. Mizzen Stays. |
| 26. Whiskers. | |

SAILS, &c.

- | | | |
|------------------|-----------------|--------------------|
| A. Mainsail. | E. Jib topsail. | I. The quarter. |
| B. Foresail. | F. The mizen. | J. Stem, Cutwater. |
| C. Jib. | G. Midships. | K. Truck. |
| D. Gaff topsail. | H. Forecastle. | L. Reef Cringles. |

A Cutter is the same without the mizen.

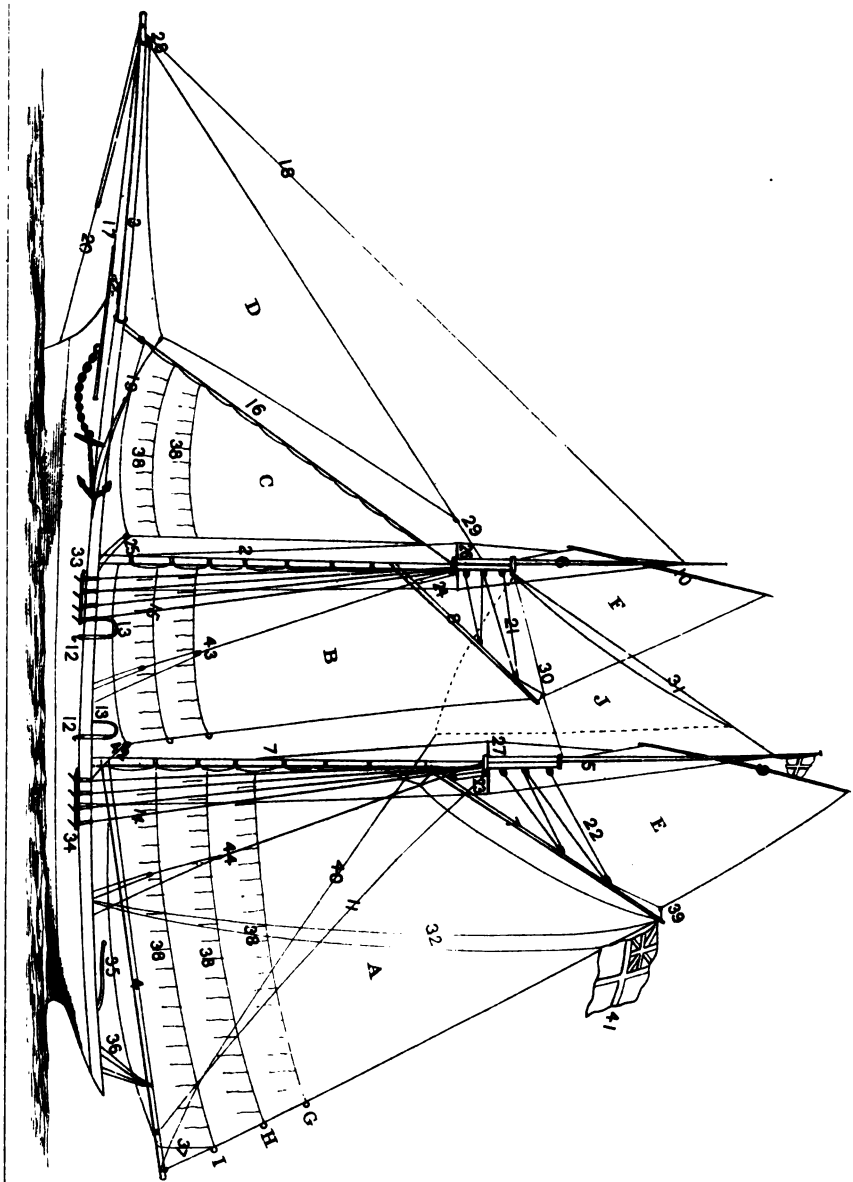
SCHOONER'S SPARS AND ROPES.

- | | |
|--------------------------|---------------------------------|
| 1. Mainmast. | 23. Main throat halliards. |
| 2. Foremast. | 24. Fore throat halliards. |
| 3. Bowsprit. | 25. Forestaysail sheet. |
| 4. Main boom. | 26. Fore crosstrees. |
| 5. Maintopmast. | 27. Main crosstrees. |
| 6. Foretopmast. | 28. Jib traveller. |
| 7. Main Gaff. | 29. Jib halliards. |
| 8. Fore Gaff. | 30. Triatic stay. |
| 9. Maintopsail yard. | 31. Maintopmast stay. |
| 10. Foretopsail yard. | 32. Ensign halliards |
| 11. Main toppinglifts. | 33. Fore channels. |
| 12. Davit falls. | 34. Main channels. |
| 13. Davits. | 35. Tiller. |
| 14. Main shrouds. | 36. Main Sheet. |
| 15. Fore shrouds. | 37. Reef pennant. |
| 16. Forestay. | 38. Reef points. |
| 17. Bowsprit shrouds, | 39. Maintopsail sheet. |
| 18. Foretopmast stay. | 40. Maintopmast staysail sheet. |
| 19. Jib sheet. | 41. Ensign. |
| 20. Bobstay. | 42. Fore Sheets. |
| 21. Fore peak halliards. | 43. Fore Runner and Tackle. |
| 22. Main peak halliards. | 44. Main Runner and Tackle. |

SAILS, &c.

- | | | |
|-------------------|-----------------|--------------------------|
| A. Mainsail. | D. Jib. | G. } |
| B. Foresail. | E. Maintopsail. | H. } Reef Cringles. |
| C. Fore staysail. | F. Foretopsail. | I. } |
| | | J. Maintopmast staysail. |

B.—In Sails, the lower fore corners are called the tacks, and the after corners the clews; of the , the upper part is the head; the lower, the foot; the fore part, the luff; the after part, the leach.



CHAPTER I.

YACHTING AS A NATIONAL SPORT.

ANTIQUITY OF PLEASURE SAILING.—IMPORTANCE OF ENCOURAGING A LOVE FOR AQUATICS AMONG AN ISLAND POPULATION.—RISE AND PROGRESS OF YACHTING.

WHO was the first yachtsman, and what sort of a craft was the first yacht? is a question that is not unfrequently asked by inquirers into the origin of our national sport, and, to the majority of persons, a rather puzzling one.

That yachting as understood at present in England, dates from a comparatively modern period, it would be folly to deny; at the same time there is little doubt that, long anterior to the reign of Charles II., who is popularly supposed to have introduced a taste for yacht sailing into England, the inhabitants of these islands disported themselves on the water in boats. Have we not historical evidence to prove that many of our kings and princes, since the conquest, kept sailing boats for their own pleasure? Of course sailing vessels were first used as a means of transport only, but when it was found how much pleasure and enjoyment could be extracted out of such craft, vessels built for the sole purposes of pleasure naturally came into vogue. In the East Indies the Rajahs and their courtiers possessed swift sailing boats, in which they sailed about for amusement at the time of Vasco de Gama, and there is every reason to believe that such was also the case prior to the invasion of Alexander the Great. Readers of Plutarch will also remember many references to pleasure trips by water. Like the Chinese, the natives of India have not altered the form or shape of their sailing vessels in any material degree since they were first visited by Europeans; and from careful researches, it is evident they reached their present proficiency in naval architecture centuries before the christian era.

Few who have never tasted the salt spray as it is dashed from the sharp bows of a clipper yacht, can have any idea of the exhilarating feeling which is excited in the breast of the ardent sailor at the bounding motion of a swift vessel careening to a fresh breeze. The craft seems instinct with life; she rushes through the water as though

she knows critical eyes are watching her movements, while the dancing waves appear to make sportive attempts to catch her, now on the bow, now on the quarter and now on the lee, only however to glance off from her smooth and polished sides or to be flung aside in disdain from her beautifully moulded bows, revenging themselves occasionally by sending a small shower of glittering spray over the white and well kept decks, in fact as Byron, himself an ardent yachtsman, expresses it—

“She walks the waters like a thing of life,
And seems to dare the elements to strife.”

There are few of our national sports which appeal more to all our manly sentiments than yachting. There is just a sufficient spice of danger about it to give it that interest without which Englishmen are inclined to deem sport tame. It is healthful and invigorating, braces the nerves, expands the lungs and opens the heart. Its influence upon the mind is ennobling ; a thorough yachtsman is generally a gentleman, I don't mean in the matter of birth etc., but in thought, word and deed. Yacht racing though it has increased enormously of late years is still free from those unfortunate characteristics which have made horse racing a bye word and reproach to us as a nation. In a word it is of all British sports the one least likely to lead its votaries into equivocal company, and therefore careful papas and anxious mamas would do well to throw no obstacle in the way if master Harry or Tom shows any predilection for yachting, as a means whereby to let off that superfluous steam which impels young England to “go in” for something or other in the way of sport.

Apart, however, from its other recommendations, yacht sailing deserves special encouragement from every well wisher of his country. Depending as Great Britain does upon its maritime supremacy for its position as a great power, it is of the first importance to encourage a taste for salt water among the population. All insular people even in a half civilized state are more or less addicted to aquatic pursuits whether as fishermen or water pirates, witness the inhabitants of the Eastern Archipelago and Pacific Isles, to say nothing of the Malays or others of those seas. A certain instinct seems to teach them that their best chance of preserving their independence is to make their name a terror on the sea. If this is the case with the half savage tribes who inhabit the islands scattered about the ocean, how much more it behoves a nation like the British with a population greater than the land can itself feed, and with wealth so enormous as must sooner or later tempt the great military powers of the continent to make every effort to increase the number of its seamen. Remember what Captain Marryat said, “The security of the kingdom is increased by every man being more or less a sailor.” Which sentiment appropriately enough forms the motto of the *Yachting Magazine*.

Our early kings from the time of Alfred were fully alive to the necessity of encouraging the spirit of maritime adventure among the

people, and gave great privileges to those sailor warriors who carried the flag of St. George to distant shores. In our days the achievements of Drake, Frobisher, &c., would be looked upon I am afraid by certain modern would-be leaders of public morals who mistake a sickly sentimentalism and goody goody humanitarianism for statesmanship, as little better than piracies. Be that as it may the fierce spirit of our Viking forefathers and their daring seamanship, made the name of England respected and feared throughout the world, and if we wish to keep what their prowess has gained, we must not neglect those precautions which common instinct teaches the savage whose abode is surrounded by water to employ for his preservation.

It has often been observed that yachtsmen, in return for the privileges granted by the Admiralty warrant, should hold themselves and their vessels at the disposal of the state in case of war. There is, no doubt, something to be said in favour of such an opinion; but, in point of fact, the pleasure navy has never been backward in offering its services. At the time when the "*Trent*" affair promised to bring on hostilities with the United States, it was proposed to form a body of volunteers from among the seamen who man our yachts, and the offer was, I believe, made to the Government. Happily, however, the occasion for this display of patriotic fervour passed away peaceably. As it is, everyone who keeps a yacht does the state some service. When it is taken into consideration that every additional vessel added to the pleasure navy, be she large or small, means the addition of so many hands to the number of British seamen employed afloat, it is easy to perceive the importance of the pleasure navy to a maritime country like Great Britain. It is a fact, however, that yachting is not encouraged to the same extent as horse racing. With the exception of two or three annual Queen's Cups, nothing is done by Government to keep alive that spirit of emulation among yachtsmen, without which yachting as a sport would dwindle away to nothing. It speaks well for the spirit and independence of the yachting community, that alone and unaided, they have, in the course of some 30 years, made yacht racing one of the most prominent of our national sports and pastimes.

Those who, like the late Squire Weld and the late Earl of Yarborough, strove in the early part of the century to inculcate a love for the noble and manly recreation of sailing matches, could they but see the strides which have been taken of late years to popularize their favourite sport, would feel that their efforts had not been in vain. The wonderful strides which yachting has made during the latter half of the 19th century, can be best understood by a reference to the following figures:—In 1853, the second year after the famous *America* startled our yachtsmen into a temporary panic, the number of Royal Yacht Clubs in existence was eighteen, the number of yachts about six hundred, number of matches sailed about fifty, and the value of prizes won £3,885. Ten years later, in 1863, the number of yachts had more than doubled, several new clubs had been started, and the value of

prizes won was £4,570. Coming down to more recent times, the number of yachts, in 1873, was 2,600, and the value of the prizes sailed for amounted to the large total of £11,414 in 284 races.

The growth of yacht racing in popular favour is no doubt due in part, to the fact that it has hitherto been carried out in that fair and manly spirit which ought to govern the conduct of every true sportsman. One meets occasionally with persons whose ill-nature compels them to find fault with everything, no matter how good or meritorious it may be, but it is seldom that the charge of unfair dealing or cheating is ever brought against the pleasure navy. It is true that in the old days of shifting ballast there were men so regardless of sportsmanlike feeling as to endeavour to evade the rule which said, "No ballast to be shifted during a match." Owing, however, to the strong feeling expressed upon the matter by the majority of yachting men, the practice was rigidly put down, and delinquents found themselves in the unenviable position of outsiders, being cut by their brother yachtsmen, and black-balled at the clubs.

Another point in connection with the progress of yachting in British waters, is the increased size of the vessels forming our pleasure fleet. In 1851 there were only some dozen or so of Schooners over 100 tons; now there are plenty of Auxiliary Screw Steamers over 400 tons belonging to the different Royal Clubs. With the exception of the Royal Yacht Squadron, few clubs, at the period of the first exhibition, could boast of many vessels over fifty tons on their lists.

In considering the question of the increased size of modern yachts, we must not lose sight of the fact, that, as far as Cutters are concerned, the Royal Yacht Squadron had on its books, in 1845, Cutter Yachts of greater tonnage than are in existence now. At the same time the generality of yachting men considered twenty-five tons the best size for racing purposes, and it was not until the *Mosquito* and *Volante* were built that fifty tonners became fashionable.

The first yacht club, with any pretensions to be considered such, was undoubtedly organized at Cork, in the year 1720, and called the Cork Water Club. Next in its wake followed the Royal Yacht Squadron, in 1815. This was soon succeeded by others, and both George the IV. and his brother the Sailor King, patronised yacht racing in a special manner. The countenance given by royalty brought it at once into prominence as a national sport; and so it has remained, increasing year by year, affording employment to thousands of artisans and mechanics, as well as seamen, and thus adding considerably to the commercial prosperity of the kingdom.

The Thames was the scene of the first sailing match between vessels kept for pleasure only, the event taking place on October 1st, 1661. There are, however, no reliable records of any racing from that time up to 1775, when another match took place on the 23rd June of that year.

On June 17th in the following year (1776) a silver cup value twenty

guineas was given by the Duke of Cumberland to be sailed for by pleasure boats belonging to the Thames. Various other matches were got up both above and below bridge among the fast sailing pleasure boats, then called Hoys, but it was not until some thirty years later that attempts were made to organize a regular yacht club on old Father Thames. There have been numerous clubs which have flourished for a season or two whose names even are entirely forgotten, while others like the Prince of Wales's have struggled bravely on for numbers of years, until compelled for lack of support to close their doors. The mention of the Prince of Wales Yacht Club, will recall to many readers of this work the names of those indefatigable pioneers of Corinthian Yachting. This club formed in October 1852, was the first club on the Thames to encourage Corinthian Matches. The size of the yachts was limited to eight tons, and it speaks well for the organizers of the movement, Messrs. Clubb, Bernecastle, Turner, Knibs, Baine and others, that in its second year the club contained 330 members with forty yachts. The Prince of Wales's Club was for many years the nursery of Corinthian Yachtsmen. The first to open the season, the red burgee with snow white plume was generally the last to be hauled down, when the shortening days and chilly nights gave indications that the yachting season was drawing to a close.

At the present time there are several associations for promoting Corinthian Matches on the Thames, and therefore it has come to pass that the Prince of Wales Yacht Club after a long, useful and honourable career, ceased to exist in 1879. Long may its memory flourish among the yachting community for a better and more enterprising class of yachtsmen, than formed its leading spirits it would be hard to find.

The seed sown in those early days has borne good fruit, there is scarcely a club but can man a score of craft from among its own members, and the Corinthian yacht sailor, like the conservative working man, and many other things once thought impossible, is an established fact.

CHAPTER II.

PROGRESS OF NAVAL ARCHITECTURE.

DIFFERENT TYPES OF YACHTS.—EFFECTS OF THE TONNAGE LAWS ON THE BUILD OF RACING CRAFT, ETC.

It is astonishing how little is said in most modern works treating of naval architecture, respecting the build and equipment of the smaller descriptions of vessels used by our forefathers; yet I can conceive no more interesting task to the ardent student of marine architecture, than the study of those designs which were thought by our ancestors to embody everything that is requisite in a sailing craft, both for speed and stability. An analysis of the progressive stages of naval architecture cannot but be useful to yachtsmen, and therefore, I need not apologize for introducing the reader to some of the types of craft which may be considered as the foundation of the modern racing clipper.

Most persons with a nautical taste, who have visited the Indian Museum, now located at South Kensington, have been struck with the beautiful forms and elegant proportions of the Bombay fishing boats, and other craft peculiar to the Indian Ocean. I remember once hearing an old sailor exclaim, on seeing the model of the celebrated *America* for the first time, "Why, she has an entrance as sharp as an Arab Dhow." Here, then, we have an exemplification of the inspired record "There is no new thing under the sun." The Arab Dhows referred to, are vessels built expressly for swift sailing, and their lines have not been altered materially since the days when the Phœnicians and the Arabians were contending together for the monopoly of the Indian trade.

Vasco de Gama, when he arrived in India, was struck with the wonderful sailing qualities of the native boats, and it was due in part to the knowledge brought back by the early Portuguese voyagers, that the feluccas, built in that country, became so renowned for their speed under canvas. In old times there were always three classes of vessels, called by the Romans the *naves longæ*, which were war ships, *naves onerariæ*, vessels for the carriage of merchandise, and *naves liburnæ*, craft built for speed alone, and used principally for pleasure, in fact they were the yachts of the ancients. It stands to reason that experiments must have been made by the builders of the last class of vessel, in order to increase the velocity of their craft, and the results arrived at, are seen in the swift sailing, fishing and pleasure boats

belonging to the East Indies. In Europe, up to the time of the irruptions of the Saracens, the science of naval architecture had not been much studied, still there is every reason to suppose that the natives of those countries, having an extensive sea coast, were not quite in the dark respecting the utility of easy lines in the construction of their several boats. Indeed we are told by Cæsar that the ancient Britons possessed a very fast kind of sailing boat, called the *Pictæ*. These boats are described by the Roman historians as very long, low and sharp, and in order that they might meet with less resistance in passing through the water, were coated with wax, and from the fact that the boats, together with their rigging and sails, &c., were dyed a light blue colour, it is probable they were used for piratical excursions, that colour making them less distinct to the enemy, the different tribes composing the inhabitants of this tight little island at the time of Cæsar's invasion being hostile to each other, although the approach of a common enemy united them after a fashion.

In the annexed sketch, Fig. 1, the reader will have some conception of the form and proportions of these ancient British yachts, if I may so call them. They had oars as well as a sail, sometimes as many as twenty. The form of these craft is somewhat preserved in the north country cobsles of the present day. The Gauls

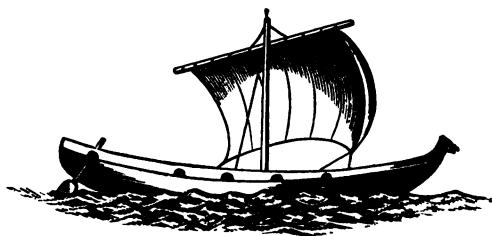


FIG. 1.

had boats of a similar description. It is a singular circumstance that in the majority of ancient vessels built for speed, the main breadth is generally abaft the centre, a peculiarity of construction popularly believed to have been originated by the Americans, but most erroneously so, as a study of the figures of ships upon old seals, coins, frescoes, &c., proves beyond question; besides the East Indian boats, as before observed, have not altered materially for centuries, and in the subjoined sketch, Fig. 2, of an Arab Dhow, the reader will have a very fair idea of the knowledge possessed

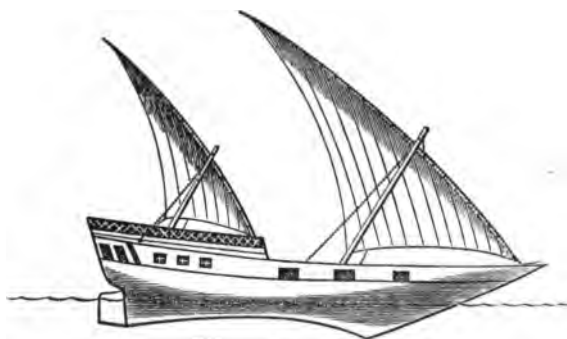


FIG. 2.

by the Phœnicians and their Arabian contemporaries, with regard to nautical matters.

The form is not unlike that of the Bombay fishing boats, except the keel is less arched; and being sea going vessels, they carry a heavy poop, in which are contained the cabins of the officers and crew, the hold being kept for merchandise, whether human or otherwise.

Various conjectures have been made as to the reasons for the arched form of the keel of these eastern boats, the true one being, no doubt, that the ancient navigators, not knowing how to mark the shallows and sand banks, adopted the plan of making the forward end of their keels deeper than the rest of the boat, so that when it touched bottom, the boat was hung as it were on a pivot, and the crew could push the craft off into deep water. This is practised by the Nile boatmen to the present day, the keels of their craft being made concave for this purpose. It is also a fact that the Bombay fishing boats, Arab Dhows, &c., will not sail so well with the arch of their keel filled up, as has been proved by experiment.

Like the other arts and sciences introduced from Asia into Europe, naval architecture made slow progress for many centuries. Speed was not considered by our rough and ready forefathers as of so much account as strength and durability, hence the continued building of the unwieldy compromise between a Noah's Ark and the modern dumb barge, which figures so conspicuously upon the seals and coins of our Anglo-Norman Kings. It is true that there were galleys of extraordinary swiftness, if we are to believe the accounts of "ye ancient chronicles," but these craft were propelled by numerous oars, worked by slaves, and may be considered to bear the same relation to the sailing ships of the past, as steamers do to those of the present day. In the year 1660 the Dutch East India Company presented to King Charles the II. a yacht, modelled somewhat after the style of the East Indian boats, which John Evelyn, in his diary, styles "very excellent sailing vessels." This craft was sloop rigged, and not unlike the London Hoys of a later period. See Fig. 3.

The merrie monarch was fond of aquatics, and raced his craft more than once on the Thames. This seems to be considered the beginning of yachting proper, in England at least, for from that time fast sailing boats were by no means uncommon, not only on the Thames, but also round the coast.

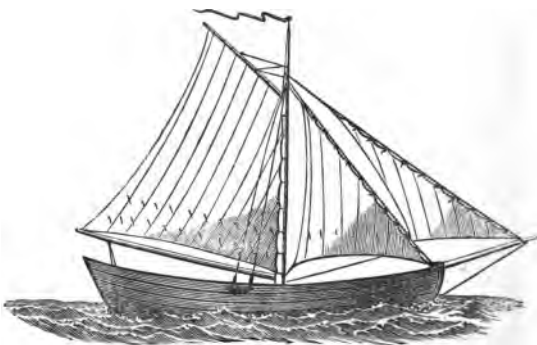


FIG. 3.

A few years later we find that yachts or pleasure boats were regularly built for wager sailing.

The yachts of this period were remarkable for their beam, in proportion to their length, very broad sterns, heavy quarters, and flaring bows; their sterns were also higher out of the water than the bows, a fashion which still prevails among the sloops trading up and down the Hudson River, in the United States. The bottoms were the half of a semi-circle, the broadest part being at the deck. A few years later, in the beginning of the 18th century, the advantages of a sharper floor began to be known, and then the builders increased the dead rise, but not to any marked degree. It is however to the Irish, more than any other of the inhabitants of Great Britain, that we owe the improvements in yacht building between 1700 and 1800. A party of gentlemen established an association at Cork, called the Cork Water Club, in 1720. The emulation this excited among the coast population, led to more attention being paid to the fishing boats, and resulted in the building of some very fast vessels. These craft, known as Kinsale and Skerries Hookers, were for a long time almost invincible when close hauled. Here I may be allowed to digress a little, in order to offer a few observations on the origin of the term hooker, which has puzzled the brains of so many naval archæologists. In the British Isles there was a class of boats used for coasting and river cruising called holkers; they have been variously described, some writers insisting upon it that they were like the canoes of certain savage tribes, made from a single trunk of a tree hollowed out by fire, others that the term holker was only another name for the church, described by Sir Walter Scott in his "History of Scotland." The latter, however, appears to have been a sort of craft similar to the coracle of the ancient Britons, and would hardly be fit for extended cruises along the coast, and, therefore, such an idea scarcely commends itself to the mind of a practical seaman. It has also been held to be merely the original of the term "hulk," signifying a lumbering, heavy craft with little speed; but P. Marin, who published a work in 1752, entitled, "*Groot, Nederduitsch en Frensch Wood en Boek*," explains the term hulk, "old shape of ship of merchant vessel, such as seen in the churches and ancient arms of Amsterdam." In the early Flemish writings however, we meet with the howker, a coasting vessel partaking somewhat of the character of the modern smack. From howker to hooker is an easy transition, and therefore the most feasible explanation of the term hooker, seems to be that it was originally holker, afterwards howker, and when it reached the Irish coast became hooker, signifying a light easily managed vessel, differing in many respects from the "hulk" which was as described by Marin, a regular old merchant ship, cumbersome and heavy in her appointments.

To return to the class of vessel going by the cognomen of hooker on the Irish coast; they differed in many respects from the boats before described, being very shallow forward, but drew considerable

water aft. They were full bowed and round sided with fine quarters, a type of build borrowed possibly from the smuggling luggers of the 17th century. Rigged as cutters, with mainsail, foresail, and jib, they were fast and undoubtedly weatherly. The proportions of length to beam being about three to one, not much dead rise, with slightly hollow garboards, were their distinguishing characteristics. The boats of the Cork Water Club were modelled somewhat after the fashion of these hookers, whose build has not altered much up to the present day.

The Cork Water Club Boats appear to have been fine powerful craft, ranging from ten to twenty-five tons. From the subjoined sketch, see Fig. 4, the reader will have a better idea of their peculiarities. They were only decked amidships for a cuddy, clincher built of oak, and gaily decorated with gilt mouldings and ornamental figure heads; the gear simple, very few carried even a bobstay, the jib generally being taken in altogether when it blew hard, the boats sailing well under foresail and mainsail. Later on, the schooner rig was introduced, but it was much the same as that of the Swan-

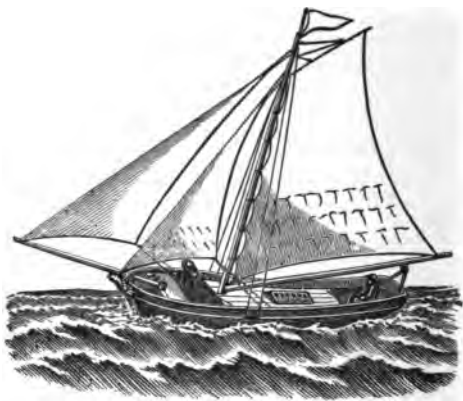


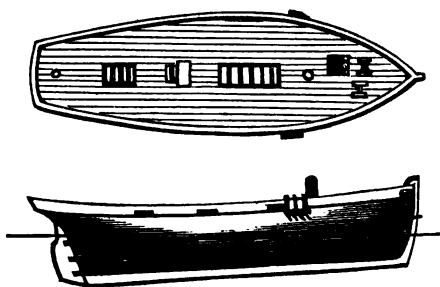
FIG. 4

sea Pilot Boats of our own time, the mainmast raking very much aft, while the foremast was stepped upright. These were the type of craft which prevailed in the yachting world up to nearly the close of the 18th century, when the French set the fashion of building what came to be known as the "Cod's Head and Mackerel Tail" style.

The fishing luggers of Ushant and the N.W. coast of France, began to commit serious breaches of the revenue laws with impunity, and the Government Cutters of that time were beaten so often in speed by the contraband traders, as to open the eyes of the British Admiralty to the fact that the French were in advance of them in the matter of Naval Architecture. The lines of a captured smuggler were taken off, and several cutters constructed on the same principle, only exaggerated. Our naval architects jumped to the conclusion that the fine run was the secret of it all; just as, nearly a century later, every yacht builder imagined that the long hollow bow of the *America* schooner was at the bottom of her success. In the former, as in the latter, results did not justify such hasty assumptions; the fine run had, undoubtedly, something to do with the speed of the French craft, but there were other considerations to be taken into account; notably, the smugglers were more lightly built, their area of displacement was considerably less, and, although their runs were finer, the bow, and what is of equal

importance, the floor finer as well. Still the cod's head and mackerel tail came into fashion, the majority of our yachts being modelled, with few exceptions, upon this type up to about the year 1825, when some enterprising yachtsmen and builders began to see, that very full heads were not so conducive to speed even when coupled with a long tail, and several craft were built upon more equal displacements, the results justifying the expectations of their designers. In Fig. 5 is seen the deck line and sheer plan of a cutter yacht of the year 1815, the date of the foundation of the Royal Yacht Squadron.

FIG. 5



Most yachts were, like the Revenue Cutters, clincher built at the time mentioned; but carvel built boats began to come into fashion for small craft about the year 1820. The most successful yachts of the early part of the present century were the *Menai*, 176 tons, cutter, built, I think, in 1820; *Arundel*, 210 tons, cutter; *Arrow*, built in 1825, and now in existence; *Alarm*, built in 1830; and *Pearl*, 130 tons, belonging to the late Marquis of Anglesea. The majority of these vessels were all more or less broad in proportion to their length, with rather full bows in comparison with their after body, but nothing like the exaggerated types of mackerel tails which prevailed a few years previously. In 1828 Irish yachtsmen were startled by the appearance of a new type of craft in the shape of the *Peri*, 27 tons. This cutter had a very sharp, long bow, broadest part rather abaft the centre, hollow garboards, and lead ballast cast to fit. She proved more than a match for most of the yachts of her size, and her owner built some others larger and deeper, and beat the majority of the yachts he competed against. It may be as well to impress upon the reader, that the principle of the *Peri* and her prototypes was the same as George Steers carried out in the famous *America* some twenty-five years afterwards. The style of build inaugurated by Mr. Beamish was never a favourite with English yachtsmen, whose ideas seemed to be centred in a luxuriously furnished cabin with plenty of head room, the latter essential being very deficient in the *Peri* class. It was vexatious to be beaten by them however, and the question of the day in the yachting world, was how to combine the comfort of the old type with the speed of the new. This problem was solved by the late Mr. Wanhill, the well known yacht builder, of Poole. A careful study of the tonnage law as it then stood, showed him that as depth was represented by half the beam, narrowing a vessel must necessarily decrease the tonnage to a great extent; and the real depth not being taken into account, the draught of water could be increased *ad infinitum* without

increasing the nominal size of the craft a fraction. Narrow beam and great depth, however, were not enough for the purpose; and Mr. Wanhill was sagacious enough to perceive, that as the length for tonnage was taken on the keel, the shorter that portion of the vessel the better. Having arrived at these conclusions, he set about carrying them into effect, and built several very fast yachts on this principle, those best known being *Heroine*, built in 1844; *Secret*, built in 1846; and *Cygnat*, also built in 1846. With these vessels the *Peri* type had no chance in the market, from the simple fact that Wanhill's boats were as fast, if not faster, and had double the accommodation below. Mr. Wanhill was not allowed to have a monopoly of this class of craft very long, for in 1848, Mr. Ditchburn, a naval architect, connected with a firm of shipbuilders on the Thames, designed a cutter to be built of iron. This was the well known *Mosquito* which made her first appearance in that year. She had a far sharper bow than any previous yacht, and was so far successful that no yacht of her tonnage afloat, after she was got into trim, could take the shine out of her; indeed she was the crack racer of the day from 1849 up to 1865. She met a sturdy opponent in the *Volante*, built by Harvey, of Wyvenhoe, in 1851; but the last named was two tons smaller than *Mosquito*, and besides, had the disadvantage of generally being in cruising trim when sailing against the iron wonder, as she was then called. The *Volante* was certainly a step in the right direction; she was not overdone with either depth or beam. Like the *Mosquito*, she was a compromise; the difference between the two being, that *Mosquito* was slightly shorter and broader, with a heavier midship section, but with a finer entrance; both had great rake of stern post, in order to increase the actual size without increasing the nominal tonnage.

The year 1851 marks a new era in yachting annals. For some time our transatlantic cousins had made up their minds to try for a Queen's Cup. The late Commodore Stevens of Hoboken, New York, commissioned George Steers to design and build a schooner to cross the Atlantic, for the purpose of competing at Cowes, with the proviso that if she did not beat the English yachts, Steers was to return part of the purchase money. The *Illustrated London News* published sketches of the yacht while building. The sporting journals were full of accounts of the new American schooner, but predicted her defeat in our waters. In the summer of 1851 she arrived at Havre, and having had some trifling alterations, such as the rounding of her forefoot, &c., performed, set sail for Cowes. Great was the disappointment of the American visitors when it was found that they could not enter for the Queen's Cup, that honour being reserved exclusively for members of the Royal Yacht Squadron; but Commodore Stevens was informed he could compete in the open race for a cup of the same value, given by the club. This was accepted, and the result of the race was in favour of the Yankee schooner. The only two of her competitors which might have had a chance with her, being disabled,

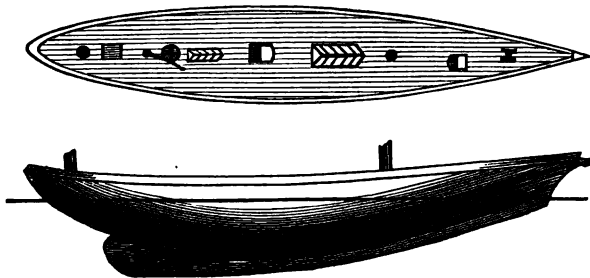
namely, *Volante* and *Arrow*. This was a serious blow to British yachtsmen, more especially as it created a sort of panic among builders, and caused a great deal of mischief, vessels being constructed with hardly any run at all, and the number of failures built between the years 1851 and 1861 would take up too much space to enumerate. This is no doubt the reason why *Mosquito*, *Volante*, *Phantom*, *Thought*, *Vampire*, and other old craft maintained their pride of place for so many years against successive new boats. It took the English yachtsmen nearly ten years to recover from the American scare, and even to this day the lingering traces of it are seen in the sailing models displayed in some toy-shop windows, which put one in mind of a very long-necked Champagne bottle cut in half lengthwise the neck forming the bow of the craft.

