

Rigging of Period Ship Models
PETERSSON

Rigging

PERIOD SHIP MODELS



LENNARTH
PETERSSON

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Rigging

PERIOD SHIP MODELS

*A Step-by-Step Guide to the
Intricacies of Square-Rig*

THE rigging of period ship models is arguably the most complex task which any modeller has to take on. The very scale of the work is daunting. An eighteenth-century man-of-war boasted mile upon mile of rigging, over 1,000 blocks and acres of canvas. To reduce this in scale and yet retain an accurate representation is, indeed, an awesome undertaking.

This remarkable book of drawings, however, makes the modeller's job logical and straightforward. The author has drawn over two-hundred detailed diagrams which show clearly how each separate item of both standing and running rigging is fitted to the masts, yards and sails; belaying plans are included and knots and fastenings are also depicted. Based on the model of the frigate *Melampus*, this rigging plan is the most detailed available in any publication. Whether a modelmaker needs to rig a whole ship or just requires information on one aspect, it is all here.

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Rigging Period Ship Models

*A Step-by-Step Guide
to the Intricacies
of Square-Rig*

Lennarth Petersson

NAVAL INSTITUTE PRESS
Annapolis, Maryland

Acknowledgements

It is my intention to limit this book to the classification of the rigging of *Melampus* and no mention is made of the numerous alternative aspects of square rig to be found during the eighteenth century; this work describes the rigging of a specific period and one specific model. I hope the perspective drawings will help towards an understanding of the use of standing and running rigging for modellers and for all with an interest in square rig.

I would like to thank Captain Olof Pipping; my good friend Vernon Gidman; Mr Alan King, curator of the Bristol Industrial Museum; my family and parents for patience and support; and Julian Mannering, editor of Chatham Publishing, for help and advice. Beyond that, I take all the blame.

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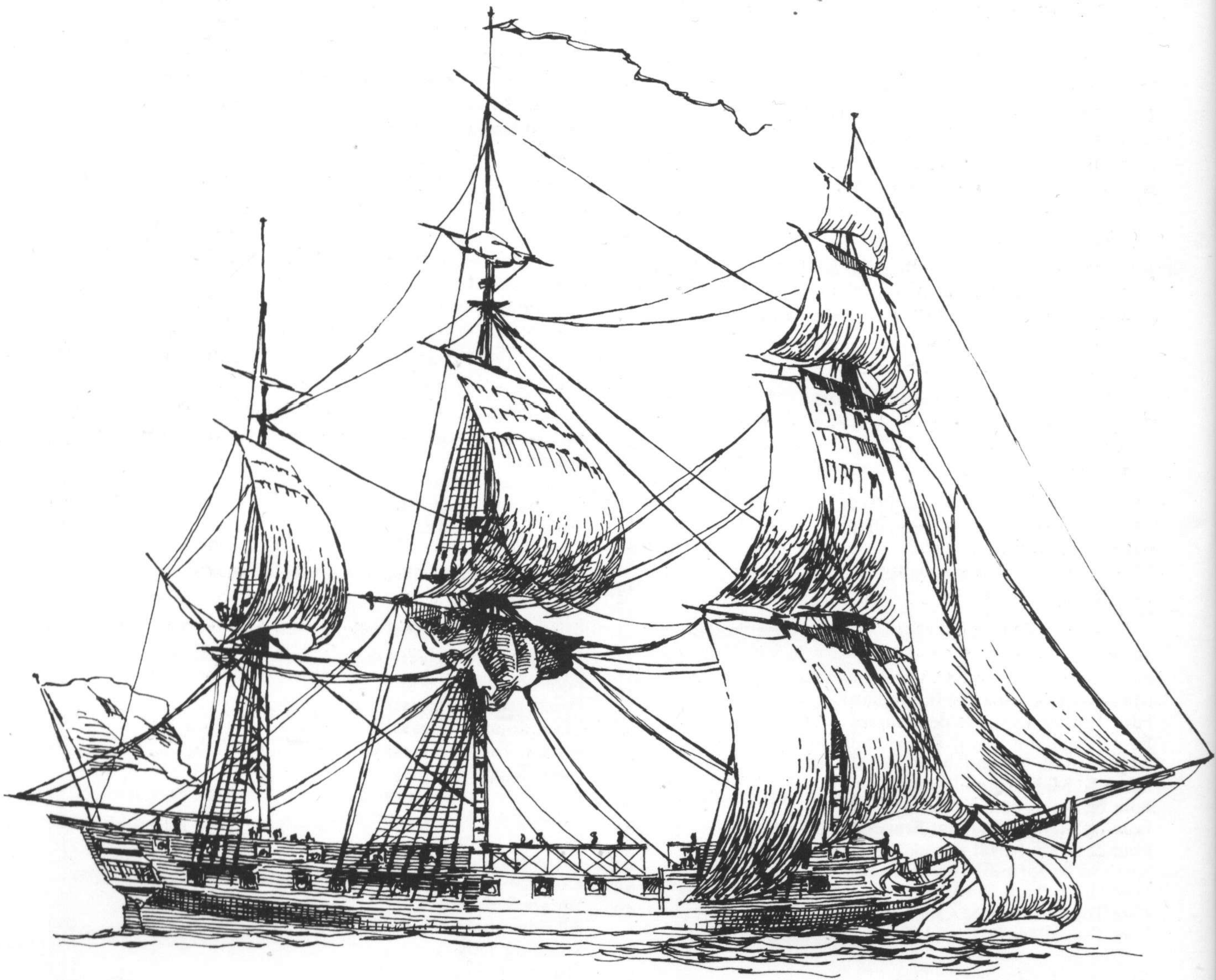
ISBN 1-55750-970-0

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Introduction

I SET OUT TO CREATE this series of detailed drawings because, as a modelmaker, I needed the answers to a number of questions relating to the intricacies of square rig. I could find no publication which allowed me to study a ship's rigging in the way that one can, for example, in front of a model in a museum. And even then, of course, the sheer complexity is confusing and difficult to grasp. Most modelling books, while dealing extensively with hull construction, often approach rigging in a rather cursory fashion. The genesis of this book was, therefore, the desire to fill that gap. I decided to study and depict each item of a ship's rigging on its own, isolated on a page, so that the reader might understand where a particular sheet or halliard, for example, leads and how it functions.

One of the pleasures of researching and putting together all these drawings was the realisation of how logical and functional the rigging of a square-rigged ship is. This really should not have come as a surprise. Sailors are nothing if not practical, and the apparently complicated confection of ropes and tackles is, in fact, a wonderfully simple and ordered creation with no unnecessary or redundant parts. My intention in the book is to show this simplicity and, at the same time, draw to the reader's attention the basic principles by which square-rig functions; throughout the centuries, square-rigged ships have followed the same principles when it has come to catching the wind.

Though these principles have remained the same I felt it important, both for the sake of accuracy and for the benefit of modellers, to draw from a contemporary model, and I decided on an English frigate which should have retained most of its original rigging. By going to a three-dimensional source I hoped to be able to depict the intricate details in the clearest possible manner, and by choosing a contemporary model create a scheme which was authentic. With the help of the publisher I found a suitable model, with much of its original rigging intact, in the Bristol Industrial Museum. It is a beautiful model of the *Melampus*, a 36-gun, 18-pounder frigate. It was donated to the museum in 1844 and while it has received the attention of restorers over the years its rigging is considered a reliable representation. I photographed and sketched the model from every angle and the results of the exercise were the source for the drawings in this book.

Melampus seemed a suitable choice not just because of her authenticity but also because of her relatively small size and her long and quite distinguished career. All modelmakers, I'm sure, feel happier working on the model of a prototype which

distinguished herself and *Melampus* had a long career during one of the most turbulent periods of the Royal Navy's history.

She is one of four models of ships which were built by the Bristol yard of James Martin Hillhouse and is assumed to have been commissioned by the builders. The ship herself was launched in 1785 and was one of the biggest frigates of her day. She was one of the first of a new generation of 18-pounder frigates and carried 36 guns rather than the 38 of similarly sized vessels and, subsequently, had more space on her gundeck and performed well at sea. Her reputation spread soon enough and she was coveted as a command by, among others, Prince William Henry – later William IV

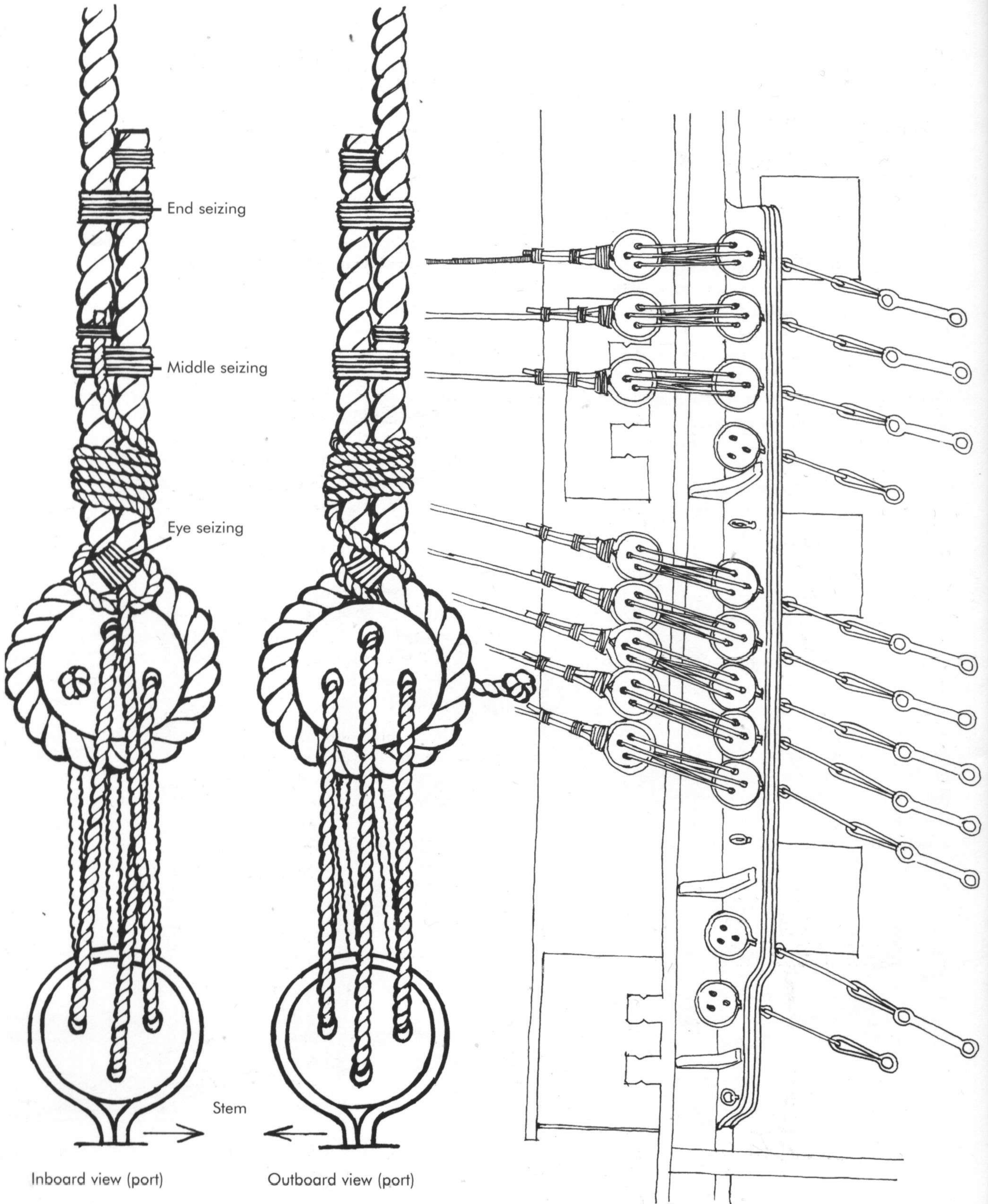
During her thirty years of service in the Royal Navy she took part in a number of actions. In 1794, for instance, she was with the *Arethusa* and two other frigates in Warren's action against Desgarceaux's squadron, which ended in the capture of three French frigates. Under the command of Sir Richard Strachan, *Melampus*, along with four other frigates, chased a French convoy into Carteret Bay where every ship bar one was destroyed by the ships' boats. Three years later, in 1798, under the command of Captain Moore, she was involved in the interception of the Brest fleet off Ireland and captured the *Bellone*, a 44-gun frigate. Two days later she took another frigate, the *Resolute* 36. She was later, in 1807, to experience the fall-out of the *Leopard-Chesapeake* action when two-hundred of her water-casks were burnt by the enraged inhabitants of Norfolk, Virginia. In 1811 she captured the slaver *Fortune* and brought her back to Plymouth, and, finally, in 1815, she was sold off to the Dutch navy. Despite being thirty years old, she continued to serve for another decade.

I hope this book will make the task of rigging easier for modelmakers at all levels. Certainly, researching and drawing out the illustrations answered a lot of questions for me. There are other works which any modelmaker needs to refer to and which have been stalwart guides for me. Foremost are James Lee's *The Masting and Rigging of English Ships of War 1625-1860*, and C N Longridge's *The Anatomy of Nelson's Ships*. Any modeller's book shelf also requires *The Ashley Book of Knots*.

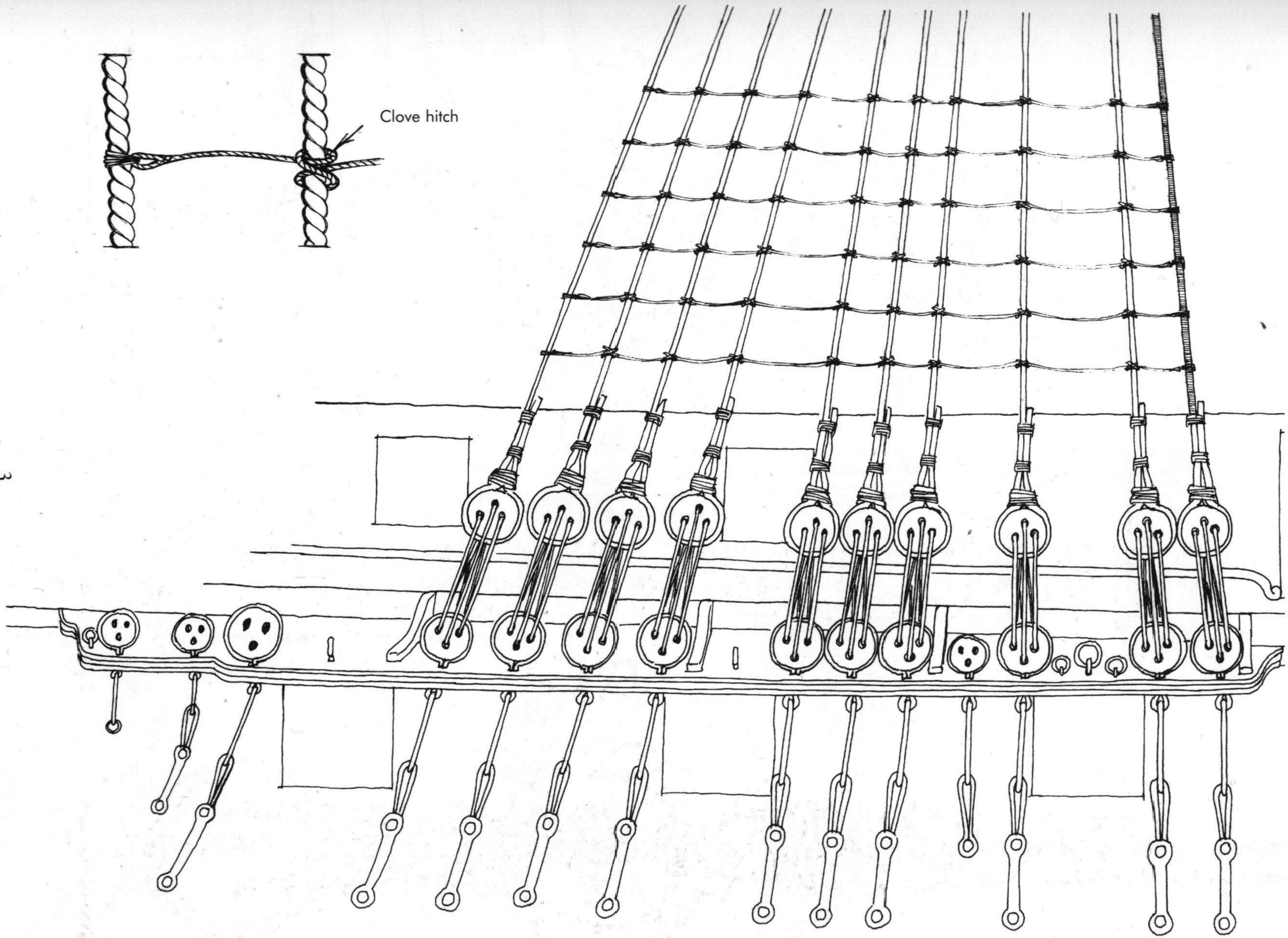
Finally, the journal *Seaways* and *The Nautical Research Journal*, from Nautical Research Guild in the US, have been useful guides for me.

