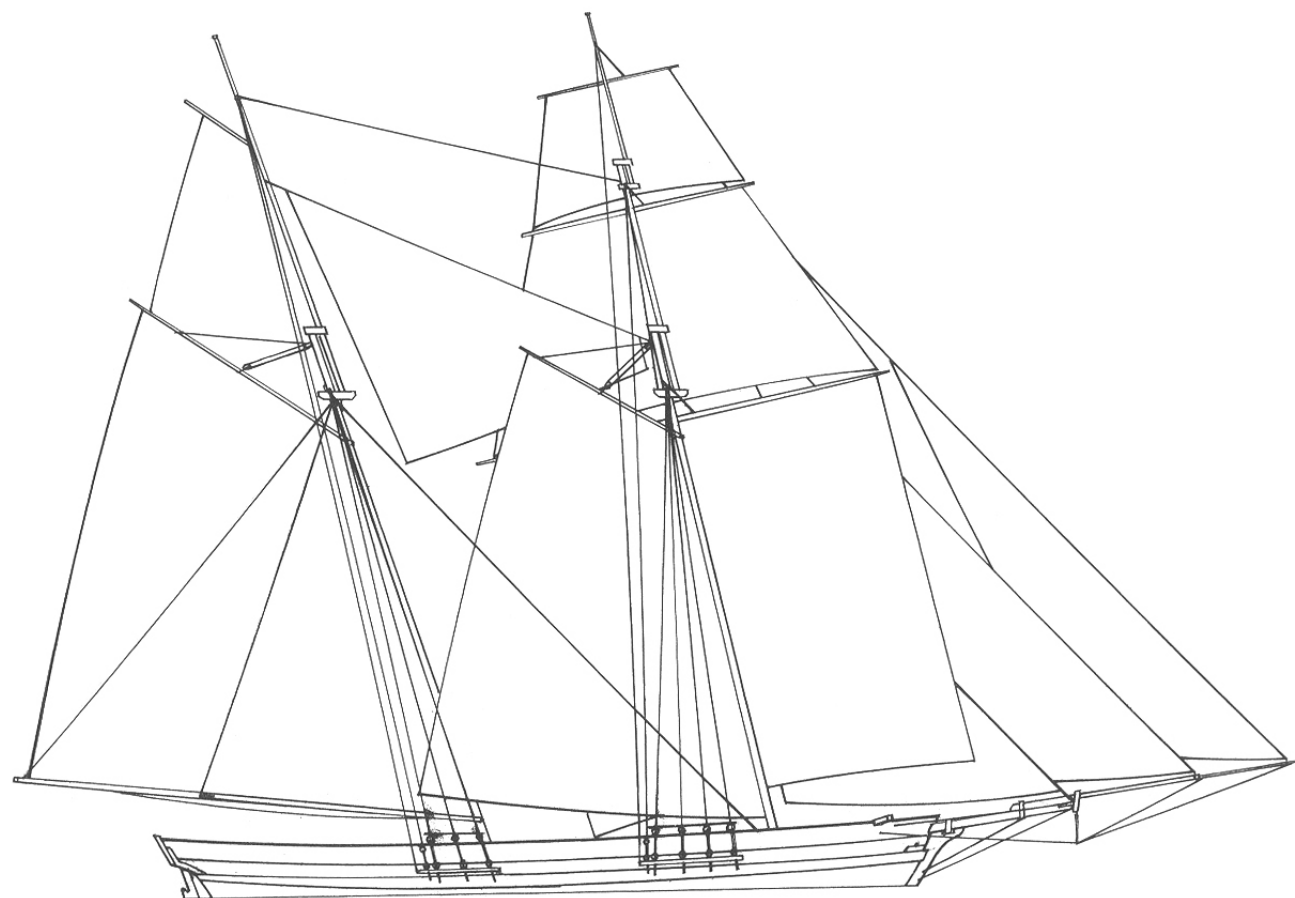
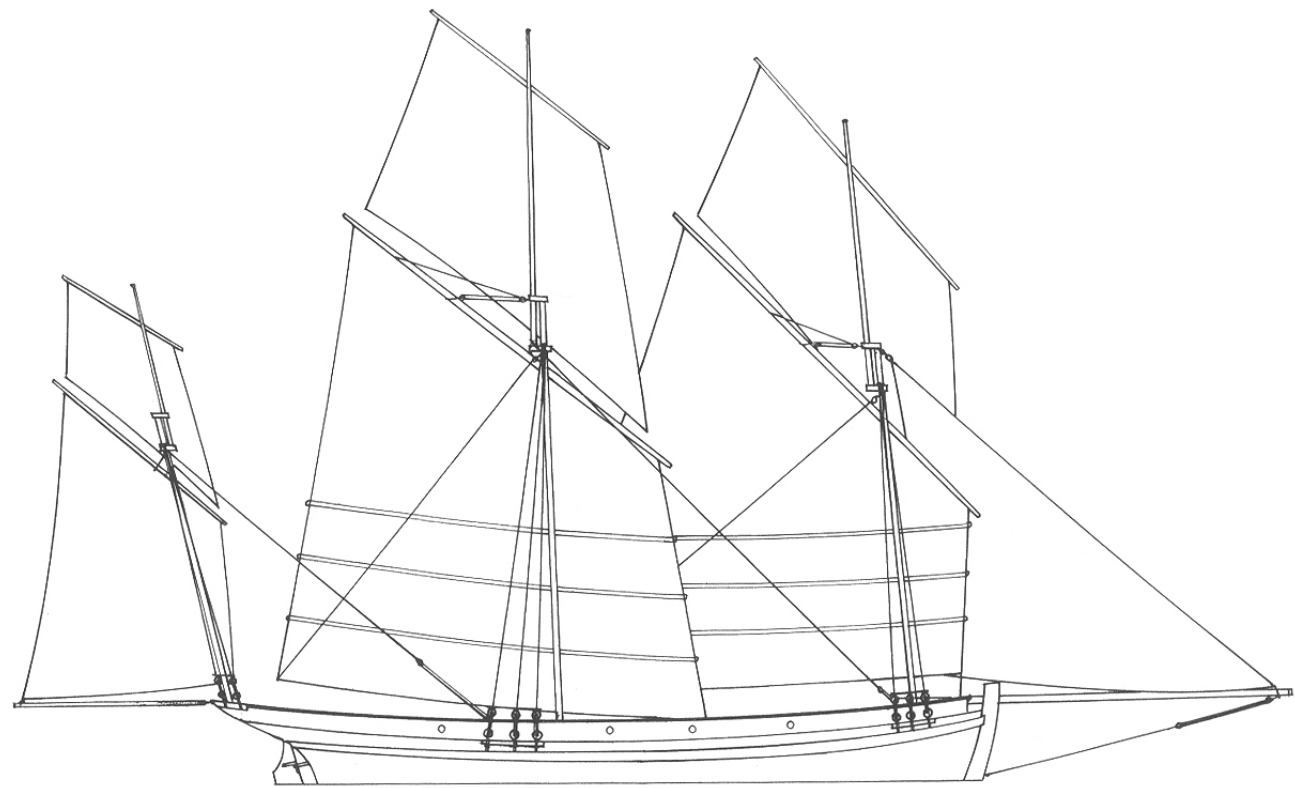
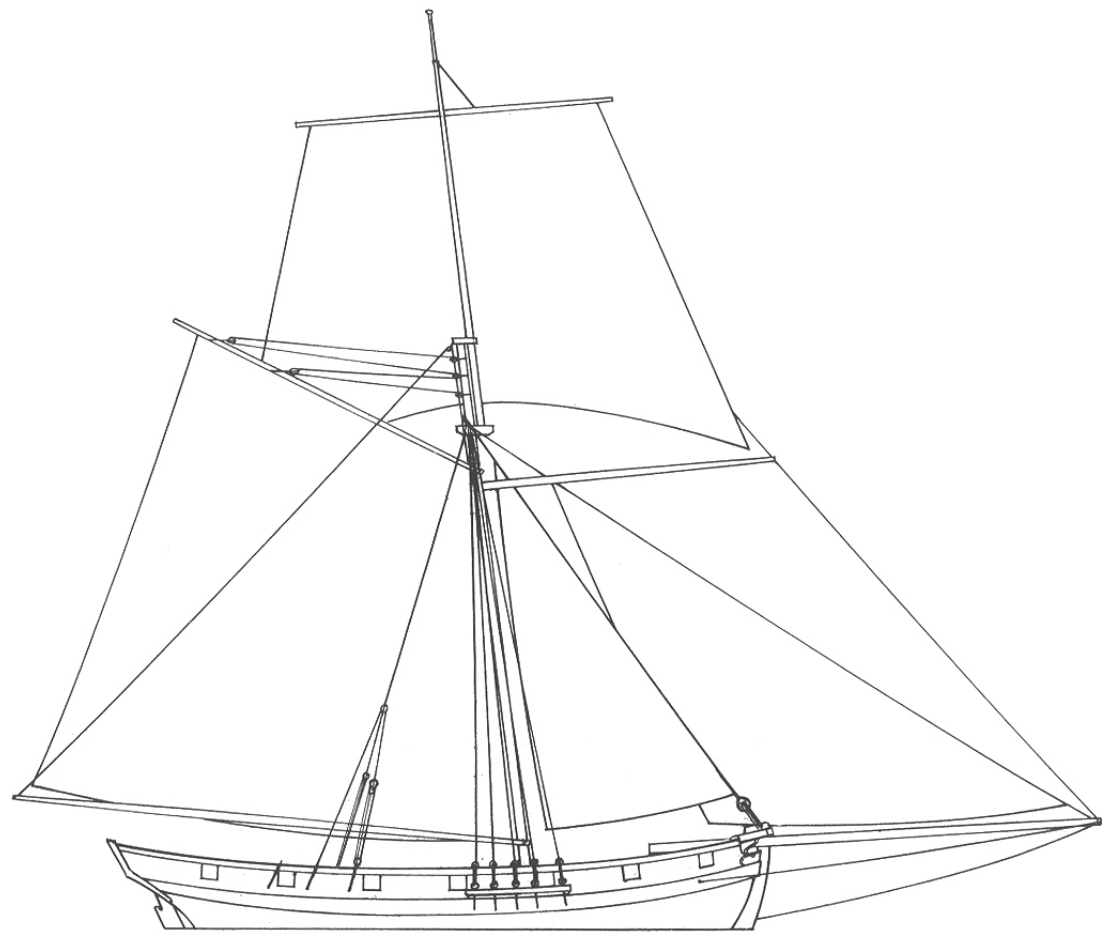


Rigging

Period Fore-and-Aft Craft

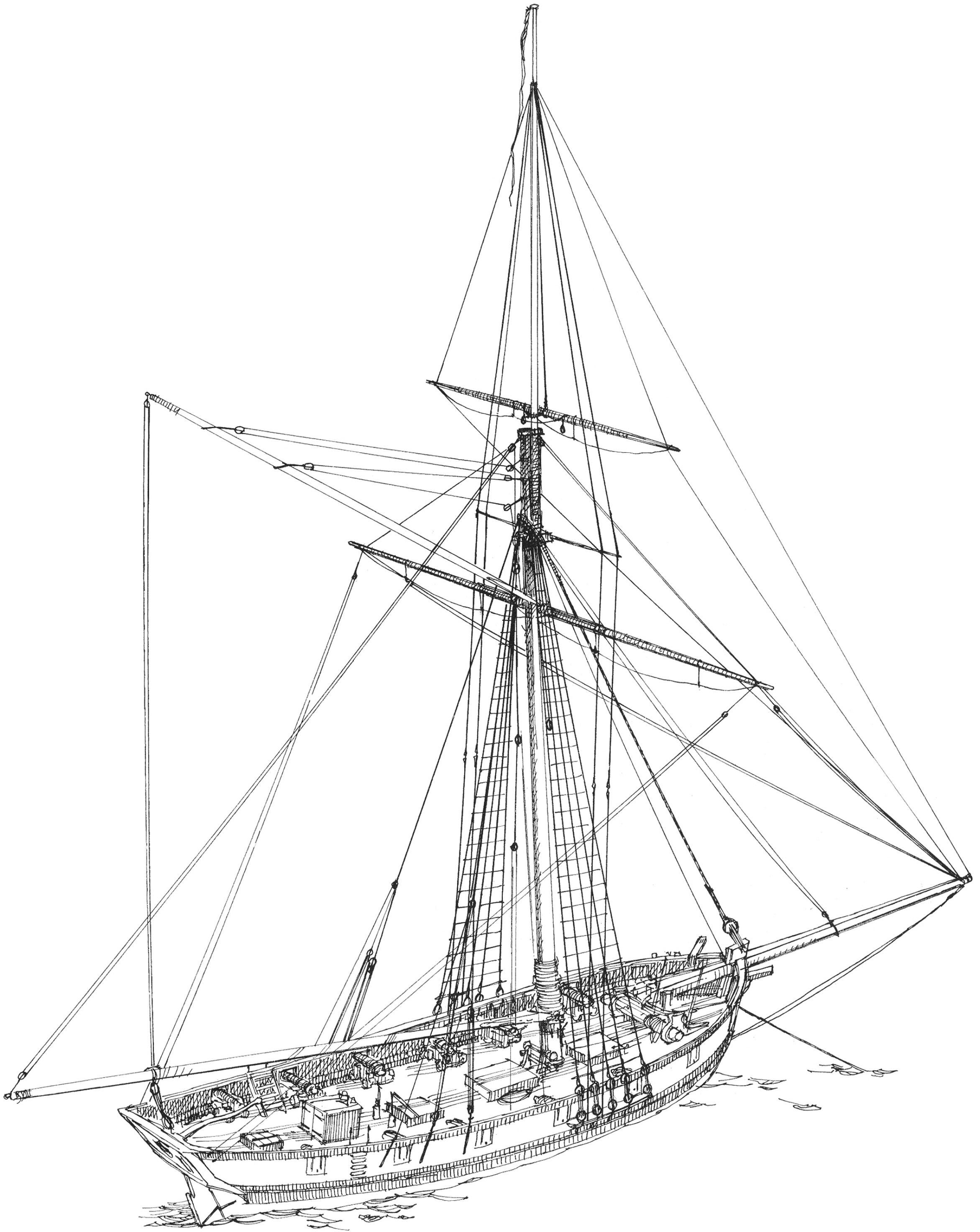


Lennarth Petersson



Rigging

Period Fore-and-Aft Craft



Rigging

Period Fore-and-Aft Craft

Lennarth Petersson

CHATHAM PUBLISHING

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To Eva

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A fleet of fore-and-afters at anchor has its own slender graciousness. The setting of their sails resembles more than anything else the unfolding of a bird's wings; the facility of their evolutions is a pleasure to the eye. They are birds of the sea, whose swimming is like flying, and resembles more a natural function than the handling of man-invented appliances. The fore- and-aft rig in its simplicity and the beauty of its aspect under every angle of vision is, I believe, unapproachable. A schooner, yawl, or cutter in charge of a capable man seems to handle herself as if endowed with the power of reasoning and the gift of swift execution. One laughs with sheer pleasure at a smart piece of manoeuvring, as at a manifestation of a living creature's quick wit and graceful precision.

JOSEPH CONRAD

The Mirror of the Sea

Introduction

AS A PROFESSIONAL ILLUSTRATOR and an amateur model-maker I have, along with many others, often found it so difficult to find detailed information about ships and vessels that I have wanted to depict or replicate. This is particularly true when it comes to the rigging of ships, and particularly the rigs of smaller craft. My first book, *Rigging Period Ship Models*, was intended to help modellers, and anyone with an interest in the ships of that period, understand the three-masted ship rig. The enthusiasm with which that book seems to have been received suggested that I should try and do the same for the smaller, fore-and-aft rigged craft.

After searching for suitable prototypes with assistance of the publisher, I finally alighted on three different models representing vessels of a moderate size. These are an American schooner, a British naval cutter and a French lugger.

Ship models are fascinating objects to study, and it is easy to be drawn into a world of fantasy onboard, but it was important to stick to the task I was pursuing and the more I became acquainted with the ships, the more I have realised the limits of my own knowledge. I have, as in my previous book, attempted to describe and illustrate no more than the rigs of these vessels. Readers wanting more information on the design, construction and careers of these sorts of craft will need to look elsewhere.

The model of the American-built schooner *Experiment* was made in Sweden some time after she was bought into the Swedish Royal Navy in 1812, and it differs somewhat from the drawings published by Howard Chapelle in his *The Search for Speed under Sail*. The model does not carry any sails but I have made an attempt at reconstructing them, with the exception of the middle staysail, not having found any reliable representation of such a sail. I also show two versions of the main topsail, as the model does not carry any spar indicating which kind of sail was used.

Drawings preserved in the War Archives in Stockholm of Falk and L' Aigle, both of which were built on the lines of the Experiment, show different versions.

Likewise, the model of the naval cutter does not carry any sails and I have chosen to show only the jib and the foresail. Nevertheless, I hope the reader will be able to deduce and reconstruct the topsail and the mainsail from all the other drawings depicting the spars and the running rigging which are to be seen in the original model.

The French lugger is the most complete model and perhaps the most suitable to replicate with sails. The rig of the model is straightforward and functional, and is also the one that seems to have been least intervened with over the years.

The book is not intended to be an academic contribution to the field of maritime historical research; as a visual study based solely on three models it is rather intended as an accessible guide for the enthusiast and model shipwright. These contemporary models were all made by people well acquainted with the vessels of the period, and so they can be seen as representing some of the best evidence of the way these craft were rigged. Furthermore, there is a real advantage in being able to walk around a three-dimensional model as opposed to looking at a two-dimensional painting; I hope I have been able to bring some of that three-dimensional vision onto the printed page.

It has been exciting to be allowed the opportunity to analyse these models and I hope that the illustrations will be an inspiration to other modelmakers. Personally, I cannot imagine a more beautiful ornament in a home than a ship model, regardless of whether it is made by an ambitious and careful enthusiast or by a professional with a fancy for the sea.

LENNERTH PETERSSON

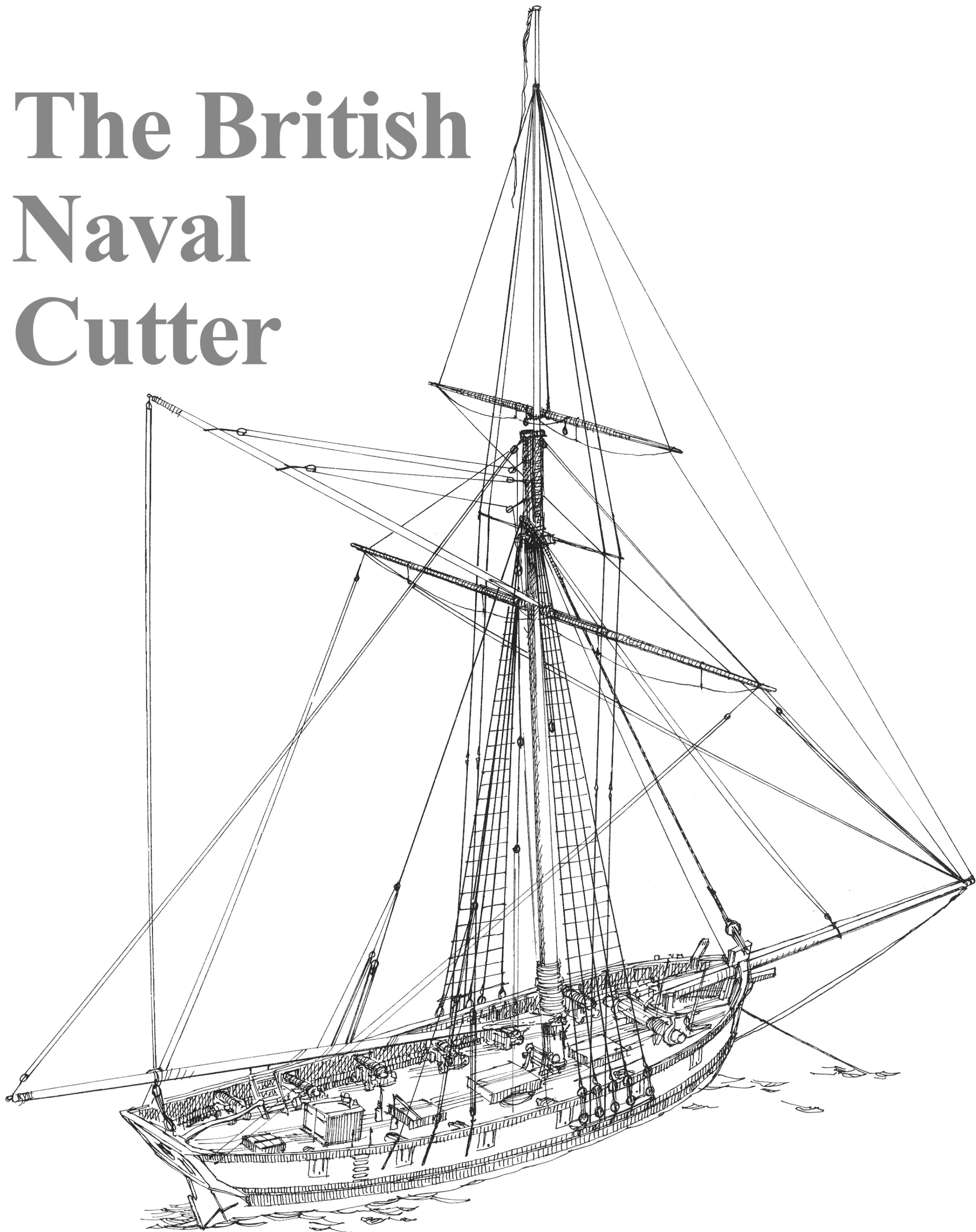
Habo, February 2007

Acknowledgements

The names of the makers of the models are sadly lost in the mists of time, as is so often the case. Fortunately, their skilled work has survived to tell us a story, but without the aid of many persons of great knowledge and learning it would have been very hard for me to create the drawings found in this book.

I am in particular very grateful for the friendship of Manne Dunge, Tom Ohlsson and Per-Inge Lindqvist of the Marinmuseet in Karlskrona, Sweden, and for their help generously given; also for the assistance given me by Peter Fitzgerald of the Science Museum in London and Bernard Bryant of the National Maritime Museum in Greenwich, as well as from Olof Pipping in Alingsas, Sweden. Without the generous assistance and patience, as always, of Julian Mannering of Chatham Publishing this book would not have been launched at all.

The British Naval Cutter



THE FOLLOWING DRAWINGS, portraying the rigging of an eighteenth-century naval cutter, are based upon a rigged model in the Science Museum in London. This model represents one of the larger naval cutters that were built in the second half of the eighteenth century to counter the ever-increasing smuggling trade. It has been estimated that at one point in the mid-eighteenth century there were some twenty thousand professional smugglers at work but only a pitiful collection of thirty revenue boats, small King's ships and under-rigged revenue sloops, to police the entire British coastline. A Parliamentary committee was formed in 1745 to look into "the most infamous practice of smuggling and consider the most effective methods to prevent the said practice." A new generation of revenue cutter emerged after the Seven Years War, developed by the Navy, and these were evolved from the fast trading craft that had been used in the Channel in the previous decades for both legal and illicit trade. The naval cutters were clinker-built vessels with a broad beam and bluff bows, though fine lined beneath the waterline, and they had a deep draft and low freeboard; in their role patrolling the Channel they were designed to remain at sea in most weathers. To give them the sort of speed that was required a massive sail area was piled on to drive the hull through the water and carry the added weight of, in this case, twelve guns, two carronades and twelve swivels.

Falconer, in his *Universal Dictionary of the Marine*, gives as clear a definition of a cutter of this period as any describing it as 'a small vessel commonly navigated in the Channel of England, furnished with one mast and a

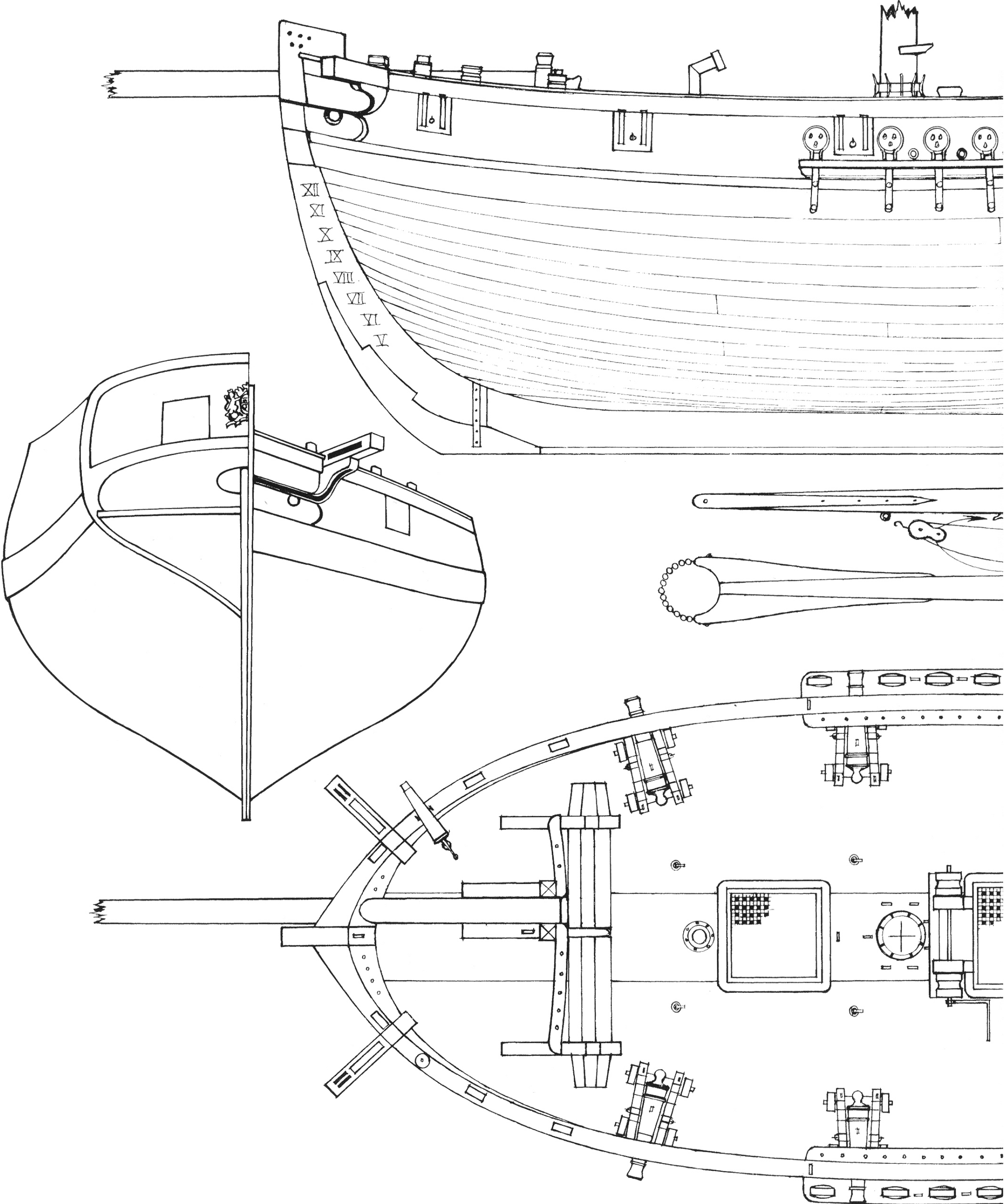
straight-running bowsprit that can be run in on the deck occasionally; except which, and the largeness of the sails, that are rigged much like sloops. Many of these vessels are used on an illicit trade, and others employed by the Government to seize them, the latter of which are either under the direction of the Admiralty or Custom-house'.

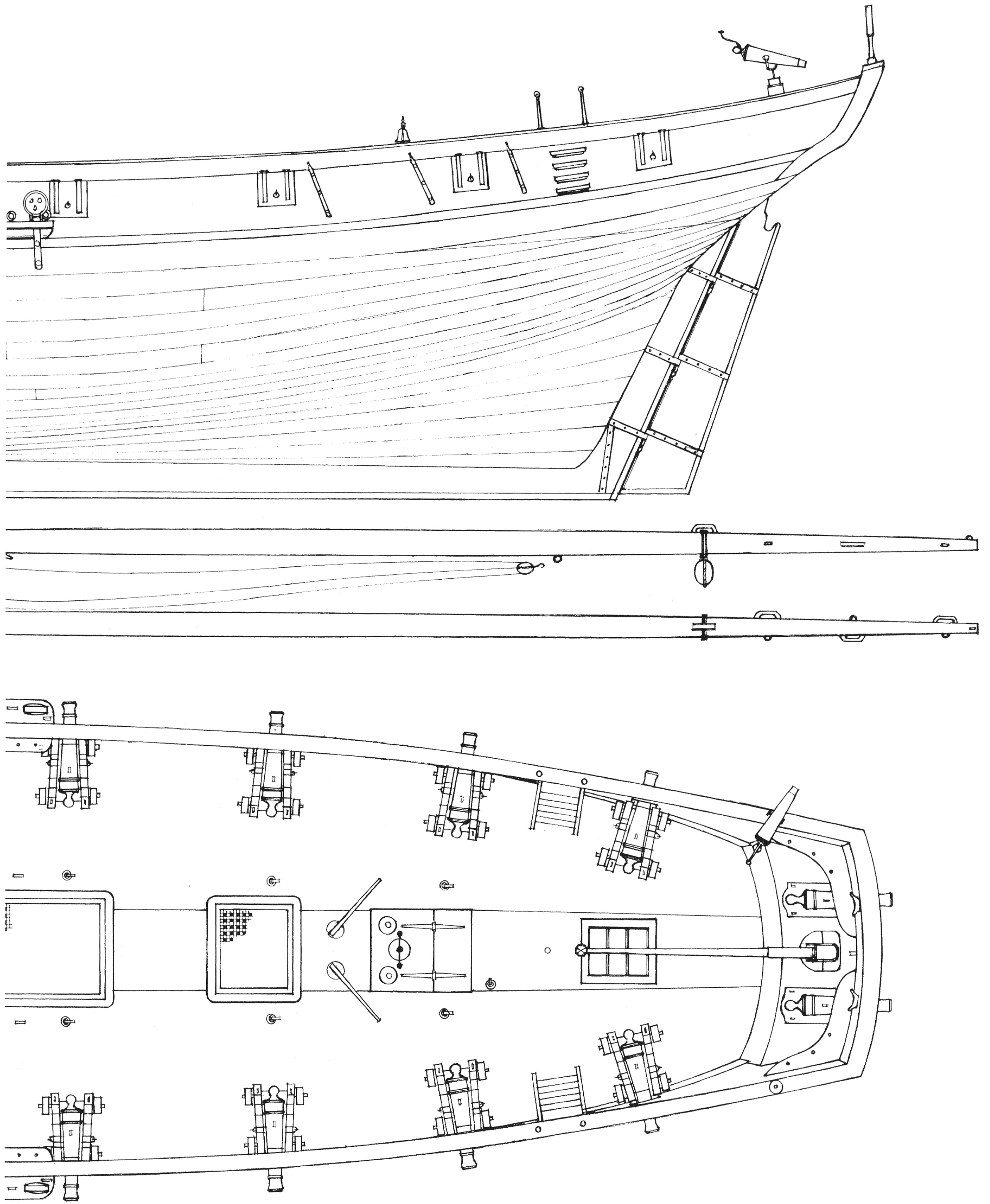
A quick glance at the spars of this vessel confirms the huge sail area. The mast, gaff and boom are all long and the topmast seems almost excessively so; the five shrouds on each side would have been needed to carry the colossal weight of sail and, unlike a sloop, the forestay led to the stem, not to the end of the bowsprit. This horizontal running spar is likewise huge and at its end carried the topmast stay. A square topsail was carried while the spar for a square-sail on the mast is shown just above the deck.

The dimensions measured from the 1:30 scale model are: length of gundeck 69ft, length of keel 49ft, beam 24ft and depth of hold 11ft. The hull of this model is contemporary and its dimensions conform closely to the draught of the *Expedition*, a cutter designed by Sir J Williams and built at Dover in 1778. This draught is held in the draught collection at the National Maritime Museum where there can also be seen a model of the cutter *Hawke*, dated 1777, which offers the rare sight of a full suit of sails.

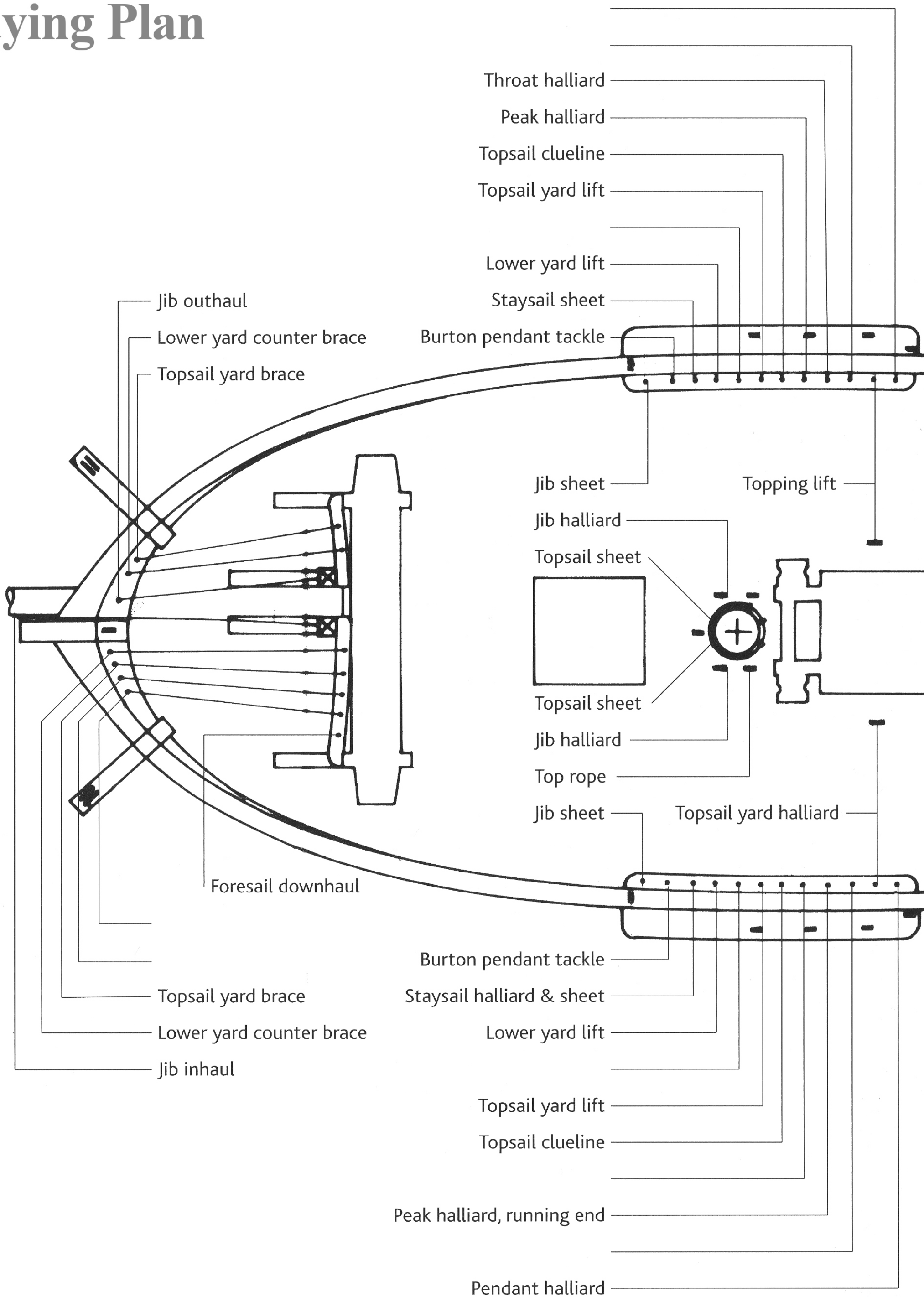
These heavily-sparred cutters were amongst the fastest vessels of their day and they came to acquire other roles in the Navy. Their speed made them fine dispatch craft and their up-wind abilities recommended them for reconnaissance in those waters where the less handy square-rigged vessel found it difficult manoeuvre.

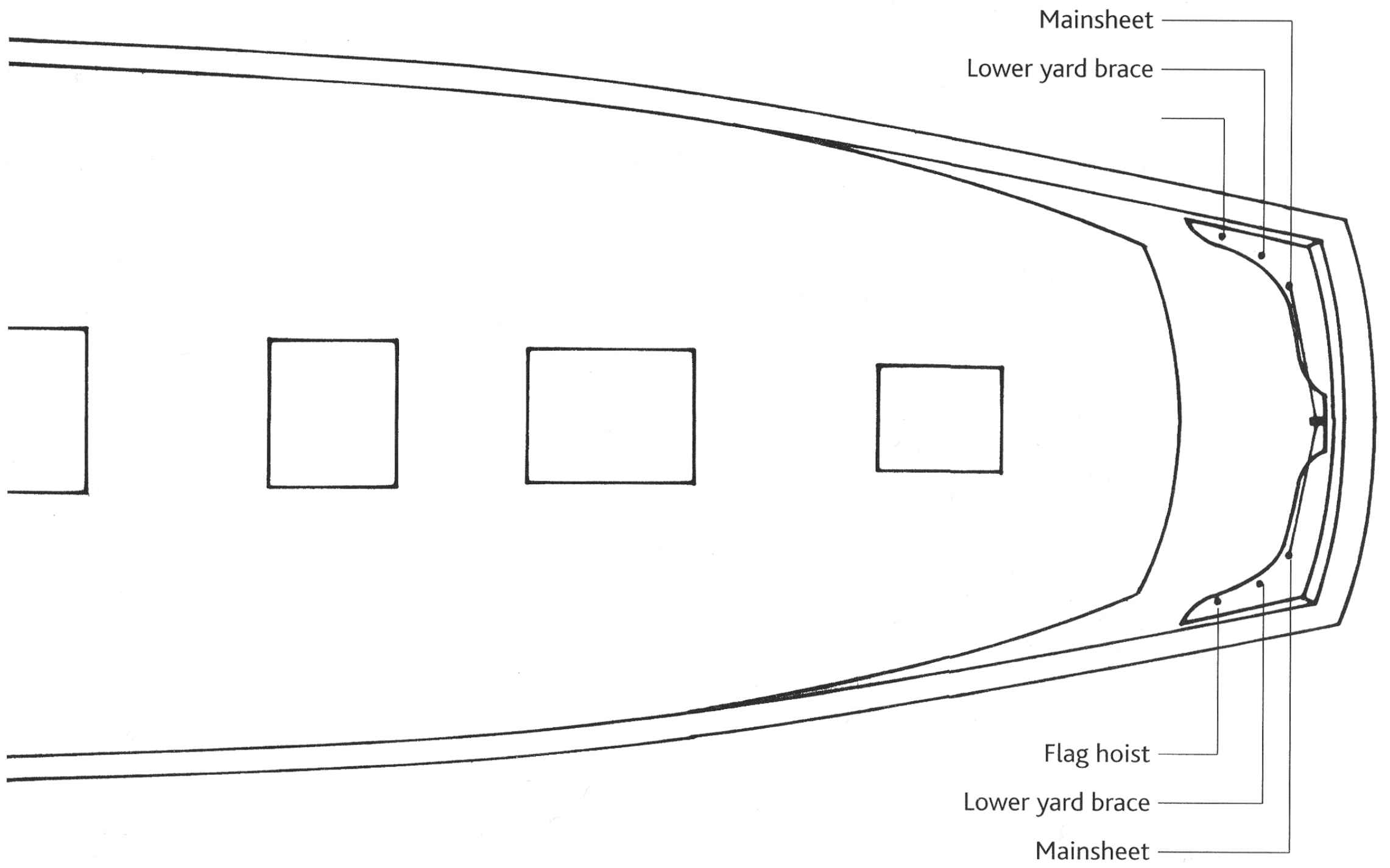
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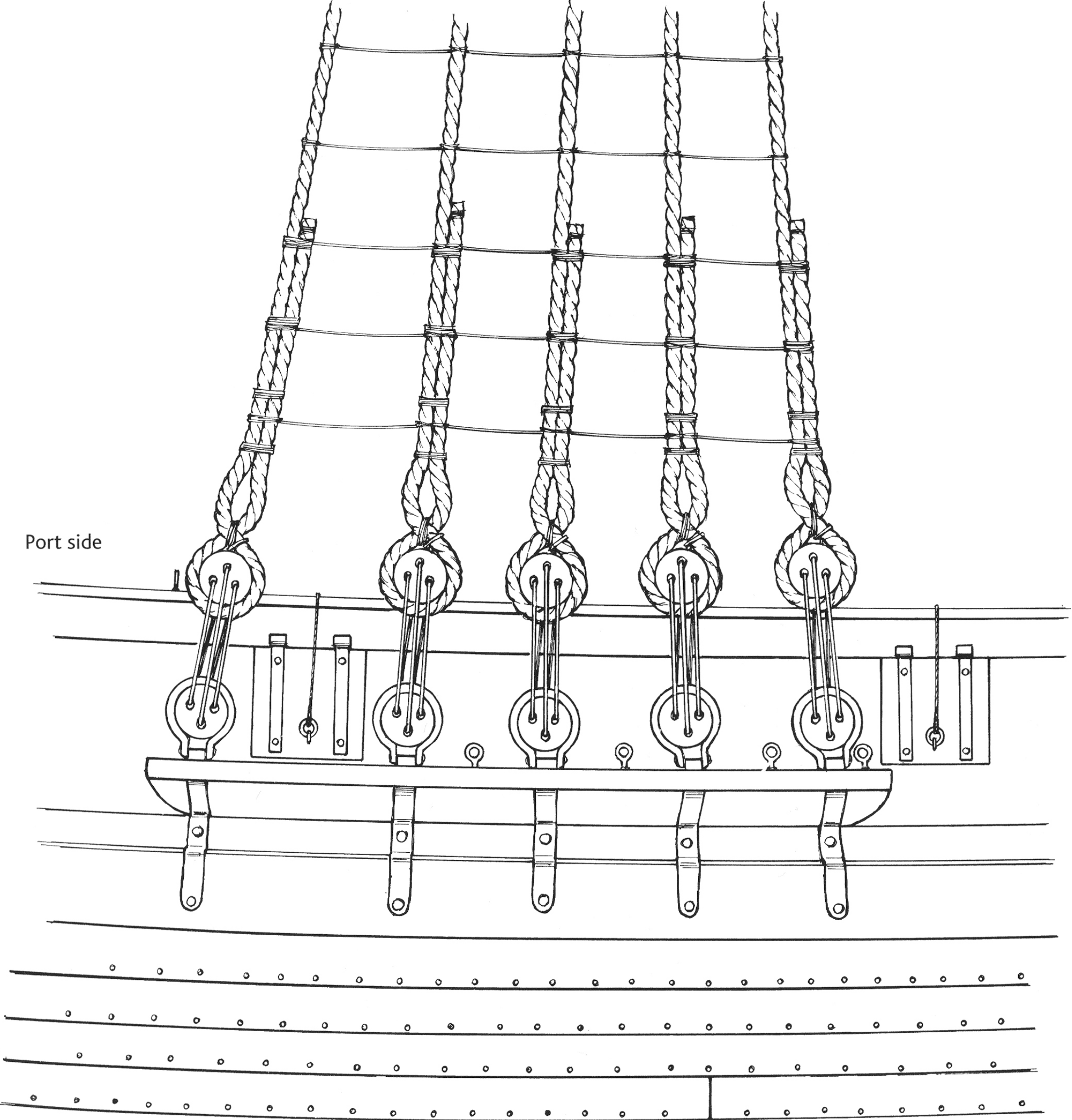


Belaying Plan

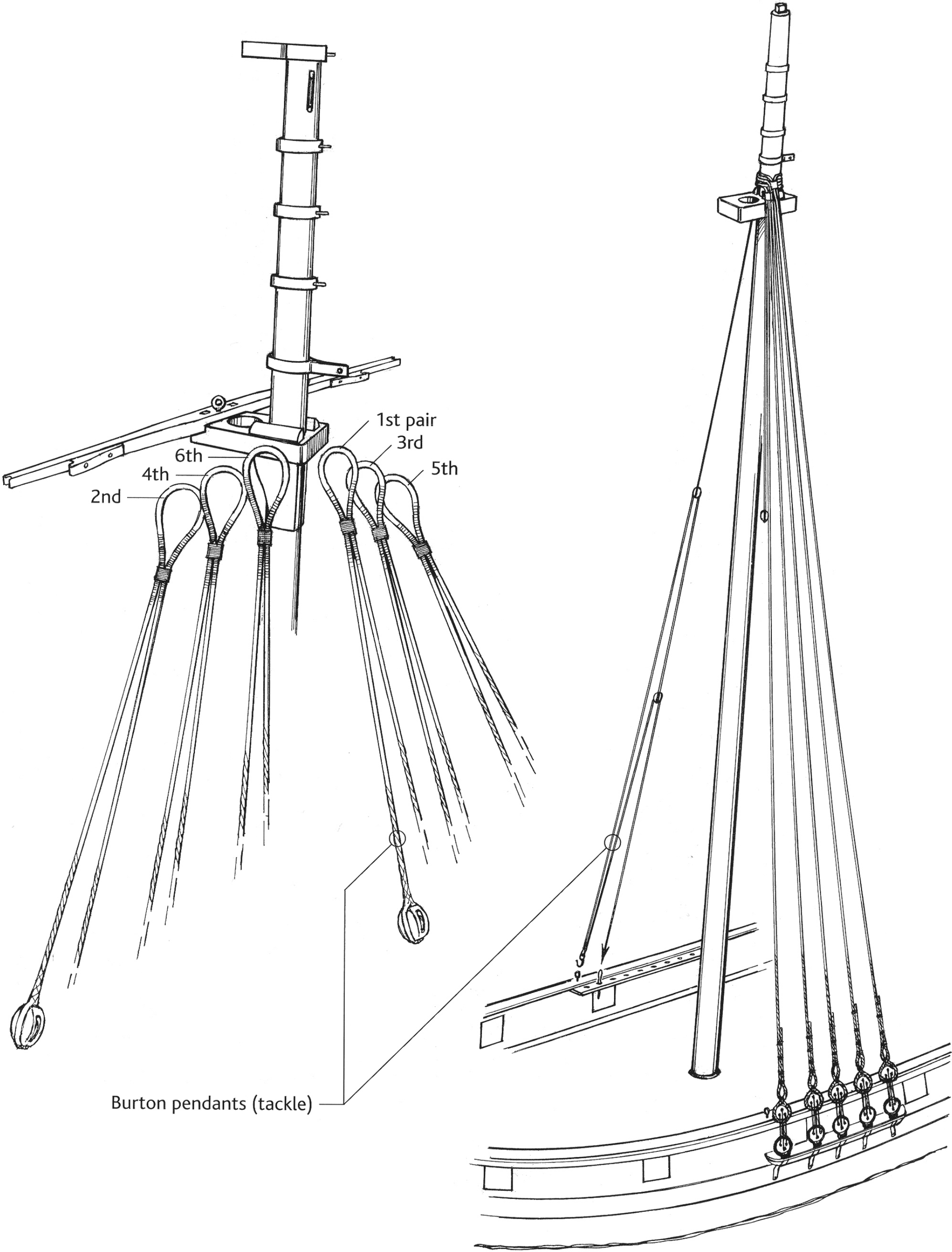




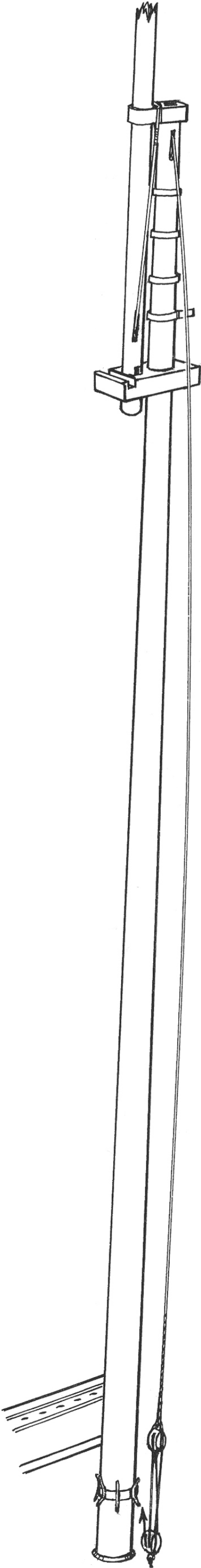
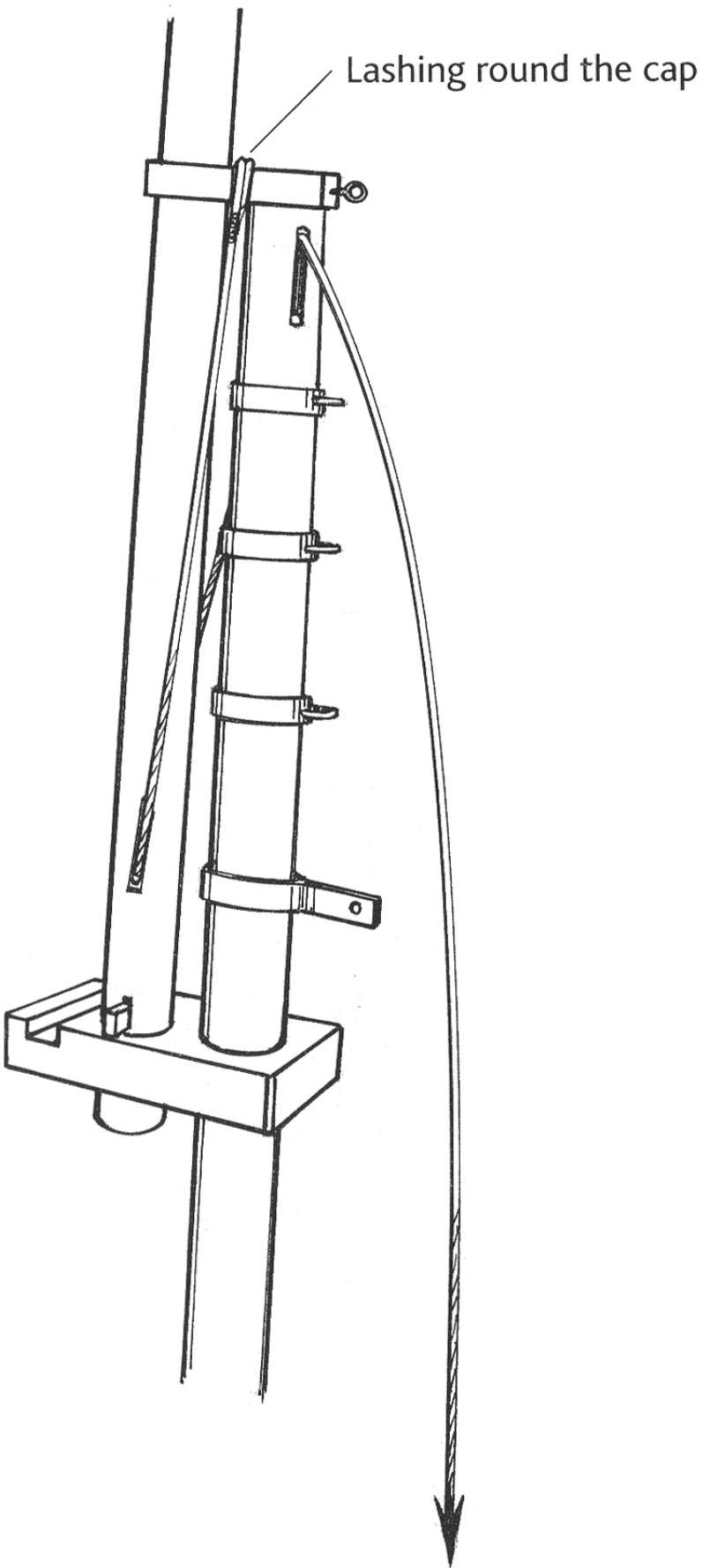
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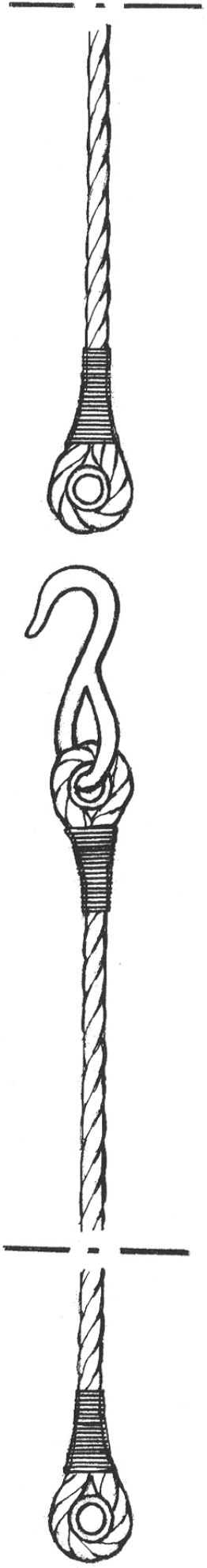
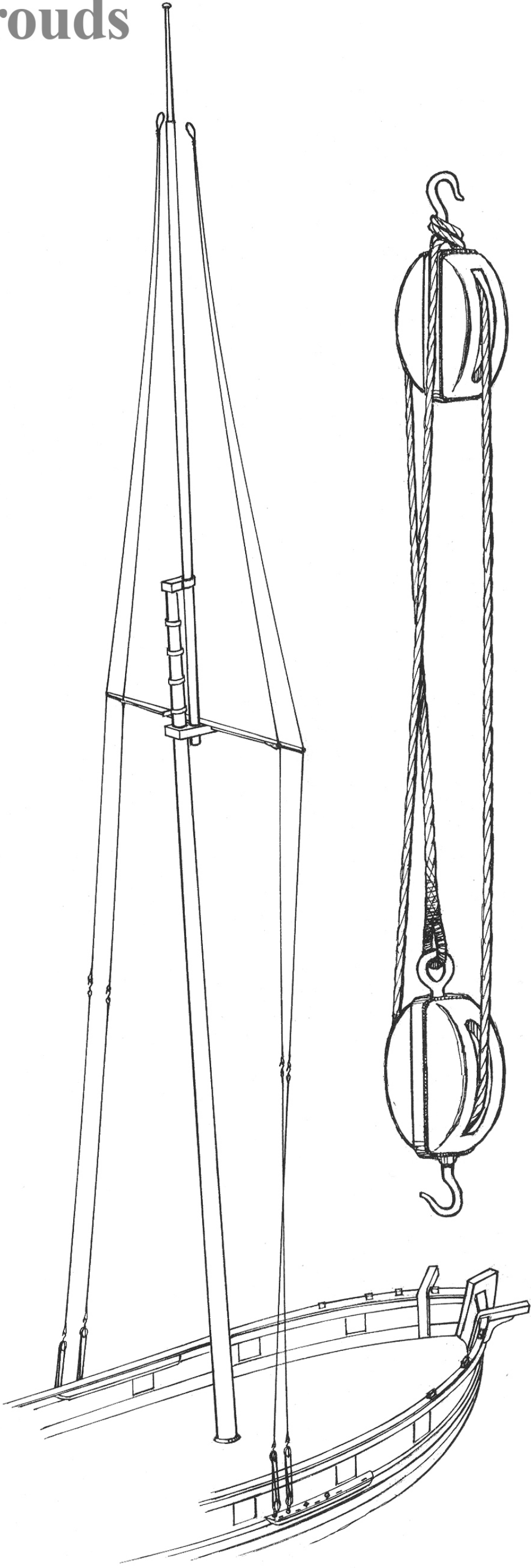
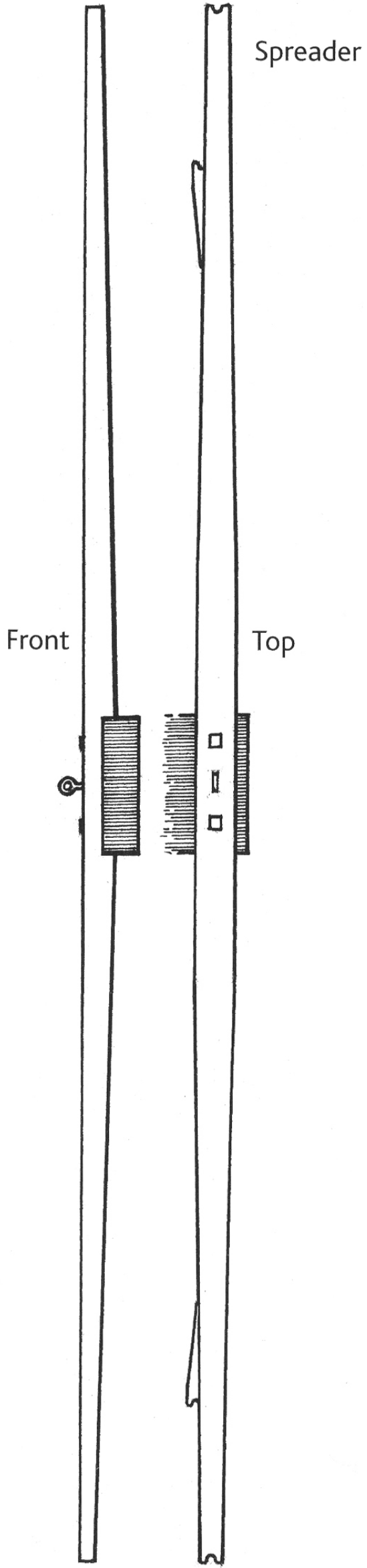
Shrouds