In 1854 the length for tonnage was changed from the keel to the deck between the perpendiculars. This caused another alteration, many yachts being hauled up, and the stern brought in on deck, and lengthened out on the keel. This, however, did not suit some, and upright sternposts were abandoned in favour of a moderate rake, the same that prevails at the present time.

There have not been many innovations in the yachting world since 1864, when shifting ballast was put down with a strong hand. Metal keels have been increased in size and weight, and the internal ballast decreased accordingly; but this will be treated of under its proper head.

Some sensation was caused by the appearance of the *Jullanar* yawl in 1876, but what little advantage she may have gained from her short length for measurement, has been negated by the decision of the Council of the Yacht Racing Association, to take the actual water line for the purpose of finding the length for tonnage. The *Jullanar*, however, offers some peculiar points well worth the study of the amateur designer. I may remark, that the same principle has been followed in the construction of the Windermere Lake Yachts, which sail by length, the length being taken between the perpendiculars. Fig. 6 is a sketch of the deck line and sheer plan of *Jullanar*.

FIG. 6.



CHAPTER III.

BUYING AND BUILDING.

A TOUR ROUND THE DIFFERENT BUILDERS YARDS.—HOW TO CHOOSE A YACHT.—RACERS AND CRUISERS.

MUCH has been written in those publications devoted to yachting regarding the comparative merits of Buying and Building. An old proverb says, that "Fools build houses for wise men to live in," and this has been held by some to apply with equal force to yachts. No doubt there is much to be said on both sides of the question. To the would-be yachtsman with an unlimited purse, who wants an out and out clipper which shall be the fastest of her class afloat, I would say build by all means; but to the less fortunate but equally enthusiastic amateur, who would consider the outlay of £100 as a serious drain upon his cash-box, my advice is, buy.

There are plenty of good handy little craft to be picked up at a figure surprisingly cheap, craft that only require a few pounds to be spent on them to make them veritable little ships. The cost of building has increased enormously of late years, in fact out of all proportion to the increased price of labour and material. Twenty years ago a very good 5 ton yacht could be built all complete, including spars, sails and interior fittings for about £25 a ton, now the same size yacht would cost fully double the amount with only iron ballast.

Should, however, the intending Corinthian determine on building, he would do well before doing so, to make the tour of the yards of the most famous yacht builders. We will suppose he has the time and money to spare, and that he is bent upon going in for a new 10 or 5 ton racer—the latter the best for a beginner. If he is a resident of the metropolis, the Colne will be about the best place to begin his inspection. Take the train at Liverpool Street for Wyvenhoe, changing at Colchester. Here is the yard of John Harvey and Co., the famous builders of *Volante*, *Sea Belle*, *Miranda*, and many other fast craft whose names are household words among the yachting fraternity. Then there is Harris, of East Donyland, on the opposite bank of the river, a young but rising builder, who pays careful attention to the wants of his customers; Husk and Barr, of Wyvenhoe, and one or two others. From thence a short journey by rail brings the traveller to

Brightlingsea, where he will find much profitable enjoyment in a chat with Aldous, whose yard is only a few minutes walk from the station. Aldous has built some fast craft in his time, notably *Crystabel*, a few years ago one of the fastest cutters of her tonnage afloat, *Satanella*, *Violet*, and others too numerous to mention. Both Harvey and Aldous are careful shipwrights, and their patrons may depend upon getting good value for their money; but by the time the aspirant for aquatic fame has gone the round of those mentioned he will be pretty tired, and, unless wishing to spend the night in Brightlingsea, had better make tracks for the station, the last train for London leaving about seven in the evening.

Having done the Colne, the next place to book for will be Portsmouth. Here the traveller has a choice of stations, Waterloo, Charing Cross, London Bridge or Victoria, according as most convenient. On arriving at the town so identified with the naval annals of Old England, go on board the floating bridge, or one of the steam launches which ply across the harbour to Gosport, and you land close to Nicholson's Yard, whose name, in conjunction with that of his late partner Camper, has long been known in connexion with clippers of all rigs and tonnage. The Gosport firm are noted for good workmanship, the craft turned out by Nicholson and Sons being generally strong and substantial; indeed they go in more for cruisers than racers, although *Aline*, *Florinda*, *Gwendoline*, *Blue Belle*, and *Guinevere* are practical proofs that they know what salt water likes. Returning from Gosport the next point is Cowes, which can be reached by boat from Portsmouth. At this aristocratic yachting station our amateur friend will find a hard day's work before him. On the west bank of the Medina river is the yard of Michael Ratsey, one of the most clever builders in England. A hint of what he is in search of, will extract many useful suggestions from Mr. Ratsey, and although he has not made the building of small yachts a speciality, could doubtless turn-out a flying 10 tonner to order. Then there is John and Samuel White on the east side of the river, and Hansen close by, whose ideas on the best form for speed are worthy of careful attention. From Cowes to Southampton is a pleasant water trip, and in the neighbourhood of the latter town, the wanderer in search of a yacht will be more than ever puzzled to choose between the claims of the rival builders. Of course his first visit will be paid to the building slips of the late Dan Hatcher, whose yard, the cradle of so many clippers, lies a short distance up the Itchen, at a place called Northam. Here the famous old *Vampire*, for upwards of 20 years the acknowledged champion of her class, was launched in 1851. From that unpretentious looking shed the saucy *Glance* glided gracefully into her native element in 1855, and showed the yachtsmen of the time how a clever builder could make a big boat measure small by the R. T. Y. C. rules, the *Glance* being five times her beam in length on the water line. As to all the fast vessels built by Hatcher, from the Itchen fishing boat, measuring 17 feet over all, to the stately cutter

of 60 tons, their name is legion. A little higher up on the same side of the river are the yards of Fay and Sons, and Paynes. Both these builders generally have a large number of yachts in the winter season hauled up on their slips, so that the visitor will have a good opportunity of studying the models of different vessels, and if he has kept his eyes about him in his peripatations round the yards, he ought by this time to have a very fair idea of the peculiarities of the different yacht builders. Crossing the Itchen by the floating bridge, the wanderer will find himself close to the yard of Luke, a builder who has done much to uphold the honour of the sunny south in the 10 ton class. At the time the *Preciosa* made her number in the Thames, the metropolitan yachtsmen were almost in despair, the famous *Lily* having made an example of the south country 10 tonners, and the news that the dreaded *Florence* was also coming, made them quake in their shoes. *Preciosa*, however, held her own well, and saved the reputation of our southern yacht builders. Luke does not confine himself to small craft, but will take an order for anything, from a screw steamer of 100 tons, down to the humble shrimper of 14 feet keel, and will give the same attention to one as the other. Again, at Southampton there is Dummer, an ex-foreman of Fay's yard, an experienced shipwright who looks well after his work; and besides these there is the firm of Stockham and Pickett, West Quay, near the Royal Pier. Mr. Stockham is dead, but John Pickett is still to the fore, and the searcher after nautical lore will find him ready and willing to give him all the information in his power. Pickett turns out good work, and at by no means an extravagant price. So the intending yachtsman cannot do better than have a chat with him before he makes up his mind.

I presume the traveller will continue the journey to Lymington, where in the yard of Inman some more information may be gleaned. Here, many years ago, the once formidable *Alarm* was built, so many years ago, as almost to be lost in the vista of time. This is also the birthplace of the famous old *Arrow*, still a hard nut for the moderns to crack, and many other craft whose fame has spread far and wide wherever yachtsmen congregate. Poole, that wonderful yachting locality from whence sprung so many of the clippers of days of yore must not be passed by. From the yard of the late Mr. Wanhill was launched the once famous *Heroine*, followed by the equally renowned *Cygnets*, and the *Secret*, the winner of many a hard sailed race. The wonderful *Egeria* is also a living memento of Wanhill's handiwork, than which there are few better all round vessels of her tonnage afloat.

It would take up far too much of the space allotted to this chapter to particularise all the different yacht building yards between the Land's End and the bonny Clyde, suffice it to say that (always with the proviso of time and money being no object) the traveller might do worse than follow up his round of visits by a call on Patterson & Co. of Bristol, good conscientious constructors, although not renowned as builders of fast craft, Buckley and Sherlock of Liverpool, Fulton of

Birkenhead, and further north to Fyfe, of Fairlie, "Old Wull Fyfe" as his patrons, and they are many, delight in calling him. Fyfe is one of those practical men from whom more may be learnt in a day than from others of his calling in a week. A believer in well known and tried principles, Fyfe will not waste either his or your time in discussing the possibility of this or that theory being correct, but will at once give his opinion without circumlocution, and his opinion will be found not far wrong in the end. On the Clyde are also the yards of Boag and Reid, both of whom are builders of fast craft. Mr. G. L. Watson, of Glasgow, is another skilled hand in the moulding loft, and it only needs to refer to *Verve*, *Quaraine*, and *Madge*, three of the fastest 10-tonners afloat to speak volumes in his favour. There are many other clever handicraftsmen around the coasts of England and Scotland, such as Forrest and Sons, of Limehouse; Watkins, of Blackwall; Stow, of Shoreham, &c., but if the intending yacht owner cannot suit himself from among those named, he must indeed be hard to please.

With regard to buying, thanks to the advertisements in the "*Field*," "*Land and Water*," &c., to say nothing of the circulars issued by the numerous yacht agents, the task of choosing is rendered somewhat less difficult. The first thing is to make up your mind as to the exact size of the craft you want, always bearing in mind that the classes are arranged somewhat differently nowadays to what they were formerly; for instance, ten years ago it was lowest class under 10 tons, next highest not exceeding 15 tons, and so on; now the small classes are 2½, 5 and 10 tons. A few clubs on the coast take length as the rule of measurement, but that I shall treat with further on. Having made up your mind on the craft wanted, the next thing is to study the papers named, and make a note of those vessels you believe will suit. Having ascertained, by means of correspondence or a call upon the agent or owner, where the craft in question is lying, appoint a day to go and look at her, and make it a *sine qua non* that she shall be put ashore, so that you may make a careful examination of her bottom. If you are diffident of your own opinion, by all means get some thoroughly experienced yachting friend to accompany you in overhauling the craft. There are few things in which the inexperienced may be so easily deceived as in buying a yacht. There are knavish dealers in boats as well as in horses, and it behoves the amateur to be well on his guard against the sharp practice of those gentry who consider "doing a green-horn" rather a meritorious action than otherwise. There are plenty of respectable yacht agents, however, and the aforesaid friend will in all probability give you, in sporting parlance, "the straight tip" as to the reliability of the agent you may happen to be corresponding with. There is one pretty good test of the *bond fides* of the vendor, if he at once consents to your seeing the yacht ashore, it is a guarantee that he is prepared to act fairly. The expense of putting the vessel ashore ought to be divided between the seller and

buyer if no sale is effected, but in the event of business resulting, then the seller should not object to bearing the expense himself. Directly any objection is made to the inspection of a vessel's bottom, break off the negotiations, and seek elsewhere for what you want. Many yachts when for sale are hauled up high and dry on purpose, and remain so until sold. This is by far the better plan, as it saves all trouble, and the buyer can give the craft a thorough overhaul both inside and out, comfortably and leisurely, whereas when a yacht is laid alongside a wharf or quay, one has to wait for low water, and the time that she remains dry is often too short for more than a hurried inspection of the lower part of the vessel.

We will suppose that arrangements have been made, and the eventful day has arrived upon which you are to inspect the craft, and here let me impress upon the intending buyer the imperative necessity of being punctual to the appointed hour. A few minutes, more or less, may not be thought of much consequence, but in reality the arriving at the spot ten minutes late may mean the difference between seeing the boat with her keel dry fore and aft, and seeing her with five or six inches of water round her. Spring tides flow very rapidly, and it is astonishing how quickly the water returns directly it has ceased to ebb. Of course, in the case of a vessel hauled up above high water mark upon a slip it does not so much matter. In inspecting a yacht, the first part to be looked at is the keel, especially in these days when so many craft have a large portion of their ballast outside. This part of the vessel requires very careful and critical examination. If coppered, look well along the garboards, and if the part presents the wrinkled appearance as at A Fig. 7, it is a sign she has strained herself in that locality.

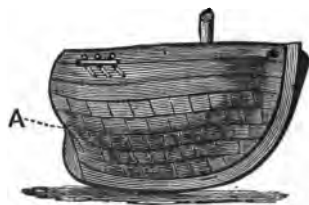


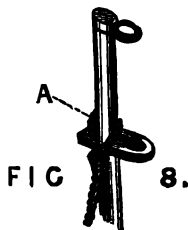
FIG. 7.

If the craft has not been coppered, or the copper has been stripped off, it is easy to see by probing with a knife whether there are any defects. If the blade of the knife slips into the seams easily, and the edges of the planks break away with a very slight effort, it is a sign that the planking is either very old, or that she has never been properly caulked in that seam. All defective places should be carefully marked with a piece of chalk. The stern post and stem next demand close inspection to see if either have been *faced*. This is a dodge sometimes practised to hide a shake or split. A minute inspection of the forepart of stem and after part of stern post, will generally show whether this has been done. A little scraping with a knife will also show whether any defects have been filled up with plaster of Paris or putty; don't stare, my friend, this has been done before now by an unscrupulous seller. Wherever any red streaks or spots appear on the copper, especially round the heads of the nails, it is a sign that iron is close by, or in other words, she is iron fastened in some places at least. If the craft

has an iron keel, the copper ought not to approach it nearer than three inches. A clear space of that distance being necessary to prevent any galvanic action between the two metals. Inspect the bobstay shackle, rudder pintles, and gudgeons; these ought to be either gun metal or copper. See that the chain plates, or channels, if she has them, are sound and firmly secured. Next go carefully over the topside planking, sounding the seams as already directed, and look well at the planking under the counter, because it is here that defects are too often overlooked. Next survey the decks, go round the water ways, skylights, deck houses, if she has them, and look out for rust marks, because wherever the woodwork is stained with rust, there iron fastenings have been used. See that the windlass and bowsprit bitts are well secured, and have not been started. By started, I mean, loosened from their positions. If they have been started, they will probably have a cant to one side or the other. Now let us proceed below, and have a look at the interior. "Hullo! why she has part of her ballast out on the cabin floor;" easy, my friend, this is only done in order to facilitate your operations. See that the place where the ballast is stowed is clean and sweet, probe every timber and plank carefully with your knife, don't leave a corner unexplored, peep into every locker, poke your knife into every suspicious looking spot, and examine carefully the deck, beams, and stringers (square pieces of timber running round the upper part of the side upon which the decks rest); if there are great streaks of rust or discolorations in the vicinity of the joins and fastenings it is a sign that they are iron bolted. It is astonishing how fond some builders are of putting iron fastenings into their vessels. The difference in the expense between copper and iron is not worth consideration, especially in a small yacht. Yet one constantly meets with small craft, capital boats in other respects, but with those horrid rust stains, disfiguring the paintwork, both inside and out. I once asked a boat builder the question, "Why not use galvanized iron fastenings if you must put in iron?" "Because, you see, Sir, that would be pretty near as dear as copper." I ascertained that the extra cost of copper fastening the craft he was building, she was about 6 tons, would have been between two and three pounds, a sum certainly not worth talking about. Be careful to ascertain if the decks and fittings are tight, because leaky skylights, etc., are a great nuisance. If the ballast has not been taken out of the boat, insist upon its being done, because unless you can get at the futtock timbers, keelson, etc., it is impossible to see the exact condition of the craft. The older the boat the more necessary is it that this should be attended to. I remember hearing rather a good story with respect to the inspection of a yacht below. A friend had been negotiating for a certain vessel which was about laying up, the season being at an end. The gentleman in question was rather diffident of his own opinion in such matters, so decided on taking down a crack surveyor to inspect the yacht. On arriving on board they found the ballast all taken out except just enough to keep her

upright. She was lying in a mud creek. After a look round the decks the party went below. "Looks clean and nice down there," said the surveyor, pointing to the hold. "Yes, Sir," said the captain, "our owner always likes a clean hold." "Ah, I suppose just whitewashed?" queried the surveyor. "Well, yes, Sir," replied the captain. "You won't find any difference, fore or aft," he added hurriedly as he saw the surveyor descending on to the keelson preparatory to a closer inspection of the apparently beautifully whitewashed hold. "Shan't I," laughed the surveyor. "Why, man, do you take me for a greenhorn, that you are trying to make me believe that yonder dry rot is white-wash? Look here;" and stooping down he scraped off the white, clean-looking fungus, and shoving a caulking iron into the planking, brought away pieces like touchwood. "Another time, my man," addressing the astonished skipper, "make sure of your game before you begin to play it. Your vessel is as rotten as a pear, and you know it, and the best service you can do your owner is to tell him the truth and advise him to break her up. There's my card;" and turning to the would-be purchaser the surveyor exclaimed, "By jove! it was lucky you brought me with you, or you would have been done to a certainty."

After having carefully gone over the hull and interior fittings, the next thing is to overhaul the spars, sails and gear. Look well at the mast, bowsprit, and boom, see that they are sound with no great wavy cracks in them; straight cracks are not of so much consequence where they run parallel with the spar itself, they are merely openings of the grain, caused by sun and weather; but when these cracks run across in a diagonal direction, with great unsightly looking knots intersecting them, it is a bad sign. The gaff and topmast being small are less liable to such defects than the larger spars; at the same time they must be well looked at for shakes, splits, and cracks. If the mast is stepped, the rigging will, where it goes over the hounds, necessitate critical examination, because there it generally gets strained; if wire, see that it is not rusted and worn in the nip—by nip I mean the part where it is doubled over, as at A in Fig. 8.



The forestay also is a part of the standing rigging that requires to be sound. If the wire rigging looks very brittle and old, with the galvanizing worn off here and there, and plenty of rust showing, don't trust to it. The blocks must not be overlooked, see that the sheaves run round easily, and that the ropes they are intended for, render smoothly through the sheave holes; gear too large for the blocks is very common and is excessively annoying, not to say dangerous. It is most important that every rope should work easily and smoothly, because upon this the safety of the vessel often depends. The bowsprit should also work easily in and out of the span shackle or gammon iron, so as to be run in and out without any trouble. The topmast ought also to work smoothly in the caps, so as to go up and down easily.

See that the jaws of the gaff are sound and in good condition, and not started, as in B, Fig. 9, but are well and firmly secured to the spar as A Fig. 9.

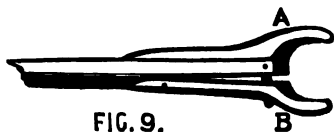


FIG. 9.

The iron goose neck, which is generally galvanized iron, must not have any flaw or crack in it. Next examine the ropes, especially mainsheet, main and peak halliards, runners and tackles, etc. If they are very much frayed and worn, don't trust too much to them. A good plan is to turn the running rigging end for end when buying an old boat, as it shifts the strain from those parts which have been most used. If the standing rigging is hemp instead of wire, be careful that it is not old stuff re-blackened over to make it look fresh. This is easily seen by picking out a piece of worming here and there, because, if old, the worming will be almost rotten, and the lays of the strands will show whether the rope is new or has seen its best days. In overhauling the sails, examine them carefully for mildew, patches and holes. If they are worn very thin and have been patched much, they are pretty well done, and although you may get through a season with them after a fashion with care, a new suit will be an imperative necessity before fitting out a second time. The presence of mildew is made known by the appearance of fine black spots like coal dust on the canvas. A little mildew in places does not so much matter, except for the look of the thing, if the sail is fairly good in other respects, but when covering the sail to any extent it is both unsightly and weakening to the canvas.

The cabin fittings, such as cushions, etc., and the galley stove, with its cooking utensils, are matters that are not of so much consequence, as nearly every one has peculiar tastes in these things, and what may suit one will not suit another, and as they are not essential to the seaworthiness of a boat, the purchaser can use his own judgment in regard to his requirements in these matters. Further on, I intend putting forward a few suggestions in this direction, but at present we will confine ourselves to the yacht and her working gear. Have the chain cable ranged on deck, or on the floor if it has been stored in a loft or shed. Measure it to see whether it tallies with the length put down in the inventory. Of course, in overhauling, you will have the inventory in your hand and take care that everything is in good condition. Such things as side lights, riding light, binnacle lamp, etc., should be cleaned before putting away in store, such little things as this is an indication that the gear and stores have been carefully looked after.

Having finished the survey, the next thing is to agree upon the value of the boat. I will presume you have been looking at a 5 ton cutter, and have found that one or two planks near the garboards are shaky, that the main skylight leaks slightly, that she wants re-caulking under the counter, in addition to which, her mainsail and foresail are nearly done, in fact that she wants new ones, and that her main boom

is sprung. Now the reader will say, "What is the use of describing all these defects, because who would buy such a boat?" Don't be in such a hurry, my friend, the defects named are not vital by any means, and the boat must not be condemned on that account. If she is a good model and sound in other respects, the best thing to be done is to go to the nearest boat builder and just ask him to give you a rough estimate of the repairs necessary to put her all to rights. Armed with this, go to the vendor and say, "Look here, the price you ask is so much," we will for example say £175, "I have got an estimate for the repairs here which is £55, now I will give you a cheque for £125 at once but not a farthing more." This the seller may or may not accept, but for a 5 ton cutter yacht a few years old in fair condition, with say a third of her ballast lead, this is by no means an out of the way figure. The price of yachts of course varies much, according to their age, size, condition, and character.

Before closing this chapter on choosing a yacht, it is perhaps as well to make a few remarks on the comparative merits of racers and cruisers. There are a great many persons who look upon an old racing vessel much as they look upon a worn out plater or Derby crack, which is only considered good enough to put between the shafts of a "growler." There are other equally good yachtsmen who regard a cruising vessel as little better than a fishing smack or barge, and consider that the little extra comfort on board is too dearly purchased at the expense of speed. As Mr. Midshipman Easy would have said, "Let us argue the point." There is no doubt in the world that a racer of the present day, with her heavy metal keel and lofty spars and sails, strains a good deal in the course of her career, so that after three or four seasons hard work she must be more or less shaky, especially about the garboards. But a little extra strengthening in the shape of stout metal strappings between the timbers will be all that is necessary to make her tight and strong, although her speed will suffer a trifle, but not to the extent imagined by some. The straps should take the keelson and deck inside, as in the sketch, Fig. 10, between every other timber amidships, about four in a 10 and six in a 20 tonner would be ample. The celebrated *Phantom* was treated in this way, and is as strong now as the day she was built, although nearly forty years old. An old racer with her spars and sails clipped, would then be quite as good, if not better than a regular cruiser with the exception of the draught of water. This is one great drawback to the utility of modern racing yachts as cruisers. A 10 tonner drawing seven to eight feet is by no means uncommon, and this necessitates the waiting for tide over bars, etc., which in so small a yacht is rather awkward if a gale of wind springs up; not but what they are safe enough, but the discomfort on board is very great to those who are not "regular old salts." A cruiser of 20 tons ought not to draw more than seven or eight feet at the most,



FIG. 10.

and such a draught is quite compatible with having six feet head room under the deck in the saloon.

Again it has been said, that an old racer requires almost entirely replanking when five or six years old, because from the frequent coppering the planking is so honeycombed with nail holes that it becomes sodden and heavy. This may be true in some cases, but few racing yachts have their copper renewed more than once in two years, and, if the planking is hard wood, the small punctures made by the tacks, for they are little more, will not do much harm, besides a good stiff coat of coal tar previous to re-coppering will stop them all up.

In conclusion, I should advise the novice to rather lean to the cruiser in his first essay as a Corinthian. A racer that is any good at all, is generally put up at a figure almost equal to her original cost, and it may happen that after purchasing, the possessor of such a craft finds that her day is gone as far as racing is concerned, she is outbuilt, and by the time he has made the alterations necessary to turn her into a good cruiser, the amount he is out of pocket by the transaction would have gone a long way towards building a new one.

A cruiser, on the contrary, is usually much cheaper, and far more adapted from her less draught of water and lighter gear for a beginner to serve his apprenticeship in. As already intimated, I by no means hold with the idea that ex-racing yachts are to be avoided in buying, but for the reasons just stated, my advice to the amateur is, look out for a good cruiser when you first determine on going in for yachting.



CHAPTER IV.

CONCLUDING A PURCHASE.

FITTING OUT.—REEVING GEAR.—BENDING SAILS, ETC.

IN the last chapter we are supposed to have made an offer for a certain craft, and that it has been accepted. The next proceeding is to pay the money and have the boat made over to her new owner. If the yacht is 15 tons or above that size by Custom-House measurement, she will be registered as belonging to some port. The name of the managing owner, according to the Merchant Shipping Act 1876, will also be registered. The Register will have to be endorsed, and the new owner's name substituted for that of the late owner of the vessel. It may be as well to state that in registering a new yacht the following documents must be produced:—certificate of the Custom-House Measurement, builder's certificate, setting forth the date of building, place where built, etc., and lastly the Declaration of ownership.

In the case of a vessel already registered, she may be transferred by sending to the Custom-House, or Registrar of Shipping, a Bill of sale, the ship's Register, and Declaration of ownership, which must be either signed in presence of the Custom House official, or before a Justice of the Peace. This latter document is retained by the Customs.

Care must be taken before paying the money to see that there are no liens, mortgages, or other claims against the vessel. Sometimes a craft is sold in dock, and the purchaser may be led to suppose that there are only a few months' dock dues to be settled, not worth disputing about, and when he comes to take the vessel, finds that the claims against her on the part of the Dock Company are a serious item. I have in my own recollection a case in which it cost a new owner something between £20 to £30 before he could get his receipt from the Dock Company, so it is advisable to have a clear and definite understanding, in black and white, before handing over the amount agreed upon to the vendor.

If the vessel is registered, any legal mortgage on her must be entered at the Custom-House, or at the office of the Registrar General of Seamen, and by giving in the name, port of registry, and official number of the vessel—which can be easily found by a reference to the *Mercantile Navy List and Maritime Directory*, a book published annually—and the payment of a fee of 1s., you can freely inspect a copy of the

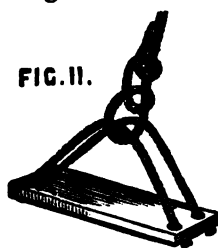
register, and learn for yourself whether there is any registered mortgage on the vessel.

I shall, however, assume that our amateur friend has found no difficulties in the way of concluding his purchase, and that the money has been paid and he is the sole owner of a bonny craft, not as perfect as might be, but still capable of being made into a good tight and staunch little yacht.

The next thing to be done, supposing she is hauled up on a slip with the mast out and entirely stripped, is to thoroughly clean her out below, and whitewash the hold where the ballast is stowed, or give it two or three coats of red lead. When a boat is thoroughly dry along the keelson, a good coat of red lead will prevent the bilge water from soddening the wood, and thereby tend to preserve the timbers and planking. The ballast, if iron, should also be carefully whitewashed or painted with red lead before being put back in its place. If the pigs of iron or lead are not marked, as they ought to be when they are taken out, you may find it troublesome to get her into right trim again. The trim of a vessel, whether large or small, is everything, and great nicety is often required in its adjustment; therefore the best plan is to get hold of some one who has superintended the unshipping of the ballast, and get him to re-stow it as near as he can to its former position. Then, slightly screw down the floors, take her out for a sail with a couple of smart hands, and by shifting it about you will soon see how the craft likes her weight.

Supposing that your yacht has been totally dismantled during the process of laying-up, the first operation, after stepping the mast, which is done by means of either a crane, or a pair of sheers, is to scrape the mast head, spars and blocks; then commence to set up your rigging, and after which, just before bending the sails, finish scraping the mast.

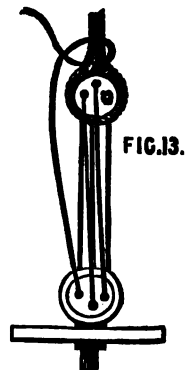
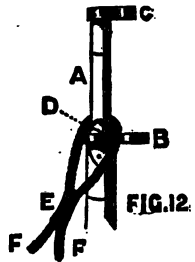
We will begin scraping the mast head. Reeve a gantline through the sheave hole in the mast head, then rig a boatswain's chair, which is a piece of wood with two holes in each end of it, as in Fig. 11; take two short pieces of rope about six feet long and reeve the ends through the holes, make a knot in them, and the chair is made. Take one end of the line, and pass it through the bight at A, Fig. 11; take a couple of turns and two half-hitches, stopping the end so that the weight of the man sitting in the chair will not cause the hitches to slip. Care must be taken that the chair is hung evenly. Now let the hand who is to scrape the mast head get into the chair, and hoist him up and make the rope *well* fast. If the mast is in store with the rest of the spars, the head had better be scraped before the mast is stepped. Scraping spars is an operation that, provided the amateur has time, he might do himself. Indeed, if he wishes to become a thorough practical yachtsman; the opportunity of assisting in the fitting out of his little craft ought not to be lost. A



novice will learn more respecting the rigging of a vessel at this than at any other time. He will be able to see exactly how shrouds are set up and turned in ; how to worm, serve, parcel, and marl ; how to clean the shells and sheaves of blocks ; the right way to bend sails ; and gather a fund of information besides, which would take a volume to particularise.

In scraping a spar use a scraper, or a common sailor's sheath knife. When a spar is very black, dirty and rough, a smoothing plane may be run over it. Frequent planing is not to be recommended, for the reason that it lessens the diameter of the spar every time it is done, and weakens it correspondingly. When the spars are scraped, glass paper beginning with No. 2 and finishing with No. 0 may be rubbed over them before varnishing. The best pale copal varnish will do for this purpose. It varies in price from 16s. to 18s. a gallon. Two coats of this varnish must be put on, and then the glass paper may be applied again, and then another coat of varnish will give the spar a beautiful polish. The mast need not be varnished, or it may have one coat, a rub with No. 0 glass paper, and then be well greased. The mast hoops, if wood, must also be scraped and varnished, if galvanized iron, they will be bound with leather. Iron mast hoops although common enough a few years ago are seldom seen now ; they are neat, however, and hold little wind. The blocks should be also scraped, the sheaves taken out and sand papered, to make them spin round easily, and the shell of the block varnished ; where rope is used for strops, it may be covered with canvas or leather.

The shrouds must be put over the mast head as follows :—starboard side first, and then port side. In small craft, say up to 15 tons, two shrouds on each side are about all that are required, and these ought properly to be pairs, that is one long piece of wire rope doubled is put round the mast head, and rests on the bolsters. The sketch, Fig. 12, will show more clearly the mode of putting the rigging over the mast head :—A mast head, B lower cap, C upper cap, D bolsters, E a seizing put on to bind the two parts of the shrouds F together, so that they cannot shift from their position. The forestay goes with a large eye over all, and rests on the main halliard bolt. This eye must be large enough to let the topmast run through the cap freely. Having got the shrouds in their places, the next operation is to set them up by passing the lanyards. These go through dead eyes in the lower part of the shrouds and are taken through similar dead eyes on the channels or chain plates. The method of reeving the lanyards is shown by Fig. 13. The lanyards have a Matthew-Walker knot in one end, the other end goes through the forward hole of the upper dead eye on the starboard side,



down through the corresponding hole of the lower dead eye, up again through the middle hole of the upper and down again through the corresponding one in the lower, and so on. The end must be pushed through the space between the upper dead eye, and the seizing half hitched and the end brought to the standing part and stopped. On the port side the knot is rove through the after hole of the upper dead eye. Before putting the forestay over the mast head, the runner pennants must go on, starboard side first. With respect to the fitting of the mast head, the jib halliard blocks are hooked on each side, as in Fig. 14 the peak halliard blocks are hooked on to screw eye bolts going through the mast and tightened with a nut on the fore side, or clinched with a collar. The throat, or, as it is sometimes called, the main halliard block, is also hooked on to a screw eye bolt, but this projects far enough to let the fall of the halliards clear the after part of the lower cap. An iron or gun metal band passes round the mast head where the jib halliard blocks hook on, and the peak halliard blocks are placed, the first above and the two others below this band. It is better, however, to have metal bands round the mast head for the lower peak and main halliard block as well, because the constant strain on the bolt loosens it sooner or later, and then the nut generally cuts a nice score all round it, whereas the metal bands keep the whole thing secure and insure its lasting much longer. The running gear, such as halliards, etc., can now be rove, the gaff parreled, bowsprit shipped, and before rigging the bowsprit, *i.e.*, putting on the shrouds, bobstay and topmast stay, the jib traveller must be put on. The crosstrees ought to be made to ship and unship easily. In a small craft some prefer galvanized iron crosstrees to wood, as they can be made so much smaller and yet retain sufficient strength. Wood crosstrees are all very well in vessels over 10 tons, but under that size they are thought by some to give a heavy look to the mast head; wood is of course lighter.

FIG. 14.

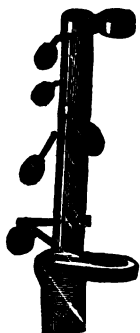
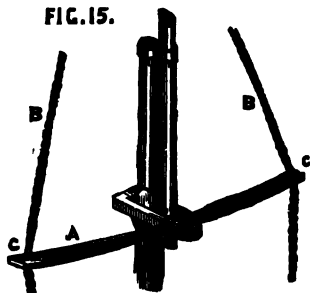
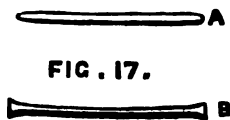
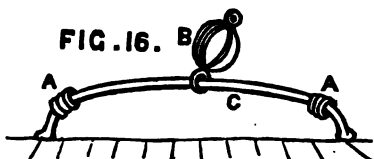


FIG. 15.