LENNARTH PETERSSON
Habo, Sweden, 2000

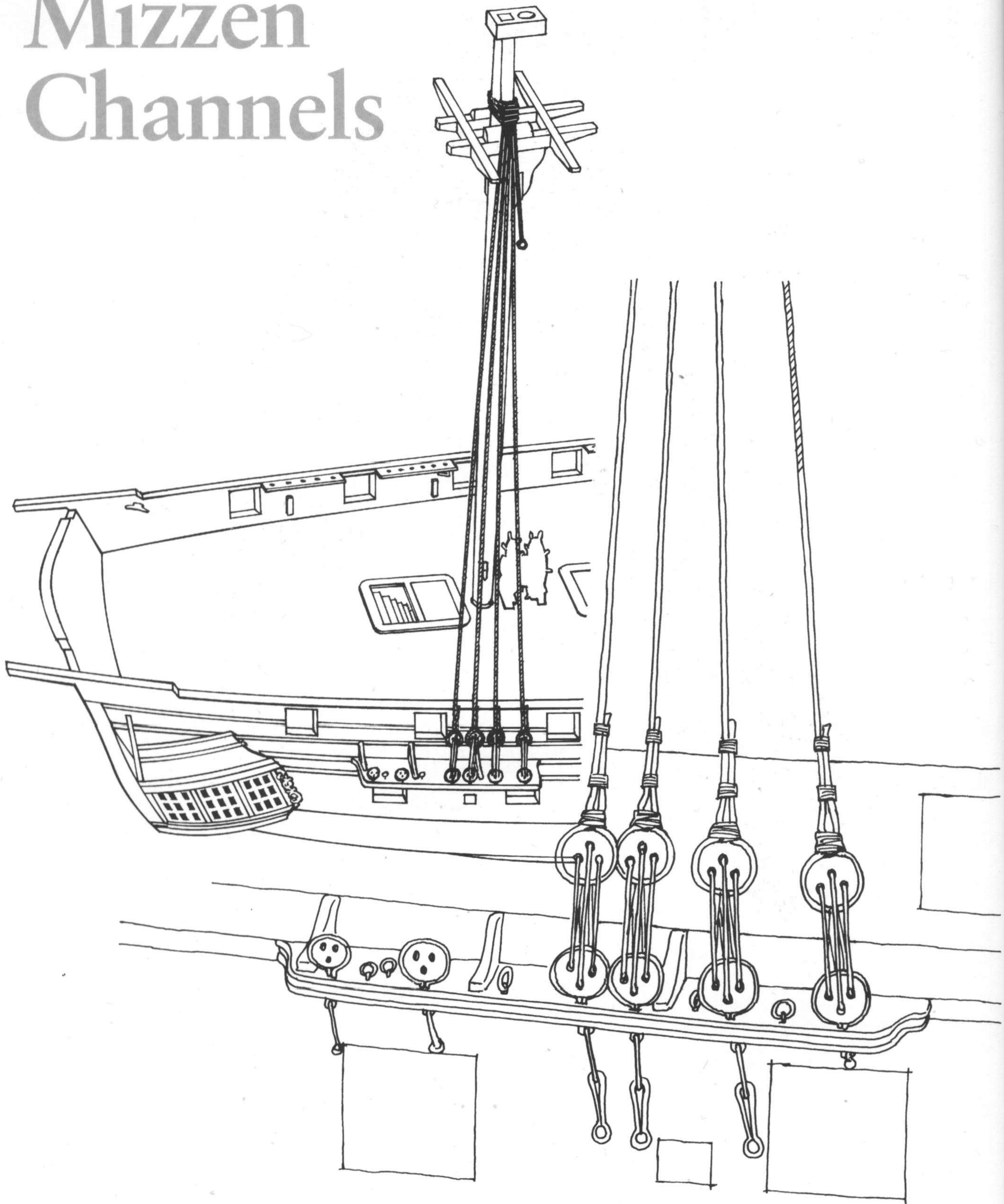
Fore Channels & Dead-Eyes



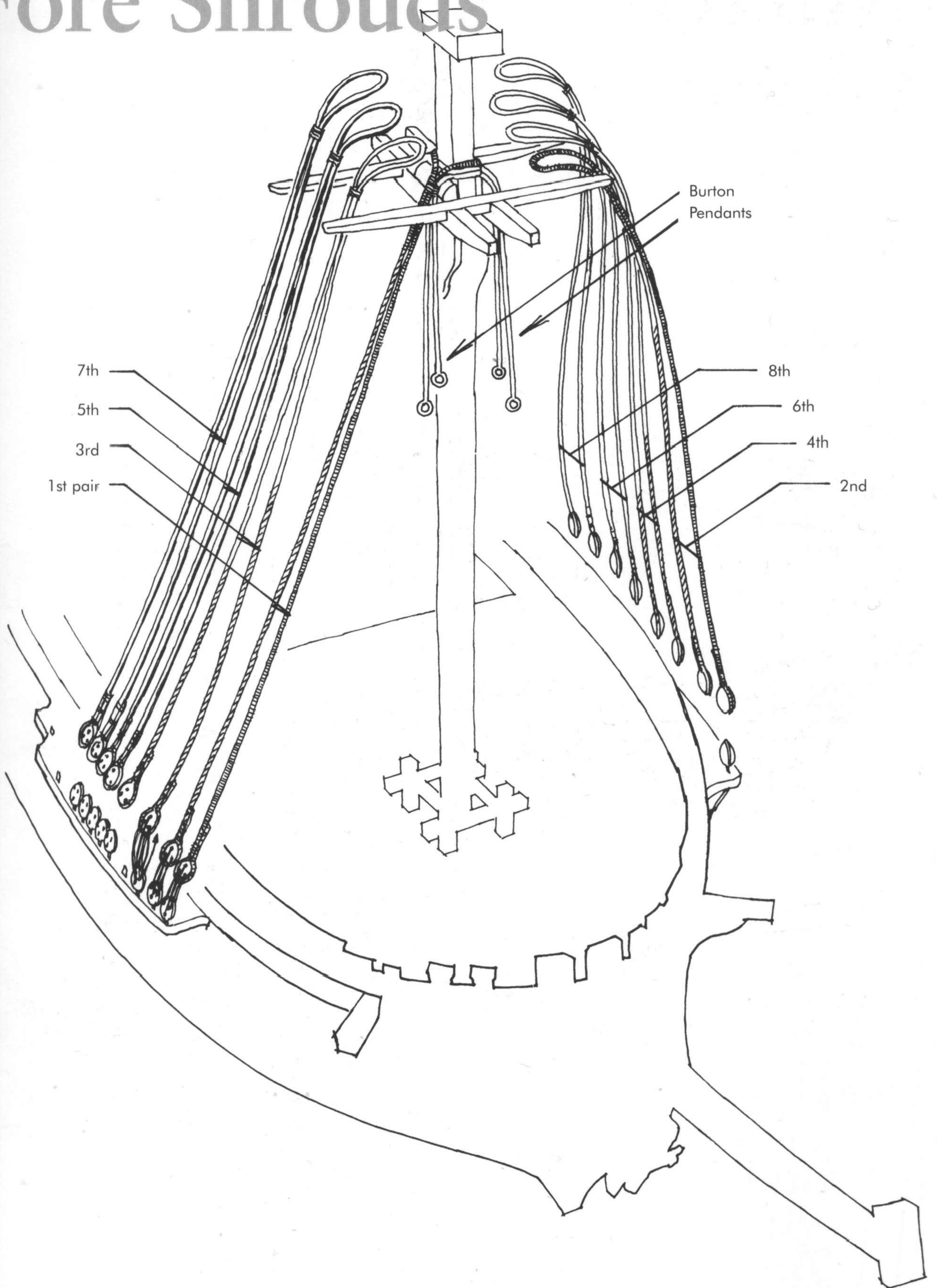
Main Channels & Ratlines



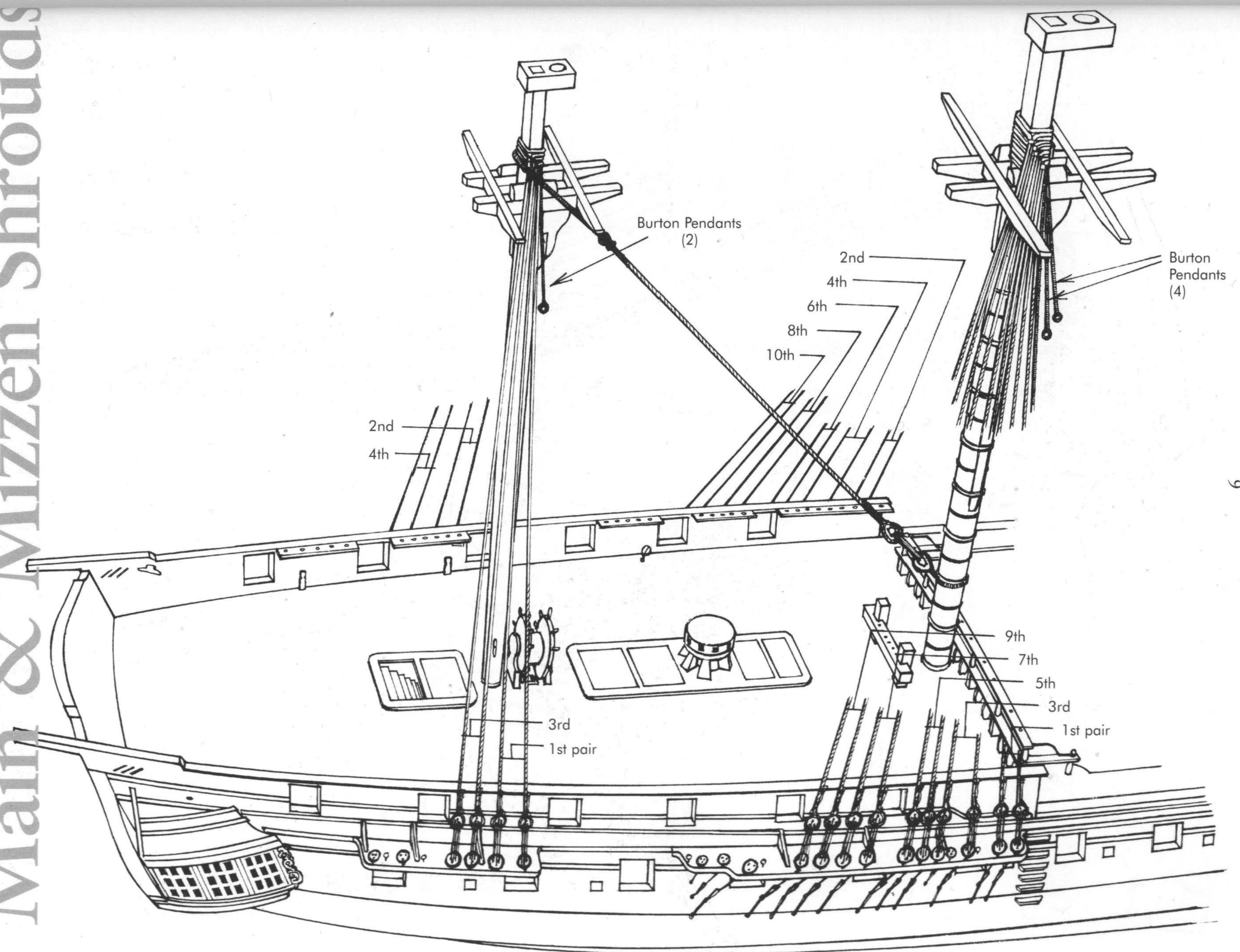
Mizzen Channels



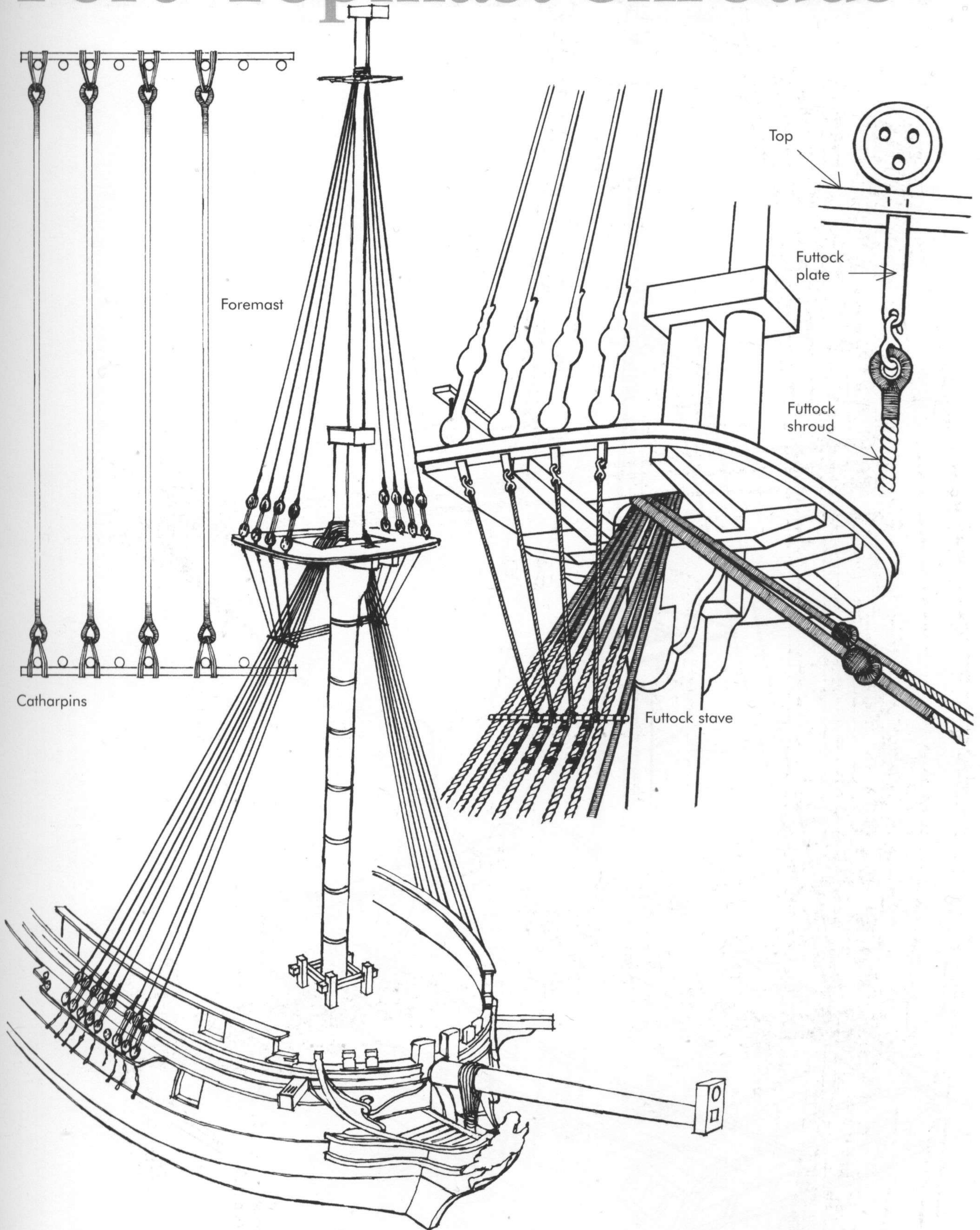
Fore Shrouds



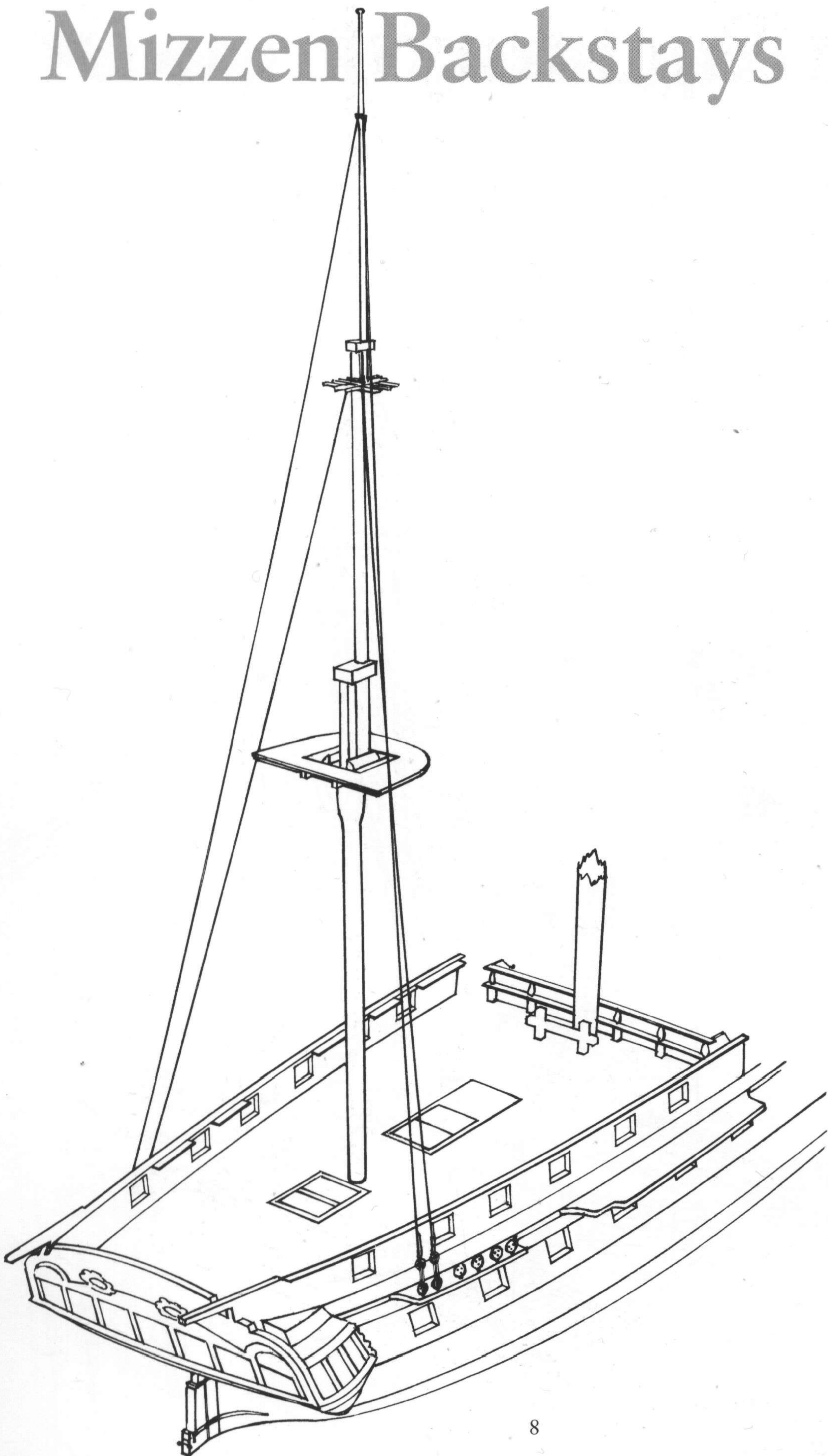
Main & Mizzen Shrouds



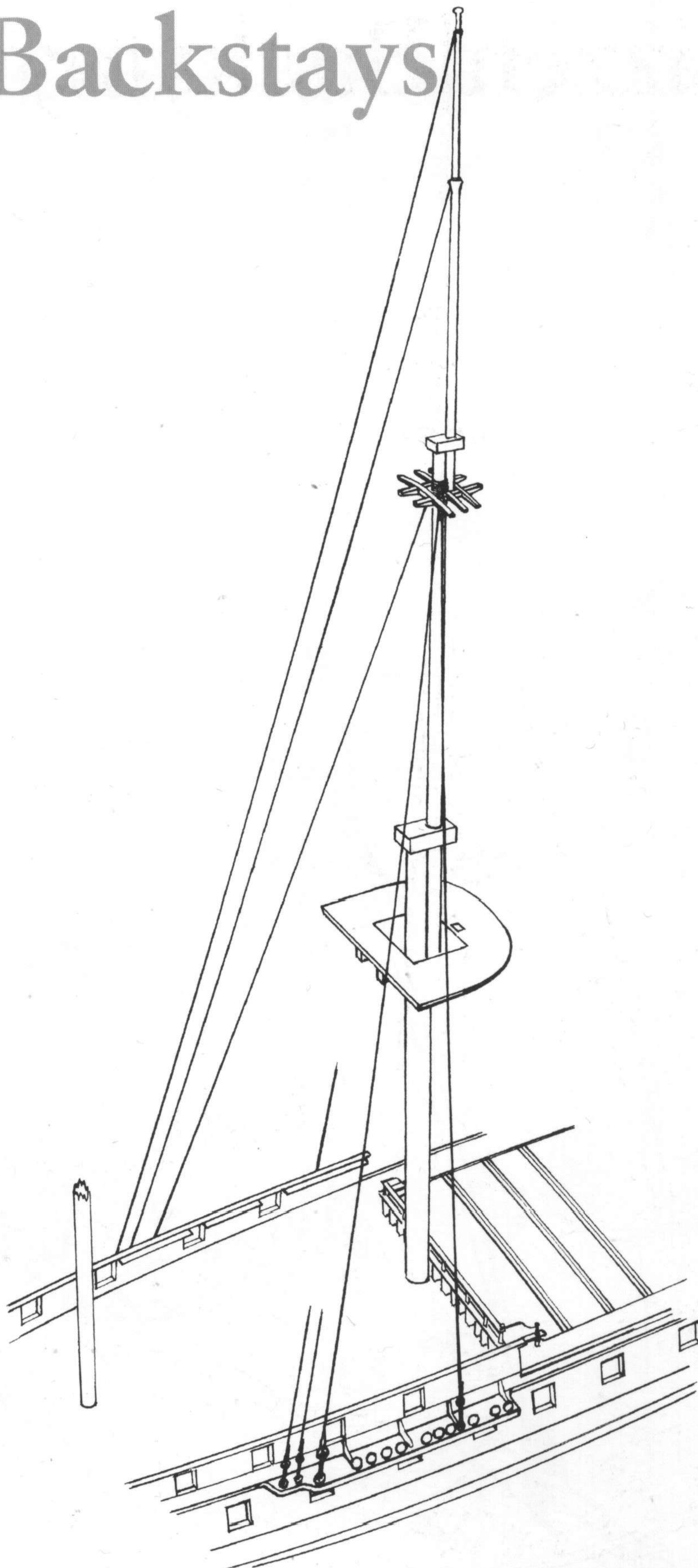
Fore Topmast Shrouds



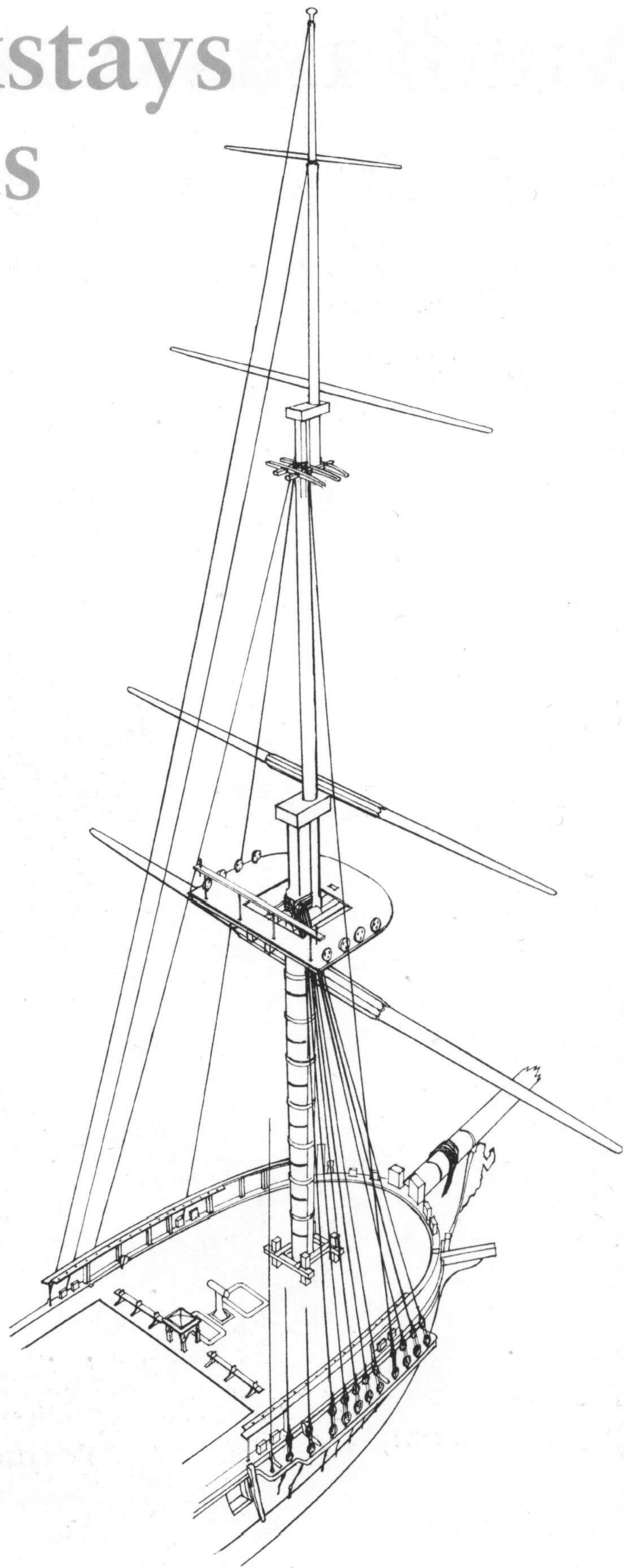
Mizzen Backstays



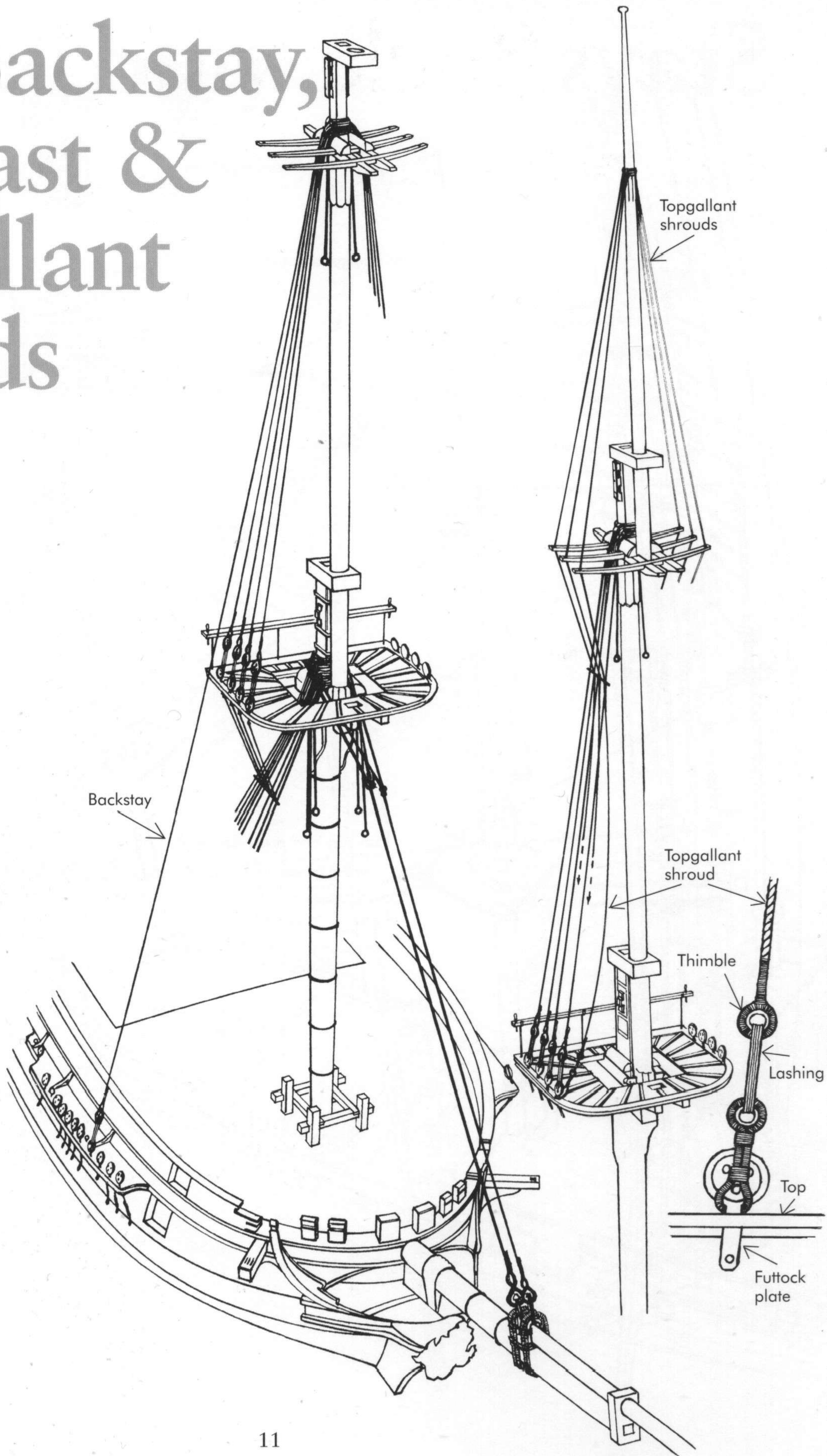
Main Backstays



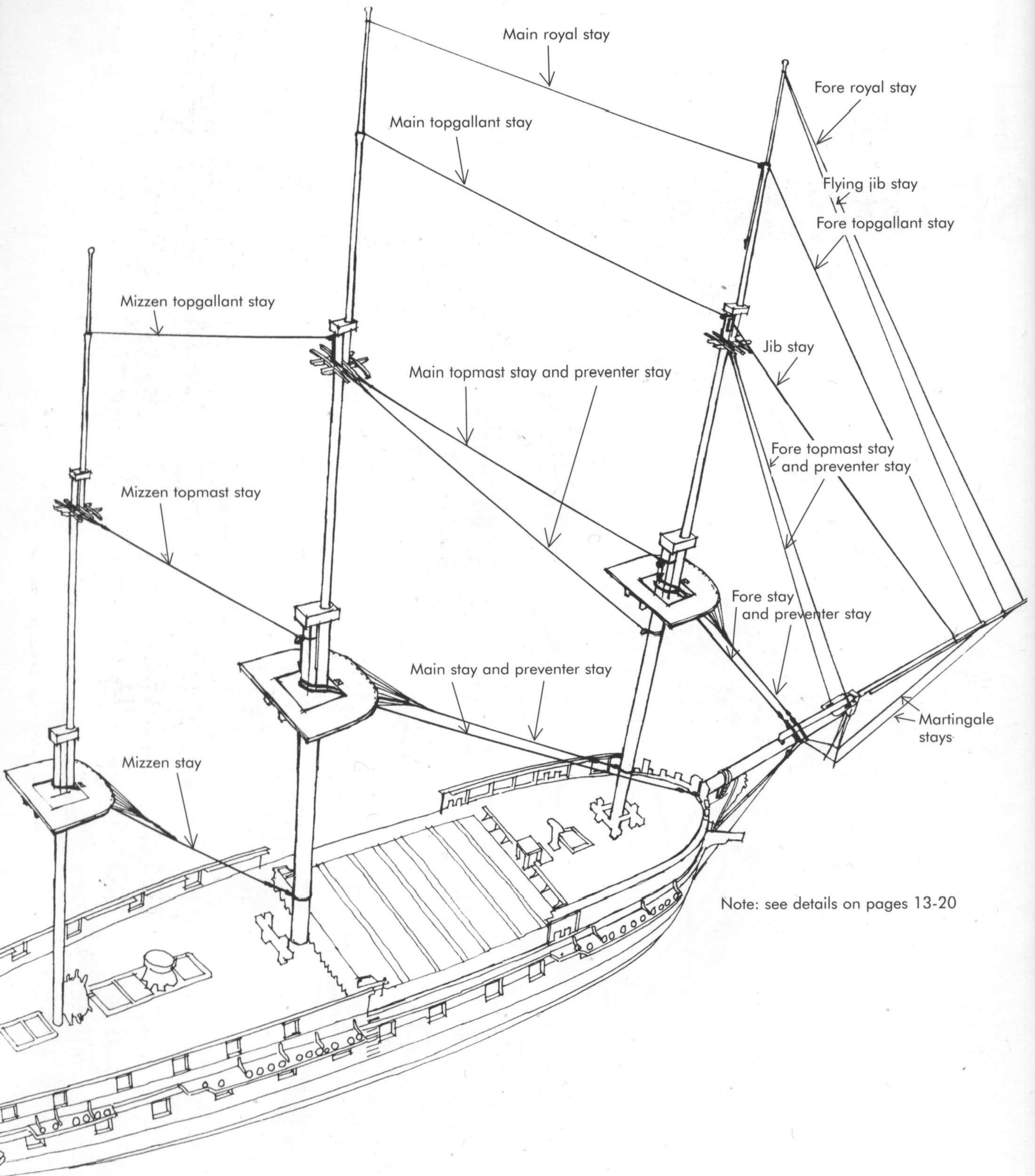
Fore Backstays & Shrouds



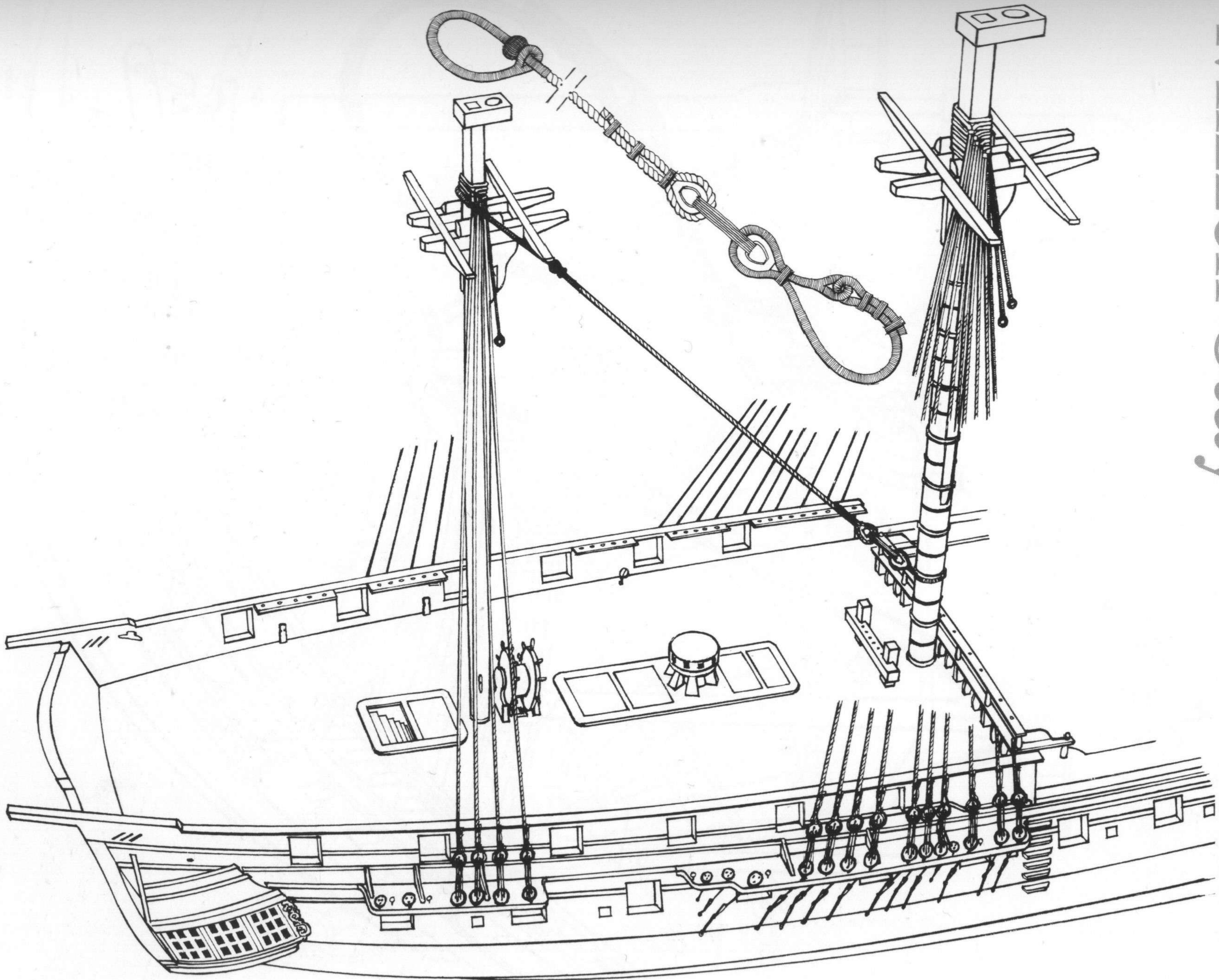
Fore Backstay, Topmast & Topgallant Shrouds