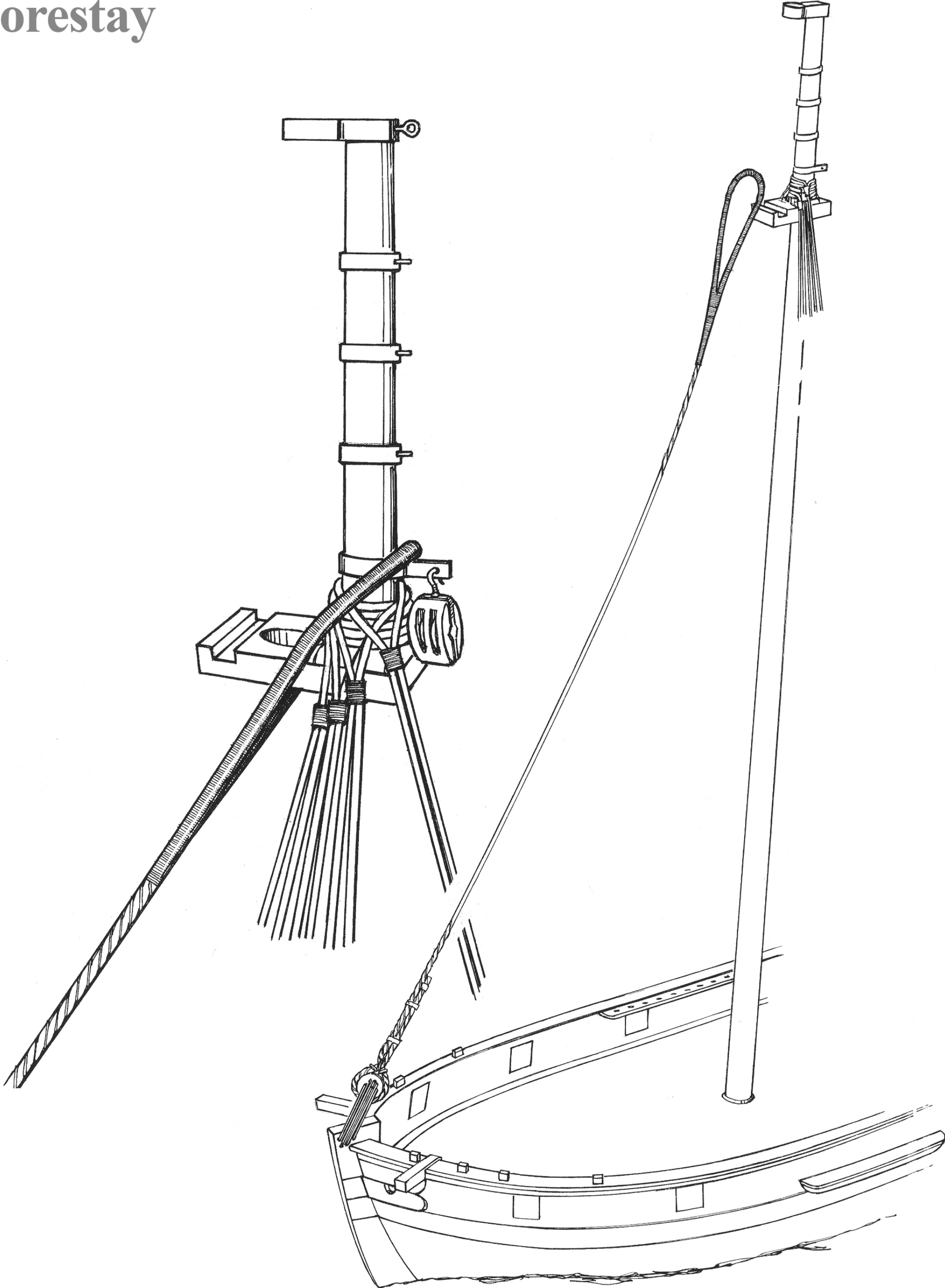
Toprope

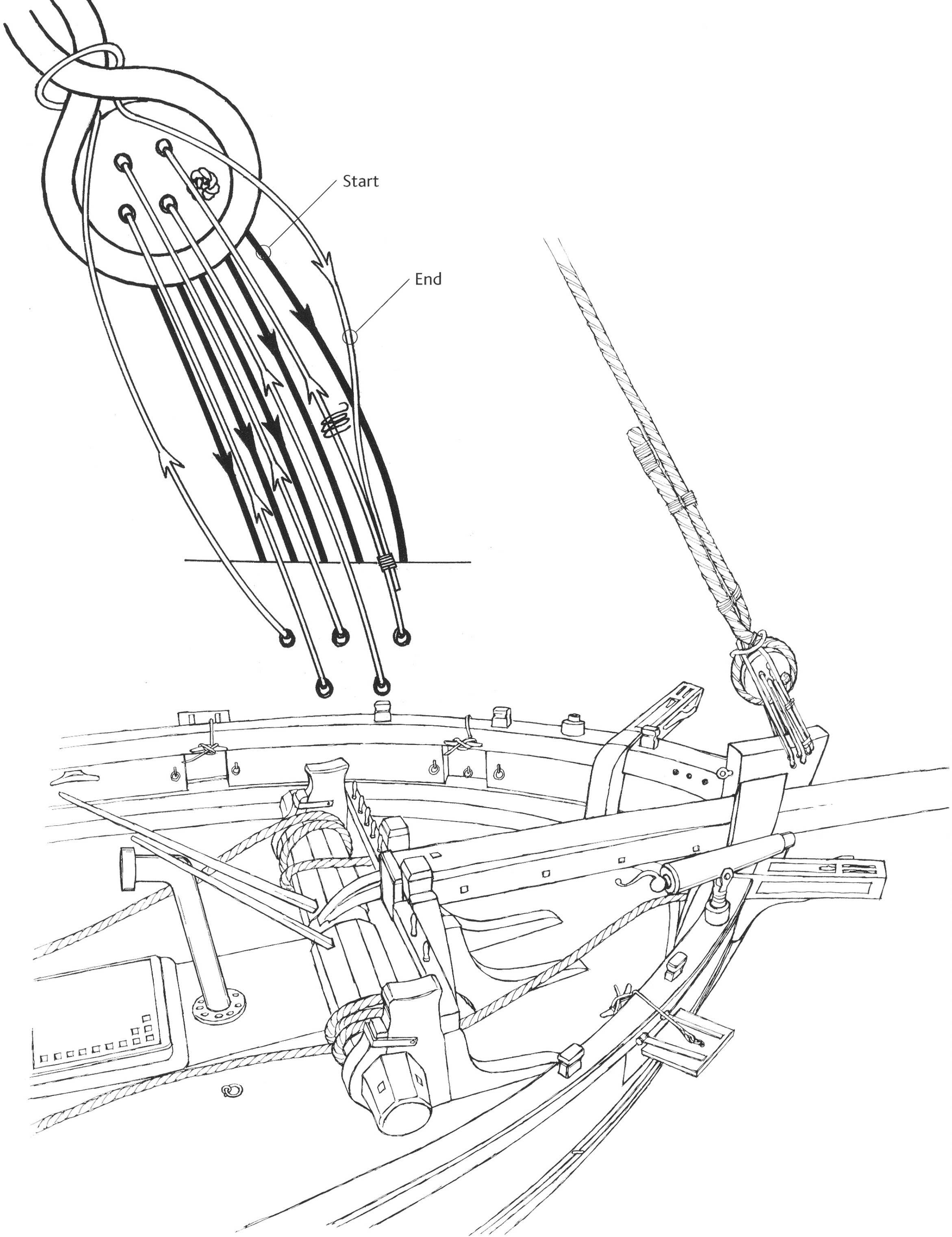


Topmast Shrouds

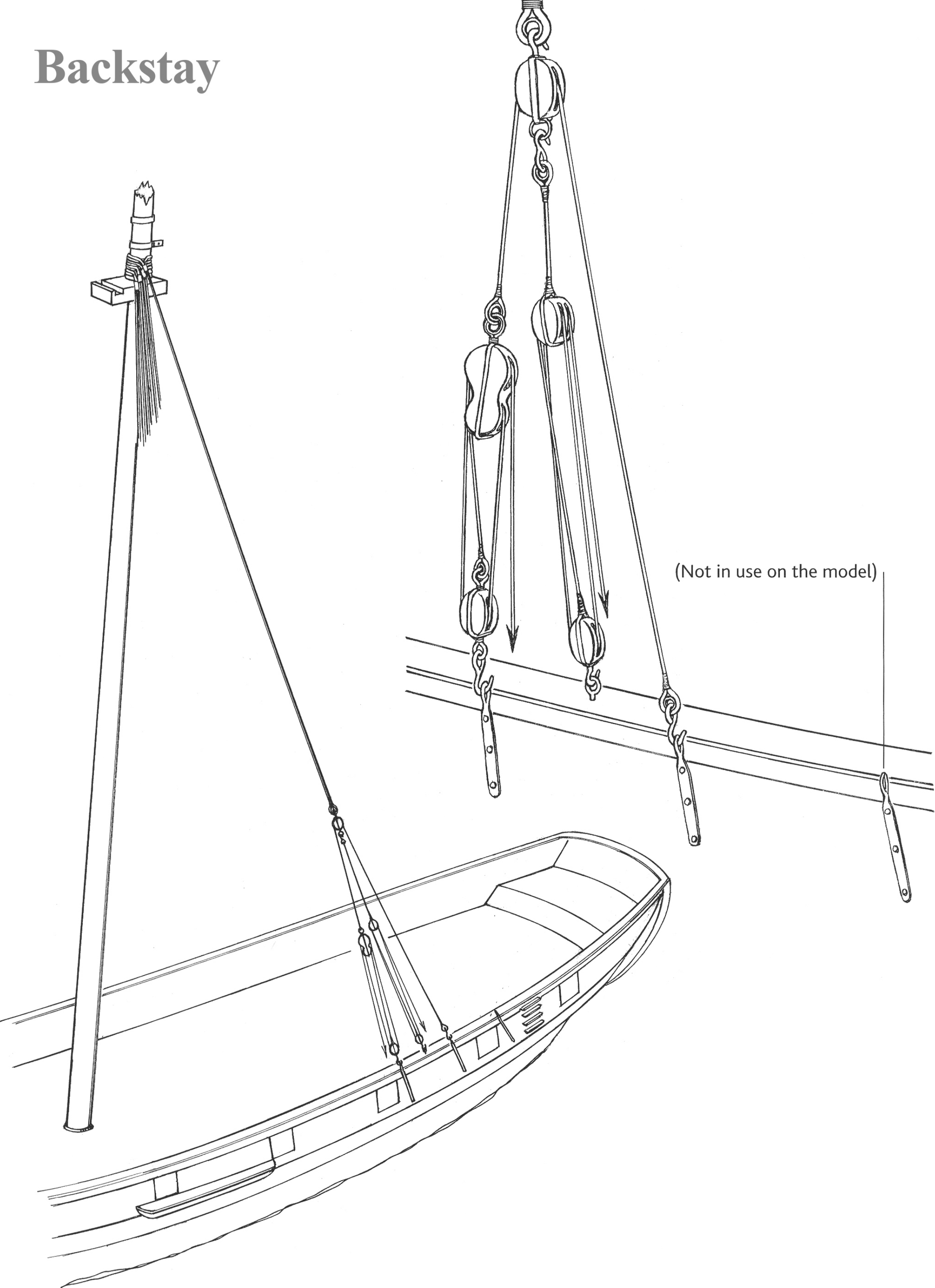


Forestay

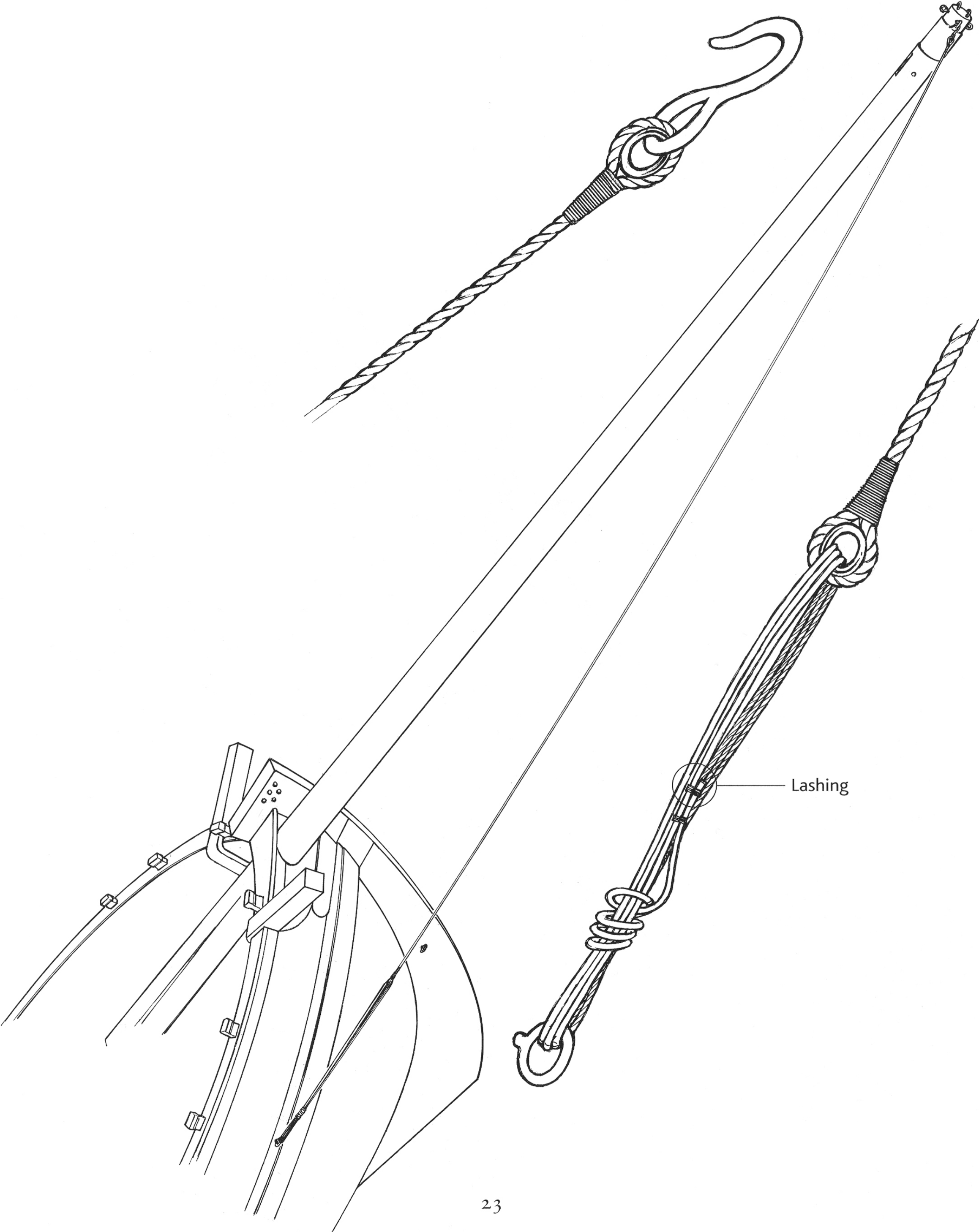




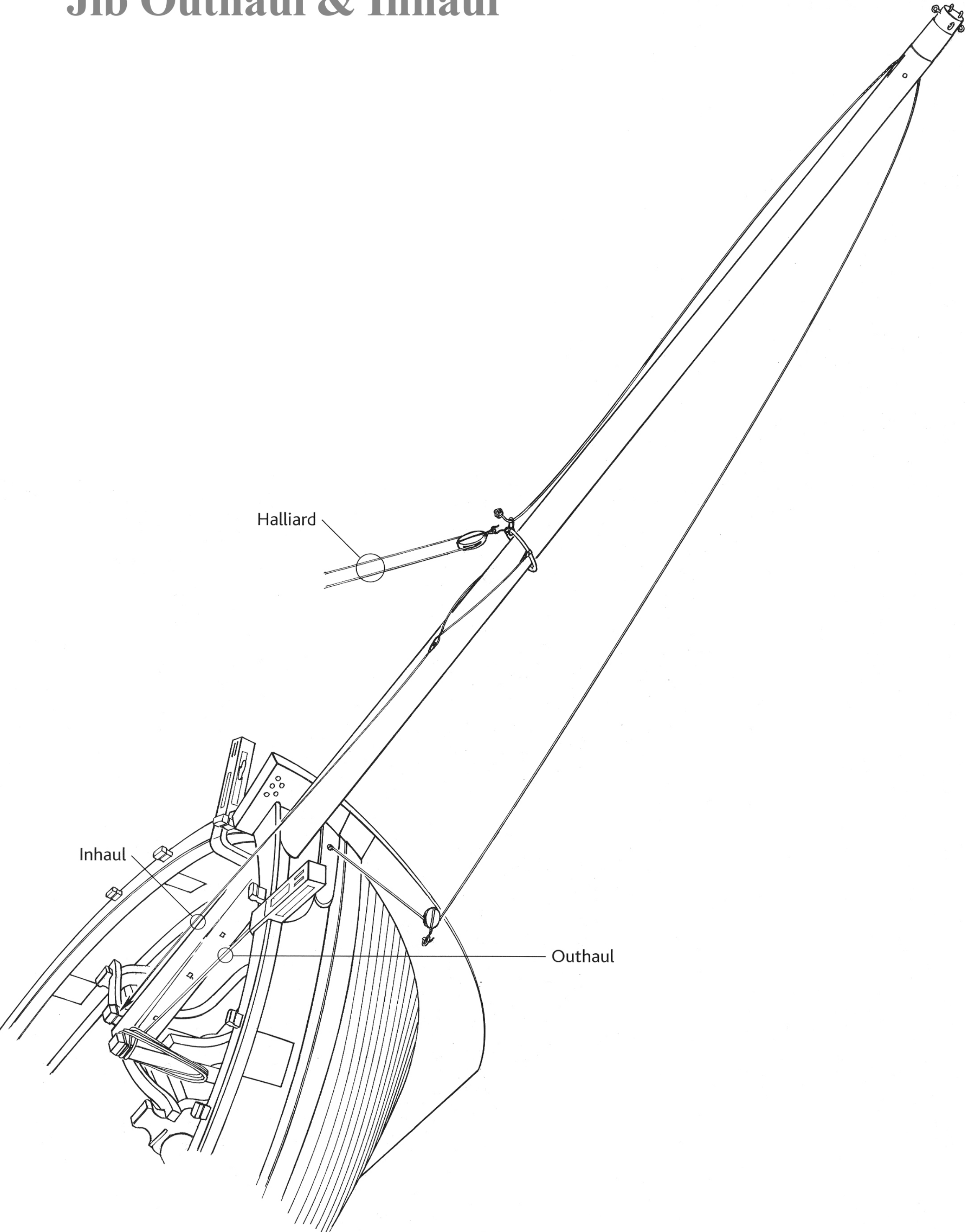
Backstay



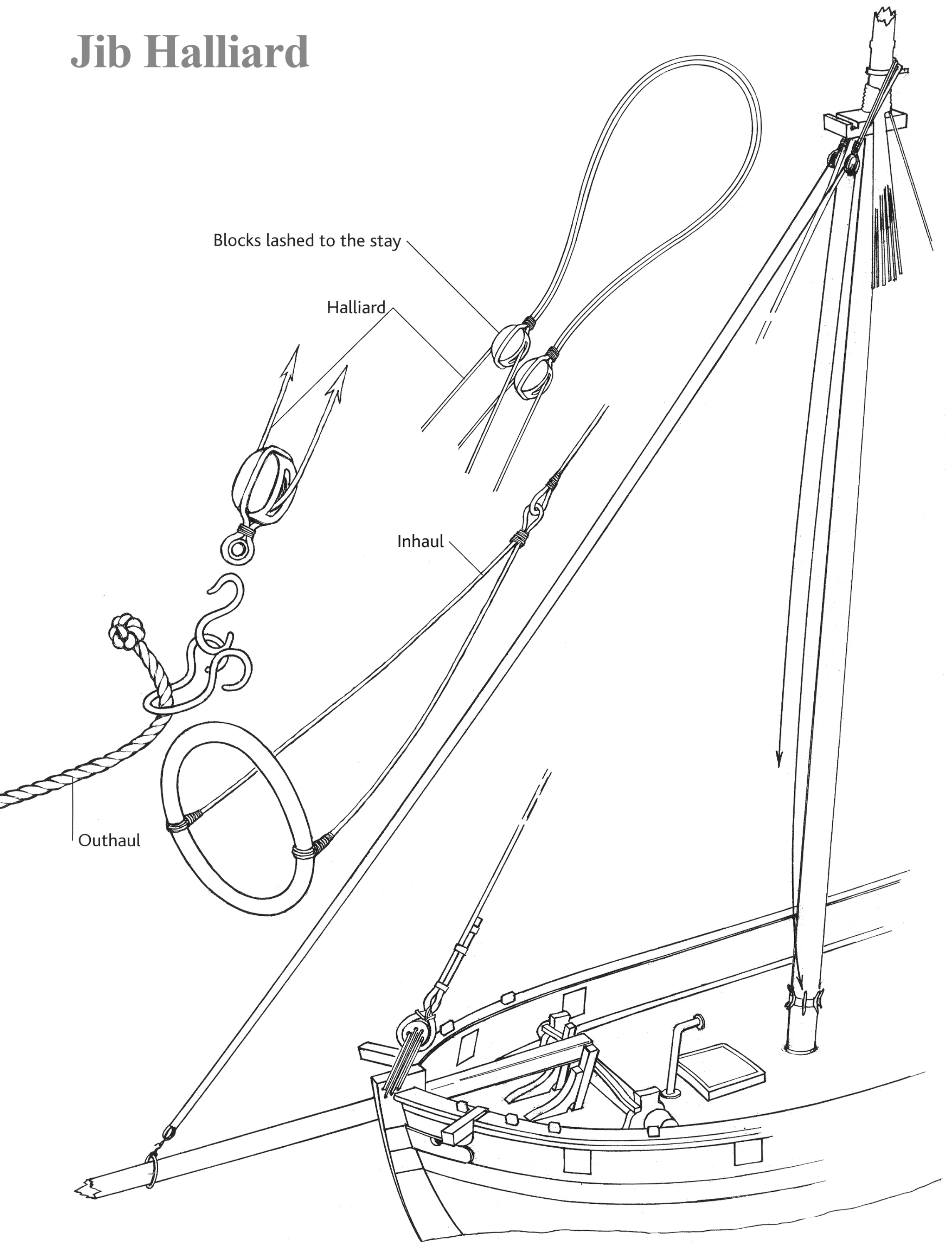
Bowsprit Guys



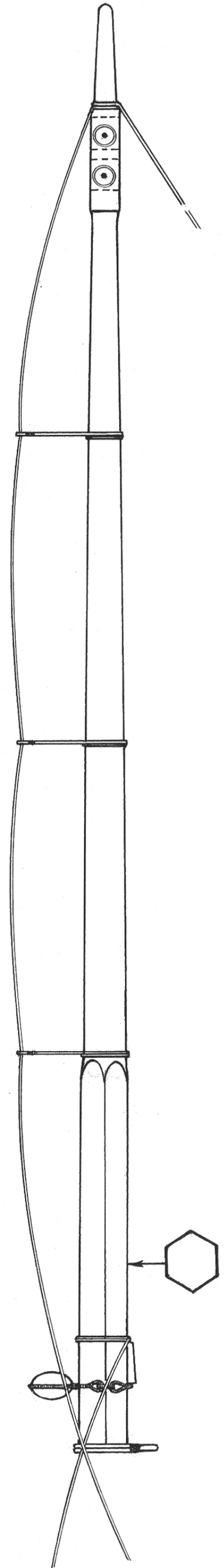
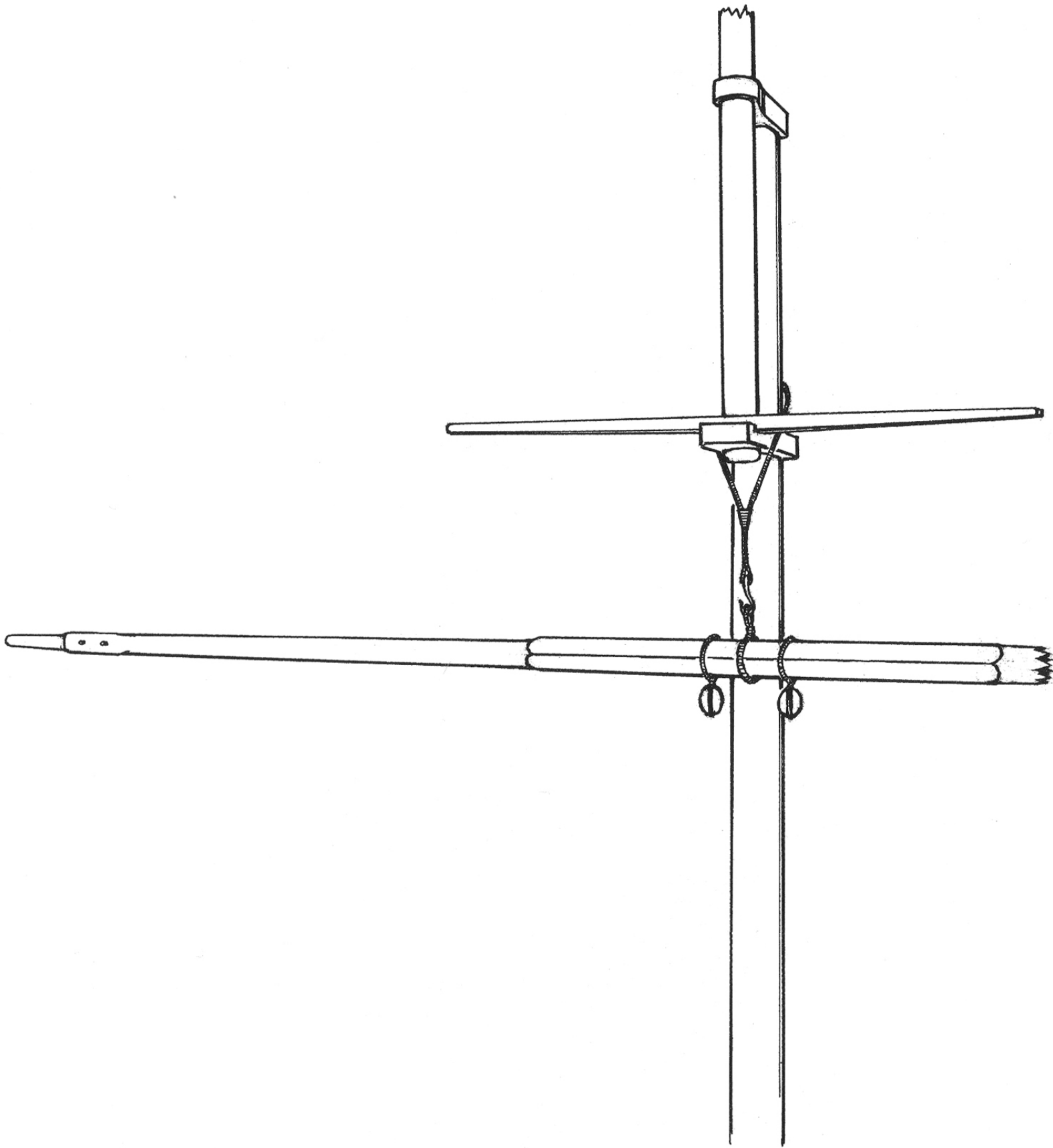
Jib Outhaul & Inhaul



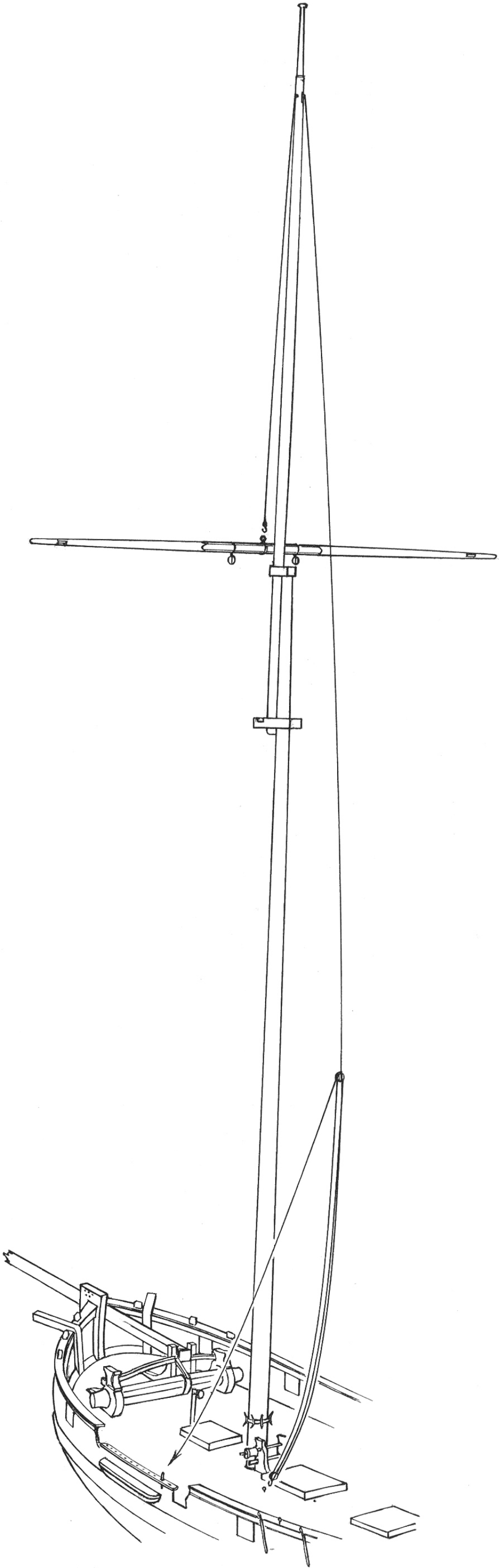
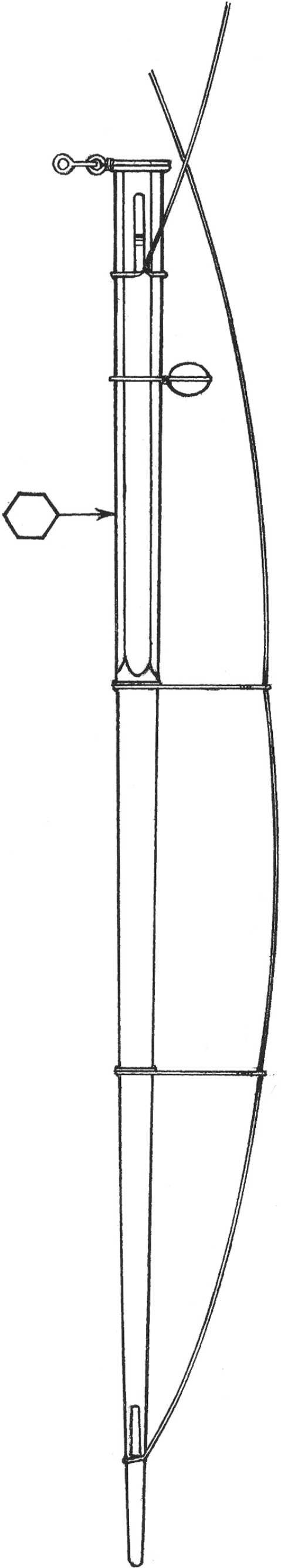
Jib Halliard



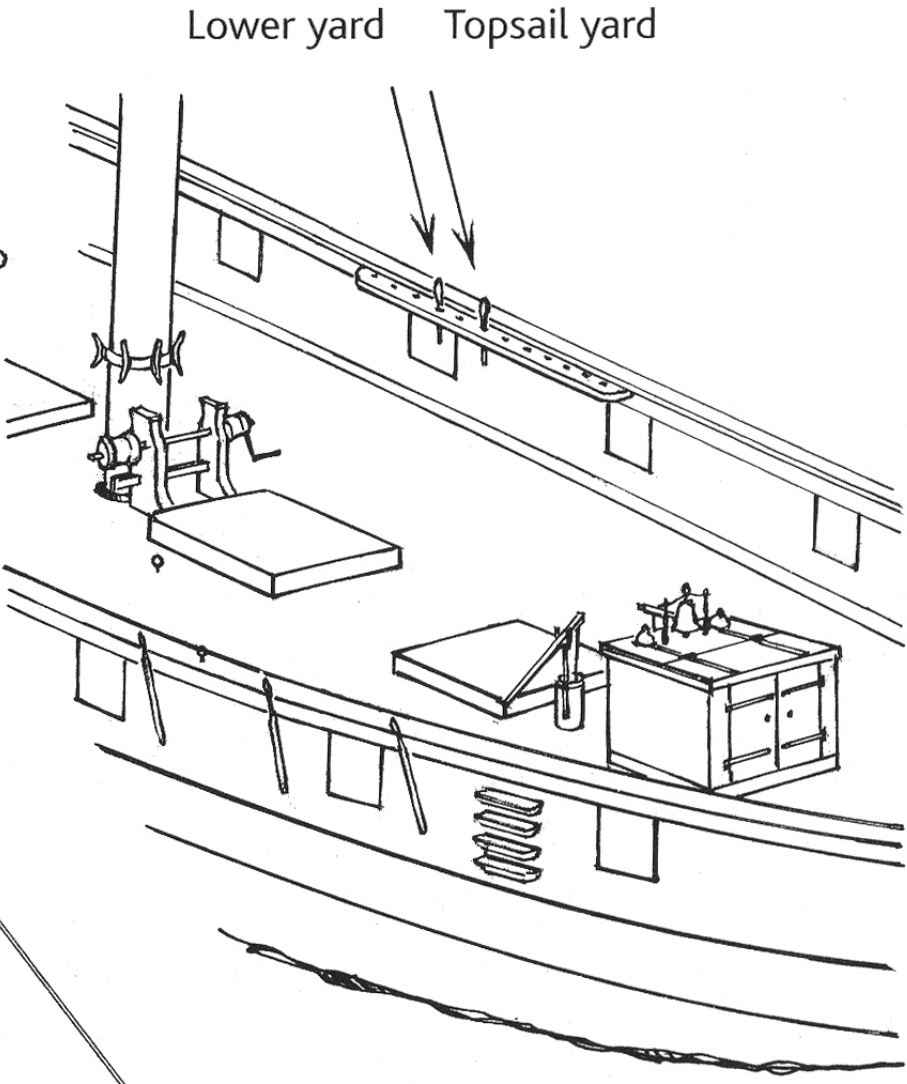
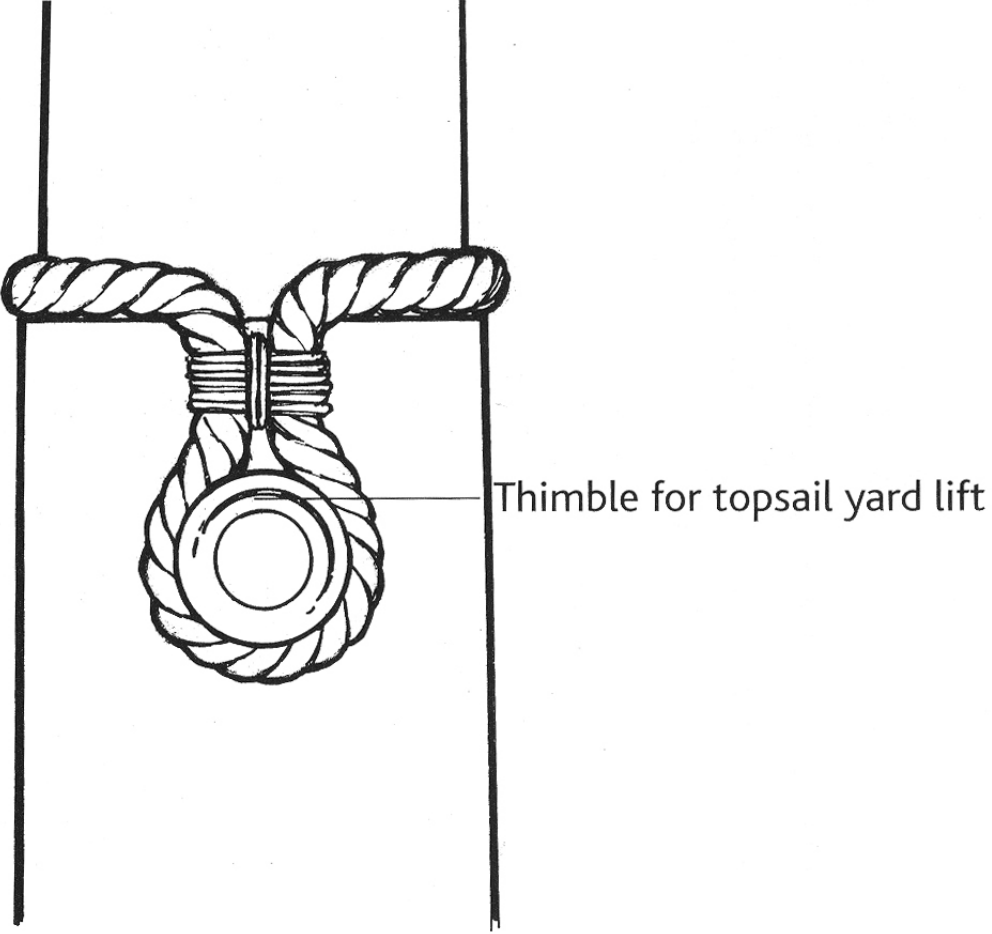
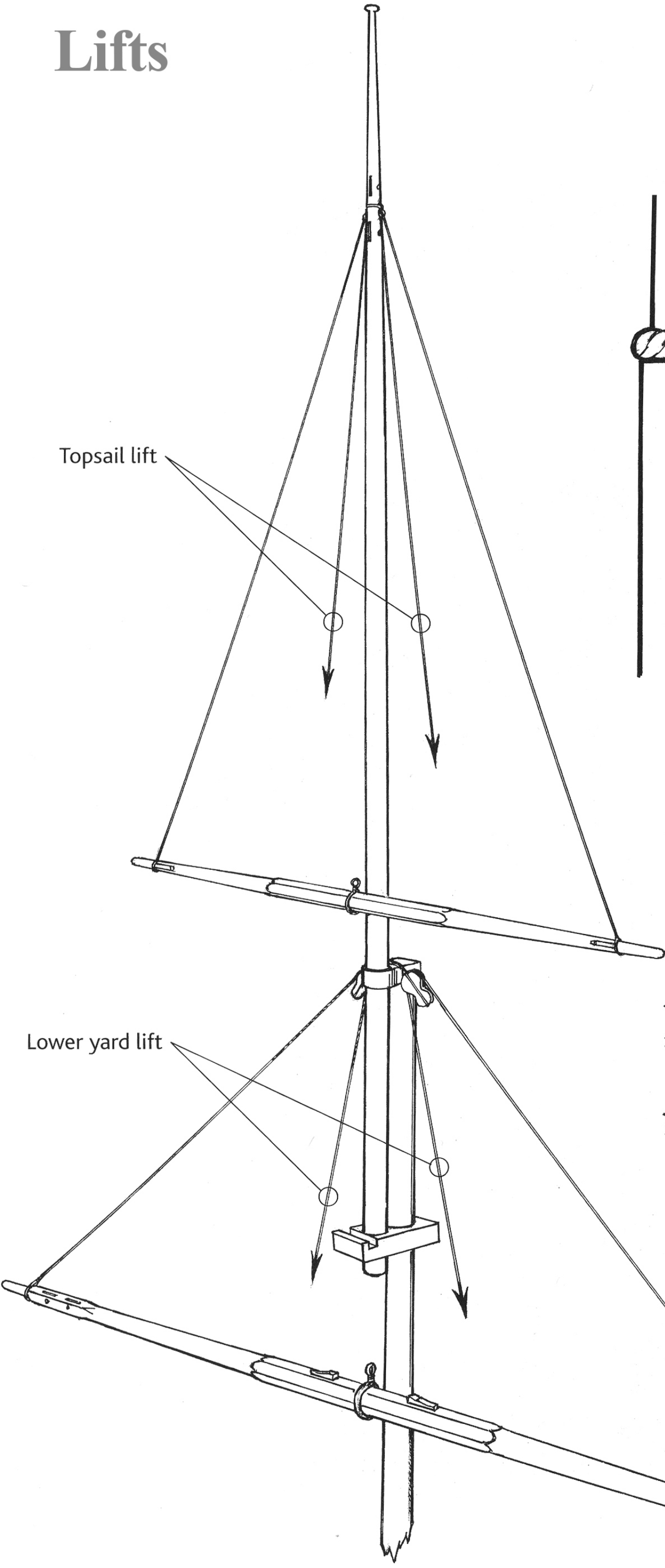
Lower Yard Sling