The topmast shrouds should be of light wire, each in two lengths, fastened together with clip hooks, or, as they are sometimes called, sister hooks; in racing vessels they are replaced by shackles, so that when the topmast is housed, the lower part can be unhooked or unshackled, and the shrouds set up taut with the tackle. I believe in a good deep score in the ends of the crosstrees, so that the shrouds lay well in their place; a wire fid, or as some people prefer a wooden button, makes everything secure, as in Fig. 15: A, crosstrees, B, topmast shrouds, C, piece of wood to prevent shroud

slipping out of score. The bowsprit shrouds are set up with tackles hooked to eyebolts on each side of the bow, but this is old fashioned, in most modern vessels they are wholly set up in-board. The bobstay is shackled on the stem, and to a tackle leading from the bowsprit end. The topmast stay also leads in board through a block on the bowsprit end, and is set up with a tackle to the bitts. In a small vessel no tackle will be needed, for the topmast stay can be set up as taut as a bar by hand. The main sheet should be a strong bit of manilla, but it is a mistake to have it too large. Take care that all gear renders easily through the blocks and sheaves. If the main-sheet works on a horse or traverse, an iron bar going across the taffrail, the best way to reeve the sheet is to have a treble block on the boom and a double one travelling on the horse; the sheet is then rove so that an end leads to each quarter through a single block hooked to an eyebolt screwed into a timber head. All eyebolts should be made long enough to take a nut on the screw end, as otherwise they are apt to draw when subjected to a great strain, as I have more than once experienced to my cost. Most yachts have a patent main-sheet buffer made of vulcanized india rubber to ease the shock of the boom going over in jibeing; in small vessels it is not so necessary, still it is better to have something to meet the shock of an inadvertent jibe. The Americans use stout india rubber rings, about four inches broad and half-an-inch thick, placed on each end of the main traverse where it curves towards the deck. The ring of the lower block jams the rubber against the iron, and the elastic nature of the rubber eases the jerk materially. Fig. 16 explains this fully: A, india rubber ring, B, main-sheet block, C, traverse or horse. Of course the patent buffer is best, but the foregoing is a very good makeshift. The sheer poles must be seized on neatly, and ought to have a projection at each end to prevent the seizing slipping off. If the sheer poles are not made with this projection, place them upright on a piece of iron or stone, and with a heavy hammer batter the edges round until they project as in the sketch, Fig. 17: A, end before being hammered, B, end after hammering. These look neater if covered with leather. After rigging finish scraping the mast, then commence to clean your decks.



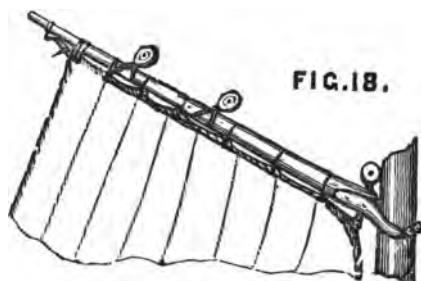
If the decks have been varnished as they ought to be when a yacht is laid up, it must next be cleaned off, not scraped as some yacht sailors are so fond of doing. Scraping decks roughs them up dreadfully, better put a plane over them at once than have the nice smooth appearance which a yacht's decks ought to present spoilt by the marks and cuts of a scraper.

There are two or three ways of cleaning the varnish off the decks,

but the best and simplest way is to purchase 5 or 6 lb. of soda, and a bucket full of unslacked lime, dissolve the soda in boiling hot water, add the lime and apply to the decks. It should be applied after sundown, and if it rains all the better. Before sunrise in the morning wash and scrub the decks well, using hard brooms, and rinse the decks thoroughly with water; if the sun touches the soda and lime it causes it to have a detrimental effect upon the wood. Two or three applications of the soda and lime will take all the varnish off, and the decks will look like new. Another plan is to mix the soda with potash, but this always tends to brown the decks, no matter how carefully it is applied, and therefore I should suggest the lime. Soft soap mixed with soda, one part of soap to two of soda, is also a good mixture for cleaning off varnish. There are several patents for this purpose.

We will proceed to get the mainsail and foresail bent. Haul the first-named sail on deck with the head uppermost. First shackle on the throat to the gaff, and hoist the latter a foot or two up the mast. Then take the peak of the sail and lay it along underneath the gaff until it is far enough for the thimble in the peak to reach the outer end of the gaff. Take a turn round the gaff end, outside the stop cleat, and bring it back to the sail and pass the end through the thimble in the peak of the sail, haul taut so that the head of the sail lays fair and even along the gaff, then pass the end of ear-ring head, which is the lashing spliced into the head of the sail, round the gaff and through the thimble again, taking four or five turns as in Fig. 18. Pass the end underneath the turns and seize the end down so that it cannot draw.

The mainsail has a lacing along the head, which is passed round the gaff and through the eyelet holes on the sail, and hitched in every eyelet hole. When the head of the sail is bent, begin to bend the sail to the mast hoops, using two yarn spun yarn, hoisting the sail sufficiently high each time to get at the next lowest



hoop. The tack is set down with a small tackle, the outer clew is shackled on to a traveller on the boom, similar to the jib traveller, and hauled into its place with an outhaul. Having bent the mainsail, roll it neatly up and pass stops or tyers round it; crutch the boom, and put the painted coat over all; hook the main and peak halliards to bands passed round the boom; haul taut and belay. Now get the head of the foresail and hook on the fore halliards, taking care to put a mouseing, *id est* a piece of spun yarn, round the neck of the hooks, to keep them from getting unhooked, or to speak nautically, adrift. If the foresail has spring cliphooks along the fore rope or luff, you have nothing to do but slip them round the stay, hoisting the sail up as convenient; but if it

goes with hanks on the stay, these hanks must be made fast to the eyelet holes in the luff of the sail, in the same manner as the hoops are fixed to the mainsail. Lash the tack earring to the eye bolt in the stemhead, or a tackle is better; lower the foresail down, and stow it neatly; put on the cover, or, more properly speaking, coat, first unhooking the halliards which take into the mast, hook to a belaying pin, and haul taut.

CHAPTER V.

YACHTS' BOATS.

LAYING DOWN MOORINGS.—PICKING A CREW.

ONE of the most important appendages to a yacht, large or small, is the dinghy or as it was formerly called "the jolly boat." Without a boat of some sort it is not wise to get underweigh in even a 5-tonner. All British registered vessels are supposed to come within the provisions of the Merchant Shipping Act, which ordain the carriage of one or more boats, according to their size, and the number of persons on board; the law however has not been enforced against yachts, although it is questionable whether, in the event of any lives being lost on board a registered yacht, through the want of a boat or boats, the owner would be able to divest himself of liability on the plea, that the Merchant Shipping Act did not apply to pleasure vessels. My advice to all intending yachtsmen is to steer as closely as possible to the law, and it is therefore best to have on board a copy of the Merchant Shipping Act of 1854, with its various amendments. It can be obtained for three shillings and sixpence, and will be found of great use to the amateur sailor in his dealings with the crew. The owner of a large yacht bound on a foreign cruise ought also to have with him "*Abbott's Digest of the Merchant Shipping Laws*," it is a most useful work, containing full and complete explanations of the acts of parliament and their application to owners, ships, masters and men, and gives many cases as precedents.

Most yachtsmen are as particular regarding their boats as they are

with respect to their yachts, but there are a few, who I am sorry to say do not seem to take the same interest in them.

Nothing looks so unseamanlike as to see a smart yacht with a disreputable looking boat towing astern; and to the amateur I would say, have a good boat, even if you have to build her yourself.

In a 5 or 10-tonner, a good dinghy will be all that is required. A dinghy for the smaller sized yacht should be about 10 ft. long by 4 ft. beam. Such a boat, if made tolerably full in the ends and with a good wide floor, ought to hold three persons very comfortably, or four on a pinch. A shorter boat, say 9 ft., with about 3 ft. 10 in. beam, would do as well, but is not so slightly, and from its tubby dimensions is harder to row and tow.

If your yacht has a dinghy belonging to her when you are buying, nothing remains to be done but to see that the boat is tight, strong, and complete in its fittings. If it has been bright varnished and you prefer that to paint, the best way to make her look new and smart is to go carefully over her with soft soap and soda, or ground pumice stone—the latter the best—scouring off all dirt and grease. Then take glass-paper, beginning with middling coarse (No. 2) and finishing with fine (No. 0). Wet the glass-paper, or else it will not rub smoothly over the varnish. When this is done the sides of the craft ought to be as smooth as ivory. Now take a perfectly new and clean brush and give the boat a coat of pale oak varnish, and when this is thoroughly dry and hard, say in 48 hours, lay on a coat of copal boat varnish, and give it a week at least to get thoroughly hard before putting the boat in the water. Should there be any cracks or crevices, fill them up with a little gold size putty, coloured with yellow ochre, before varnishing. The interior of the boat should be treated in the same way. If you wish a very “dandy” looking boat, run a gilt moulding round her. If she is painted, a good rub with sand and canvas, going over her afterwards with ground pumice stone, will smoothen her down sufficiently for a new coat, unless she is a very old boat, in which case the paint will probably be all lumpy and rough. The only thing to be done in such a case is to bream her, that is, burn the old paint off. A good pair of ash oars and a boat hook must not be omitted. It is advisable to have a spare oar on board as well, in case of one of the others being broken or lost. If she is fitted with thole pins, that is, pieces of wood stuck in the gunwale for the oars to work in, throw them overboard and get a pair of galvanized iron or brass rowlocks to ship in their place. Thole pins are always breaking, can never be found when wanted in a hurry, and are a nuisance in every way. Four round boat's fenders neatly covered with leather, or canvas painted white, should be securely fastened inside the gunwale, so that they can be put over when coming alongside a vessel or pier. A nice neat dinghy, fitted completely for a 5 ton yacht, ought not to cost, new, more than £10 or £12, but this depends, of course, upon the locality and the builder, some charging more, some less. One thing

I would strongly impress upon the young yachtsman, and that is, always to see that the plug, if she has one, in the boat's bottom is in its place. A good plan is to jamb the corks of empty bottles into the boat, between the bottom boards, as these make the best plugs, and in a hurry there is always a cork handy. In most well-kept yachts the new bright boat is kept for the exclusive use of its owner and his friends; a second old and painted boat spares the better one, and is useful to the crew when wanted for their own use, and bringing coals and water on board; this is left at moorings, or anchored off when the yacht is under way.

In large yachts, besides the dinghy, a gig is carried. This is a longer and rather more elegantly shaped boat than the former. A gig for a 20 ton cutter should be about 15 ft. long, and 4 ft. beam. Above 20 and up to 50 tons, the gig can be increased in length, in fact an 18 ft. boat is not unusual in yachts from 30 to 40 tons.

In fitting a gig, mahogany or teak top streak stern sheets and back-board look the best (remembering that teak is the best wood for all yacht deck fittings, as it will always scrape up fresh owing to its hardness and durability, and it does not turn black with the various preparations sometimes used in cleaning, which is often the case with mahogany deck fittings and oak covering boards and stanchions, if not very carefully looked after and cleaned with the proper solutions), and the effect may be heightened with a brass yoke and rowlocks. Handsome rep cushions for the stern sheets, either blue or crimson, add considerably to the smart appearance of a yacht's gig, and contrast well with the bright sides of the boat.

Next in order comes the launch, a boat of rather heavier construction than the gig, not being quite so long, but with more beam, and altogether a more powerful sort of craft. In yachts of 50 tons and upwards a small portable engine is a very useful adjunct to a launch's fittings. The boat need not be built specially for this purpose, as it only needs to bore with a long auger, a hole through the dead wood, large enough to take the screw shaft. A launch of 16 ft. fitted with an engine and good screw will tow a 50 ton yacht $2\frac{1}{2}$ to 3 knots in a calm. Under 50 tons a gig and jolly boat are all that are necessary however, and if there is room for a third boat let it be a good shooting punt. A gig can be fitted with an engine and screw equally well, as the heavier built launch, although it is the fashion to suppose that the former is too lightly constructed to bear the strain of machinery. The fact is however that engines are made now a days for yachts' boats, which are little more than toys, and the lighter the boat the more easily they will drive her, I have seen one fitted to a very lightly built boat 13 ft. long and 2 ft. 8 in. beam, and it drove her along at the rate of 5 knots. I never learnt that the little craft was any the worse for the experiment. There are not a few yachtsmen who recommend that the gig and launch should be good sailing boats, that is should be so constructed as to carry enough canvas to enable them to beat to windward, some say that an iron keel should be fitted to the gig so that she

might carry a good spritsail and foresail. Dinghies and gigs are now sometimes built with galvanized iron centre boards, and this enables them to stand up to a good press of sail. This is all very well in its way, but such craft as yachts' gigs are better without such appendages. It is a sort of "tempting of Providence" to try and beat a passage with this style of boat. All open boats are dangerous under sail; how much more so must they be when made long and narrow, and with the small amount of surplus buoyancy which appertains to the gig class? A small light lugsail for running before the wind is quite sufficient for all practical purposes.

One of the difficulties in the way of carrying anything but a very small dinghy on board a yacht of 5 tons is the room it occupies, when from the danger of towing it or other causes, it becomes a matter of necessity to get the boat on deck. Various methods have been tried to overcome this objection, but the most successful is that carried out by the Rev. E. Berthon, whose invention, the "collapsible boat," Figs.

19 and 20, is so well known. These boats are very handy, a 9 ft. dinghy shutting up into a space 9 ft. long by 10 in. wide, and from their extreme lightness—the size in question weighs something under 100 lbs.—are exactly suited to small vessels. If the cockpit or companion way is not large enough to get it down below, it can be lashed on deck under the rail, or alongside of the cabin top, and the room it takes up is hardly noticed. A little practice is required to get them smartly into the water, but

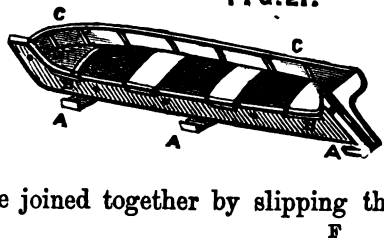


FIGS. 19 AND 20.

a novice could open out a 9 ft. dinghy and have her ready for use in less than three minutes. They are buoyant, and pull fairly well, but should not be dragged over rough shingle, as the canvas skin is apt to get torn. A hole or two, more or less, however, does not make much difference, as they are full of air-tight chambers.

Another very ingenious dinghy was invented by a well-known yachting gentleman, Mr. J. Ridgway, in 1858. This boat was built as follows: a board, shaped as B. Fig. 21, was first cut out, and the boat built on this in half-sections, as C. Fig. 21. Another board was then cut in the same shape, and the other half of the boat built on it; when completed the two halves were joined together by slipping the

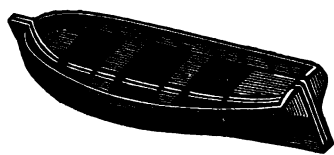
FIG. 21.



under side of the one board into the iron clamps, A. Fig. 21, the whole being tightened by thumb screws in the holes indicated. The boat then appeared as in Fig. 22.

The thwarts being in halves like the rest of the boat. The longitudinal board, forms a fore and aft bulkhead which is very little in the way of a sitter, who can sit with one leg on each side of it.

FIG. 22.



This boat is a trifle heavier than an ordinary dinghy, but inasmuch as the two halves can be separated in a few seconds and stowed on each side of the yacht's deck, the extra weight is not of so much consequence. It is doubtful however whether in a race, under rules making it compulsory that the boats should be ready for immediate use, that one of this description would not have to be carried in the usual manner, that is ready to be launched over the side at a moment's notice, and the same applies to collapsible boats.

There are a few other devices, notably the India-rubber boats which are inflated by blowing air into them, but these although very useful additions to the ordinary dinghy, are a poor substitute for it, whereas the invention just described is as strong, if not stronger, than a boat built in the usual manner. Another plan which has been recommended is to have a light iron dinghy divided in half athwartships, one half forming the bow, another the stern, I should not think this a very good arrangement, certainly not, equal to Mr. Ridgway's method. A Mr. Ayckbourne in 1852, invented a folding boat, the folds being either sheet metal or wood, but it has been superseded by the Berthon patent.

There are few yachtsmen who are not fond of shooting, and although in a small yacht special boats for the purpose are not so necessary to the enjoyment of the sport, as in a large vessel, whose draught of water will not allow her to enter the mouths of those creeks and rivers, where the feathered tribe abound, still a small punt will be found very handy. The punt although often confounded with the dinghy is a totally different craft.

The word punt in an old nautical dictionary is thus explained, "an oblong flat bottomed boat something like a dumb barge only much smaller," no one with the least pretension to nautical knowledge could trace much similarity between a yacht's dinghy and a dumb barge. Punts are of various sizes, and construction, from the regular shooting punt, fitted to carry a duck gun, to the small oblong box, just sufficient for one man to shoot from; a small punt suitable for shooting purposes can be bought second-hand for about £5 to £6, or a very good one may be built to order for £9 or £10 plainly fitted.

When once a yacht is fitted out for the season, it is advisable to have moorings laid down in the most favourable locality within easy distance of the owner's residence. This saves a great deal of both time and trouble, many a cruise is spoilt by the time wasted in clearing a

foul anchor, besides the risk of dragging in heavy weather necessitates a constant look out to be kept on board an anchored yacht, whereas once fast to good moorings the owner may make his mind easy, and need not worry at the thought, when he hears the wind rattling the casement, that perhaps his crew may be on shore, and his yacht dragging athwart hawse of something or other. Even moorings carry away occasionally, but if well laid down, and taken proper care of, ought to last a long time.

There are several ways of laying down moorings, but the modern method is to have two anchors each with single flukes and shackled together by a chain. The anchors are laid down at a good distance apart; the middle of the chain has attached to it a lighter chain, called the bridle, this is made fast to a rope which is fast to a small spruce cask or piece of wood; this is picked up and brought on board the vessel when it is intended to moor her, and the chain attached to it brought through the hawse pipe, or through a fairlead on the rail, and made fast to the bitts. Always lay down your moorings with a due regard to the proximity of anchored vessels. In most rivers and harbours there is a special anchoring ground, and by noticing how the different vessels take up their berths, a very good idea may be gained as to the spot best suited for your moorings.

At such places as Erith, Gravesend, and Greenhithe on the Thames, and other well-known yachting stations, there are always plenty of persons ready to give advice as to the laying down of moorings, but don't trust too much to local knowledge. A good plan, advised by that prince of yacht sailors the late Vanderdecken, is to anchor two or three times in the locality chosen as the station of your yacht, and the getting under weigh once or twice will give you an excellent idea of the best place for a clear berth. Mind and have the moorings in sufficient depth of water, so that at low water springs the yacht will not tail the ground.

There are few more difficult tasks which the novice in yachting has to perform than the operation of manning his vessel. Even when the crew is represented by one hand, who is by turns skipper, mate, boatswain, cook, steward, able seaman, and loblolly boy, the picking out of a good, steady, well-trained man is by no means easy. Like matrimony, manning a yacht is "very much of a lottery." In large yachts the selection of the crew is generally delegated to the skipper, who, if he is a competent man himself, and up to his work, will know how to pick a good crew. In a small vessel, carrying only one or two men before the mast, the owner has to depend more upon his own discrimination. If he belongs to a club, the chances are our amateur friend will be able to get a hint or two from the secretary, or a brother yachtsman, as to the character and abilities of the applicants for a berth on board his craft. It by no means follows, however, that the most strongly recommended candidate will suit the best. Yacht sailors as a class are no better, and no worse, than any other men in

their own sphere of life, still it is a fact that they are considered by many yacht owners to have sadly deteriorated of late years. Whether there is any truth in the accusation, remains as yet a moot point. I shall not, however, weary the patience of my readers by attempting to controvert any of the arguments used either *pro* or *con*, there is, doubtless, a great deal to be said on both sides of the question; as far as my own experience has gone I have generally found that the best yacht sailors were those who had served most of their time in racing vessels. In a cruising yacht—especially those which only get under weigh about three or four times during a season, and then only for a short spin of from one to two days—it would be a wonder if the men did not deteriorate. Laying at anchor off the club house for weeks together, with nothing to do after the matutinal scrub down but lounge about the esplanade, with an occasional pull to and from the shore, is enough to spoil any man, let alone a sailor, who, although he may be only a fresh water fore-and-after, partakes more or less of the roving, restless propensities of his salt water brother of the wave. Many a “ne’er do weel” among yacht sailors has confessed to me that he dates the commencement of his downward career to the insupportable *ennui* engendered by a long continuance at one anchorage, lasting through a whole season. Again, there are owners who would ruin the smartest crew that ever trod a plank; at one time indulgent to a fault, treating the hands with that familiarity which we are told “too often breeds contempt,” and at another querulous and fault finding, threatening all hands with instant dismissal, bullying the skipper before the men, and *vice versa*; can it be wondered at if the crew become to a certain extent imbued with the same sort of temper as the owner, whom they unconsciously adopt as a model, whether rightly or wrongly?

So far as regards the remuneration of the crew, wages vary slightly at different yachting stations, and of late years they have risen considerably. For a small yacht, however, a very good first hand ought to be obtained for about 30s. to 35s. per week, a second hand for about 23s. to 27s., and a boy ought not to cost more than 10s. to 15s., according to ability and size. Some small boys are really good helps and capital little sailors, but many, we are very sorry to say, such an abominable nuisance that many yachtsmen will not carry them. The skipper or first hand would rather come for the lower named rate of wages and say 10s. a week (more or less, according to size of the yacht,) for looking after the vessel during the off season; in fact, the length of the probable engagement materially affects the hiring of yacht hands, and the owner who is out early in the season till late in the autumn, say from the beginning of May till the end of October, has no difficulty in getting the pick of the men at reasonable wages, the fact being that yacht sailors as a rule are obliged to trust almost entirely to their summer engagements, to keep themselves and their families during the winter months, when some eke out their livelihood

by fishing, which is at times a very precarious living, others ship in yachts going to the Mediterranean or coasting vessels. If the intending yachtsman means to go in for racing, he will, of course, find the expense of keeping up his boat greatly increased, for unless he confines himself to Corinthian matches in which no professional hands are allowed, other than the pilot, the owner will nearly always be loosening his purse strings. It is usual in racing to give the crew 20s. extra apiece if a winner, and 10s. if a loser, but this is not always adhered to, some giving more, although few offer less. Eschewing professional racing, the young yachtsman ought not to find his expenses very heavy, so far as regards the crew. Most yacht sailors are tolerable cooks, and the boy, even if he has had no previous experience, will, if worth anything at all, make a very efficient steward after a few lessons; and unless the owner is a sybarite in the matter of eating and drinking, the plainest viands will suffice for the appeasement of his appetite, and, indeed, will be more relished on board than the greatest luxuries on shore.

One piece of advice which I have to offer to the beginner in yachting before dismissing the subject of crews is this, never allow any approach to undue familiarity upon the part of the hands; always insist upon the observance of those little points of etiquette without which a good servant always degenerates into a bad master. The men themselves have a far greater respect for the owner who keeps his place and makes them keep theirs. There are certain times when a little relaxation of discipline is allowable, but it should be the exception, and not the rule, and any attempts to presume upon it must be stopped at once, kindly, but firmly. At the same time encourage your hands, by every means in your power, to place confidence in you, not only as master, but friend and adviser. This advice may appear a little contradictory, but strict discipline is no bar to a good understanding between owner and crew. For instance, I once knew a merchant captain a regular martinet on the quarter deck, but who was almost worshipped by those who sailed with him. Stern and unbending, scarcely exchanging a word with those under his authority, except to issue orders, somehow he had managed to inspire all on board with the utmost confidence in him, not only in a judicial sense, but also in his kindness of heart. I shall never forget an instance of this which occurs to me now, and my readers will doubtless pardon the digression, in consideration of its applicability to the foregoing subject. It happened while the ship, which the aforesaid martinet commanded, was lying in Table Bay, waiting for a fair wind to proceed to the Mauritius. The vessel had been chartered by Government to take out emigrants from home to Cape Town, and in the course of the nine weeks' passage one of the crew, a smart north country seaman, had managed to gain the affections of a soft-hearted lass who, before she came on board, had never been half-a-mile from her native village, and as the time for the ship's departure from Table Bay approached, our salt water Lothario began to experience sundry qualms of conscience with

regard to the matter, which were increased rather than diminished by the raillery of his messmates. At last he could stand it no longer, and announced his intention of speaking to the "old man," the *nie-name* for the captain, in the fore-castle, about it. Our gallant commander was not in the best of tempers at the time; something had gone wrong and he had announced his intention of stopping all shore leave for the rest of the week for some offence or other, I forget what it was at the present moment. However, nothing daunted, our friend with the uneasy mind faced his captain with "Please, Sir, I want your advice." "Well E——, what is it?" was the somewhat impatient reply. "If you please, Sir, its about that 'ere gal what came out with us." The captain turned round, and looking hard at his interlocutor, who with a very sheepish air was turning and twisting his cap about as if he wanted to increase its pliability, exclaimed, "Well, what about her?" "Why, Sir, its all my fault, Sir." Placing his hand kindly on the man's shoulder, the captain said, "Tog yourself out and come on shore with me." This was about six bells in the forenoon watch. In the evening a new hand came on board in the place of E ——, who was reported to the mate as discharged. We saw nothing more of our shipmate for three or four days, when he paid us a visit, looking none the worse for his summary dismissal, as we considered it. On hearing his story, however, we could not but endorse the exclamation with which he finished it, "Ah, the old man is a right born gentleman, he is." It seems that on their reaching the shore the captain took him at once to his sweetheart and arranged that they should be married the next morning. Using his interest, he also succeeded in getting the man a berth on one of the quays, and gave him his discharge from the ship, together with £5 over and above his wages, a practical proof that the man's confidence in his martinet commander was not misplaced.

It is usual to provide the crew with two suits of clothes a-piece, one rough for every-day wear, the other of somewhat finer material, for Sunday or holiday afternoons. Some yachtsmen like to see their crew rigged man-of-war fashion, but a neat serviceable, plain guernsey shirt, with the name of the yacht worked across the breast in fancy letters, looks well: fashion, however, even affects yachtsmen; sometimes the plain initials of the Yacht Club are only embroidered. The above may be varied in very warm weather with a white drill frock and trousers of duck. Your first hand, if you wish to be very dandy, may have a brass buttoned blue cloth jacket, with a cap of similar material relieved by a gold band. The suits of clothes furnished to the crew by the owner are considered to be lent for the period the men remain in his service. The prevailing practice is, however, to allow the men to take the clothes when leaving, unless from misconduct, or otherwise, the owner considers that they do not deserve any favours of this description. Some owners also present their hands with a suit of oilskins as well, but most yacht sailors possess these very useful

adjuncts to their outfit when they join, as a suit of oilskins ought, with careful wear, to last a man through three or four seasons.

Never allow smoking upon the part of the men while on duty aft, or at the helm, without special permission in bad weather. Set your face against it directly you see the least attempt at anything of the sort. Also, strictly forbid the use of foul and indecent expletives; accustom the crew to regard the after part of the vessel as sacred from such profanity, and then you will be spared the mortification of having to apologise to your disgusted and humiliated lady visitors for any laxity in this respect. Many owners, in addition to the wages, give a small gratuity of from 2s. 6d. to 5s. per month, as good conduct money. This is a very fair arrangement, as the men have a double incentive to be on their best behaviour, because the owner can, if he thinks fit, stop this douceur. With respect to the rations of the crew, different practices prevail in different vessels. Some owners prefer to pay less wages and allow so much per week for food money. It is far better, however, to let Jack find himself; it saves no end of trouble, and is more agreeable to the men. In the above-mentioned scale of pay to the crew the men are supposed to find themselves, (except when the owner is living aboard) which they invariably do when two or three hands or more are kept; if only one hand is shipped, or one hand and a boy, it is best to have an agreement with the crew that they should find themselves, and then if the owner only occasionally lives on board, it usually happens the hands live from the surplus of the cabin table. It is these little privileges, and the chance of keeping the yacht at a few shillings a week during the winter months, that the faces of so many of our best yacht sailors, crack foremast hands of the flying "forties and "twenties" are seen sobering down, content to be skippers of our Mosquito fleet.

It is a good plan to give the men permission to finish the remnants of the broached stores, such as bread, meat, etc., but wines and spirits will keep for a certain time, and ought to be left untouched by the crew until the owner returns on board; and if the yacht owner finds that in these minor matters his instructions are faithfully carried out, it is a proof that he has a crew who take an interest in the welfare of the vessel and her stores. This causes a pleasant feeling all round and insures a comfortable and contented ship's company, and is far preferable to placing things under lock and key.

CHAPTER VI.

NAVIGATION.

NAUTICAL INSTRUMENTS.—PROVISIONING FOR A CRUISE.

IN our last chapter we are supposed to have laid down moorings and picked a crew, and the novice may imagine that little remains to be done but put the stores on board, and get a friend or two to join you, and start off for a jolly good cruise; there are, however, a few more rather important items which are matters of necessity on board a vessel. In a small yacht it will not be absolutely necessary that either the owner or his first hand, or, as he is called, "the skipper" should be book read navigators; at the same time the mere fact of the owner's knowing how to work a traverse, and lay off a ship's course on the chart, will inspire a certain amount of respect from the crew, and render the skipper somewhat chary in presuming upon his employer's ignorance, when he is desirous of putting into some port other than the one you wish to visit. It is not given to everyone to become an accomplished navigator, any more than it is to everyone to become a finished equestrian, at the same time a person may, by dint of studying the various works published on navigation, pick up sufficient knowledge for all practical purposes, so far as regards yachting. "*The Yachtsman's Handy Book*," by W. H. Rosser, contains full and complete instructions to the amateur navigator, and will be found a very useful addition to the yacht's library. Should the intending yachtsman, however, wish to obtain the certificate granted by the Board of Trade to owners of yachts, he will find it best to attend some nautical academy, where under the able tutorship of some competent instructor, he will learn far more in a short time than he possibly can from the mere perusal of books by himself.

Of course it will be absolutely necessary that the yacht should carry a good compass, and the owner, if he has not done so already, must make himself thoroughly acquainted with all the points, half, and quarter points, so that he can, by a glance of the eye, answer the enquiry, "How's she heading now, sir?" with "N.W. $\frac{1}{4}$ W.," or whatever it may be.

The best compass for a small yacht is a small liquid compass, that with a $4\frac{1}{2}$ inch card is a good medium size, but as these come

expensive, a dry compass, fitted with double needles and a moveable bell cap, which is used for steadiness in heavy weather, can be substituted; common compasses with a single bar not being so reliable, are only fit for use as a second or spare compass. Care must be taken in placing the binnacle, *id est*, the wooden or brass case enclosing the compass, so that it is free from any local attraction caused by iron work or an iron tiller. This can easily be done by taking certain well known bearings in the immediate neighbourhood of your anchorage and comparing them with those on the chart.

Besides the steering compass, a tell-tale compass is very useful, this is a small compass hanging in the cabin or over the owner's berth, so that he can at a glance check the course steered without the trouble of going on deck for the purpose.

Having provided yourself with a good compass, the next thing to get will be a set of charts. If your cruises are to be limited to the English Channel you need only have, in addition to a chart of the Thames, the large scale chart of the English Channel, which extends from the Downs to the Scilly Islands, and the opposite French coast, as far as Ushant. It includes the plans of nearly all the principal harbours on both the French and English coasts, embraced within those limits. Books of sailing directions accompany the charts, but these are only useful as adjuncts to the charts, without the latter, sailing directions are not of much account; whereas, with a good chart, the navigator may manage to find his way without any directions other than his own eyes give him. Lights and buoys are altered occasionally, and sands shift, so that it is always advisable to get the very latest published charts. The charts should be backed with linen, and it is also necessary to have proper round tin cases for them. Two ought to be sufficient for a small craft, one for the large the other for the small charts. In larger vessels they are generally folded in half and placed in a portfolio, and can be easily found by a corresponding number on the chart, as indexed in the portfolio.

Next, a small patent log and the proper plaited log line—this instrument, which is towed just clear of the vessel's wake, registers the distance sailed within certain times. Larger yachts either carry a full sized towing log, or one of the numerous deck logs now invented; in the latter the registering dial is fixed to the vessel's taffrail, and the rotator only is towed, and on long southern cruises two or more of these rotators should be carried, as it is not an unusual thing for them to be bitten off by a shark.

A pair of compasses or dividers, or a compass disc, a horn protractor, and a parallel ruler, together with a good pair of marine glasses, and last, but not least, a good aneroid barometer, will be all you require for a first cruise in the shape of navigation tools. A tide table and almanac must not, of course, be forgotten. Such things as a 7 lb. hand lead and line for taking soundings (that is the depth of water), side and anchor lights, and a flare up—this is a tin can like an ordinary

coffee pot with a lid, attached to which is a piece of wire with tow. A little turpentine in the tin allows the tow to be easily ignited, and you can in an instant, if in danger, show a bright flame to an approaching vessel, and this in a small yacht does away with the necessity of carrying blue lights and rockets—ought to be in the inventory, but should any of these necessities be absent, take care they are on board before getting under way. Give the forecastle a small wood-framed octagon American clock, as it is very useful to those forward, and then there will be no excuse for the crew missing a tide or neglecting any duty under the plea of not knowing "what's o'clock." A fog horn is indispensable; these are generally made in either tin or brass—a common tin mouth horn costs about 2s. There are several inventions in mechanical fog horns, one, called the "Little Squeaker," is very powerful, the sound is emitted in the same way as the water in a garden syringe, which it much resembles, and is worked by hand. A larger kind, on the same principle, worked with the foot and hands, called the "Vicar of Bray," is often used in large vessels. Another kind is a zinc cylinder, (with a strap to sling over the shoulder), the horn turns up alongside, and it is worked like the syringe; some horns have a bellows attached to them. The fog horn is used only when the yacht is under way. If at anchor in a fog a bell is used. In small vessels a hand bell is sufficient. If you have room to stow it, it is as well to have the ship's bell to measure 8 inches across, it would then pass the Board of Trade survey, if required to do so; it would be unreasonable if very small yachts should be made to carry lamps and bells of the regulation size, as there would be no room to stow them away; still, in case of a collision—say, while you are at anchor—it may happen that the size of your riding light or bell is measured by those in charge of the colliding vessel, and the payment for any damage you may have sustained disputed on the plea that your anchor lamp is not of the regulation size, which is that the globe should measure 8 inches in diameter, and even where inconvenient to carry the regulation side lamps, it is best, if possible, that the anchor globe should be full sized. To pass survey, the side lamps should measure 9 inches across the back and side (the lens not less than 5 inches in height); but, as these could not be conveniently carried in anything less than a yacht of about 20 tons, those measuring 6 inches are sufficient for smaller craft, while we would not recommend a less size than 5 inches for very small yachts, say of 3 to 5 tons.