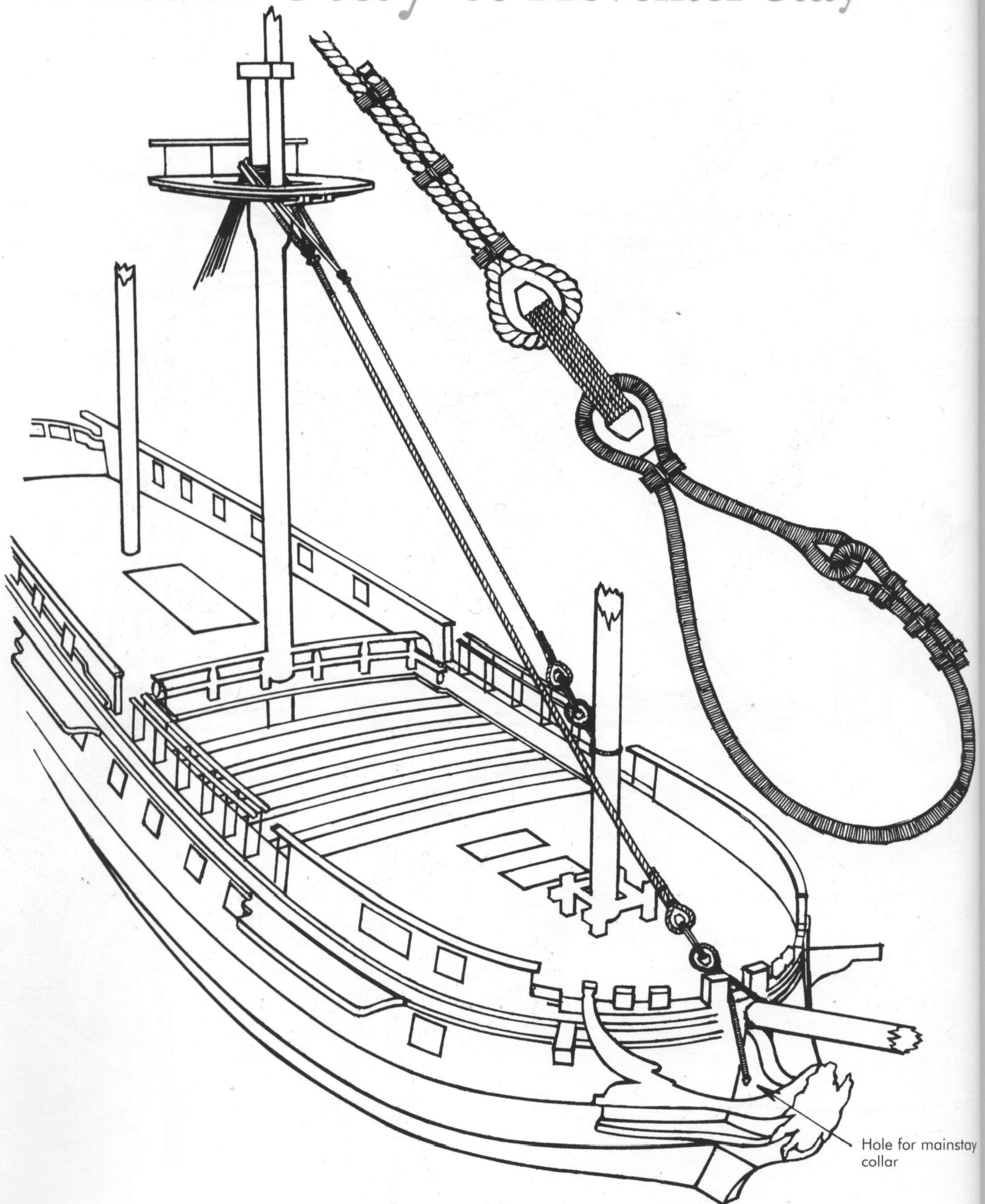
Stays



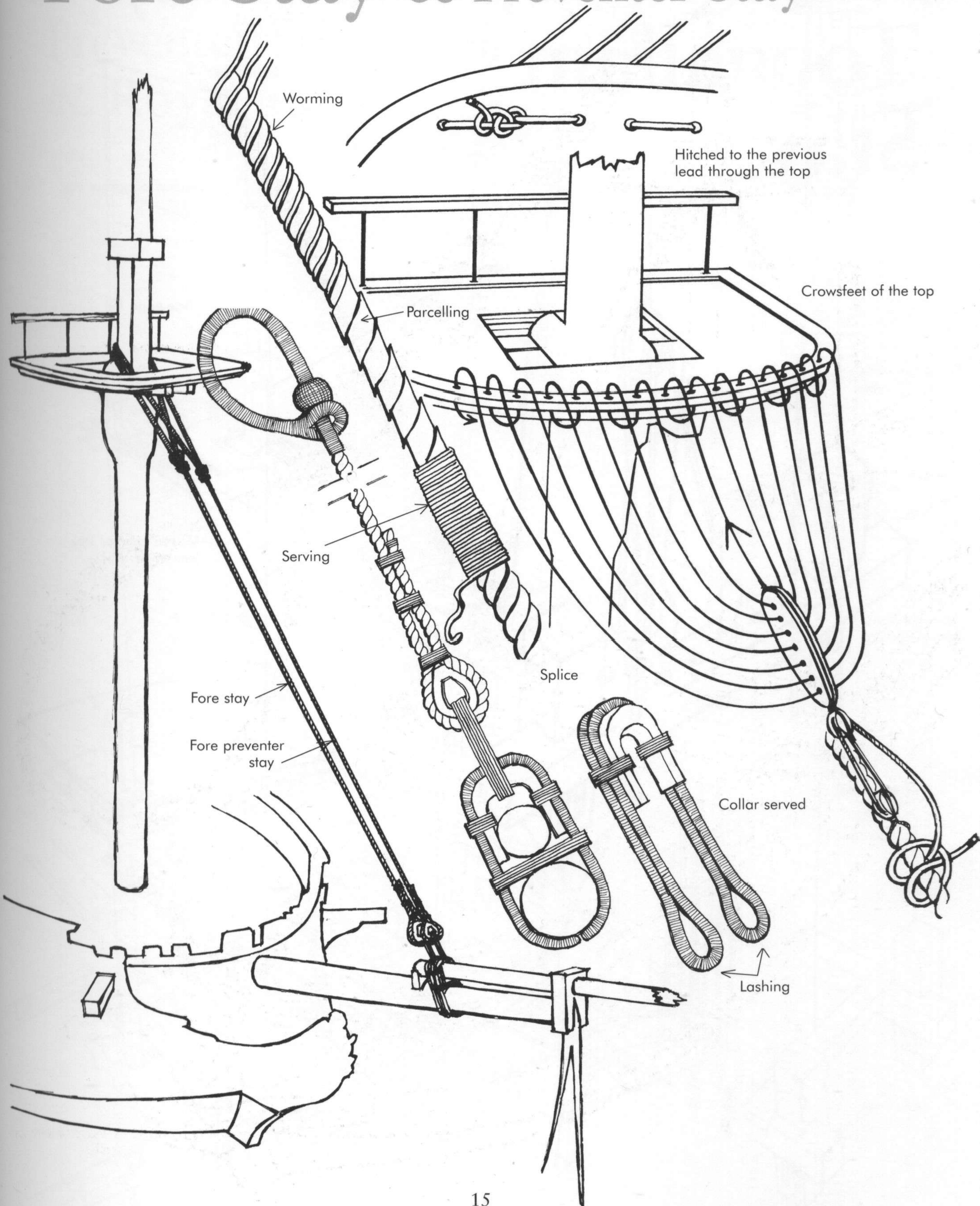
Mizzen Stay



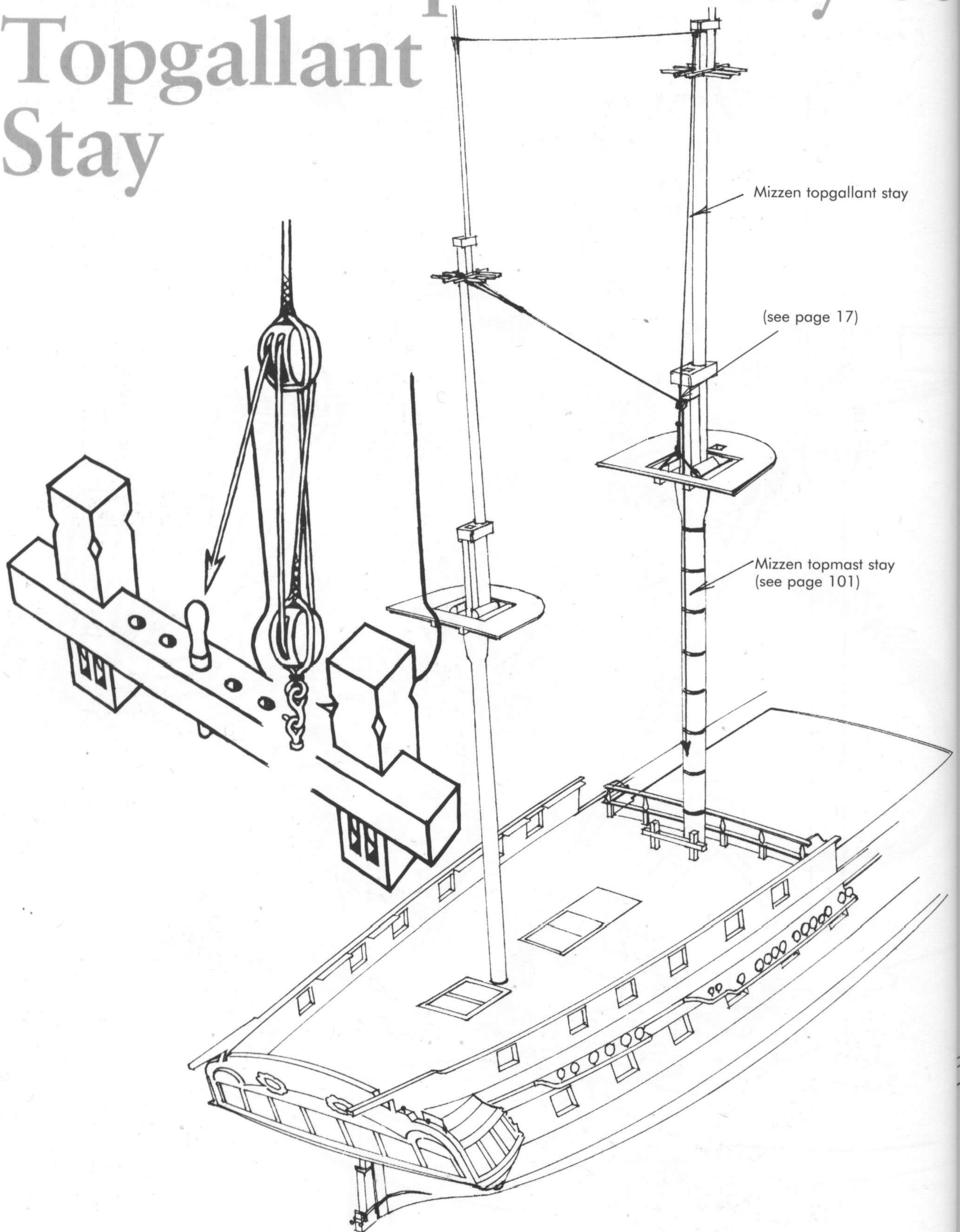
Main Stay & Preventer Stay



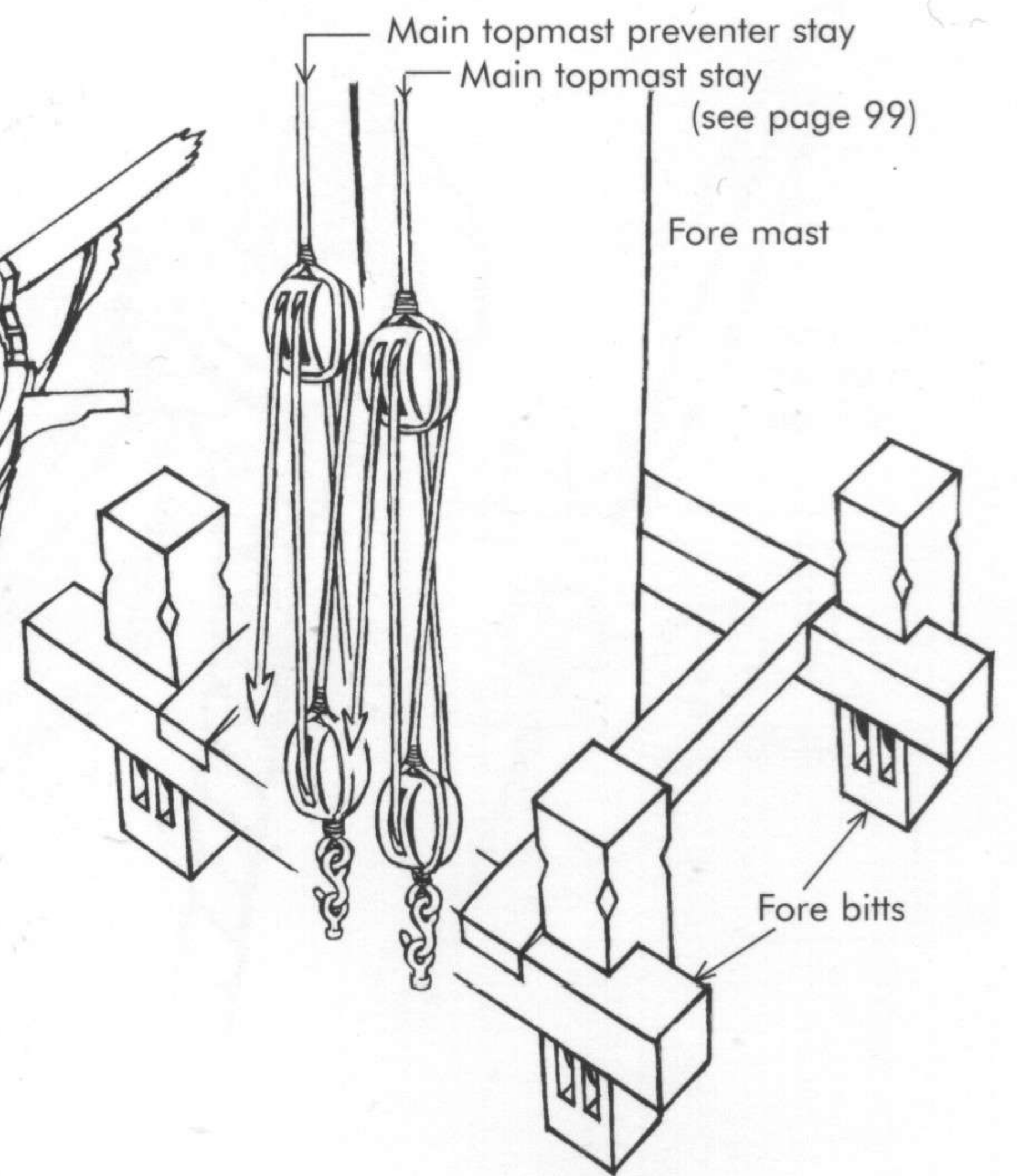
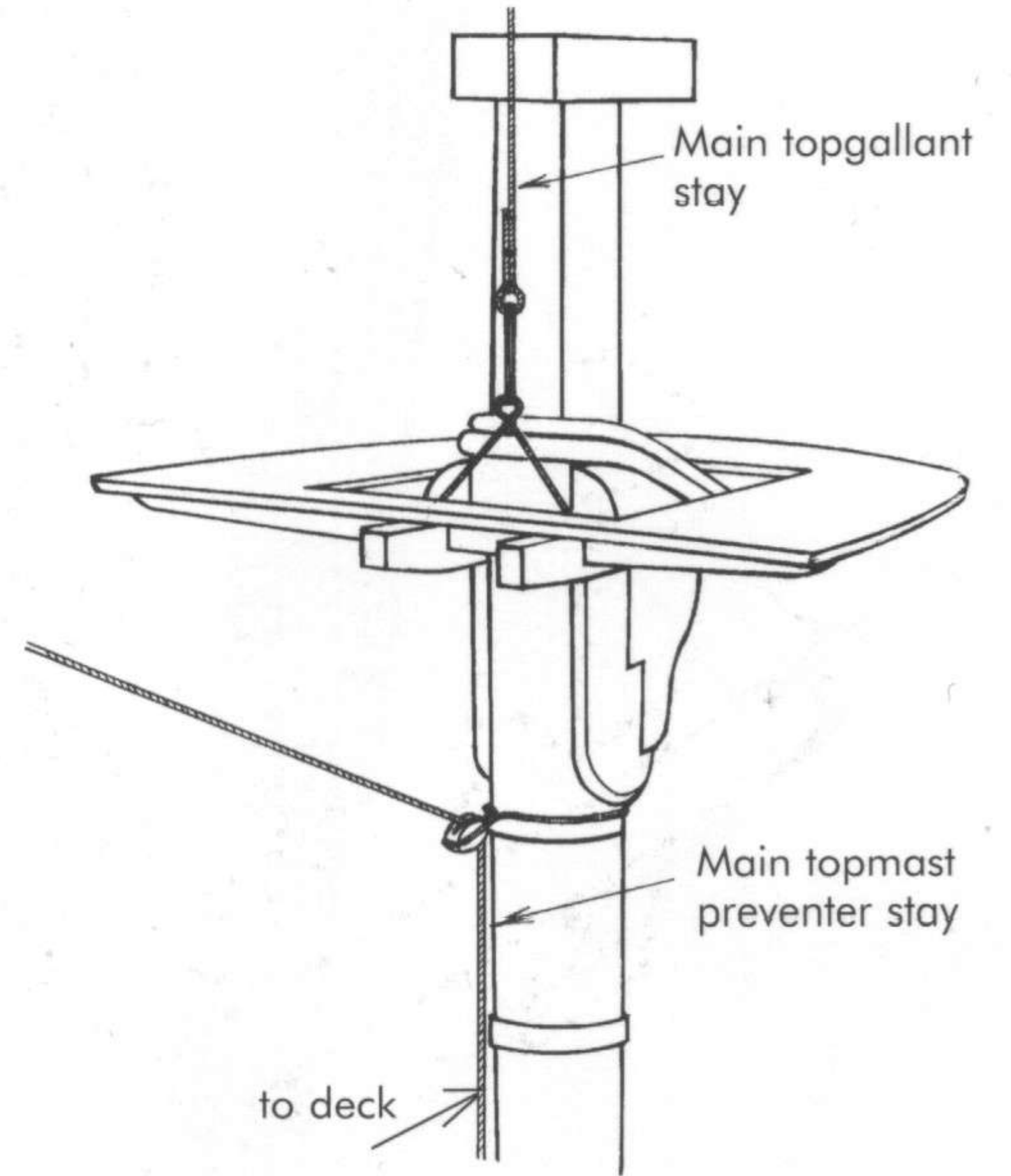
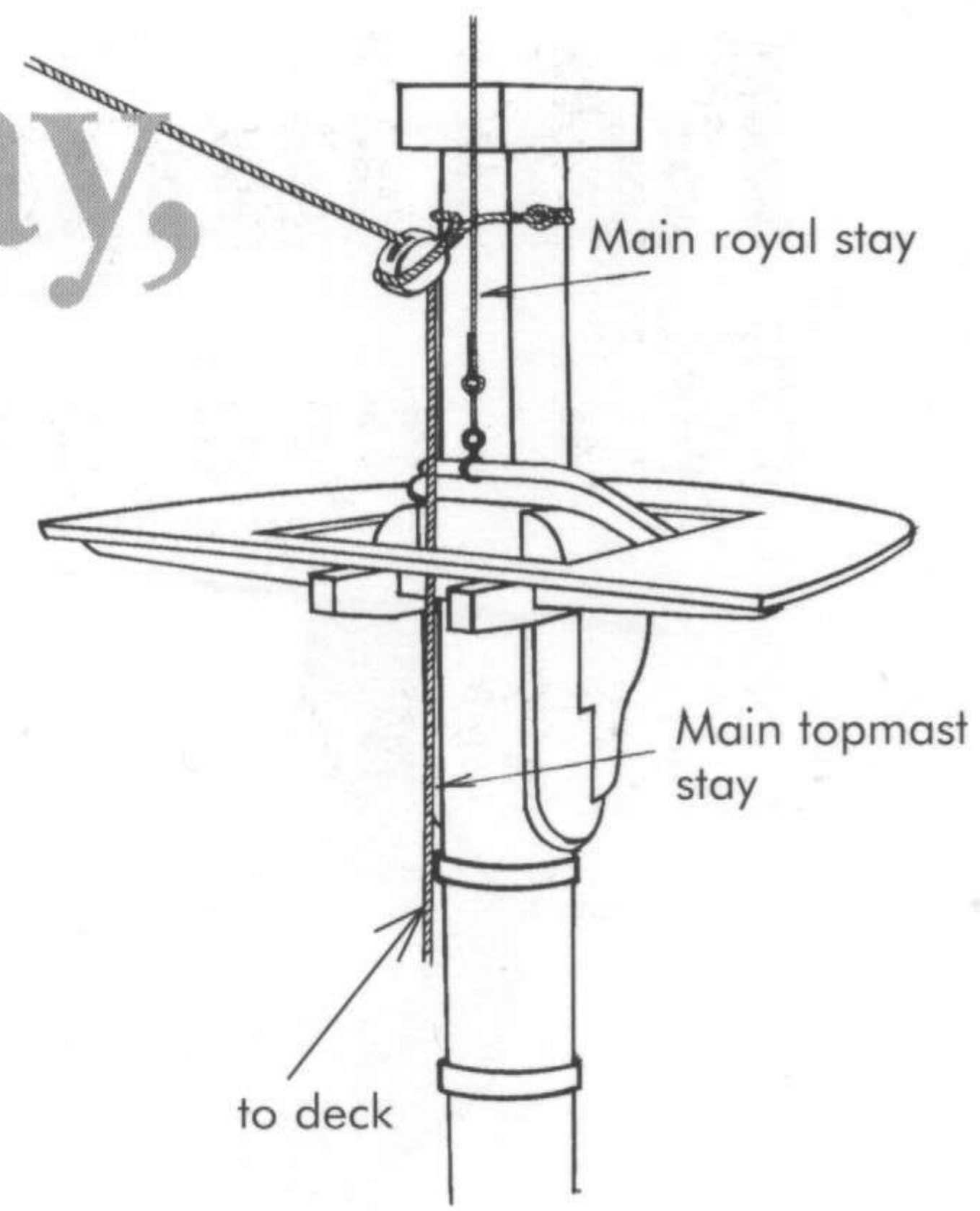
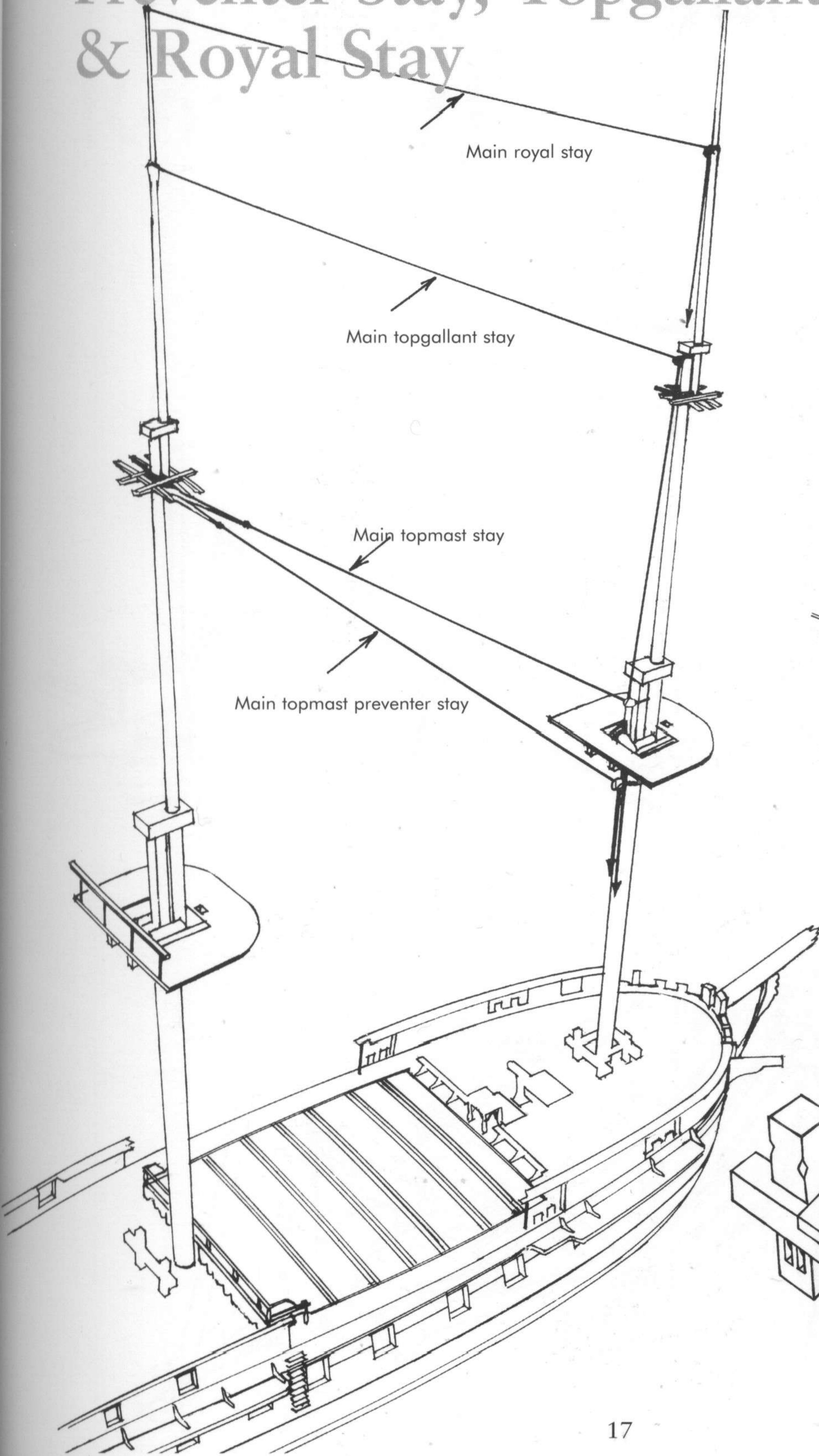
Fore Stay & Preventer Stay