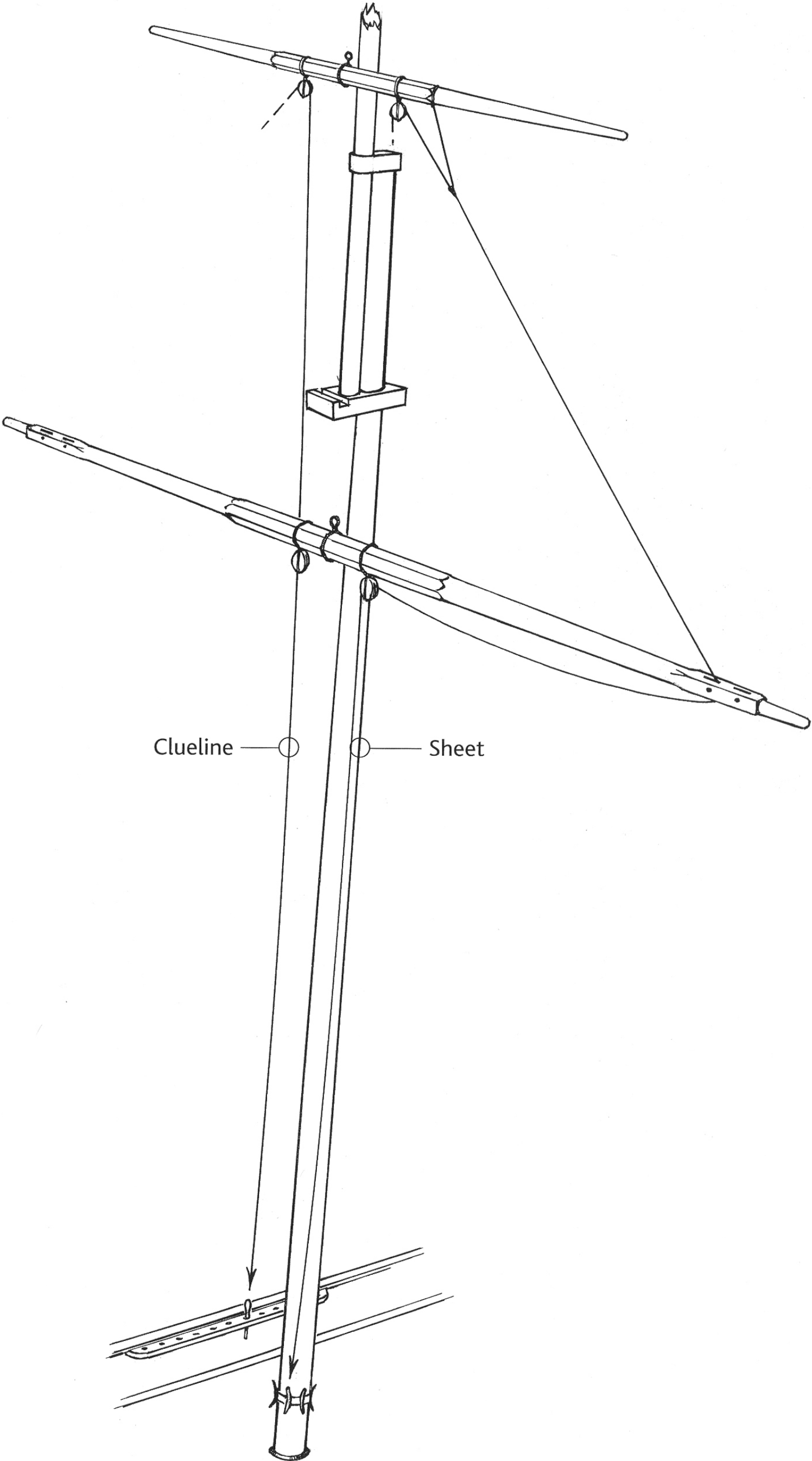
Topsail Yard Halliard



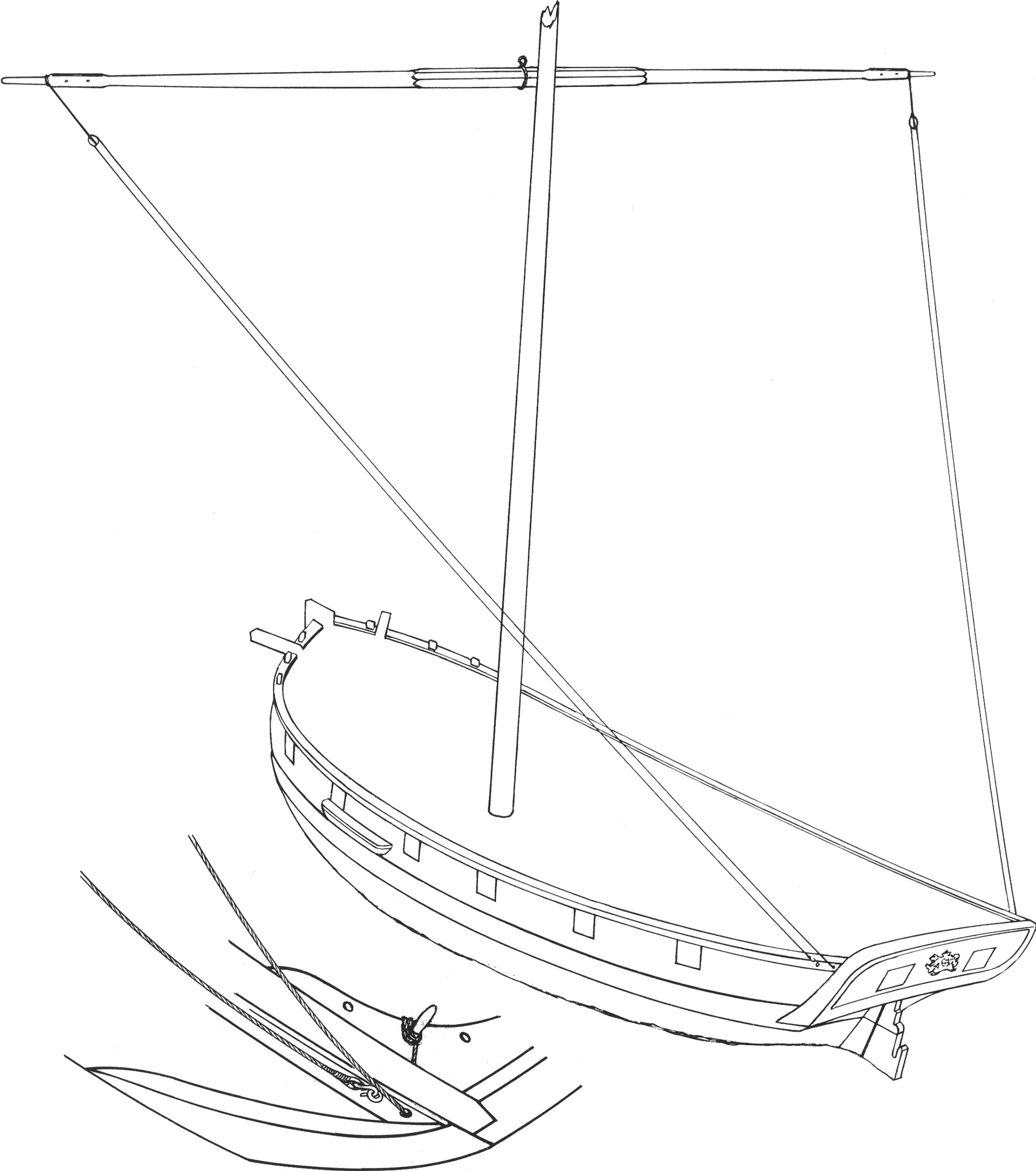
Lifts



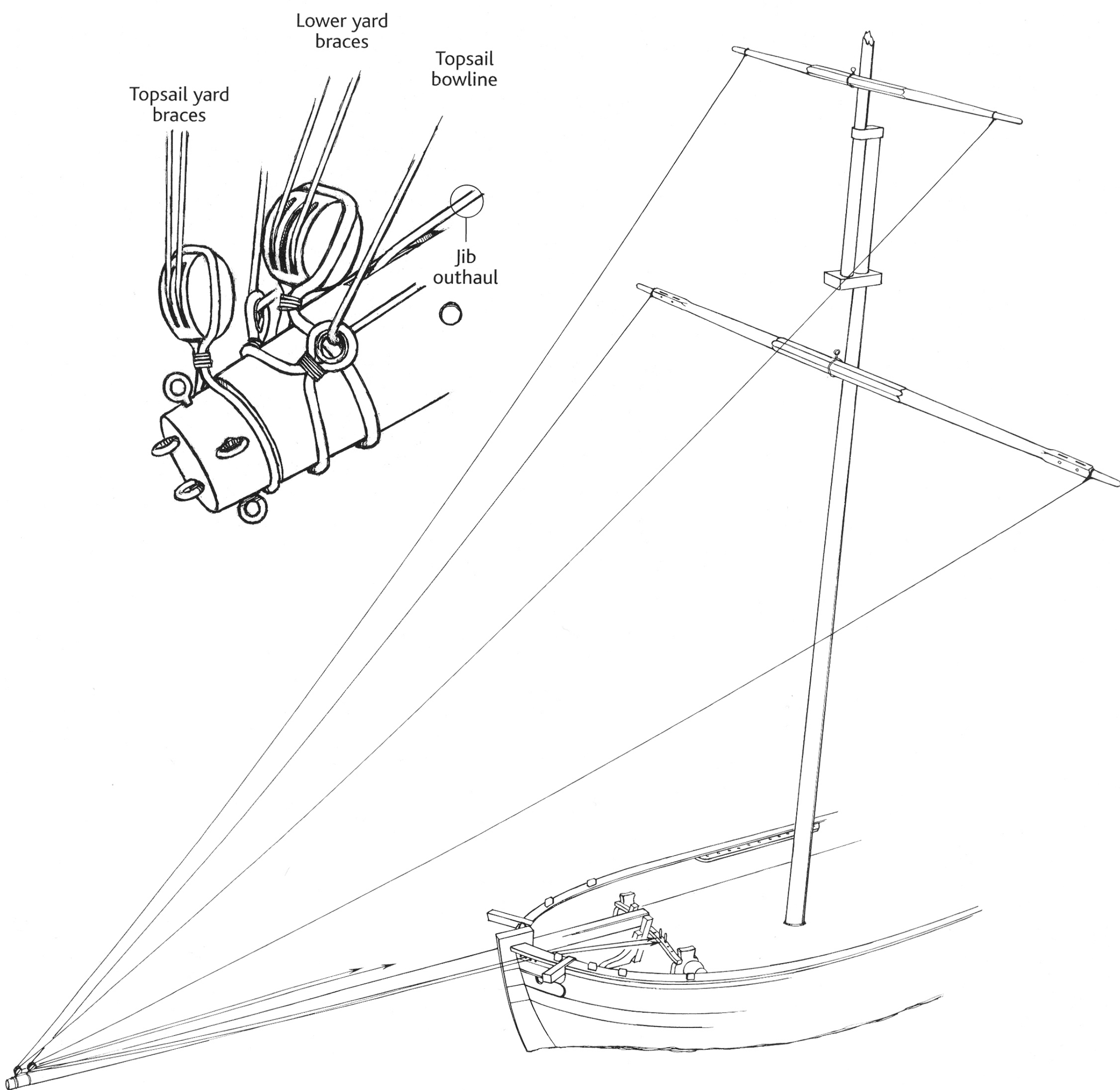
Cluelines & Sheets



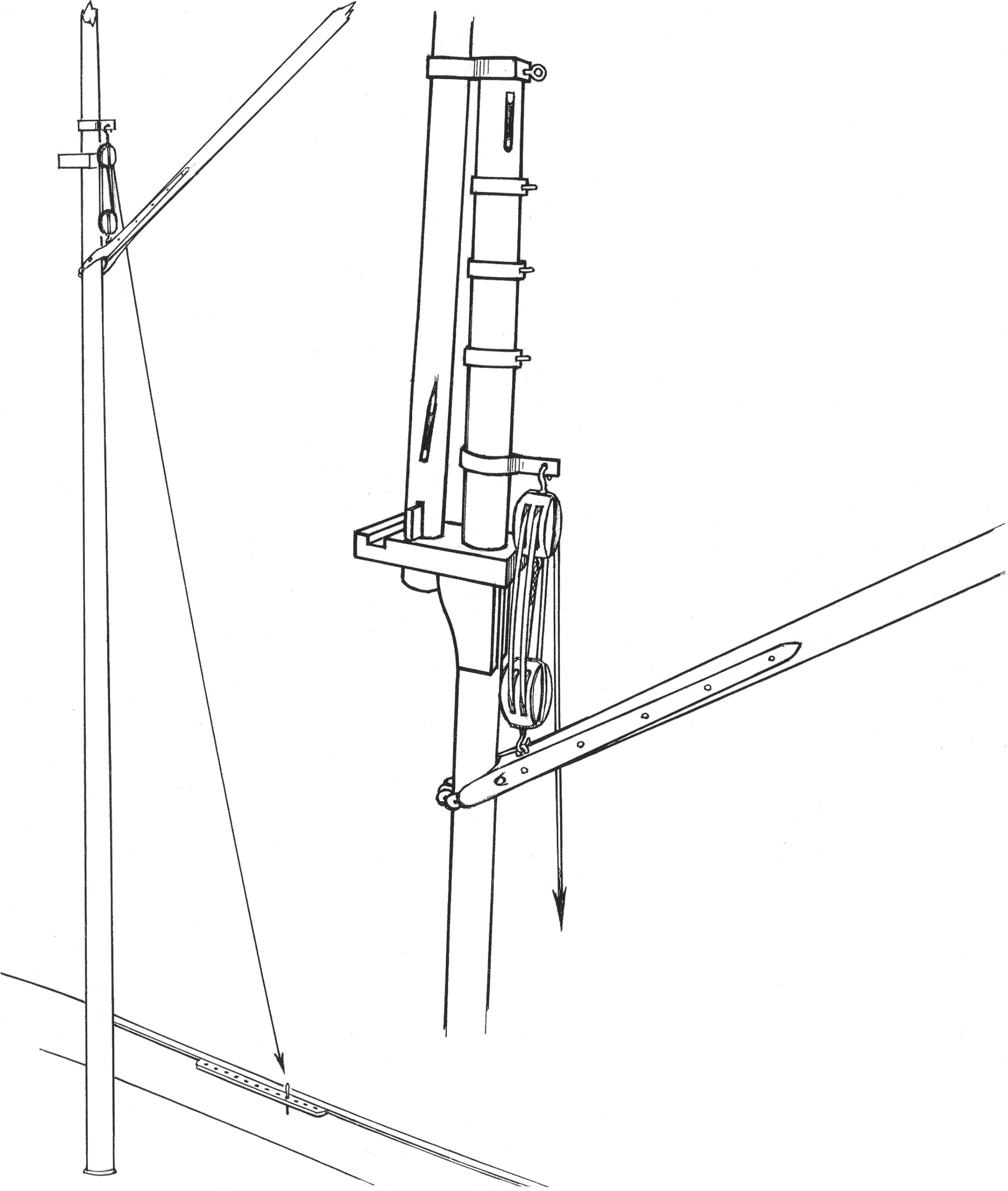
Lower Yard Braces



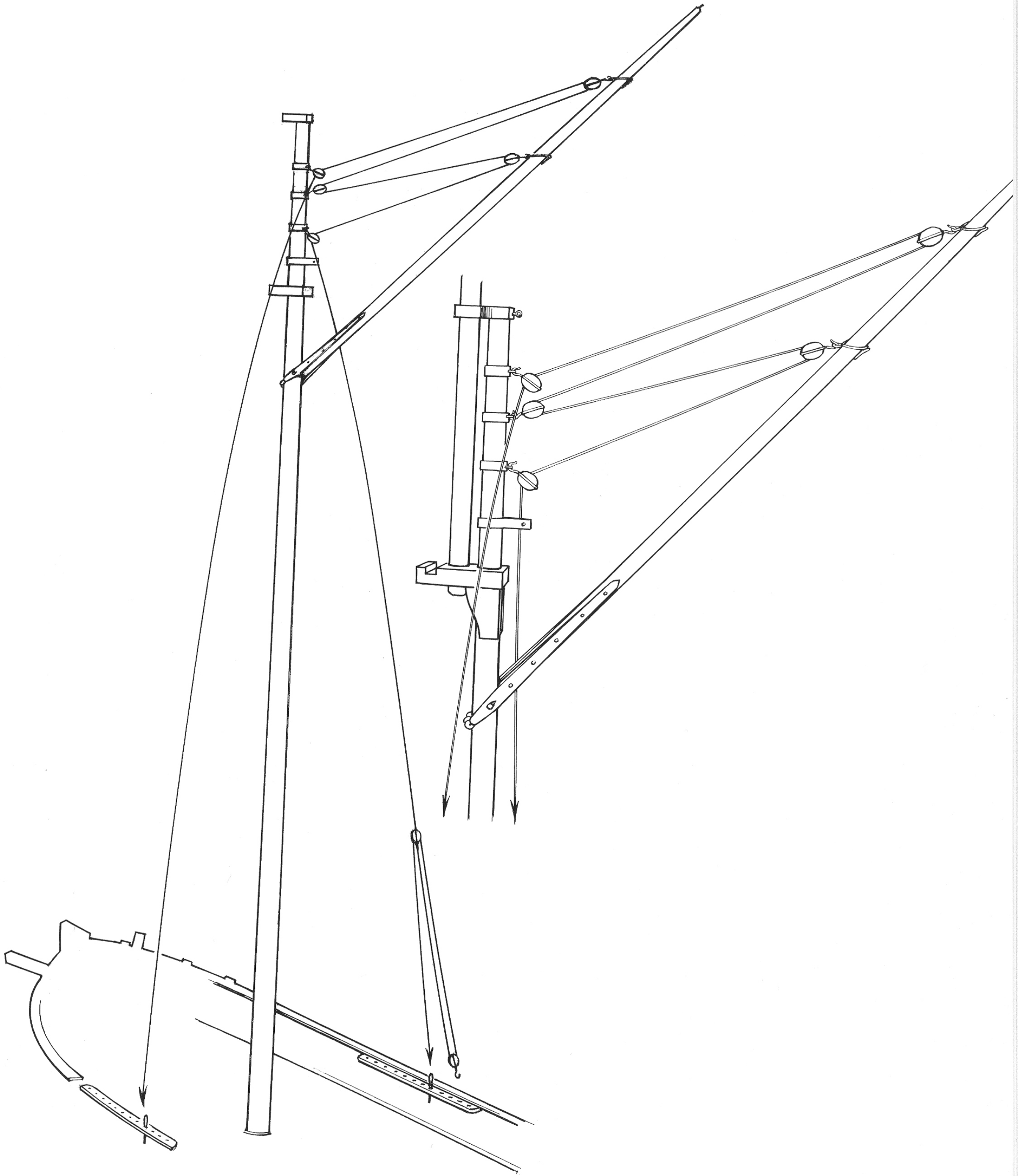
& Topsail Yard Braces



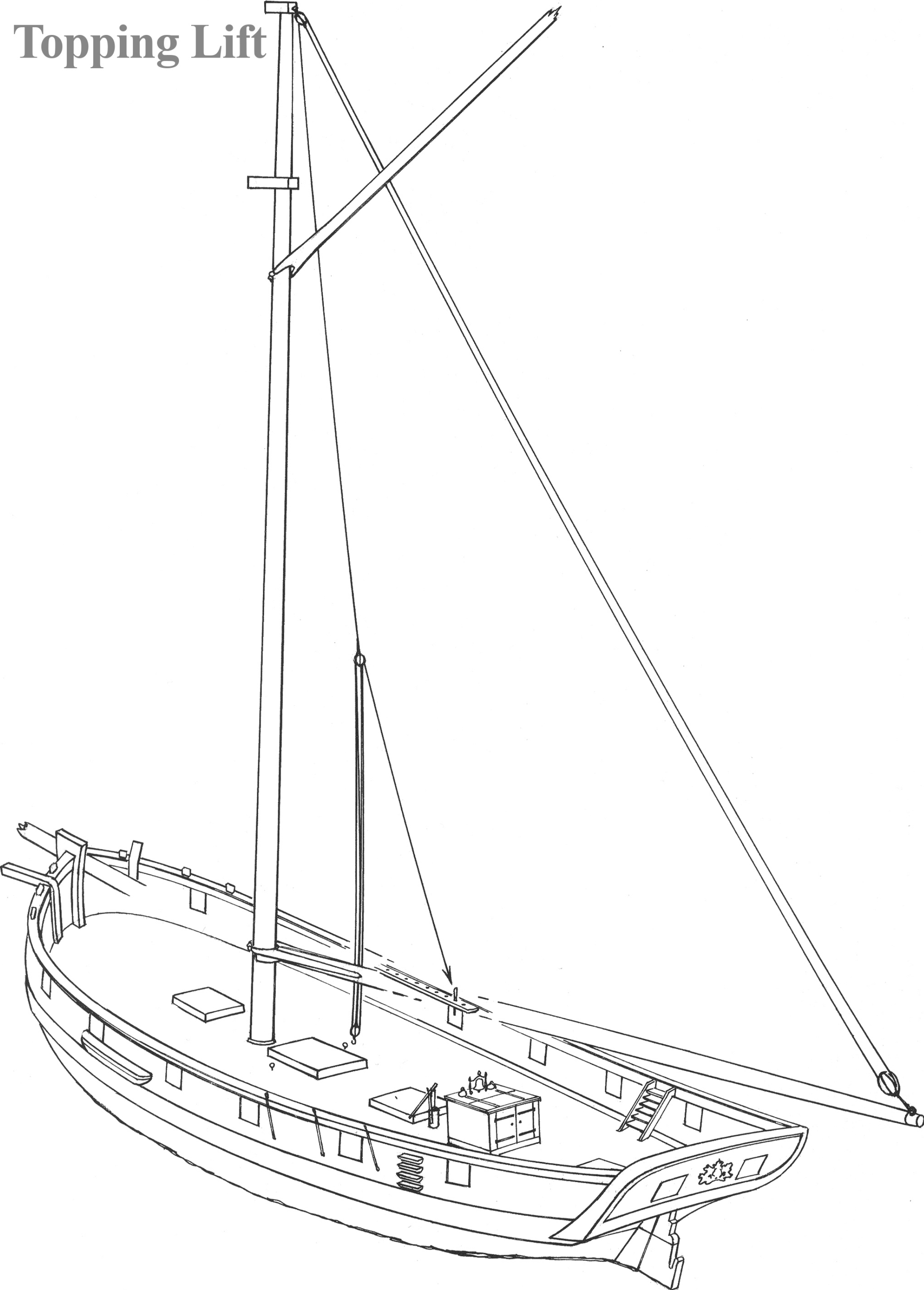
Throat Halliard



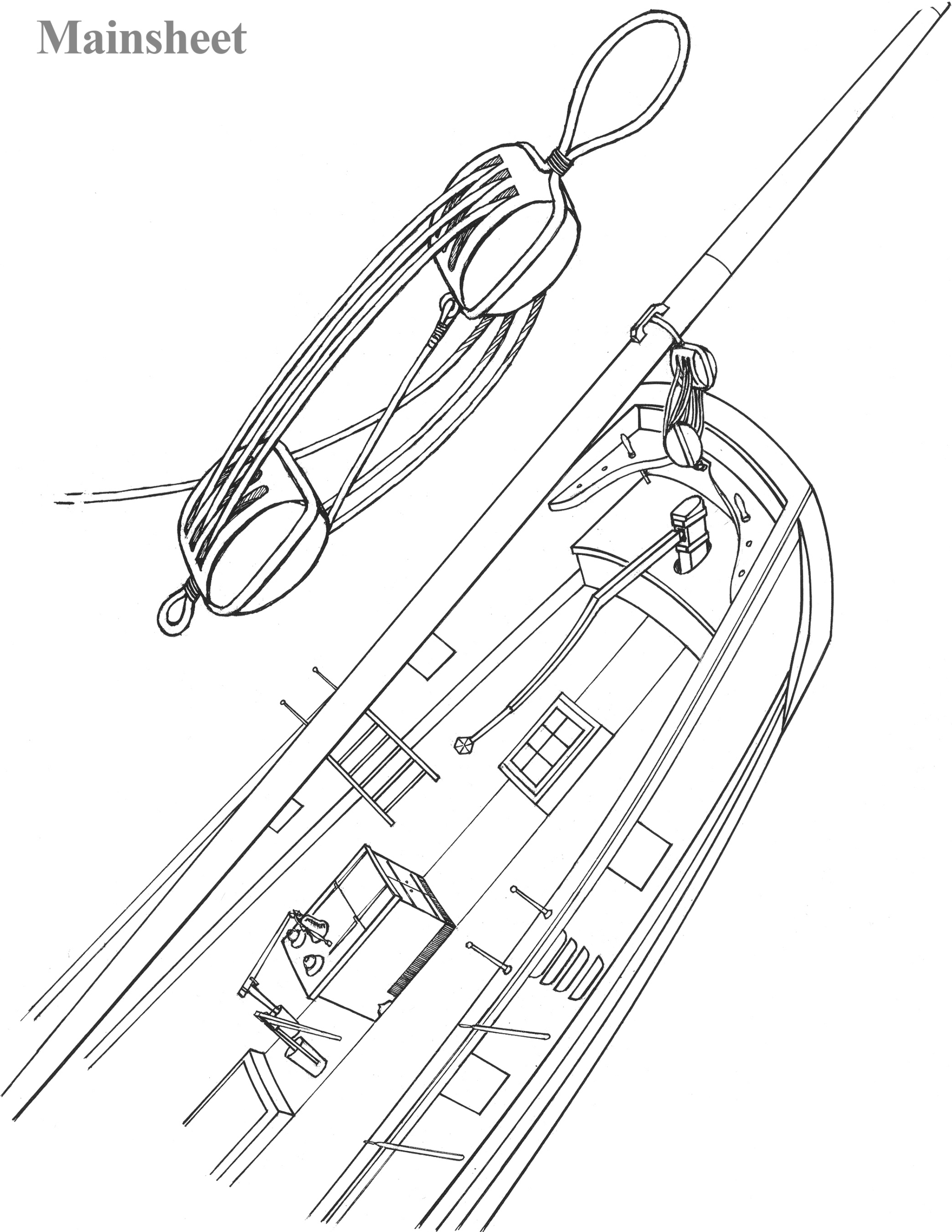
Peak Halliard



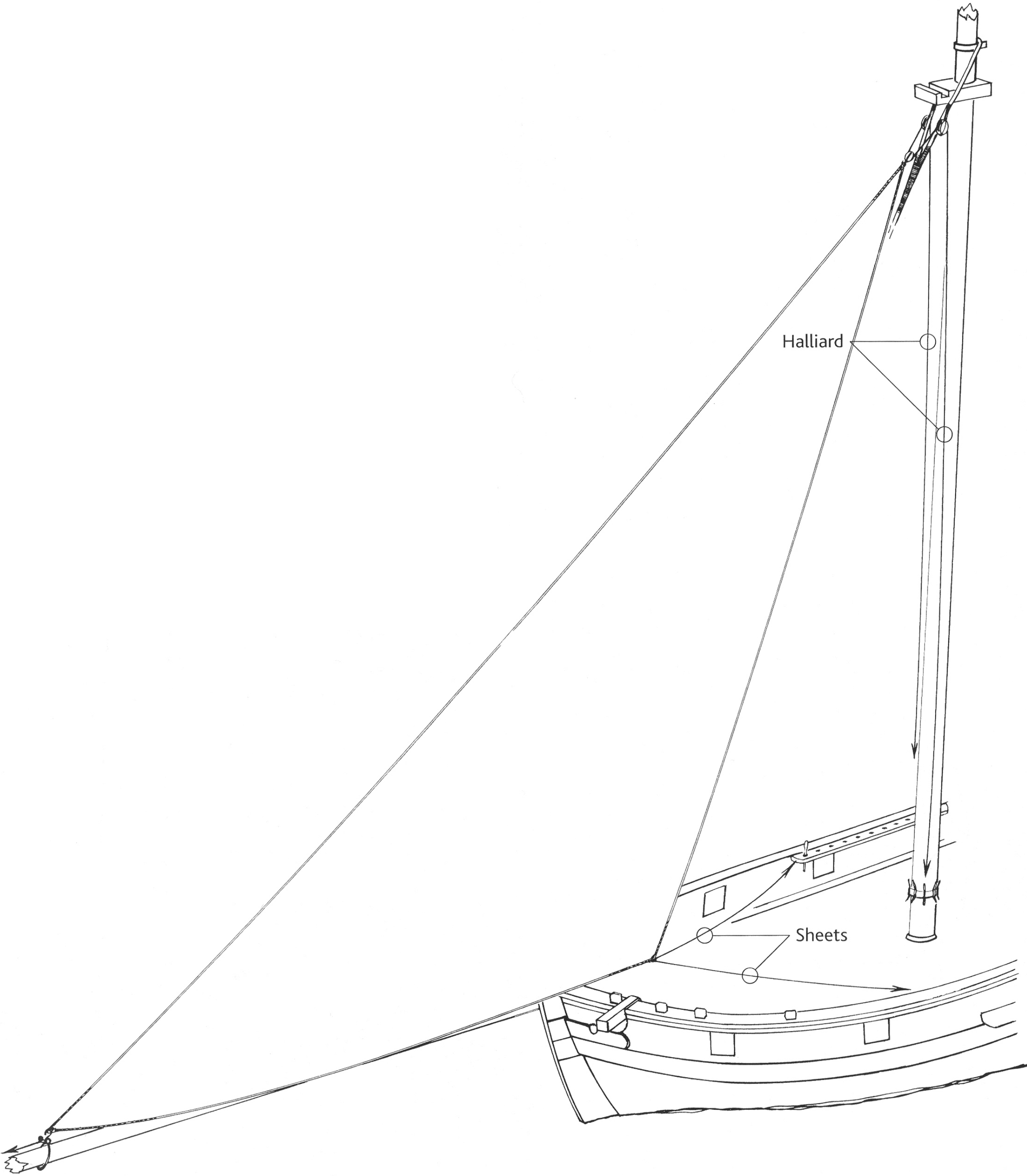
Topping Lift



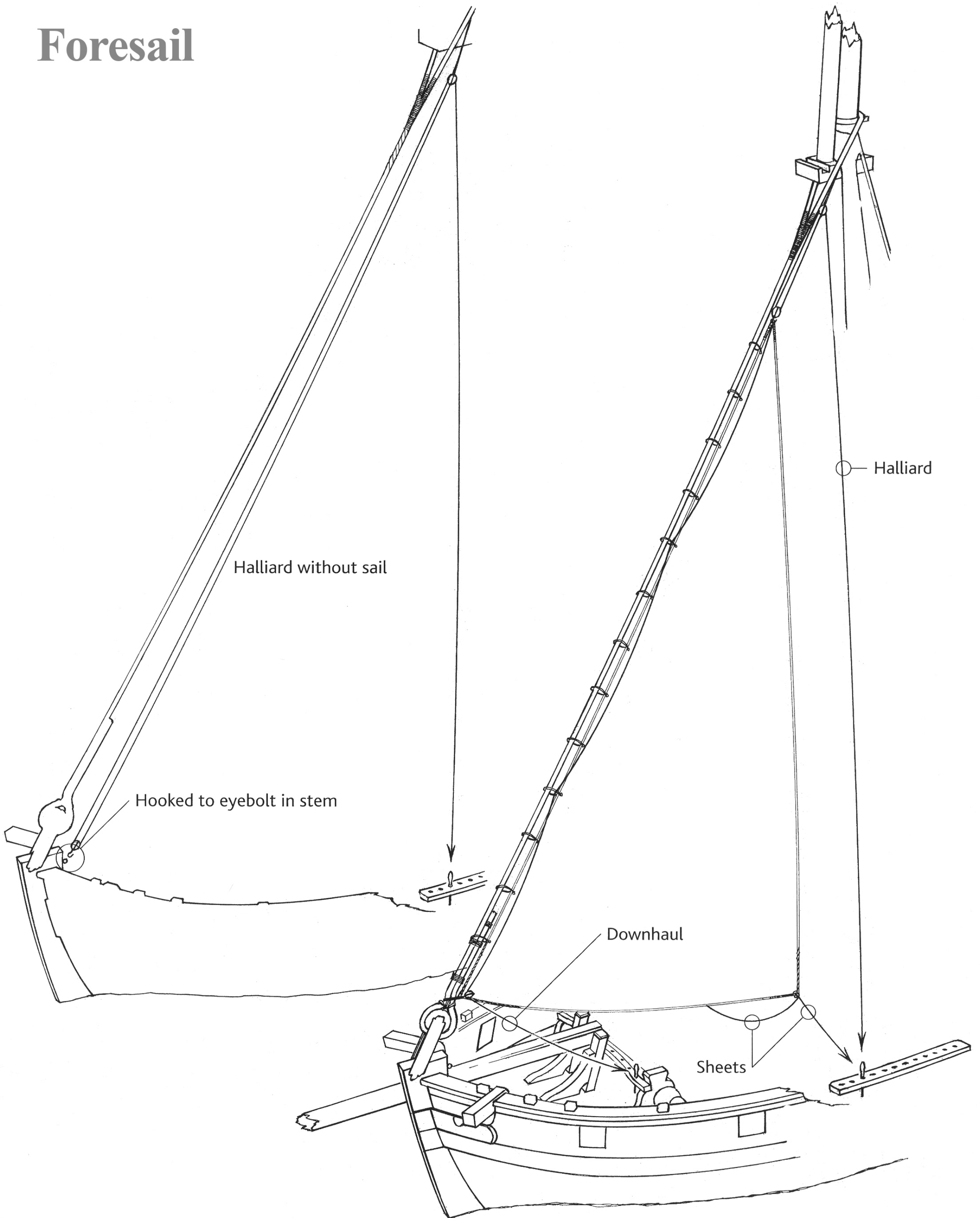
Mainsheet



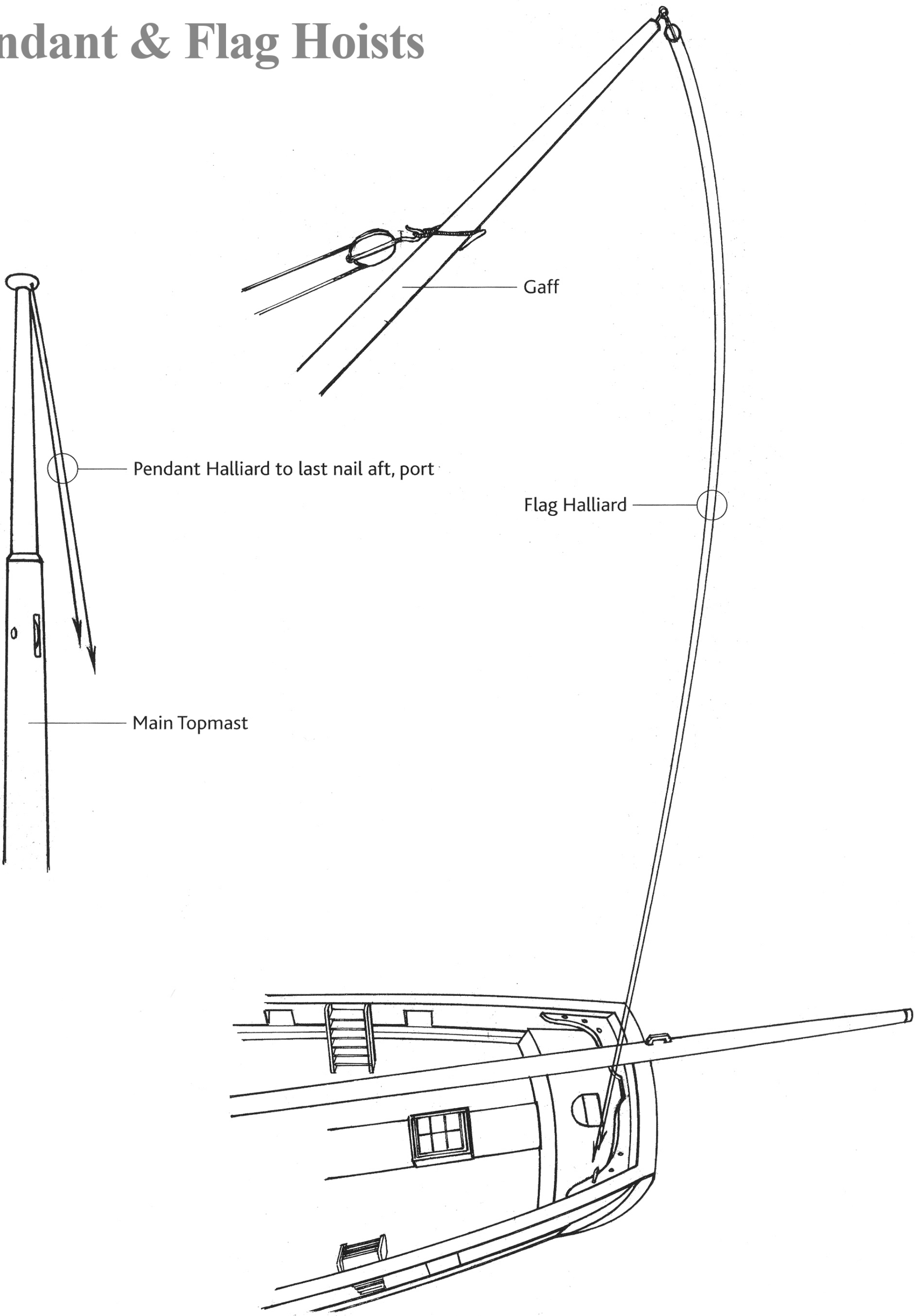
Jib

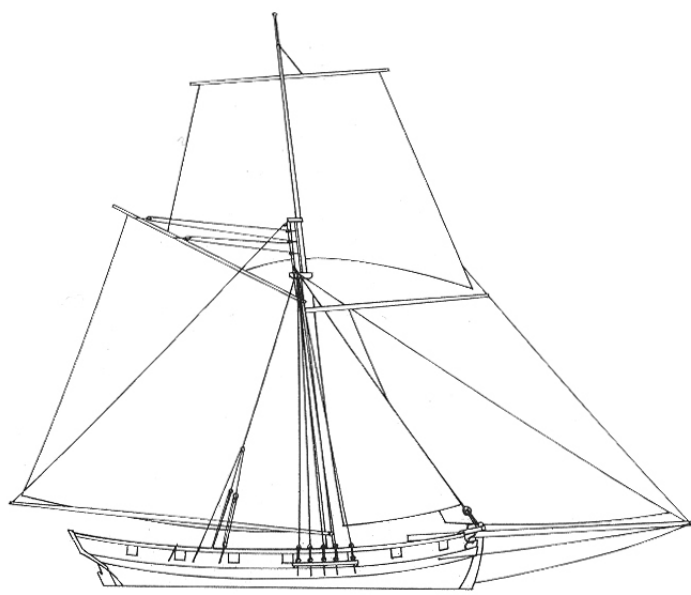


Foresail



Pendant & Flag Hoists





The French Lugger



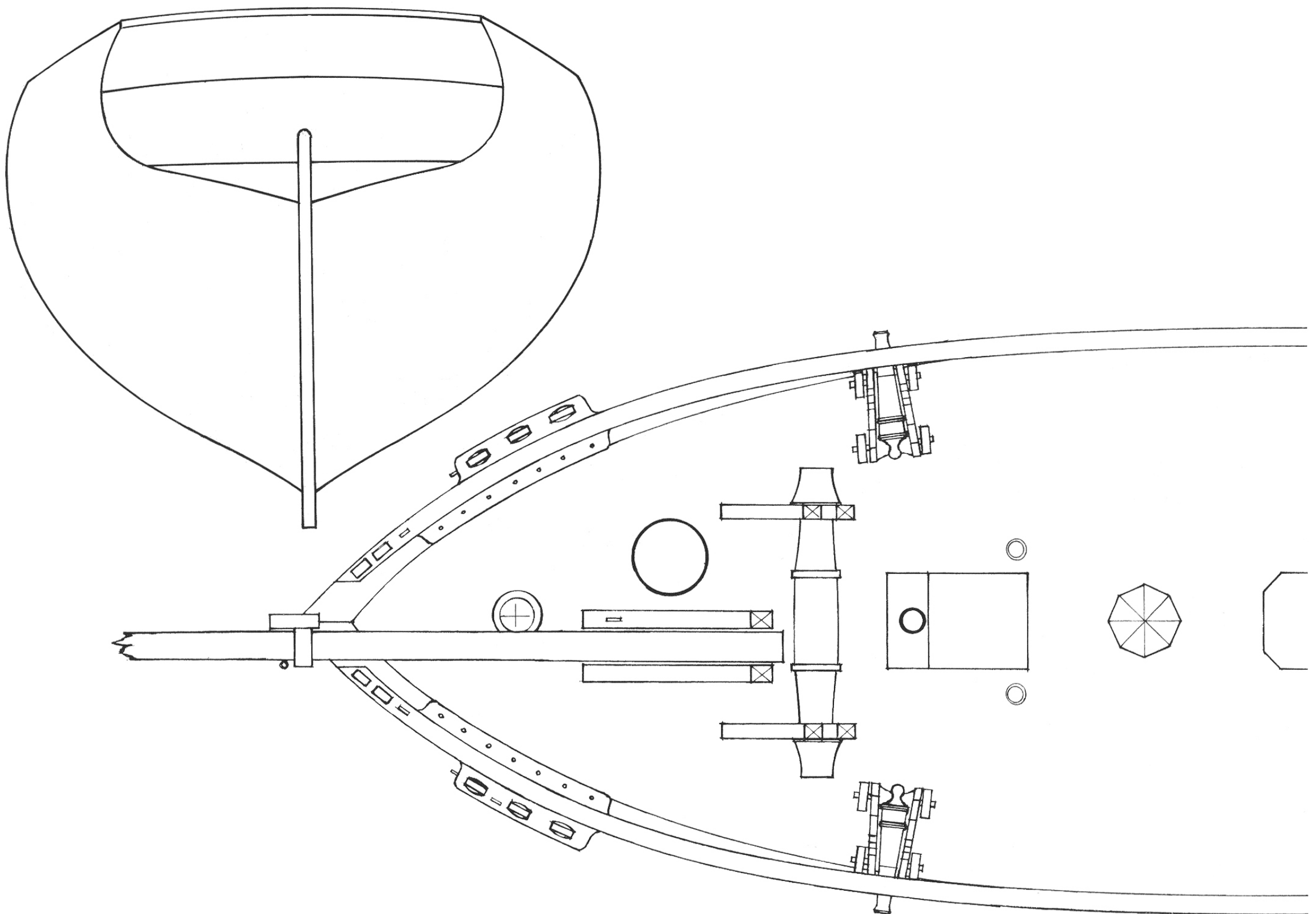
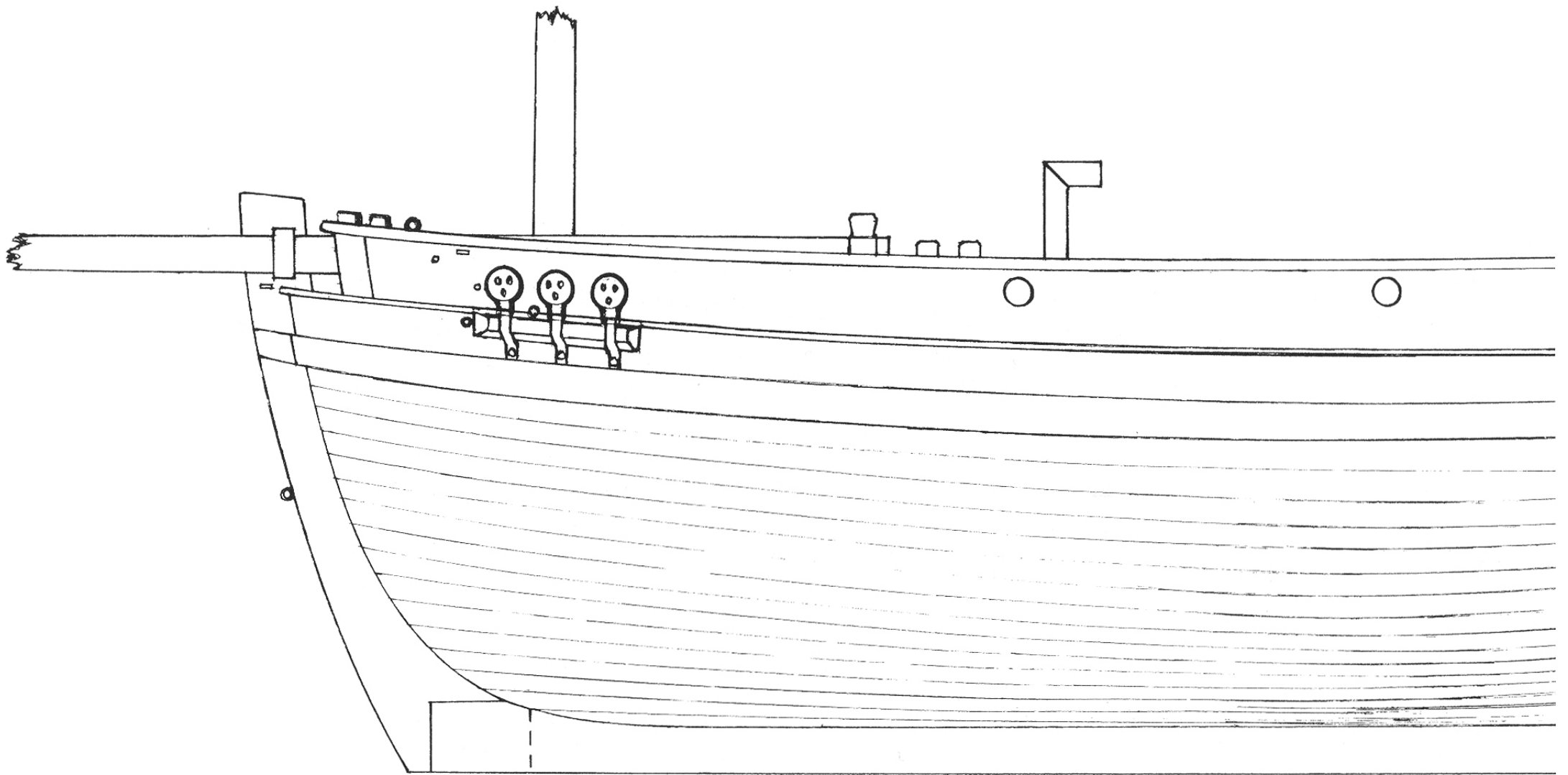
THE FRENCH LUGGER that is depicted on the following pages is a typical three-masted type that was used by the French privateers during the Napoleonic Wars, particularly in the English Channel where they harried and harassed British shipping. The corsairs, as privateers were known as in France, mostly operated out of Dunkirk and St Malo and were responsible for the capture of hundreds of British ships during the wars. Able to lie at sea, sometimes even with their gear down, perhaps in the lee of a headland, they would be practically invisible to a merchant ship making its way up or down Channel.

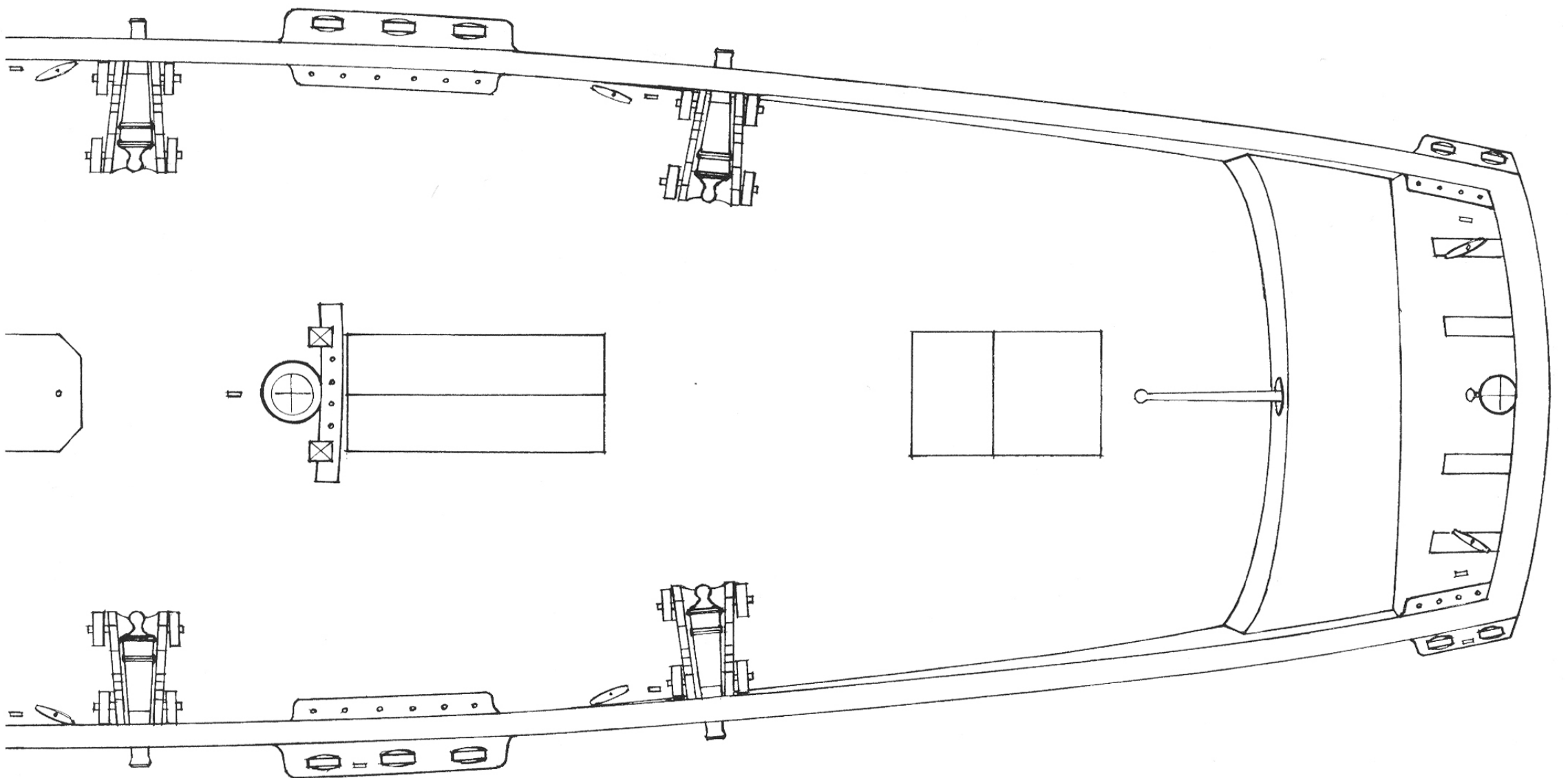
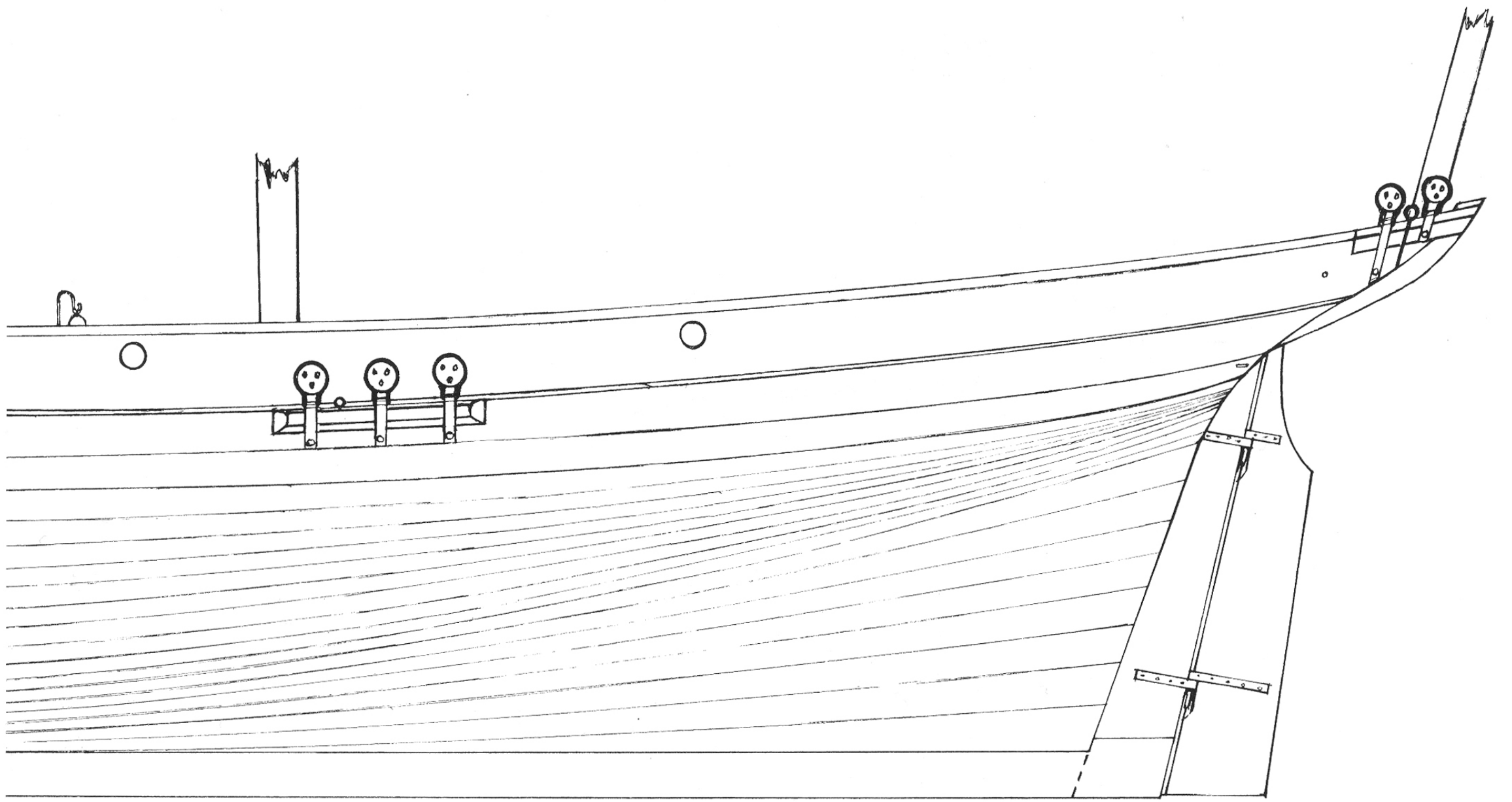
These armed luggers developed from the three-masted luggers that were used in the North Sea fisheries and the type survived through to the twentieth century in the form of the French *chasse maree*. They were fine-lined and light and very fast, particularly when hard on the wind - perhaps their fastest point of sailing - and it is, therefore, of little surprise that the type was also favoured by English smugglers who found it a weatherly contender to the British revenue cutter. With reduced resistance and turbulence from their minimal rigging they sailed in much cleaner air

than the heavily-spared and rigged cutters and also pointed higher. The loose-footed sails were very powerful and these craft required large crews to sail them, but this was hardly a disadvantage to their employment as privateers where a large crew was required to fight.