Of course, I am presuming that the first cruise of the amateur is merely a short coasting trip, say from the Thames to Harwich, Ramsgate, or even as far as Boulogne. Should the contemplated cruise be across the Bay of Biscay, a sextant and chronometer will have to be added to the above list, besides additional charts, but my advice to the beginner is: commence your yachting career in a small vessel, and when, at the end of two or three seasons, the ambition of owning a larger craft becomes too strong to be resisted, the knowledge picked up.

in the 5 or 10 tonner will stand you in good stead, and make you feel less a novice in the presence of your brass bound skipper and his smart crew of able seamen.

One matter concerning charts is apt to be overlooked by persons imperfectly acquainted with them, and that is they are not always engraved true N. and S.; but a glance at the engraved compass will at once show which way the north lies; the lines of latitude and longitude also differ from maps, crossing each other at right angles. The ship's compass always varies more or less from the true N., this is known as magnetic N.; therefore, in laying off the course or track of a vessel on the chart this variation must be taken into consideration. If you are setting your course from a true compass engraved on the chart; the steering compass and an engraved magnetic compass on the chart ought to agree, unless you are in an iron or composite vessel, which causes deviations of your compasses, which require to be properly adjusted by magnets, by a qualified compass adjuster before going to sea. All good charts give the magnetic points as well as the true, but still it is best to bear the foregoing in mind. I have seen more than one mistake arise from trusting to the hasty glance of an unpractised hand at the chart, and such mistakes, even in sight of land marks, may be attended with disastrous consequences. Bearings and other references to the points of the compass when referred to on the chart are magnetic, unless the contrary is expressly stated. It is only when taking bearings or distances not referred to, that one must be careful to distinguish between true and magnetic N.

A word as to the tides, a correct knowledge of which, in the locality chosen for your cruising ground, will much facilitate operations. Of course the time of high and low water can easily be found by a reference to the "Tide table," but this is not sufficient, it is also important to know the directions in which the tides run, and their average velocity, these are generally pretty accurately given on the charts; but, inasmuch as the force of the wind, and its long continuance in one direction, to say nothing of the difference between spring and neap tides, vary the velocity, and in less degree, the direction of certain tides and currents; it is advisable to allow for such variations, and not trust too much to the exactness of the particulars given on the charts. Don't forget that the highest and lowest tides occur during the equinoxes. A rough way is if the tide is marked three knots on the chart and it be springs, allow 1 knot for first hour's run, 2 for the second, and 3 for the third, when it decreases gradually to about 1 knot during last hour's run.

I have already mentioned the patent log, but a very useful addition to the above is the old fashioned common log line and reel. This consists of a reel with handles attached to the spindle, a piece of triangular wood, and a sand glass. A line, somewhat similar to the lead line, is wound round the reel. This line is marked at equal distances, bearing the same proportion to the number of seconds in the sand glass

as a knot or nautical mile does to an hour. Thus for a 28 seconds glass the line will be marked at a distance of 46 ft. 8 in. apart. A certain amount, called stray line, is allowed before commencing to mark, from 8 to 10 fathoms, this is necessary in order to carry the "log ship," the name given to the triangular piece of wood, clear of the wake of the vessel. This log ship has a piece of lead on its base, sufficient to make it float upright when in the water. Attached to two of the corners is a short span of three legs, the other leg of the span has a little wooden plug which fits tightly into a hole in the third corner of the log ship (see Fig. 23). Sometimes the span has two legs only.

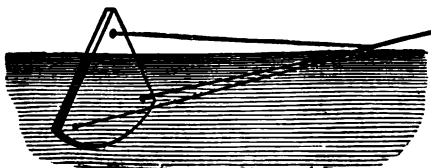


FIG. 23.

Now it is obvious that this span is necessary for the purpose of keeping the log ship square with the water, so that it has sufficient resistance to remain almost stationary where it is thrown. The span is made fast to the end of the stray line, and at the distance say of 8 or 10 fathoms (for a very large yacht, say 100 tons, 12 or 15 fathoms, should be allowed, as the indraught from their wake is proportionately longer), raise one of the strands with a pricker or small marlin spike, and insert a piece of white rag, giving the line a twist to tighten it. At the distances of 23 ft. 4 in. from the white rag insert a piece of marlin or spun yarn in the same way, and tie a knot in it, this marks half a knot, equi-distant from that insert a piece of leather, this marks the first knot or nautical mile. Another knot of spun yarn at the half mile, two knots at the second mile, three at the third and so on. Remember that all the half knots or miles are marked by one knot tied in the line, and the full miles after the leather by the exact number. A 14 seconds glass and a smaller reel, with the length of the knots marked at 23 ft. 4 in., will be more handy for a small yacht. The way to use the log, or, as sailors say, "heave it," is as follows:—Let one hand hold the glass, while another holds the reel, then fix the plug in its place in the log ship, and take sufficient of the spare line in the hand to insure a clear throw. Heave it slightly to leeward of the vessel's wake, and pay out the line quickly, assisting off the reel now and then; when the white rag goes over the taffrail sing out "turn," to which the man with the glass must answer "turn," as he reverses the glass. As soon as all the sand has run out, he will call "stop," to which you reply "stop," at the same time seizing the line in the hand, the man holding the reel will also jam it against his chest, to prevent it unwinding any more. The sudden jerk of stopping the line draws out the wooden plug, and renders the operation of hauling it in less difficult; even with the plug out the hauling in the line when a vessel is going through the water at great speed is by no means easy. I have seen the whole watch (seven men) tail on to a log line in

a ship going 12 knots, and then it was hard work, the officer reeling up as the line was hauled in.

The log reel and line is, however, seldom used now, save as an auxiliary to the patent towing log, the latter sometimes getting out of order. Always keep the sand glass dry, and test it now and then with a watch.

I have already mentioned the necessity of a hand lead and line; this should also be accurately marked. In a small vessel it is advisable to mark the first fathom in feet (in the navy, for surveying expeditions, the first 5 fathoms are marked in feet). A fathom is 6 feet, and for 1 fathom a knot is inserted, at 2 a piece of leather cut into two strips, 3 a piece of leather with three strips, 5 a white rag, 7 a red rag, 10 a piece of leather with a hole in it, 13 a piece of blue bunting, 15 white rag, 17 red bunting, 20 fathoms two knots. The fathoms between the marks are called deeps, and are indicated by a single knot in the line. For a small yacht 15 fathoms of line is quite sufficient for all practical purposes.

In heaving the lead take up and hold lightly in the left hand a couple of fathoms or more, according to the supposed depth of water, give the lead a good swing forward parallel with the side, don't attempt to swing it round your head, only a practised leadsman can do that with impunity, and the chances are that you will either send it smash against the bulwarks, entangle it in the rigging, or bring it back on your own cranium, which, apart from its awkwardness, is, to say the least of it, rather dangerous. In foggy or thick weather a little tallow, called arming, put into the cavity in the bottom of the lead will bring up specimens of the ground and help to show the mariner where he is.

Bearing in mind the hints given above, the amateur navigator will not find much difficulty in taking his craft a channel coasting trip. The best plan is always to keep a good look out, a good harbour under your lee, and a steady hand at the helm; and remember that "log, lead, and look out," are the seaman's best friends.

There are very different opinions among yachting men as to the best way of provisioning a yacht for an extended cruise.

Some owners will send down a list to the skipper or steward, with orders to have the things on board by the time he joins; others merely tell their first-hand, steward or skipper to get whatever is required, and the consequence is, in nine cases out of ten there is an unpleasantness anent the length of the bill. It is far better to find out for yourself the amount of stores you require and see to every detail, thus the temptation to "stand in" with the various provisioning merchants upon the part of your skipper or steward will be absent, and you will be a pound or two in pocket into the bargain.

In the matter of small stores, the first thing to be considered is the length of the cruise, the number of persons on board, and last but not least the depth of your purse. Very often a party of friends will club together for a yachting cruise, and go shares in the expenses. This is

no doubt the most economical way. Many yachtsmen, however, object to this, and with reason on their side too; they, the objectors, hold that the yacht and her crew, under such circumstances, can no longer be considered the exclusive property of her owner. The friends having paid their share have a voice in the direction of affairs. "I say," exclaims one, "why can't we go to Dover?" "Oh, we had much better remain at Ramsgate," argues a second; while a third goes forward, and after a confab with the crew, clinches the matter by saying, "The skipper's opinion is we can't get out this tide, and as the wind is, it won't do to try and beat down Channel." Meanwhile the owner, with the courtesy of a gentleman, shrinks from expressing opinions adverse to those of his guests, for so he still considers them, the consequence is, the discipline of the yacht suffers; the skipper and crew presume upon the idea that "the gents don't know their own minds," and act accordingly. The following conversation in a yacht's fore-castle, which actually occurred within my own hearing, speaks for itself:—"I say, Bill," said the mate to the skipper, "what about getting back on Sunday?" "Why," exclaimed one of the hands, who was busy trying to pick a live coal out of the stove to light his pipe with, "the gov'nor said this morning that he should go out and meet the racers as was coming round, and run on to Dover with 'em." "Oh, the gov'nor be blowed," sharply retorted the skipper, "one of the gents aft told me they was a going to get back by Sunday, and as they had all paid their share, they didn't see no fun of having to pay railway fare as well as yacht fare." This was received with boisterous laughter, although where the wit came in I was at a loss to conceive. When the owner made his appearance on board later in the afternoon the whole thing was arranged. The friends and the crew were too many for the "gov'nor," and a pleasant cruise was spoilt, as well as the view of one of the most interesting matches of the season, namely that from the Nore to Dover.

I would strongly recommend the amateur yachtsman to avoid if possible making a family ship of his craft. By all means invite a friend or two on board, but let it be distinctly understood that you are bound on a certain cruise, and that the yacht will not return before your time is up. For instance, you can say, "I am bound to Dover for the regatta, shall probably put into Ramsgate, and may be, run across to Boulogne, would you like to come?" Then, perhaps, your friend may answer, "Well I should like to go to Dover, how long shall you be away?" "Oh, probably a week or ten days, but you can run up to town from either Ramsgate or Dover." Your friends will thus be really your guests, and not co-sharers with you in the hire of a yacht, for that is what the sharing expenses fad amounts to. If you cannot afford to pay the expenses of your yacht without extraneous help, economise in some other direction; get a smaller vessel, or wait until the cash box is more plentifully supplied. Should any of your friends want to borrow your yacht, and offer to pay for the loan, it is another

affair. If you are inclined to let her for a week, a fortnight, or a month, there is really no reason why you should not do so. One thing is important, if she is not already insured get it done before she goes away.

Now, to return to the subject of victualling, it may not be amiss to the yachtsman to know that $3\frac{1}{2}$ lbs. of bread a day will feed an adult, or 2 lbs. of flour made into bread. 1 lb 5 oz. of peas or beans will also supply the daily waste of tissue. Oatmeal, say 2 lbs. per day, will sustain life. Potatoes are less nourishing than the foregoing; 10 lbs. of potatoes only equalling, as a flesh producer, 2 lbs. of bread. The mere fact of keeping a man alive, however, is not sufficient, his bodily health and strength must also be sustained; therefore, other things have to be taken into the stomach besides those enumerated above to supply the waste of brain and muscle. Of these the most necessary is meat. In cases where a man has had to live on bread and meat for weeks at a time, without any other variety of food, it has been generally found that his bodily strength has been well kept up. Very few other articles of food will supply a deficiency of bread and meat, vegetarian professors and pamphleters to the contrary notwithstanding. Inasmuch, however, as we have been accustomed from our childhood to varieties of diet, the body has, in a measure, become habituated to change; and, therefore, it is absolutely necessary, if we wish to keep ourselves in health, that our food should not be all of one kind, monotony in eating, at least to most persons, soon palls the appetite, and this tends to weaken the digestive organs. Certain "political economists" may call our modern appetites "vitiated," but such as they are they have to be studied to a certain extent, or the body loses some of its elasticity for want of sufficient nerve producing power.

It is often a hard matter for the yachtsman to decide on the requisite amount of provender for his contemplated cruise. To see the perplexed look on the face of an amateur, as he thoughtfully considers the all important question of small stores is refreshing.

Many think that the best way to meet all difficulties is to order a Derby hamper. This, to say nothing of the expense, is a poor way of satisfying the requirements of hungry Corinthians. The *pâté de fois gras* and lobster salad, although very well as *entremets*, and no doubt fairly satisfying to the ladies, will neither go so far, or be so relished as the pea soup, juicy steak, or sea pie, made as only a ship's cook can make it. Let us suppose that you are going away for a three days cruise, which may possibly be lengthened to four, in a 15 tonner, and that the number of persons on board is seven—rather a large party you will say, but not for a modern 15 ton yacht—consisting of two foremast hands, a boy, the owner and three friends. The owner and one friend can sleep on the sofas in the saloon, and the other two in the after cabin, or *vice versa*. In the annexed list of stores to be taken, I am presuming that the crew are to be provided for in common with those aft. First and foremost it will be necessary to have a good

piece of beef, which can be either roasted or boiled, according to fancy. About 10 lbs. weight will be enough to take on board. Four quartern loaves, about 3 lbs. of cheese, 2 lbs. of butter, 2 lbs. of brown sugar, 2 lbs. of loaf ditto, $\frac{1}{2}$ lb. tea, $\frac{1}{2}$ lb. cocoa, 1 lb. coffee, a jar of pickles, 1 tin captain's biscuits, 1 tin of ox tongue or beef, 1 tin Swiss milk, a jar of jam or marmalade, and about 10 or 12 lbs. of potatoes. These may be supplemented by a couple of tins of sardines, some eggs, bacon, ham, and sausages. Of course you will not be at sea all the time, so fresh eggs and milk for breakfast, with, perhaps, a bit of fish for a change, may be obtained when you get into any small port. Fruit pies, puddings, and other luxuries of a like nature are not unattainable even on board a small yacht; most sailors can make a fairly good tart, and of course dough, or, as Jack pronounces it, "duff," will be seen occasionally on your cabin table. A quartern of flour will make a couple of tarts and a good plain pudding, sufficient for two or three dinners.

In marketing, take the boy on shore with you, with a good straw basket, such as workmen carry their tools in; yacht sailors prefer this sort to the ordinary market baskets used on shore.

Remember to fill up the fresh water tank, if the boat is fitted with one, or if not, have the breakers (small casks) replenished. See that oil and wick for the lamps is on board, and buy a good pair of lamp scissors for trimming them. It is also advisable to have a spare coil of good $1\frac{1}{2}$ inch manilla rope, in case any new gear wants reeving.

Now, my friend, I fancy you and your chums will be able to make things pretty comfortable, especially if the owner adds to the above a couple of bottles of rum, ditto whiskey, and ditto brandy; don't bother with wine, unless any ladies are of the party; these, with a two gallon jar of beer (securely lashed to the mast when under way), will be all that is necessary in the way of drinkables. Do not forget the tobacco, and a strong wooden pipe or two fitted with a metal covering over the bowl, will prevent the chance of a burnt mark on a sail in a calm, and make sure of a comfortable smoke in a breeze of wind.

CHAPTER VII.

PREPARING TO START.

CASTING OFF MOORINGS.—MAKING SAIL.—TIDE WORK.—A SQUALL.—
BRINGING UP.

A GREAT writer has said that “nothing can exceed the pleasures of anticipation,” without, however, going so far as that, I believe the near approach of some long looked for happiness fills the heart with joyful hopes, the realization of which more often than not hardly equals our sanguine expectations. It is best, therefore, for the novice in yachting to restrain his imagination somewhat, and while indulging in the reasonable hope that everything will be *couleur de rose*, prepare for those little disappointments which, we are assured on high authority, are inseparable from this mundane existence. Perhaps while the train is whirling you down to the haven of all your hopes, the sun may be shining and the breeze soft and favourable, by the time you reach the end of your journey the wind has shifted and is blowing a gale, the rain pouring down, and, to crown all, the macintoshes have been left behind. Don’t be downhearted, however, but with a “better luck next time” feeling, go on board and amuse yourself and friends by putting things straight below and tidying up generally. It is wonderful how quickly the time passes, “Tea oh” will be sounded before you are half settled in your floating home, and the clerk of the weather will be almost forgiven for the chance he has afforded you to unpack and stow away eatables, drinkables, clothes, books, charts, and the various paraphernalia with which the cabin of a small yacht is crowded on the day before starting on a first cruise.

The rest of the evening after tea may be profitably spent in inspecting the chart of the proposed course, and noting down the principal marks and buoys you will have to pass, and arranging the time to get under weigh the next day. I am one of those who believe in an early start. The pleasantest part of a cruise is the sailing along in the freshness of the morning, ere the sun has attained power enough to make the glare of the white sails and deck rather oppressive, therefore turn in betimes, after piping all hands to a glass of grog to drink success to the voyage. One thing before turning in, if the dinghy has not been hoisted inboard, let a hand pass her forward under the bowsprit and make her fast with a short scope of painter, this will obviate the necessity of having to turn out in the middle of the night

H

to fend the boat off from the side at slack water. There is a wonderful amount of attraction in all floating bodies, and there is nothing so annoying as to be woke up out of a sound sleep by the "bump," "bump," "rub," "rub" of the dinghy against the quarter or side of the yacht. The first night on board to the amateur is generally rather trying work. The mind is so excited, besides the novelty of the situation and the motion of the yacht, as she rocks to the swell of some passing steamer, are of themselves sufficient, when experienced for the first time, to keep one awake. Everything must come to an end, however, and by the time the first faint glimmer of the dawn begins to show through the skylight, you will probably be just falling into that dreamless sleep which often follows a restless night. Scarcely have you thus dosed off when a rude shake disturbs you, and a voice, in not the very sweetest of tones, says, or rather shouts, "I say, arn't you going to turn out? It is half an hour after high water, and your man says we had better be moving if we mean to save this tide." Out you tumble—lucky if you do not bring the upper part of your head in violent contact with a beam in doing so—and sitting on the edge of the berth, feel as though you had not been in bed for a week. Never mind, dress and get on deck and lend a hand to set the canvas, if the yacht is riding to moorings, your skipper will probably have streamed the buoy, and is only waiting his owner's appearance to slip. A knowledge of what is meant by streaming the buoy will not be out of place here. When getting underweigh from moorings cast the chain bridle off the bitts or windlass, make fast to the buoy, then pass the buoy underneath the bowsprit shroud and see it is clear of the head sheets, now pass a line through the ring on the buoy and bring both ends on board and make fast, now drop the buoy in the water and the yacht is hanging on to the buoy. To slip, cast off one end of the line and haul it on board with the other. Before doing this see that the bobstay is properly tautened, that the bowsprit shrouds are set up, and the runners and tackles hauled taut. Unhook the throat and peak halliards, unlace the cover, fold it up and stow it in the sail locker, hook the halliards in their proper places, cast off the tyers, or, as we call them at sea, "gaskets," always make the tyers up neatly and put them away so that they are handy. Nothing is more lubberly than to see everybody hunting all over the ship for gaskets just at the time they are most wanted. Now top the boom up a foot or two, taking care the crutch does not go overboard in doing so, see that the main sheet is clear for running. While yourself and another are busy with the mainsail, one hand will have cast the coat off the foresail, hooked on the halliards and shackled on the sheets, see that they lead clear. Next get the jib along, run the hand down the bolt rope and take out all turns, *remember that the bolt rope is sewn on the right hand side*, as that will tell you in the darkest night which is the clew and which the head, hook on the clew to the traveller and haul it out three or four feet; now hook on the halliards, and be careful to put mousings on all

hooks, that is, bits of spun yarn, marlin, or a good rope yarn will do, round the hook, as in Fig. 24 and 25. This keeps all fast and prevents them getting adrift. Send a hand out on the bowsprit and pass the dinghy astern and make the painter well fast, then haul the jib out as far as it is meant to go, belay the out haul and hook or shackle on the sheets; most yachts' jib sheets are fitted with a screw shackle, see Fig. 26.

Everything is now ready for a start, but first take a look round and see whether the road is clear. If the wind is very light and adverse to the course, it will be advisable to get everything set before casting off from moorings. Suppose, however, there is a nice sailing breeze and the anchorage pretty clear, if you wish to leave on the port tack run up the foresail and make fast the bowline to the starboard fore shroud and haul aft the sheets, put the helm a starboard, man the peak and throat halliards and hoist away, easy with the peak, don't hoist it up quite so fast as the throat or the latter will jamb. When the throat is well up, make fast and peak the sail up till it just begins to wrinkle under the jaws of the gaff. Belay peak halliards and ease off the sheet a bit, cast off from the buoy, man the jib halliards and hoist away, hauling in starboard sheet at same time. When the jib is up, haul in the main sheet and away she goes, close hauled on port tack.

If there is plenty of room for a good board, set up the jib purchase and prepare to set the topsail. If the weather looks uncertain, leave the yard topsail alone and be content with a jib header. Get the topsail on the weather side of the deck, see that the halliards are all clear aloft and bend them on to the head of the sail; in some yachts clip hooks are used, if there are none, bend on with a good clove hitch. Next, bend on the sheet, taking care it has not a round turn round the gaff end or twisted round the ensign halliards, and is also clear of the topping lift; it is best to look at these things when setting the main sail. Now hoist away on the halliards and sheet,

not too fast, hold on a minute, do you see that little bit of rope flying out from the tack clew? Well, that is to prevent the sail blowing out from the mast when hauling it down; pass the end of that same rope round the throat halliards and make a bowline knot on its own part, as in Fig. 27. A, standing part of peak halliards; B, rope with bowline knot; C, topsail. Now hoist



FIG. 24



FIG. 25.



FIG. 26.

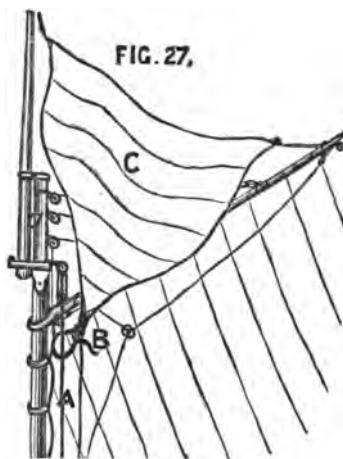


FIG. 27.

away again on the halliards, taking in the slack of the sheet at the same time. When the sail is chock up, bowse down the tack with a small tackle, and then haul the sheet out taut. If you find the topsail is too slack in the after leach, ease the peak halliards a little, which will bring the weight of the gaff on the topsail and tend to flatten it. Be careful to have your topmast shrouds backstays and topmast stay well set up before hoisting the topsail.

The novice will have lost all his somnolescent feelings by this time, and the keen morning air has sharpened the appetite; here comes a nice puff which lays the little clipper over to her rail, and already the exhilarated feelings of the would be corinthian, which were somewhat damped the previous evening, are beginning to return. He imagines himself at the tiller of a flying 40, visions of helmsmen's lockets and shining tankards presented by the fair hand of beauty, flit through his excited brain, indeed, so joyous has he become that he insists upon taking the tiller out of his skipper's hands, when the latter suggests "Better stand by to put her round now, Sir."

The operation of tacking in a fore and after is a very different business from the same manœuvre on board a square rigged vessel. In the latter the multiplicity of sails and gear and the utility of the different orders are rather puzzling, but in a fore and after, especially in a cutter, the knowledge of putting about, so far as handling the different ropes is concerned, may be acquired in a comparatively short time. See that there is plenty of room, by this I mean no other vessel, either under steam or sail, likely to interfere with you while in stays. Sing out "Ready about," and let one hand stand by the lee jib sheet. Ease down the helm, do not jam it hard down all at once, and again sing out "Lee oh!" The hand forward must now ease up the jib sheet, which spills the wind out of the sail and assists her in coming round. If there is a strong breeze the mainsail will flap about very much and jerk the boom from one side to the other as if it would tear the stern to pieces, if there is no one aft but the helmsman let him make the tiller fast to leeward (most yachts have a piece of rope made fast to the bulwarks each side of the tiller to assist the steersman in holding it, all that is required is to slip the rope round the tiller head and belay to a pin, if there are no tiller ropes, becketts ought to be fitted on each side) get hold of one part of the main sheet and haul in the slack as the boom comes in, this steadies it until it fills again; the man forward, as soon as the jib blows over the forestay, must haul in the opposite jib sheet quickly, ere the wind gets full power on the sail. If she is at all slack in stays, keep the fore bowline fast until she is fairly round, when sing out "Let draw," and the foresail will blow over to leeward of itself, when the bowline can be hauled taut and made fast to the fore shroud on the lee side, this also helps to keep the foresail flat. While in stays a pull may be taken at any of the halliards which require tautening up, that is if you have a spare hand or two. The foresail ought to work on a traverse or horse in a cruising

yacht, because there is one head sheet the less to look after. We are supposed to have started on the port tack, the yacht is now on the starboard, that is, her port or left hand side is to leeward. The wind has come round a bit in that little puff which so exhilarated our amateur friend; it is getting lighter though, and the skipper has muttered something about the big topsail. Now, then, is the time to get it on deck, if you are working short boards it would be better to wait until the yacht is again about on the port tack, because that is the side on which the topsail is set, but owing to the shift of wind she is just lying her course although still close hauled. Send a hand aloft to cast off the lacing of the jib headed topsail, if it is not laced there is no occasion; ease away sheet and halliards very carefully and haul it down by the tack, keeping it clear of the crosstrees. You will now see the utility of the running bowline round the main halliard, the sail is prevented blowing out from the mast and comes down without much trouble. Although you are taking it in to leeward, which is contrary to the modern practice, which is always to take a topsail in on the windward side, and in racing a hand goes aloft and shifts the back over. In large yachts a good plan is to have a clew line fitted to the square headed topsail, which brails the sail up to the yard and renders it less liable to foul the crosstrees and rigging when hauling it down. Meanwhile the square topsail is got on deck and the head laid along the yard, the inner clew forward, and pass the fore earing first and make fast, then stretch the sail well along the yard and pass the after earing, hauling it as taut as you can get it, unless the topsail is a new one and you are setting it for the first time, in which case only haul it hand taut and don't rouse it too much. When the after earing is fast, pass the lacing. Now unbend the halliards from the jib headed topsail and send a hand aloft to shift them over to windward and bend them to the yard with either a fisherman's bend or a topsail halliard bend—see "*How to make Knots, Bends and Splices, as Used at Sea*," a book published at 1s.—if the halliard is fitted with clip hooks pass it round the yard and hook it to its own part, and mouse the hooks.

Most topsail yards are marked where the halliards should go. Now hoist up sufficiently to raise the yard four or five feet from the deck, bend on the sheet, which must also be brought over to windward with the halliards, take care that the sheet is inside the topping lift and is clear of turns; now hoist away again, hauling out the sheet at the same time, bend on the tack tackle, not forgetting the "lazy guy" already mentioned,—hoist away until the yard is chock up to the sheave hole or block at the topmast head, guide it up with a tripping line or clear line, if it is fitted with one, in a small yacht this is unnecessary as the sail can be kept well under command with the tack. Bouse the tack down taut and haul out the sheet,—“Why! what's the matter, the gaff is half a fathom from the topsail sheet cringle, that sail doesn't fit.” Ah! that's because the gaff is not peaked up properly, so get all

hands on the peak purchase, slack the topsail sheet, and rouse away on the peak. That's better, now haul taut the topsail sheet again; there, you see, it sets like a card.

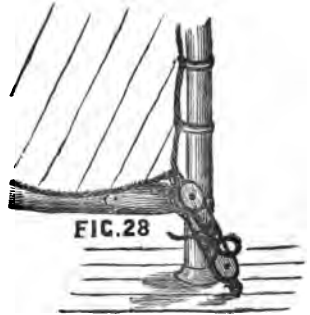
It is advisable to let the crew clean up a bit about decks and give them a rinse down while the craft is slipping along so quietly. The decks ought by rights to have been scrubbed the first thing in the morning, but getting underweigh so early has interfered with the morning ablutions, not only with regard to the ship but yourself and friends also, so now is the time for a "good wash and brush up" as the advertisements say. Meanwhile the smoke which begins to appear out of the funnel and a certain savoury odour very like fried ham assails the nostrils, and at the first whiff you begin to feel as if breakfast would be by no means unwelcome.

It is not always, at least in yachting, that the mind can be tranquilly employed dwelling upon the pleasures of an approaching meal in the full confidence that everything, both below and aloft, is all as it should be without experiencing some little disturbance. A hard squall will interrupt the most profound reverie, but there is a worse thing than even a sudden gust, and that is a dead calm. Perhaps while below, busy giving the finishing touches to an elaborate toilet, the inclined plane, which the vessel's floor presents to the feet, appears to grow less, the hissing ripple of the water round the sides dies away, and an ominous flap, flap of canvas, accompanied by the creaking of blocks, causes the party in the cabin to pause in their application of hair and tooth brushes, while the voice of the skipper sounds quite alarming as he sings out "Flatten in the weather jib sheet." Don't be scared, there is nothing much the matter, only the wind, which has been gradually failing, has drawn right ahead, and the yacht, having little steerage way on her, is "in irons,"—the meaning of which is, that she won't pay off but apparently prefers to remain head to wind. Hauling the weather jib sheet brings that sail aback and will tend to force her head off. It's no use, however, what little wind there was has vanished, the sails hang idly on the spars, the boom swings inboard, and the blocks seem inclined to get up an impromptu concert in honour of the occasion. If such a *contre temps* happens in an estuary or channel where there is plenty of sea room it need not give rise to much uneasiness, save and except in the matter of time. When, however, it occurs in a crowded tidal river like the Thames it necessitates extra care and vigilance upon the part of all hands. Even if the road seems clear, vessels a little ahead of you may bring up all at once to clear some obstacle towards which the tide is drifting them. The rudder is, of course, useless, if you have sweeps on board—long oars similar to those used by lighters—they will, in a small yacht, suffice to keep her clear of anchored vessels. Supposing that you are without those needful appendages, the anchor or kedge must be got over the bows and a few fathoms of chain ranged on deck. Now is the time to see what the crew are made of. See! the yacht is sweeping down on to the

bows of an anchored steamer, round which the water is foaming and spluttering as if she were going six knots. The danger is imminent, but your skipper ought to be alive to it,—“Let go the anchor!” and the splash of the mudhook is followed by the rattle of the chain through the hawse pipe. The yacht brings up with a jerk, while the skipper casts a rapid glance round to see which side it is best to go, “Hard a port with the helm, Sir,” is the result of his observation. The bows of the craft sheer off to starboard, and the anchor, only just biting as it were, is dragged from its hold and you sweep past the steamer all clear. “Heave in the anchor forward there,” is the order, but before you have time to breathe freely, an anchored brig appears in the road and the operation has to be repeated, while at the same time a bright look out must be kept for steamers under way, as they are not at all particular in giving a sailing vessel a close shave. This is what is called “dredging clear,” only enough cable is veered away to enable the anchor to reach the bottom, this checks the yacht’s way and enables the helmsman in a measure to regain the command of her. It is exciting work, sometimes there is no room to sheer on either side, and then you must bring up altogether and drop step by step as it were until clear. If the tide is against the yacht, and you happen to be in the main channel when the breeze drops, she must be either swept or dredged into the snugger berth within reach, out of the way of the traffic, let go the anchor and take things quietly until the tide turns. At last all seems pretty clear ahead, a little cat’s-paw steals along the water and she again moves ahead of the stream, and the lad’s “Please, Sir, breakfast’s getting cold,” is answered by a simultaneous dive down below, and it will be found that the excitement you have just gone through has rather increased than impaired the appetite.

A summer’s morning, so changeful in the matter of wind, as I have endeavoured to describe, is often followed later on in the day by thunder squalls. Those black looking clouds away up to the eastward mean something, so, not to be caught napping, see all the halliards clear. When they are coiled up, the coil ought to be capsized so that the rope will run freely without fouling. *Shroud or hawser laid rope must be coiled right handed, or with the sun or it will be full of kinks and turns.* Next get a reef earing rove, if the skipper has not done so already. It is always best, no matter how fine the weather, to have at least one reef earing rove. To reeve an earing, pass it up through the bee block on one side of the boom, through the thimble or cringle in the leach of the mainsail, and down through the opposite bee block. Some yachts booms are fitted with brass sheaves in the bee blocks, but in small yachts a simple cleat with a score cut in it is most common. A little grease or soap in the score will ease the reef earing through when hauling on it. The reef tackle should also be handy. In large yachts it is customary to bend on the earing to the tackle and hook it on its place under the boom, overhauling the tackle so that the earing is slack and does not girt the leach of the sail. Meanwhile the wind

is beginning to freshen up and it is time to take in the topsail, no time to shift tack and sheet over so get it down as it is, don't ease away the sheet too quickly, but gradually, in fact let the yard come nearly up and down the mast before easing much, then you may haul down on the tack hand over hand and sing out "Ease away the sheet handsomely." Having got the topsail on deck, get one hand to stand by the fore halliards while another does the same with the down haul. Always have a down haul rove for the fore sail, bend it on to the head of the sail, lead it down through the hanks on the fore stay, and in-board through a small block lashed alongside the fore tack sheave. The main tack tricing line should also be ready for use. The main tack should be all ready for casting off at a second's notice. The best way to make a main tack fast in a small yacht is shown by Fig. 28. To cast it off, pull the loop through and it is all adrift in a second.