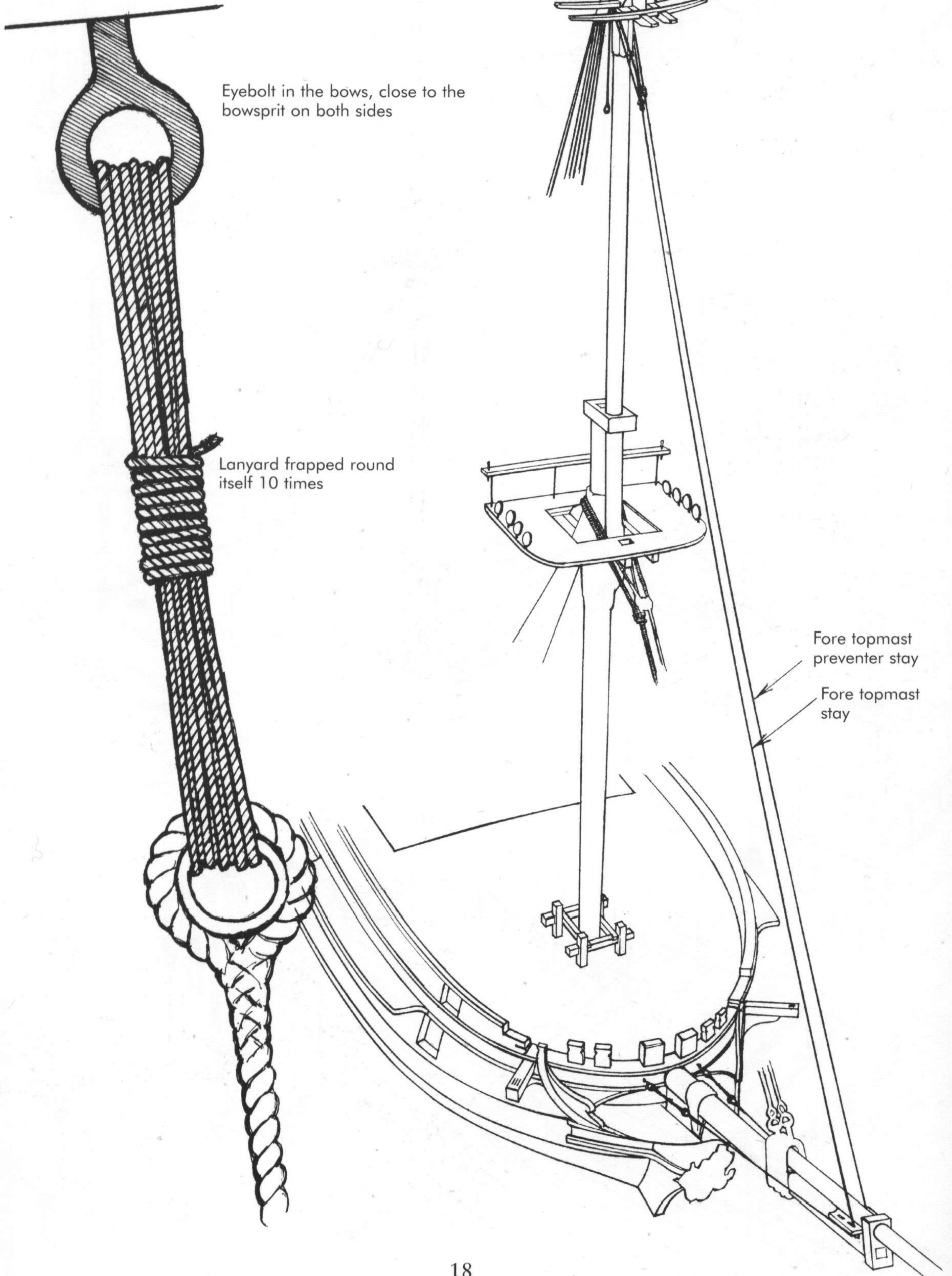
Mizzen Topmast Stay & Topgallant Stay



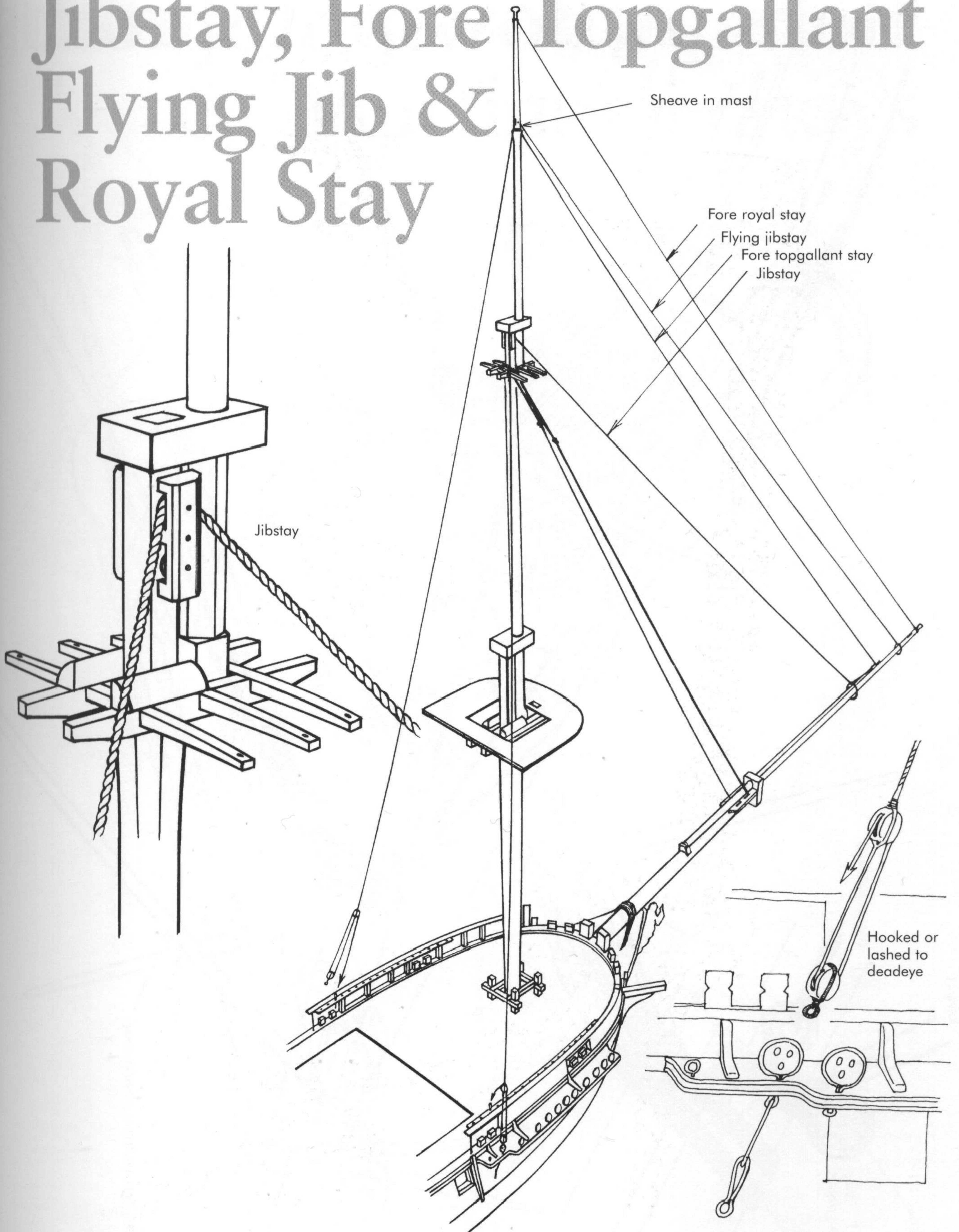
Main Topmast Stay, Preventer Stay, Topgallant & Royal Stay



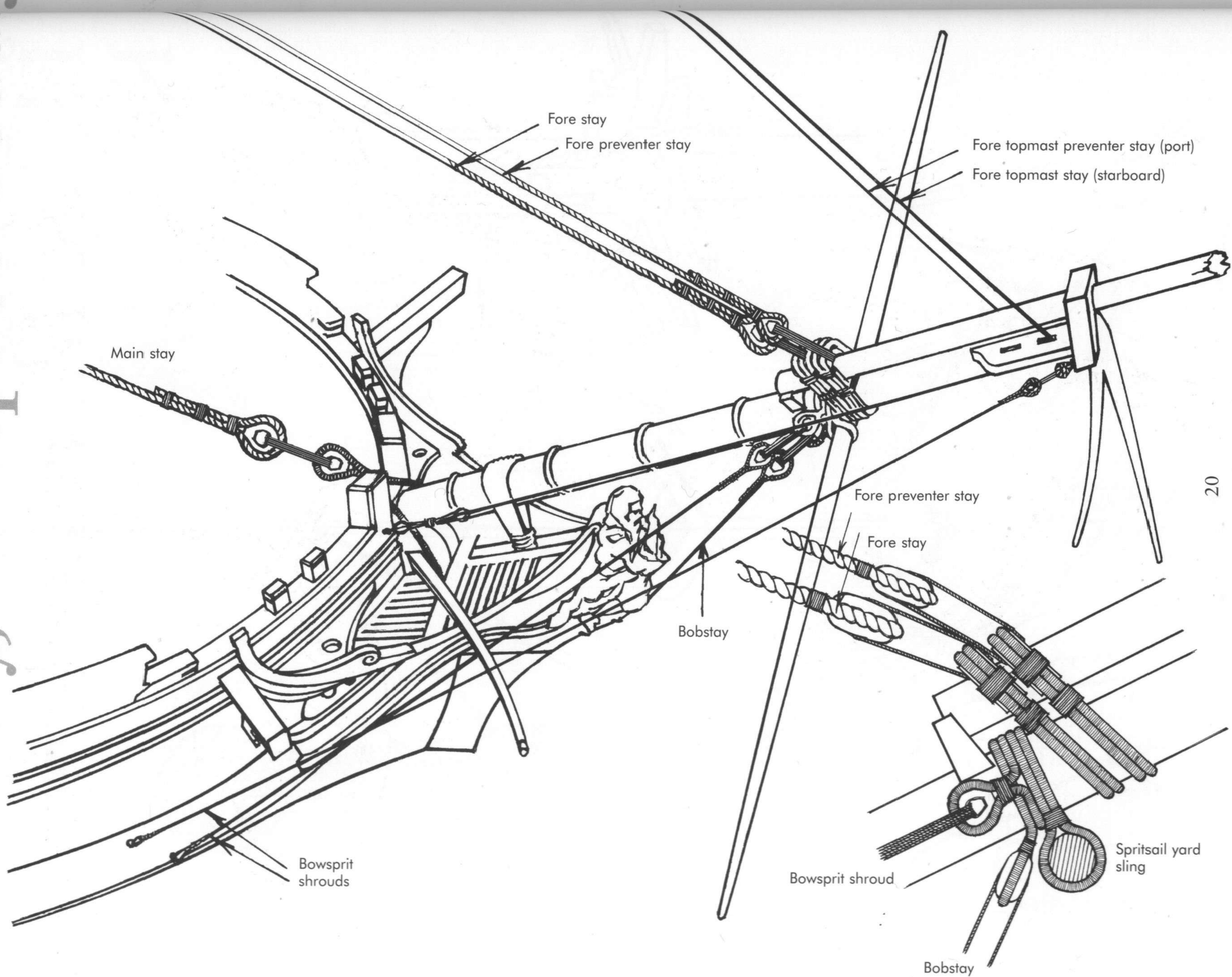
Fore Topmast & Preventer Stay



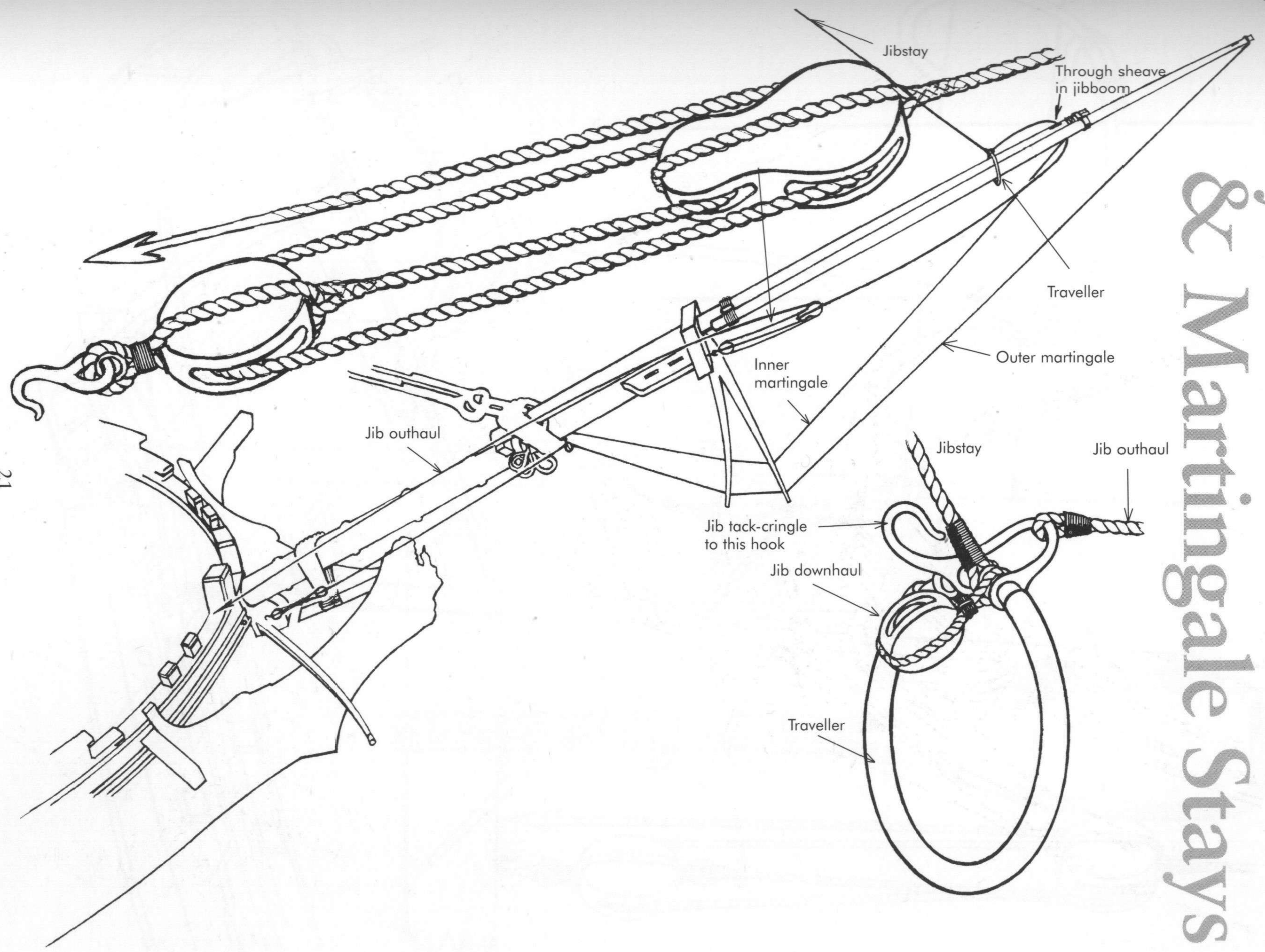
Jibstay, Fore Topgallant Flying Jib & Royal Stay