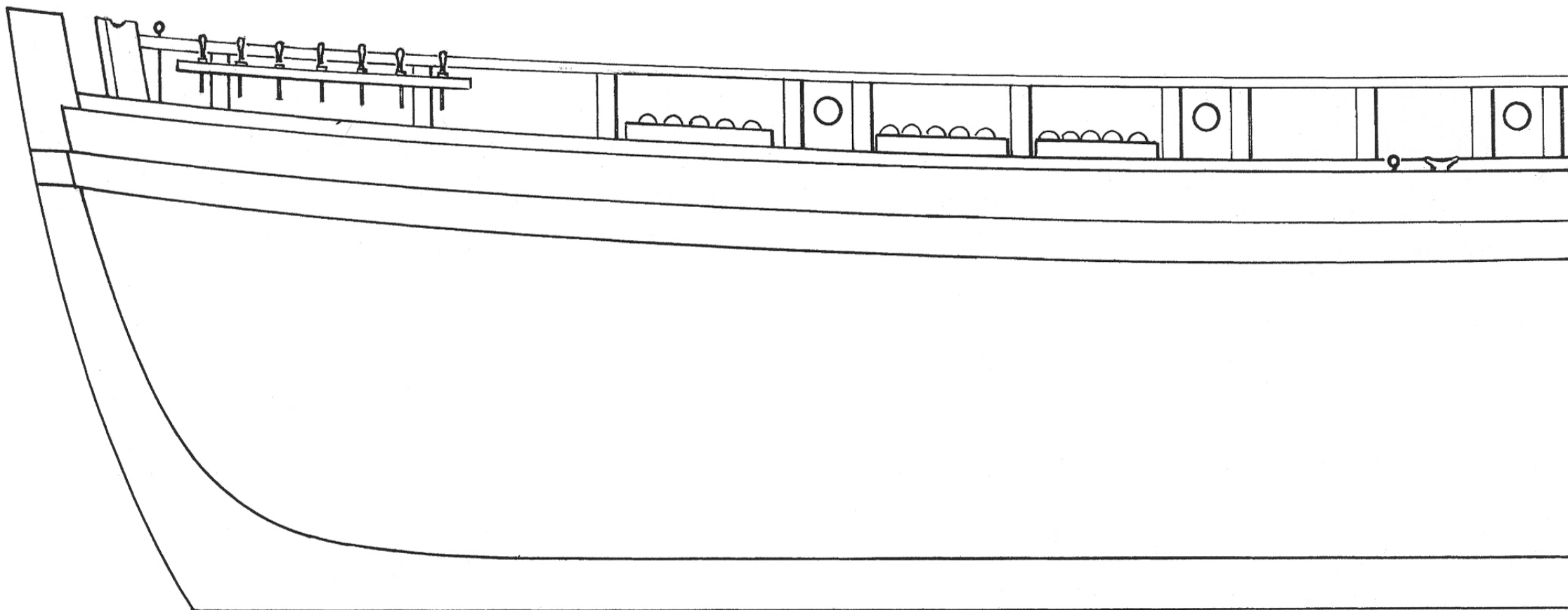
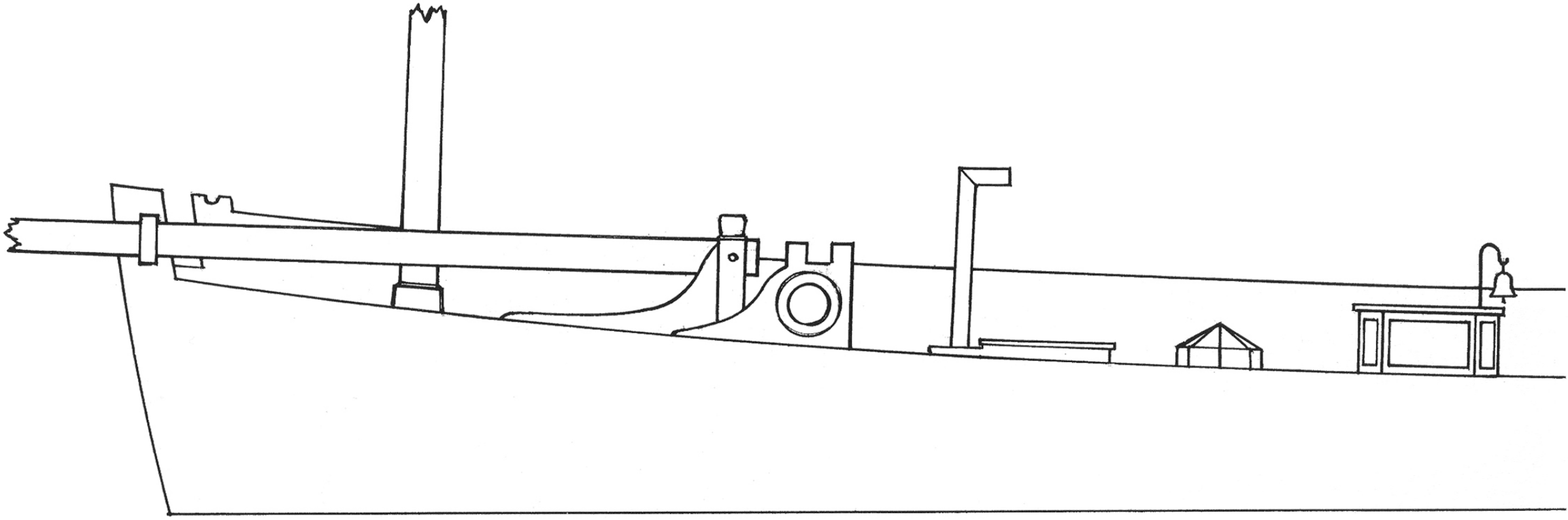
The model at the National Maritime Museum is built to the scale of 1:24 and is dated around 1800. It is a contemporary full hull model, built plank on frame of clinker construction and it depicts a vessel with eight guns. The model is decked, equipped and fully rigged, with sails set, and both the rigging and the sails are original. At this scale the model represents a prototype of some 76ft length overall with a beam of 20ft and an approximate tonnage of 110 burden. One distinct characteristic can be seen in the stepping of the topmast abaft the mainmast; though the practice was very occasionally found on cutters it is generally a peculiarity of the big luggers of this period, *Le Coureur* was one such vessel, built by Denys of Dunkirk in 1776. She was captured by the Royal Navy cutter *Alert* on 17 June 1778 and there are both original plans of her as well as drawings made after her capture.

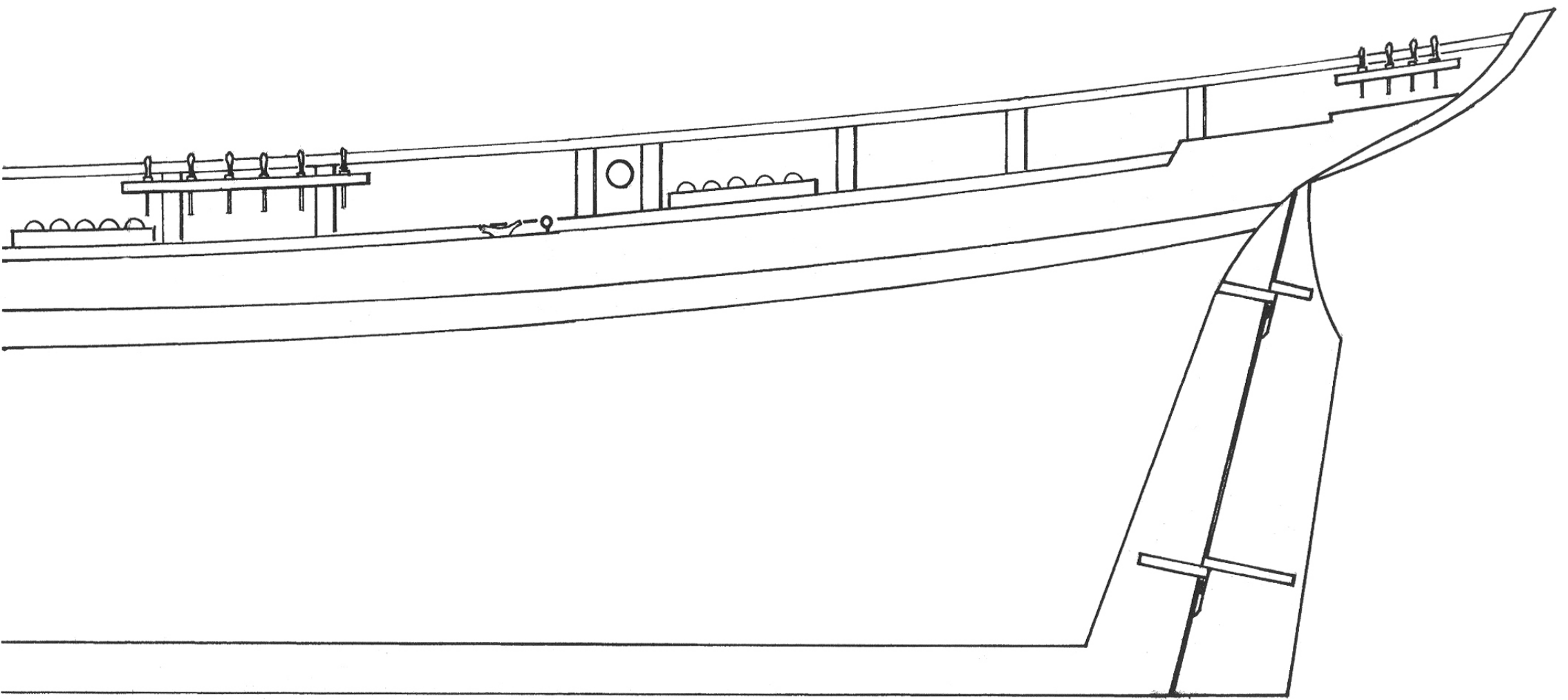
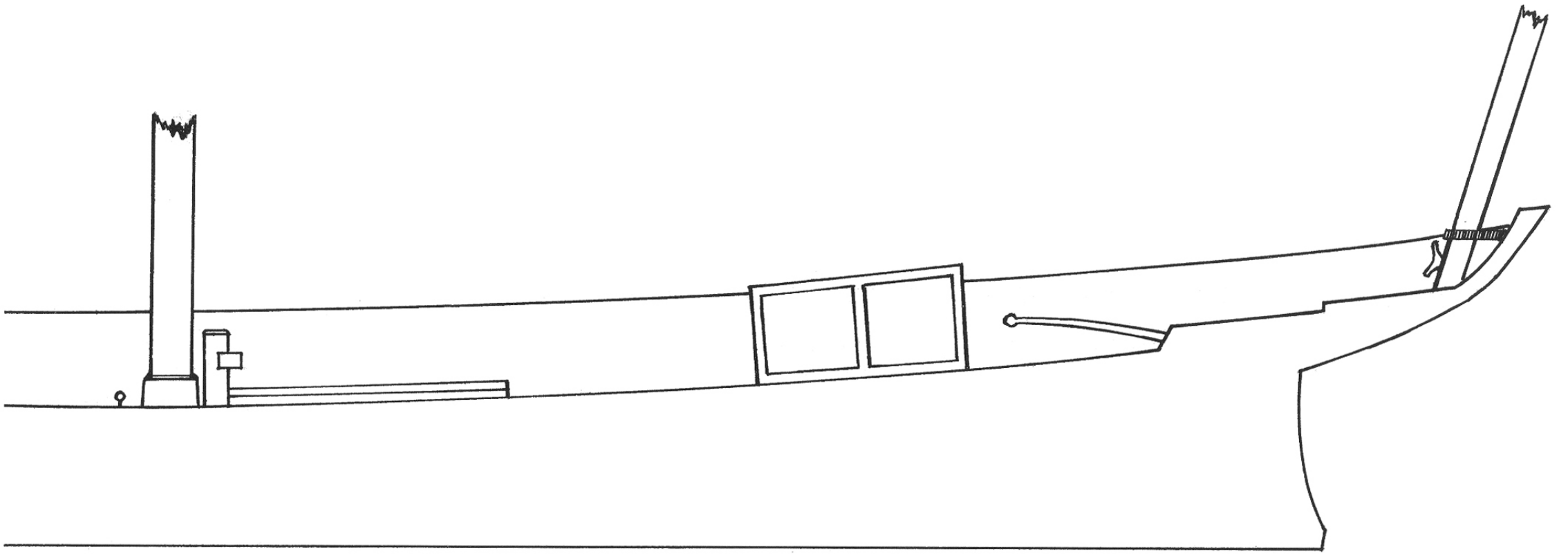
Profile & Deck Plan