Now you are all ready for the squall. Ah, here it comes at last, more rain than wind in it after all, yet it struck the yacht with sufficient force to lay her over until the lee bulwark and a couple of deck planks are submerged; luff her to it so that the luff of the mainsail just quivers and ease up a foot or two of the jib sheet, this will ease her a good deal. She is still rather over pressed, but it is only a summer squall and will soon blow over. A crack up aloft like a pistol shot startles you, and someone sings out "The fore halliards are gone, Sir." All right, down foresail and up maintack, and sail her along with jib and reduced after sail. Now you will see the utility of the fore downhaul; the foresail is half way down already, but the wind binds the hanks against the stay, a vigorous pull on the downhaul clears them and it rattles down all snug. Let go the main tack, and haul on the tricing line until the tack is about three fourths up the mast, when belay tricing line. Next, unreave the fore halliards and long splice the broken part, or, if they are old and worn—a circumstance you ought to have ascertained before putting to sea, by-the-bye—get up your coil of new rope and cut a length from it and reave new fore halliards, bend them on to the sail and hoist away again. By this time probably the squall is over, so down maintack and coil up the loose gear. The tide now begins to slacken, so never mind setting the topsail again, unless the wind is fair and you and your friends are anxious to make a quick passage and don't mind night work; another tack will bring the yacht into very good anchorage, so your skipper informs you and suggests the advisability of bringing up while there's a good chance. "Then you can get your tea comfortable like" he adds, by way of giving force to his opinion.

In bringing up it is always best to get as much as possible out of

the way of the traffic. Choose a clear berth, with sufficient depth of water, so as to leave a margin under the yacht of a fathom or so at low tide; and take care that the spot you have chosen is well sheltered from the prevailing winds, so that if it comes on to blow hard you may not be disturbed. Consult the chart for the force and direction of the tides in the vicinity, and get as much into the slack as possible. If there are many vessels brought up, notice how their heads tend, and when the anchor is down sheer your vessel—done by giving her a little port or starboard helm, as the case may be, and lashing the tiller in that position accordingly—so that she swings clear of other craft.

We will suppose that you have reached a suitable anchorage, keep well to leeward of your berth, and putting the helm gently down shoot her towards it, head to wind, at the same time singing out—"Down jib and foresail"; as soon as the vessel's way through the water has ceased let go the anchor, and veer away about double the amount of chain as there are fathoms at high water, thus, if brought up in 7 fathoms at high water give the yacht 14 fathoms of chain. Of course, if it comes on a gale of wind you must veer away a few fathoms more chain. Unhook the jib from the traveller and halliards, unshackle the sheet and put it down below unless wet, when it is best to leave it bent, putting a couple of tyers of rope yarn round it, called stops, to prevent its blowing about, stow the foresail, and lower away the mainsail; the ensign halliards will be found useful for a peak downhaul, and the tack tricing line will bring the throat down if the hoops are inclined to stick. Pick up the mainsail, pass the tyers, haul the mainsheet taut, and clear up the decks. Sound the pump to see that she has made no water, and tell the steward to stand by his tea-kettle. While that delectable meal is preparing get the kedge anchor into the boat, with about 7 to 10 fathoms of line,—a good 3-inch bass hawser makes a capital kedge line for a 10 or 15 tonner,—and let the boat row off to about that distance broad off the bow, when far enough drop the kedge overboard, and row back to the yacht with the end of the line, heave in a fathom or so of the chain cable and make the line fast to it with a good rolling hitch at the water-line, now slack away the chain again, and your yacht is securely moored, and should anything drive or run foul of her during the night you can recover damages, whereas, if only laying to single anchor, the chances are, you could not claim a sixpence. Always lay your kedge off on the side opposite to that to which the yacht is sheered.

Clear up the decks, see that the riding light is properly trimmed, and if it is dusk make it fast to the fore stay at about a fathom from the deck or bight of fore halliards and hoist it up about a fathom and a half from the deck. The yacht is now snug for the night, and all hands will be in right trim for a jolly comfortable tea, and in the hope that the reader's first day at sea will end as pleasantly I will now close this chapter.

CHAPTER VIII.

HANDLING YACHTS.

THE CUTTER.—THE YAWL.—THE SCHOONER.—REMARKS ON OTHER RIGS.

ONE of the first things a Corinthian yachtsman should learn, is how to handle his own craft. By this I do not mean the mere art of steering, for although it is in the highest degree necessary that he should be a good helmsman, yet it is equally important that he should be capable of taking entire charge of his vessel in a case of emergency. The quick and ready eye and doing the right thing at the right moment, are the distinguishing characteristics of the thoroughbred seaman, and although the reader may not aspire to the position of a Nichols, Diaper, or Cranfield, still he may, by a little attention, study, and careful observation, become in time a very good corinthian yachtsman, that is if his heart is in his work. The man who does not care to learn, or fears to soil his hands, has no business afloat save as a passenger.

The most common rigs among British yachts are the cutter, yawl, and schooner. Twenty years ago the yawl, or dandy as it was then called, did not meet with much appreciation among either skippers or owners. It was considered neither one thing or the other, and the common remark among yacht skippers in reference to any particular yawl was, "Ah, Sir, she's a good cutter spoilt." At present, however, it rivals the cutter in favour, and its advocates and admirers are legion. With respect to schooners, the modern vessels of that rig are very different indeed from the craft which the "*America*" vanquished in 1851. Small schooners are, I think, a mistake, by small I mean vessels under 50 tons. For speed and weatherliness there is no rig equal to the cutter, except perhaps the American sloop, and the latter only in fine weather. In the matter of handiness the yawl rig is superior, because size for size, a yawl requires fewer hands to work her. In a 5 or 10 tonner, however, the difference in the weight of gear and spars between the two rigs is so trifling that it is not worth thinking about, so commence your yachting career in a cutter, and when you can sail her in light wind or strong, and have thoroughly mastered all the peculiarities of your little ship, all fore and aft rigs will be alike to you so far as handling a vessel is concerned.

The first thing is to learn the names of the different ropes and where they lead. This ought to be acquired so thoroughly as to enable you in the darkest night to put your hand on any particular rope. Next make yourself acquainted with a few of the more common knots, bends, and splices. A few hours practice with a marlin spike and piece of rope will do wonders in this direction. The mechanical part of steering is easily acquired, but the art of making a vessel do everything but talk, by humouring her with the tiller, is more difficult of attainment. Good helmsmen there are in plenty, but it is not given to everyone to become a first-rate timoneer. Some persons are natural-born steersmen and can take the helm in any craft that sails the seas in fair weather or foul after half a dozen lessons. Should, however, the reader not be one of these gifted mortals, the best thing is to endeavour, by careful attention to the action of the rudder on the vessel under every condition of wind, and by constant practice overcome any difficulties in that direction. Some people have an idea that the best way to teach a novice how to steer is to let him practice in an easy steering vessel, this is a mistake altogether. The mere mechanical action of the hand and arm in putting the helm to port to send the vessel's head to starboard, or *vice versa*, is no doubt very simple and easy, but in a vessel that requires a little humouring, the mind is brought into play more extensively, the perceptive faculties are exercised, and the effect of the helm in conjunction with the balance of sails, has to be studied in a way which compels a novice to give that attention to his steering, which more than anything else will teach him to become a good helmsman.

In steering, the position of the helmsman should be to windward, in a very light breeze he may stand, provided he has good sea legs; the weather tiller rope should be slipped round the head of the tiller and held in both hands, as in Fig. 29, or he may take hold of the tiller with one hand while the other holds the rope. In a large yacht the tiller ropes are a block and tackle. Never saw the tiller backwards and forwards as some do, at least, not more than can be helped; if the vessel carries a good weather helm an extra puff will cause her to luff without the necessity of putting the helm to leeward. Always let her eat to windward all she can in the puffs when closed hauled, never keep her away for a squall unless to avoid collision or other danger to windward. If the squall is a very heavy one and you are short handed and want to reduce sail, let her luff all she can, shove the tiller down to leeward, make it fast in that position, and haul the foresheet to



FIG. 29.

windward, and make the bowline fast, she is then "hove to," see Fig. 30, and she can be reefed, the jib shifted, or anything else done that may be necessary at the time. Reefing the mainsail is an operation which, unless you have a strong crew, had better be done while laying head to wind. The reef tackle should be bent on to the earing in the manner described in the last chapter, ease up the main-sheet, so that the boom may be topped up, and haul on the topping lift; if the yacht is

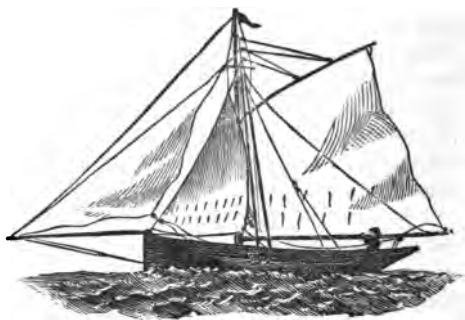
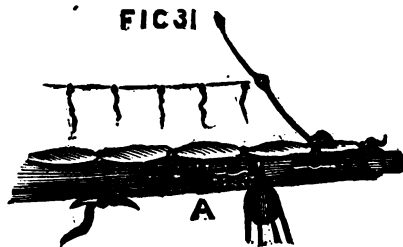


FIG. 30.

fitted with double topping lifts, haul on the weather one and make fast. Cast off the main tack, ease the main and peak halliards until the sail has settled down to the first reef, now haul on the reef tackle until the cringle in the after leach of the sail is close to the bee block, through which the earing leads, belay the reef tackle to the cleat underneath the boom, roll up the foot of the sail tightly and evenly, and tie the points with reef knots. Hoist up the throat and peak, ease away the topping lift, and haul the tack down with the tack tackle. Haul in the sheet again. Next shift the jib, let go the outhaul, and ease away the halliards; gather the sail in the arms as it comes down, and be careful it does not get overboard or you may have some trouble to get it in again; unshackle the sheets, and unhook it from the traveller, pass the smaller jib along; with single reefed mainsail, No. 3 jib should be carried, hook the tack cringle to the traveller, and hoist away, taking in the slack of the lee sheet; when the halliards are taut belay them and rouse down the purchase. Pass the other jib down into the forecabin or cabin, not into the sail locker, because if wet it will damp the other sails. Coil up the ropes, right the helm, let draw the foresheet, and away she goes again. If there are signs of the wind getting stronger, reeve another earing and rack the first earing, that is, put a seizing round the earing and the boom close to the bee block, as in A. Fig. 31, cast off the tackle, and make the end of the earing fast by jamming turns round the boom, or to a cleat under the boom; the tackle is then already for the second earing.



The most ticklish manoeuvre in a cutter is gybing in a fresh breeze. Gybing is shifting the boom from one side to the other when before the wind. When the wind is right aft or, as some modern writers

are fond of saying, "dart aft," there is always danger of the boom coming over of itself, and as a sudden gybe, "all standing," is seldom accomplished without an accident of some sort, proper precautions must be taken to guard against such a mishap. A rope, termed a lazy guy, made fast to the boom and taken to the after shroud will keep the boom in its place. The helmsman should be a practised hand under such circumstances as everything depends upon the manipulation of the "twiddling stick." Suppose you are running under a single-reefed mainsail, and it becomes necessary to alter the course a point or two, which will bring the wind on the opposite quarter to that which the vessel is carrying her main boom. Haul on the topping lift so that it takes the weight of the boom, lower away the peak halliards, and also ease the throat a trifle as well, just sufficient to take the strain off the luff of the sail. Get all hands on the main sheet, and letting go the lazy guy gather in the sheet hand over hand, and let one of the crew catch a turn over the kevil or cavel, a large cleat, made on purpose to belay the mainsheet to, while another hand lets go the weather runner and tackle, and then hauls taut the lee one. Put the helm over and keep her away until the wind takes the mainsail on the other side, when pay away the mainsheet handsomely, don't let it all go by the run; when the boom is well off, belay mainsheet, and shift the head sheets over.

The mode of gybing in a yawl or schooner is much the same as in a cutter, the only difference being, in the one, the mizen sheet has to be attended to, and in the other the foresheet. In a schooner, with a boom foresail, the best way, if short handed, is to haul the foresheet close in and make it fast before attempting to gybe, then get all hands aft to the mainsheet and proceed as already described. As soon as she is square off again and the mainsheet fast, ease off the foresheet, and shift over the head sheets. In running with the wind right over the taffrail it is sometimes advisable to run "wing and wing," that is, with the mainsail square off on one side and the foresail on the other. Lazy guys should be attached to both booms in such a case, as it is almost impossible, especially if there is a heavy sea, to prevent the vessel from occasionally yawing; so as to bring either fore or mainsail "by the lee."

The operation of tacking in a cutter has been already dealt with, but a schooner is not always so quick in "stays" as the "single sticker," and it often happens that a little humouring is necessary. Very often a vessel owes her bad name in this respect to the bad management of those who sailed her. Take, for instance, a schooner under double-reefed mainsail, and reefed fore staysail, with foresail stowed, this is very trying sail to beat to windward with, if she has a running bowsprit she would have a small jib set as well. A schooner without her foresail is but a lame duck, and although she may be very dry and comfortable, will not behave so well as when the foresail is set. There is a nasty jump of a sea, and you want to put her on the other tack, watch for a smooth, which generally takes place after three heavy

seas have past in succession. Ease down the helm, ease off the stay-sail sheet, and haul in on the mainsheet as she comes up in the wind, if she stops dead and begins to go astern shift the helm the other way, which will very often force her head off on the right tack. This manœuvre requires great promptitude and care. If the helm is shifted before she has got stern way on, it will simply hang her in irons, and if left until the first shoot astern has spent itself will simply have no appreciable effect either way. If she misses stays altogether, and there is room for another try, fill on the old tack and get good way on her before attempting the manœuvre again.

Reefing a schooner's mainsail is performed the same as a cutter, and the boom foresail also has earings rove through scores cut in cleats placed on the after end of the boom for that purpose. A foresail with sheets, which lead abaft the mainmast, is called a lug foresail; and this is reefed by hooking the sheets into the reef cringle, rolling the sail up tightly, lashing the outer clew with a good piece of amber line or ratlin stuff, the reef points are then tied, and the tack boarded *id est*, brought close down to the boom, and then the halliards set taut, same as the mainsail.

One thing I would always recommend in a schooner fitted with a boom foresail, and that is a vang for the fore gaff. Owing to its narrowness at the foot there is very little pull on the after leach, consequently the gaff sways off at a very much greater angle than the boom, and unless the boom is nearly amidships the upper part of the sail is nearly useless. By lashing a small block under the upper cap of the head of the mainmast and reeving a line through it, one end leading down on deck, the other fast to the fore gaff end, the gaff can be kept from swaying away to leeward, and the pull of the sail becomes more effective. A lug foresail does not require it, because the pull of the sheets is further aft. In small schooners, say up to fifty tons, a single line would be all-sufficient, but in larger vessels a regular tackle would be necessary, the single block on the gaff and the double one at the mainmast head.

One of the most favourite rigs of the present day is the yawl, or as it used to be called the "Dandy." The latter, however, differs from the yawl proper in having no boom to her mainsail, the sheets of the latter going on a bridle, so that it takes the pull on the after leach as well as across from clew to throat. The modern yawl is an extremely handy rig, inasmuch as in reefing, getting under way, picking up moorings, &c., a vessel can be kept under full command with the mizen and jib, a great desideratum when short handed. Again, in turning to windward in a narrow channel, with but little way on the craft, the fact of the yawl's coming about with but little trouble may be confidently relied on. A small tackle leading from the mizen boom through a leading block on each quarter, and the hauling part in the hands of the steersman, will enable him to make a certainty of the vessel's turning like a top. He may even take a half turn round the

tiller and then the act of putting the helm down, hauls the mizen up to windward. The bargemen on the river generally work their mizens with the rudder when beating to windward. The utility of this is easily explained. When the vessel comes head to wind, the mainsail is simply flapping about, it has lost its power of pushing her round, and consequently the continuance of the turning motion imparted to the vessel when the helm is first put down depends upon the action of the water on the rudder. Now the action of the rudder depends on the speed a vessel is passing through the water. In a light breeze the rate of sailing is not very great, therefore as she comes head to windward the momentum gradually ceases and the vessel turns but slowly, occasionally perhaps refusing to come round at all. By hauling the mizen to windward that sail retains the power of pushing the stern aside, and thus assisting the rudder long after the mainsail has ceased to act, and thus it is that barges and craft of that description seldom, or never miss stays in the lightest breeze. Another thing in favour of the yawl rig for cruising vessels is its adaptability for bad weather. In extended cruises, of which I will treat in the next chapter, it sometimes becomes necessary to keep at sea, even although the "Elephants look omnibus," as Mrs. Partington sagaciously observed. Vanderdecken has said that "A storm jib and a trysail are a cruiser's best port," and no real sailor will gainsay the wisdom of that observation. It does not always follow, however, that the trysail is all ready for setting at a moment's notice, though it ought to be, besides, the mainsail must be stowed first. In a yawl matters are much simplified, the mizen will suffice to keep her head to the sea while the trysail is being set. Again, the gaff carries away, or halliards part, rather a serious thing when struggling to windward in a heavy sea with an undermanned cutter; in the yawl the mainsail can be lowered and damages repaired without any troublesome thought arising as to the amount of leeway to be picked up when once more all-ataunto. I am speaking now of the real *bona fide* yawl, not the sham affair occasionally seen at local regattas. A yawl should have her mizen mast stepped so that it will stand up against a gale of wind, and not tumble over the side directly any extra pressure is brought to bear upon it. There is another very handy rig, a modification of the schooner and yawl, called the "Ketch." The ketch differs from the schooner in carrying her principal sail on the foremast, and differs from the yawl in having the mizenmast stepped further inboard, and carrying a gaff sail on it instead of a yard. This description of craft, however, is mostly used for trading purposes, and is not considered so sightly in her rig as either the yawl or schooner. "Handsome is that handsome does" should be the motto of the yachtsman, and your true sailor ought never to despise a vessel because she may happen to differ in some trifling degree from what he may have been taught to consider a true orthodox style.

An attempt has been made at different times to introduce the

American sloop rig to our waters. With the exception, however, of Windermere and one or two other fresh water yachting stations, the believers in the efficacy of the single head sail have not met with that success in converting our yachtsmen as was anticipated. Although for working to windward in smooth water, the American style can scarcely be surpassed, something more is necessary when sailing in the turbulent seas round the British coasts. The big staysail of the sloop is a far more pressing sail than the jib and foresail of the cutter, besides being very awkward to handle in a breeze. The only way of reducing the head sail is by reefing it, unless it goes with a bonnet, but as the sail is set on the forestay, reefing it does not bring it further inboard, although the surface of canvas is lessened ; besides, in the operation of reefing, a hand has to go out on the bowsprit, not a very pleasant berth in a bit of a sea. The bowsprit cannot be run inboard like a cutter's because it is a fixture, the forestay leading through the end of the bowsprit and is set up on a stem shackle like the bobstay. In large sloops, and in schooners also with standing bowsprits, both the forestay and bobstay are set up by screws attached to shackles in the stem. The flying jibboom sometimes runs through irons on the bowsprit, but is often merely lashed on. In some of the imitations of the American rig seen in Continental ports, notably in Antwerp, the flying jibboom does duty for the spinaker boom as well, and *vice versâ*.

I should not advise the adoption of the American sloop rig for English waters. It is unhandy in more ways than one. Some yachtsmen believe in a modification of the sloop and cutter, the head sails of the latter with the mainsail of the former. The length of boom necessary in the mainsail of the sloop—the gaff being so narrow, cloth must be had somewhere—renders it a nasty awkward sail to play with in a breeze. Besides, from its being laced to the boom, there is no tricing up the tack to ease the vessel in a squall. A great deal has been written and said anent the merits and demerits of lacing sails to booms. I, myself, have tried mainsails laced and unlaced, both in models and real yachts, and so far as the experiments went, am decidedly in favour of non lacing. I found that a boat is livelier in a sea with the sail unlaced, an opinion confirmed by the skipper of a Greenwich cod smack, who told me that "He had tried his mainsail laced to the boom after the fashion of that 'ere American schooner, but it warn't no use, only pinned her down in a sea, so I cut's 'em adrift and she was as lively again, in fact we likes a little draught through 'em." The Americans themselves now acknowledge that a loose foot is best.

I am aware that some of our racing schooners have their mainsails laced to the boom, but it is questionable whether any great advantage is gained by it. In smooth water and light summer breezes it answers admirably of course, but for cruising purposes give me the old-fashioned plan of an out-haul and a free foot.

Next to the cutter, yawl, and schooner, the lugger rig is believed to be the best for all-round purposes. The rig has even been thought by

some superior to the cutter for speed, and in reaching and running there can be no question but that a couple of well cut lugs take a tremendous amount of speed out of a boat. In 1853 a little four ton yacht called the "*Gnat*," belonging to the late Prince of Wales Yacht Club, came out in the matches as a two masted lugger. The foremast was stepped right in the eyes of her, in fact close to the stem, and was stayed to outriggers similar to ordinary whiskers, only stronger in proportion. The mainmast raked

ast considerably. The sketch, Fig. 32, will give the reader a better idea of this wonderful little craft. She exhibited extraordinary speed on all points of sailing, but more especially on a reach. The fore-lug had the tack fast to a short bummkin projecting from the stem, and her sails stood like sheets of cardboard. In beating to windward the fore-lug had to be dipped each time so that it set to leeward of the mast, but this might have been obviated by cutting the fore luff the same as the mainsail and having the tack fast to the mast like the Pembroke luggers. A small jib could then

have been set, and by having the main and foresails hoisted on opposite sides the trouble of dipping is avoided, and the boat rigged in this way can be stayed as easily as a cutter. Another celebrated yacht rigged as a lugger was the "*New Moon*," built by Tutt, of Hastings, for Lord Willoughby D'Ersby. This vessel measured by R. T. Y. C. rule, 209 tons, and carried three enormous lugs, the main containing 900 yards of 18 inch canvas. She was built in 1859, but came out as a racer in 1865 and 1866. Some extraordinary stories were current regarding the speed she displayed. It was said that she had reeled off 17½ knots on a reach, and beat the mail boats crossing the channel in a very hollow manner. When she came to be tested against other yachts, however, she did not bear out her great reputation. Such craft as "*Volante*," "*Crystabel*," "*Vindea*," and even the old "*Marina*" beating her easily going to windward, and the famous "*Alarm*" beat her 32 minutes in a race from Sheerness to Harwich in a fresh leading wind for three parts of the way. The "*New Moon*" certainly managed to beat "*Crystabel*," "*Lulworth*," and three or four other cutters over the same course in the following year, but it was reaching most of the journey, and after all as she only came in fifty seconds ahead of "*Crystabel*" it cannot be

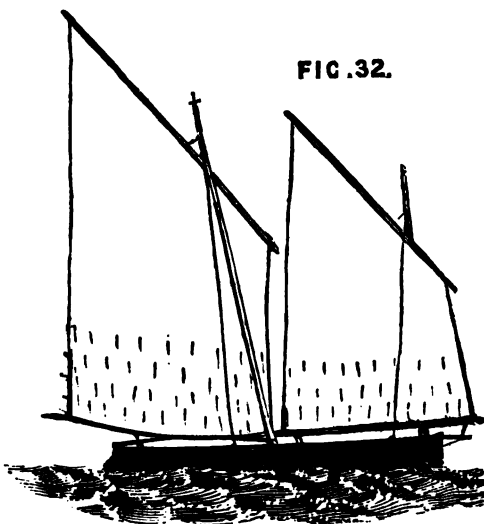


FIG. 32.

called a very grand performance. However, there is no doubt that the lug sail is a very powerful one with the sheet eased off a bit, but the rig is not to be recommended for all-round cruising.

Latteen is a rig rarely seen in English waters. Those who have visited the Mediterranean carry away with them lively recollections of the graceful feluccas common in that sea. No doubt they are very picturesque in their appearance and are fast down wind, but it is in working to windward in a breeze that they are seen to least advantage. The long tapering yard, springing about like an enormous whalebone, is not easy to handle in a gale of wind. Reefing is the most dangerous operation, especially when it is done from the yard; and the risk is so great that the men who undertake the duty get double pay. It is a powerful sail to run with, but not so good on a wind unless there is a boom on the foot, and even then the extreme pliability of the elongated yard causes the body of the sail to belly out considerably. Like the square lug, it has to be dipped every time the vessel goes about. To obviate this, various inventions in the shape of sheers and double masts have been tried, but although some of these have answered fairly well when applied to small boats, they have been found of little practical use in larger vessels. The Bermudian rig is but a modification of the American sloop, and although a very weatherly rig, is not good for running and reaching; in fact, to sum up, the young yachtsman cannot do better than stick to the cutter or yawl, the former for racing, and the latter for cruising.

Before dismissing the subject of handling yachts, I wish to impress upon my readers the desirability of always having the trysail and storm jib handy when bound on a cruise. The trysail gaff should be laced to the sail and the latter neatly made up in its cover. In some yachts it is lashed on the main boom, but in a small craft, if she has a cockpit, it will stow along the sides under the locker. If there is no cockpit and the gaff is too long to pass down, lash it alongside of the skylight. Should you not have a trysail ready when caught in a gale, with no port under the lee, make eyelet holes along the luff of one of the jibs, 2nd or 3rd. This laced to the mast will be found useful as a *dernier ressort*. There should never be less than four jibs. Some yachts have as many as six on board, No. 1 a large light jib for reaching and running, No. 2 a good working jib, No. 3 for a single reefed sail, and No. 4 a storm jib made of No. 2 or even No. 1 canvas. A big jib should never be carried on a yacht when close hauled unless the wind is very light. Directly the craft begins to lay over a couple of streaks, even although under a jib headed topsail, stand by to shift for a handy working jib. A large jib not only has a tendency to sag the boat away to leeward, but actually stops her speed through the water as it buries the boat bodily into the seas. Another thing the young yachtsman must bear in mind, and that is when sweating up the jib purchase, take care and not take the strain off the forestay. This often occurs in small yachts, and besides looking unsightly—nothing is so lubberly to a sailor

as to see the forestay all in a bight—is really dangerous. The whole strain of the mast being on the luff rope of the jib, it stands to reason that something must go, either the bobstay, the luff rope, or the halliards. The sudden jerk occasioned by the breaking of a luff rope may carry away the forestay also, as I once witnessed myself on board a 15-ton cutter. There seems to be a mania upon the part of some yacht sailors to rouse upon everything they can lay hold of that has a purchase attached to it, especially if they have been accustomed to large craft. Bowsprits are bowed up and down by means of the jib purchase and bobstay fall until they are like a poker, and it is a wonder that many more bowsprits are not carried away.

The continual strain that is put upon this unfortunate spar in some yachts must necessarily weaken the fibres of the wood, and consequently a little extra jump or jerk settles the question, and away goes either the bowsprit or bobstay, or perhaps both. Everything should be taut and bear an equal strain, but there is a limit to the endurance of even hemp wood or iron, and care must be taken that this limit is not overstepped.

There is one sail which is very handy for a cruiser, be she cutter, yawl, or schooner; I allude to the square-sail, not the ponderous sail, with its braces, lifts, clew-lines, and complicated gear, without which no yacht was considered complete a quarter of a century ago, but a nice handy sail, bent to a light yard, and set flying in the same manner as a spinnaker. A square-sail will be found most useful for running, even in strong breezes, for what is more comfortable than to furl the mainsail and crutch the boom, and run under the square-sail alone? No trouble about gybing then; all that is required is to have the booms double, and made with jaws similar to a gaff, the outer end to have a sheave hole through which a sheet is rove. The way to set it is simply to bend it to the yard with a lacing, bend on the fore-halliards to the middle of the yard and hoist it up. The outer lower clew is then hooked on to the sheet at the outer end of the boom, and hauled out, the sheet serves as an after guy. A rope made fast to the square-sail boom, and belayed to the rail, will keep it from rising. To take it in, lower away the halliards, unship the boom, ease up the sheet, and gather it in as it comes down, the forestay prevents it from blowing forward out of reach. The boom being made with jaws, it is unshipped in an instant, and comes inboard of itself without any trouble. Nothing can be more simple than this plan, as it enables the square-sail to be set either side most expeditiously. Say it is set on the starboard side, and you want to gybe, while one hand is easing in the sheet, another ships the port boom, hooks on the inner or port clew to the port sheet, and hauls out; in fact, it can be done in much less time than I take to write it. If running right before the wind both booms can be shipped and the sail set square. A spinnaker could, of course, be treated in the same way, and it has often surprised me that this plan of two short booms with jaws has never occurred to racing yachtsmen, it is much simpler than

the sliding gunter booms advocated some time since in the columns of the *Field*. I have had practical experience of its utility, and can recommend it confidently, especially for small cruisers. The jaws may have a rope parral made with an eye and toggle, just to prevent them slipping away from the mast, it can be cast off in an instant, but the pull of the sheet keeps it in close enough.

CHAPTER IX.

EXTENDED CRUISES.

PLACES WITHIN THE SCOPE OF THE CORINTHIAN YACHTSMAN—GETTING ON SHORE—PLEASURES OF YACHTING—MARINE SKETCHING.

BRITISH yachtsmen have often been twitted by their American cousins with being mere fresh water sailors, although in reality the boot is on the other leg. Certainly the Americans were the first to send their vessels over to our waters to contend against the clippers of the Clyde, the Thames, and the Solent, but the majority of Uncle Sam's pleasure vessels are anything but fitted for rough sea work, and therefore it is not to be wondered at that the majority of American yachtsmen prefer to potter about inside the narrows to braving the dangers of a coasting voyage up and down their extensive seaboard. It is by no means unusual to meet with a 10 or 15-ton English yacht as far south as Bordeaux or Brest, and as for coasting trips, have we not the voyage of the *Pet*, 8 tons, O. M., round England, to say nothing of the *Kate*, 5 tons, and others too numerous to mention, which show conclusively that British yacht owners are not afraid to face the briny even when it wears its worst aspect.

I am aware there are plenty of gentlemen belonging to some of the more pretentious clubs owning vessels of large size, fitted with every improvement in the shape of sails and gear, whose only experience of

the pleasures of yachting seems to be confined to an occasional stretch up and down the Solent. On regatta days they display a considerable amount of gay bunting, and frighten the sensitive ears of their more delicate lady visitors with the occasional reports of their brightly polished cannon; but when it comes to sailing, well, there's always something which interferes. An engagement to dinner, business in town, the wind is too strong, or there's not half enough of it, and the tide is wrong, the stores have not come on board, and in fact there are generally a hundred and one excuses ready why they should not put to sea. So the season wears on, and these butterfly yachtsmen remain at their moorings until the last fashionable visitor has left the port, and then there really seems as if something was to be done at last in the way of cruising, up goes the blue peter to the fore, away aloft with the snowy canvas. "Ah, this is something like." "Hullo! why, not going into this mud creek, surely? What going to unbend sails? Oh, I see, after all it wasn't a cruise." No my friend, only a run over to the laying-up yard; and dismantled and paid off, there the vessel will remain, until the time for fitting out again arrives.

Such yachtsmen can know but little of the real spirit and enjoyment of yacht sailing; they may perhaps have touched at the different Mediterranean ports, for instance in a passenger steamer, but can have but a poor idea of the pleasure which can be gained out of a cruise in those waters in one's own well-appointed vessel. They may, perchance, have participated in the excitement of a well contested race as spectators, but are strangers to the proud delight of steering their own craft to victory. These are the drones of our pleasure navy. They keep a yacht for the same reason that Mrs. Fitzshoddy crowds a lot of people who care nothing for their hostess, and less for each other, into her small rooms, because it is popularly supposed to be the right thing to do.

It is rather a feather in the cap of the members of the junior clubs, that they are adventurous enough to take their little clippers upon trips that are considered by some only within the capabilities of larger craft. Indeed, a writer in *Hunt's Yachting Magazine*, as far back as 1854, complains that, "few persons are aware of the risks incurred by the owners and crews of small yachts in their perilous adventures at sea in 6 and 8 ton vessels, built expressly for sailing in smooth water; we often notice during the summer months the voyages of these little craft across seas they ought never to look at," and more to the same purpose. Such admonitions have happily had no effect in deterring the said owners from adventuring to sea in their small vessels. It speaks volumes for the courage and skill of our Corinthian yachtsmen, that the loss of life in such craft is almost *nil*. This being so, it will be in the highest degree necessary that the young yachtsman should be able to take his little ship a coasting trip now and then, just to show his *confrères* that he is not a mere mud proper. In a yacht of 15 tons and upwards he may even cross the channel and coast down

as far south as Bordeaux, and the adjacent French ports. Some adventurous spirits have even braved the perils of the Bay of Biscay in vessels not larger than a modern 15 tonner; but as yachting is supposed to be undertaken for pleasure, it is advisable not to make a toil of it, and a voyage across the Bay of Biscay is rather a serious undertaking for a small craft. It is not alone the danger, for after all a boat that could live through a channel gale, would stand a fair chance, if properly handled, of weathering a S.-wester in the Bay; but there are the weary night watches, and the anxiety of mind, to say nothing of the sense of responsibility always present, and then the discomfort to all but a seasoned old salt of being boxed up in a little cockle shell for days together, in fact it is a regular case of being

“Cabined—Cribbed—Confined,”

for, at the least sign of bad weather, the yacht must be battened down fore and aft. So I say be satisfied to take your outings within the compass of the British Isles. There are ports in plenty which are well worth a visit, and places too that are almost a *terra incognita* to the majority of yachtsmen, where nearly as much novelty may be enjoyed as in the most out of the way foreign ports.