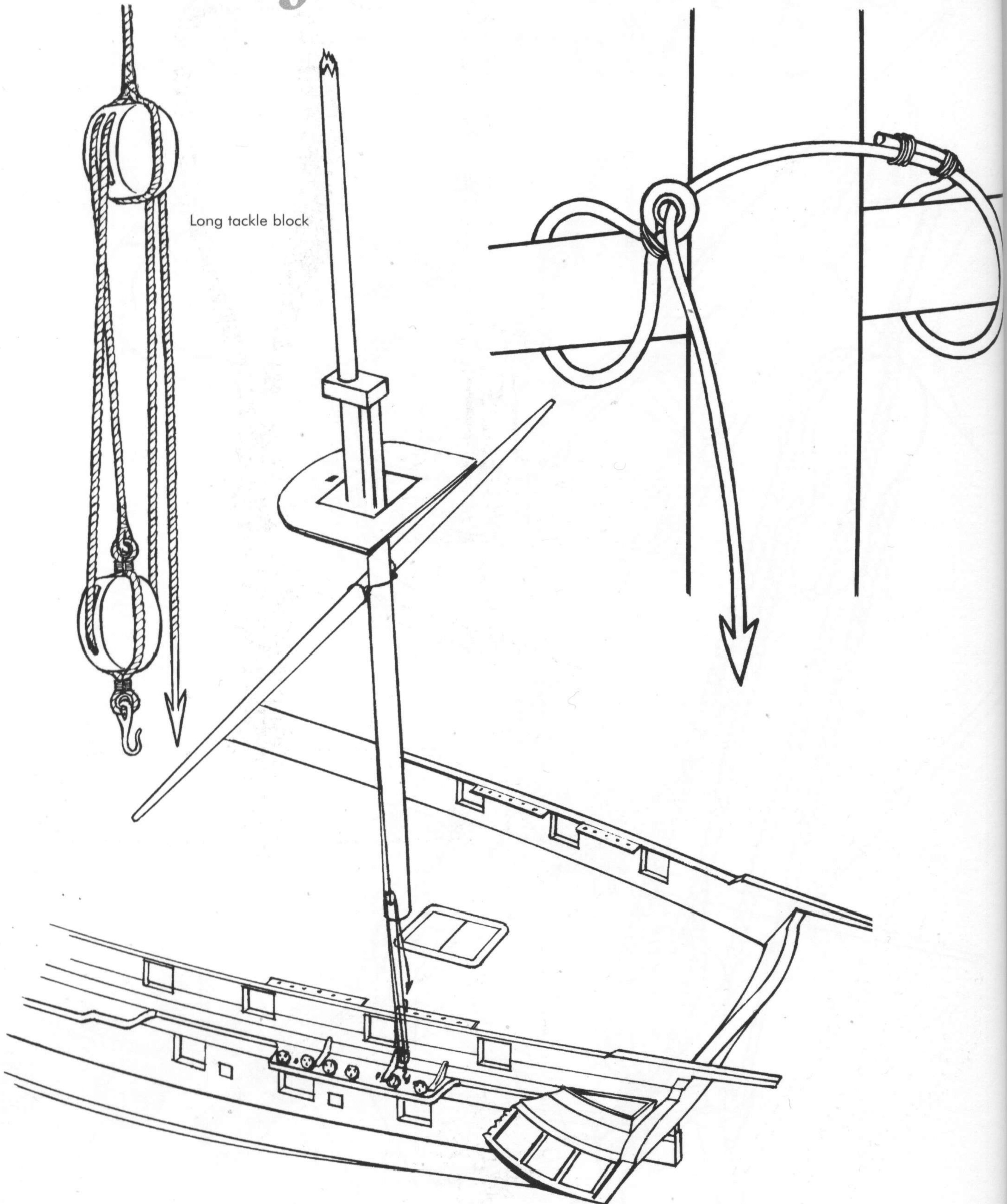
Bobstay, Bowsprit Shrouds



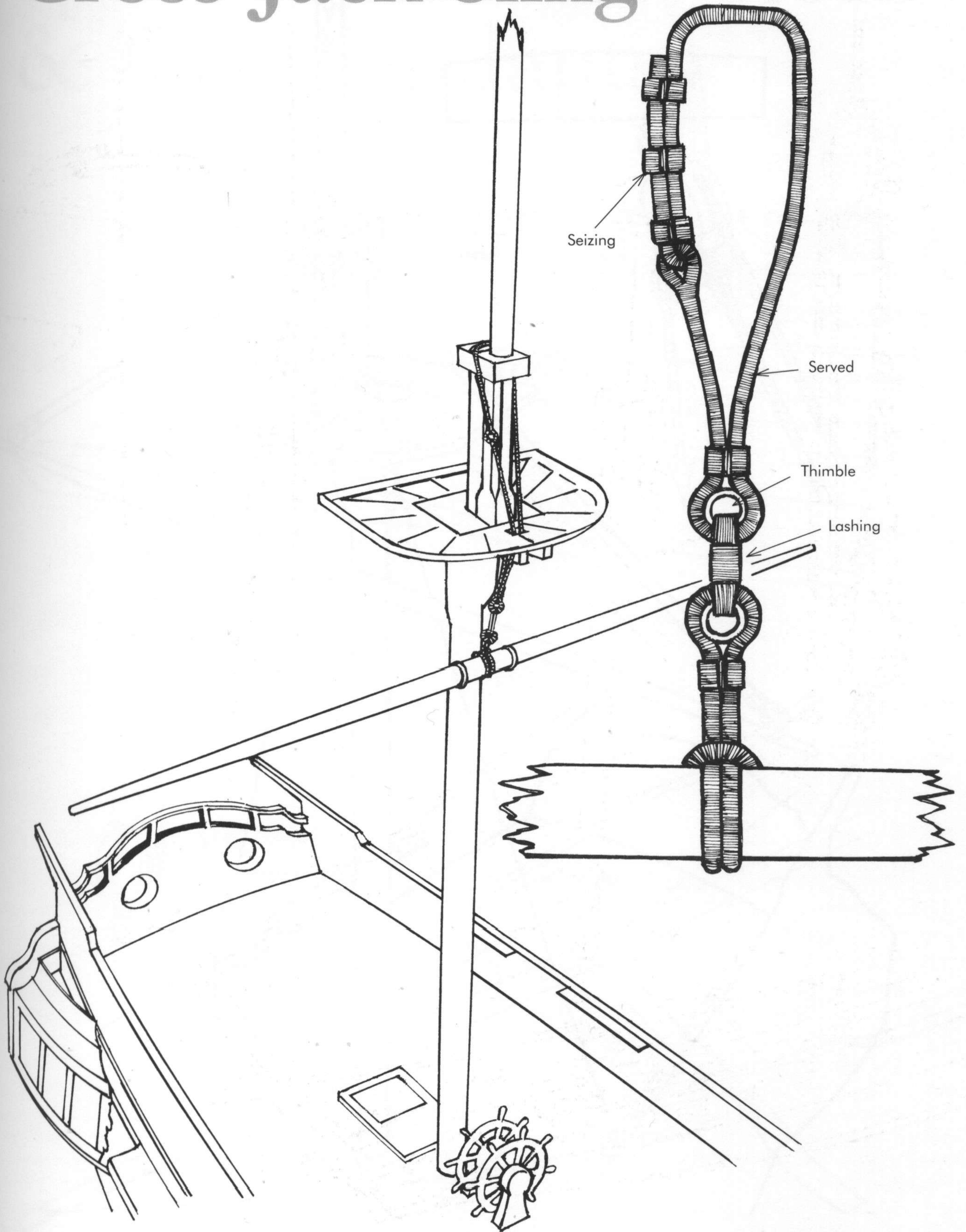
Jibstay & Martingale Stays



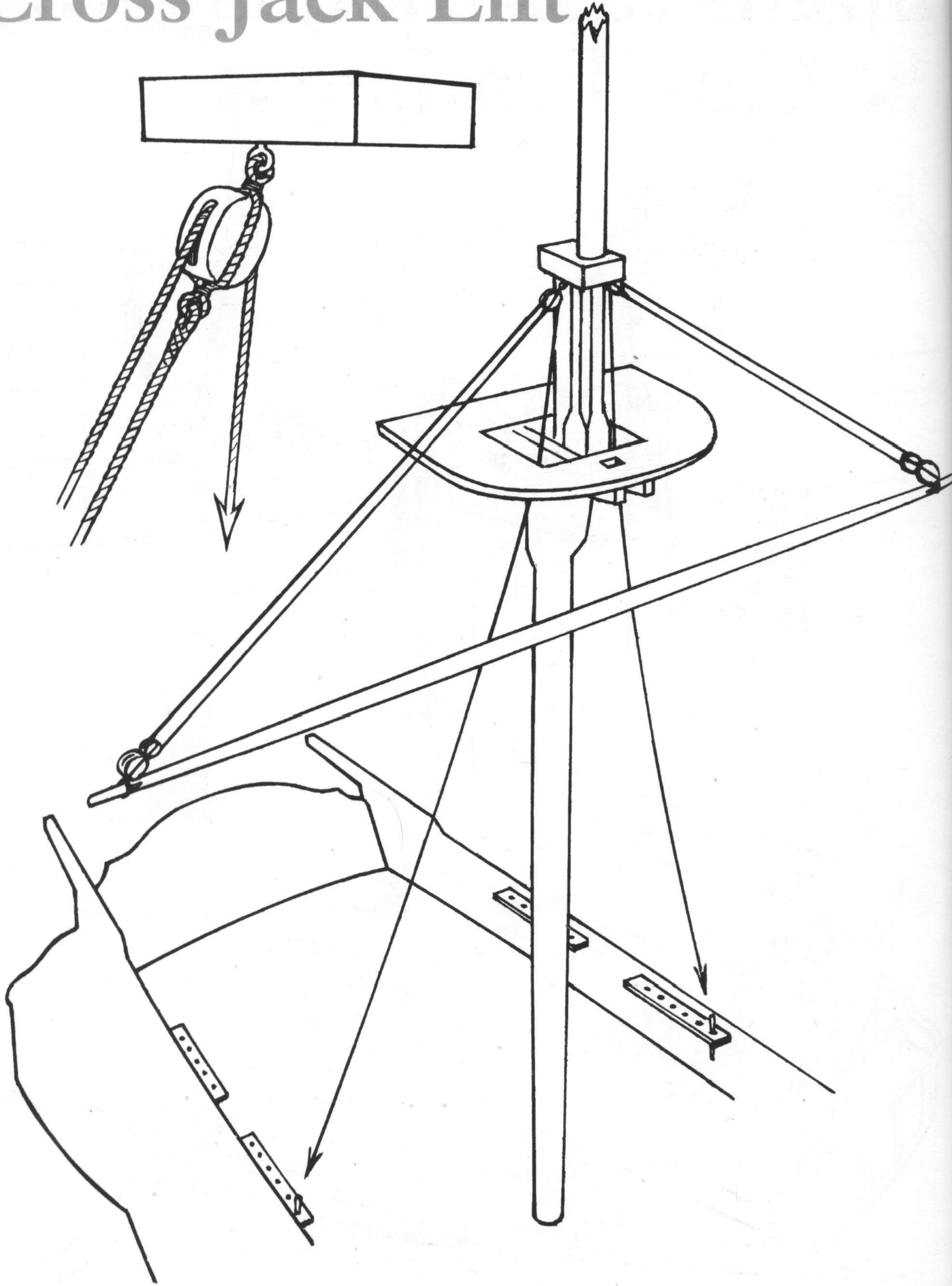
Cross Jack Truss Pendant



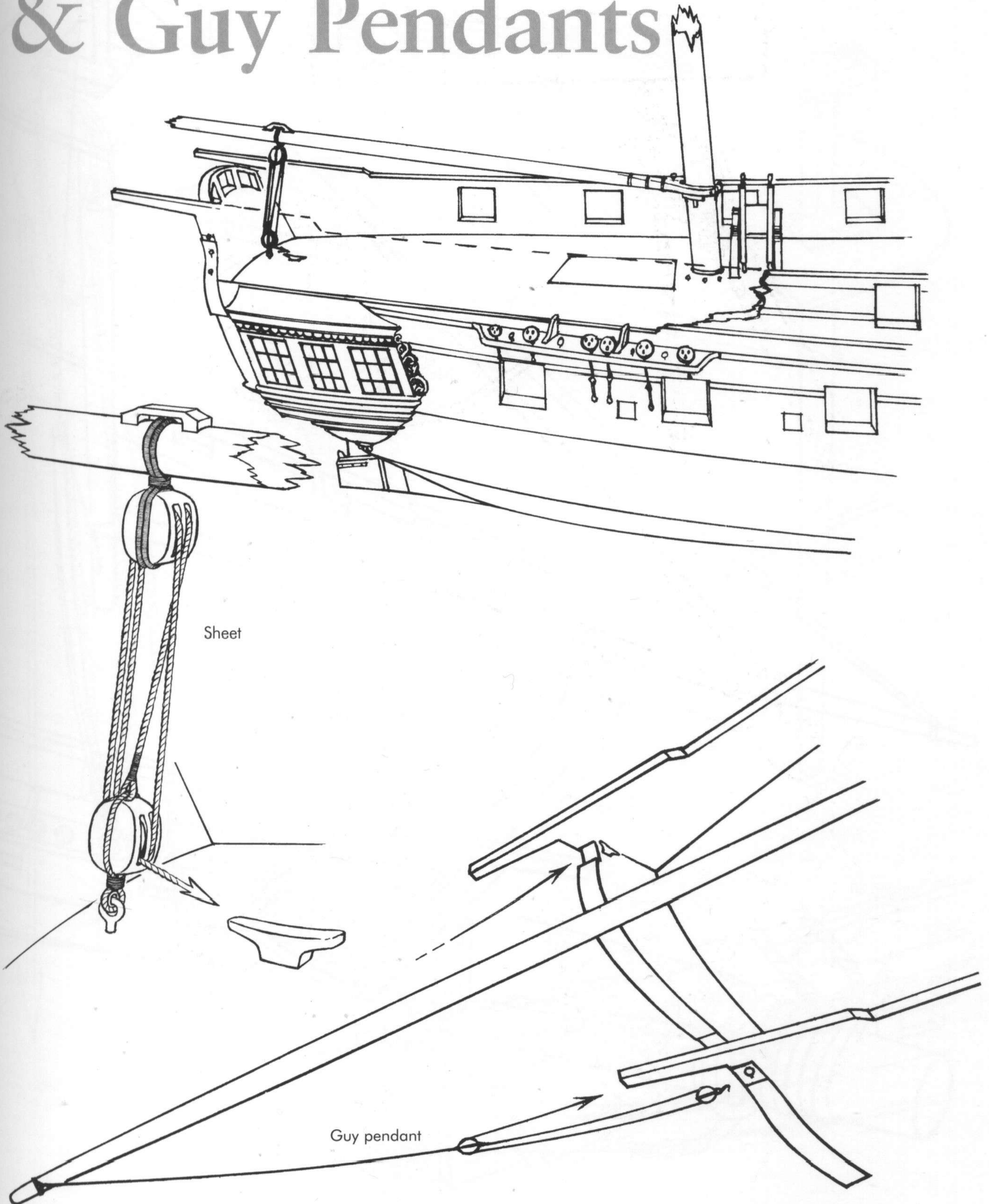
Cross Jack Sling



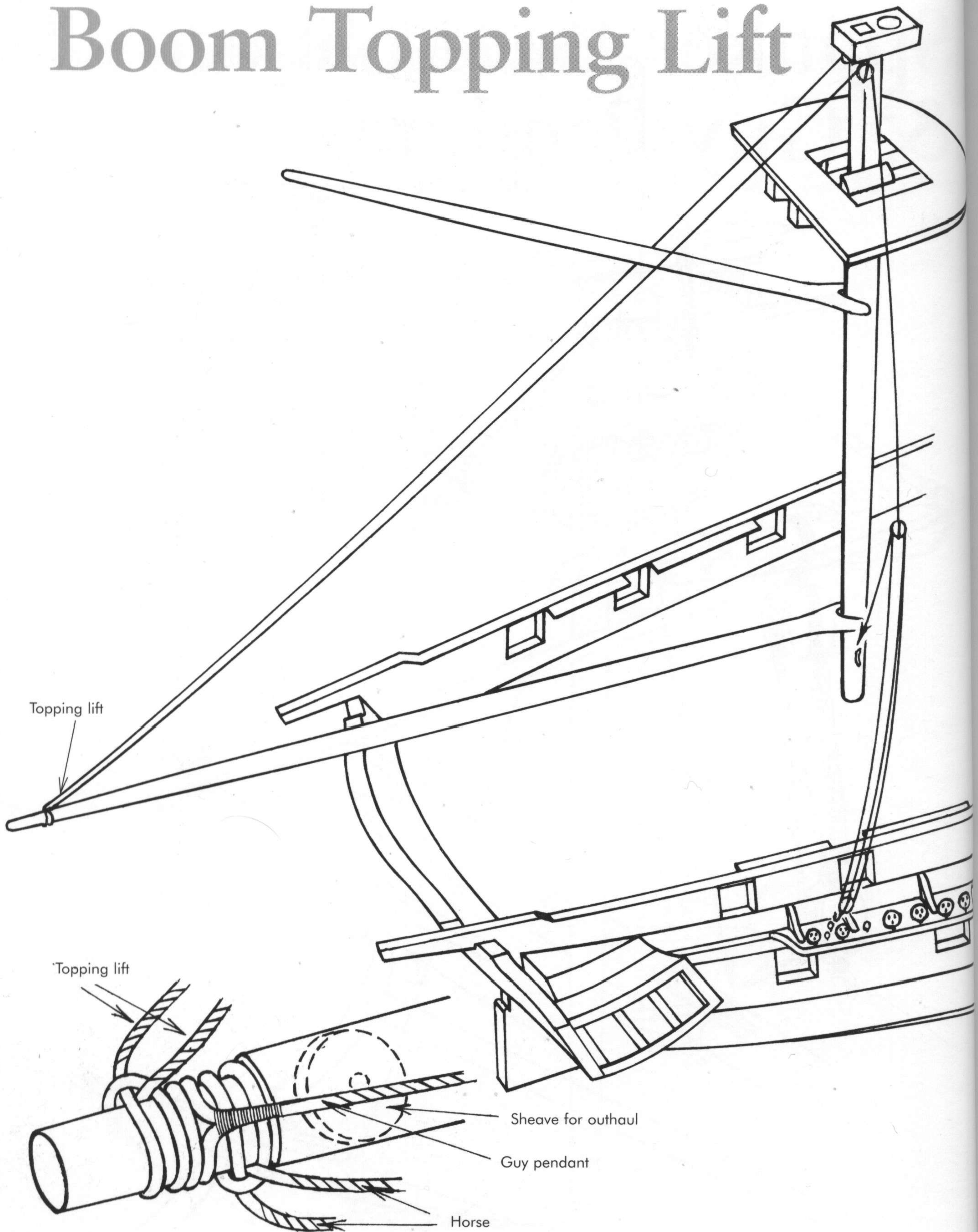
Cross Jack Lift



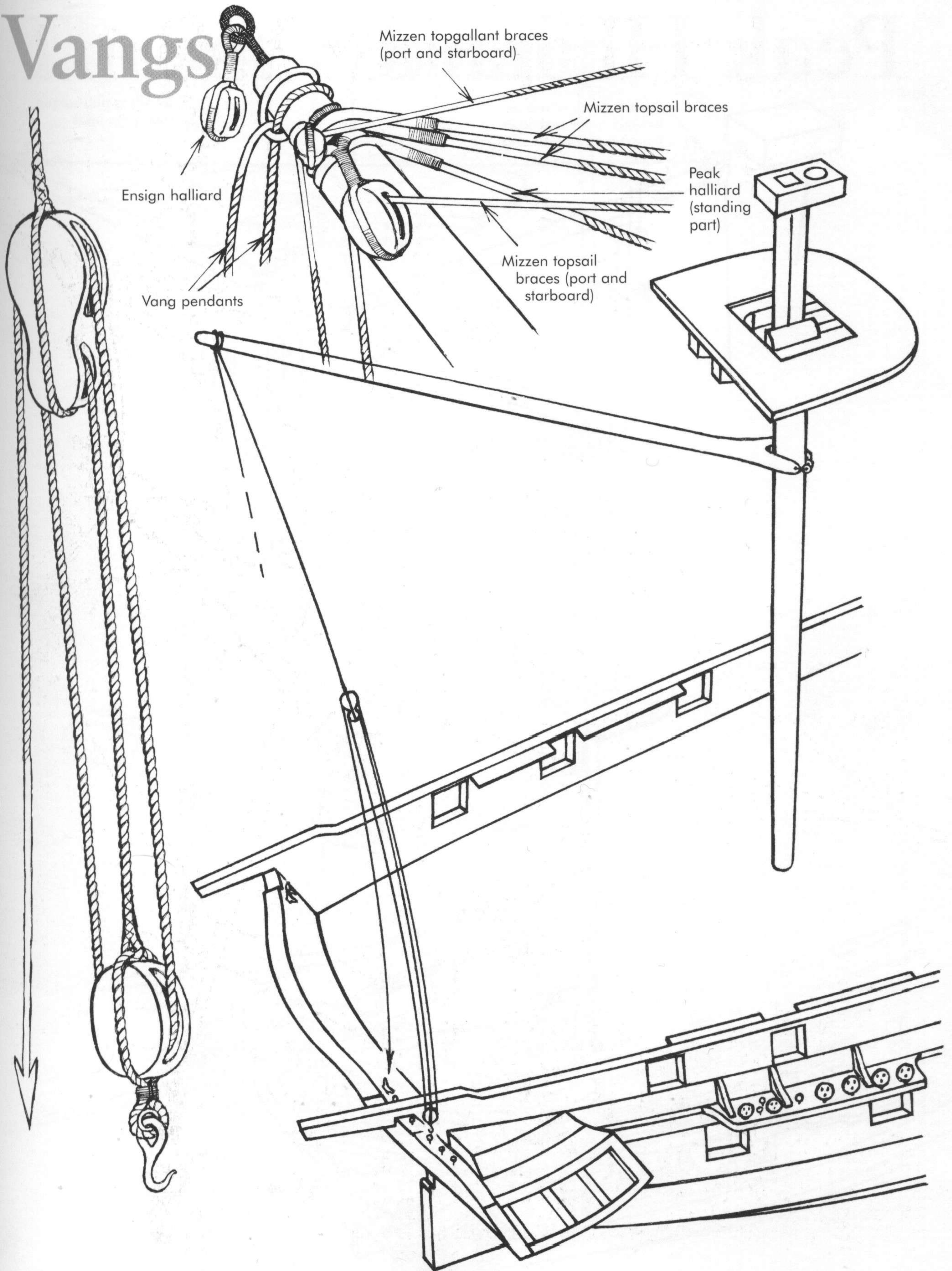