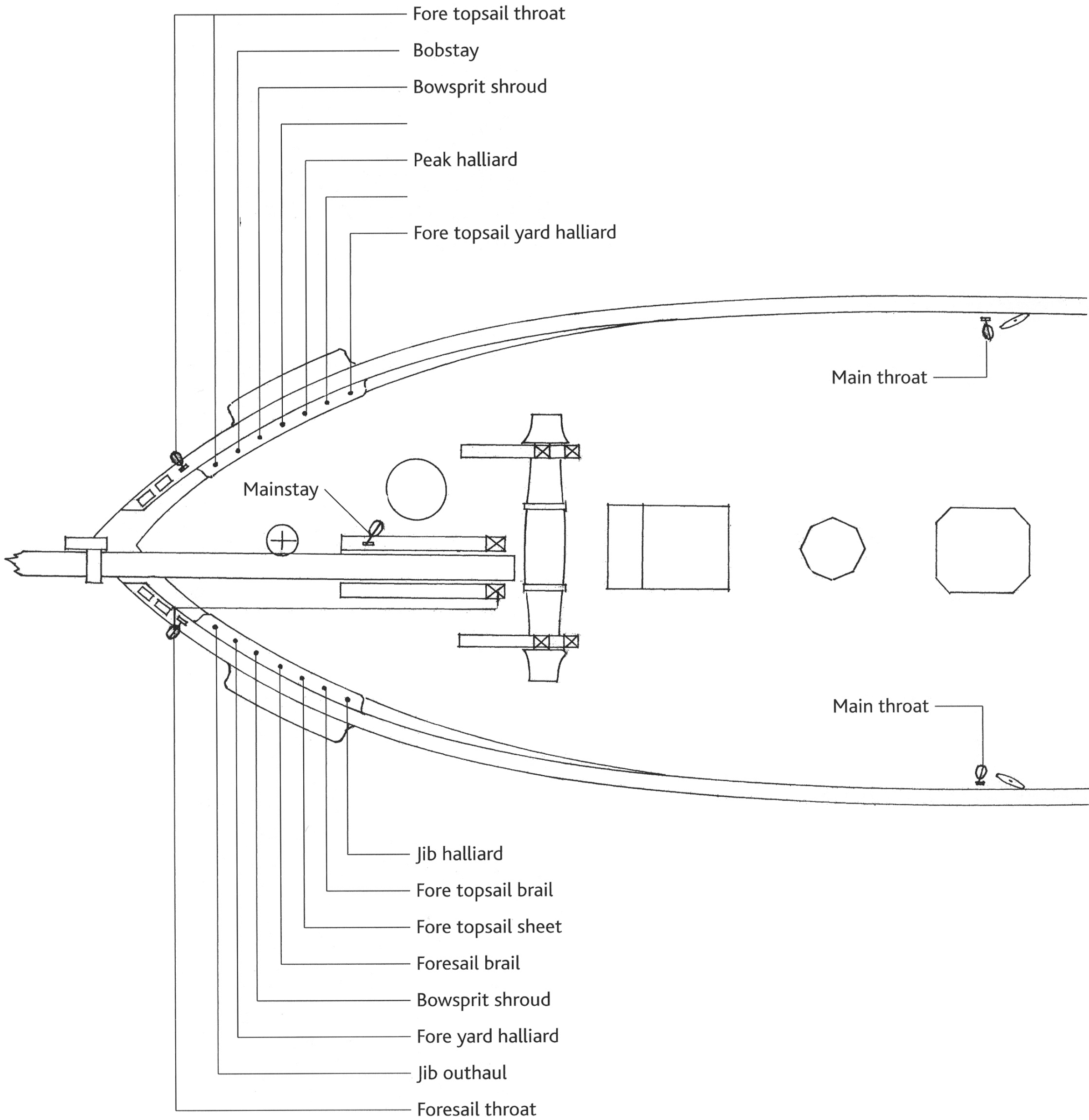


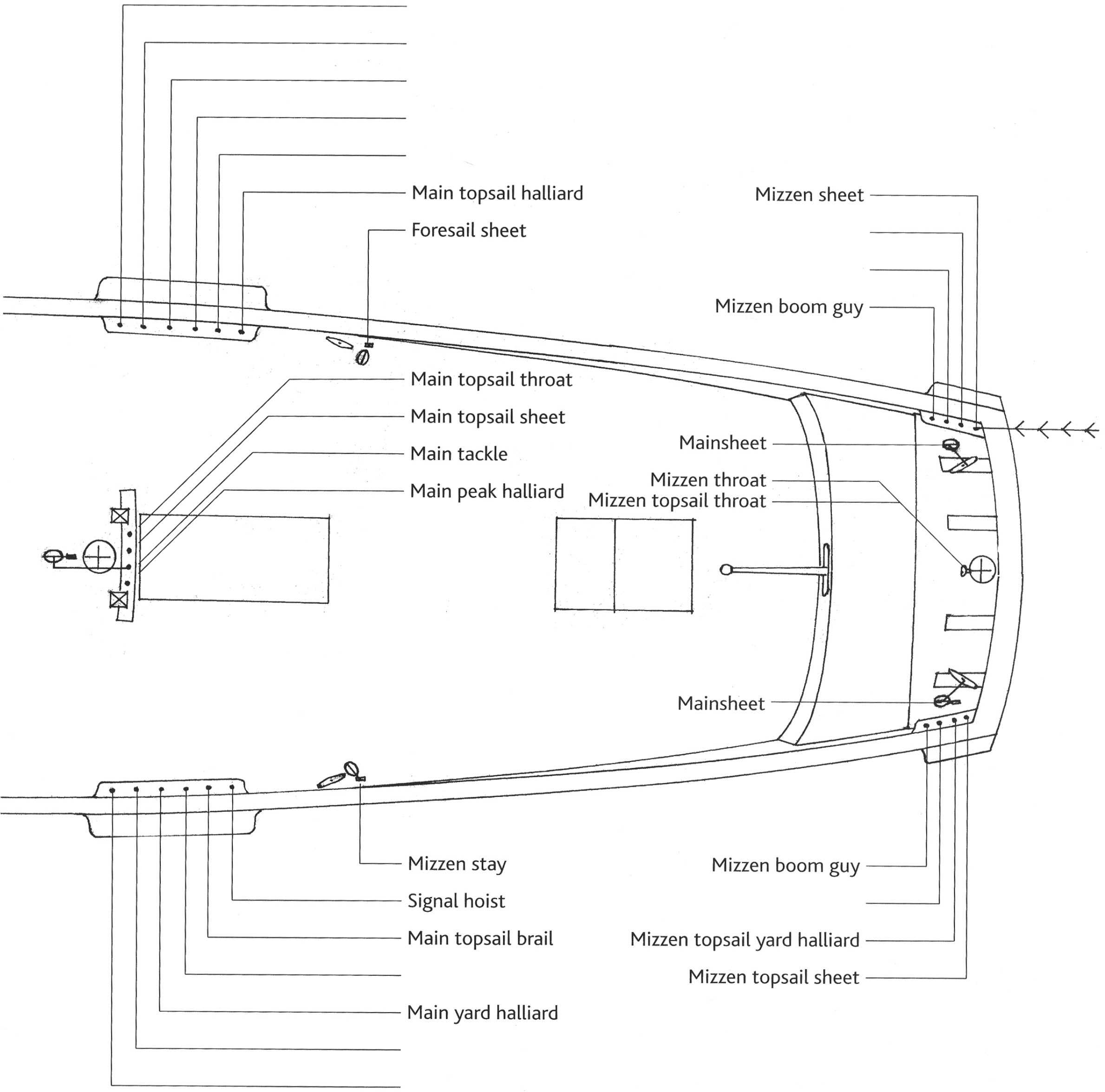
Deck & Rail details



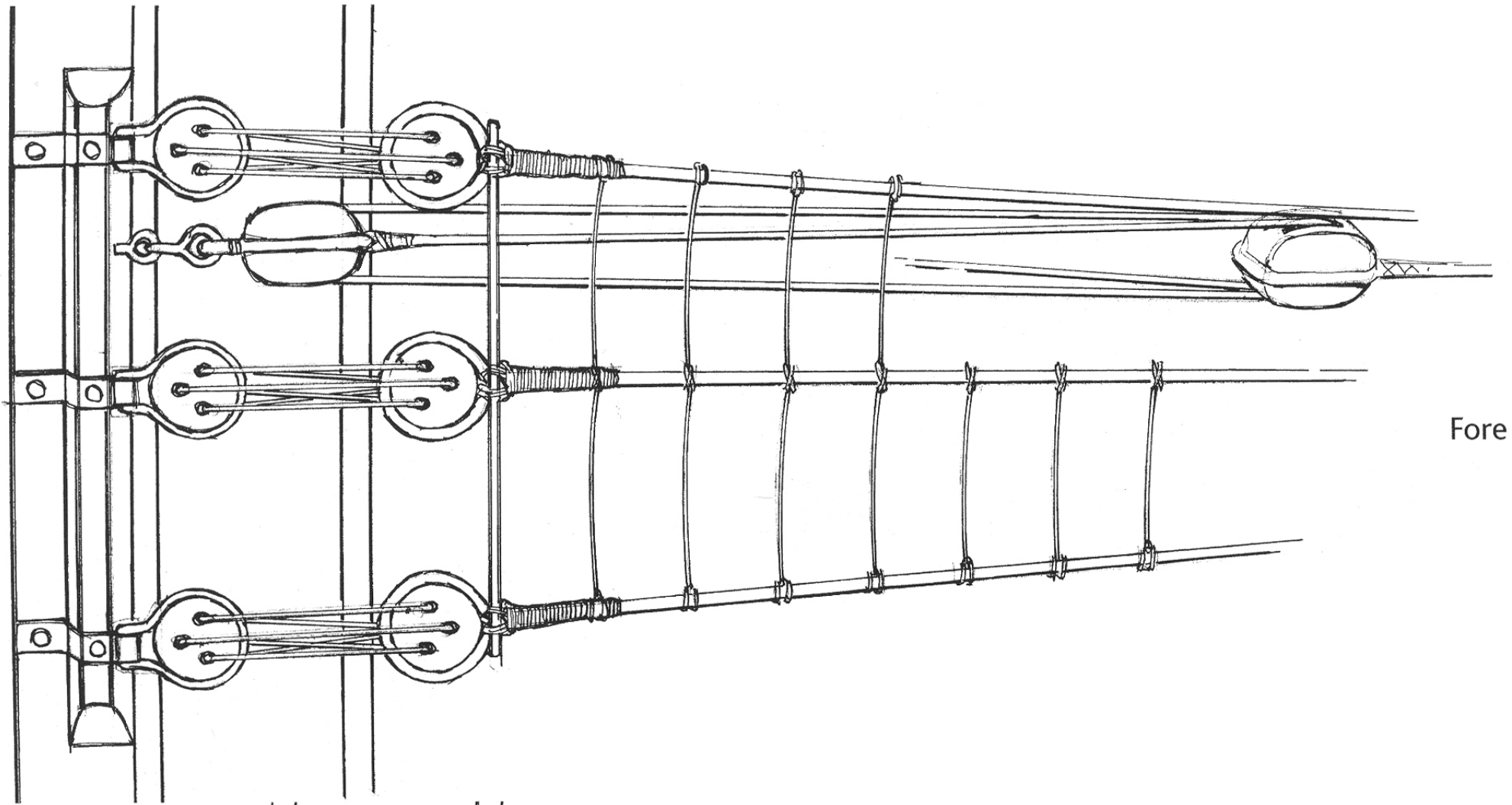


Belaying Plan

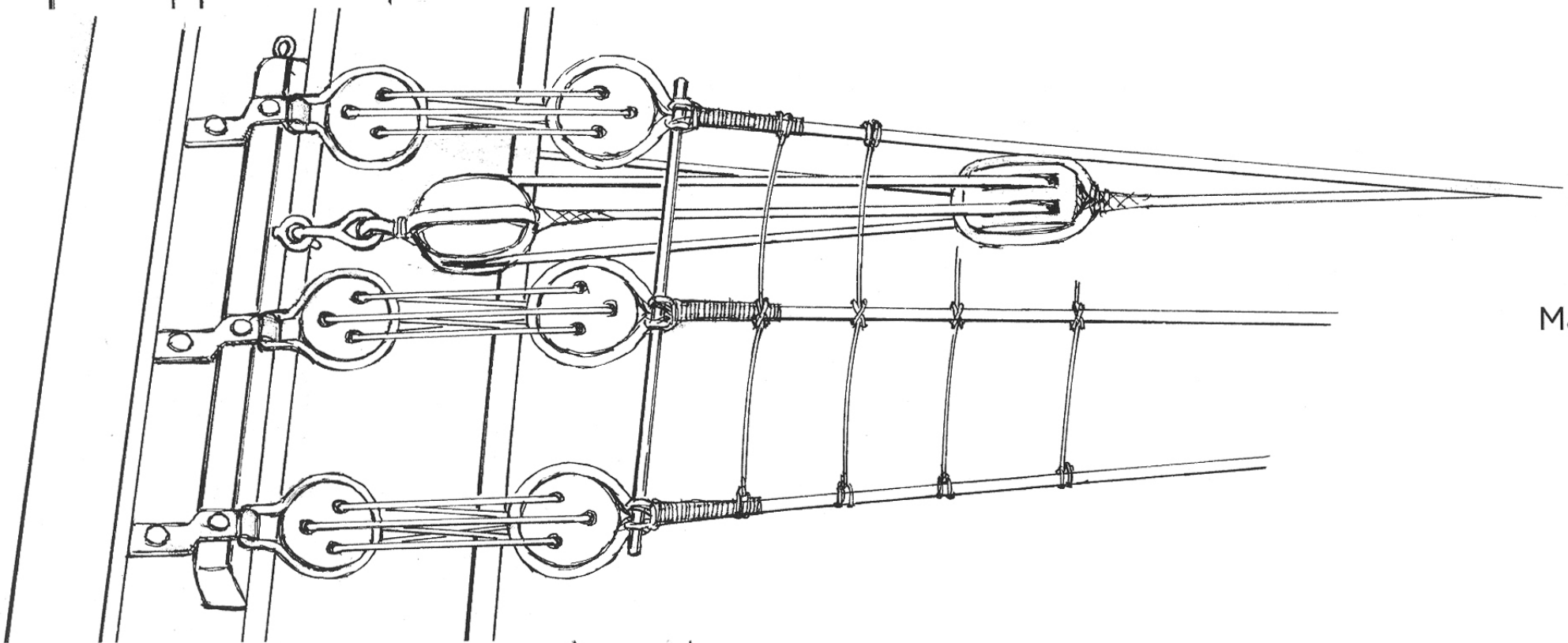




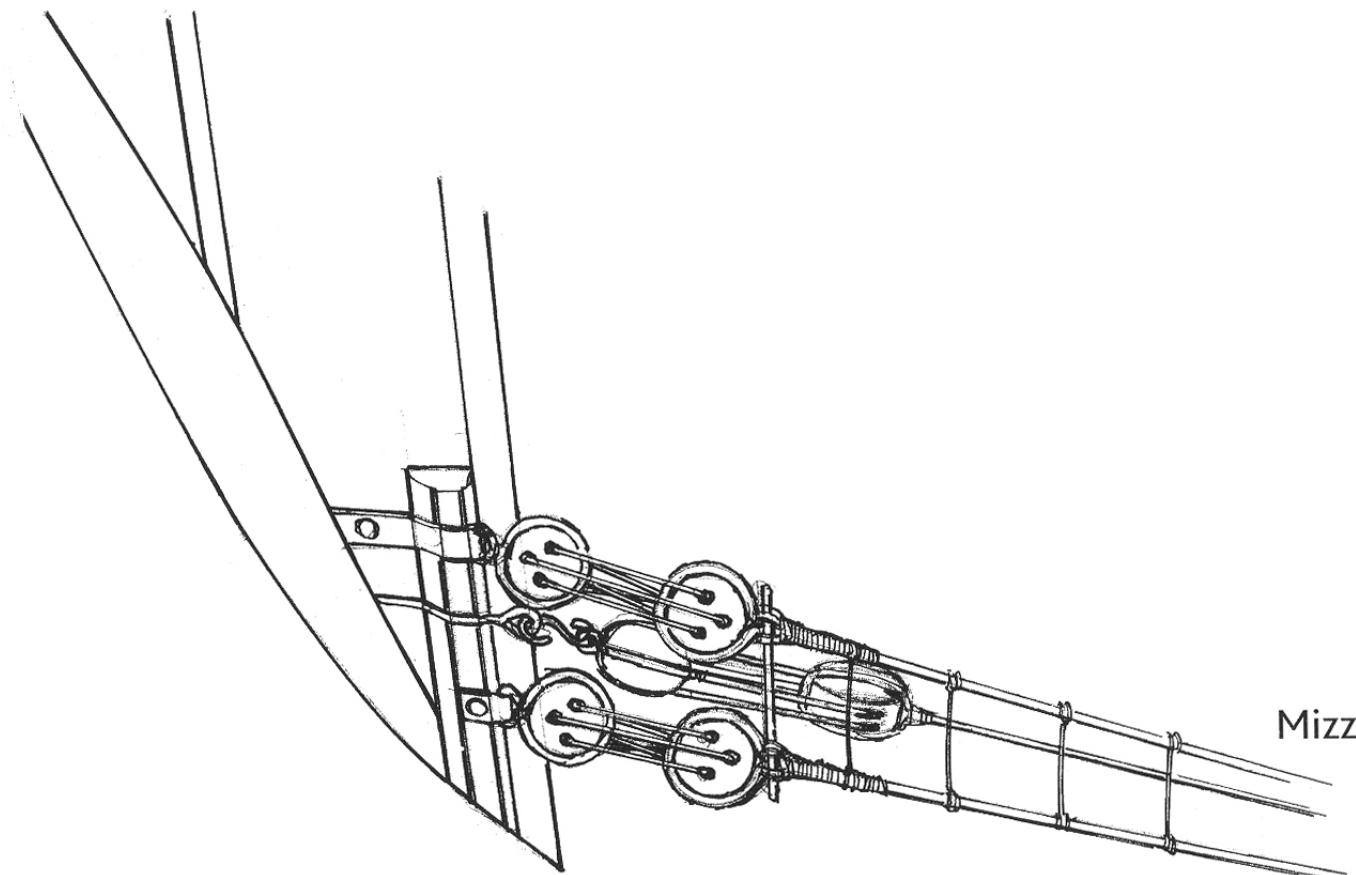
Fore, Main, Mizzen Channels



Fore

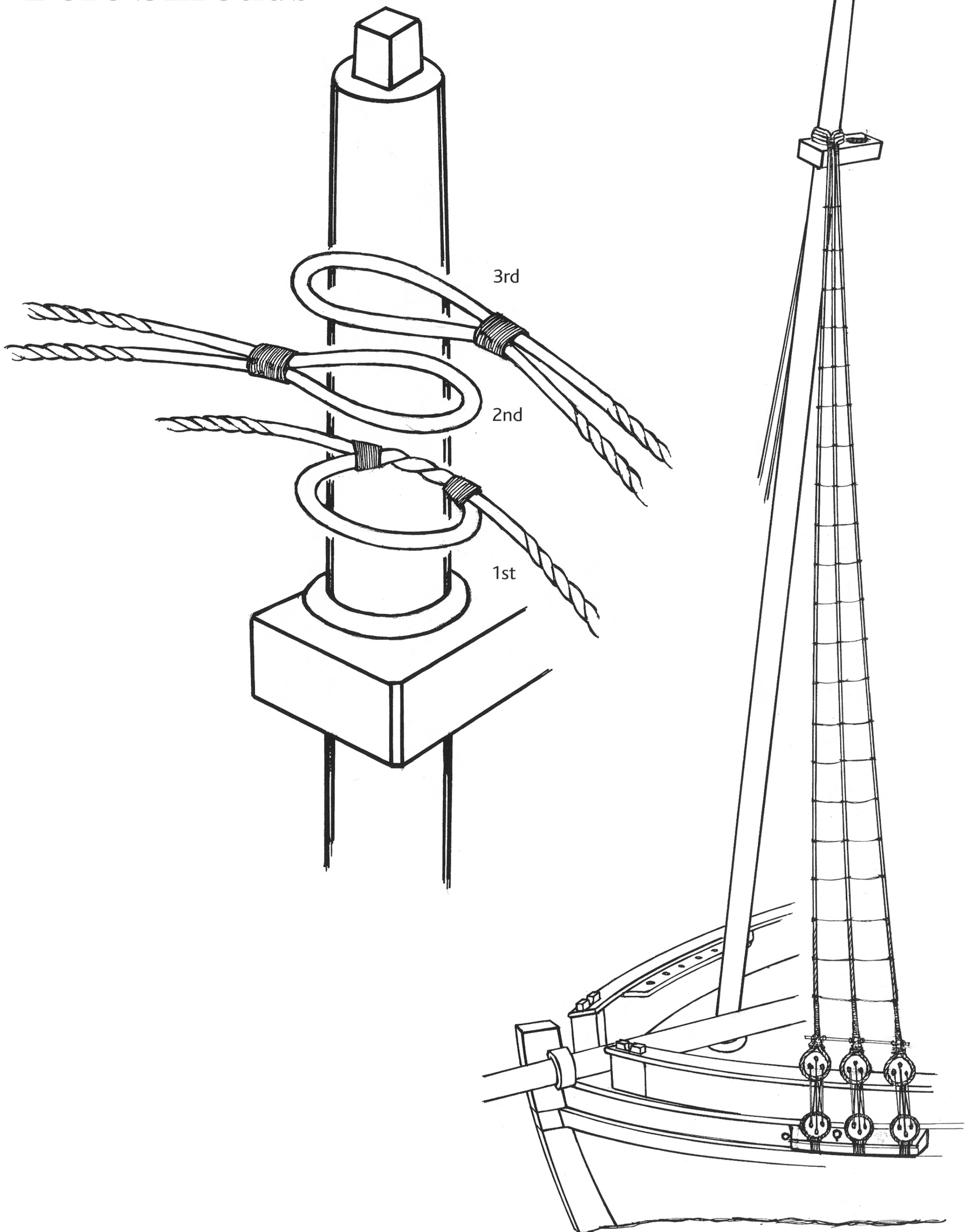


Main

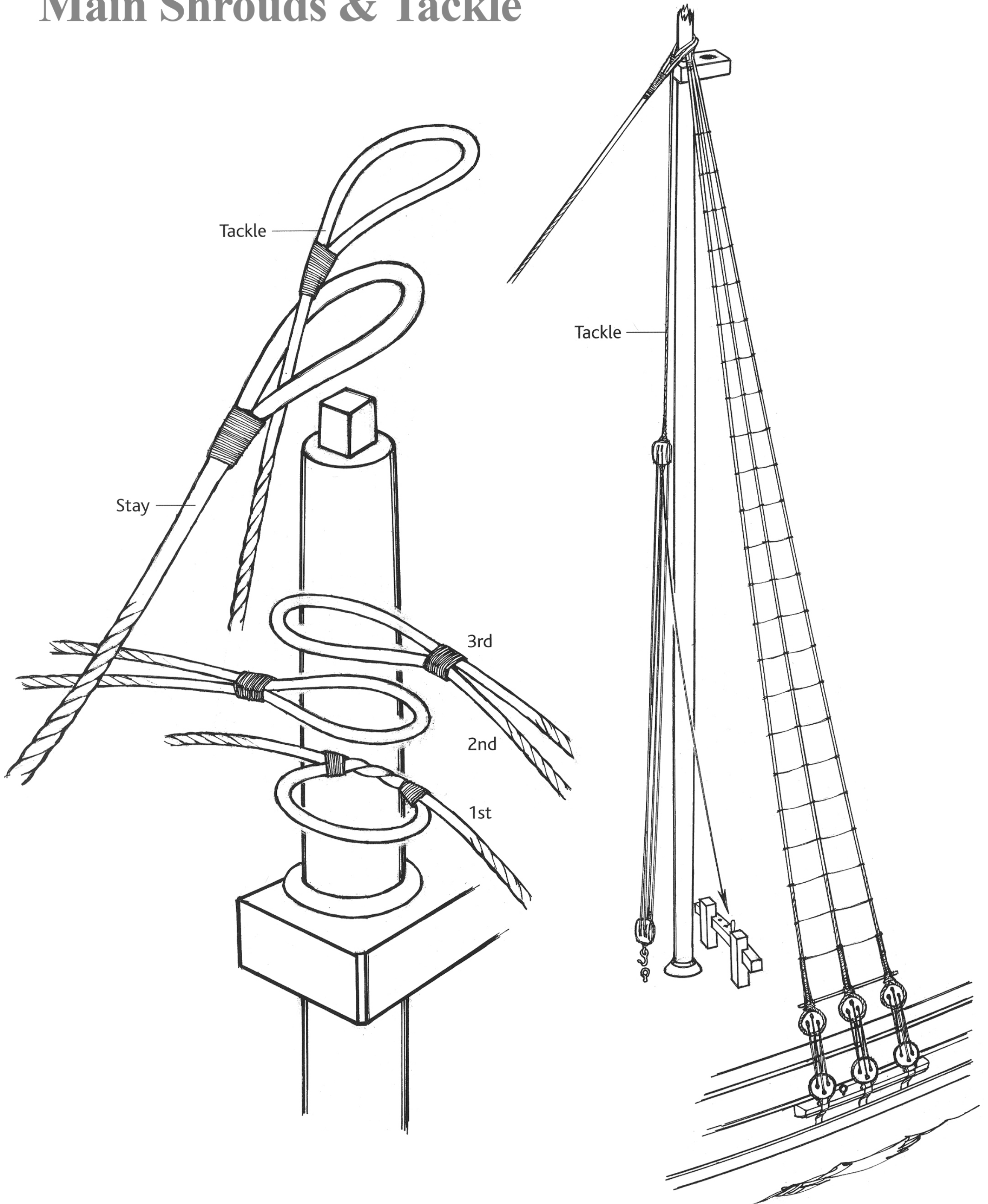


Mizzen

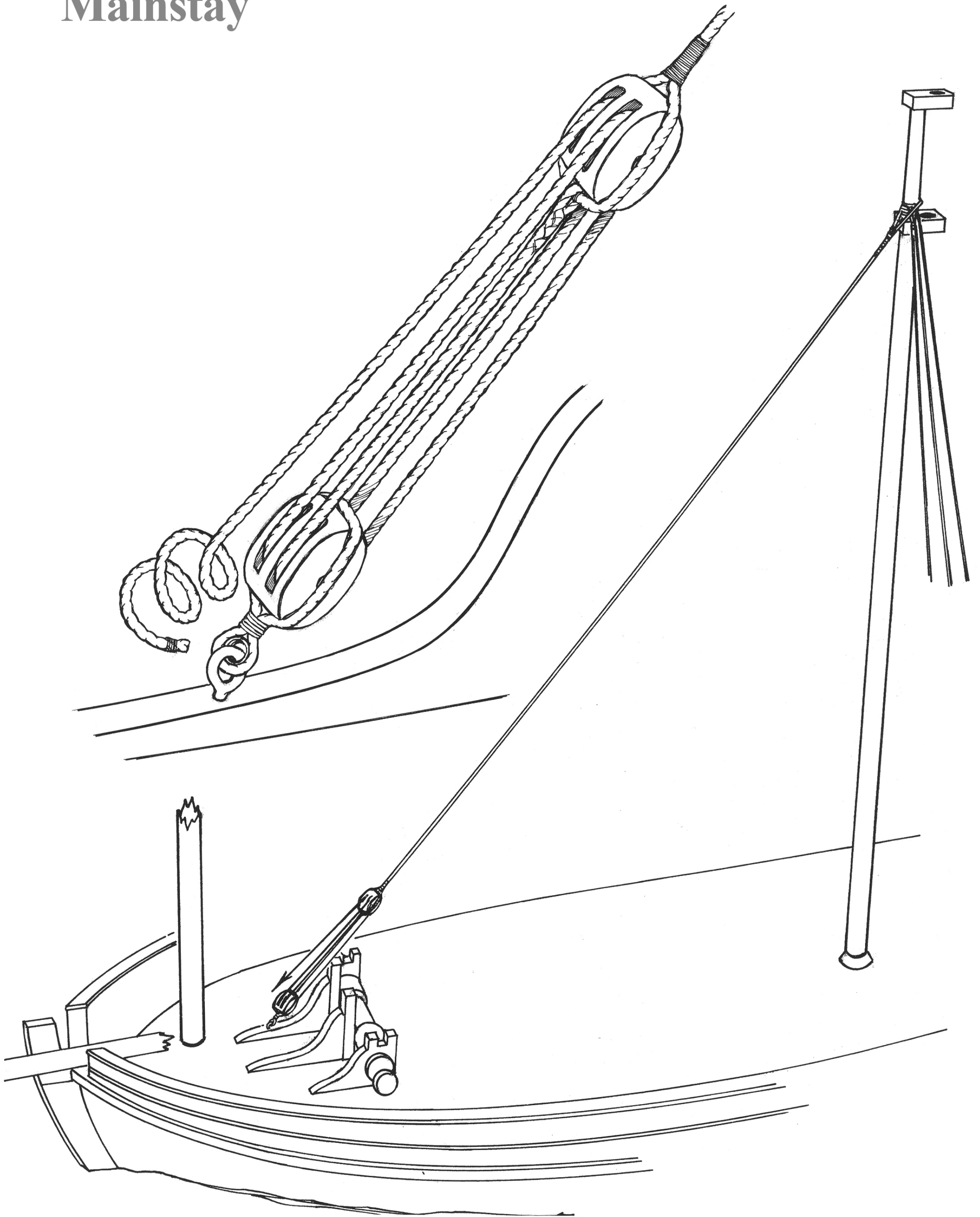
Fore Shrouds



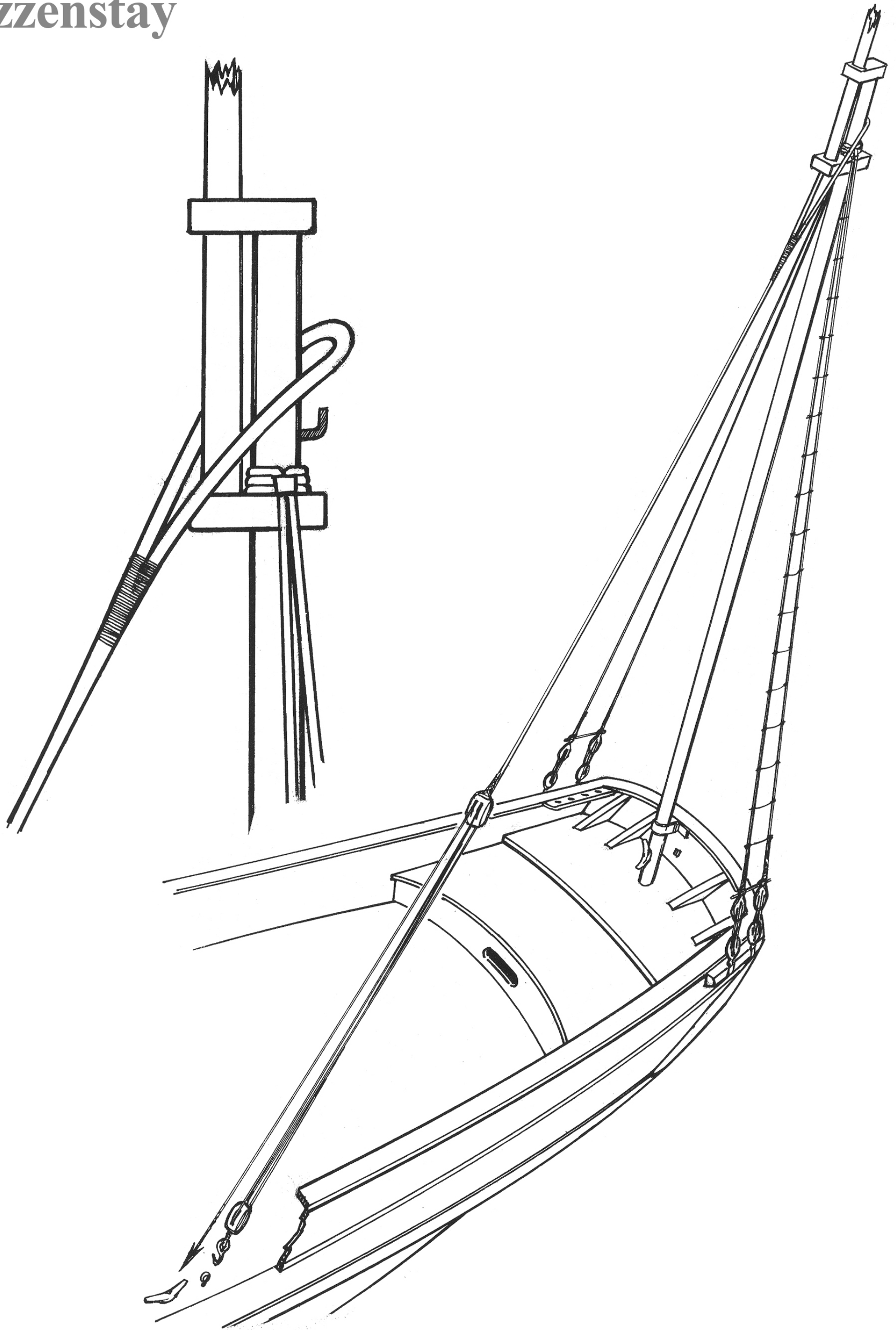
Main Shrouds & Tackle



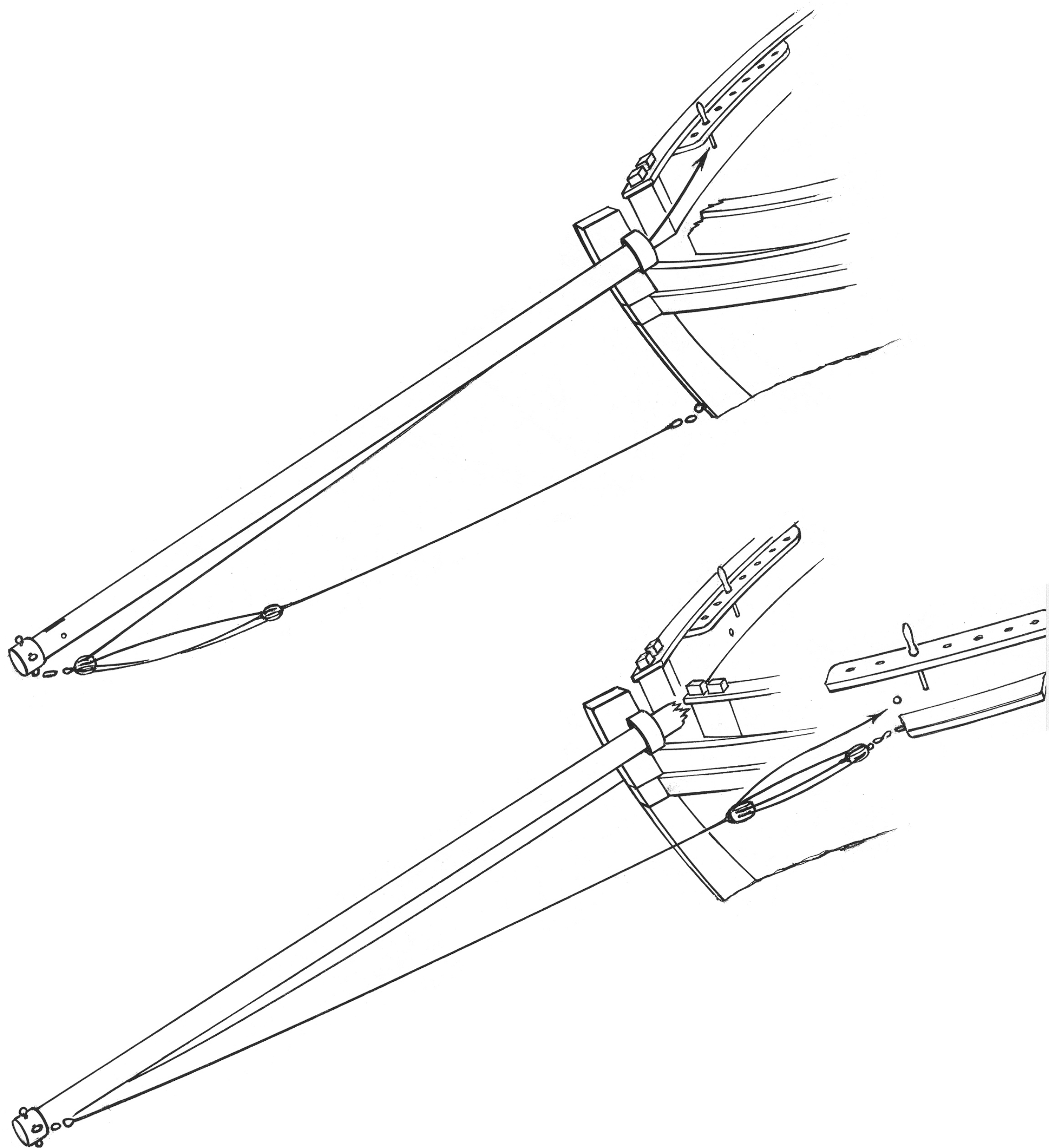
Mainstay



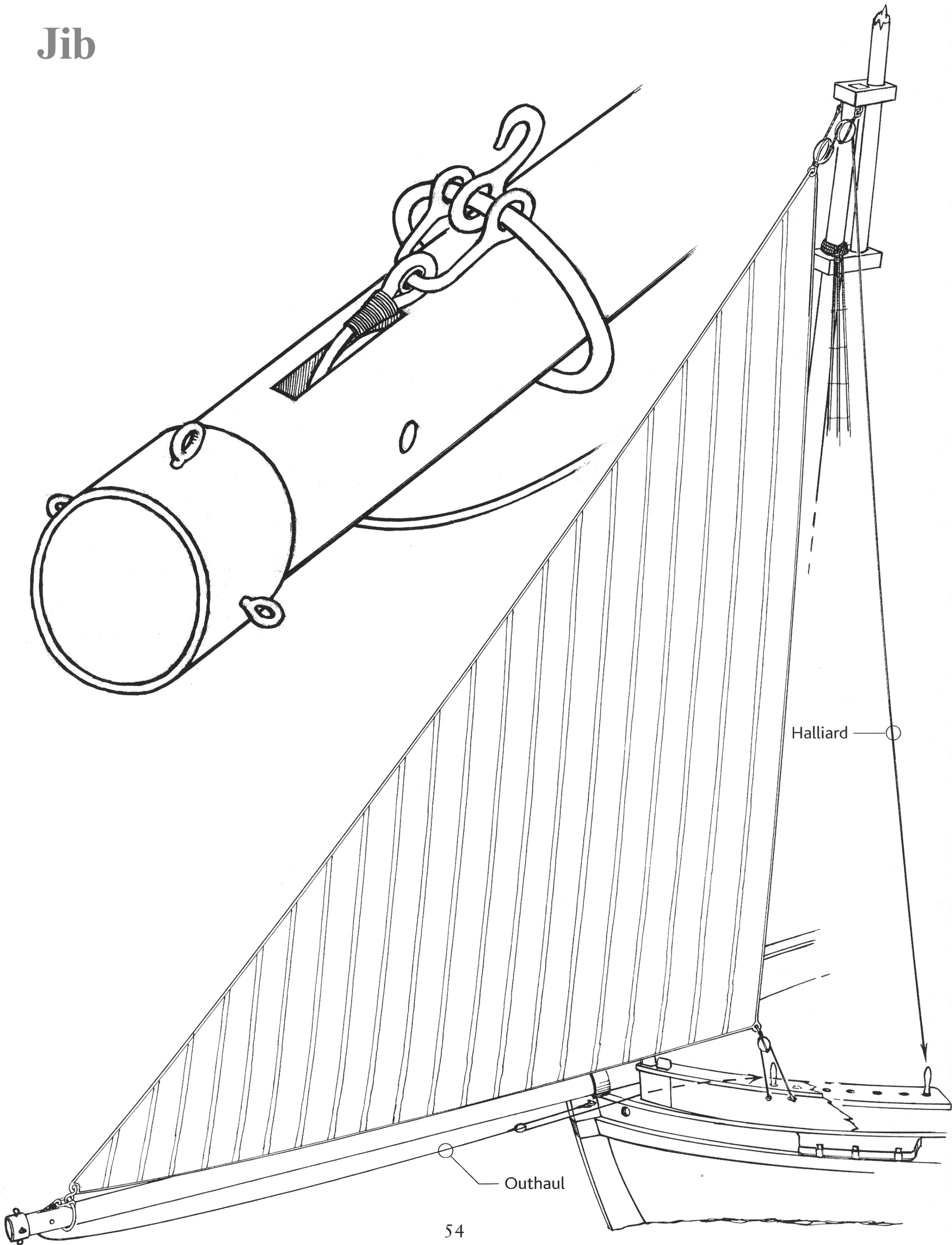
Mizzenstay



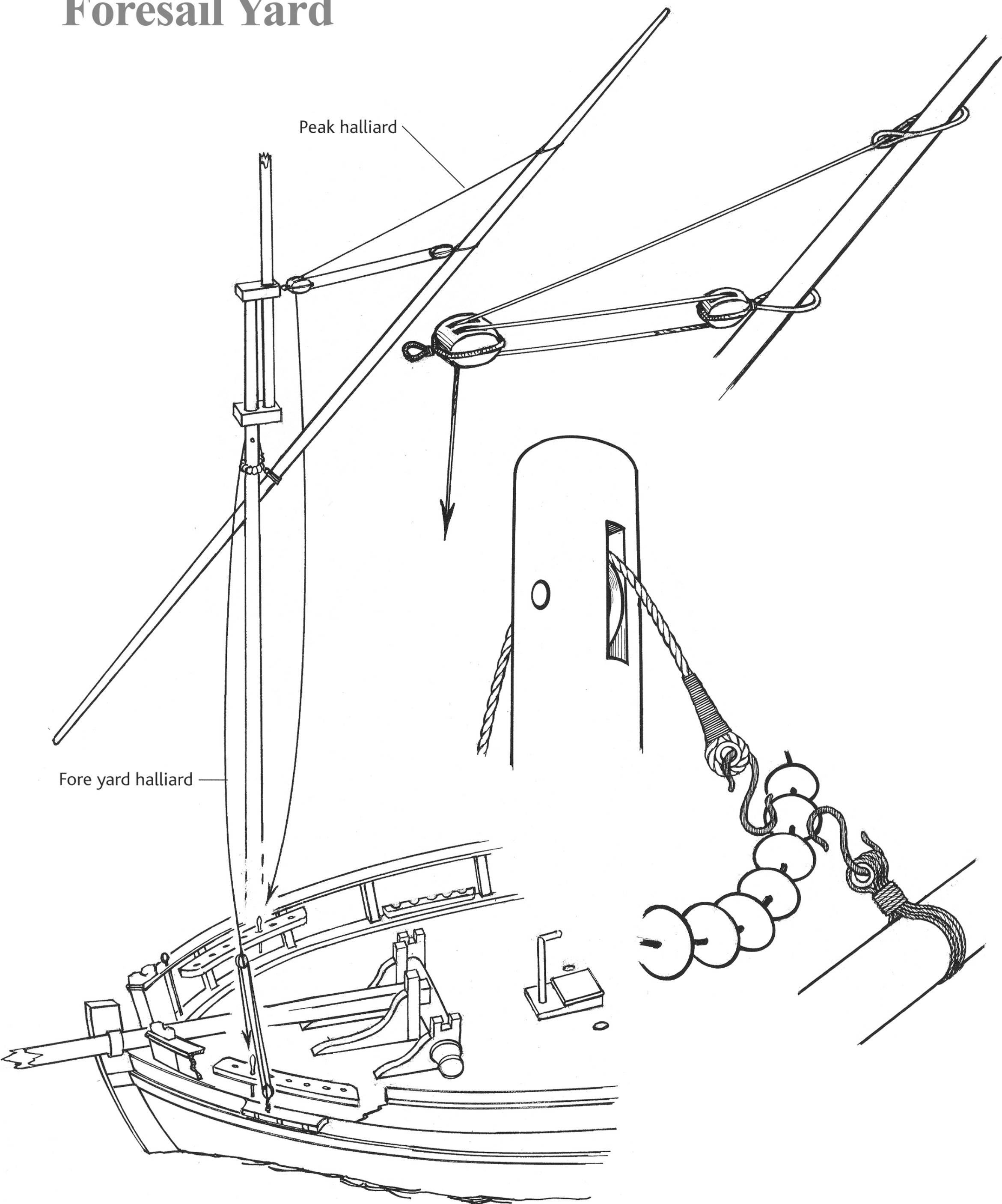
Bobstay & Bowsprit Shrouds



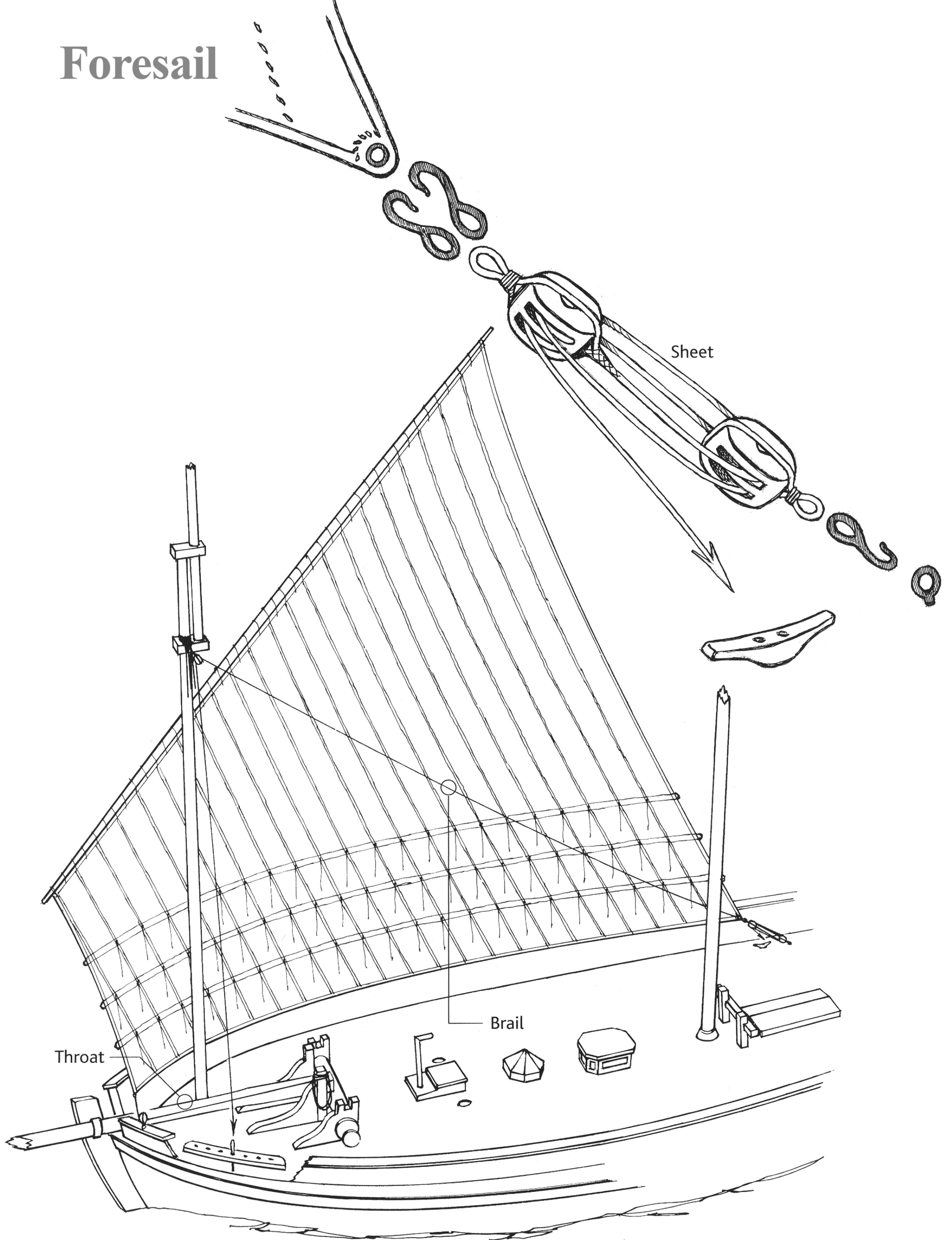
Jib



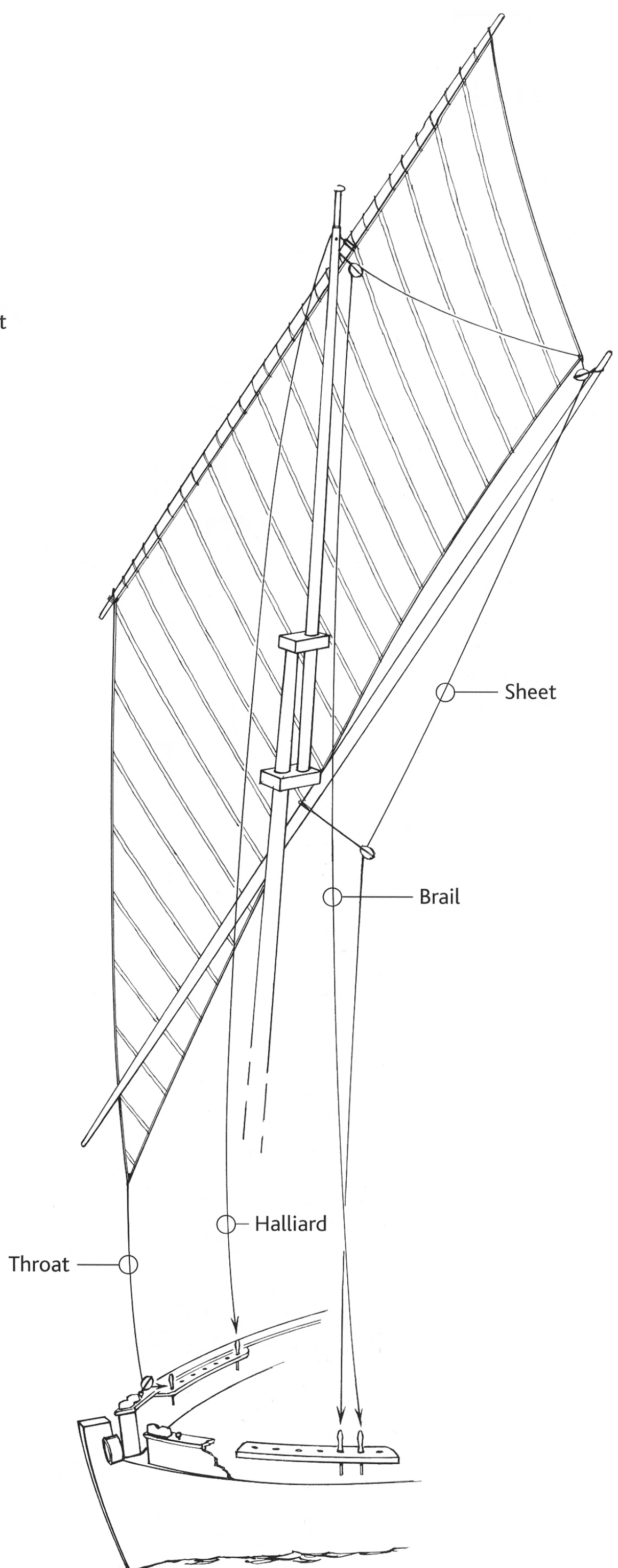
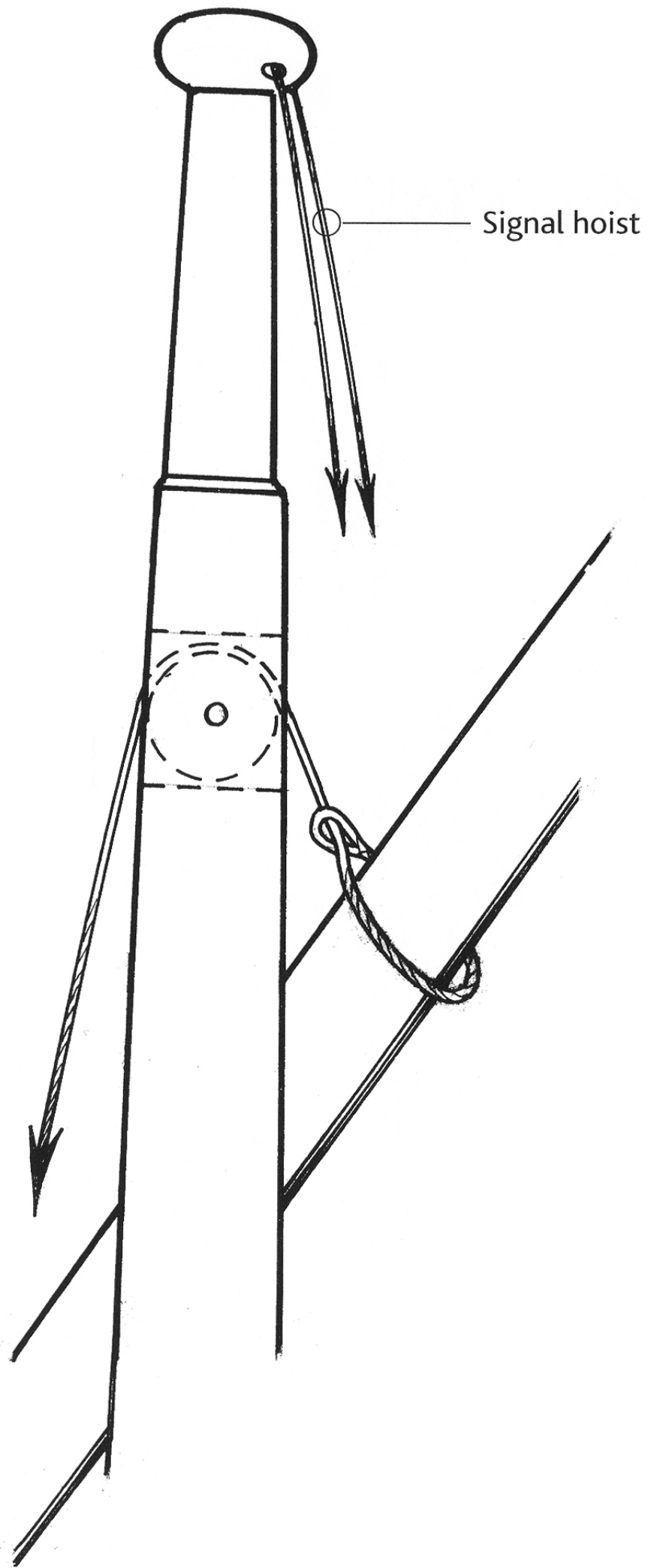
Foresail Yard



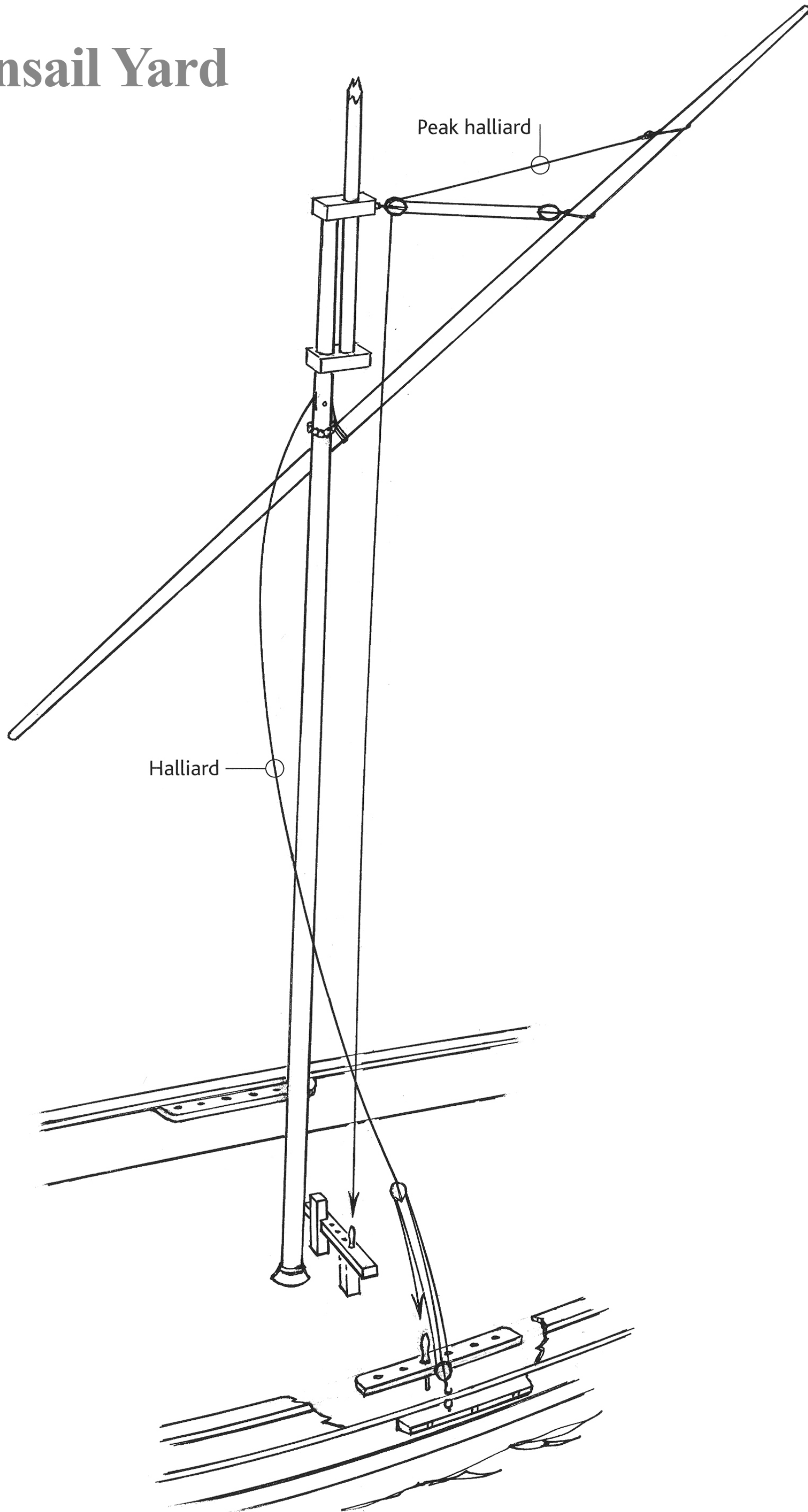
Foresail



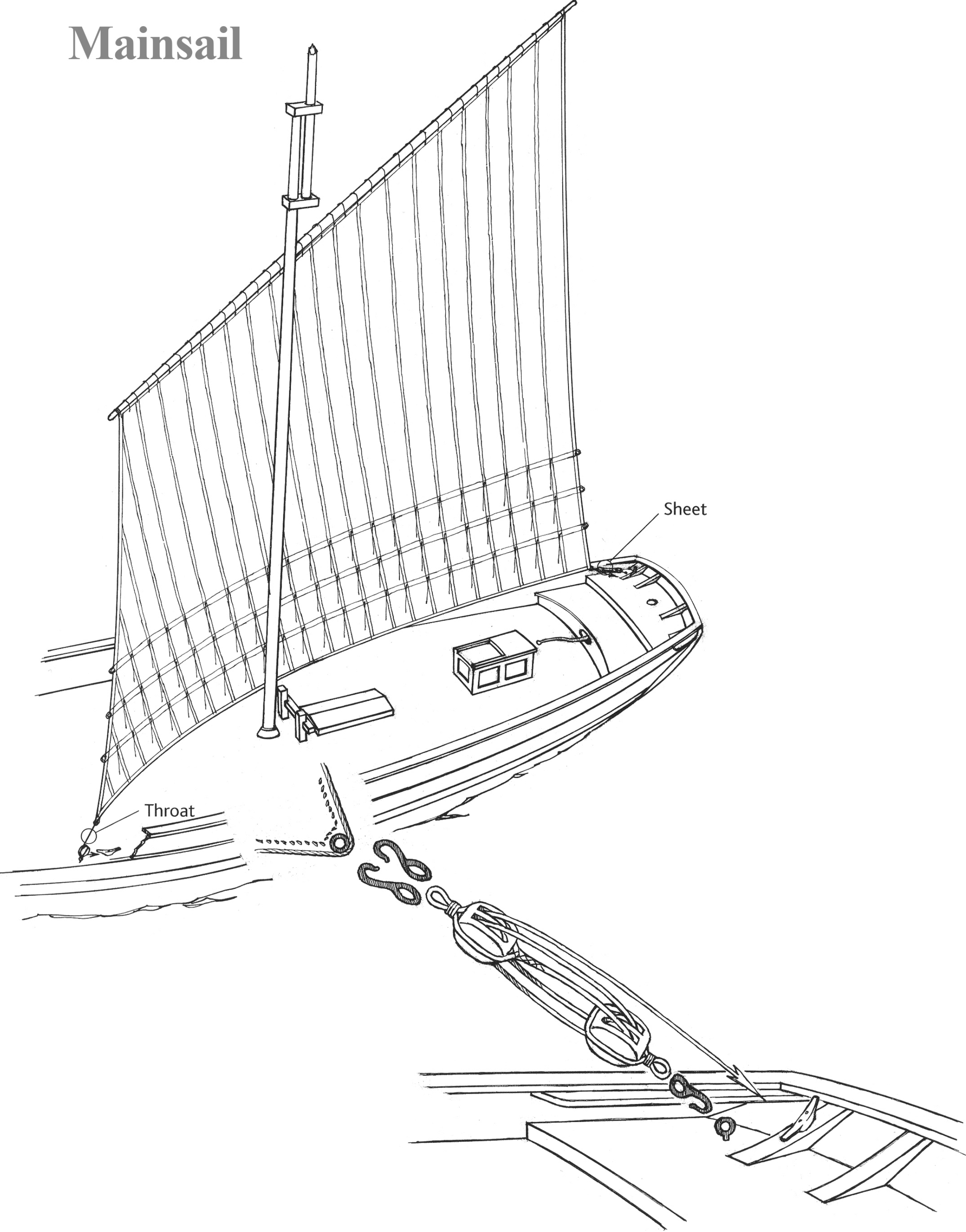
Fore Topsail



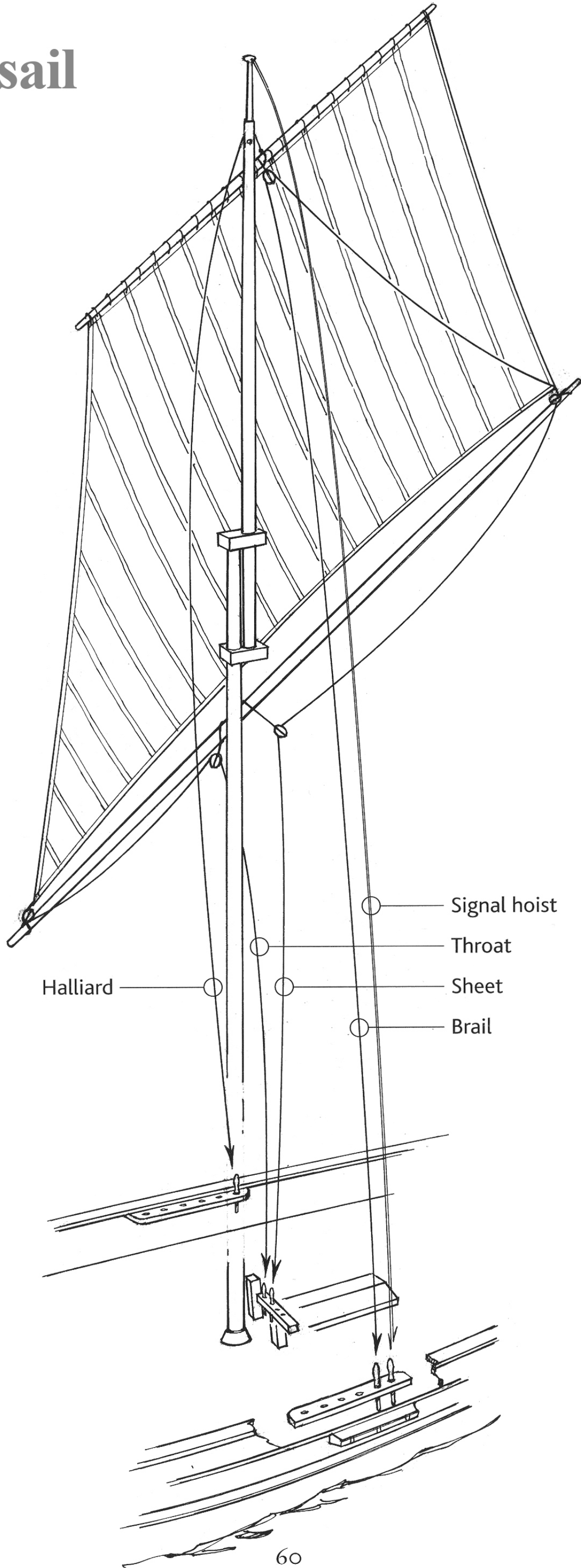
Mainsail Yard



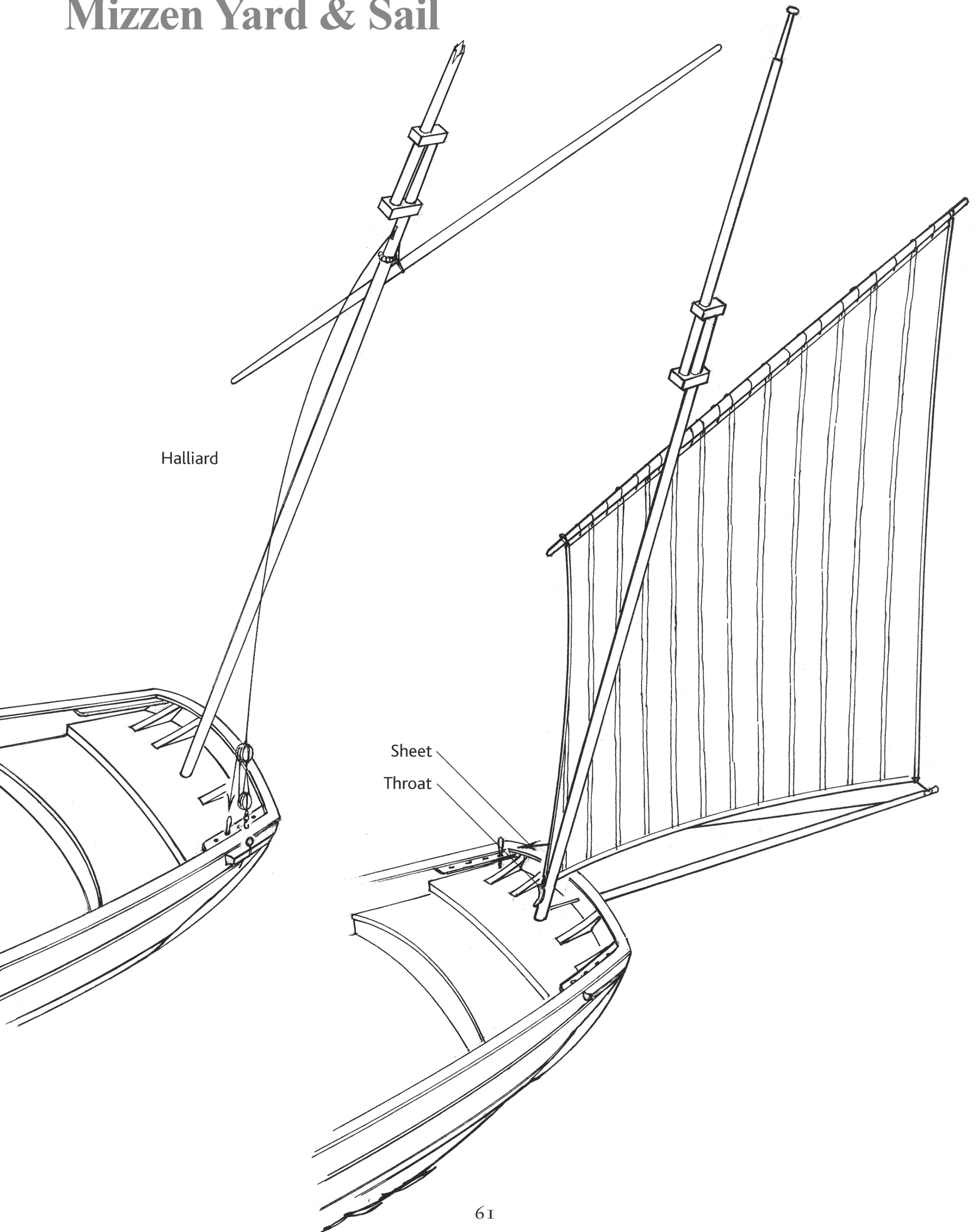
Mainsail



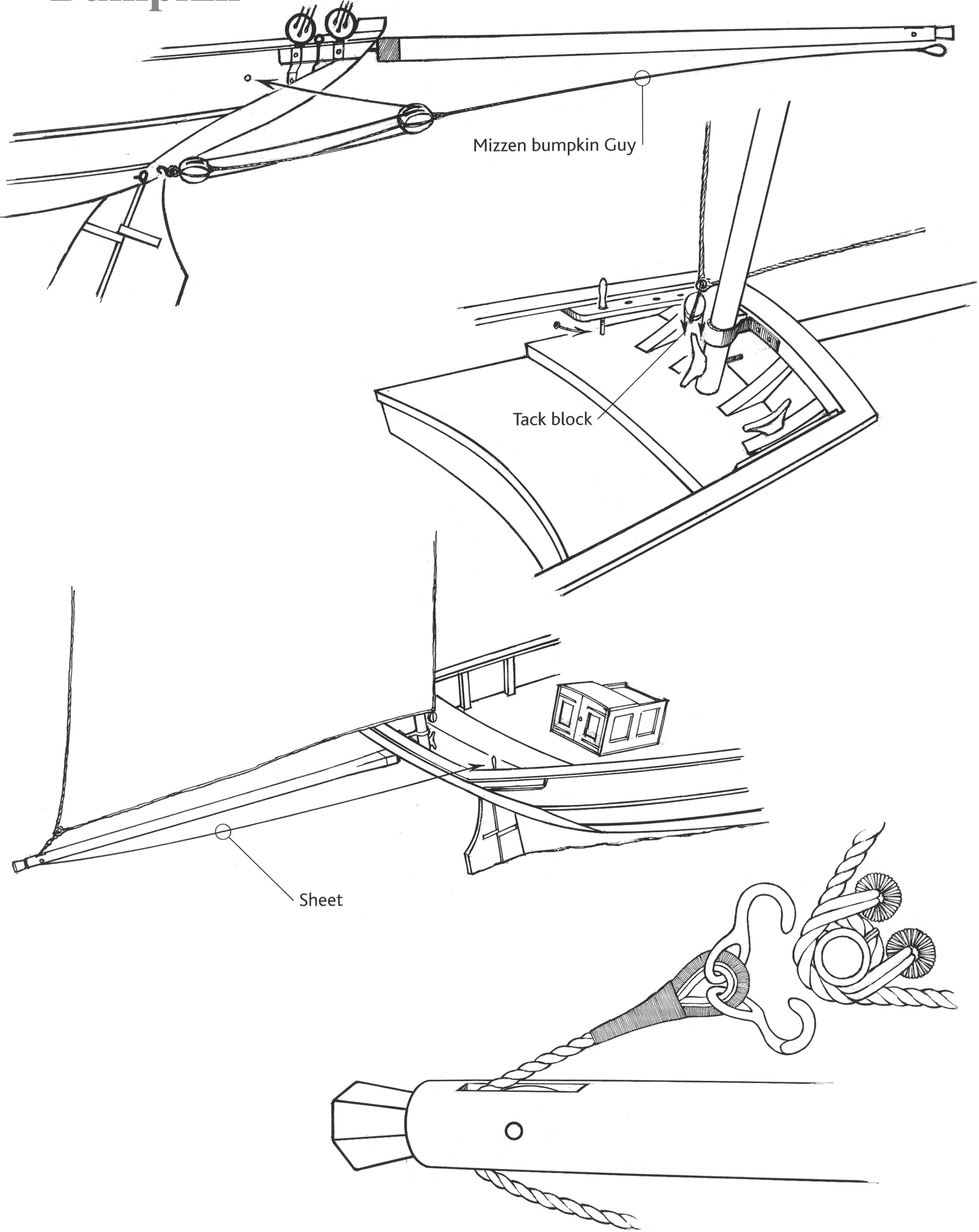
Main Topsail



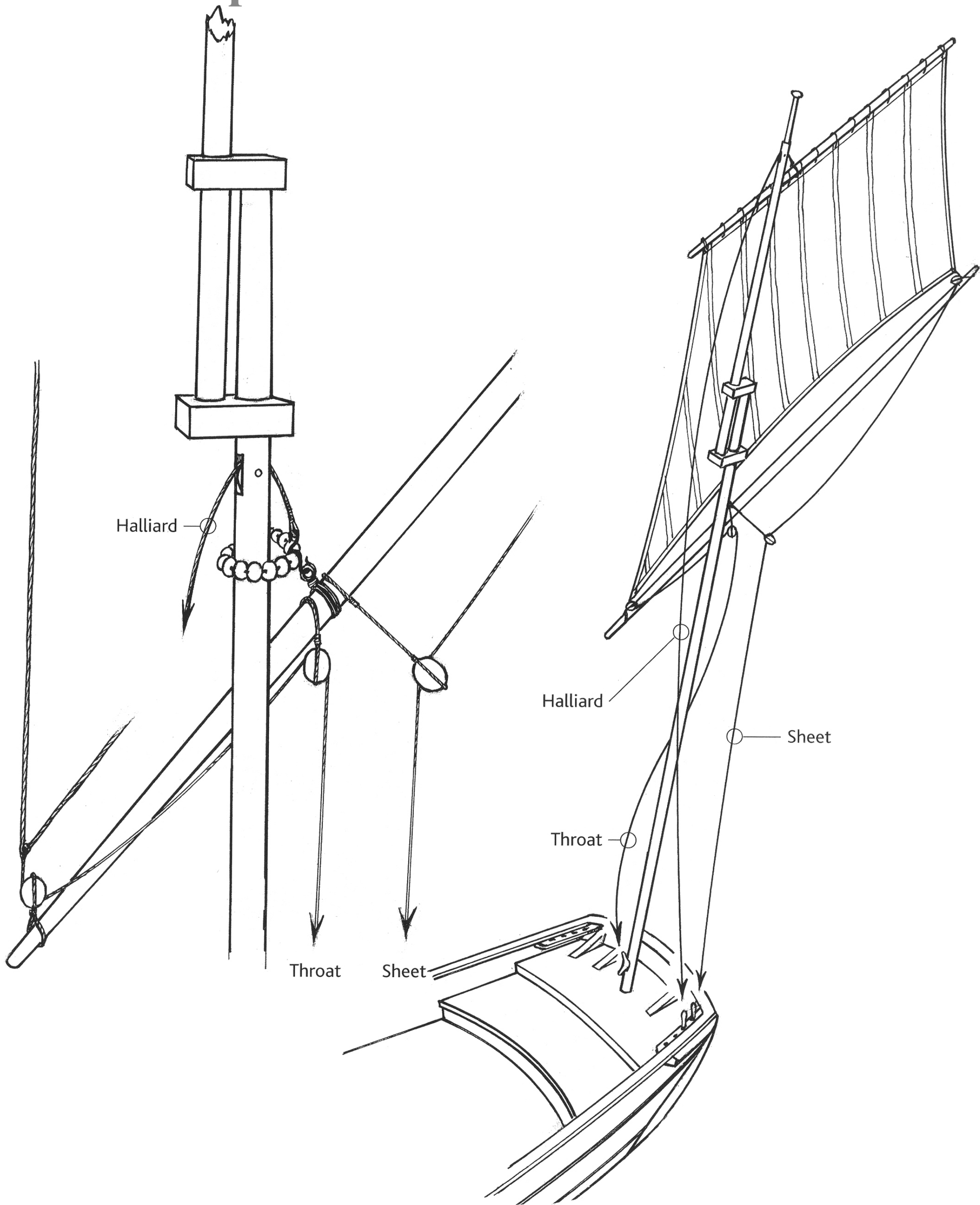
Mizzen Yard & Sail



Bumpkin

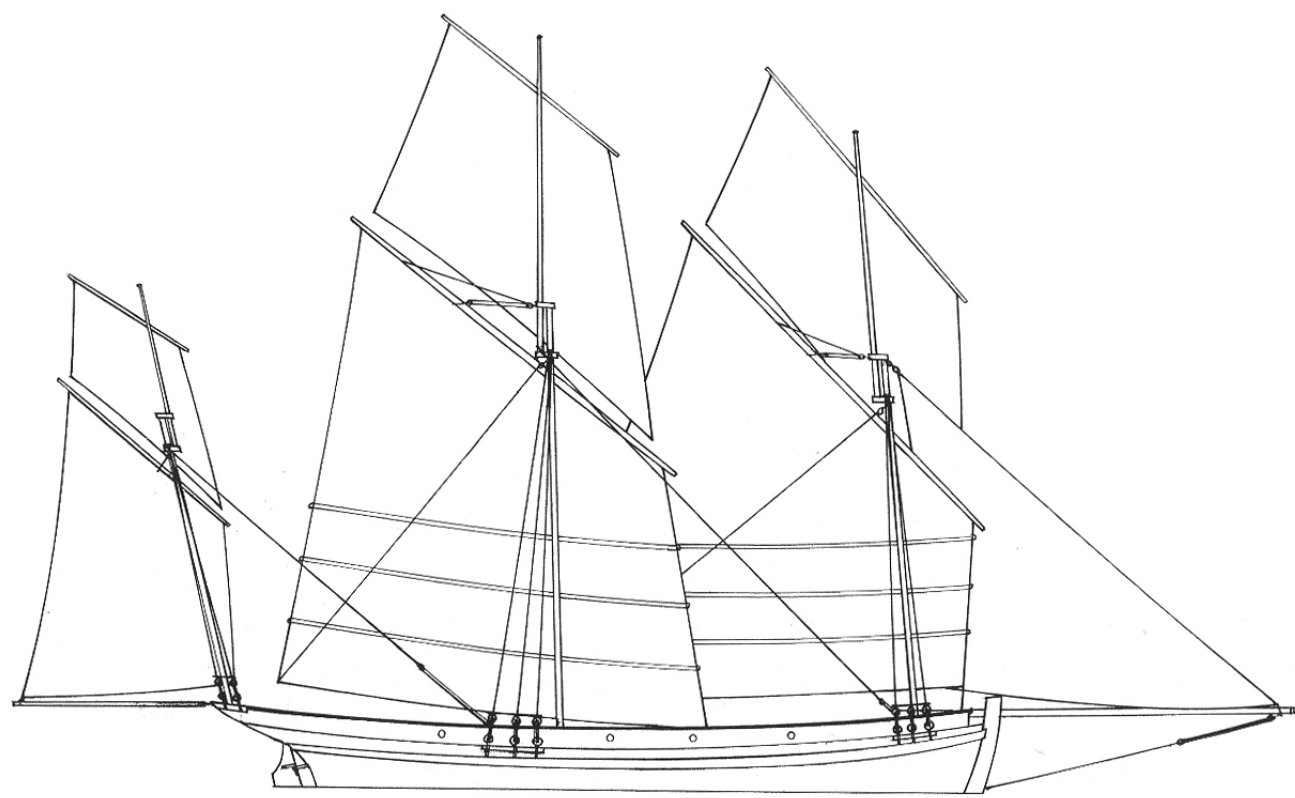


Mizzen Topsail



Anchor Gear





The American Schooner



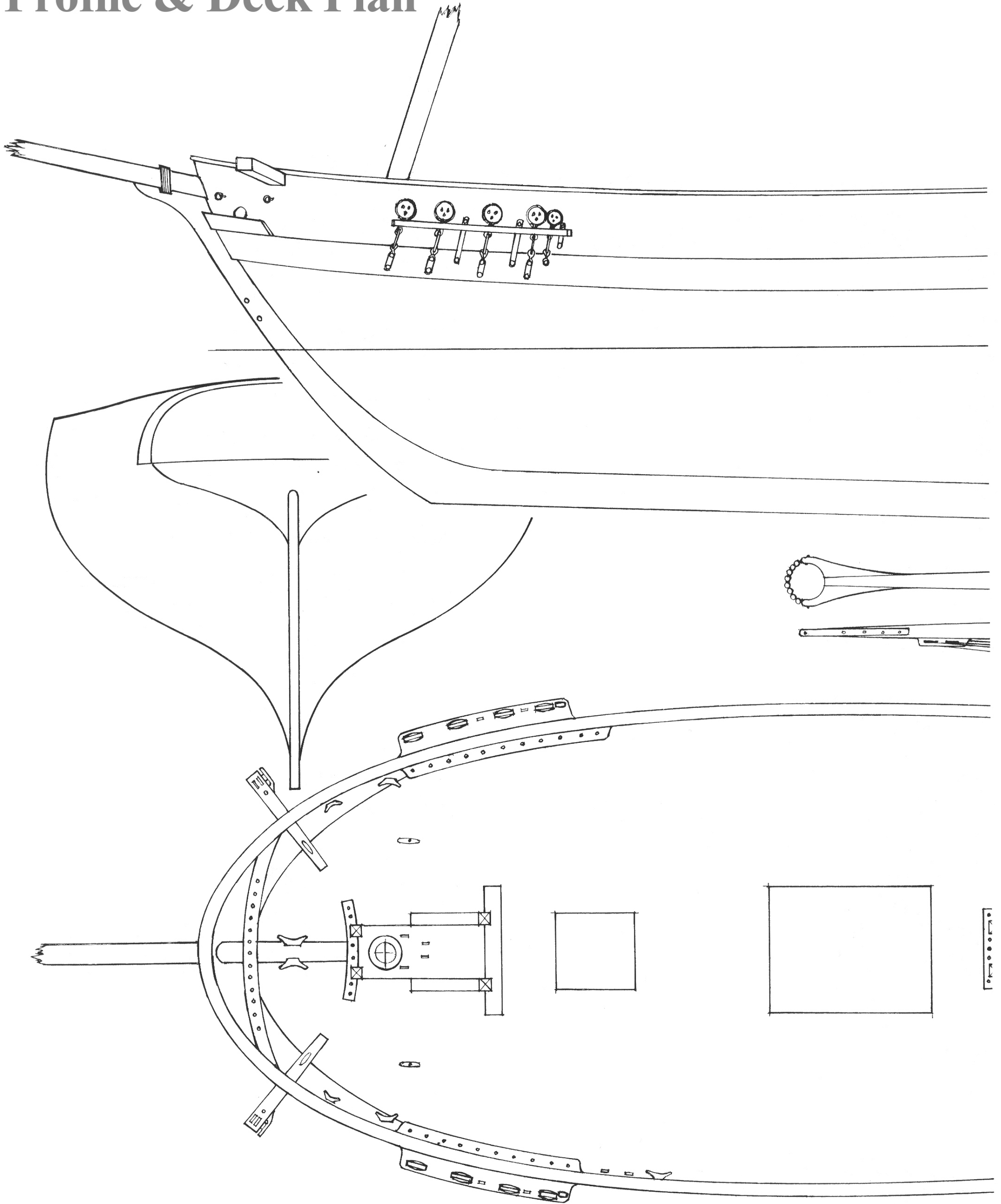
THE RIGGING PLAN for a typical American schooner is based on a model in the Naval Museum, Karlskrona, in Sweden. Although not an exact copy, she bears a close resemblance to the vessel that arrived in Karlskrona in the late summer of 1812 with vital supplies for the Swedish Navy. *Experiment*, as she was named, made a considerable impression on the Swedish Admiral Johan af Puke and later that year it was decided that she should be bought for the Navy. She became the prototype for four vessels built between 1831 and 1847 (namely *Falk*, *af Puke*, *L'Aigle* and *Activ*) and although the model was not entered in the Ships Models register until 1862, it probably dates from the time of the *Experiment's* purchase.

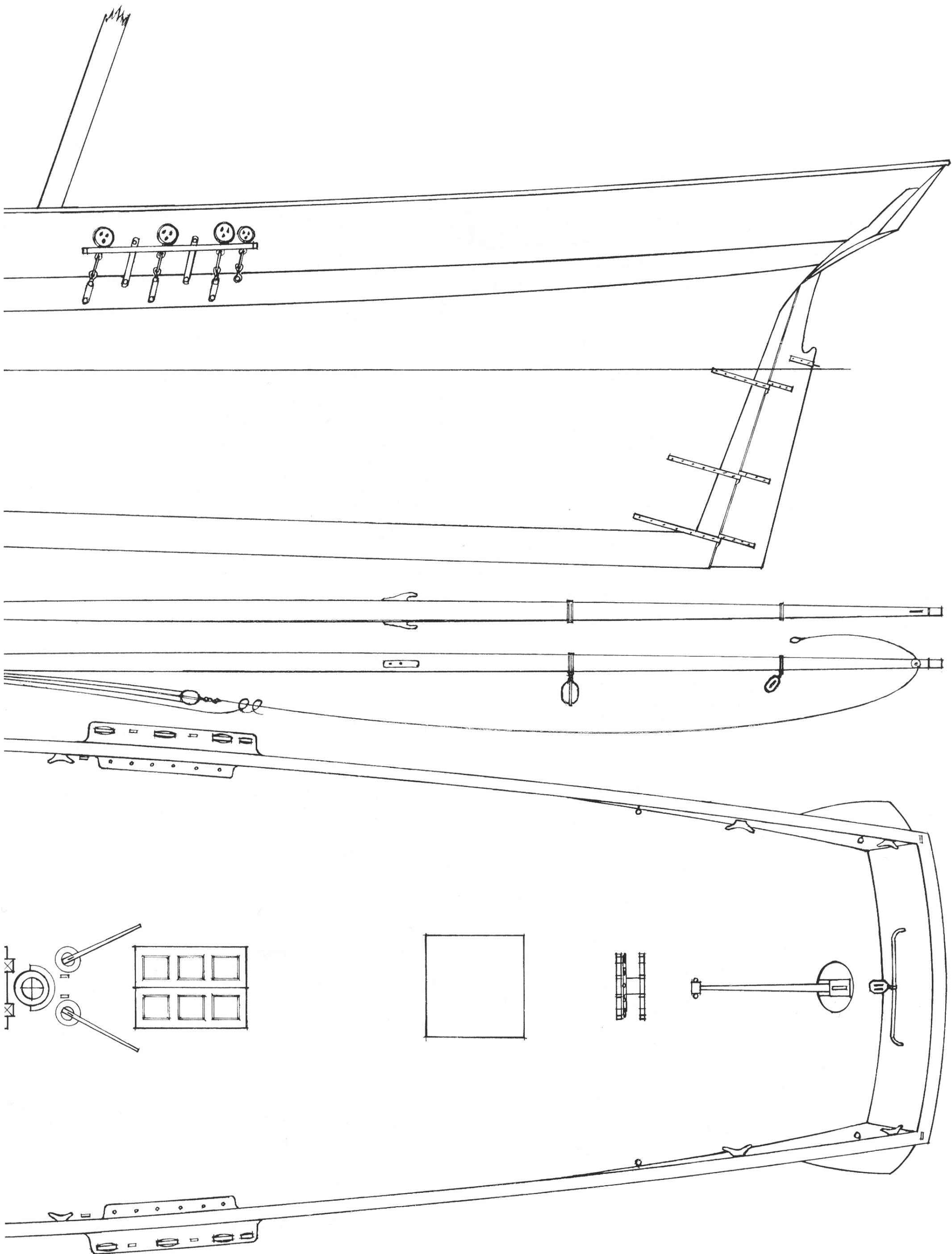
Built in New York in 1808, the *Experiment* had an overall length of 73.3ft, a beam of 20.4ft, a displacement of 138 tons and carried six guns of varying calibre. One of the earliest of the ships later known as 'Baltimore clippers', she was one of the fastest vessels in the Swedish Navy and remained in the Navy in service until 1871. These fore-and-aft schooners were fast to windward and they became the perfect model of the privateer. But with their low freeboard, relatively light build and tall rig they were

vulnerable in a sea and certainly difficult to handle; nor had they the displacement to carry much armament. But the raked masts, carrying a cloud of canvas, and the long, lean hulls made for very fast if dangerous ships, and the unsettled political situation during the French Revolution and the Napoleonic Wars led to an enormous demand for fast vessels suitable for blockade running, reconnaissance, smuggling and privateering; these American schooners, renowned for their speed and excellent sailing qualities, were the perfect answer and were in great demand by the European navies. Not all were purchased, however, and a number were inevitably taken as prizes.

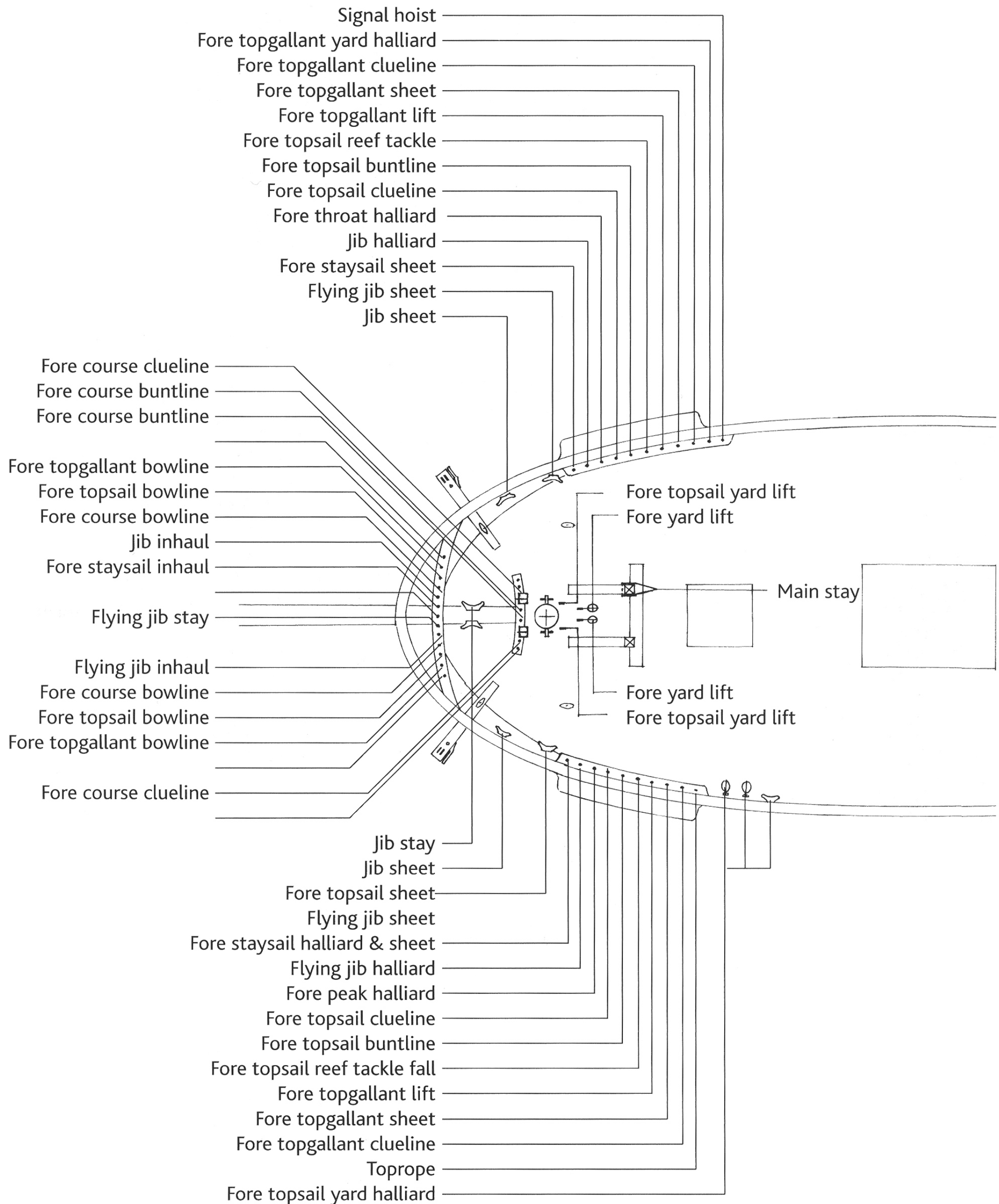
The *Prince de Neufchatel*, one of the largest specialist-built American privateers, so impressed the Royal Navy that a copy was planned, but the end of the War of 1812 put such plans on hold. Even after the end of the war, however, these vessels played a significant role in the development of the sailing ship and through-out the nineteenth century their lines and rig exerted influence on both the ships of the Royal Navy and on merchant vessel design, and in the field of competitive yachting they became the forerunners of the elegant boats that would race for the America's Cup.