Take for instance the Stour and Orwell, these rivers it is true are not unknown to the majority of Thames and Essex yachtsmen; but, for all that, very little information has ever been published respecting the navigation, scenery, and topographical features of either of them. In a small yacht drawing under 6 feet of water, there is no difficulty whatever in sailing up to Ipswich or Manningtree—Mistley is the port of Manningtree, there is good water there for ships of 300 tons to lie afloat in places,—these are the principal towns on the Orwell and Stour. Wyvenhoe and Brightlingsea, on the Colne, are well known yachting stations, a few hours sail of the Thames. A nice Corinthian cruise may be enjoyed as follows:—Start from Erith or Greenhithe, proceed up the Crouch to Burnham, a pretty fishing town, about 6 miles up that river, remain there for the night; get under way, and sail round to Maldon, on the Blackwater; from thence make sail for Harwich, and, if time permits, explore both the Stour and Orwell, as far as the towns already mentioned. A trip like this ought not to take more than a week, provided the weather is favourable.

With respect to other ports on the English Channel within easy reach of the Thames Corinthian yachtsman, there are plenty of them; Margate, Ramsgate, Broadstairs, Dover, Littlehampton, Shoreham, Portsmouth, Ryde, Cowes, and Southampton, on the one side, and Antwerp, Ostend, Dunkirk, Boulogne, Dieppe, Havre, and Cherbourg on the other, are all good ports, although Margate, Broadstairs, Littlehampton, and Shoreham on the English, and Boulogne and Dieppe on the French side are little better than mud harbours, still there is plenty of water for vessels drawing considerably more than a 15 tonner, on the top of the flood, and by taking advantage of favourable winds, and working the

tides properly, the yachtsman ought to be able to so time his arrival as to avoid any long detention outside any of the bars which obstruct the entrance to the places named. Broadstairs is not a port any more than Margate is, but with the wind off the land a vessel may lie snug enough. It has an inhospitable look, however, lying selfishly in the hollow of a cliff it seemingly offers no shelter to the passing mariner in the shape of a port; still I have lain at anchor there through a heavy westerly gale, and, although it was rather rough riding, found it preferable to hammering round the Foreland in such a breeze. Here I would caution the young yachtsman to always try and keep under a weather shore directly there are indications of a blow, unless there is a port handy under the lee which you can reach without much risk. A good barometer, combined with careful attention to the changes of the weather, will work wonders in making you a good weather prophet; and although everyone cannot expect to be a Fitzroy or a Saxby, still anyone gifted with ordinary intelligence can, by careful observation of the sky, and noting the fluctuations of the barometer, pick up sufficient knowledge in a comparatively short time, to foresee a shift of wind a few hours before it takes place. There is one thing about the mercurial barometer which few sailors take much notice of, and that is with respect to the shape of the top of the mercury in the tube. If this is hollow, it is a bad sign, and if a gale is rising look out for a snorter, for it will blow hard and no mistake; if on the contrary the top presents a convex appearance nice and smooth, there is not much to be afraid of. Summer gales seldom last long, but it is a mistake to suppose that the wind does not blow as fiercely round our seagirt isle in summer as in winter. Some of the heaviest and most destructive storms of wind ever known in the Channel have occurred between May and August; so never be so foolhardy as to neglect the warnings of the barometer simply because it is summer time. There are other instruments, notably the aneroid and the sympiesometer, very useful as weather glasses, indeed the former is preferred by some to the mercurial barometer; the latter though is more reliable, at least so far as my own experience goes. I have already drawn attention to the importance of studying the set of the tides. In channel cruising, a great deal may be done through knowing how to hit the first of the ebb, or avoid the last of the flood, or *vice versa*. Sometimes by keeping close to a certain shore you may cheat the tide for two or three hours, while vessels out in the offing are struggling against its full force. In some localities the tide ebbs along shore two hours before it is high water in the channel, and so on. Then the direction and set of the current must not be lost sight of. Always avoid as much as possible the unnecessary risk, which some yachtsmen are so fond of running, in cutting off corners by shaving sand banks, and going inside marks and buoys. Plumping a vessel on shore for the sake of saving an extra tack or gybe, is a most lubberly proceeding, and one that only excites the contempt of the real thoroughbred seaman. Above all,

never attempt any intricate passages or channels in strange waters on a falling tide.

It is becoming the fashion now among yachtsmen to make what is called the round cruise, that is from the Thames to the Bristol Channel, north about as far as the Sound of Mull, through the Caledonian Canal, and homewards by way of Aberdeen, Leith, and the East Coast of England. This is a capital trip, and a 15 or 20 ton cutter or yawl is amply large enough for the purpose. Yachts very much smaller have performed the passage in safety; but, if more than two persons are going, it is better to have the extra room, to say nothing of the extra comfort. A modern 15 tonner, as already noticed, has two cabins, and with the sofas used as berths can stow four persons aft comfortably, and with one man and a boy for a crew; this number will make up a very good ship's company, and if the gentlemen of the party are not afraid of soiling their hands, amply sufficient to handle a 20 ton cutter under any conceivable circumstances. An extra foremast hand may be shipped if desirable, but, as in making the majority of your ports a pilot will be necessary, it will be better to do without him. I am, of course, presuming that the owner and his friends are not greenhorns with respect to knowing the ropes. A cruise of this description ought not to be undertaken until the would-be yachtsman has had at least a season on board his boat in home waters.

There are few subjects on which yachtsmen differ more than in regard to the merits and demerits of ports and harbours. One will tell you, Ramsgate is a beautiful place to take a yacht in: another will assure you it is the worst place in the Channel, that Boulogne is preferable, and so on. Now Milford Haven is popularly supposed to be one of the finest and most sheltered harbours in the world. Hear what a well-known British yachtsman, and acknowledged authority, has to say about it—"It is the fashion to praise Milford Haven as one of the finest harbours in Britain. These praises I had thought well merited, but I came to be of a very different opinion before I left it. Its upper part is full of banks, its lowest is much exposed to a heavy roll, and in all parts it has a tide like a mill race, worse even than the Pentland Firth. . . . To judge of it from its appearance on the chart one would imagine it similar to one of our Highland lochs, and such I judged it to be, until I entered it and experienced its difficulties, when I saw it in its true character, viz.: the estuary of a river, and that estuary at the mouth of the Bristol Channel, where the strength of the tides and the consequent accumulation of mud and sand is probably surpassed by no place in the known world."

"Any one who has been at Chepstow will know what Bristol Channel mud is. To do the Highland lochs simple justice they are not troublesome, either with respect to tide or mud. They are as harbours perfect, and to be classed in a totally different category from such places as Milford Haven."—*Hunt's Yachting Magazine*, May, 1860.

This is one opinion, now for the other side of the picture. "At six

o'clock in the morning we were quietly running up the beautiful waters of the far famed Milford Haven ; and truly it is a noble sheet of water ! well might the fair Imogen demand—

“ How far it is
 “ To this same blessed Milford ; and, by the way,
 “ Tell me how Wales was made so happy, as
 “ To inherit such a haven ? ”

“ The harbour, which runs about E.N.E. and W.S.W., has its entrance from the S.S.W., or just at right angles to the haven itself, so that everywhere it is sheltered from all points of the compass, and the approach, as well as the harbour itself, is *clear from every possible obstruction* in the shape of rocks, banks, buoys, &c. Milford Haven is such a harbour of refuge as every yachtsman ought to have a look at.”—*Blue Jacket* in *Hunt's Yachting Magazine*, 1858.

I have given this illustration of the widely divergent views held respecting a well-known harbour, and really good harbour, in order that the young yachtsman may not be deterred from visiting a place because he may have heard an unfavourable report as to its capabilities as a harbour. The best way is to find out for oneself regarding the merits and demerits of places you may wish to stop at. Very often there is no choice left, but the yachtsman has to get where he can, and glad enough is he sometimes to find himself safe and sound inside any sort of shelter after a hard night's work at sea.

In bringing up at places where the tide runs strong, the best plan is to get hold of a buoy and make the vessel securely fast, if the ground is hard in places, and the tide running in eddies and swirls, it is hard work to keep from dragging ; indeed, the only thing to do is to steer her against the tide, just as if she were under way. Take, for instance, Sheerness in a N.W. gale, it is really as bad as an open roadstead, the ground is as hard in some places as granite, and at high water a pretty tidy little swell comes rolling in, which makes it lively for small craft. The best thing to do under the circumstances is to up anchor, or, if moored to a buoy, slip and run up the Swale to Queenborough. Opposite the causeway of the town on the other side, there is nice quiet anchorage, 2 fathoms at low water, and tolerably clear of the barge traffic.

Of all harbours on the south-east coast for yachting purposes give me Harwich. You are close to the sea, and half-an-hour's sail brings you out into the blue waters of the German Ocean ; on the other hand there are the two rivers, Stour and Orwell, the latter of which is considered to equal the Dart in respect of the beauty of its scenery. It is a wonder that the town of Harwich has escaped the modern march of improvement, but has remained much the same as when the contraband traders from Flushing used to carouse in its quaint old hostelries, after escaping the vigilance of the French cruisers. Walton-on-the-Naze has certainly become a fashionable watering-place, but, with the

exception of a few new houses on the outskirts of the town, there is little to be seen of anything savouring of architectural beauty about the town of Harwich. It boasts a club, however, and that one of the oldest of our English yacht clubs. The Royal Harwich Yacht Club had the honour of being represented by the *Cambria* and *Livonia* in the races for the *America's* Cup, and the blue ensign with the gold lion rampant, was placed side by side with the white ensign at the farthest point reached by the Nares' Arctic Expedition. In the harbour itself, although it is rather open and the tide runs pretty hot, there is capital holding ground. Small yachts sometimes carry what are called legs. I am not alluding to the pedal extremities of either himself or crew, but to pieces of timber. "*Vanderdecken*" advises that they should be fitted with elm moveable socket shoes, fastened with a transverse iron pin, this enables the shoes to be unshipped when not in use, and then they can be stowed more easily. Directly the yacht takes the ground with a falling tide, get the legs over the side, the shoe resting on the bottom; if she has a list towards the shore get an anchor over on the opposite side well abeam, trim all the weights over, and rouse away on the hawser or chain attached to the anchor until she is upright; if she lists away from the shore, and you are near enough, get a hawser on shore, make it fast and haul it taut. Place the legs under the channels, if the vessel is fitted with them, if not, lash them to the chain plates, see that both the legs bear a steady equal strain, if one gives symptoms of yielding, get a line on shore, or an anchor out on the side opposite to that on which she appears to settle, and keep her on the good leg. The socket shoes prevent the lower ends of the legs from sinking into the sand or mud, a very dangerous proceeding, for if the yacht gets much of a list, the chances are that the channel under which the leg is placed will burst up with the strain and down she goes on her bilge. If the Corinthian yachtsman be unfortunate enough to get aground with a falling tide, and there are no legs on board, the best plan is to roll up a couple of sails or get a bed out of one of the berths, if the ground is hard shingle, and as she lists over shove them under the bilge; this will help to preserve the bilge from being stove in by bumping on the hard sharp pointed shingle; in soft mud it does not so much matter, but even then it is advisable to row round in the boat and feel if there are any obstructions in the shape of stones, pieces of wreckage, &c., which might injure the bilge. In an old-fashioned yacht, with only iron ballast and plenty of beam, there need not be much fear but that she will pick herself up again as soon as the tide makes, even if left high and dry, but in a yacht of the modern type there would be great danger, not so much as regards rising again—if the water is kept out of her she cannot help doing so—but with respect to opening her seams through the immense strain to which she would be subjected. So the best plan in such a case would be, to batten everything down, and get into the dinghy and watch her behaviour. An anchor laid out on the weather beam and

hove upon will assist her to rise. There is another point worthy of attention, and that is when legging a vessel up, to see that her keel is not on a soft place and the legs on hard ground, or the channels will be strained to pieces. In dry harbours, where you cannot always be afloat, get alongside a quay and take the runner and tackle on shore, and make it fast to a post or ring; as she touches the ground bowse on the tackle so that she lists in towards the quay, first taking the precaution of getting good fenders over the side to prevent damage to the covering board, bends and channels. A good plan is to get the spinnaker boom, a topsail yard, or other spar, and lash it fore and aft, outside the fenders, so that it takes them fairly and evenly, this will obviate the necessity of watching the fenders, for, in case the yacht should sway and roll about in any swell, however slight, the fenders are apt to shift out of place, especially if lying against the piles of a pier or wooden quay. Be particular in tending the bow and stern fasts as well as the masthead tackle, as the tide rises and falls. Always have a couple of good coir or bass fenders on board, the ordinary yacht fenders are not much use for such rough work as grinding against quays and piers.

Never put a vessel on shore, if you can help it, on a falling spring tide, or you may chance to get neaped, which would be awkward, especially if time is an object.

Should it ever be the reader's misfortune to be caught at anchor on a lee shore by a sudden gale, don't depend upon the ground tackle, but get the trysail on her, and set the spit-fire jib, rouse up the chain, and gain an offing as quickly as possible. There is nothing like taking it in time. Delays are always dangerous, but in such a case it might be fatal.

There are few more pleasant ways of spending a summer holiday than in a well appointed yacht, be she large or small. The sense of freedom from restraint, the knowledge that one is independent of seeking lodgings, or perhaps an expensive hotel, adds a zest to the enjoyment; besides there is no anxiety regarding the arrival or departure of trains—you are master of your own actions. You can go where you like, although it is true the yachtsman is, to a certain extent, dependent upon wind and tide, unless he owns a steamer; but as there are no golden hours without a certain amount of alloy in them, it would be too much to expect that the pleasures of yachting should be exempt from some drawbacks; but after all, even the detention in port through unpropitious weather may not be without some compensating advantage. Other voyagers may be in a like predicament; a sense of comradeship—even if not previously acquainted—draws you altogether, and some fast friendships are made; perhaps a friendly contest to the next port of call may be arranged, and the pleasures of the trip enhanced by having a consort to accompany one for the rest of the cruise.

Now I must claim the indulgence of the reader for a few words of homely advice, as respects the deportment of himself, friends, and crew

when in harbour. Some young gentlemen when they get on board a yacht think it the correct thing to behave themselves in a way they would not dream of doing on shore. The fact of being afloat does not necessarily make one any the less a gentleman, and respectable people will not excuse any laxity in this respect, from the fact that the delinquent owns or is staying on board a yacht. Turning the saloon into a low class music hall, interlarding your conversation with objectionable adjectives, and scandalising a quiet port with bacchanalian orgies of the worst description, is certainly not the right way to enjoy that most manly of all British sports, namely, Yachting.

Besides after all, an intelligent mind, when the subject comes to be analysed, must confess that there is little, if any, real lasting pleasure in such doubtful proceedings. The benefit derived from the fresh sea breezes of the morning is neutralised by the excesses of the previous night, and instead of rising betimes with that feeling of freshness and vigour which one ought to experience after a day's cruise, the votary of Bacchus rolls listlessly out of his berth at a time when he ought to be under weigh, and in lieu of enjoying a substantial breakfast, can scarcely swallow his morning cup of coffee, until he has strengthened his vitiated stomach with a tonic of questionable utility. Trust me, my friend, this is degrading a noble pursuit to a mere excuse for participating in those graver vices which the respectability of your position may prevent your indulging in on shore.

There is, on the other hand, no reason why the evening spent on board your yacht, while in harbour, should not be passed in a pleasant manner. A great deal of rational enjoyment may be got out of your little cabin. Music, that never failing solace of the weary, never sounds sweeter than when heard on the water. I remember once while at anchor in the Solent, in a large emigrant ship, being much struck with the effect produced by the soft chorus of sweet sounds emanating from a party of ladies and gentlemen on board an adjacent yacht. Our crew were a rough lot, comprised of all nations, the majority by no means favourable specimens of the merchant seaman. Skylarking was going on forward in rather a more noisy style than usual, when suddenly a female voice of undoubted purity and compass came gently wafted on the wings of the fast dying breeze, accompanied by the faint tinkling of a guitar. It had been blowing fresh all day, the song was one not often heard at sea, but which always seems to take with sailors, it is called the "Blind Minstrel," and the words are—

"True love can ne'er forget,
Fondly as when we met.
Dearest, I love thee yet."

The effect was magical, all noise ceased instantaneously, the men clustered about the bulwarks in groups, not a sound, save the ripple of the tide against the stem was heard on board our ship; the fair singer was left in full possession of the field, or rather water. Other

songs followed, glees, rounds, catches and solos. I know it was close upon eight bells, 12 o'clock midnight, when the party seemingly broke up, but during the whole time, the utmost attention was paid to the concert by our rough tars, and when one individual, rather out of the exuberance of his delight than from a wish to annoy, ventured to join in a chorus, he was shut up in the most emphatic and unceremonious manner by his shipmates.

A guitar, banjo, accordion, flute, or even a fiddle, do not take up much room, and among your friends there is sure to be some one who can tune up, after a fashion, on one of the instruments named, and it is wonderful how a few songs will help to pass the time away, let them be such songs, however, as no lady need be ashamed to listen to. Then there is another art which the yachtsman has special facilities for practising, I allude to marine painting. If the reader has a taste for drawing by all means let the sketch book and colour box form a portion of his personal baggage when setting out for a cruise. I found a shilling box of moist colours very useful for rough sketching, this may be supplemented by a cake of Indian Ink, and bottle of Chinese white. Every point of interest that strikes the artist during a cruise should be roughly sketched in black and white, the different groupings of colour written in, thus, "Fleecy, clouds tinged with bright light," "Dull grey sky, lower edge lighter," "Sun shadows on sails," and so on, the artist will then be able to make a finished picture from such notes at his leisure. In sailing rapidly along it is next to impossible to grasp the details of a scene in time to get all the colours on the paper, but by adopting this simple method the sketcher will be able to fill his portfolio with pictures of his cruise, if so minded.



CHAPTER X.

RACING.

PREPARATIONS.—TAKING UP A BERTH.—FLYING STARTS.—THE WEATHER GAUGE.—OBSERVANCE OF RULES.—ROUNDING MARKS.—CARRYING ON.—PROTESTS.—BALLOON SAILS.

RACING is a branch of the Corinthian yachtsman's education which can be learnt in a friend's yacht as easily as in one belonging to himself. Still there are special points in connexion with the preparations for a race, which it is in the highest degree necessary the would-be yachtsman should understand thoroughly; besides a work written expressly for Corinthians would be incomplete without a chapter on the subject of match sailing.

There can be no question that, to those engaged in the contest, yacht racing is one of the most exciting of all sports. Who but those who have been on board a clipper when she was one of the competitors in a desperately sailed race, can have any conception of the feverish restlessness with which the behaviour of the craft is watched, and the nervous interest which any movement on board an antagonist excites. "Is he going to set his square header?" "Yes, there they are bending it on to the yard." "Up it goes!" "Why, he will be atop of us before we can get our big topsail up." "Ready with that spinnaker boom there." "Now then butter fingers, what are you about with that guy, take a turn with it can't you?" "Stand by to gybe." "Be careful with that weather runner." "In main sheet smart, boys." "Over she goes." "Let fall the spinnaker boom, what's the matter there? By George! if you haven't got a turn in the head of the sail. Avast hoisting, the topmast back stay's all gone." Such are some of the orders issued in rapid succession, confusing, no doubt, to the novice, but intelligible enough to the old hand, heard on board a cutter gybing round a mark in a race. And then the breathless suspense as the yacht, to which you have to give time to the tune of 2' 30", approaches the flag ship. Two minutes gone, 15 seconds, 25 seconds gone, 30 seconds gone; Bang! there goes her gun, Hip, hip, hurrah! and the cheers are taken up by the losing yacht as she gracefully luffs up and begins taking in her canvas, her crew doubtful even then as to whether

she has not actually won ; and well they might as it is a matter of 2 or 3 seconds only.

The question of time allowance has been held by many sporting writers to be an insurmountable bar to yacht racing ever becoming a popular sport with the outside public in the same light as cricket or horse racing. There is, no doubt, some justification for such opinions. Of the crowds who throng the esplanade at some popular watering place during the progress of a sailing match, not more than a third of those present can understand how it is that a yacht which is some half-hour behind several others wins the prize. In the French Yacht Clubs this difficulty has been often made the subject of discussion, and in arranging the details of the Nice Regatta of March, 1880, it was determined that the time should be allowed at the start, so that the absolute first vessel in should be the actual winner. Not a bad idea, but held to be impracticable in English waters. In 1870 an attempt was made to distribute the classes, so that none but vessels of equal size could sail together. There were 5, 10, 20, and 40-ton classes, and certainly we have now a fine fleet of these sizes, only from some reason best known to themselves yacht builders will not construct yachts of exactly 5, 10, 20, or 40 tons unless specially ordered, and the consequence is that the yachts of odd tonnage increase and multiply in a far faster ratio than the others, and so "time allowance" still puzzles the brains of the non-nautical public, and regatta committees perceiving the hopelessness of getting sufficient yachts of one particular class to contend together for their prizes, are gradually falling back upon the old method, and the seasons of 1879 and '80 witnessed races open to yachts of 8, 15, 21, 25, 30, 35, and 41 tons, much to the disgust of the owners of the legitimate sizes. The extraordinary success of modern boats like *Vanduaara*, *Freda*, *Maggie*, *Madge*, *Buttercup*, and others over those of older build has once more brought the much-vexed question of calculating the tonnage into the foreground, and the yachting journals after an obstinate opposition admit that a change is necessary. Mr. Colin Archer's thoroughly sensible letter in the *Field*, of 1879, has, in fact, placed the question of classing yachts for racing purposes by length alone "within the range of practical politics."

Our business, however, is not so much with tonnage controversies or time allowance disputes as with preparing a yacht for a race. The would-be yachtsman had much better leave such things in the hands of the sailing committee, and devote his whole attention to his yacht, if going in for racing.

Although in yacht racing, as in everything else, preparation is half the battle, how often do we see, especially at coast regattas, a crack boat, known to be capable of whipping all her antagonists, defeated solely through "not being prepared for sailing." The first thing, therefore, on entering your yacht for a race is to see that none of the gear wants renewing, sails all in order, and sheaves of blocks running smoothly ; in fact, nothing should be left to the last moment. The

entry list for a race, as a rule, remains open three clear days before the date of sailing, this, in a well-ordered yacht, provided her owner cannot make up his mind to enter till the last moment, should be amply sufficient to do all that is needful in the way of preparation, but it is best not to cut it so fine as all that, because it may happen that, from the wind failing, getting ashore, or some other *contre temps*, you may be prevented from getting to the slip where the yacht is to be hauled up for scrubbing and cleaning.

An absolutely smooth bottom is most essential when intending to compete for a prize. One half the motive power is used in overcoming the resistance caused by the particles of water clinging to the surface of the vessel's paint or copper, and the rougher and dirtier this is, the closer the water sticks to it; therefore don't fail to have your yacht thoroughly cleaned, scoured, and polished a day or two before the race. Of course, if she is coppered give her a good scouring with mud and canvas, and if you want to get the surface like a new penny, go over it with brick-dust and oil. See that the nail heads are smooth and level, that all wrinkles are flattened out—a large mallet is best for this purpose, a hammer dents the copper. If there is a chance of getting to the keel see that the sides are not battered and rough, that the false wooden keel, if she has one, is not jagged and stringy. Look at the rudder pintles and gudgeons, examine the bobstay shackle, chain plates, &c., to see that nothing has been strained while cruising, because if so it is best to find it out beforehand, and not wait until the defect is brought to light by something carrying away at a critical period of the contest. If your yacht is painted, all that you can do is to clean her thoroughly, and if necessary give her another coat of the particular composition which you believe to be the best. I think the following is about as good a way of preparing a yacht's bottom for a race as any I know of. Carefully rub down with glass paper all inequalities in the paint, when perfectly smooth lay on a thin coat of coal tar, when this is tacky or about two-thirds dry, take some black lead and mix it with spirits of wine to the consistency of paint, lay this stuff well on to the coal tar, and when it is thoroughly dry get some hard brushes, such as are used for polishing stoves, and put plenty of elbow grease into them. When finished in this way a vessel's bottom ought to shine like silver. An old fisherman once remarked on my noticing the smoothness and brightness of his smack, "Ah, sir, if coal tar was a guinea a gallon and black lead a guinea a pound every yacht would be polished like that." It keeps off weeds and grass, also fairly well and only wants renewing about twice in the season.

While on the slip take a look round at the gear and spars, examine the lanyards of the rigging, the strops of blocks, and all seizings and lashings. Take particular care that all halliards and running gear are rove clear and run easily. If any new gear has to be rove see that it is not too large for the blocks, never mind the exclamation—"Oh, sir,

it will be all right after its run through a few times, it wears down very quick," rather have it too small than too large.

When the yacht comes off the slip have all your crew ready to join her. If it is to be a Corinthian match, a good and practical helmsman must be chosen. Let him have full command, and notify the same to the rest of the crew; divided authority is bad enough on land, but afloat it is subversive of all discipline, and if the owner means to have his yacht handled in a creditable manner he must put down any attempts at insubordination, kindly but firmly. The day before the race should be devoted to practising the crew in setting and taking in balloon canvas, the spinnaker for instance is a sail the handling of which requires some practice, but a few lessons will soon give a smart crew the necessary knack of setting it and taking it in quickly and deftly. It is astonishing how smoothly things work on board a yacht whose crew of gentlemen amateurs have had a few hours practice to shake themselves into their berths. Next, with respect to provisions, this should not be neglected. Men, whether gentlemen or otherwise, don't work well on short commons. There is a vast difference between extravagance and meanness, avoid either. Have a good piece of corned beef boiled—for a crew of six, a piece weighing about 4 lbs.—2 lbs. of cheese, a couple of loaves, and a gallon jar of beer, will render you and your jolly companions independent of cooking arrangements on the race day. Of course, a bottle of brandy or rum will be in the locker in case any of the lads should get a ducking and require something to stave off a cold. Shifting ballast is now prohibited, so you will be spared the bother of having to teach your Corinthians how to manipulate the shot bags. If you are so unfortunate as to be dependent upon your leading foremast hand for advice and assistance in sailing your yacht, by all means take him with you when on the experimental trip, but don't let him interfere too much with the helmsman you have chosen to sail the yacht. In most Corinthian races in English waters one, and sometimes two, paid hands are allowed, such hands not to touch the tiller. In the Irish Clubs matches are often sailed by amateurs alone, and it is a question whether it is not by far the best way, because while there is a paid hand on board, amateurs, especially if he be a skipper or first hand, are too apt to let him take the lead in handling the vessel, and although he does not touch the tiller, virtually assumes the command. If the craft wins he takes all the credit, if she loses, "It was that ere lubber as was a steering of her as lost it"; in his expressive vernacular, "He never see'd such a duffer." Some yachtsmen always start the water out of the tank as they think it interferes with the correct trim; this depends, some boats do certainly go better when the water tank is empty, while in others the difference is not perceptible. The best way is to find out the correct trim of your yacht at the beginning of the season, and not leave so important a matter until you are preparing for a race. Another point which will facilitate the working of your

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vessel, is to mark every halliard at the place where it is belayed. A piece of common red or blue twine run through the strand with a sewing needle is better than ordinary sewing twine because it is more readily noticed. Thus you will be able to see at a glance whether each halliard is in its proper place, and not be bothered by some one calling your attention to the fact in the middle of the match that the throat is not half up, or the luff of the jib all in a bight. Some mark the sheets in a similar manner, but as this is only useful when the craft is jammed on a wind I do not think it necessary. A glance will show you whether the sails are set at the most effective angle, and a boat requires different trimming when close hauled according to the wind. One day she will like her mainsheet pinned in, a foot or so extra, another day it will be the jib sheet that requires easing a bit, and so on. Next see that the topmast back stays, most important ropes, are not stranded or chafed, because without them it would be impossible to carry either a spinnaker or jib topsail long. If the pennants are wire, have a look at the nips, and also see that the eye bolts in the quarter are not started or loose but well screwed into their place. Reeve a preventer bobstay, that is a luff tackle hooked on to the standing part and bowsed well tant, this will save the bowsprit in case the bobstay carries away. Send all superfluous cabin furniture on shore, such as beds, bags, portmanteaus, &c., which are only in the way. Next unscrew the cabin table, take up the carpet, and send that and the table also on shore. It is most important in a small yacht to have the interior clear and empty of lumber. Some racing yachtsmen on the other side of the "herring pond" have the bulkheads of their yachts made to unship, so that before starting in a match the inside can be cleared fore and aft and the yacht left a mere shell. No one is more alive to the fact that such tactics tend rather to confine yacht racing to the few individuals who do not mind sacrificing comfort to speed than I am, but in these days of elongated lead mines it is useless contending in a race in ordinary cruising trim. The only way a cruiser can have the smallest chance against the regular racers is by taking such precautions as described. This is proved by the success of the *Wonderful*, a 10 tons shrimper turned into a yacht. She was nothing but an open boat lightly decked over, and scored several very fair successes against such craft as *Merle*, *Elaine*, *Cloud*, *Brenda*, and others. The night previous to the start pay a visit to the club-house or committee rooms and get the particulars of the rules and regulations, have a clear understanding with respect to the hour for taking up your berth, and if, as sometimes happens, there is a rule that a member of the club which holds the regatta must be on board each boat, and neither yourself or friends are members, arrange with the secretary or one of the committee to provide a member, and take care he is on board early in the morning.

Let us suppose that the yachts are to start from their own anchors. Have a buoy similar to the one over your moorings, and make fast a

good stout line or piece of chain to the ring and then to the buoy, sufficient to let the buoy float comfortably after the anchor is down. Sail up to the berth allotted to you and let her shoot ahead abit, then let go the anchor and throw the buoy overboard, veer out chain until the yacht is well in line with the others. Now get a piece of good stout line, about 25 fathoms for a quarter spring, and another about 10 or 12 fathoms for a breast fast. In a 10 or 15 tonner 3-inch rope will be strong enough. Pass the breast fast outside and bend on to the cable just below the hawse pipe, take the other end in board just abaft the rigging, and make fast temporarily, now bend on the quarter spring just below the breast fast to the chain cable, lead it aft under the breast fast, and take it in round the quarter timber ; if the bulwarks are solid and there is no opening, as in some small yachts, take it under the counter, or round a cleat on the rail. Unshackle the chain close to the windlass, and let the end run out through the hawse pipe. The yacht is now riding by the breast fast; the best plan is to wait until the first gun fires before slipping the chain, especially if there is a strong breeze and a fast tide. Get the boat on board and turn her bottom up, so that she lays snug, and pass a couple of lashings round her. Have every one to their station, one to the jib halliards, another to the throat, and one to the peak, and a fourth to the main sheet, if you are not the helmsman for the day, stand watch in hand watching for the gun. Bang! there it goes, slip the chain and veer away a little on the breast fast, hauling in on the quarter spring. The main sheet man can attend the quarter spring, and the foresheet man the breast fast. Give them the time by singing out 1 minute gone, 2 minutes gone, 3 minutes gone, "haul in on your quarter spring, ease away the breast fast," 4 minutes gone, 4 minutes 30 seconds gone, "haul in on the quarter spring, let go the breast fast"—"bang! let go all, up jib and mainsail," yourself tailing on to the throat, or, as they are usually termed the main halliards. If it is a run before the wind you may have to gybe, look out that you are clear of the other yachts, don't be in a flurry, keep cool, as soon as the mainsail is well up clap on the topsail halliards, which should be all ready, with halliards bent on ; as soon as the topsail is mastheaded, lead the weather topmast back stay aft, and hook the tackle on and bowse taut. Now drop the spinnaker boom, and bend on the halliards to the head of the sail and the outhaul to the clew, up with it, steadily, no hurry, "more haste less speed," there she goes, ease the after guy forward a bit, and make all hands sit down as far aft as they can get.

In starting to turn to windward the quarter spring and breast fast are managed in the same way ; only, as you have to luff to the wind, don't be in too great a hurry with the head sails, wait until the mainsail is half up and she is coming to before running up the jib.

Sometimes, after-canvas is allowed to be set so that head sails only have to be hoisted, but the usual way now-a-days is to start flying, that is, under-way. This is, after all, the best plan, provided

the water is not too crowded. In this case you can get everything set the yacht will carry, and sail about until within a few minutes of the first gun, when take care to be the right side of the mark, but not too near or you may have to go about or gybe to avoid crossing the imaginary line too soon. Many a race is lost by being a few seconds too soon at the line. If it is a run have all the spinnaker gear ready, so that you can masthead the sail as she rushes past the mark. If it is a dead beat, edge as much up to windward as possible, try and get the weather-gauge of the whole fleet, in fact, leave no room for a yacht to pass to windward, this is half the battle in a flying start. Never waste so much time in luffing a competitor as to allow another to overhaul the pair of you. "Look at those two beauties," exclaims the skipper of the third boat, "that's the ticket," and by the time the leading yachts have discovered their error they have been passed, and through the foolishness of their respective helmsmen have lost a good position in the race. Have good hands to work the head sheets, this is important. Never allow any skylarking during the race among your amateur crew, keep every man to his work, and insist upon a certain amount of silence being kept, so that the helmsman can issue his orders distinctly. In beating to windward make the crew sit well up under the weather bulwarks, crouched down as low as they can so as to present as little of their bodies to the wind as possible. Always have a couple of reef pennants rove, no matter how fine the weather looks, and never try and carry either a balloon gaff topsail, a balloon jib, or jib topsail to windward, if there is wind enough to keep the sails full.