Spanker Boom Sheet & Guy Pendants



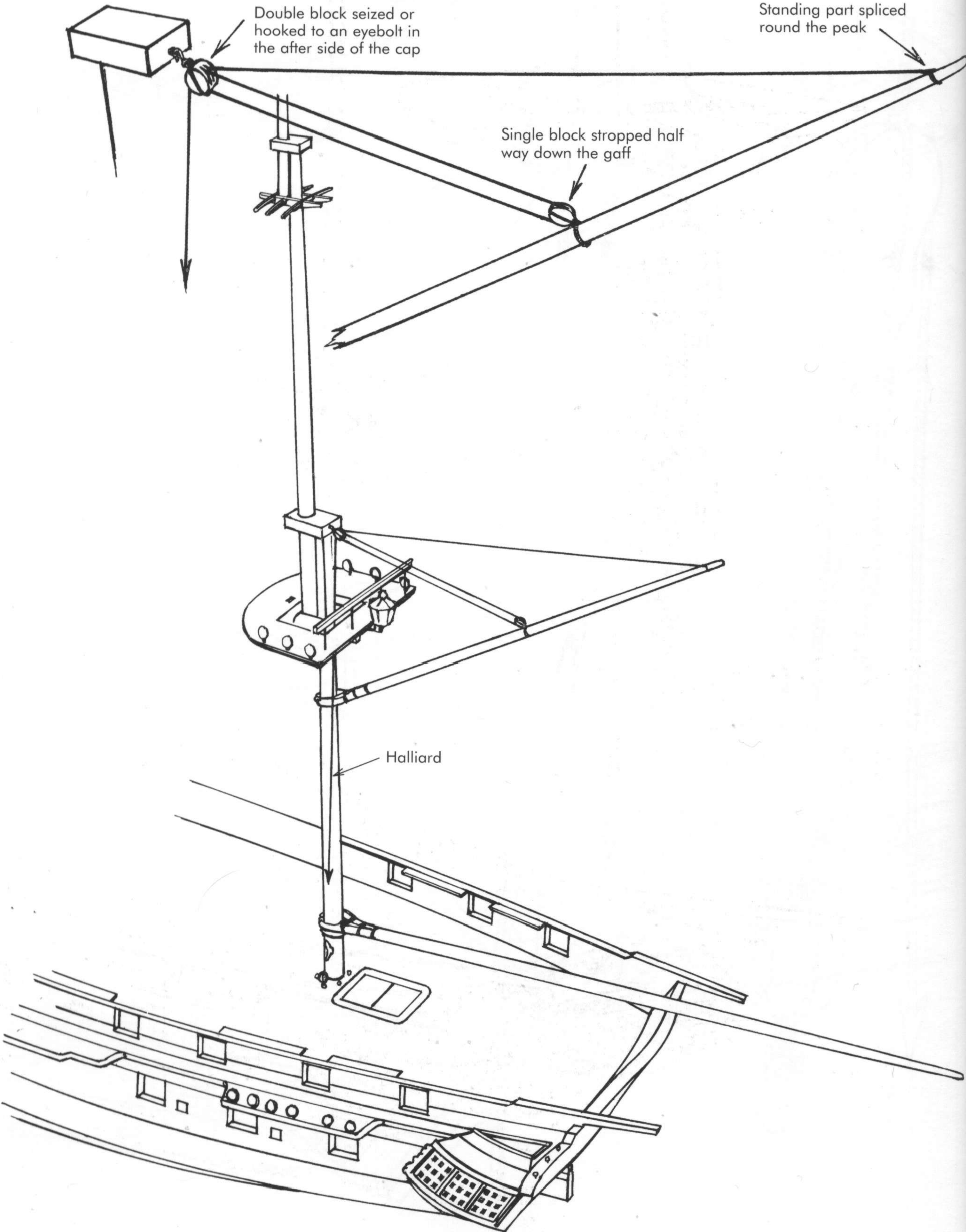
Boom Topping Lift



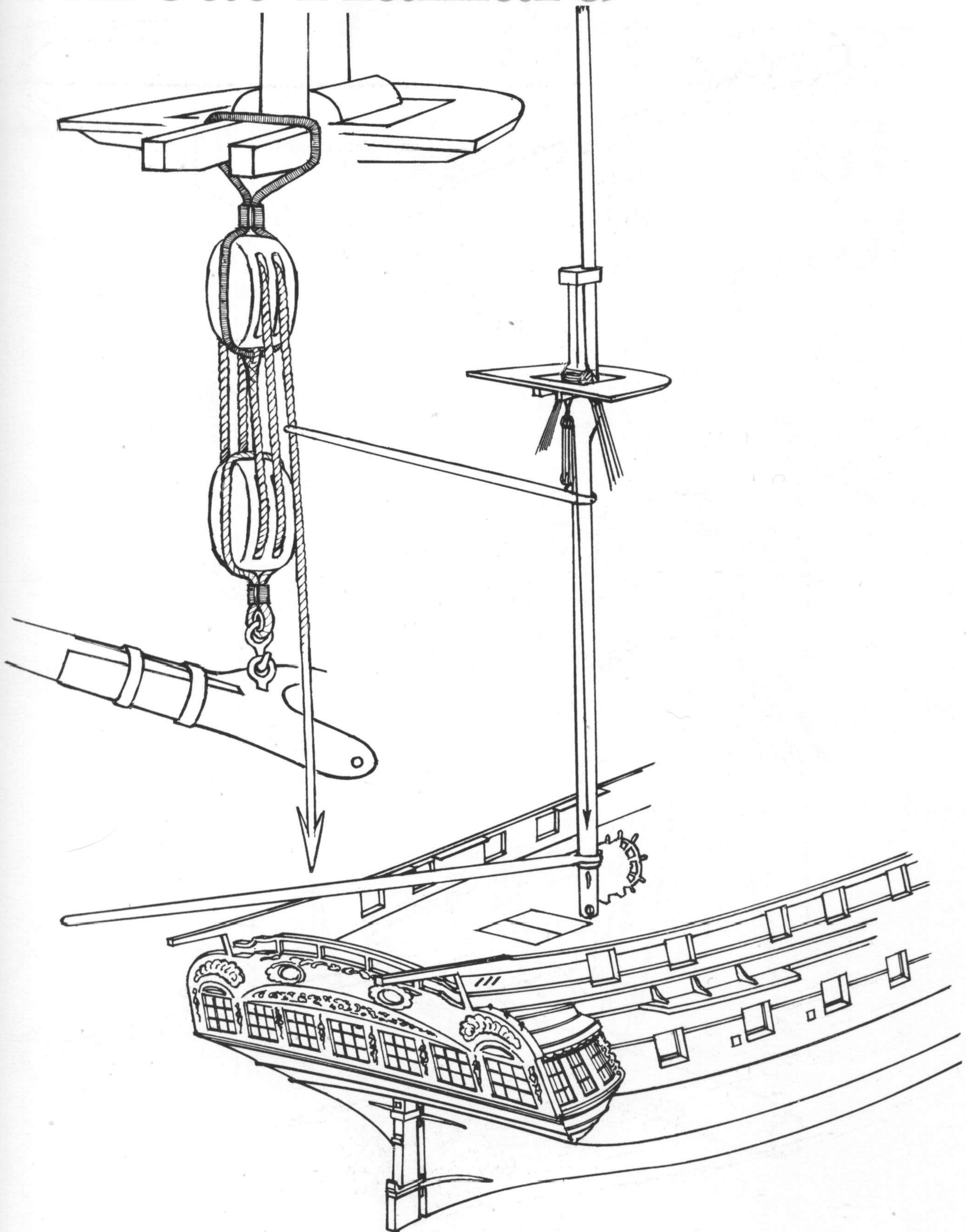
Vangs



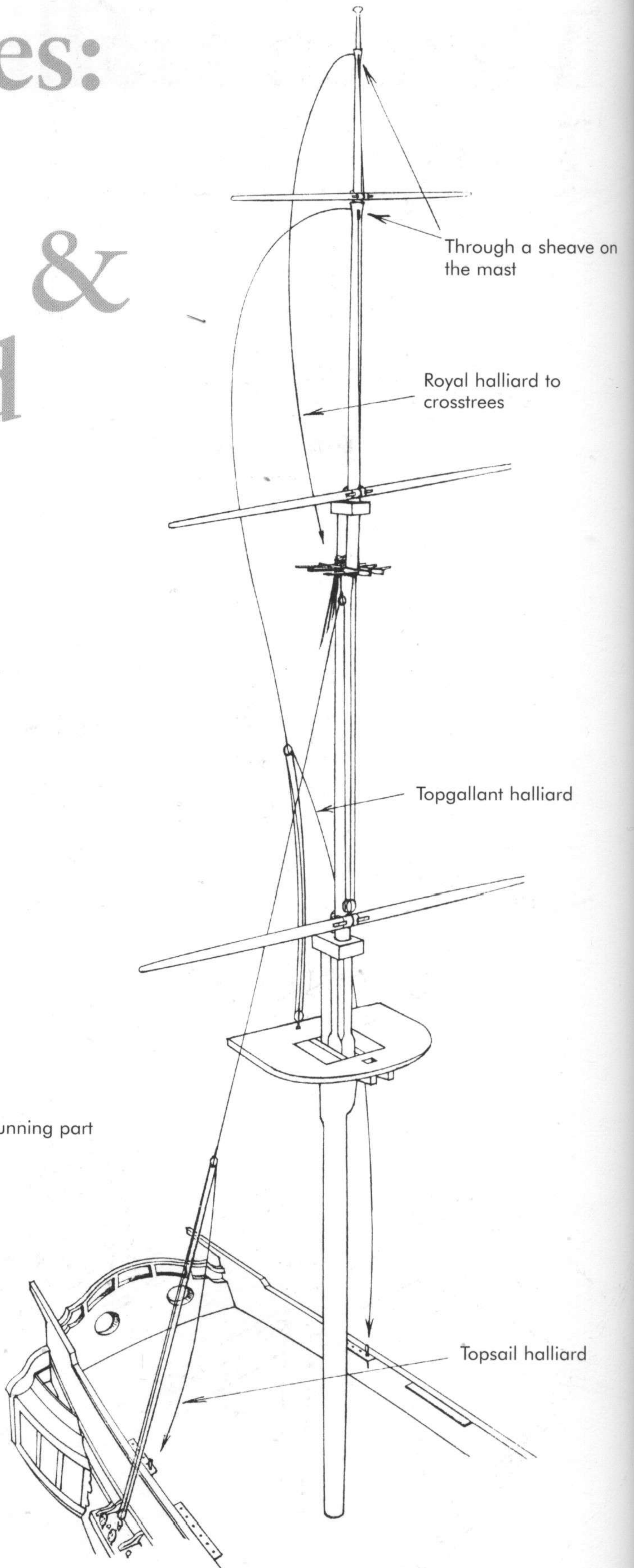
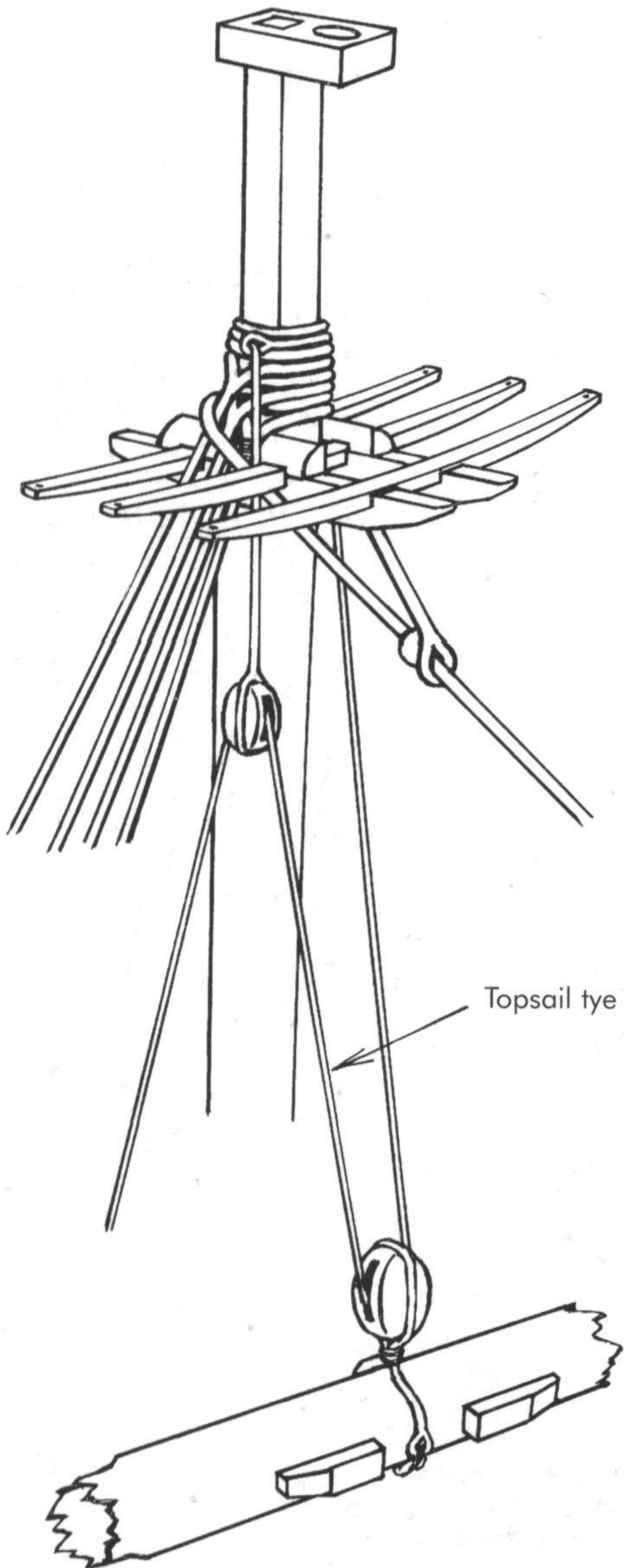
Peak Halliard



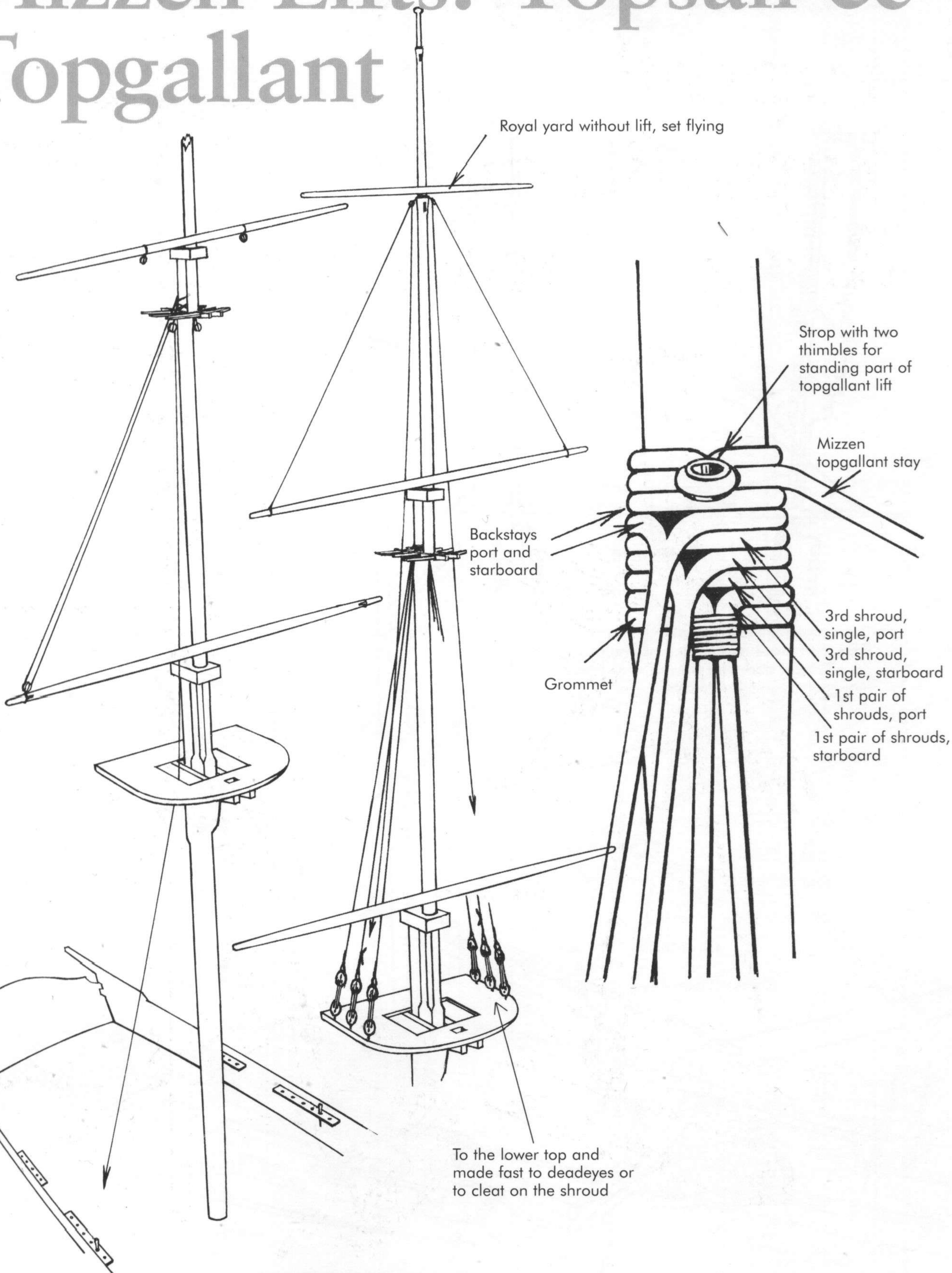
Throat Halliard



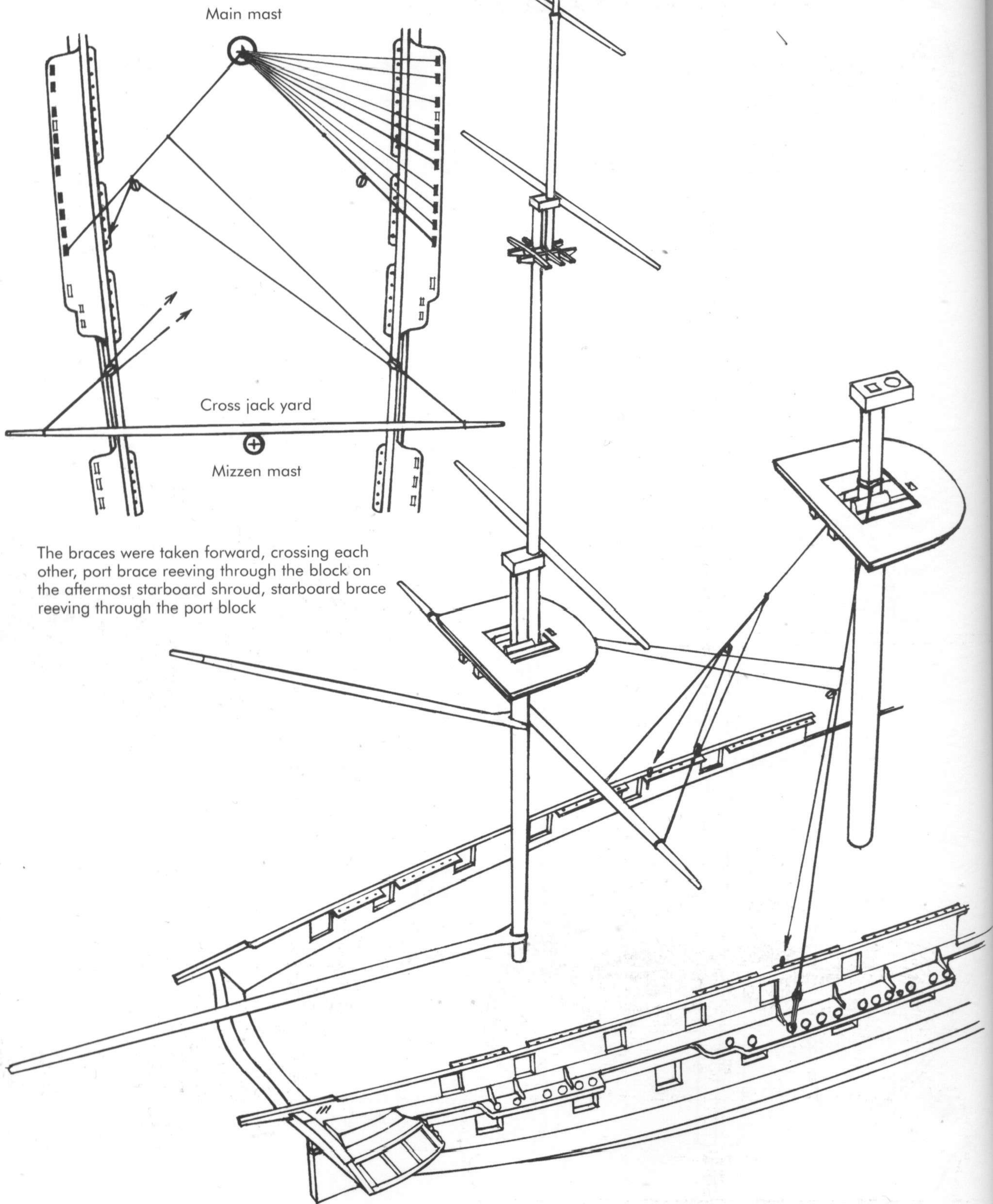
Mizzen Tye: Topsail, Topgallant & Royal Yard