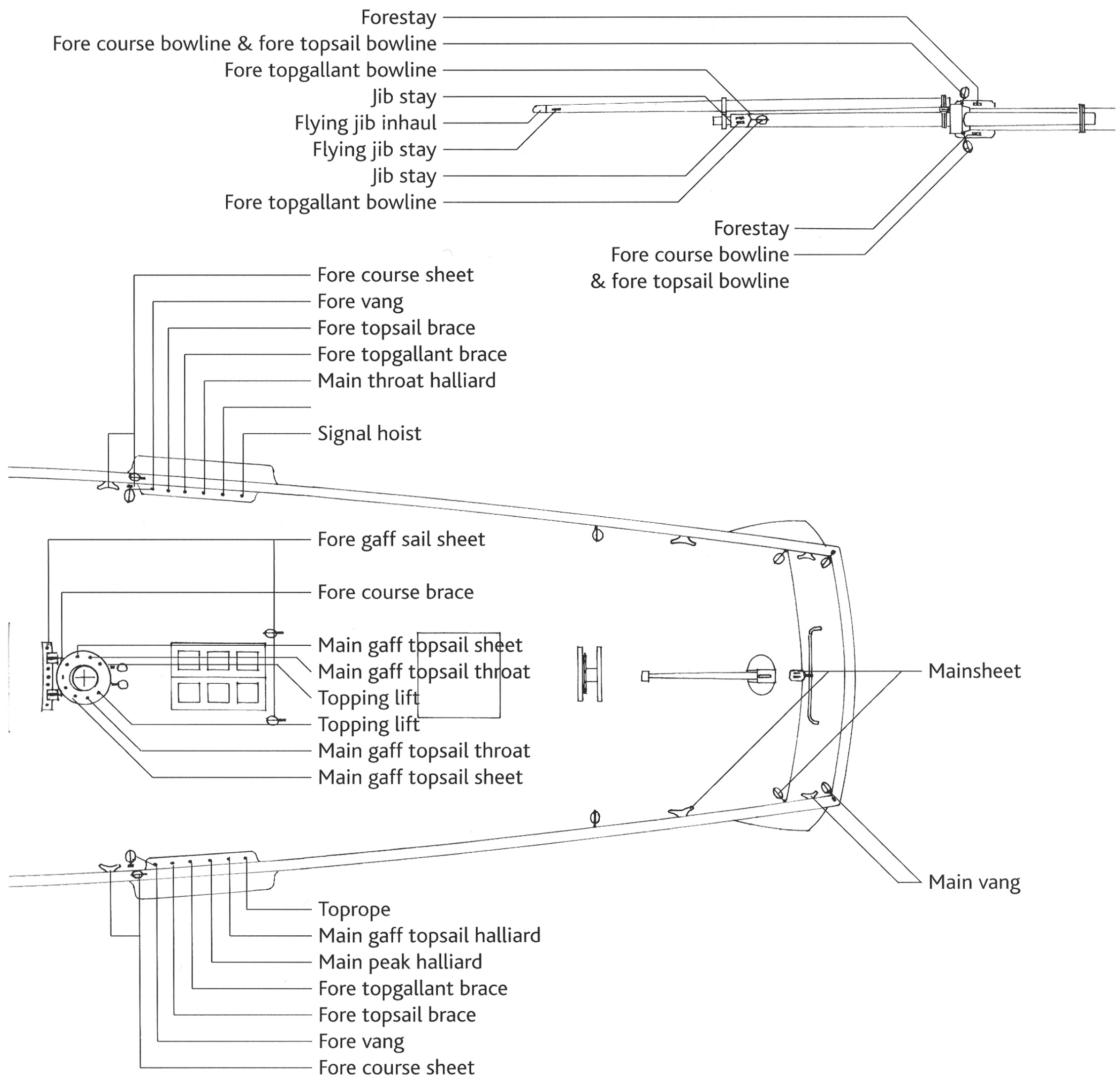
Profile & Deck Plan



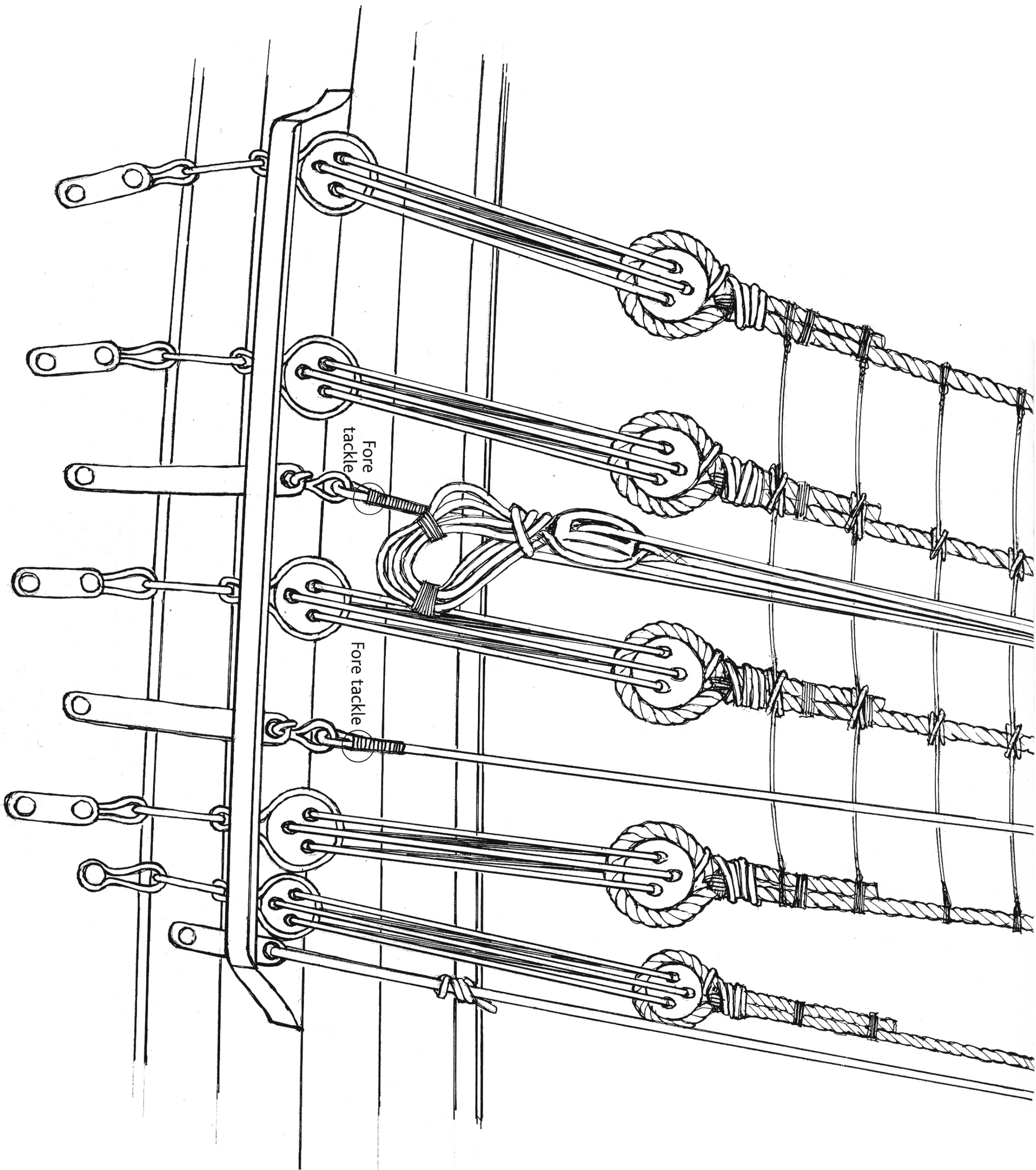


Belaying Plan

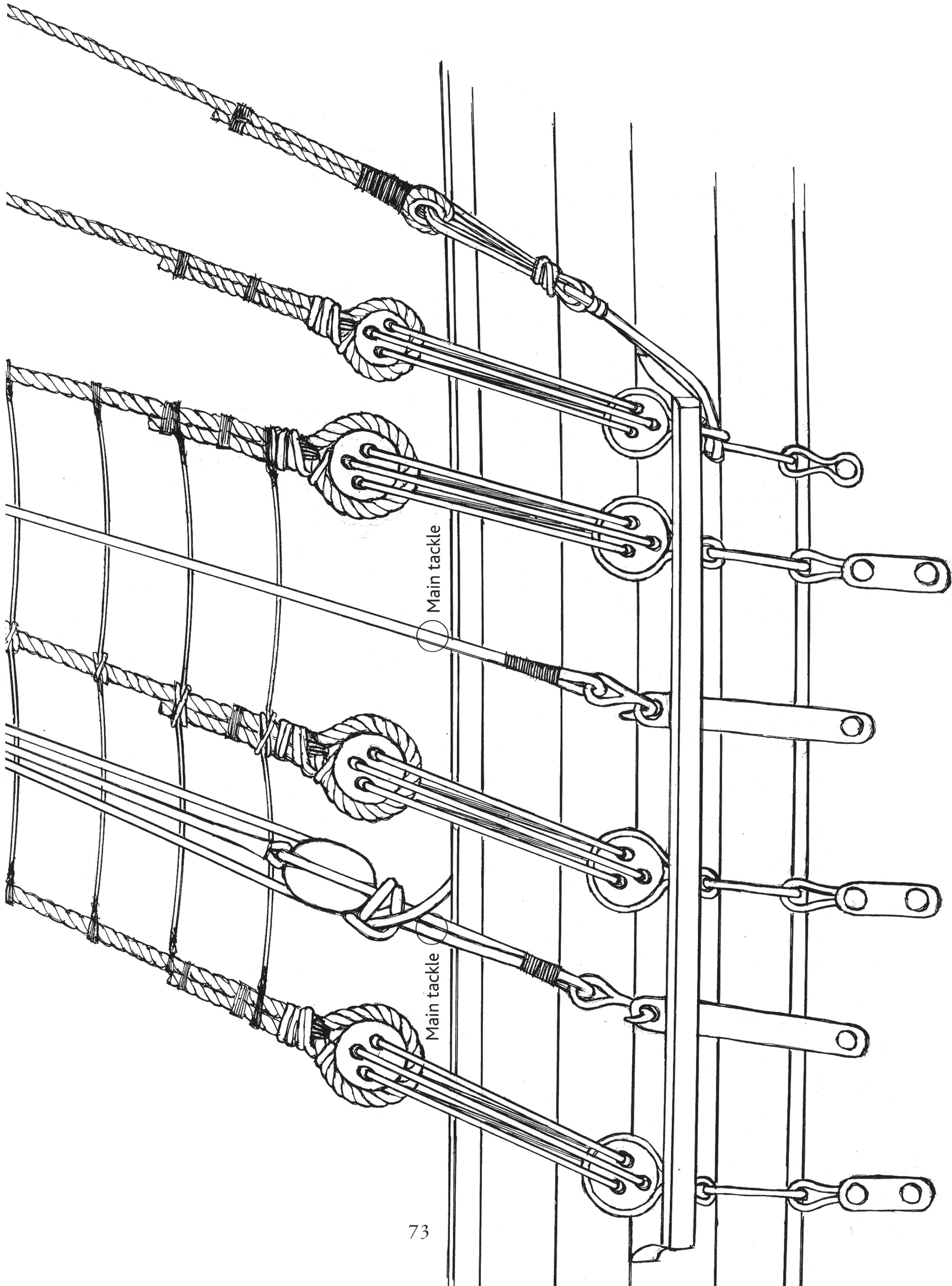




Fore Channels



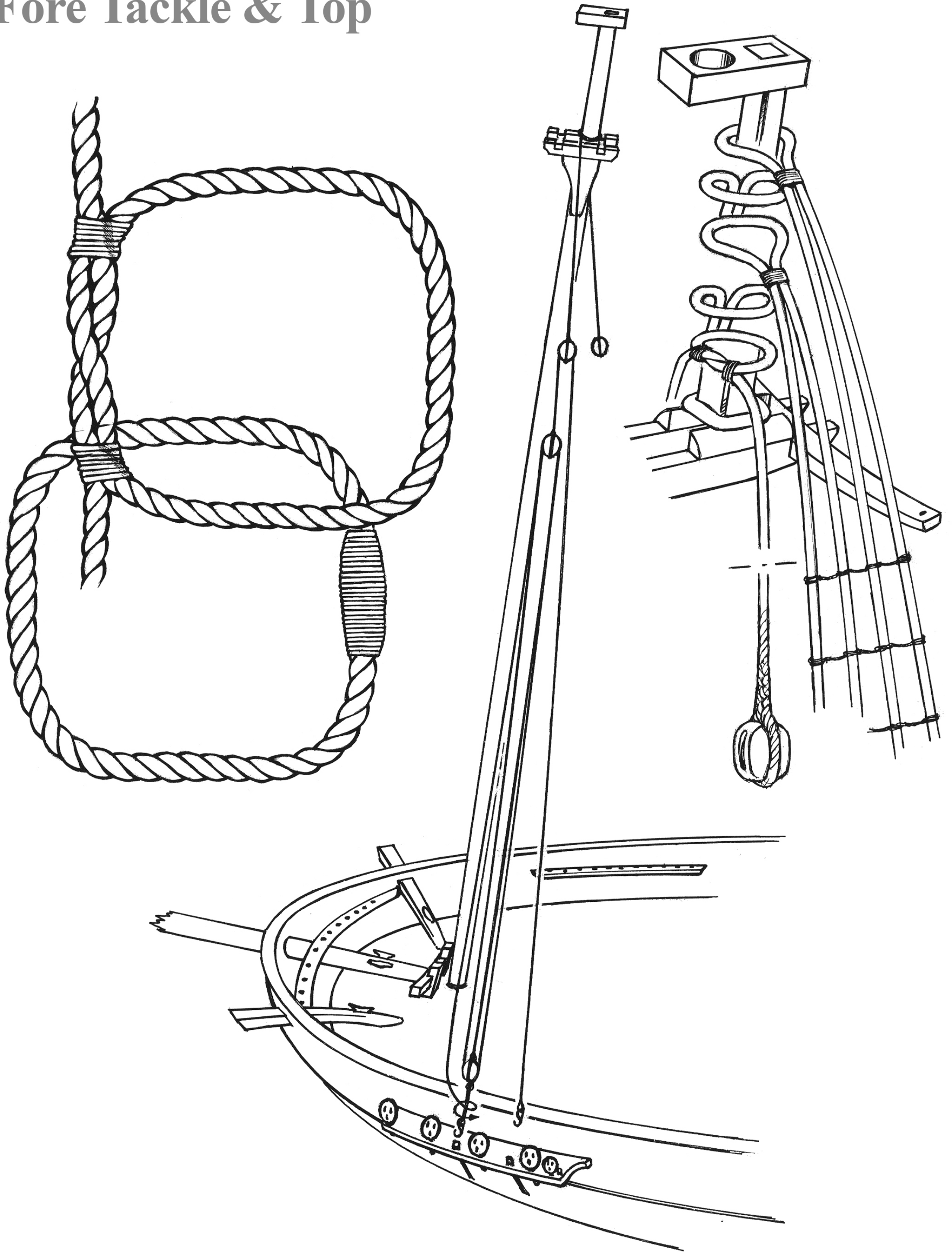
Main Channels



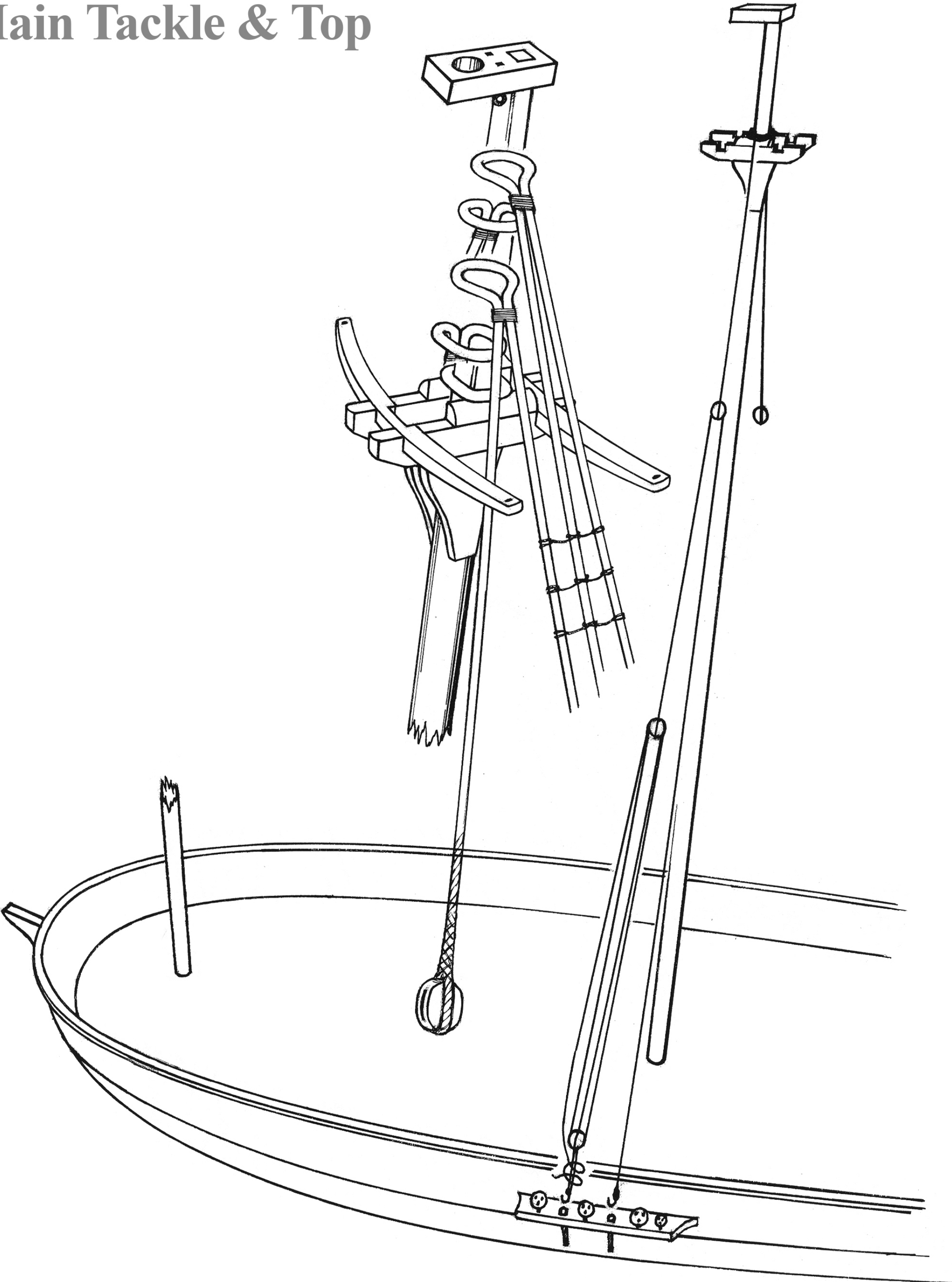
Main tackle

Main tackle

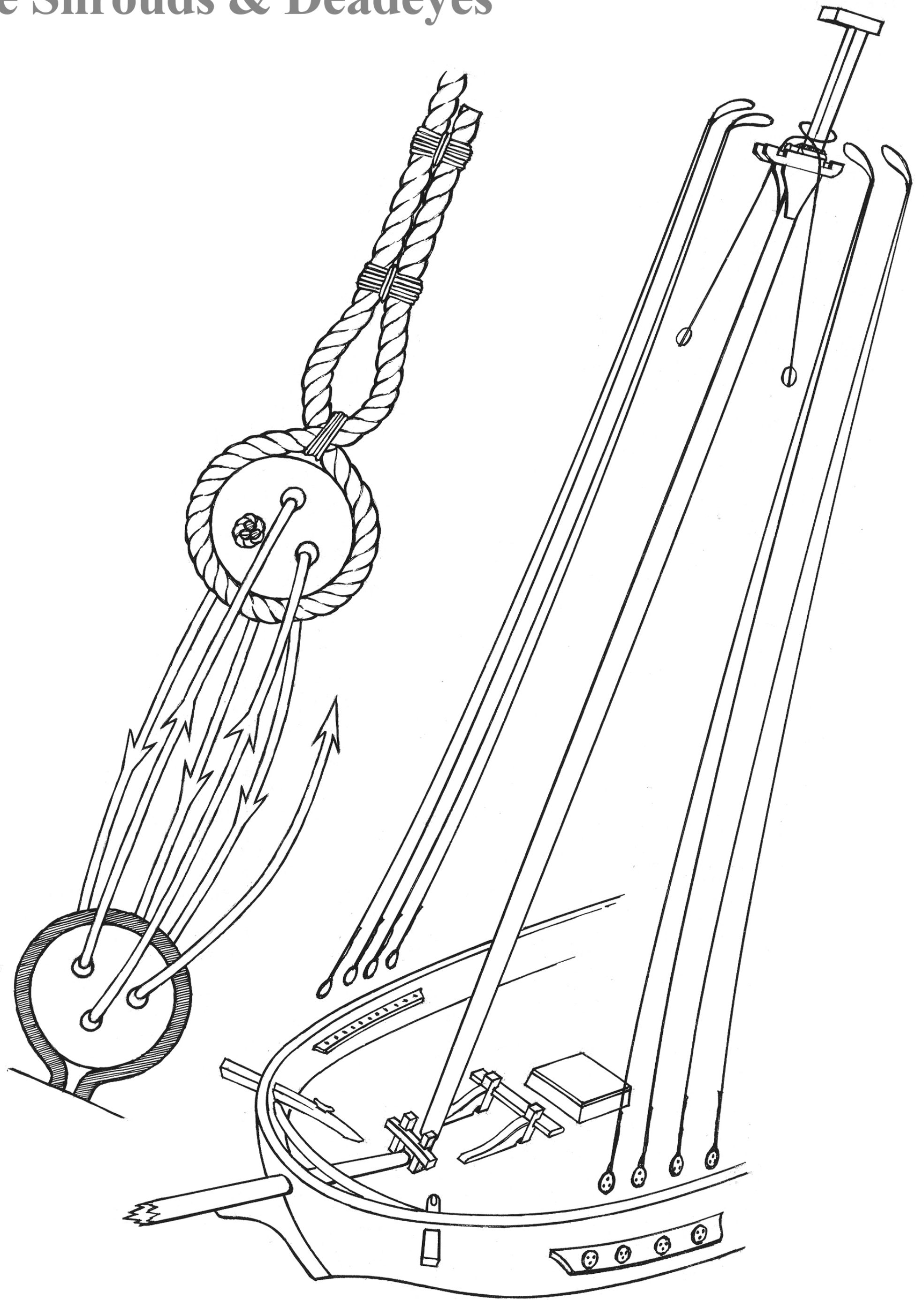
Fore Tackle & Top



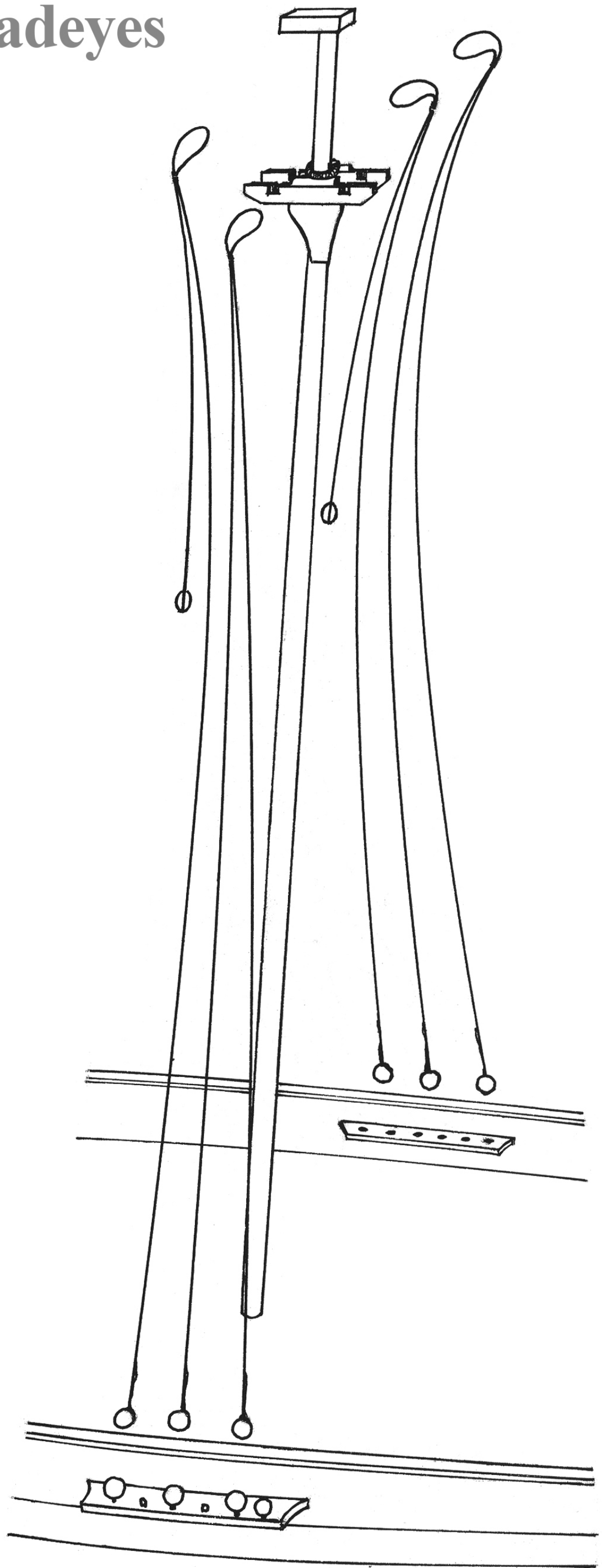
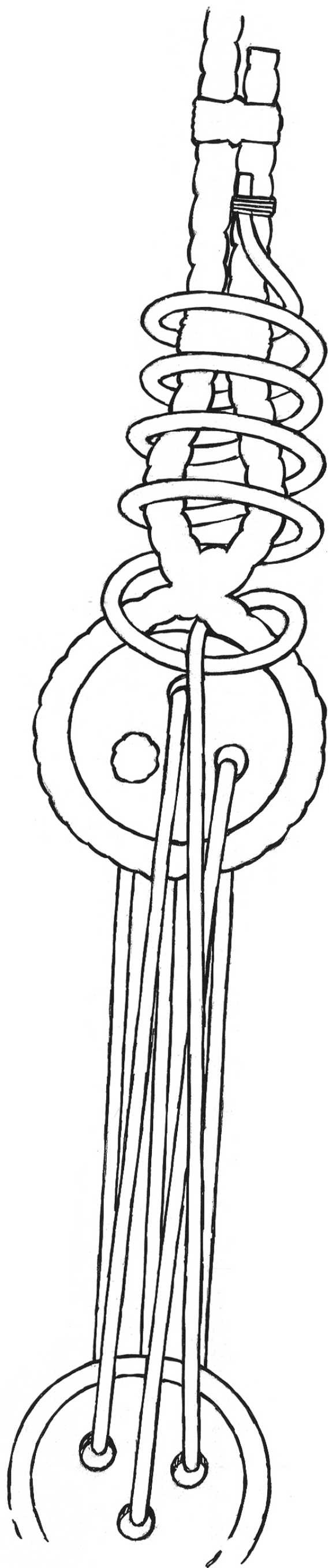
Main Tackle & Top