Always bear in mind the old adage that "every foot to windward is worth a fathom to leeward," and try and get the weather gauge of your competitors, and keep it as long as you can. Remember that yachts on the starboard tack have the right of way; therefore, where there is any doubt, and you are on the wrong tack, do not hesitate a moment, but if you don't like bearing away under his stern, "bout ship" before he is near enough to blanket you under his lee. In luffing an opponent you must be careful not to put him ashore, and if he sings out for water you must, even if on starboard tack, put about, to give him room. Again, if your opponent is under your lee, and no room to stay, and the water is shoal, he is justified in asking you to "go about," in order that he may do the same, which he is bound to do at the same time to show that the request is *bona fide*. Be careful to stick to rules and regulations, never allow any jockeying or unfair sailing, it may do for professional hands, but gentlemen should be above that sort of thing; if you cannot win by fair means it is no credit to either the owner or his boat to win by foul. "Win tie or wrangle" is a motto which should be utterly repudiated by Corinthian yachtsmen. A word as to rounding marks, if you have to gybe round, don't cut it too fine, and look well to the topmast backstay and runners and tackles. If the wind is moderate you may gybe all standing, but if

blowing hard the tack should be triced well up, and the main sheet taken in smartly and quickly. In luffing round a mark you may go a little closer. One of the prettiest sights is to see the clever way in which a racing yacht is sometimes made to weather a mark by a half tack, without losing her way through the water. Care must be taken not to get into irons while performing this difficult manœuvre, keep good way on the craft, and directly she is close to the mark and you see that you can't quite weather it, ease down the helm and let her shoot head to wind; if this little trick of seamanship is judiciously timed, it seldom fails, especially in these long heavily ballasted clippers, which will shoot a tremendous way head to wind before stopping. Directly you are clear ahead of the mark up with the helm and sail her again.

With respect to protests, they should never be frivolous or dictated by petty spite; very often in the excitement of a close contest your opponent may unintentionally commit some trivial breach of the rules, which unless it materially affects the result of the race, may be winked at. The way that some protests are justified would do no discredit to an Old Bailey practitioner. Where a yacht skipper or his owner persistently violates rules and regulations, then hang the ensign in the weather rigging as in duty bound, and keep it there till acknowledged by the gun of the officer of the day. A deposit is now exacted by some clubs when a protest is handed in, which is forfeited if it proves frivolous and untenable. This is a very fair arrangement, but it does not appear to have lessened the number of these unpleasant accompaniments to yacht racing for they are getting to be more common every year. The best way is to set such an example of fair sailing as to shame your competitors into doing the same, and thus, there will be no need of protests on either side.

One thing I would impress upon the young yachtsman, always keep your temper, and never strike your racing flag while the little barkie has any sailing left in her. "A race is never won until it is lost."

The most important balloon sail in a modern racing yacht is the spinnaker, as it takes the place of the old-fashioned balloon jib; it is, in fact, balloon jib and squaresail in one. To set the sail, get the inner end of the boom over the taffrail on the side opposite to that on which you are carrying the main boom, pass it aft until the outer end is clear of the head sheets, then launch forward, hook on the topping lift; sometimes there is a lower block to the topping lift with a tail to it, in this case it must be bent on to the boom end with a rolling hitch; reeve the outhaul, fix the fore and aft guys on the boom end, taking the latter aft outside weather rigging and belaying to quarter, hoist away on the topping lift until it takes the weight of the boom, then shove the boom forward until it can be shipped in its place on the mast, lower the boom and belay topping lift. Bend on the halliards to the head of the sail, and the outhaul to the outer clew, taking care that it is on the foreside of the topping lift, and over the foreguy. Take a turn with

the after guy, or "brace," as some call it. Hoist away on the halliards and at the same time haul out the clew ; see that there are no turns in the head of the sail. When chock up to the mast head ease away the topping lift and trim with the after guy. In small vessels the outhaul is often made to do duty as an after guy, and the halliards taken aft to the quarter act as a backstay, but this won't do in craft over 5 or 8 tons, that is, when racing. It used to be the fashion to have another guy made fast to the boom and belayed to the side to prevent the boom from rising when the sail was distended, but it is considered dangerous. A hand sometimes sits on the boom to keep it down. In taking in a spinnaker, make the topping lift hand taut and belay, ease in the outhaul and slack away the halliards, and gather in the sail ; as it comes down pass it down the forehatch, so that it is all ready for instant setting directly it is wanted. If you want to unship the boom, top it a little, ease away the after guy until the boom is fore and aft, when unship the goose neck, ease away the topping lift, pass the boom along the deck, taking care that the end passes under the foresheets, and unbend the gear ; or the boom may be hoisted up parallel with the mast and the gear stopped along the boom, then all that is requisite is to lower away the topping lift and unstop the gear ; sometimes it is necessary to send a hand aloft to push the boom out clear from the mast. In setting it as a balloon jib, make fast one end of the foreguy to the outer clew of the spinnaker, haul chock out and hoist away on the halliards ; the balloon foresail sheets will do for the spinnaker sheets. Always take care that the weather preventer backstay is taut before mastheading the spinnaker. Sometimes the spinnaker, which is generally made of light cotton duck, has a square head, to which a yard is attached ; this gives a little more spread aloft, but the yard is apt to get foul of the rigging when the sail is handled in a hurry, and is, therefore, not in great favour among racing skippers.

The boom should not be more than three-fourths the length of the yacht, reckoning from inside stem to taffrail ; but racing yachts sometimes carry booms as long as the boat, but they are awkward to handle. Thus, a yacht 40 ft. long could carry a boom of 30 ft., quite enough to stow comfortably on deck. It is best for racing to have both ends fitted with an iron cap or socket for the goose neck to ship in ; this saves much trouble, as either end can then be used inboard. The sheave holes should be about a foot in from the ends. The guys have an eye splice in their outer ends, and this slips over the boom arm, and is prevented from jamming against the outhaul by a small wooden cleat, as in the Frontispiece.

Round the centre of the spinnaker boom, there should be a grommet or selvagee strop with a wooden cleat each side. A tail block just under the eyes of the topmast rigging does for the halliards. The two parts of the halliards lead one on each side the forestay ; then the spinnaker can be sent up either side without the trouble of shifting

the halliards over. Always take a turn of the tack or inner clew before hoisting the sail.

The foot of the sail should have a few reef points put in it, as the foot can then be tied up and kept out of the water in a very light wind, without topping the boom up.

The balloon foresail has, to a great extent, superseded the balloon jib. It is set by having the sheets over the working foresail sheets clear of all the gear, lower down the working foresail, unbend the halliards, and bend them on to the balloon foresail, then hoist away, and as the sail goes up clasp the clip hooks, if fitted with them, round the forestay, lash the tack round the bowsprit just outside the gammon iron.

A jib topsail may either be set flying, that is, without being run up on the topmast stay, or it may be fastened to the latter with cliphooks or a lacing. The halliards either reeve through a sheave in the topmast head or through a tail block the same as the spinnaker halliards. They must be long enough to reach to the bowsprit end. The sheets are over the forestay, and lead aft outside of all and belay at runners. To set it, hook on the tack to a small strop on the bowsprit end, sometimes a lashing is used, bend on the halliards, toggle on the sheets, and hoist away. If it is to run on the stay, one hand must remain out on the bowsprit to clasp the cliphooks or pass the lacing as it goes up. In taking it in, lower away halliards and let one hand run out on the bowsprit and stow the sail as it comes down, or bring it inboard altogether. A good plan in a small yacht is to have a light outhaul for the tack rove through a tail block on the bowsprit end, if the sail is set flying, then there is no need to send anyone out on the bowsprit at all, but simply ease in the outhaul at the same time as the halliards, and pull it down with the sheets.



APPENDIX.

PRINCIPAL TERMS USED IN YACHT SAILING.

- Abaft or Aft.**—Signifies near the stern of a vessel.
- Abeam.**—In a line with the middle of a vessel; thus, in reference to the position of a mark or light as seen from the deck, such may be on the starboard bow, or right abeam, or on the quarter, and so on.
- Aback.**—The position of the sails when the wind is acting directly against them, trying to force the vessel astern.
- Aboard.**—Within or upon a vessel.
- About Ship.**—An order signifying that the vessel is going to tack.
- Abreast.**—Side by side.
- A-Cock-Bill.**—An anchor when it hangs by its ring from the cathead. Yards are a-cock-bill when topped up.
- Adrift.**—Floating at random, when a vessel breaks loose from her moorings or anchor she is said to be adrift.
- Afloat.**—Borne on the water, floating.
- Afore.**—The fore part of a vessel, or nearest the stem.
- A-Lee.**—An order signifying something to leeward, such as “helm’s a lee,” meaning that the tiller has been put down to the lee-side.
- Aloft.**—At the mast head, or anywhere up about the rigging, above.
- Alongside.**—Side by side.
- Amidships.**—In the middle part of a vessel, either with reference to her length or breadth.
- Anchor.**—The iron instrument to which the chain cable is made fast, which, being dropped into the water, holds the ground and prevents a vessel from moving from any chosen position. An anchor is composed of four parts—the shank or body of the anchor, the arms, which hook into the ground, the flukes, broad pieces of iron like the barb of an arrow, and the stock, which crosses the shank at right angles to the arms, which serves to tilt the anchor over into the right position for biting. There are several patent anchors, the chief of which are Trotman’s and Martin’s, both have movable arms, working on a pivot; but Martin’s has no stock. The one most in use for yachts is Trotman’s, although Martin’s is recommended by some who have used it. These are useful in a tidal river, as the old Admiralty pattern is liable to get tripped out of the ground by the fouling of the chain when the tide changes. Cole has a patent anchor that takes to pieces.
- A-Peak.**—An anchor is said to be apeak when the cable is shortened in until the vessel is almost directly over it. A long or short stay apeak is used to signify the angle made by the cable at such a time.
- A-Port.**—When the tiller is put to the ship’s port side the helm is a-port.
- Anneal.**—To render less brittle and more pliable; to anneal wire, whether brass, copper or iron, put it in the fire until red hot and let it slowly cool.
- Astern.**—The hindermost part of a vessel, an object or distance abaft the vessel.
- Athwart.**—Across a vessel.
- Athwart-Hawse.**—Across the bows.

Athwart-Ships.—Across the middle part of a vessel.

Avast.—An order signifying to stop pulling or hauling for a space, to discontinue.

Awash.—On a level with the surface of the water.

A-Weather.—A term used to signify anything on the weather side; thus, “haul jib sheet a-weather,” means that the jib sheet shall be hauled over to windward.

Aweigh.—An anchor when drawn out of the ground is said to be aweigh.

Aye, Aye, Sir.—An affirmative answer given by seamen, signifying that they understand and will obey an order given them.

Azimuth.—An arc of the horizon contained between the vertical circle passing through the centre of an object, and the north or south point of the horizon.

Azimuth Compass.—An instrument for finding the magnetic bearing of a terrestrial or celestial object.

Average.—A legal term used in reference to the claims against the underwriters for damage.

Back-stays.—The long ropes that support the topmasts, they are used to second the efforts of the shrouds when the mast is strained by a press of sail in a fresh wind.

Balloon-Sails.—Large sails made of lighter canvas than the ordinary working ones, used in gentle breezes in order to catch the stray zephyrs and thereby increase the vessel's speed. They are, however, only useful when the wind is fair.

Bare-Poles.—A term used by seamen, signifying that a vessel has no sails set although underway.

Bar Harbour.—Harbour having a bank of sand, gravel, or mud at its entrance.

Beam.—A stout piece of timber placed across a vessel from side to side to support the decks and keep the vessel together. The width of a vessel from side to side is often termed the beam instead of breadth. Thus, a yacht may be said to be “four beams to her length,” which means that her breadth multiplied by four equals her length.

Beam Ends.—When a vessel is thrown so much over on one side that the deck assumes a perpendicular position.

Bear Up.—The same as bearing away, meaning to turn a vessel's head away from the wind; but it is more correct to say “bear away.”

Bearings.—That part of a vessel where her greatest power is placed, or where she is most buoyant or has her greatest floatation.

Bear Down Upon a Vessel.—To near her from windward.

Beat to Windward.—To sail against the wind by taking short turns or frequent tacks.

Becket.—A piece of rope used to secure loose tackles, ropes, or spars.

Belay.—The act of making a rope fast.

Belaying Pins.—Pins of wood or iron placed in different parts of a vessel to which ropes are fastened or belayed.

Bells.—The time on board a vessel is kept by means of bells (see Watch).

Bend.—To attach; thus, “bend sails,” means attach the sails in their proper places. “Bend on the halliards,” means attach the halliards to the sail or spar they are to be made fast to.

Bends.—The thickest planks on the top side of a vessel, sometimes called wales.

- Beneaped.**—When a vessel remains aground through the tide not rising high enough to float her.
- Berth.**—The place of a vessel when at anchor ; a small room in a vessel ; a place to sleep in.
- Between Perpendiculars.**—The length on deck from the fore part of the stem to the after part of the stern-post.
- Bight.**—Any part of a rope between the ends ; a small bay.
- Bilge.**—The most protuberant part of a vessel's vertical cross sections.
- Bill of Health.**—A document certifying from proper authorities the state of health of a ship's company at the time of her departure from or entering a port.
- Binnacle.**—The name given to the case or box in which the compass swings.
- Bitts.**—Strong pieces of timber placed in the forepart of a vessel on which to fasten the cable. In large vessels bitts with sheaves are often placed round the masts to lead the halyards, &c., through.
- Black Paint.**—A very good paint for a yacht's topside may be made as follows : Take four pounds of ordinary black paint as sold at the oil shops. Add to the mixture $\frac{1}{2}$ pint of best copal boat varnish, then $\frac{1}{4}$ lb. patent driers, 1 gill of Japan gold size, and $\frac{1}{4}$ lb. of Prussian blue. If too thick add a little turpentine. Another way is to take vegetable black in powder, say $\frac{1}{4}$ lb., add $\frac{1}{2}$ pint Japan gold size, 1 pint of varnish, $\frac{1}{2}$ pint boiled linseed oil, and $\frac{1}{2}$ lb. patent driers. Mix well, and thin with spirits of turpentine. There are some patent blacks sold for yachts' topsides.
- Blocks.**—Shells of wood or iron in which a circular disc is placed turning on a metal pin. They are necessary in order to give an increase of purchase to ropes. Blocks are of various shapes and sizes, single, double, or treble, and even fourfold. There are also sister, fiddle, and snatch blocks, the latter has a score cut in it, closed by an iron cramp, so that the bight of a rope can be placed on the disc or wheel (technically sheave), and thus save the time and trouble of reeving the end through. Square pieces of timber on which a vessel's keel is laid when in dry dock, or being built, are also styled blocks.
- Bluff.**—Round and short, thus a "Bluff bow" means a short and blunt bow. A broad-headland is sometimes termed a bluff.
- Board.**—Used to signify the distance a vessel sails on each tack when beating against the wind.
- Bobstay.**—The rope or chain used to steady the bowsprit down upon the stem. In vessels over 3 tons it is set up with a tackle called the "Bobstay fall." The standing part in modern racing yachts is a single bar of galvanized iron, screwed to the shackle in the stem, this from its smoothness offers less resistance to the water than the links of a chain.
- Bolt Rope.**—Rope sewn round the edges of a sail to strengthen them.
- Bonnet.**—Is used sometimes instead of a reef. The sail is divided in pieces at one or more reefs, and so reduces the sail, and the cut off pieces are laced to the other part so that they can be cast off at will.
- Booby Hatch.**—The roof over the cabin to increase the height.
- Boom Iron.**—Iron bands on booms with eyes welded on to them, to which ropes may be fastened. The iron rings on a vessel's yards through which the stunsail booms pass.
- Bow.**—The forepart of a vessel.
- Bower Anchor.**—The anchor in general use.

Bowline.—A rope used to extend the leach of a sail to make it set flatter. It is bent on to another piece of rope called a bowline bridle, the ends of which are attached to the leach of the sail. This brings the strain of the bowline upon two places at once, thereby stretching flat a larger surface of the sail.

Bowse.—To haul taut.

Boxing Off.—Hauling the head sheets to windward to pay a vessel's head off. Club hauling is to turn a vessel's head by dropping an anchor to leeward.

Brail.—A rope passed round a sail and made fast to the mast on one side, on the other side it is led through a small block for hauling the sail close up to the mast, used generally for sprit sails.

Break Off.—A vessel is said to "break off" when the wind comes more ahead or shy, and she cannot lay her course.

Breaming.—To clean the tar or paint off a vessel by means of burning.

Bringing Up.—To cast anchor.

Bringing Up all Standing.—To stop without notice, to come to anchor suddenly with all sail set.

Broach To.—To come up to the wind against the helm as when running in a heavy sea.

Brought To.—Signifying that a vessel has been brought to the wind.

Bulkhead.—A partition separating different parts of the interior of a vessel.

Bull's Eye.—A round block of wood with a hole in the centre.

Bumkin.—A short standing spar of wood or iron projecting from the bow or quarter of a vessel. The standing boom of a yawl is called the bumkin.

Burgee.—A triangular shaped flag. The sizes of burgees and ensigns for a cutter yacht are about as follows :—

	5 tons.	10 tons.	15 tons.	20 tons.	30 tons.
BURGEE	2 ft. 6 in.	3 ft.	3 ft. 6 in.	3 ft. 6 in.	4 ft.
ENSIGN...	1½ yd.	2 yd.	2½ yds.	2½ yd.	3 yd.

Should the yacht be yawl rigged the ensign may be about half a yard smaller.

Burton.—A small tackle and purchase.

Bush.—A piece of metal inserted into the sheaves of blocks.

Butt.—The ends of a vessel's planks where they meet each other.

By the Lee.—A vessel is said to be running by the lee, when from a shift of wind or careless steering, the breeze is blowing on the same side as she carries her main boom.

Cable.—The rope or chain by which a vessel is anchored or moored.

Caboose.—The cooking room, or cooking apparatus of a vessel.

Carvel.—Smooth built, that is the planks fit edge to edge.

Cavel or Kevel.—A piece of hard wood nailed on to the timber heads with the ends projecting, used to belay the mainsheet.

Capstan.—A cylinder with levers to wind up any great weight, used for raising the anchor.

Carreen.—To heel to one side.

Carlings.—Pieces of timber which lie in a fore and aft direction between the deck beams.

Carry Away.—To lose or break a rope, spar, &c.

Cast.—A very common term in nautical phraseology. Thus, to cast to starboard means to pay off to starboard; "cast the lead" means "heave it"; "cast off" the same as "let go," &c.

- Catheads.**—A projecting timber or iron on each side of the bow of large vessels, with sheaves through which a tackle is rove, used for securing the anchor.
- Caulk.**—To make the seams of a vessel water-tight.
- Ceiling.**—The inside plank of a vessel's deck.
- Chain Pipe.**—A pipe through which the cable passes into the locker.
- Chain Plates.**—Iron plates which are bolted to a vessel's side to secure the rigging.
- Channels.**—Broad pieces of timber fastened on the outside of a vessel for the purpose of giving greater spread to the shrouds.
- Chart.**—A marine map delineating some part of the sea and the sea coast, giving information as to the rocks, shoals, lights, soundings, and all that is necessary to assist the mariner in shaping the course for his vessel.
- Cheeks.**—Projections at the lower part of the mast-head on which the crosstrees and trestletrees rest, sometimes called hounds.
- Chronometer.**—A marine time-keeper used in determining the longitude at sea. It differs from an ordinary time-keeper in its "compensation adjustment" being so constructed as not to be affected by climatic influences. It is set to Greenwich time, and thus the difference between the time at Greenwich and any other part of the globe can be calculated with great exactitude. It is always best for vessels bound on long cruises to carry two or more chronometers in case of one getting out of order.
- Clearance.**—The document obtained from the Custom-house stating that all the requirements of the law have been fulfilled and that all claims in the shape of port dues and other charges have been paid.
- Cleat.**—A wooden projection used for belaying a rope to. Cleats are usually placed fore and aft. Belaying pins vertical. The latter are generally iron.
- Clip-Hooks.**—Two iron hooks with one side flat, pivoted together at the eye, the hooks overlap.
- Clinker, Clincher, or Clencher.**—A mode of building in which the edges of the planks overlap.
- Close-hauled.**—Means that the sails are set flat at a small angle in order to sail close to the wind.
- Cockpit.**—An open space in the after part of a yacht, abaft the cabin, usually fitted with seats.
- Collar.**—The eye of a stay or shroud, strops are also sometimes collars.
- Companion.**—The entrance to the cabin from the deck.
- Copper Fastened.**—A term which denotes that the several parts of a vessel below the wales are fastened with copper nails and bolts.
- Corinthian.**—A term generally used to signify an amateur patron of sport. In ancient times the youth of the better classes in Corinth were regularly trained in feats of strength, skill, and agility, hence the origin of the term. A Corinthian yachtsman is one who has never been engaged in any professional capacity for pecuniary emolument on board a yacht. It means the same as amateur.
- Counter.**—The arched part of the stern which terminates at the extreme end of the vessel.
- Covering Board.**—The piece of timber running round the side of a vessel from which the deck planks commence.
- Cracks.**—A good way of filling up cracks in a spar is to stop them with a mixture of white lead, whiting, and gold size, coloured with a little yellow ochre to resemble the varnished wood. Mix to the consistency of common putty.

Cranze or Crance.—The iron on the bowsprit end to which the shrouds and bobstay are hooked.

Cringle.—A small metal ring with a groove round its outer edge. It is used on the outer edge of a sail for passing the reef earing through. It is also jambed into the strop of a block when an eye is wanted for the purpose of hooking the block on to anything. It is sometimes called a thimble, although erroneously.

Crutch.—Cross pieces of wood or iron used to rest the boom in when the sail is down. Iron knees or pieces of timber placed athwartship in the after part of a vessel to secure the heels of the timbers are called crutches. The rowlocks of boats are also sometimes called crutches.

Dandy.—A vessel, cutter, or sloop, rigged with the addition of small mizen mast at the stern. A lug or spritsail is set upon the mizen mast. Of late years this class of craft has generally been termed a yawl (see Yawl).

Davit.—A sort of stanchion, used for hoisting up boats to the side of a vessel.

Davit Guy.—A rope used to support the davits.

Dead Eye.—A circular piece of wood with three holes in it through which the lanyards of the rigging are passed. When there is only one hole in them they are called bull's-eyes.

Dead Lights.—Shutters made to fit exactly over the ports or windows, over which they are placed in rough weather.

Dead Rise.—The angle made by the floor timbers from the keel to the bilge.

Dead Wood.—The solid parts of the ends of a vessel.

Dipping Lug Sail.—A lugsail which has to be shifted to leeward of the mast every time the vessel is tacked.

Dismantled.—Stripped of sails and spars, unrigged.

Dolphin Striker.—The perpendicular piece of wood or iron under the bowsprit for giving greater angles to the stays of the jib-boom; sometimes called martingale.

Downhaul.—A rope fitted to the upper part of a sail to haul it down by.

Dowse.—To lower away suddenly; to extinguish.

Down Helm.—An order to put the helm to leeward.

Down Wind.—Sailing in the course of the wind.

Draw.—When a sail is filled by the wind it is said to draw.

Drift.—The length of rope over and above that which is really utilised. It is always advisable to have some drift in sheets and halliards. Used also to signify the set of a tide or current, and a vessel's leeway.

Dry-Rot.—A disease to which timber is subject, causing rapid decay.

Dubbing.—Working with an adze.

Earing.—A rope attached to the clews or cringles of a sail to fasten them to the ends of the yards or booms.

Ease up Handsomely.—Means to let go gradually so as not to lose command over the rope which is being cast off or the sail that is being lowered.

Easy There.—Signifying not to pull or haul strongly.

End for End.—Moving any article so that the end occupies the reversed position.

End On.—Said of a vessel when any object is immediately ahead of her bow.

Entrance.—The lower part of a vessel's bow.

Even Keel.—Said of a vessel when she draws the same quantity of water aft as forward.

Eyelet-Holes.—Small holes made in sails through which the reef points and lacing are passed.

Eyes of the Rigging.—That part of the rigging which is close to the masthead.

Fairway.—A vessel's course in the navigable part of a channel, river, &c.

Fair Wind.—A wind which enables a vessel to continue her course without tacking.

Fall.—That part of a rope which is hauled upon.

False Keel.—A piece of keel below the main keel.

Fathom.—A length measure of six feet.

Feather an Oar.—Is to turn the blade of an oar horizontally when lifting it from the water.

Feeling Her Way.—Sounding with a hand lead as a vessel proceeds on her way.

Fender.—A piece of cork, wood, stuffed canvas or matting, used for preventing the sides of a vessel from getting chafed against a pier or another vessel.

Fetch.—A nautical expression meaning that a vessel will succeed in getting to a certain point in beating to windward.

Fiddle Block.—A long block with two sheaves, one larger than the other.

Fish Davit.—A davit in the bow used for fishing the anchor.

Fish Tackle.—A powerful tackle used on board ship to hoist the anchor on to the bow.

Fish.—To strengthen the part of a mast or spar with other spars placed longitudinally and lashed round it with either chain or rope.

Flange.—A projecting edge.

Flaring.—The opposite to falling in or tumbling home.

Flood Tide.—The rising tide.

Flukes.—The part of the anchor which sticks in the ground. The main part of the anchor is called the shank, and the cross-piece the stock.

Flush Deck.—A deck with an even surface from fore to aft.

Flying Start.—In yacht racing when the yachts start with sails set and under way.

Foot.—The bottom edge of a sail.

Fore and Aft.—In the direction of a vessel's length from head to stern.

Forecastle.—The fore part of the vessel under deck.

Fore Guy.—A rope made fast to a boom, leading forward.

Fore Peak.—Close forward under the lower deck.

Fore Reach.—Said of a vessel when she gains an advance or sails past another vessel.

Forge Ahead.—Said when a vessel begins to gather way through the water.

Foul.—Obstructed, entangled, not clear.

Foul Berth.—Meaning that a ship is anchored in the way of another, or some other obstruction.

Foul Bottom.—Said of a vessel's bottom when it is covered with weeds, &c.; contrary to clean.

Free.—When a vessel can sail her course without being hauled close to the wind.

Freeboard.—A vessel's side which is above water.

Freshen the Nip.—To alter the position of a stay, &c., so that the chafed part comes to another place.

Full and Bye.—Sailing close to the wind without the sails shaking.

- Gammon Iron.**—The iron ring in the stem through which the bowsprit passes in yachts.
- Gangway.**—The entrance in the side through which people pass in and out of a vessel.
- Gant-Line.**—A light line rove through a block used for hoisting anything up aloft.
- Garboards.**—That part of a vessel's planking nearest the keel on each side.
- Gaskets.**—The lashings round a sail after it is furled or rolled up.
- Gather Way.**—Said of a vessel when she begins to move through the water under the pressure of wind or steam.
- Give Way.**—Meaning pull the oars hard when rowing.
- Good Full.**—Signifying rather fuller than full and bye.
- Goose-Neck.**—The iron hook like the neck of a goose fitted to the end of a boom instead of jaws.
- Goose-Winged.**—Used to signify that a vessel is running dead before the wind, with her sails set on opposite sides.
- Ground Tackle.**—A term for anchors, chains, or anything that secures a vessel at her moorings.
- Grommet or Grommet.**—A piece of rope shaped like a ring.
- Gudgeon.**—Iron sockets in which the pintles of the rudder work.
- Gunwale.**—The plank or planking which covers the timber heads above the deck.
- Guy.**—A rope for keeping a boom on one side of a vessel.
- Gybing.**—The act of swinging a vessel's boom from one side to the other when before the wind.
- Halliards.**—Ropes or tackles used for hoisting the sails, yards, &c.
- Hand over Hand.**—To rapidly pass the hands alternately above or before another.
- Handspike.**—A wooden bar used as a lever.
- Hand Taut.**—As tight as a rope can be pulled by the hand.
- Handy Billy.**—A small snatch tackle, used for getting an increased purchase on a halliard, sheet, &c. It is kept near at hand, hence the name.
- Handy.**—A vessel is said to be handy if she tacks about quickly, and answers her helm smartly.
- Hanks.**—Rings of wood, iron, &c., used for securing the luff of sails to the stays.
- Hard Down.**—Meaning put the helm right over to leeward.
- Haul Her Wind.**—A vessel is said to haul her wind when the sheets are hauled aft.
- Hawse Pipe.**—The holes in the bow through which the cable leads.
- Hawser.**—A large rope used for towing and other purposes.
- Head Rope.**—The rope to which the upper edge of a sail is sewn.
- Head to Wind.**—When a vessel has her sails all shaking from being too close to the wind.
- Heave Short.**—To heave up the cable until the vessel is close to her anchor.
- Heave To.**—Means to place the sails in such a position as to keep a vessel just dodging head to wind, called by sailors "Laying to." Some vessels will not "Lay to" at all well, while others will ride out the heaviest gale in this manner as comfortably as if they were at anchor.
- Heel.**—The lower end of a vessel's keel, mast, timbers, &c.

Heel Rope.—The rope which is made fast to the lower or inner end of a spar.

Helm's-a-lee.—Signifying that the helm has been put down to leeward.

Hitch.—A kind of knot in a rope for fastening to anything.

Hogged.—Means that the ends of a vessel droop, or are lower than the middle. This is very ugly, and a perfectly straight vessel will have the appearance of being slightly hogged unless she has a little sheer up in the ends.

Hold On.—Not to slacken after hauling.

Home.—A term which implies that any object is lodged in its proper place.

Hood-ends.—The ends of planks which lie in the stem or stern post.

Horns.—The jaws of gaffs or booms. The outer ends of cross-trees.

Horse.—An iron bar on which the lower block of a sheet travels, sometimes called a traverse.

Hounds.—Pieces of timber fixed on a lower mast to support the rigging.

House.—To lower down, such as "House the topmast," meaning, lower it down so that it is almost on a level with the mast. That part of the mast which is under the deck is also said to be housed.

Hove To.—Same as "Laying to."

Hull Down.—When only the spars of a vessel are visible above the horizon.

In Irons.—A vessel is said to be in irons when she will neither pay off on one tack or the other, but keeps head to wind.

Jacket Topsail.—A gaff topsail with a very narrow head and short yard. It should be cut with a very long clew at the tack as that makes them stand almost as well as a jib headed topsail. As it requires no lacing it is a handy sail for a cruising yacht.

Jack Yard.—A small yard sometimes termed a "Jenny Yard," used to extend the balloon topsail beyond the gaff.

Jamming Hitch.—To make a rope fast so that the greater the strain the tighter the turns become.

Jury Mast.—A temporary mast fitted when the vessel's mast is carried away.

Kedge.—A small anchor.

Keelson or Kelson.—A timber fitted inside a vessel exactly over the keel.

Knittles or Nettles.—Small lashings used for lacing light sails to their spars. Also used by modern yachtsmen, to signify reef points.

Knot.—A nautical mile, 2,026 yards, the statute mile is equal to 1,760 yards.

Lanyards.—Small pieces of rope used for fastening the rigging to the dead-eyes.

Large.—A vessel is said to be sailing large if the wind is abaft the beam.

Lazy Guy.—A rope used for keeping a boom from jumping in a sea.

Lead-line.—A line divided into fathoms (6 ft.) with a lump of lead at one end for measuring the water.

Leeward.—The side opposite to that from which the wind blows.

Lee-going Tide.—A tide running in the direction of the wind.

Lee Helm.—When a vessel will not luff to the wind without the helm is put over to leeward. This is a very dangerous propensity, and a yacht that behaves in this way is radically wrong either in her construction or sail plan.

Leeway.—The distance a vessel loses when blown sideways by the wind.

Lizard Rope.—A piece of rope with a thimble spliced in it.

Load Water-line.—The line of flotation of a vessel when in her best trim.

Log Line.—A measured line used for ascertaining the speed of a vessel through the water.

Luff.—Signifying to bring a vessel closer to the wind.

Lurch.—The sudden pitch of a vessel forward or to one side.

Mackerel Sky.—A sky presenting the appearance of the stripes on a mackerel's scales.

Make Sail.—The order to set the sails.

Marle.—To wind a small rope round another.

Marline Spike.—An iron spike used by sailors to open the strands of rope for splicing, &c.

Meet Her.—An order given to the helmsman, signifying put the helm the opposite way in order to prevent the head of the vessel coming up or falling off too much.

Midships.—The same as middle.

Mildew.—Black spots on the sail like smuts, caused by damp; to eradicate, scrub well with soap and fresh water, rinse well with salt water, then steep in the following solution—A bucket of slacked lime in 100 gallons of water and 2½ ounces of blue vitrol. Dry the sail thoroughly and dust it well afterwards.

Miss Stays.—Means that a vessel fails to come round on the tack opposite to that she is being sailed upon when the helm is put down.

Mizen Bumpkin.—The projecting spar to which the mizen sheet leads.

Mizen Mast.—The mast nearest the stern.

Mizen Staysail.—A sail set on the mizen stay.

Moor.—To ride with two anchors down or to make fast.

Mouse.—To lash a small piece of spunyarn or marlin round the hook of a block to prevent its slipping out of the eye.

Muslin.—A term sometimes applied to the sails.

Neap Tides.—Those which occur near the first and last quarters of the moon.

Nock.—The corner of a fore and aft gaff sail which is fast under the jaws of the gaff.

No Nearer.—An order to the helmsman, meaning "do not bring the vessel any closer to the wind."

Offing.—The space between a vessel and the shore.

Outhaul.—A rope used for hauling a sail out on to a spar.

Overhaul.—To lengthen the tackle by hauling the slack rope through the blocks. Also used by sailors to signify a careful examination of anything.

Over-all.—The extreme length of the hull of a vessel from end to end.

Painter.—The rope used for towing the dinghy or punt astern of a yacht; also for making a small boat fast to a larger vessel.

Palm.—A leather going round the palm of the hand with a thimble in the middle, used by sail-makers.

Parbuckle.—A rope used for hoisting and rolling casks, spars, &c., by.

Parcelling.—Tarred canvas wound round a rope to prevent chafe.

Parral or Parral.—A rope used to confine the gaff to the mast.

Paul.—An iron wedge to prevent a windlass or capstan from turning round the opposite way to that which is wanted.

Pay.—To lay on a coat of tar, &c., with a mop or brush to preserve the wood and keep out water. The seams of a vessel after they are caulked, are payed with pitch to keep the water from the oakum.

Paying Off.—Means that the head of the vessel is turning away from the wind.

Pay-Out.—To veer or slacken a rope or cable.