Mizzen Lifts: Topsail & Topgallant

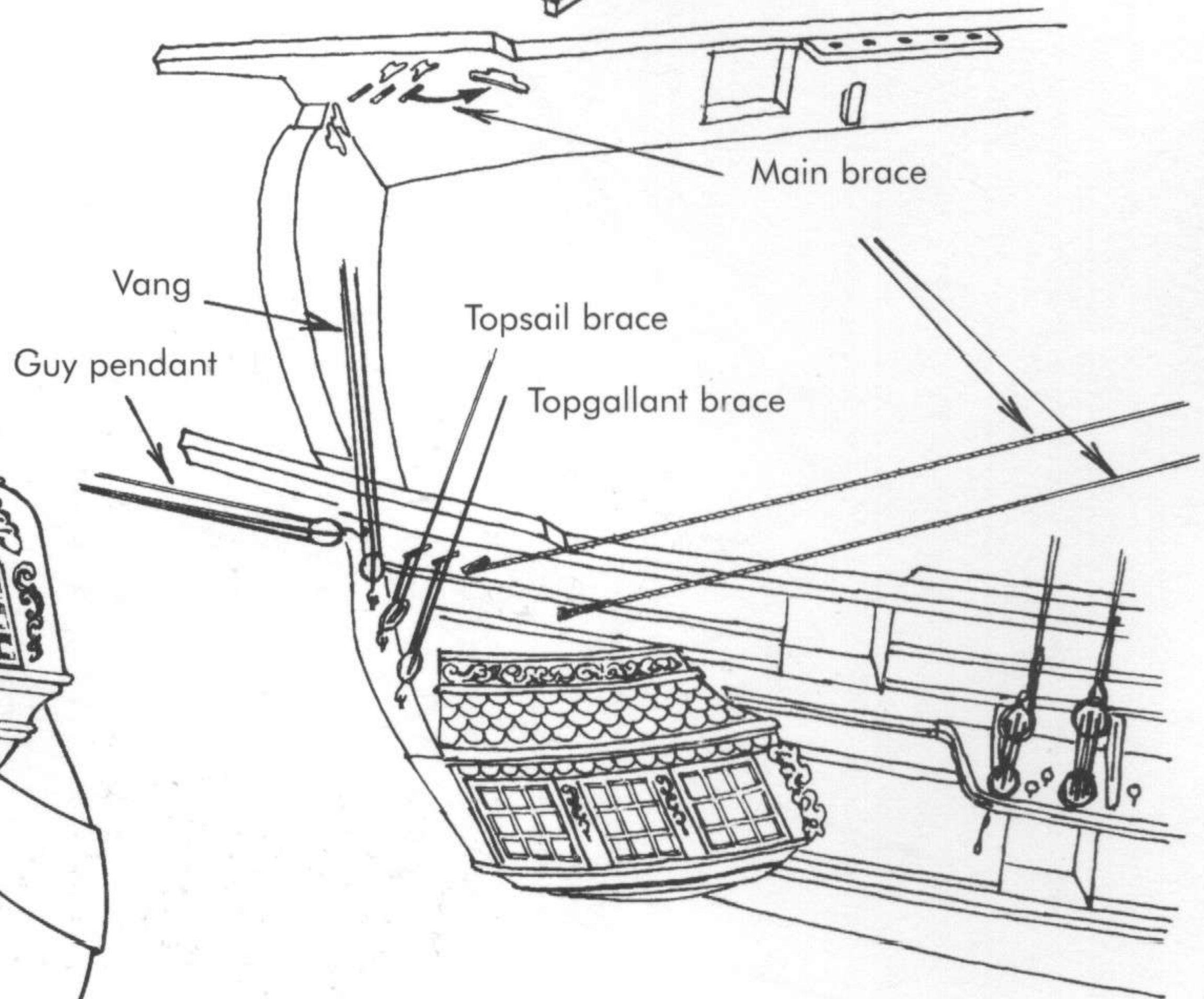
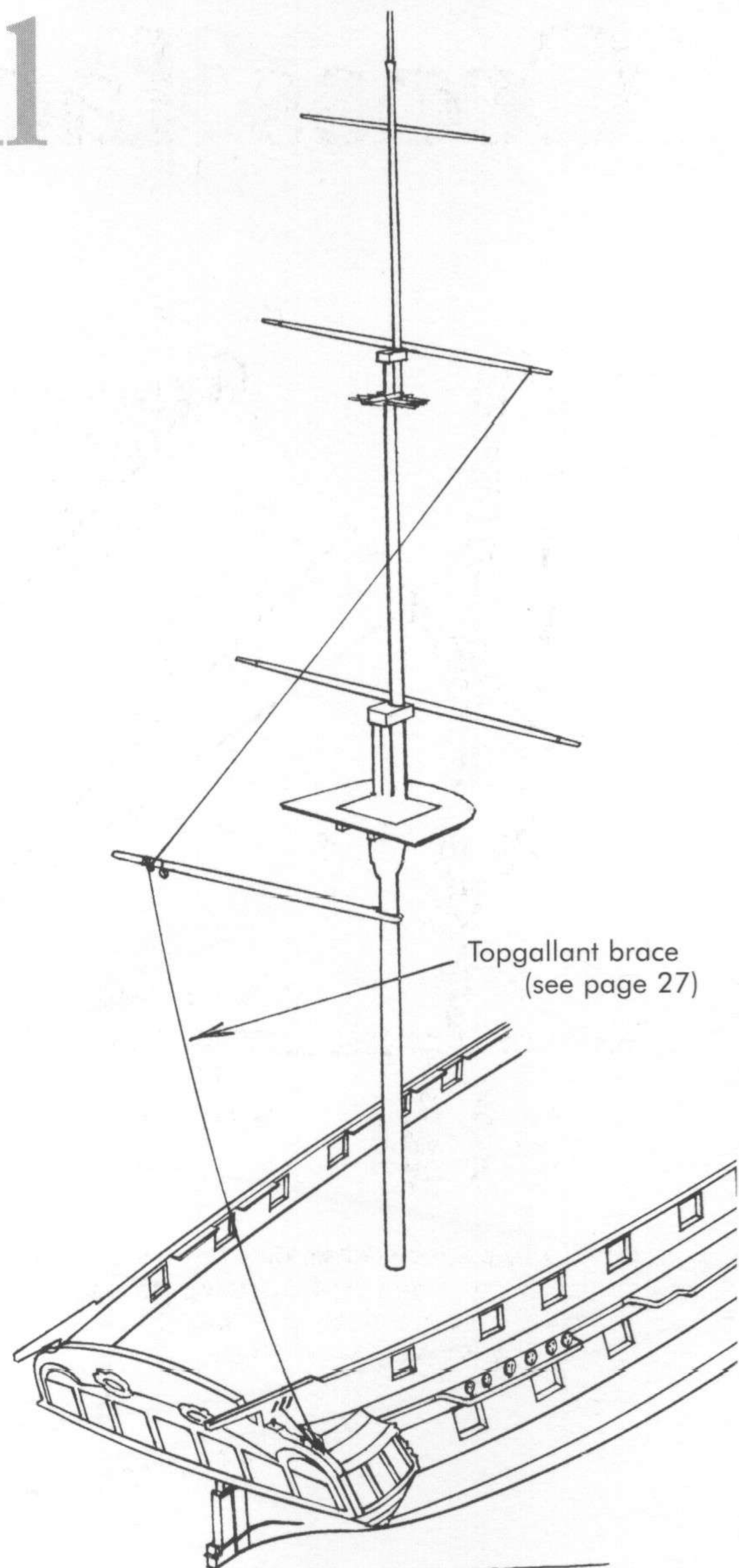
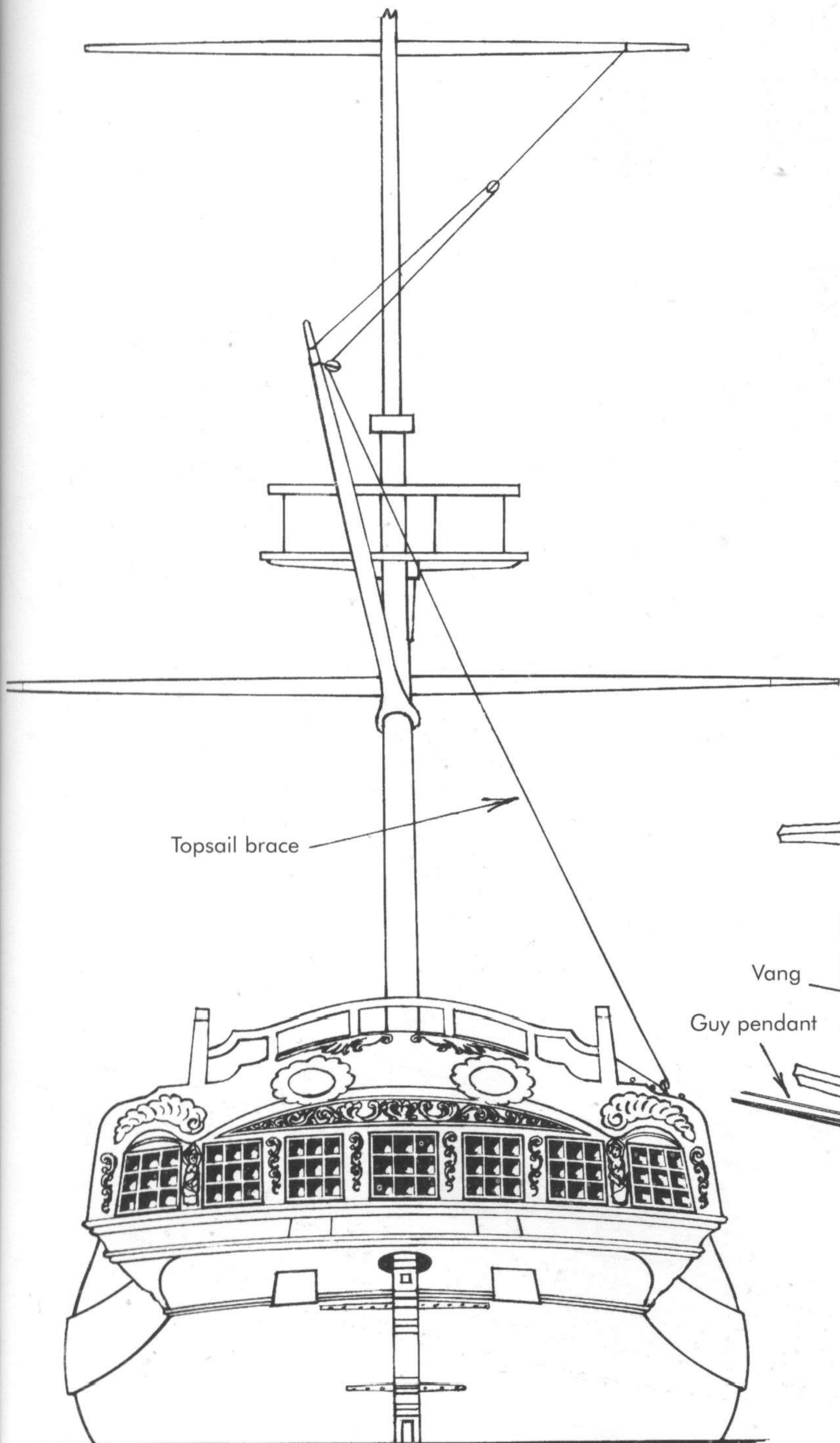


Cross Jack Braces

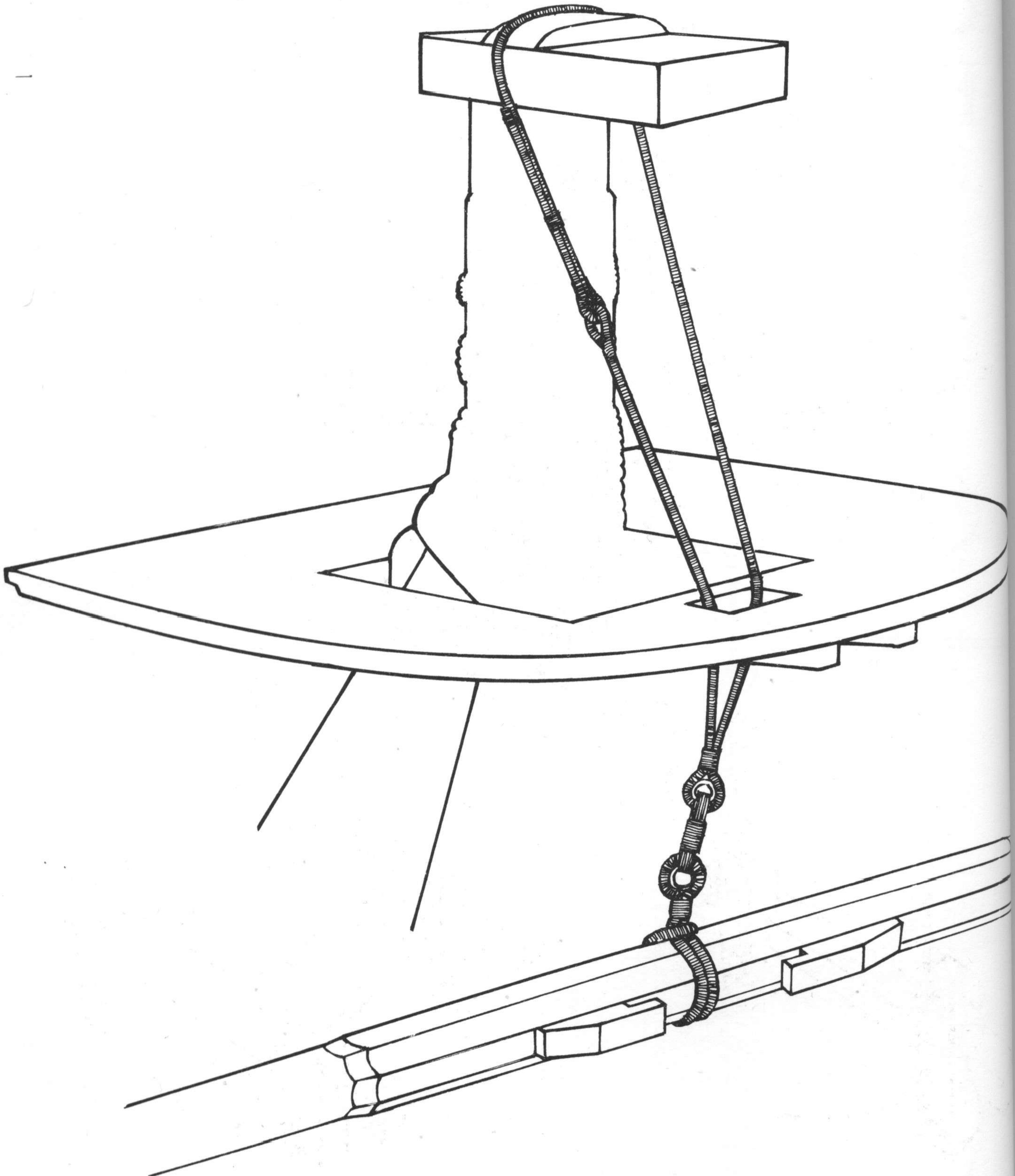


The braces were taken forward, crossing each other, port brace reeving through the block on the aftermost starboard shroud, starboard brace reeving through the port block