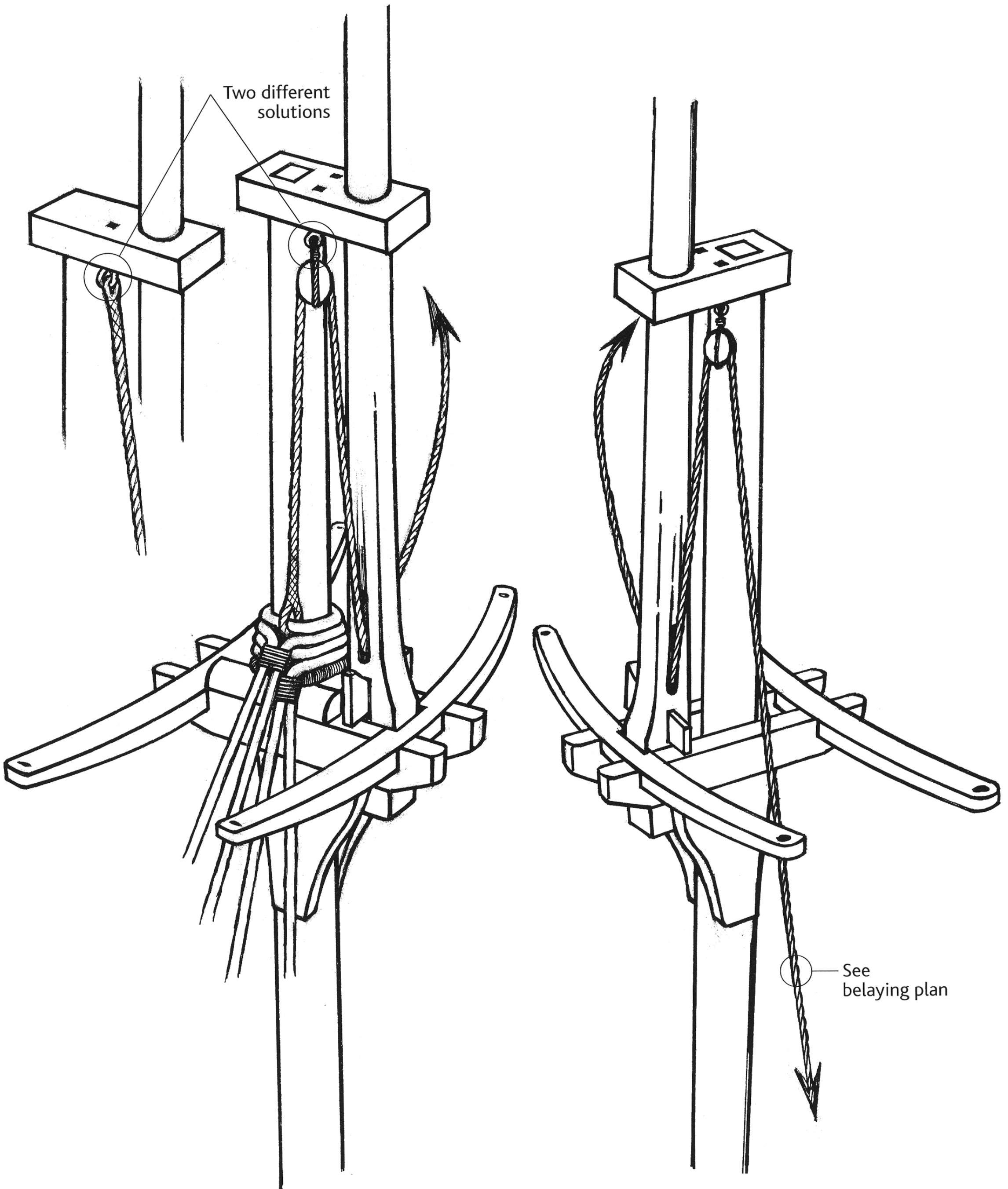
Fore Shrouds & Deadeyes



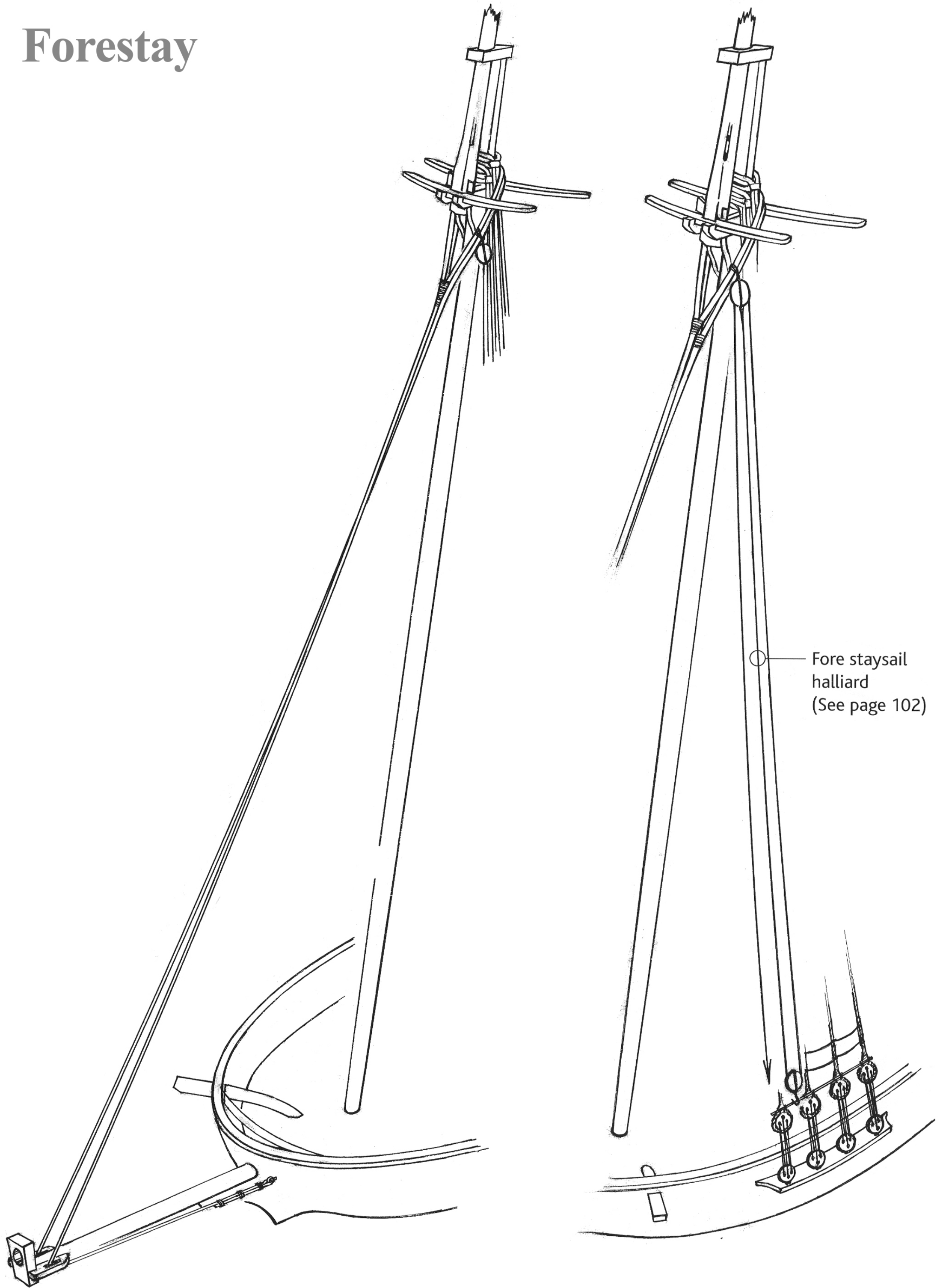
Main Shrouds & Deadeyes



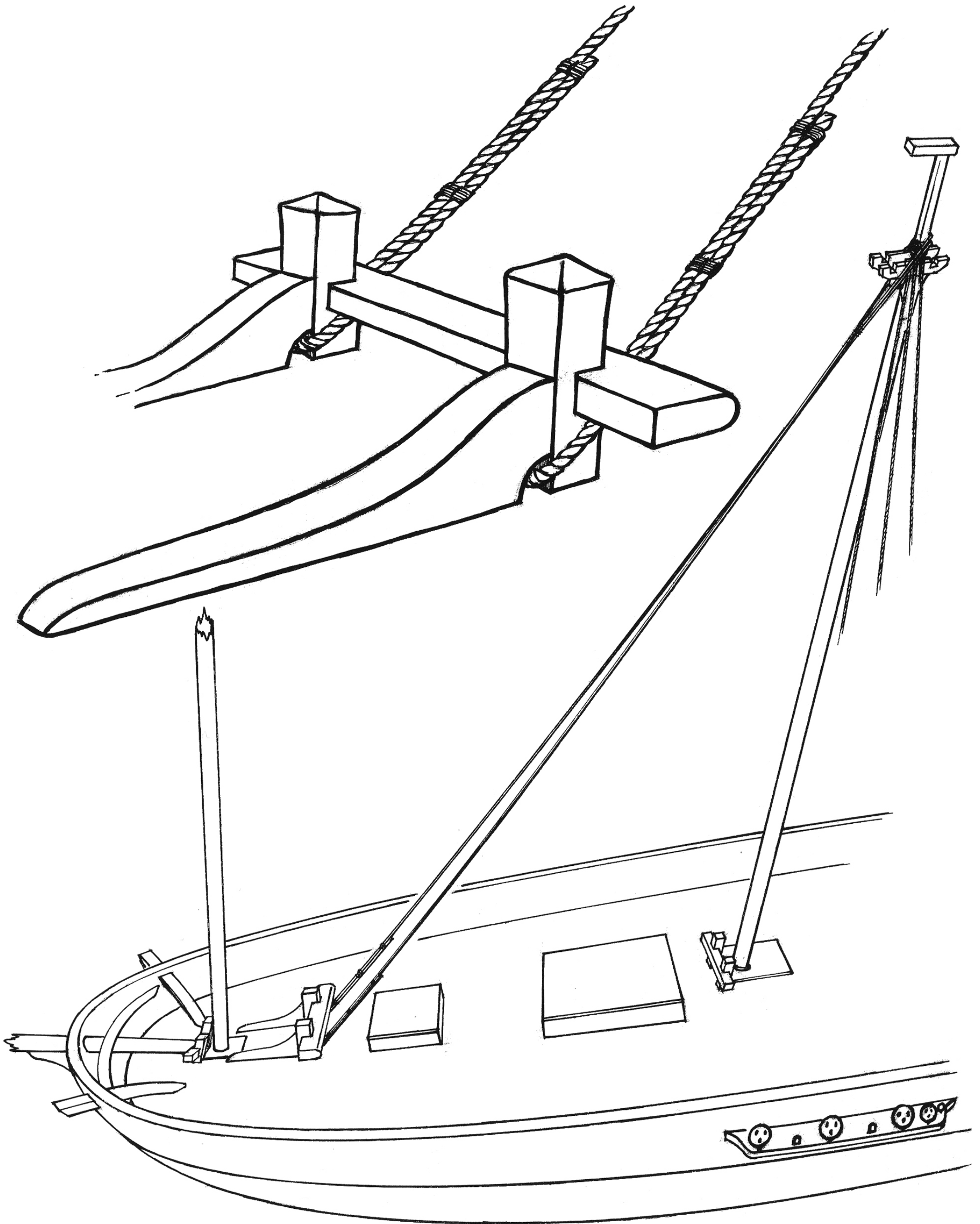
Toprope



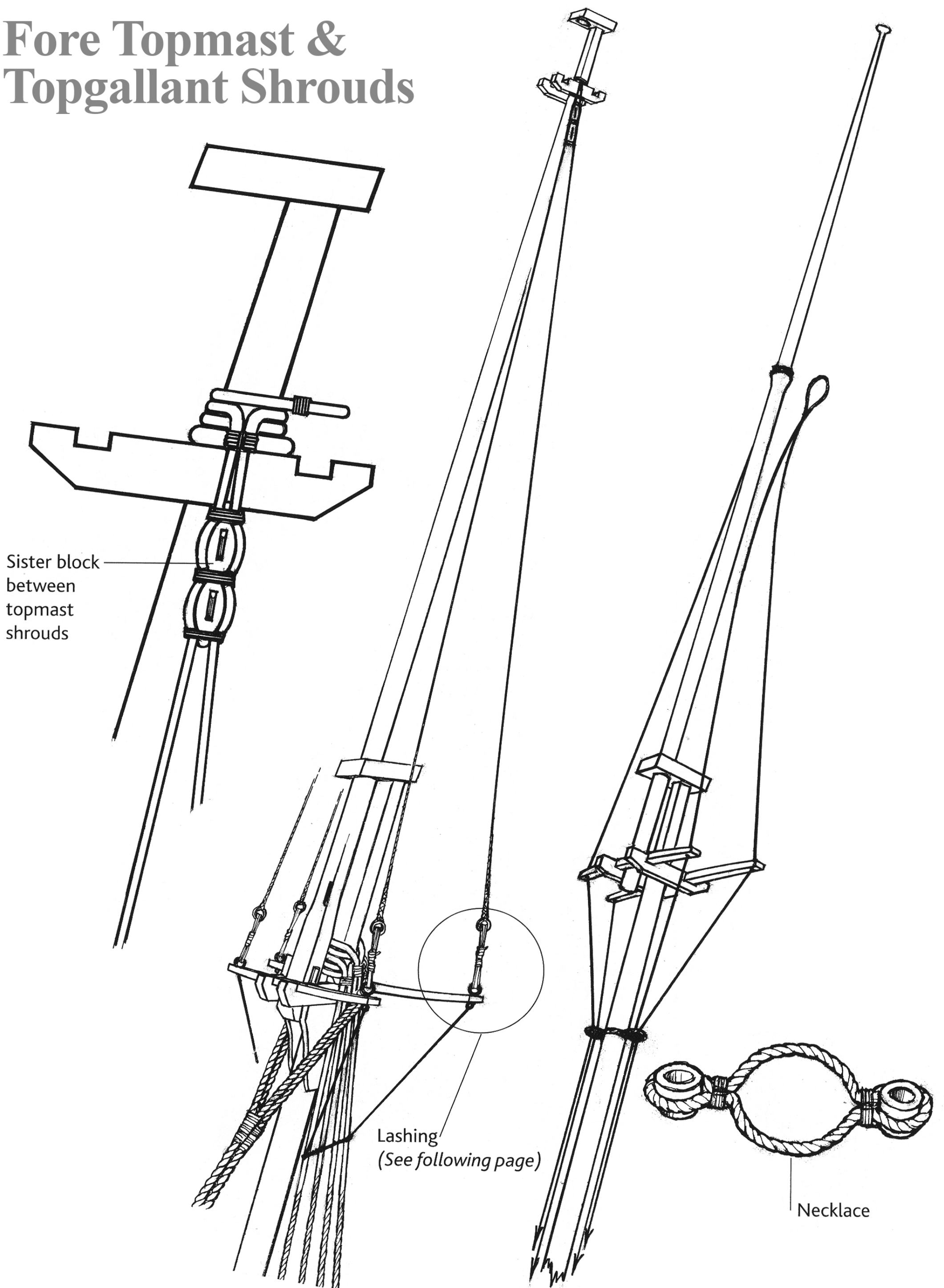
Forestay



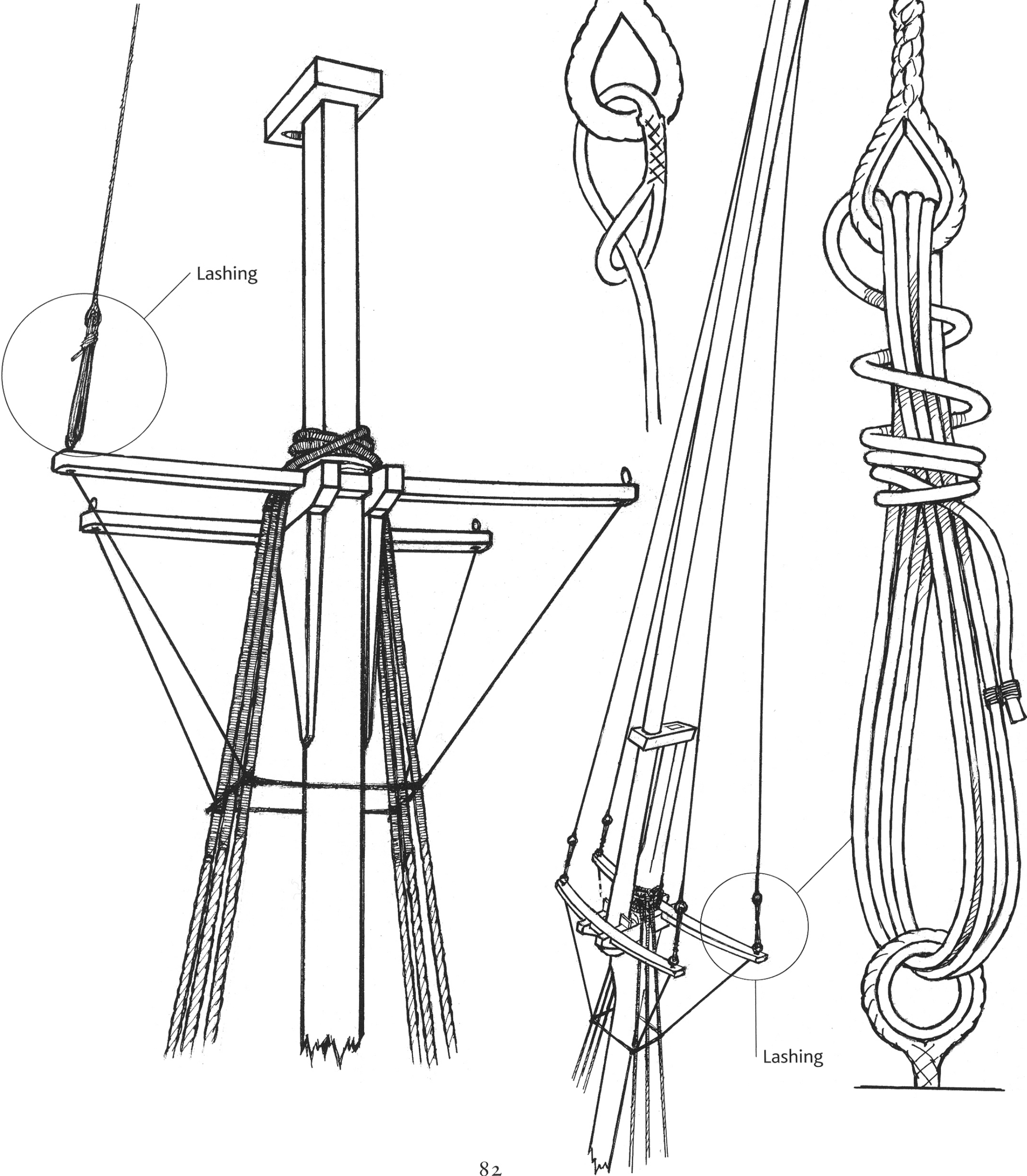
Mainstay



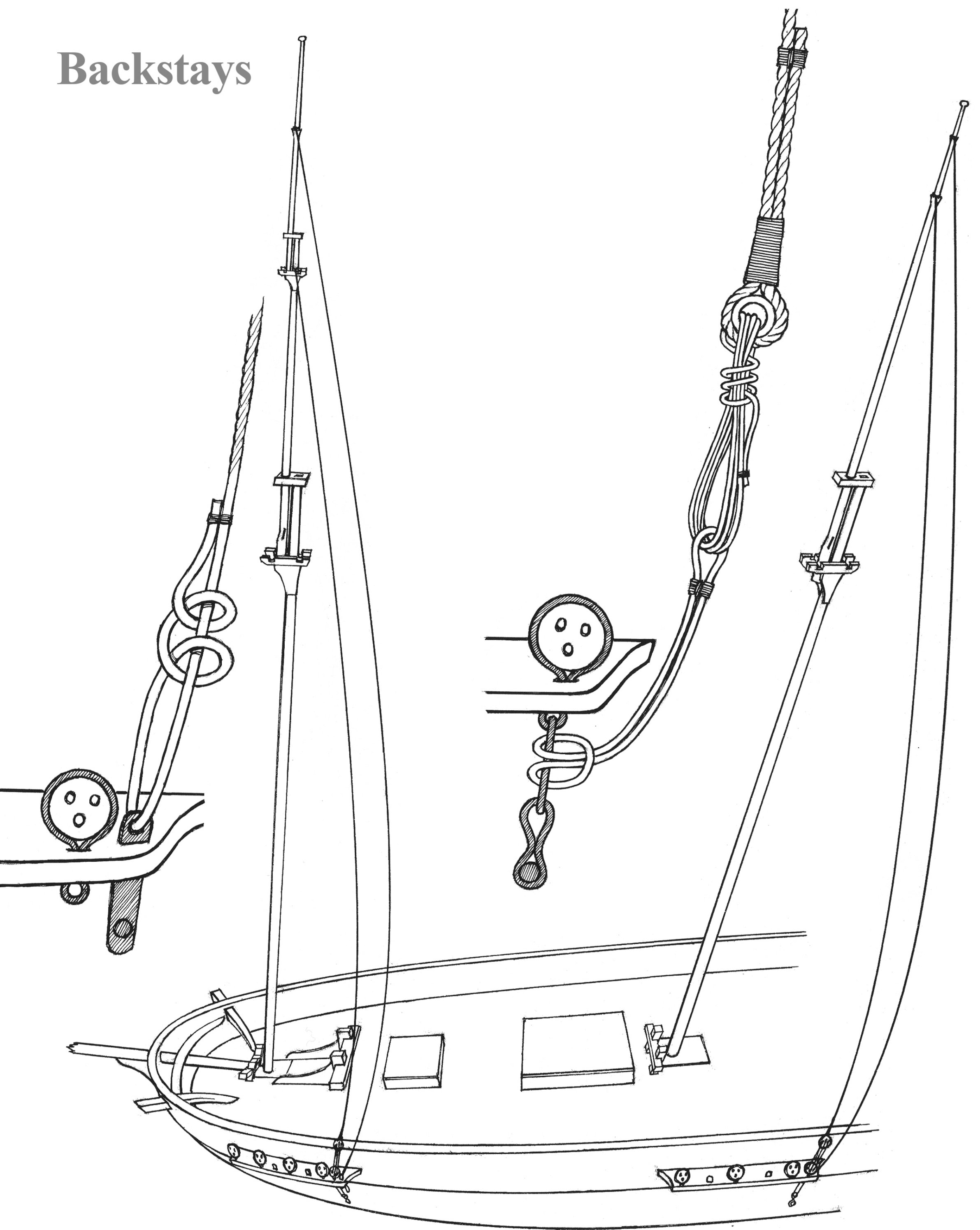
Fore Topmast & Topgallant Shrouds



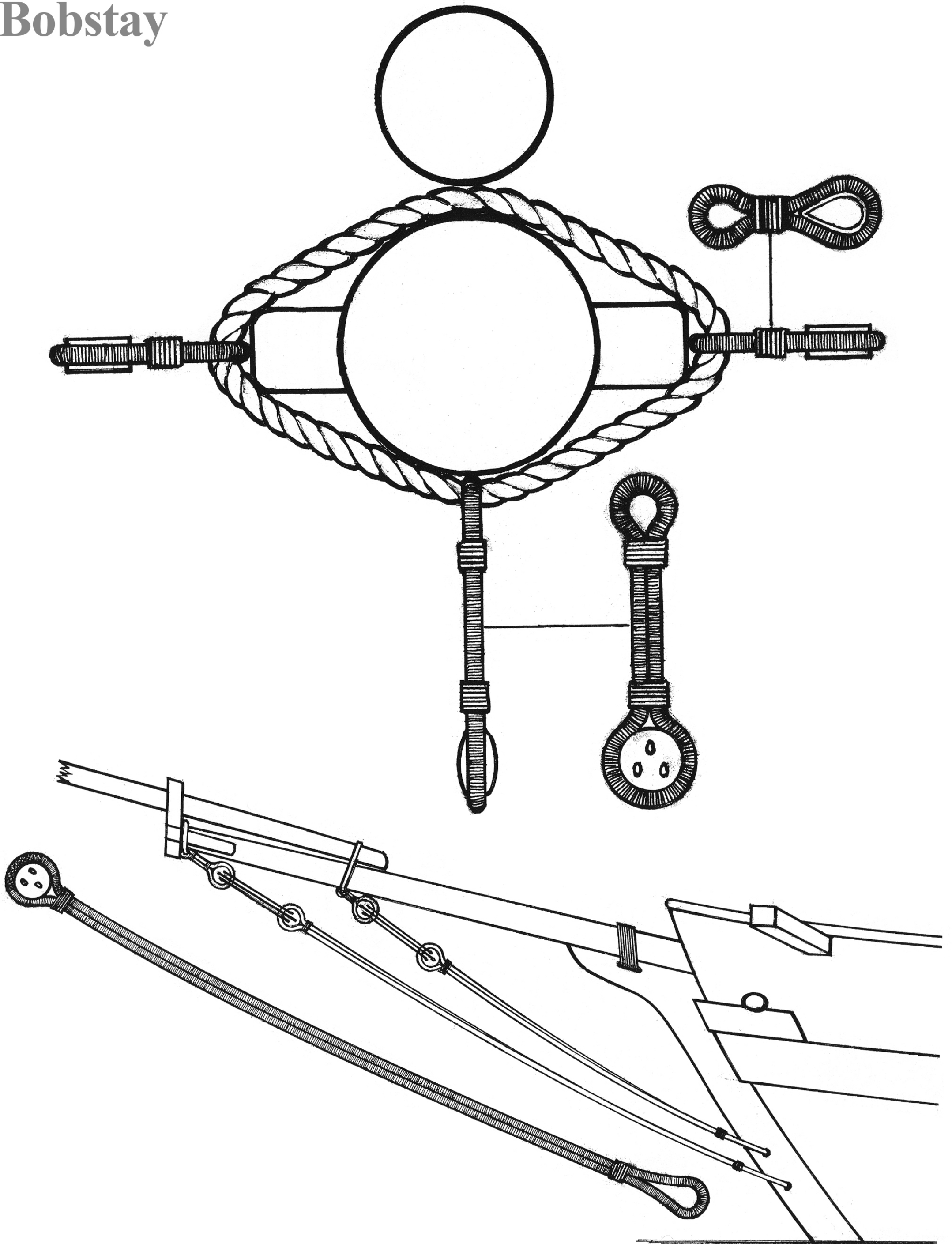
Main Topmast Shrouds



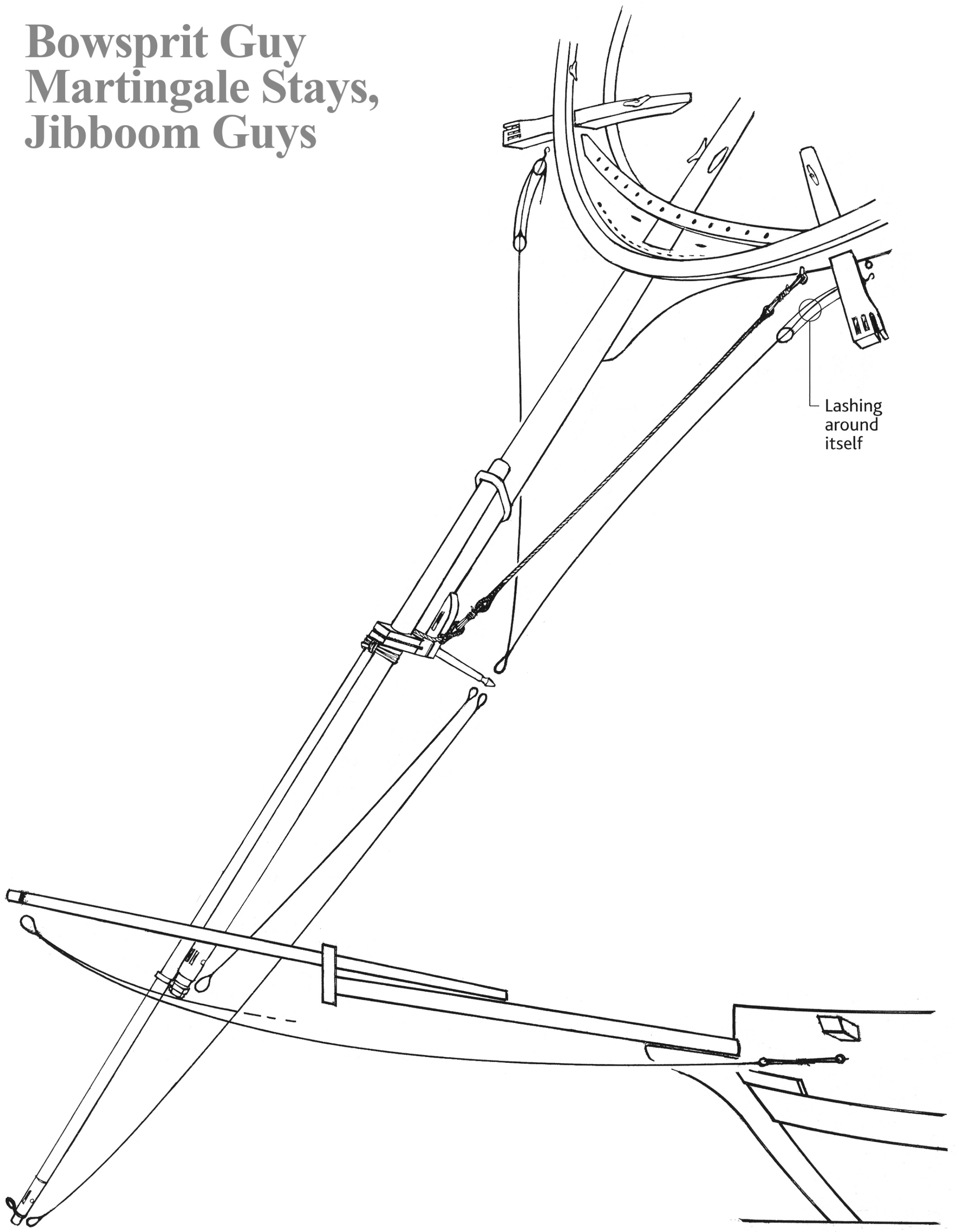
Backstays



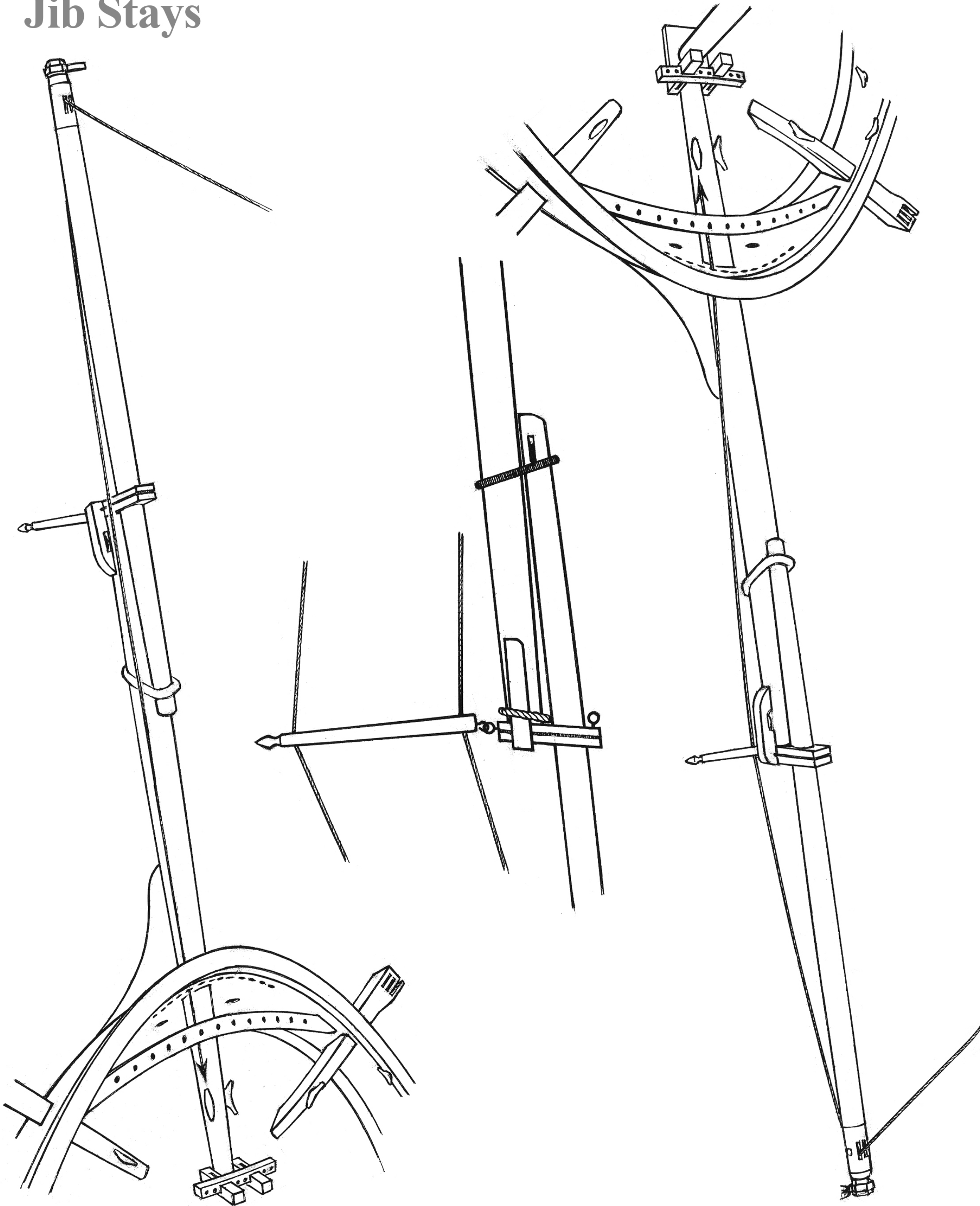
Bobstay



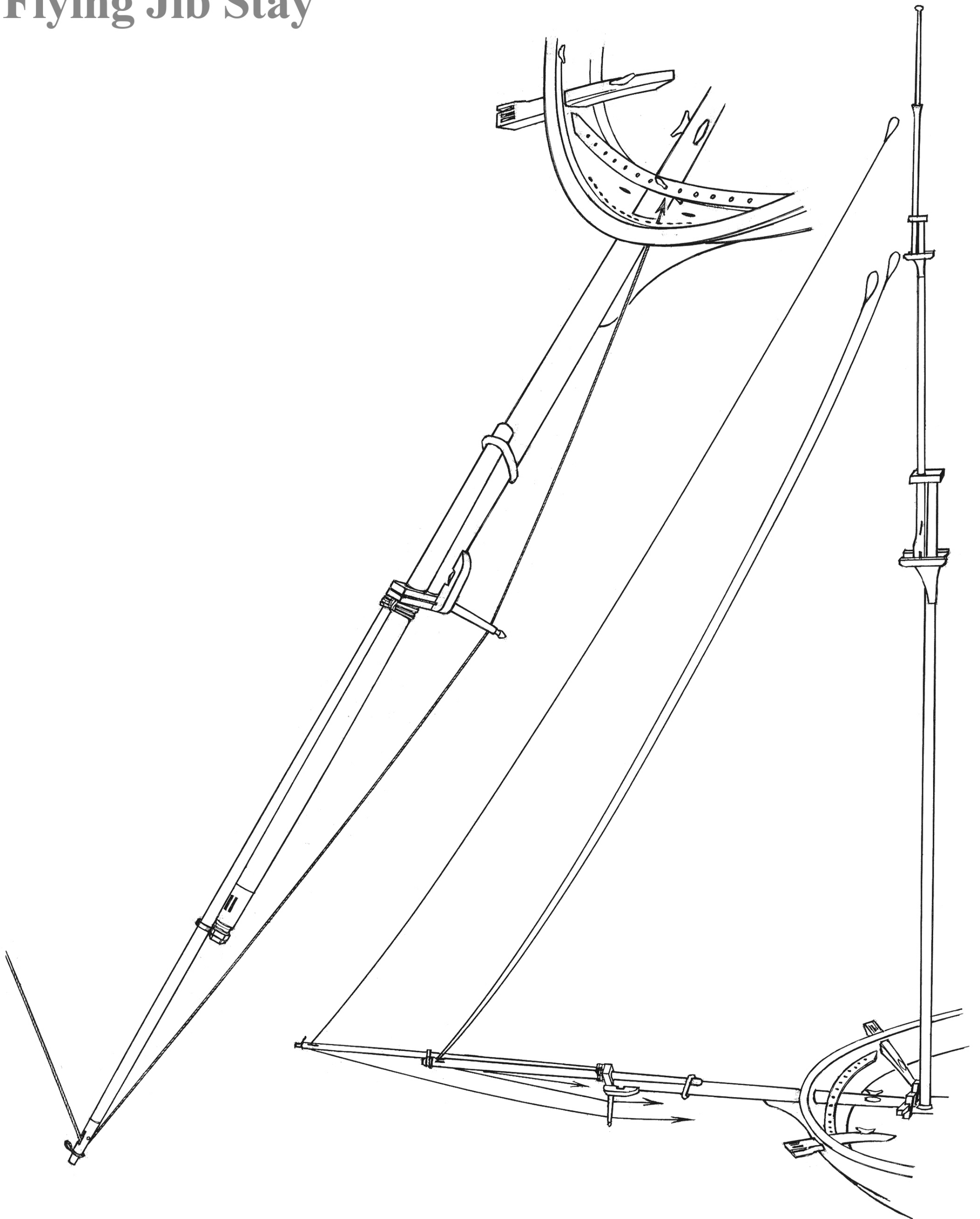
Bowsprit Guy Martingale Stays, Jibboom Guys



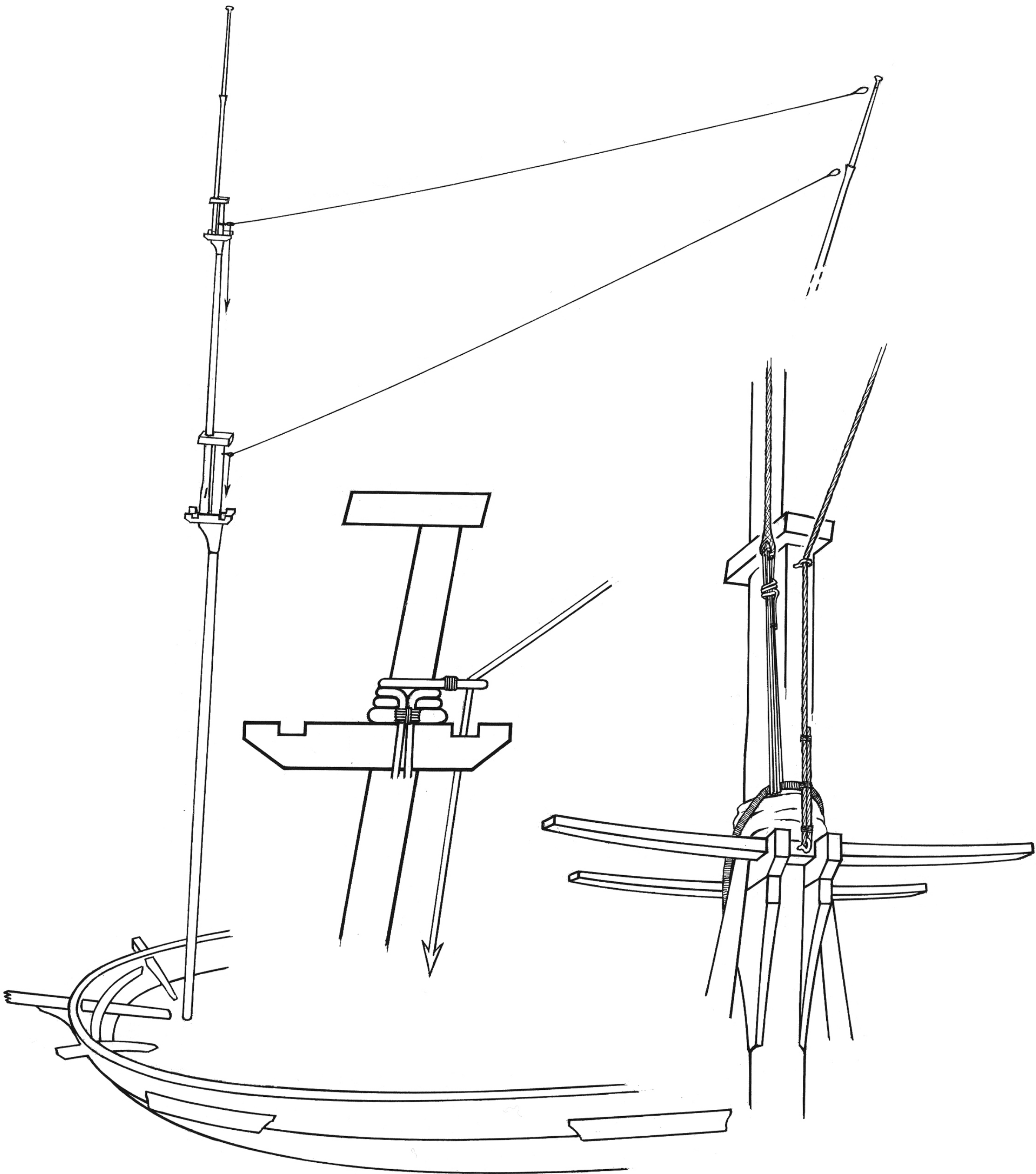
Jib Stays



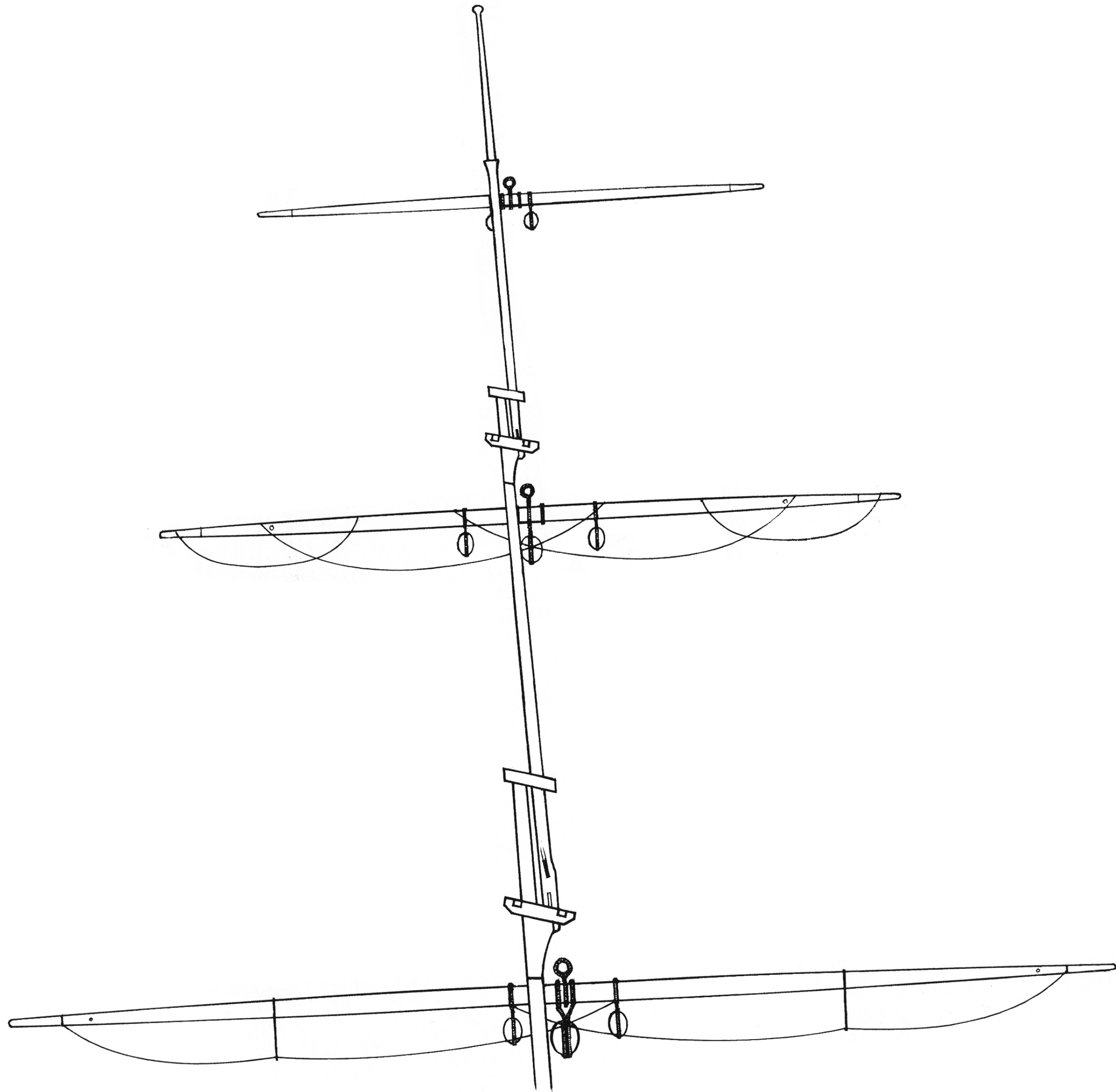
Flying Jib Stay



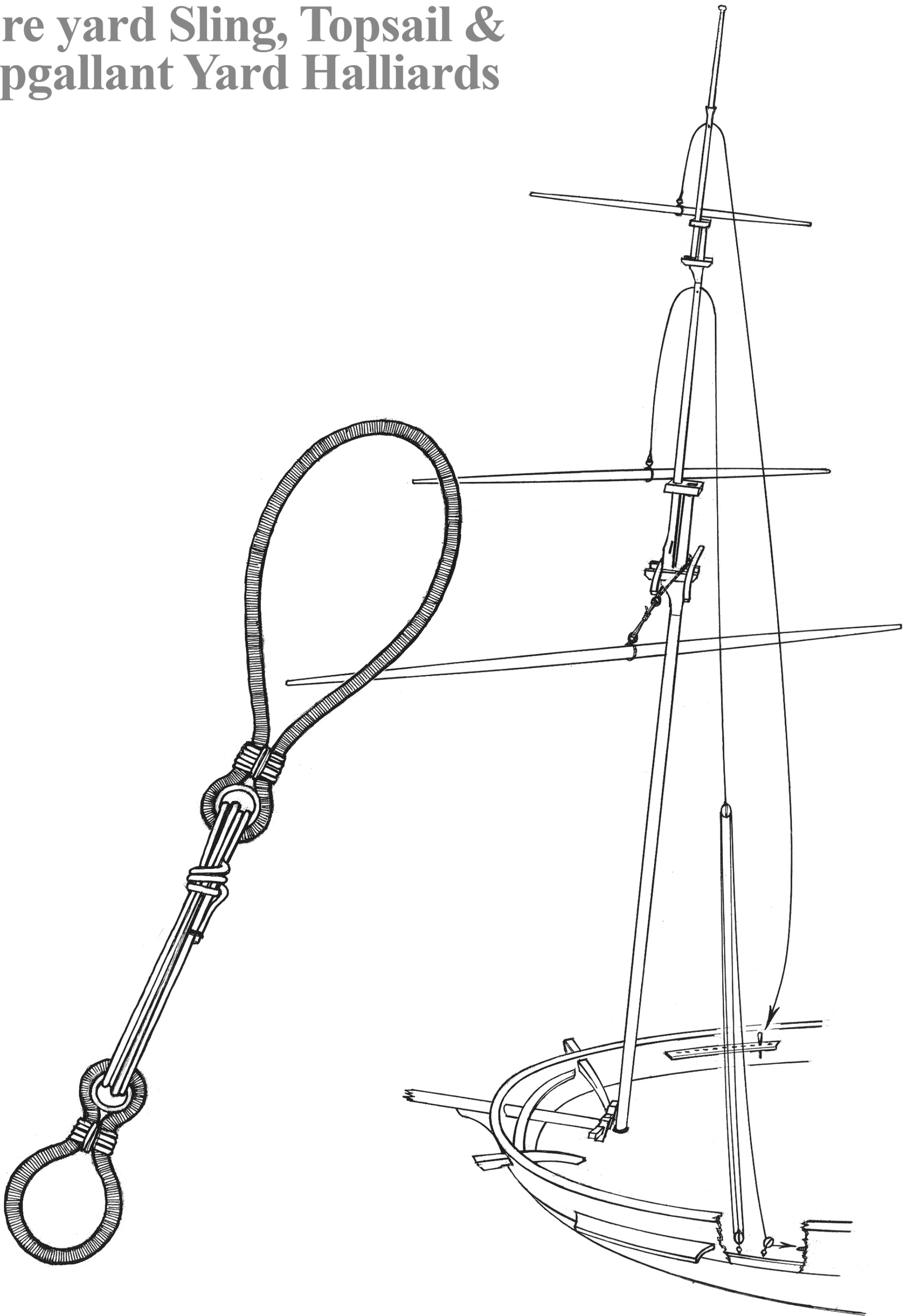
Main Topmast & Topgallant Stay



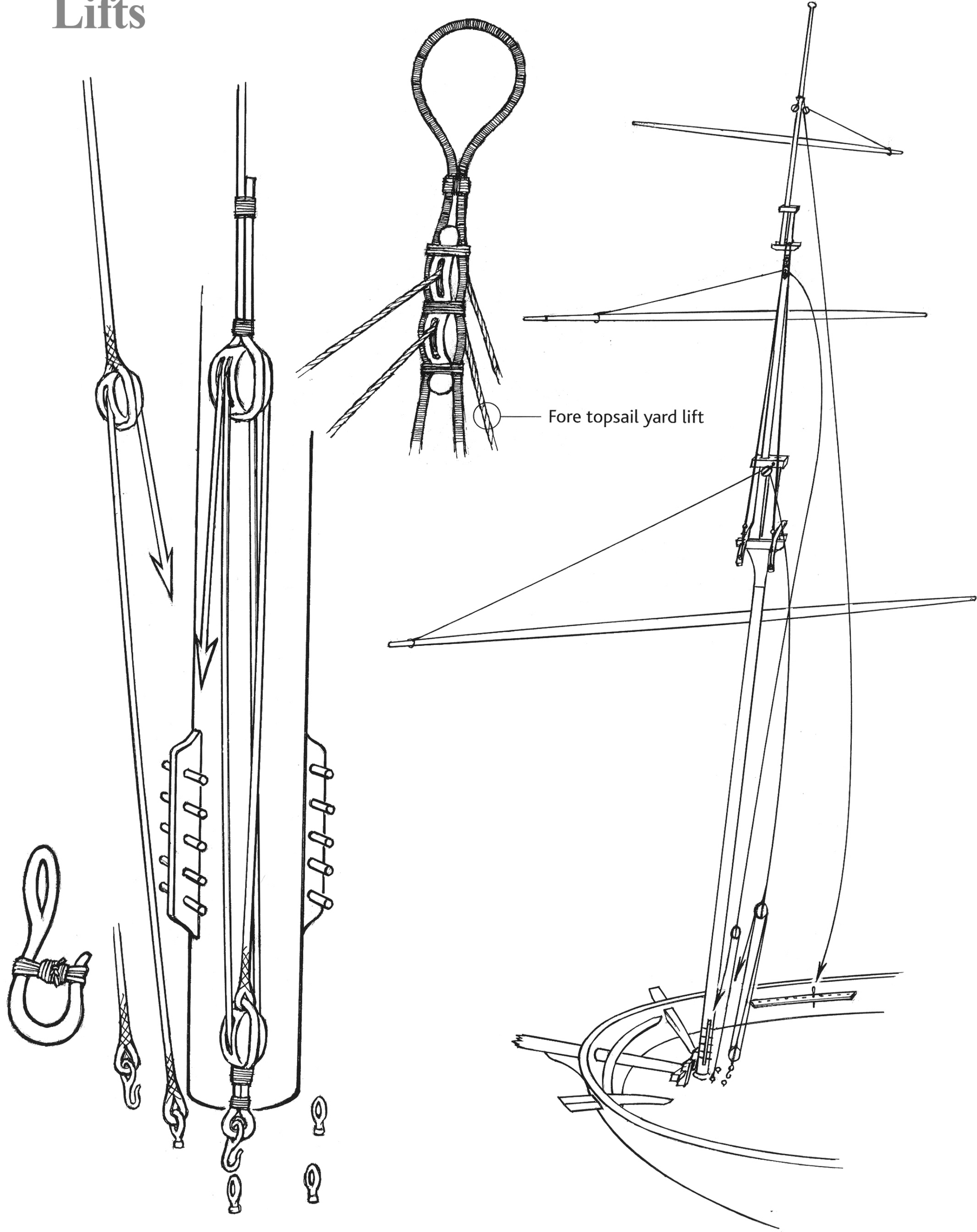
Foremast Yards



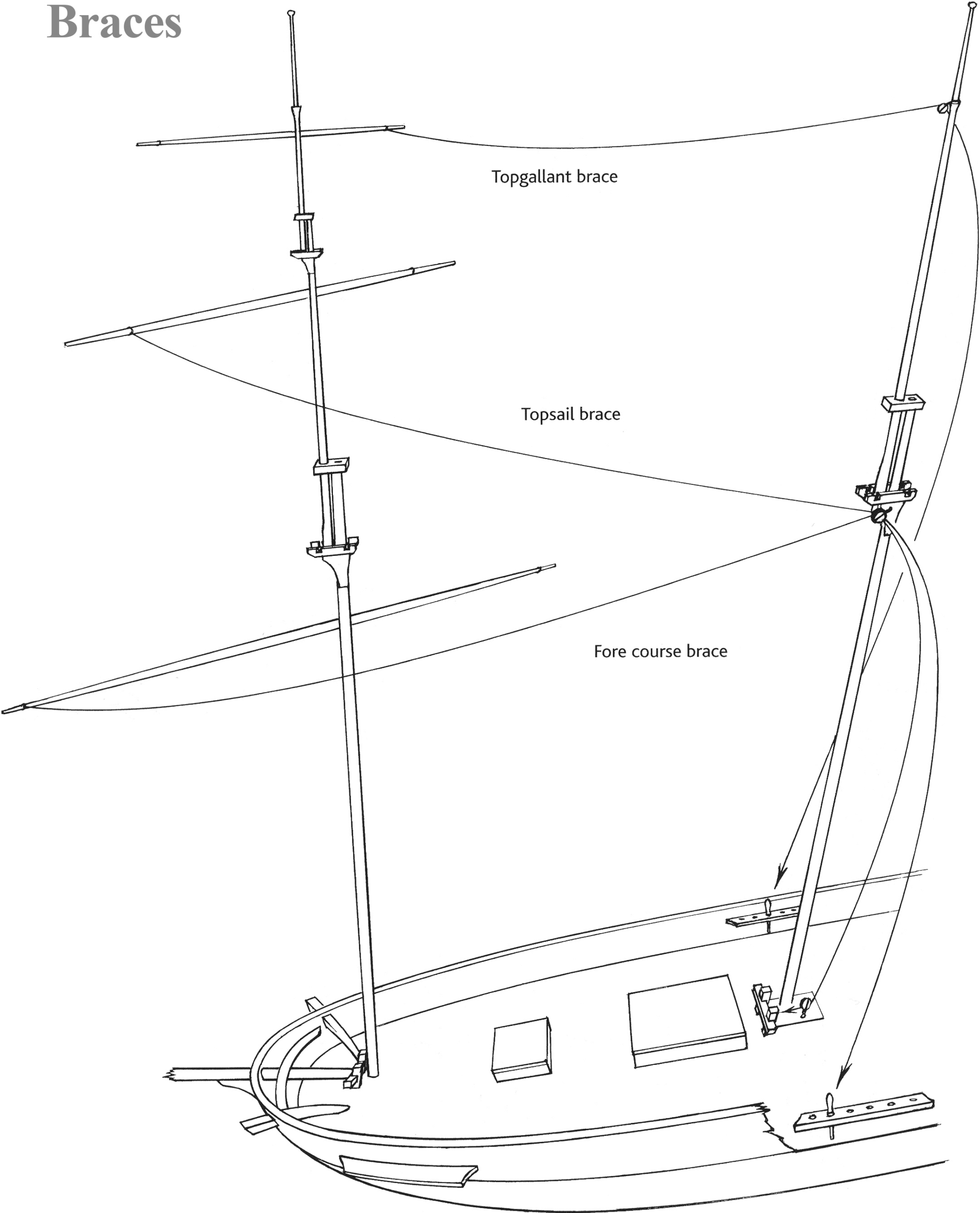
Fore yard Sling, Topsail & Topgallant Yard Halliards

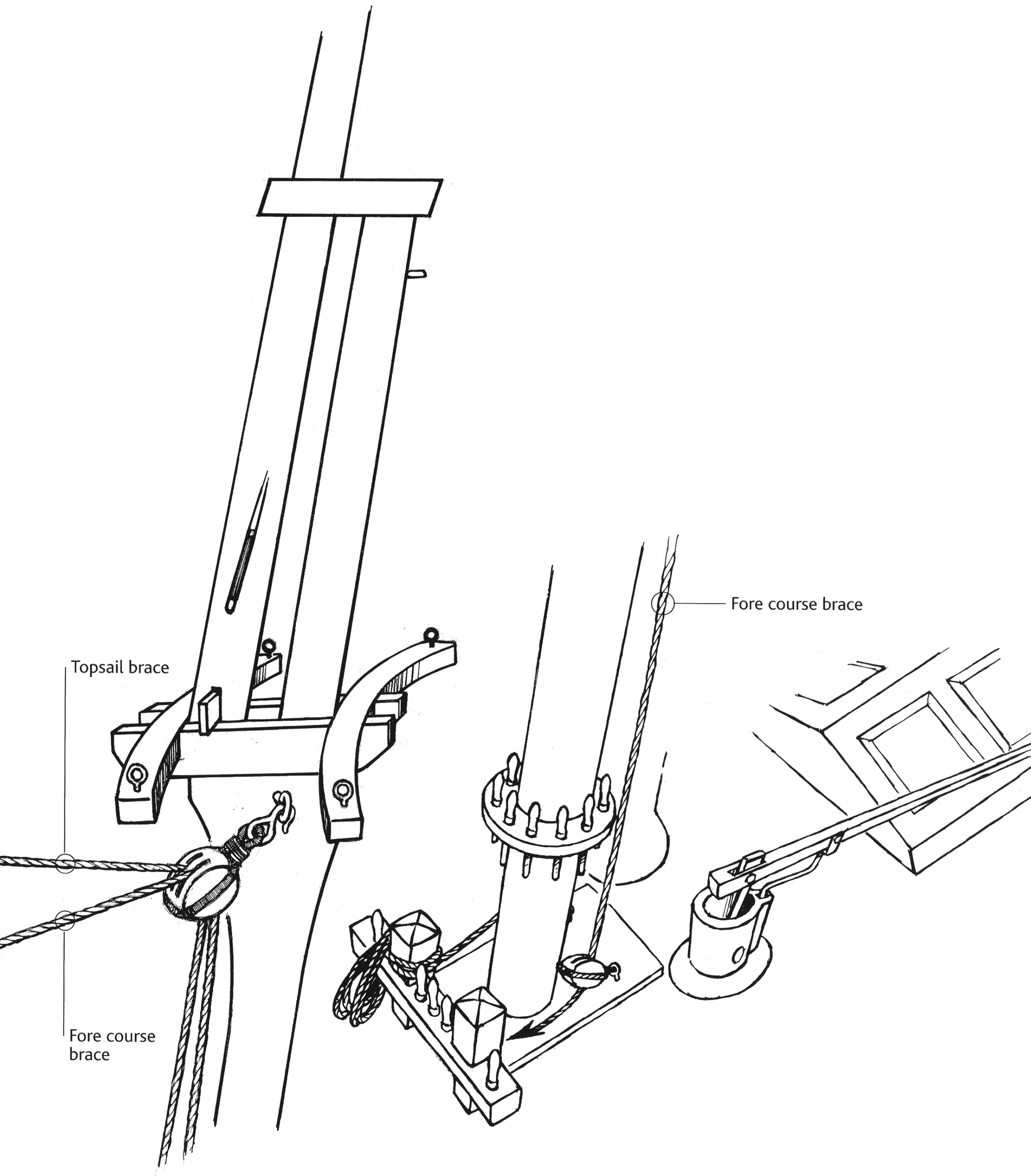


Lifts



Braces



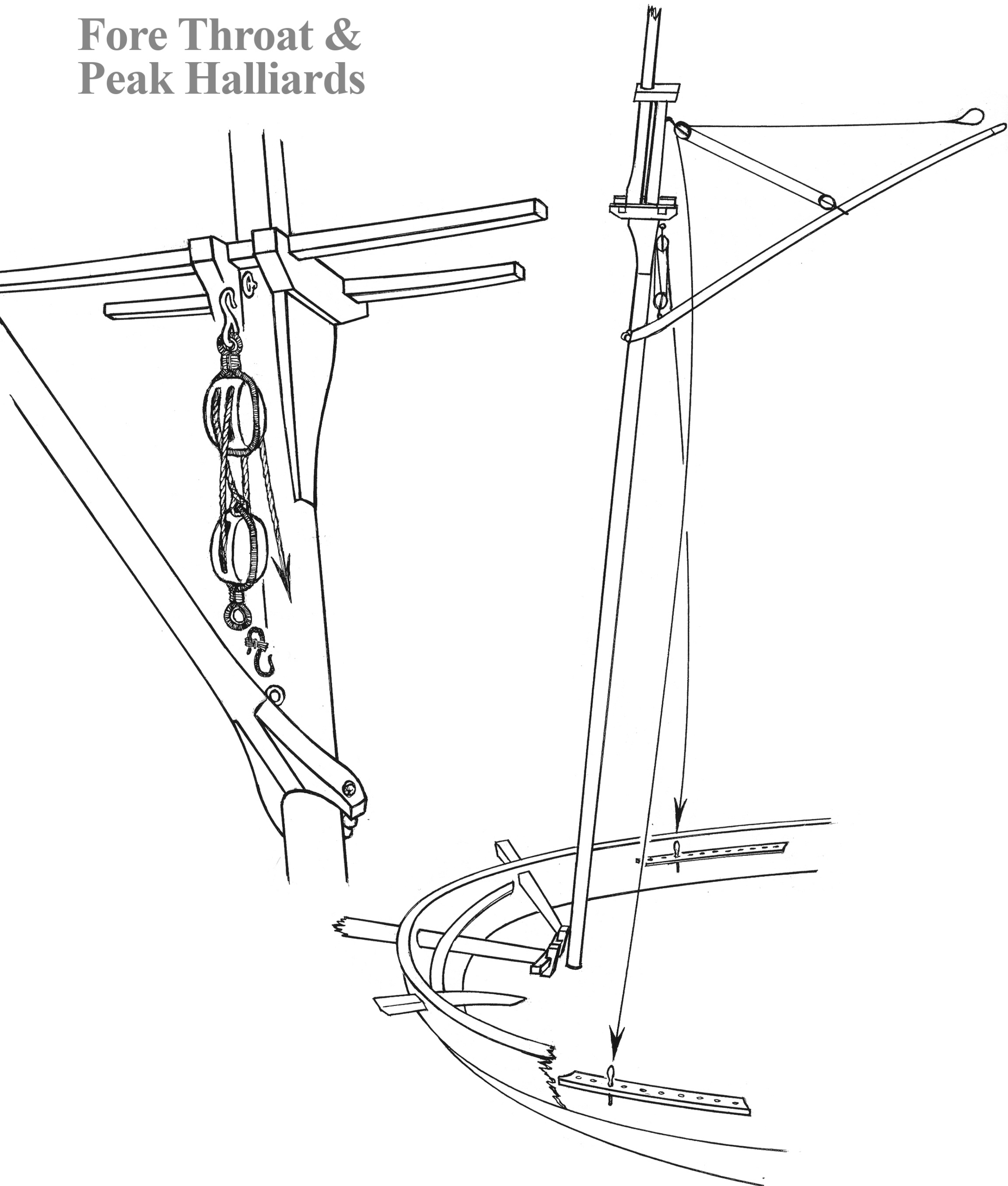


Topsail brace

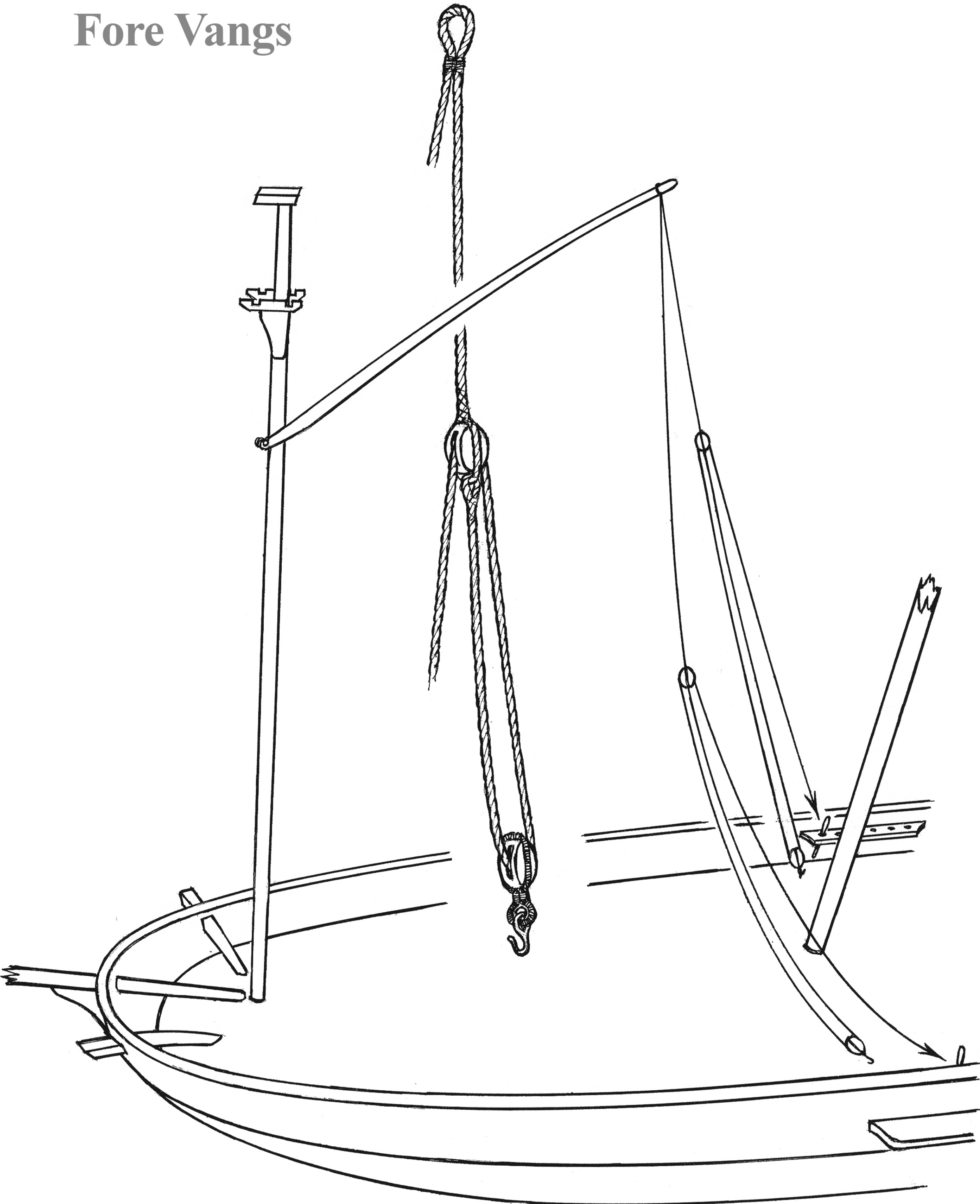
Fore course brace

Fore course brace

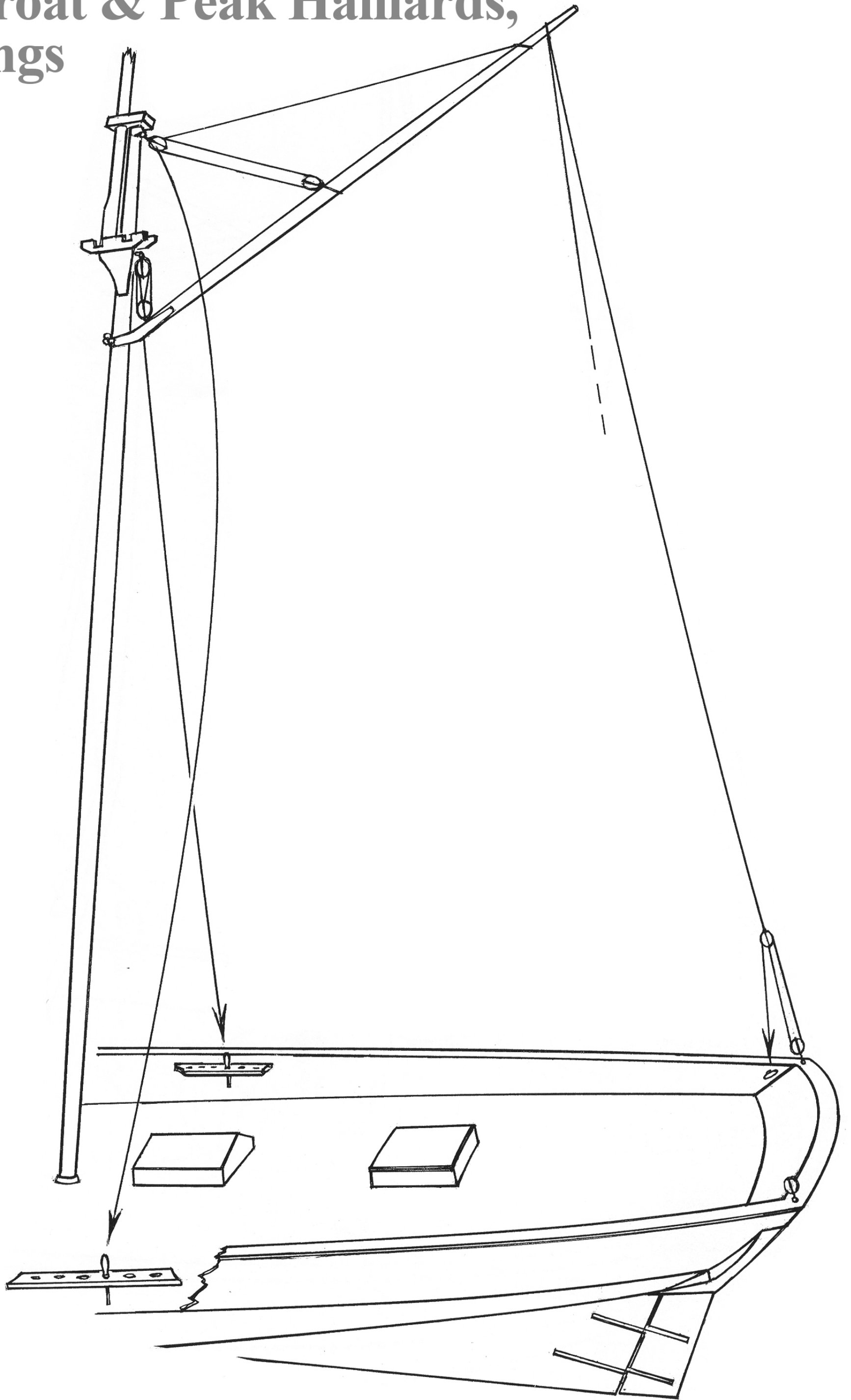
Fore Throat & Peak Halliards



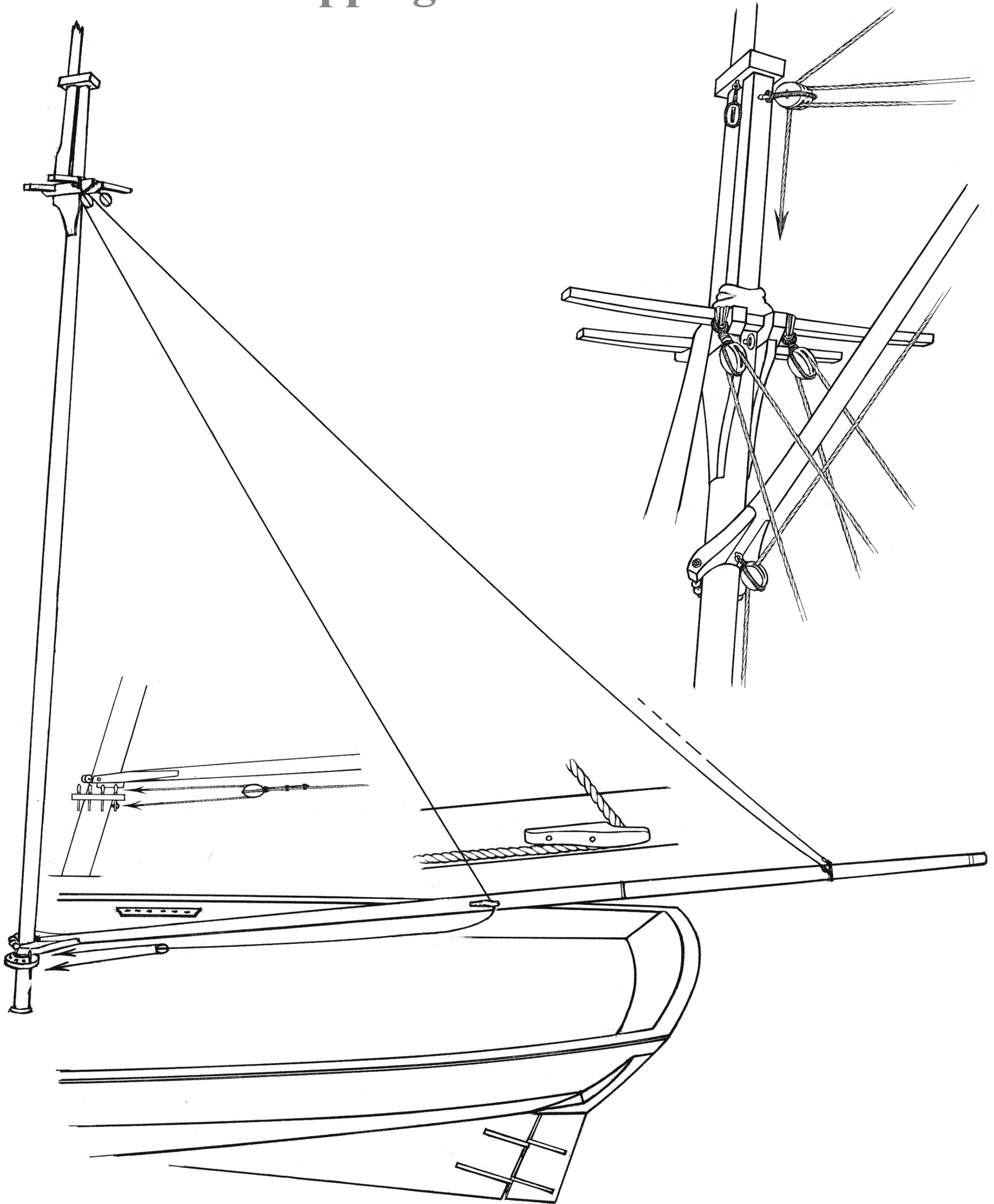
Fore Vangs



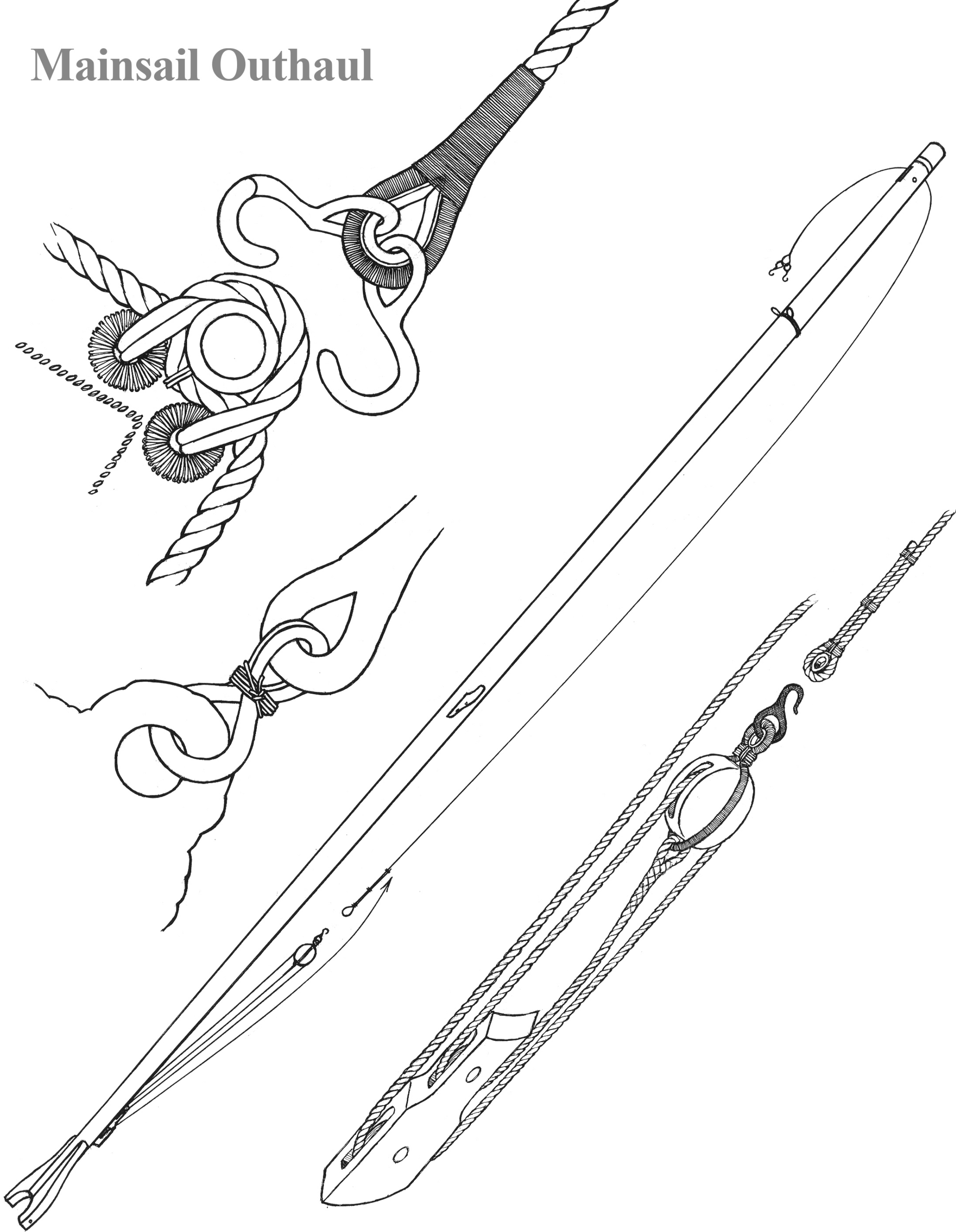
Main Throat & Peak Halliards, Main Vangs