Peak.—The upper outer point of a gaff.

Pendant.—A rope to which tackles are fastened.

Piniles.—The hooks on the rudder which fit into eyes called gudgeons on the stern-post.

Pole Mast.—Mast and topmast in one length.

Port.—The left-hand side; the openings or windows in a vessel.

Patent Logs.—Useful as adjuncts to the ordinary line and glass. They are of various descriptions, the chief of which are Massey's and Walker's. In sailing yachts the towing log is best, as it registers correctly in light winds. In steamers, and when a sailing vessel is passing quickly through the water the deck Log has the advantage, as the indicator is in-board, so that the distance sailed can be read off without the trouble of hauling in the line, a rotator only being towed.

Purchase.—The multiplied power obtained by a tackle.

Put About.—To tack.

Quarters.—That part of a vessel's side which extends from the stern to one third of her length forward.

Quarter Fast.—A rope secured to the quarter.

Quarter Wind.—The wind that blows on a vessel's quarter.

Racing Flags.—A racing flag is a small square flag set at the topmast head. The winning boat at the conclusion of a regatta may hoist as many flags under her burgee as she has won prizes. The size of a racing flag for a 5 tonner should be 1 ft. 3 in. square; 10 tonner, 1 ft. 6 in.; 20 tonner, 2 ft.; 40 tonner, 2 ft. 6 in. square.

Racking.—Seizing two parts of a rope together with spunyarn or other stuff.

Ramping Full.—Not quite close hauled.

Rate.—The daily loss or gain of a chronometer.

Ratlines.—Small lines which cross the shrouds, forming steps to go aloft by.

Rattle Down.—To place ratlines to the shrouds.

Reaching.—Sailing with the wind on the beam.

Ready About.—An order to the crew to be prepared for tacking.

Reef.—To reduce sail by tying up the lower part.

Reef Pendant or Reef Earing.—The rope used for confining the reef cringle to the boom.

Reef Points.—Pieces of rope fastened in the eyelet-holes of a sail to tie it when reefing.

Reef Tackle.—A tackle fastened to the reef pendant to haul it out by.

Reeve.—To pass a rope through thimbles, or eyes, or the sheave-holes of a block.

Render.—A rope or tackle is said to render if it works easily ; to slacken or ease.

Ride.—To lie at anchor ; to be secured by an anchor.

Ring Bolt.—A bolt with a ring through the eye.

Round To.—To bring a vessel's head to windward.

Round Turn.—To pass a rope completely round anything.

Rowlocks.—Used in some boats instead of thole pins, which are merely straight pieces of wood to rest the oars in. They are metal, generally brass or galvanized iron.

Running Bowsprit.—A bowsprit that is fitted to work in and out through the bitts.

Saddle.—A resting place for the jaws of the boom.

Sagging.—The reverse of hogging.

Sail Coats.—Painted covers to keep the sails dry and clean.

Scud.—To run before the wind.

Scull.—A light oar ; to propel a boat by means of one oar in the stern.

Scuppers.—Openings in the lower part of the bulwarks to let the water run off.

Scuttle.—A small hatch ; to cut holes in a vessel's side under water.

Schooner.—Fore and aft carries only fore and aft sails ; a topsail schooner carries a topsail and top-gallant sails forward ; and a two-topsail schooner has square sails on both her topmasts.

Seize.—To lash anything with small stuff, such as spunyarn, marlin, &c.

Selvagee Strop.—A strop made of rope yarn.

Serve.—To wrap spunyarn round a rope to prevent chafe.

Set Flying.—A sail that is set up on its own luff-rope, like the jib of a cutter.

Set of the Tide.—Course of the current.

Setting Up.—Tautening up.

Shackle.—An iron link sometimes with an eye in each end through which a bolt passes.

Shake Out a Reef.—To let out a reef by untying the reef points.

Sheathing.—There are various ways of sheathing a vessel, the principal being by means of copper or yellow metal plates.

Sheave.—The roller inside a block.

Sheer.—The longitudinal bend of a vessel's side in a fore and aft direction.

Sheet Anchor.—The largest and strongest anchor on board a vessel.

Sheet.—A rope or chain used for securing the corners of sails.

Shifting Backstays.—Backstays only used as occasion requires, always shifted when a vessel is put about.

Shiver.—To cause the sails to shiver by bringing a vessel too near the wind.

Sister Block.—Two single blocks in one piece, with a score between for a seizing.

Sket.—To wet the sails of a vessel to make them stand flatter.

Slack.—Not tightly secured.

Slack in Stays.—Slow in tacking.

Slant of Wind.—A wind that comes a little more free.

Slings.—A rope or chain used for hoisting and lowering different articles.

Slip.—Slip the cable, meaning, to let go the cable from the vessel.

Snotter.—The loop or ring into which the lower part of a sprit is inserted.

Soldiers' Wind.—A wind abeam.

- Soundings*.—Where the deep sea lead reaches the bottom of the water.
- Spanish Reef*.—A knot tied in the head of a sail to shorten it.
- Spencer*.—In yachts the foresail of a schooner is sometimes called a spencer.
- Spit Fire*.—The name given to the storm jib.
- Splice*.—To unite the ends of rope together by interweaving the untwisted strands.
- Spring*.—A rope or hawser.
- Spring Tides*.—The tides at or near the new and full moon.
- Spun Yarn*.—Several rope yarns twisted.
- Stand By*.—An order signifying to be ready.
- Standing Bowsprit*.—A fixed bowsprit, on which is set a lighter spar called a jibboom. A standing bowsprit not only looks handsome in large schooners, but it enables the head sails to be reduced more quickly.
- Standing Part*.—The part securely fastened.
- Standing Rigging*.—The rigging that is always kept in one place.
- Starboard*.—The right hand side of a vessel.
- Started neither Tack nor Sheet*.—Said when a vessel sails her course without change of wind, thus preventing the necessity of alterations in the adjustment of her sails.
- Stays*.—Large ropes used for supporting the masts, &c.
- Steering Way*.—When a vessel moves through the water so as to render her manageable by the helm.
- Stiff*.—Stable or steady.
- Stopper*.—A short piece of rope.
- Storm Sails*.—Small sails used in heavy weather instead of the ordinary ones.
- Stranded*.—Said of a rope having one or more of its strands broken. Run ashore.
- Strop*.—A piece of rope spliced in the form of a ring.
- Surge*.—When a rope renders or slips round a pin, capstan, &c.
- Sweep*.—A long oar.
- Swig*.—To take a pull by means of a sudden jerk.
- Swivel Hook*.—A large hook that revolves upon an axis for taking the turns out of a tackle.
- Tabernacle*.—A kind of trunk used to step the mast in on deck when it is intended to lower, used in barges and up river yachts.
- Tabling*.—A piece of canvas sewn to the edge of a sail to strengthen it where the roping goes.
- Tacking*.—Beating to windward.
- Tail Block*.—A block with a piece of rope spliced to it, to fasten it in any place where it is wanted.
- Thimbles*.—Metal hoops shaped like the letter U with the top ends turned round making a hook, which holds the seizing.
- Tholes*.—Pins inserted into the gunwale of a boat for the oars to work in.
- Throat*.—The part of a gaff or sail next the mast.
- Thwarts*.—The seats across a rowing boat.
- Tiller*.—The piece of wood or iron fixed in the rudder head as a lever to move it by.
- Tiller Ropes*.—The lines fastened to the tiller to work it by.
- Toggle*.—A piece of wood fastened to a rope with a loop in the other end, called a becket.

Top the Boom.—To hoist the boom at any angle from the deck.

Transoms.—The thwartship timbers of a vessel which are bolted to the stern-post.

Traveller.—An iron ring which runs on a spar or gaff.

Triatic Stay.—The stay going from mainmast to foremast head in a schooner.

Trip.—To break an anchor out of the ground.

Trysail.—A small, narrow-headed fore and aft sail, used for stormy weather instead of a close-reefed mainsail.

Truck.—The circular top of a vessel's mast.

Tyrs.—Pieces of small stuff used to secure the sail when stowing same, as gaskets.

Unbend.—To cast off a rope or sail altogether.

Under the Lee.—Sheltered from the wind.

Unmoored.—Riding with a single anchor. The reverse of moored.

Unship.—To remove anything out of a vessel.

Vang.—A rope used for steadying the gaff of a fore and aft sail.

Veer.—To run out chain. The wind is said to veer when it changes with the course of the sun, and to back when it changes against the course of the sun.

Wall Sided.—Flat or straight sided, as distinguished from round or barrel sided.

Watch.—The divisions of sea-time. Thus, a watch is four hours. The dog watches are from 4 to 6 and from 6 to 8 in the evening. These change the watches, so that the crew have an equal amount of rest on alternate nights. The bells are struck every half-hour, beginning at one bell and ending at eight bells, when a new watch begins.

Warp.—To tow a vessel along by pulling at a rope fast to a fixed object. A strong rope.

Water Sails.—Sails set underneath the foot of fore and aft sails in very light wind. They are only useful when running before the wind.

Wearing.—Putting a vessel before the wind for the purpose of changing her tack. This manœuvre is only resorted to when a vessel refuses to come about, but falls off on the same tack directly she is brought head to wind.

Weather.—The reverse of leeward; the side on which the wind blows.

Weather Gauge.—Said of a vessel that is to windward of another.

Weather Helm.—When a vessel has an inclination to come too near the wind and requires the helm to be put over to windward to check her.

Weathering.—To pass to windward of anything.

Wheel.—Most large vessels are steered by a wheel instead of a tiller.

Whip.—A purchase formed of one single block.

Whiten Decks.—Take a bucket of unslacked lime, mix with four times its bulk of water, lay on the deck after sundown and leave it all night, if it rains during the interval all the better. In the morning wash off before the sun touches it. Scrub the decks well with hard brooms and rinse down with plenty of water. Some recommend a mixture of oxalic acid, 1 lb. of the acid to one gallon of water, and damp the deck and wash off quickly. Soap lees are sometimes used, but this stuff tends rather to brown the decks. Small stains may be taken off by lemons.

Whiskers.—Projecting irons across the stem heads of very sharp bowed vessels to give more spread to the bowsprit shroud.

Whole Sail Strength.—A wind which enables a vessel to carry all her sail.

Windlass.—A horizontal machine for heaving up the anchor and raising great weights.

Yard.—A spar by which a sail is extended.

Yarn.—Threads of which rope is made ; a story told by a sailor.

Yaw.—When a vessel leaves her direct course in steering.

Yawl.—Formerly a double-ended open boat used for fishing on the coasts ; also a boat used by war ships. Now the name is given to dandy-rigged yachts.

Yoke.—The stretcher on top of the rudder to which the yoke or steering lines are made fast in a small boat.

THE following Forms are intended to give an idea how to draw up an Agreement for the Hire of a Yacht, which should have a 6d. adhesive Agreement Stamp affixed and cancelled by the last signature. If this is not done, an impressed Stamp will be required. Both signatures should be witnessed :—

AGREEMENT FOR HIRE OF YACHT " , "

BETWEEN , of the one part, and , of the other part. The said Owner agrees to let and the said Hirer agrees to take the Yacht " , " of about . . . tons (B.M.), for lunar months for the sum of . . . per month. The Hire to be prepaid.

The said Owner agrees to pay captain and crew, cook and cook's mate, and the said Hirer to find his own steward or valet, also to be at the cost of all necessary fresh water, lamp oil, cotton waste, fuel, pilotage, towing, &c. ; also to insure the Yacht for for term of hire against all risks.

The said Owner to fit the Yacht out ready for sea, and find clothing for captain and crew, cook and cook's mate.

Yacht to be delivered up at in as good a condition as she is now in, the usual wear and tear excepted.

Witness to the } _____ (Signed) _____
Signature of }

Witness to the } _____ (") _____
Signature of }

AGREEMENT OF HIRE. YACHT " "

IT IS THIS DAY MUTUALLY AGREED between A. B., of , owner of the Yacht " , " of tons, of the first part, and C. D., of , of the second part, that the said A. B. agrees to let and the said C. D. agrees to hire the above-named Yacht on the terms and for the considerations as follow :—

Hire.—The hire to be £ . . . per month of four weeks, for a term of commencing on 188 . Payment to be made in advance, the vessel to be handed back to the Owner at Hirer to have the option of keeping the vessel for a further term of a month or more by giving Owner notice thereof on or before the . . . of . . . , at the same rate, viz., £ . . . per month of four weeks. Vessel to be delivered up at , or other Port agreed upon by Owner. Should the time of hiring expire when the vessel is elsewhere, the time of sailing to (or other agreed Port) to be added to the term of hire.

Insurance.—The Hirer to insure the vessel at Lloyd's, or other approved office, against all risk, including collision, for the sum of £ The insurance policy to be handed to the Owner before the . . . of . . . , Insurance to be made for the whole term of hire.

Damage.—Any damage sustained by the vessel to hull, gear, spars, sails, boats, &c., or any part of them, such as is not payable by the Insurance, to be made good by the Hirer, except the ordinary wear and depreciation of sails, spars, and paint.

Captain.—The captain shall have entire command of the vessel and crew, he will carry out all the orders and wishes of the Hirer except he consider such to be contrary to prudence and safety.

Pilots.—In all cases where the captain wishes for a pilot, a pilot is to be provided at the expense of the Hirer.

Outfit.—The Hirer to have the use of all charts, linen, plate, crockery, &c., belonging to the vessel, any further quantity that may be required to be provided by the Hirer.

Witness to the } _____ (Signed) _____
Signature of }

Witness to the } _____ (") _____
Signature of }

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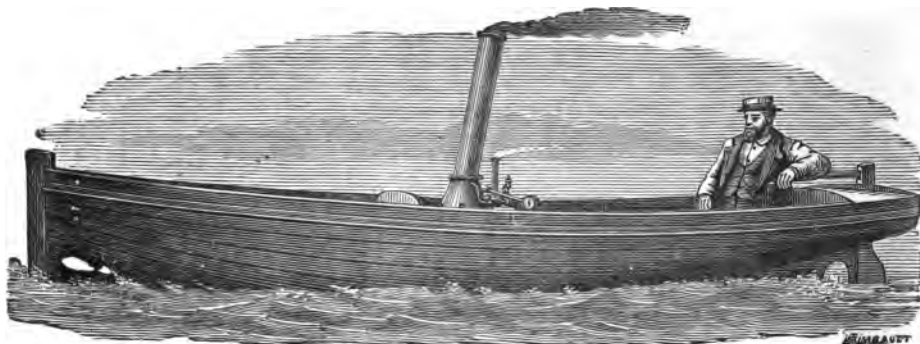
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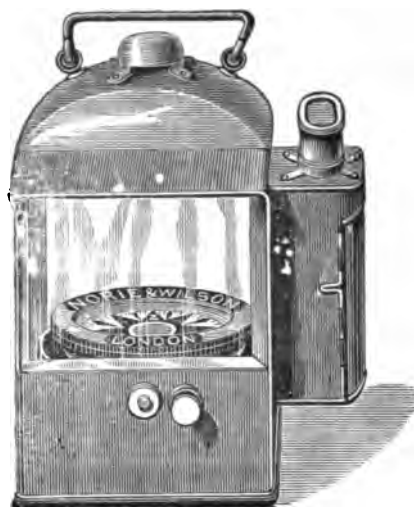
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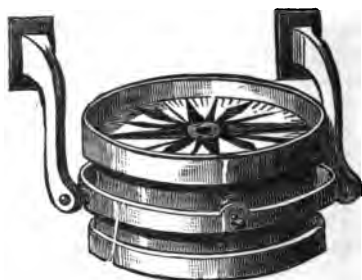
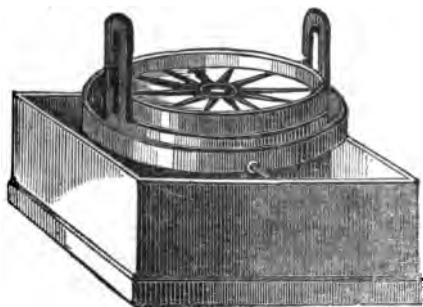
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No. 2, with $4\frac{1}{2}$ inch Compass Card, stands 11 inches high, and is 7 inches square **£5 10s. Od.**

With extra finish, glass in front to open for cleaning, &c.

Teak Binnacle, Compass and Lamp complete, similar design to above, Compass has double needles and Bell Cap. These Binnacles have been designed as the cheapest, strongest, and best for open boats and very small yachts £2 10s. Od.

Azimuth Compasses for Taking Bearings, AND CABIN TELL-TALE COMPASSES, &c.



Azimuth Compass, best prismatic, with divided ring and mahogany box, £6 6s. : Plain ditto, £5 5s.

Hanging Cabin Tell-Tale Compasses, and Transparent Compasses, with brass arms, 25s. to 50s.; also Nickel Plated if required.

NEW YACHT & STEAM LAUNCH BINNACLE, FITTED WITH BEST DOUBLE NEEDLE LIQUID COMPASS.

The Smallest Binnacle made with 5 inch Compass Card.

Price £6 10s. Nickel Silvered £7 10s.

A very handsome little Instrument, extreme height
only 14 inches.



The Compass is perfectly steady under any amount of vibration
or pitching and rolling of the vessel.

Amongst the unsolicited Testimonials we have received, the following appeared in the *Field* of 22nd February, 1879, in a series of letters headed "Racing Season of 1878, in the 'Freda,' 5 Tons, R.T.Y.C."—J. BEAVOR WEBB, Esq.:—

"I do not think I have mentioned our compass and binnacle. Every sailor knows the difficulty of getting one that will remain perfectly steady in a sea way, which difficulty is increased in the small craft, they jump about so much more than the large ones. I have tried many compasses by different makers, and, until last May, could not get one which would remain perfectly steady at all times. I then heard of one supplied by Messrs. Norie and Wilson, City, and, on seeing one, took such a fancy to it that I ordered one at once. The peculiarity of them is that they are compass and binnacle all in one, not having any gimball, the card floats in glycerine (and water), doing all the work; they are remarkably pretty little things—at least everyone admires ours, which we always keep on deck, big-ship fashion. They are very cheap, costing only £6 10s. each. I may as well say here, in case anyone wishes for one, that I have tried all the other liquid compasses, and found them all fail, as in a heavy sea the card would fly about so much as to make it impossible to steer by it."

We have received letters expressing approval, from the Owners of the "FREDERICA," 20 tons, and "KOHINOOR," 10 tons; and several other Yachtsmen have called and expressed their entire satisfaction of the same Binnacle and steady Compass.

TO YACHTSMEN ABROAD, &c. REQUIRING SUNDRIES

The following and any other Yachting Requisites can be shipped to order, or prices quoted on application; also Electro and Nickel-plated Lamps:—

Candle and Oil Lamps from 10s. to 20s. and 30s.

Cabin Candle Lamps, hang up or form Candlestick, from 7s. 6d.

Atkey's Shadowless Lamps from £3 15s.; Electro-plated £5.

Atkey's Cooking Apparatus, small £3 15s.; with Baking Oven £5 5s.; with

Boiler and Roasting Oven £7 7s.; large Stoves £9 9s. to £12 12s.

Improved Main Sheet Buffers from £3 3s., suitable up to 10 tons; Ratchet

Windlass for small Yachts with Wrought Iron Bitts from £3 3s.,

or for Wood Bitts £2 10s.

BELLS, CANDLE AND OIL LAMPS.

PRICES QUOTED FOR NICKEL PLATED GOODS.



Fig. 1.



Fig. 3.



Fig. 2.

Fig. 1. Cabin Lamp, with back plate to hang up, bronzed, 11/6.

Fig. 3. Brass Bells, 5 inch 16/6; 6 inch 18/-; 7 inch 22/6.

Fig. 2. Smoke Shade 3/6 to 5/6.

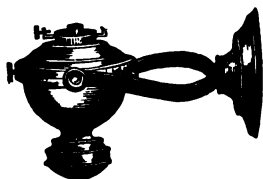


Fig. 5.



Fig. 4.



Fig. 6.

Fig. 5. Oil Cabin Lamp, with back plate, bronzed 12/-.

Fig. 6. Tin Forecastle Lamps from 2/6.

Fig. 4. Brass Bells, 5 inch 16/6; 6 inch 20/-; 7 inch 25/-.



Fig. 7.

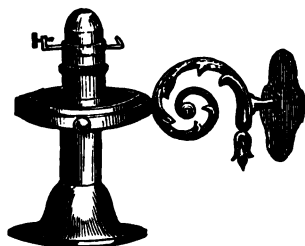


Fig. 8.

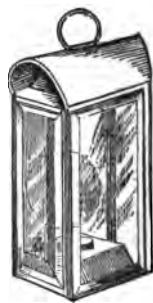


Fig. 9.

Fig. 8. Candle Stick Lamp, with back plate, superior 15/-.

Fig. 7. Flash or Flare-up Lamps 3/6 and 4/6.

Fig. 9. Engineer's Lamps in tin, small 7/6, large 12/6; also in Brass.

SALOON AND CANDLE LAMPS.

PRICES QUOTED FOR NICKEL PLATED GOODS.

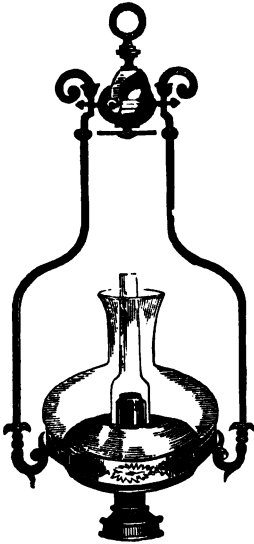


Fig. 10.

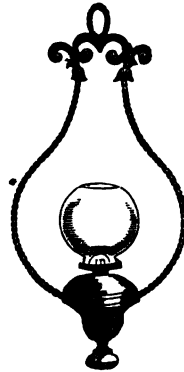


Fig. 11.

Fig. 10. Saloon Hanging Oil Lamp, 22 inches long, 42/-.

Fig. 11. Small Cabin Hanging Oil Lamp, 19 inches long, suitable for small Yachts, 9/6 and 12/-.

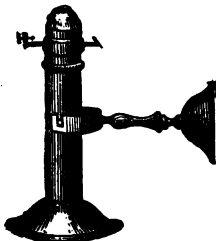


Fig. 12.

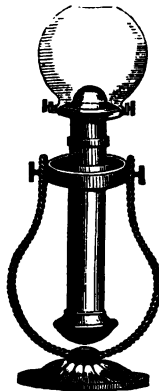


Fig. 13.

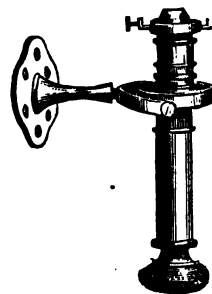


Fig. 14.

Fig. 12. Candlestick Lamp, with foot for table, 10/6.

Fig. 13. Candlestick Lamp, without back plate, 7/6.

Fig. 14. Hanging Candlestick Lamp, Bronzed, 8/6., or with back plate and loose tube to push through the glass globe, 10/6.

The Celebrated 50s. and 63s.
**"NORIE & WILSON" DAY OR NIGHT
 MARINE BINOCULAR GLASSES.**

With embossed Name, NORIE & WILSON, LONDON, on each eye piece.

With **LARGE EYE
 PIECES** and *finest lenses*
of greatest power,
 covered with Morocco
 Leather in Sling Lea-
 ther Case.

FIRST QUALITY,
£3 3s.

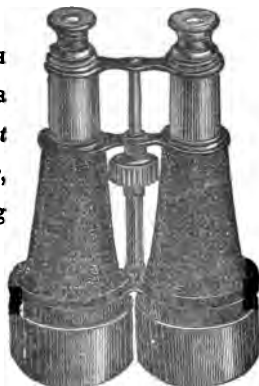


WITH **LARGE EYE
 PIECES**, covered in
 Morocco, and in a
 Sling Leather Case. A
 strong useful Glass.

SECOND QUALITY,
£2 10s.

In **TWO PATTERNS**, HIGH
 SHAPE AND MEDIUM OR
 EMPEROR PATTERN, *finest*
lenses of greatest power,
 Morocco coverings, Sling
 Leather Cases.

FIRST QUALITY,
£3 3s.

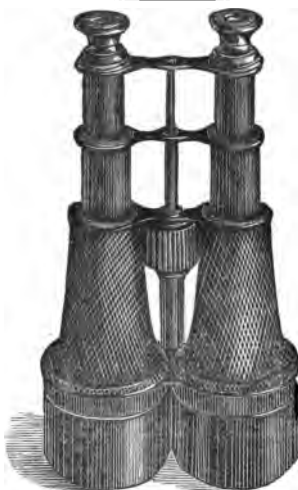


In **TWO PATTERNS**, HIGH
 SHAPE AND MEDIUM OR
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 covered in Morocco, Sling
 Leather Cases. Strong
 useful Glasses.

SECOND QUALITY,
£2 10s.

SPECIAL GLASS
 FOR LONG DISTANCES,
 with *Double Draw*,
 both Draws twist out,
 specially adapted for
 Long Distances at Sea,
 strongly made and
 fitted with best Lenses
 of the greatest power,
 and large Object Glass,
 and covered with
 Morocco Leather, in
 Best Sling Leather
 Case.

£4 4s.



**BEST NAVY
 TELESCOPES**,
 Taper Pattern, Leather
 Body, large Object
 Glass, and best Lenses,
 —2 feet with spray
 shade,

63s. ;

18 inches, with ditto,

50s. ;

15 inches,

31s. 6d.

The above will be sent, securely packed and carriage free, on receipt of P.O.
 Order. They are *the best glasses that can be made*, and always highly spoken of.

FLAGS AND SIGNALS

Printed or Sewn, whichever preferred.

Special Terms to Committees of Regattas and Buyers of large quantities of Flags. Estimates given for Yacht Club Burgees and Ensigns, if in quantities.

FLAGS of the INTERNATIONAL (COMMERCIAL) CODE of SIGNALS, made of the best hunting, kept in three sizes.

Large, 3 ft. \times 4½ ft., £3 10s. 6d.; **medium,** 2 ft. \times 3 ft., £2 10s. 6d.; **small,** 1½ ft. \times 2 ft., £1 10s.

The Code Signal Book, 12s. Pamphlet explaining use 1s.

BURGEES and ENSIGNS for every Club, a large Stock always on hand.

RACING and OWNERS' FLAGS made to order on stating tonnage of yacht.

Flags with Crests and Devices designed and painted.

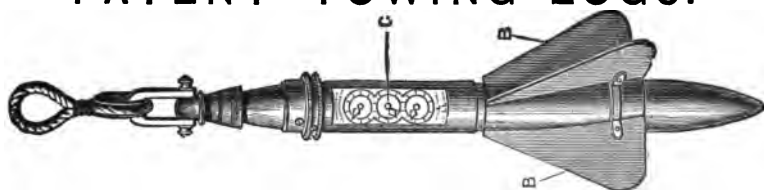
RED ENSIGNS from 1 yd. 4s. 6d. to 7 yds. 50s.; also **PILOT JACKS,**

RACING FLAGS, SIGNALS, BURGEES and ENSIGNS in Silk if required.

Halyard Lines at per gross of yards.

BOATS' BOW PLATES. Bow Plates Painted on Copper for Yachts, Gigs, and Dinghies, with Burgee for any Club, price 7s. 6d. to 10s. 6d. per pair.

PATENT TOWING LOGS.



Massey's New Miniature Yacht Log, only 15 inches long, is the smallest made, and adapted for very small Yachts, 55s.

MASSEY'S NEW FRICTIONLESS PROPELLER LOG, with conical tube or fish tail end, 63s., large size. Flat Bottomed, 50s.



A 1

A 2

Walker's A 1 Harpoon Log, 63s. Large size.

Walker's A 2 Harpoon Log, 50s. „

Walker's A 1 Yacht Log, only 18 inches long, 63s.

Superior Log Lines, 25 fathoms, 8s. 6d.;

36 fathoms, 10s. 6d.; 40 fathoms, 12s. 6d.;

50 fathoms, 17s. 6d.



SOUNDING MACHINES.

Massey's Frictionless Shield Sounder, 45s.

Walker's Patent Sounding Machine, 50s.



LAMPS & LANTERNS FOR YACHTS & BOATS, Yachts' Lanterns, Side Lights, Anchor & Masthead Lamps, Fitted with the New Patent Prismatic Out Lenses.

Advantages over the Plain or Dioptric Lenses:—A better and more brilliant light, that can be seen at a much greater distance; the whole of the surface of the lens is illuminated, which is not the case in any other arrangement. These new lenses are not so liable to break with the heat.

FULL SIZED LAMPS, TO PASS BOARD OF TRADE SURVEY.



Best Copper Side Lamps, fitted with *Patent Prismatic Out Lenses*, £6 10s.; Anchor Lamp £2 15s.; Steamer's Masthead do. £5; or Lamps with the same kind of Lenses, only second quality, Side Lamps £6; Anchor £2 10s.; Masthead £4 4s.

Best Copper Side Lamps, fitted with *Dioptric Lenses*, £6 10s.; Anchor Lamp £2 10s.; Masthead £4 10s.; or second quality Side Lamps £5 10s.; Anchor £2 2s.; Masthead £4.

Best Copper Side Lamps, with *Plain Lenses*, £4 15s.; Anchor £1 17s. 6d.; Masthead £3 12s. 6d.; or second quality £3 10s.; Anchor £1 10s.; Masthead £3.

Japanned Tin or Galvanized Iron Side Lamps, with *Patent Prismatic Out Lenses*, £4 4s.; Anchor £2 2s.; Masthead £3 10s.

Japanned Tin or Galvanized Iron Side Lamps, with *Dioptric Lenses*, £4 4s.; Anchor £1 15s.; Masthead £2 15s.

Japanned Tin or Galvanized Iron Side Lamps, with *Plain Lenses*, £2 10s.; Anchor £1; Masthead £2 10s.

SMALLER YACHTS' LAMPS.

Smaller size Side Lamps in Copper, fitted with *Patent Prismatic Out Lenses*, 52s. 6d., 27s. 6d., and 35s. 0d., or in Galvanized Iron, or Tin Japanned, 42s., 21s., and 30s.

GLOBE ANCHOR LAMPS to pass Survey, in Tin, from 10s. 6d., or in Copper and Brass, or in smaller sizes, in Tin, from 8s. 6d. and 10s. 6d.; also in Copper from 10s. 6d.

Very small Tin Side Lamps, with plain lenses, per pair 18s. 6d. Anchor Lamps 6s. 6d. and 8s., Masthead 15s.; or in Copper 35s., 12s. 6d., and 20s.

Second size Tin Side Lamps 25s., Anchor 10s. 6d., Masthead 18s., same size, in copper 50s., 18s., 30s.

PATENT TRICOLOUR LAMP.

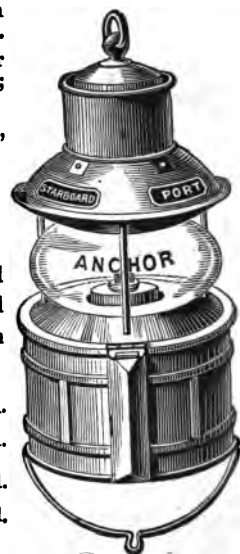
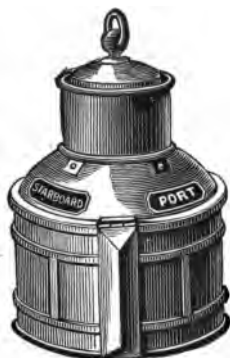
Anchor, Port, and Starboard Lamps in one Lantern, useful for small Yachts and open Boats, &c.

Small size in copper ... 37s. 6d.

Ditto tin japanned ... 20s. 0d.

Full size in copper ... 50s. 0d.

Ditto tin japanned ... 27s. 6d.



JUST PUBLISHED,
PRICE FOUR SHILLINGS.

THE PRACTICAL GUIDE
TO THE USE OF
MARINE STEAM MACHINERY,
AND
INTERNAL MANAGEMENT
OF
SMALL STEAMERS,
STEAM YACHTS & STEAM LAUNCHES.

BY JAMES DONALDSON, ENGINEER,
Author of "Drawing and Rough Sketching for Marine Engineers." "The Engineers' Annual," Etc.

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YACHTS FOR SALE OR HIRE.

GEORGE WILSON, AT NORIE'S NAUTICAL WAREHOUSE, 156, MINORIES, LONDON, E.,

Being continually asked by Customers to find Purchasers for their Yachts, solicits enquiries from intending Purchasers, as he has several vessels for sale, from 5 to 200 tons, in both Sailing and Steam Yachts.

References to Noblemen and Gentlemen, at home and abroad.

Insurances effected at Lloyd's, by the month whilst cruising, and for 3 or 6 months whilst laying up, against all risks.

The following list of small vessels is worthy the attention of intending Buyers of such craft:—

5 TONS. CUTTER, a very pretty little vessel, with new sails and part lead ballast. £130.

5 TONS. CUTTER, new, flush deck, cabin fitted in mahogany, has also after cabin, very handsome and fast boat. £350.

7 TONS. YAWL, new, the handsomest of her size afloat; over 6 tons lead. £375, or offer.

6 TONS. CUTTER, teak, built by Forrestt, 1865. £90.

10 TONS. CUTTER, flushed decked, beautifully fitted below, has two cabins; 5 tons lead ballast. £250.

10 TONS. CUTTER, flush decked, nearly new, light draft of water. £250.

10 TONS. CUTTER, flushed decked, undoubtedly the handsomest and best built 10 tonner afloat; new sails and copper. £420.

13 TONS. CUTTER, by Harvey, with 6 tons lead; a handsome and fast vessel. Cheap, £210.

10 TONS. YAWL, a powerful and bold little cruiser, with good cabin, w. c., fore-castle, and cockpit; 2 tons lead. £130.

14 TONS. CUTTER, a capital cruiser, carvel built, 1872. £210.

15 TONS. CUTTER, built 1875, has 2 cabins, new canvas, a sightly, fast, and good sea boat. £315.

LONDON, October, 1881.