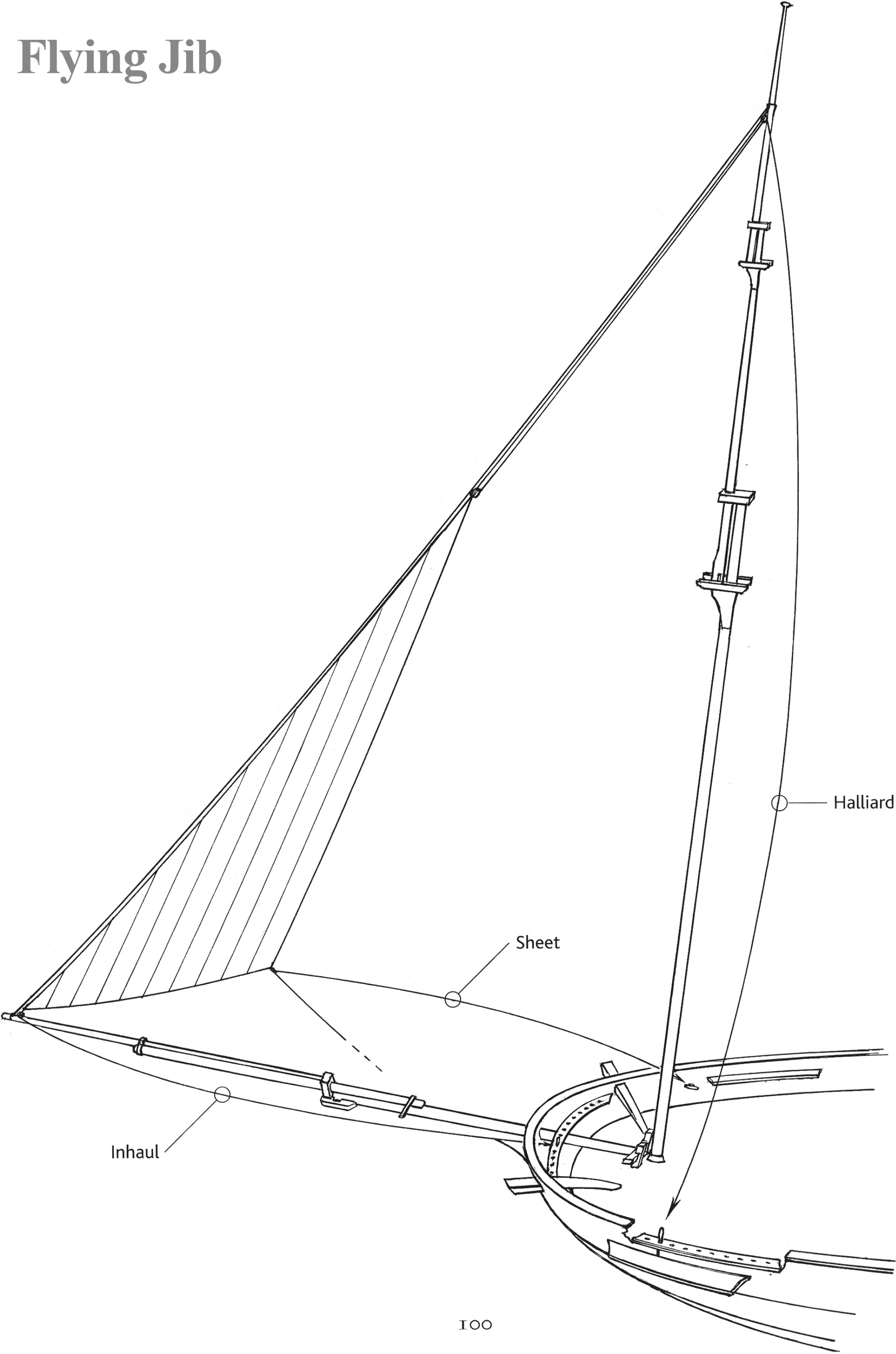
Main Boom Topping Lift



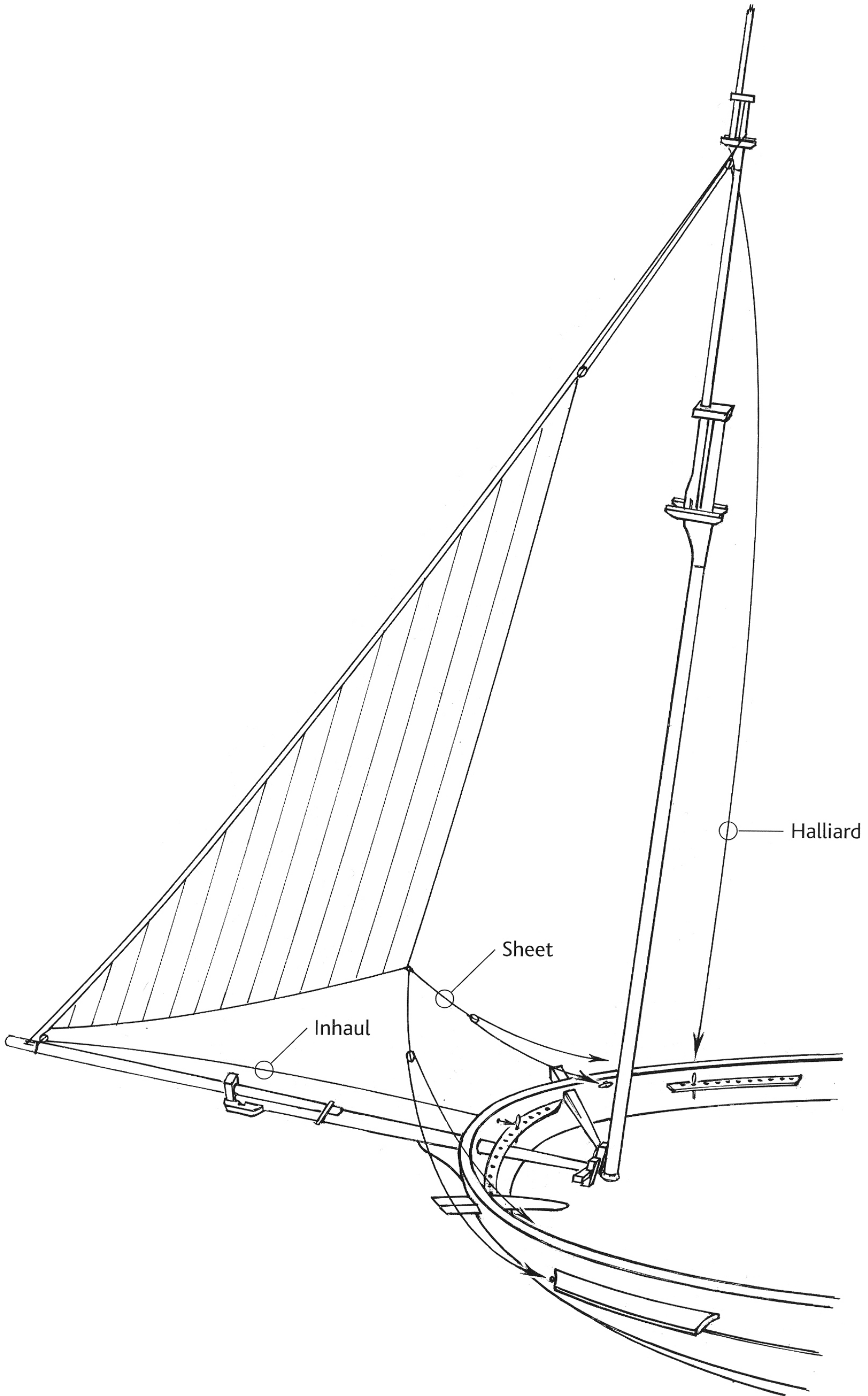
Mainsail Outhaul



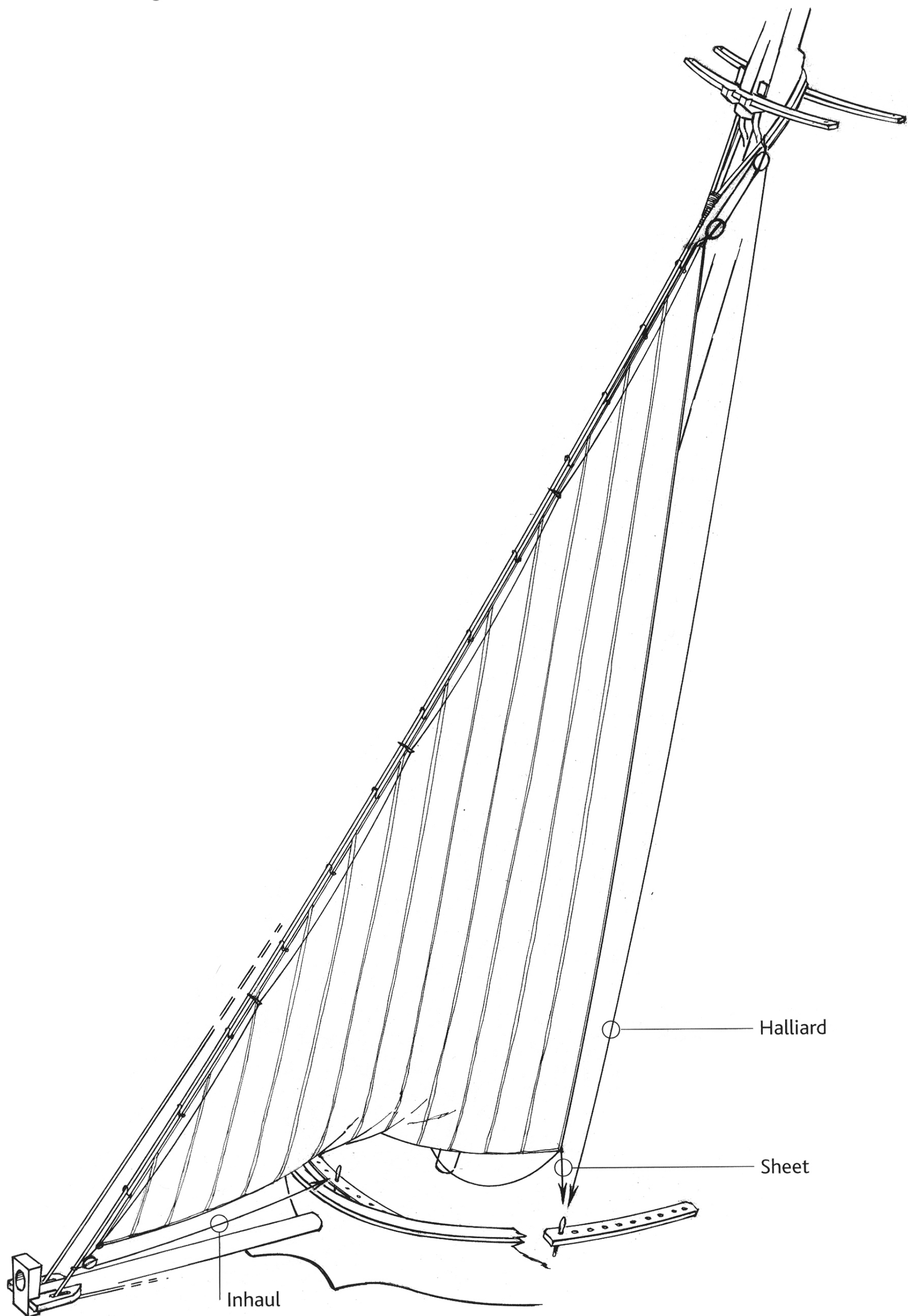
Flying Jib



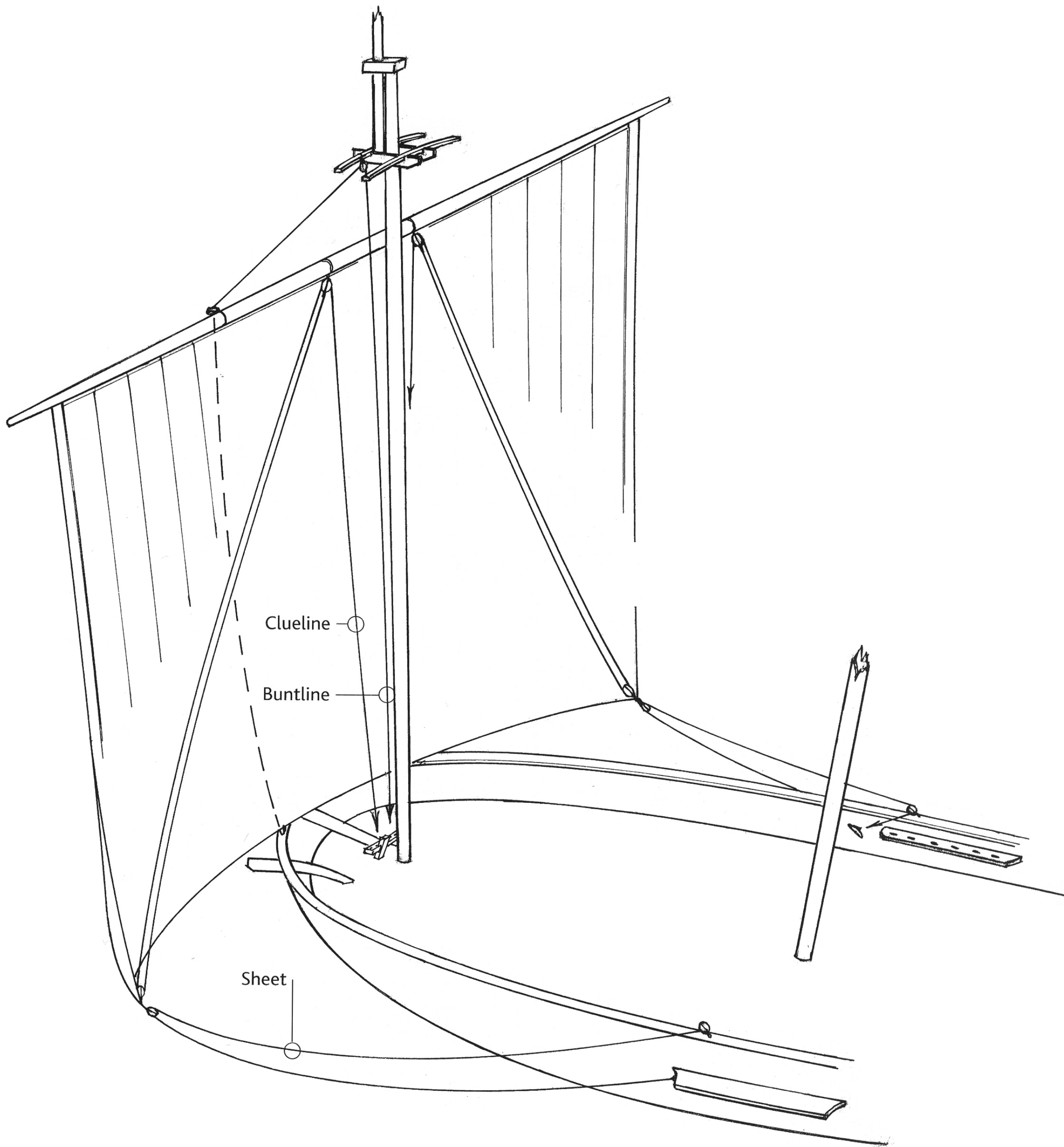
Jib



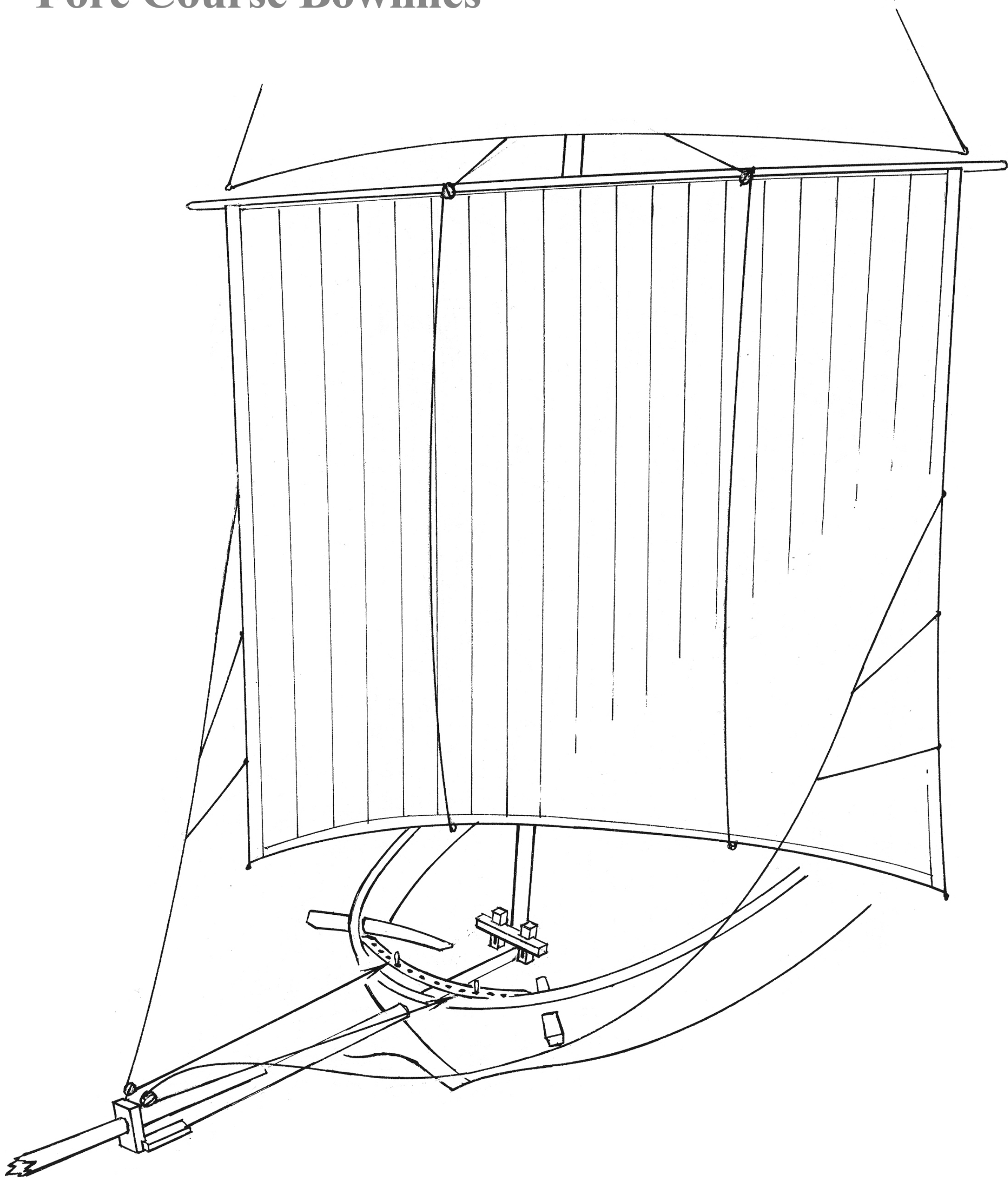
Fore Staysail



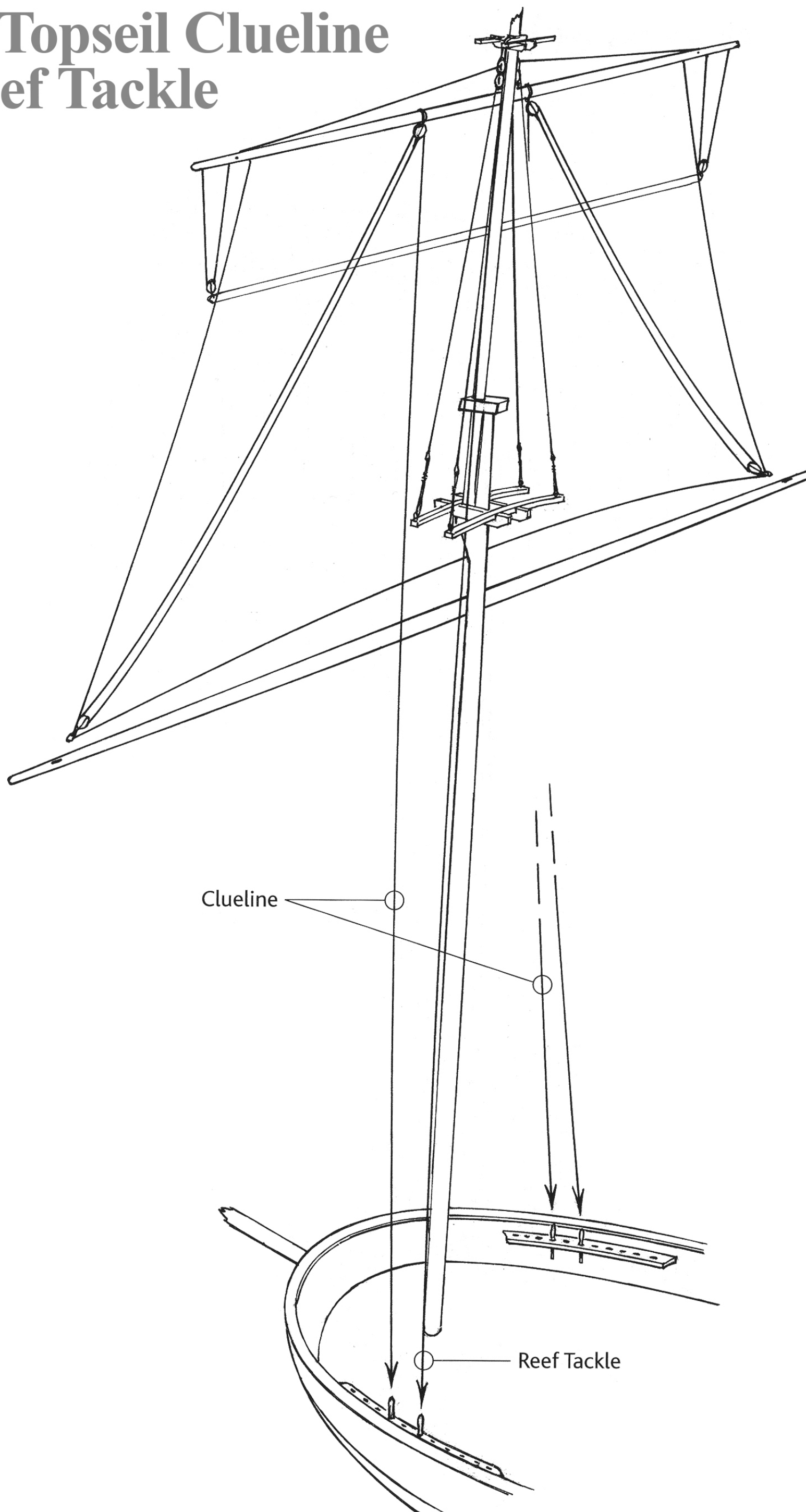
Fore Course Clueline, Buntline & Sheet



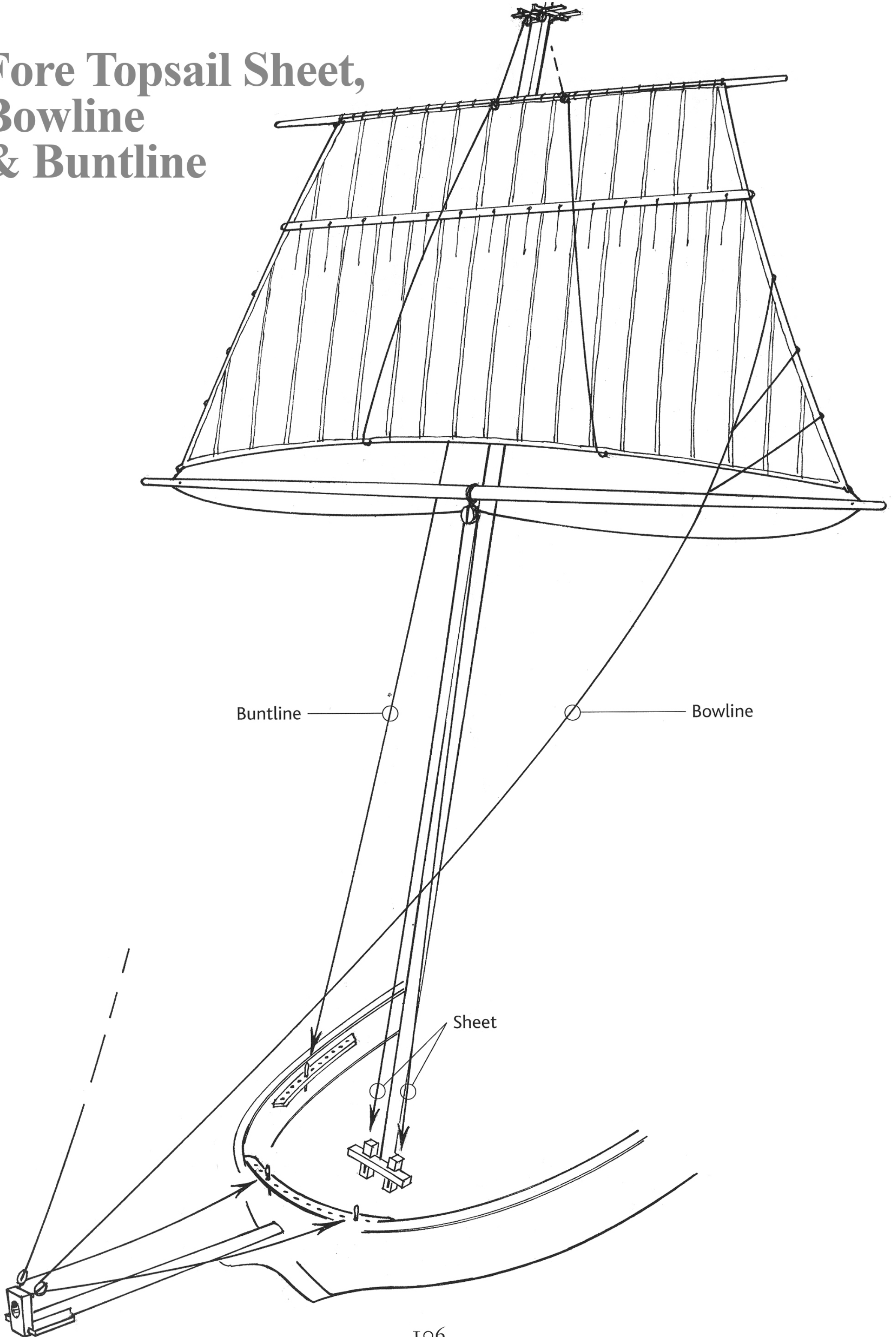
Fore Course Bowlines



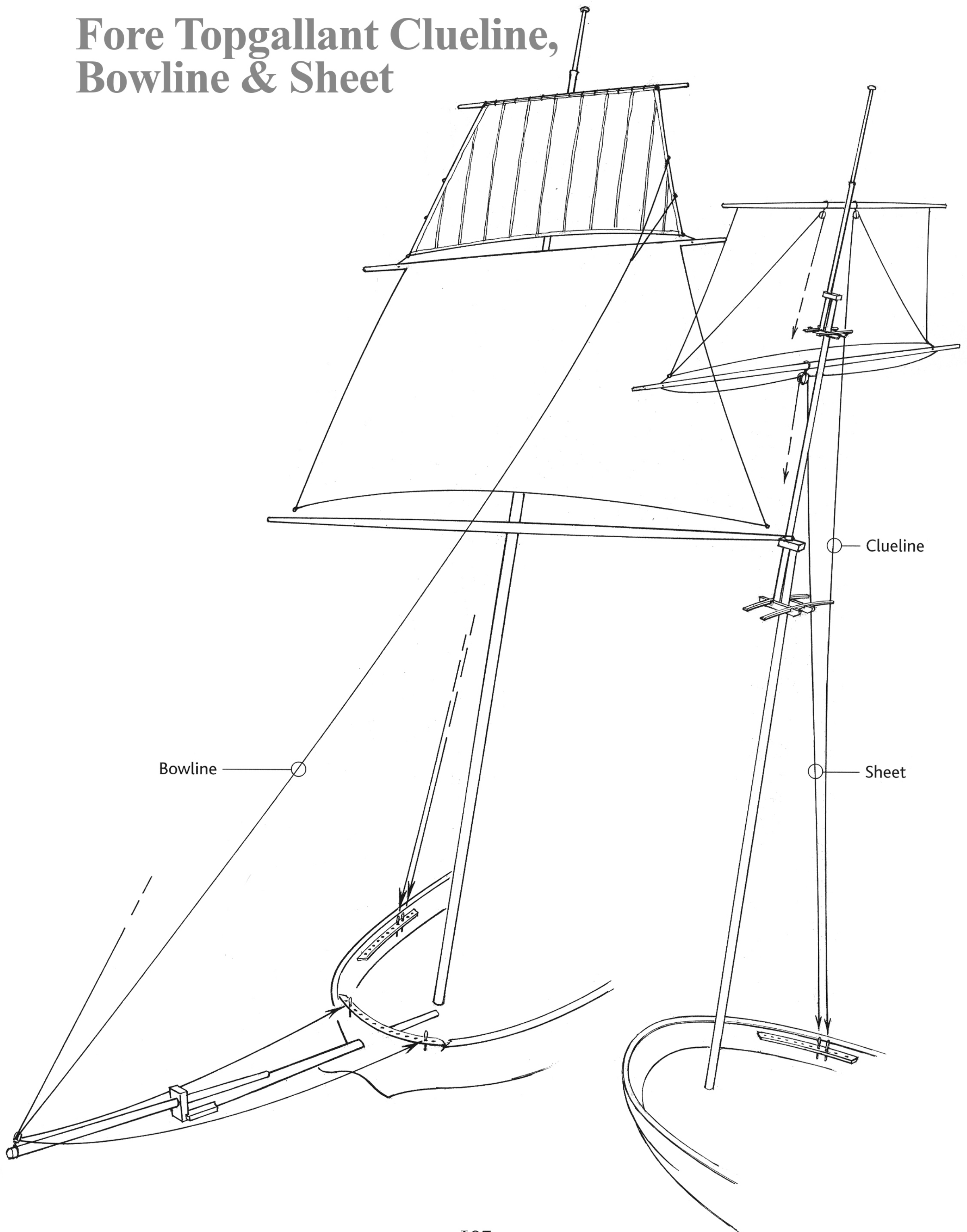
Fore Topseil Clueline & Reef Tackle



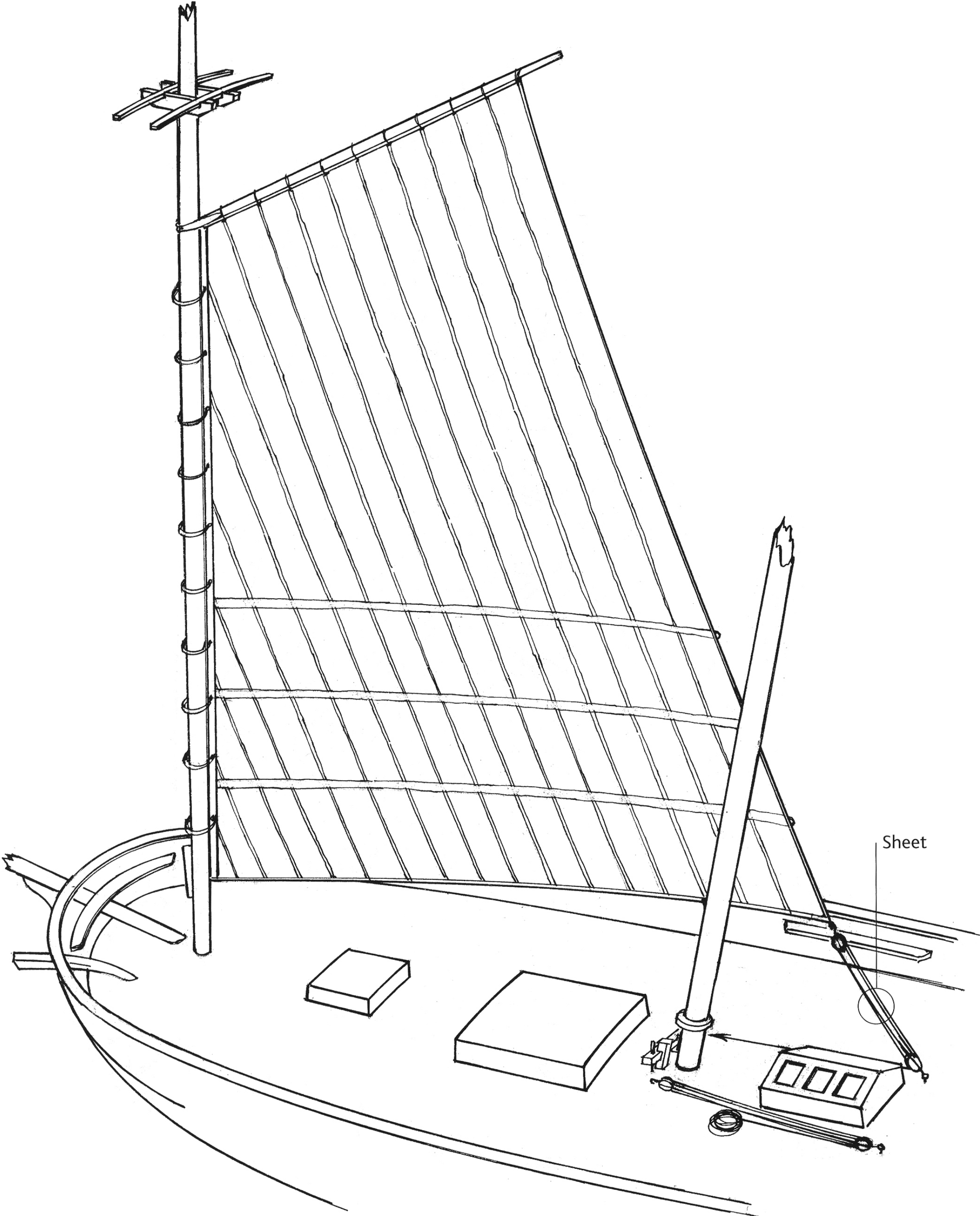
Fore Topsail Sheet, Bowline & Buntline



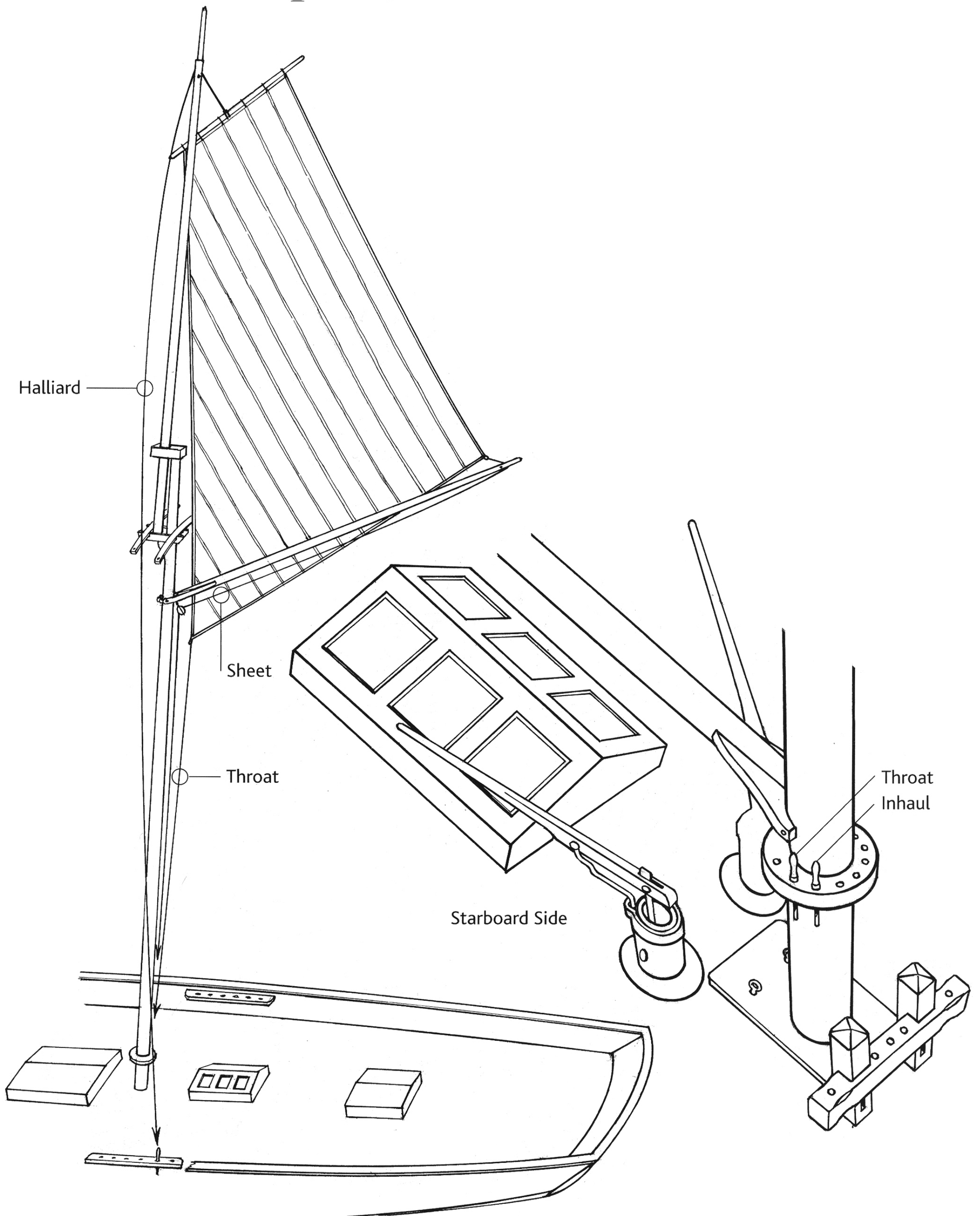
Fore Topgallant Clueline, Bowline & Sheet



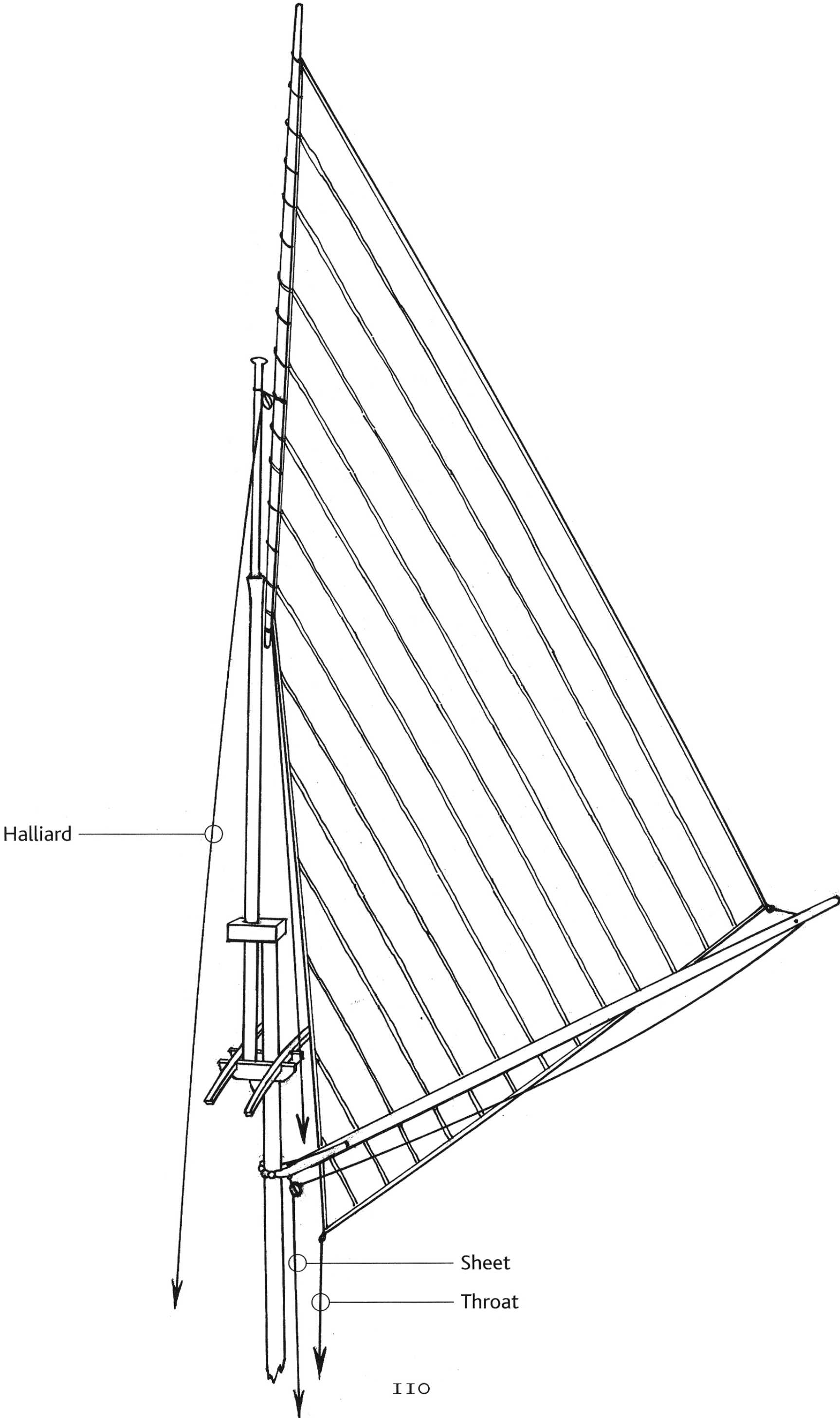
Fore Gaff Sail



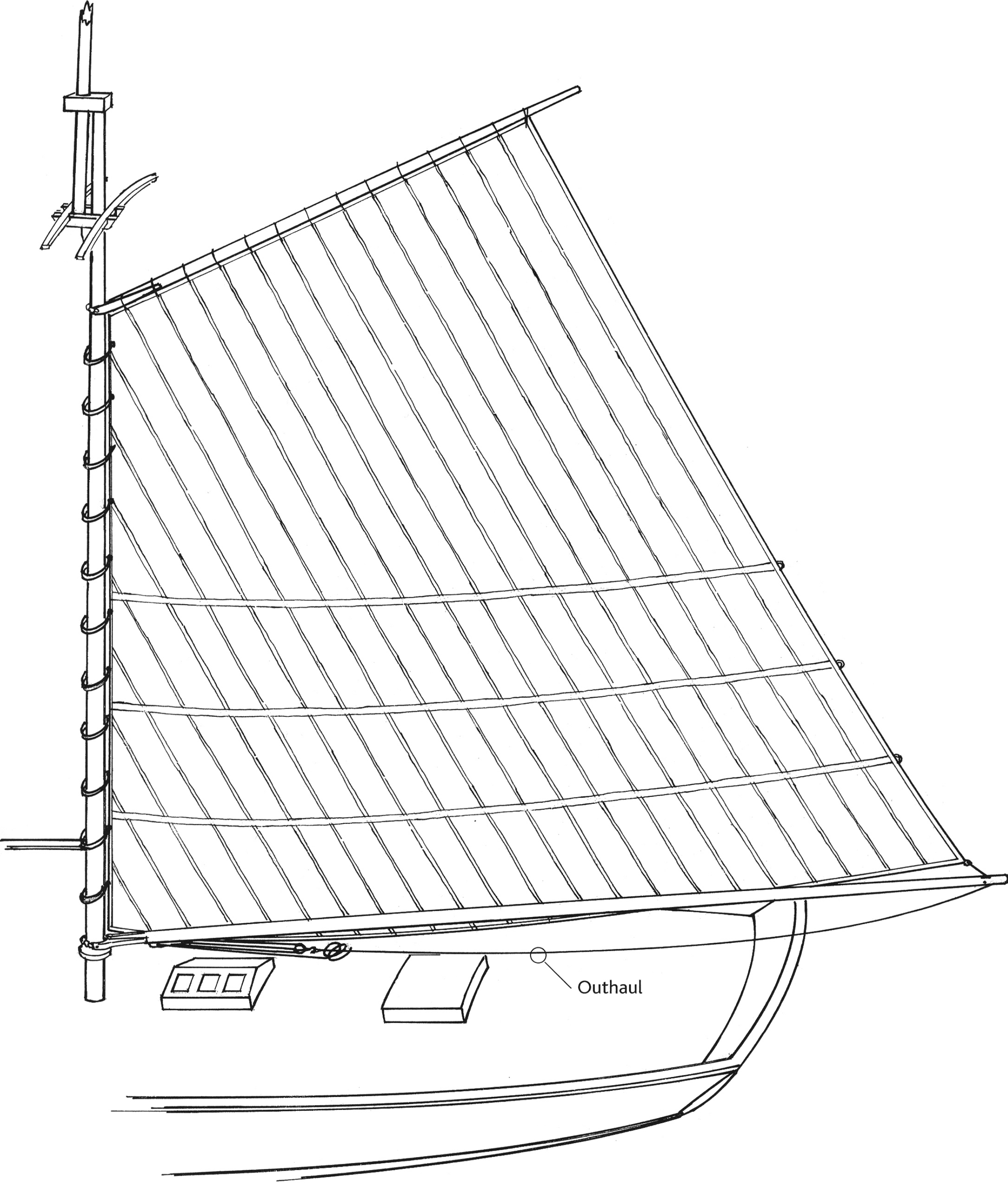
Main Gaff Topsail, Swedish Fashion



Main Gaff Topsail, American Fashion



Mainsail



Rigging

Period Fore-and-Aft Craft

Employing superb, clear draughtsmanship this book shows each and every detail of the rigging of typical period fore-and-aft vessels.

The rigging of period ship models is arguably the most complex task that any modeller has to accomplish; the intricacies can be daunting and visual references limited. The author's first book, *Rigging Period Ship Models*, was a triumph of clarity for those wishing to decipher the complexities of square rig, and this new book does the same for fore-and-aft rigs and depicts the rigging of three typical eighteenth-century vessels - an English cutter, a three-masted French lugger and an American schooner. Some 200 diagrams show clearly where each separate item of standing and running rigging is fitted, led and belayed. Whether a modelmaker needs to rig a whole ship or just requires information on one aspect, it is all here.

This beautiful work brings a visual immediacy and clarity to the complexities of period rigging and will delight anyone with an interest in rigging traditional fore-and-aft craft.