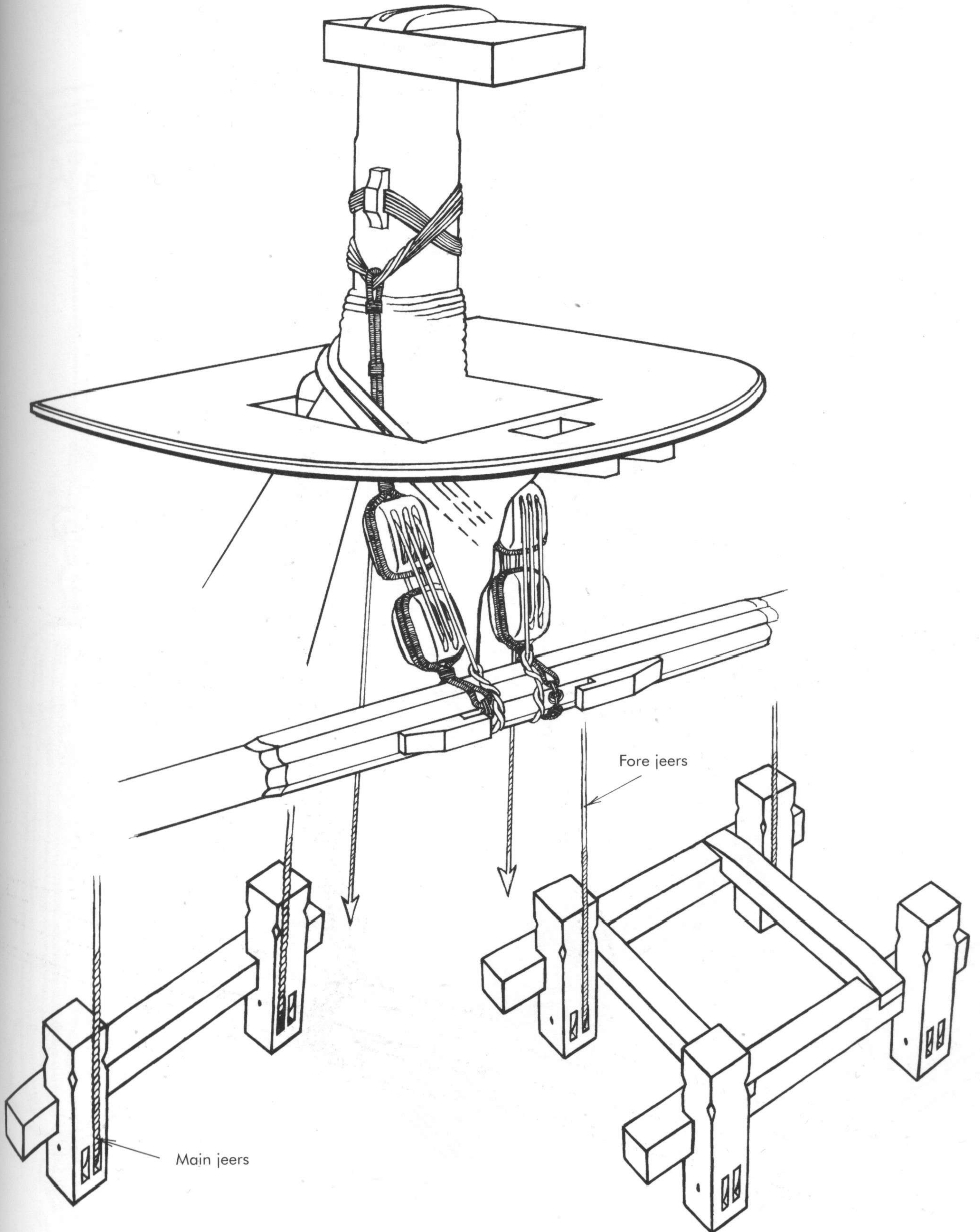
Mizzen Topsail & Topgallant Braces



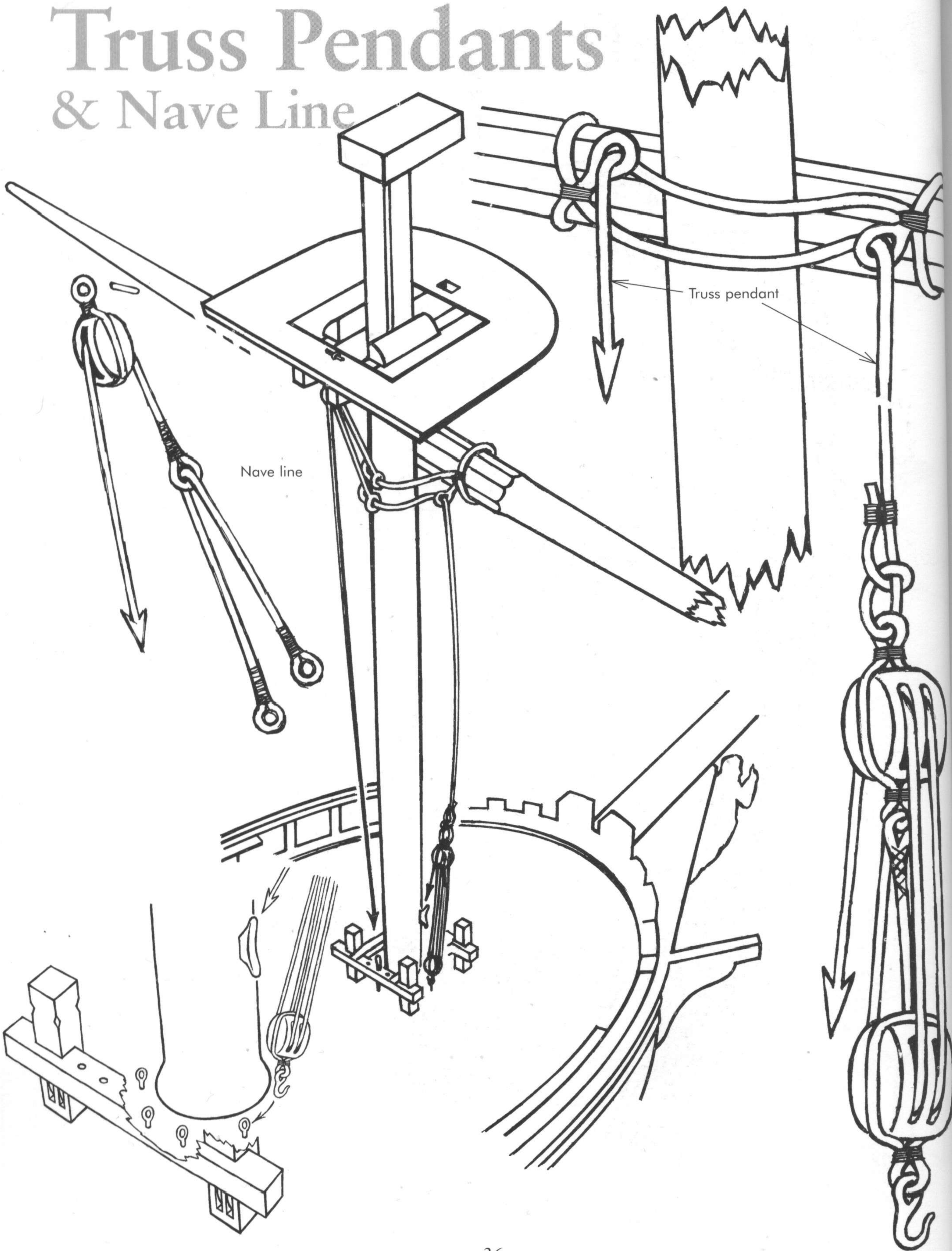
Fore & Main Slings



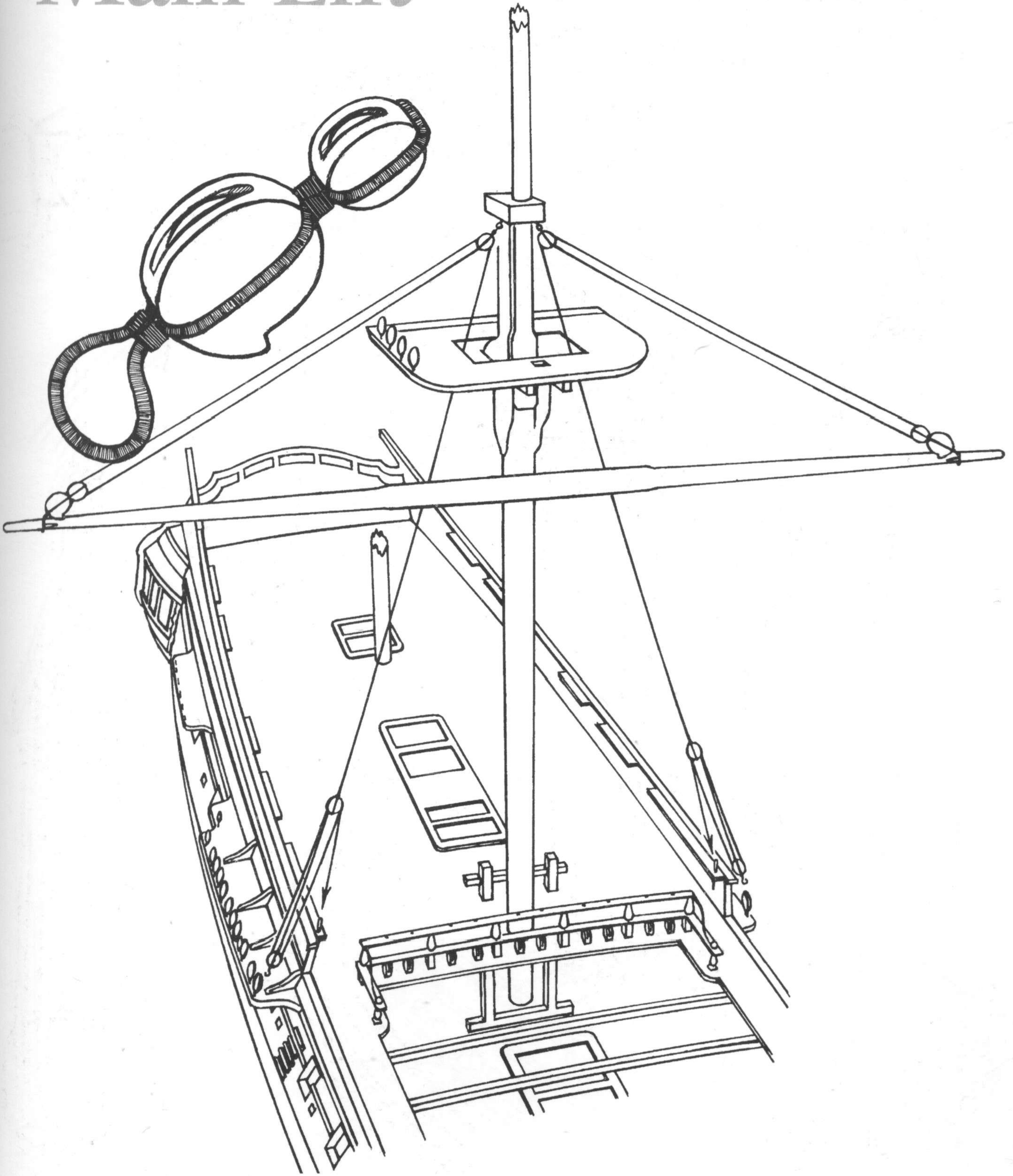
Fore & Main Jeers



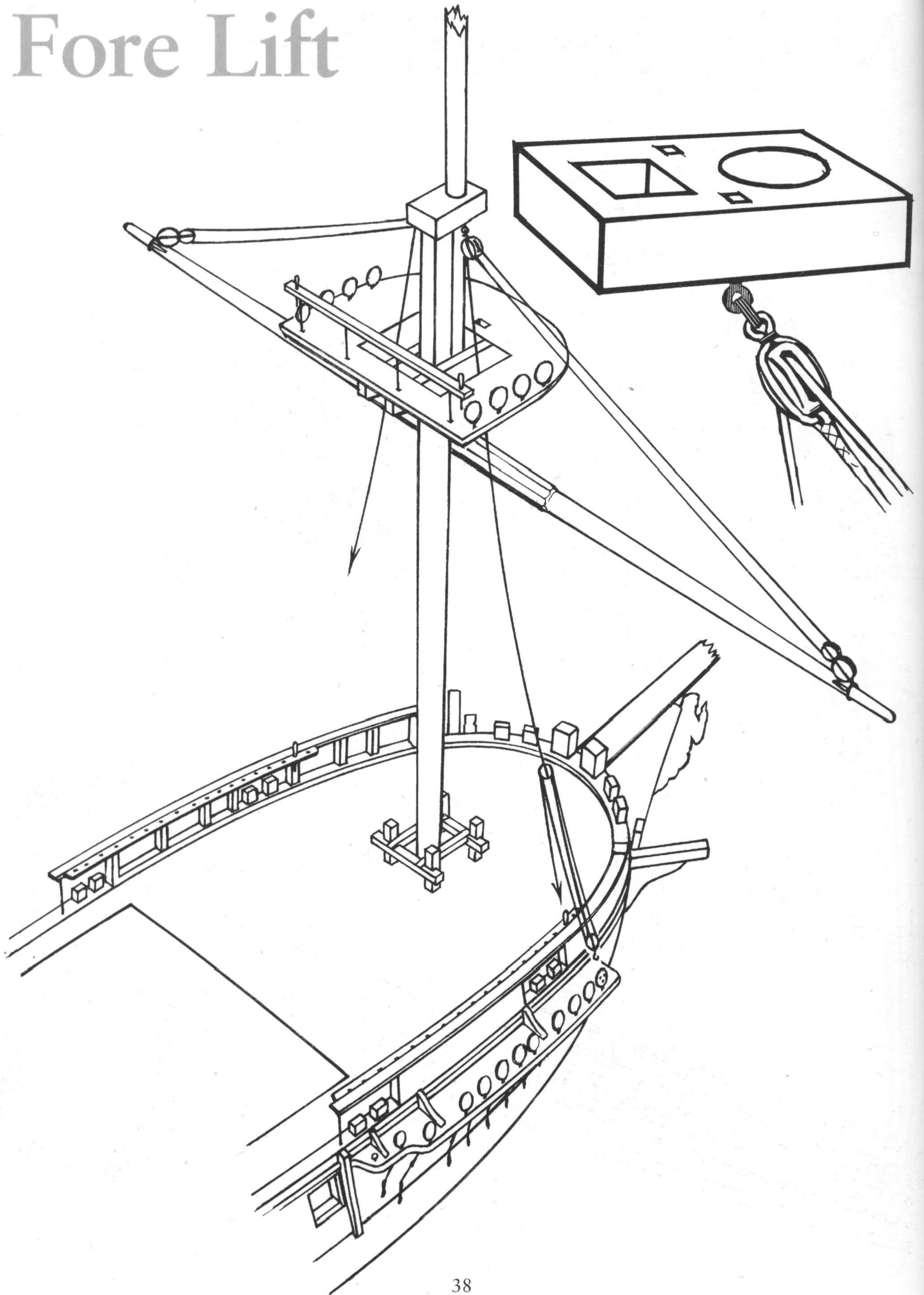
Truss Pendants & Nave Line



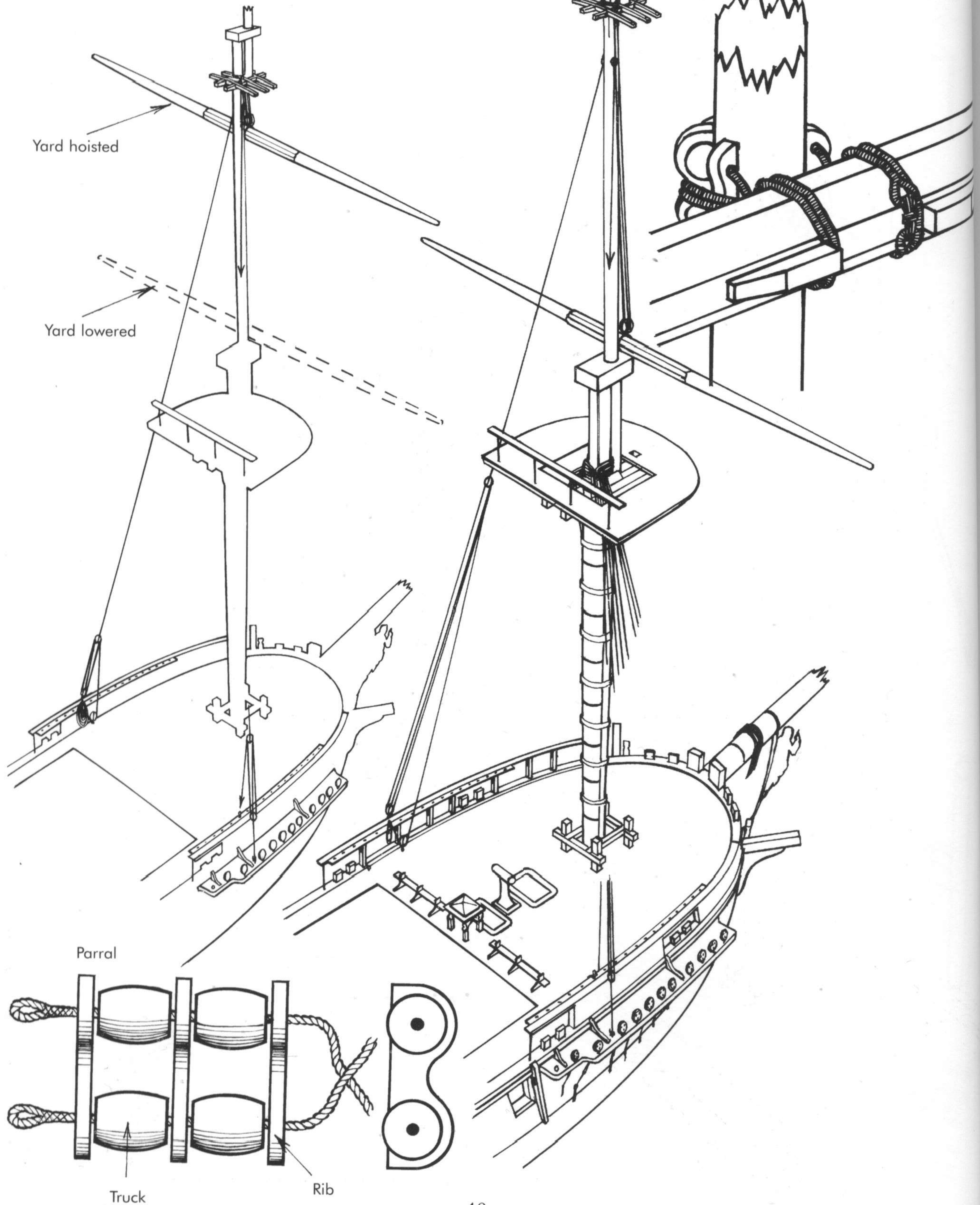
Main Lift



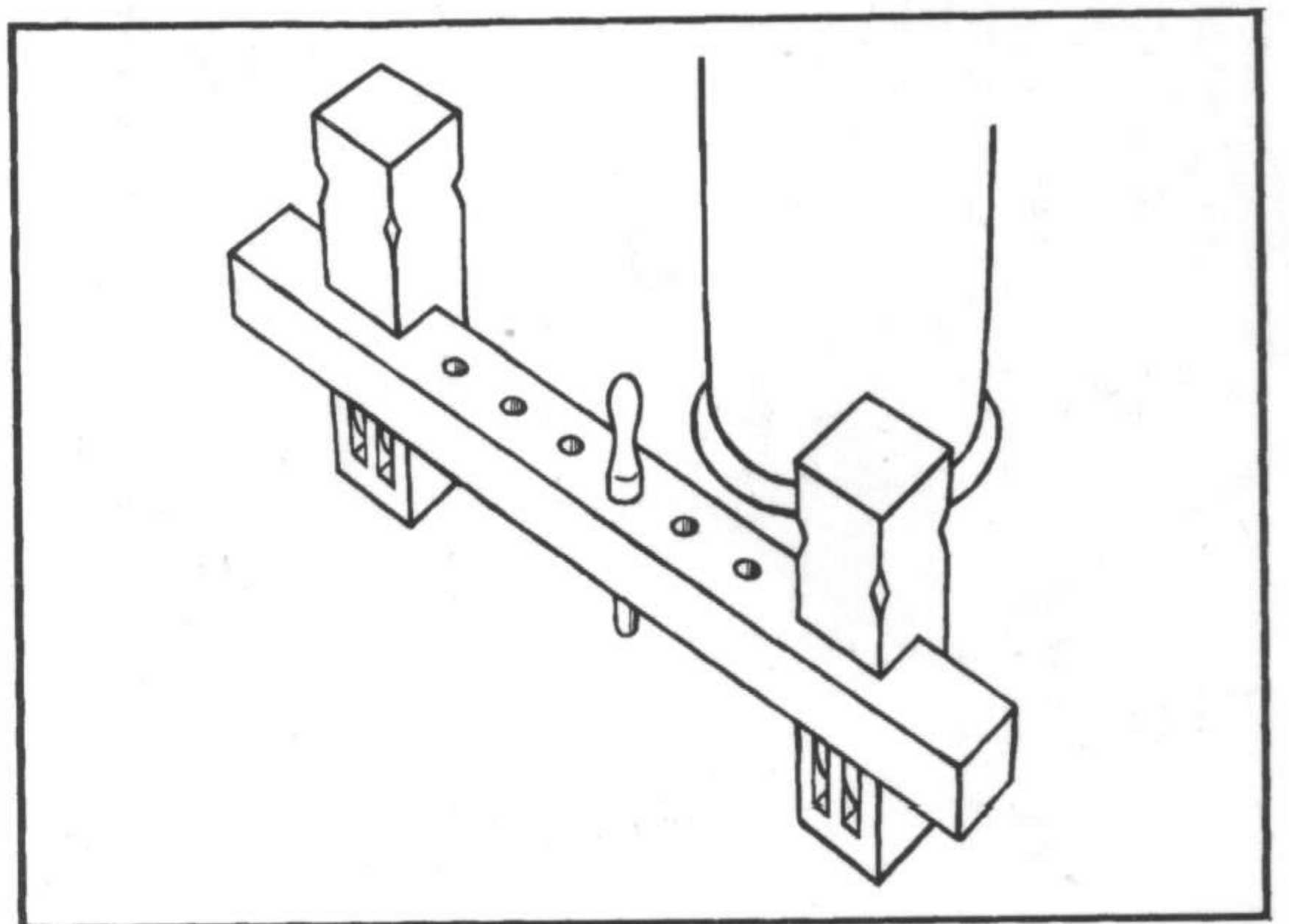
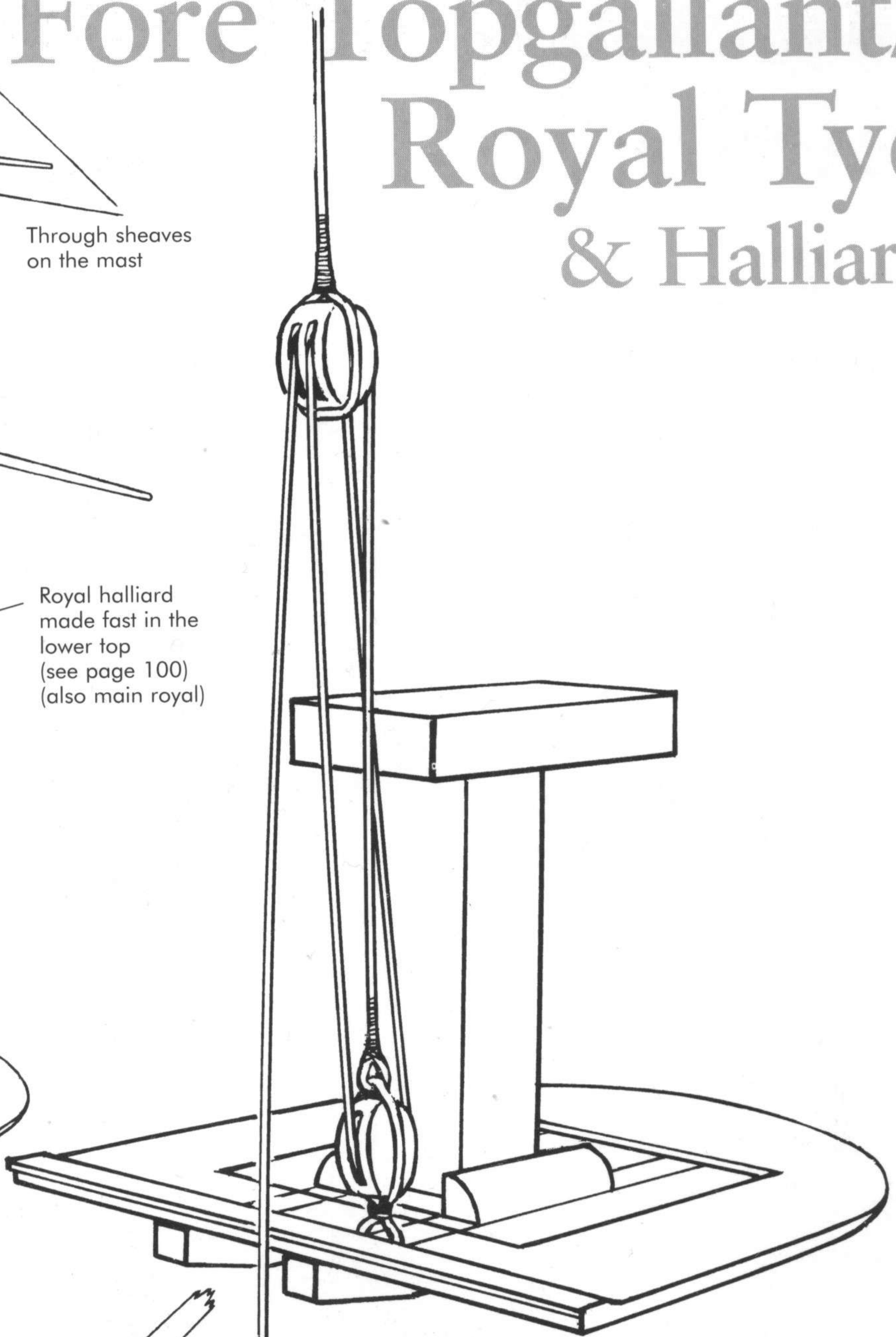
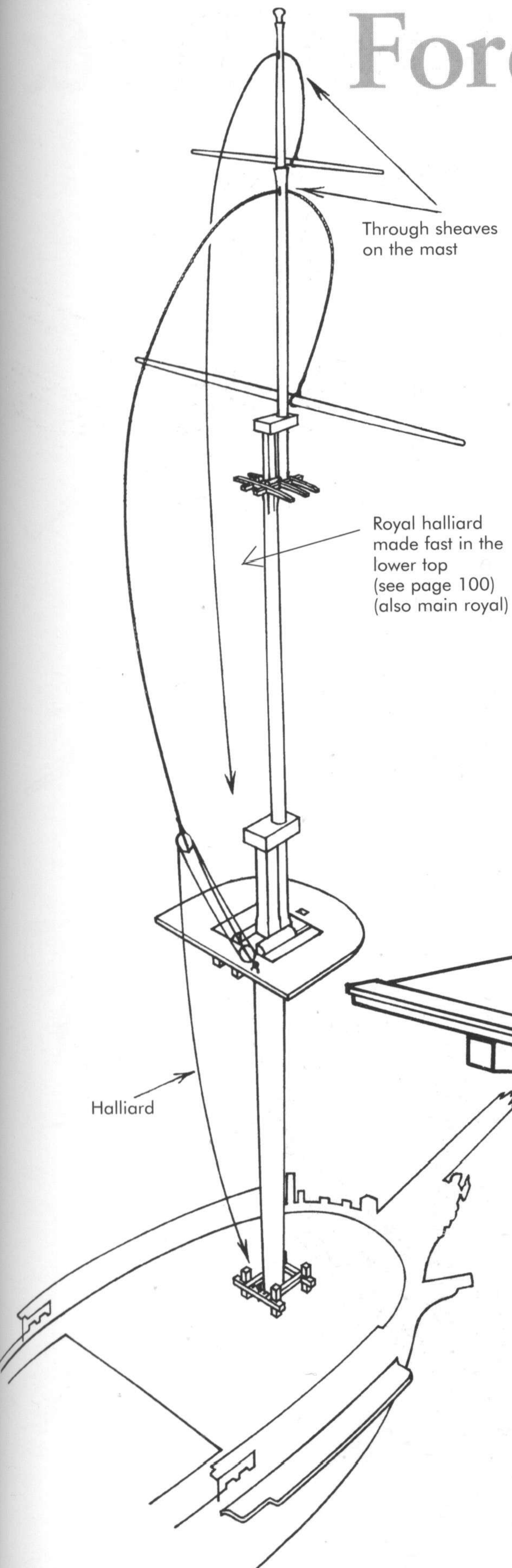
Fore Lift



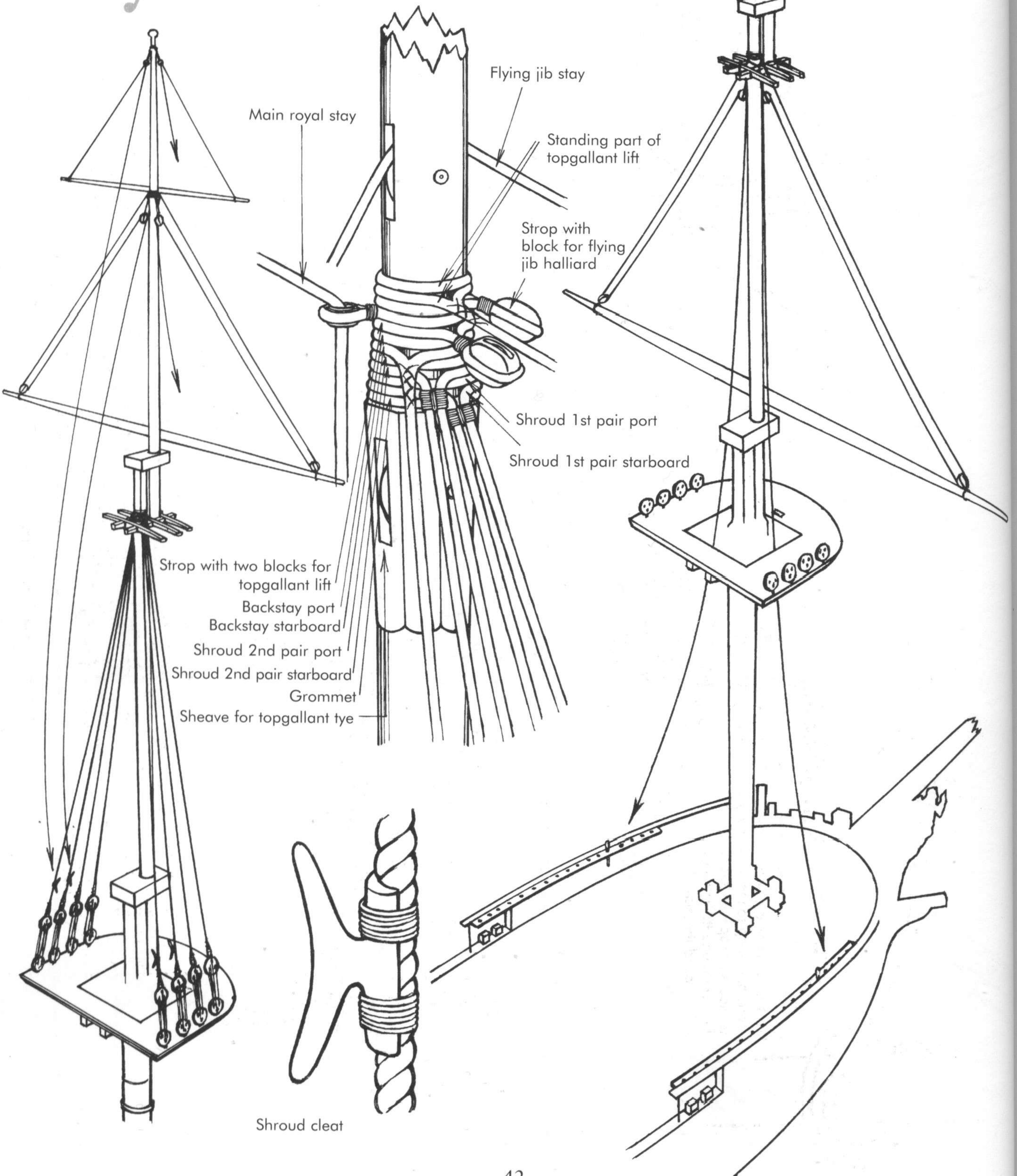
Fore Topsail Yard Tye & Halliard



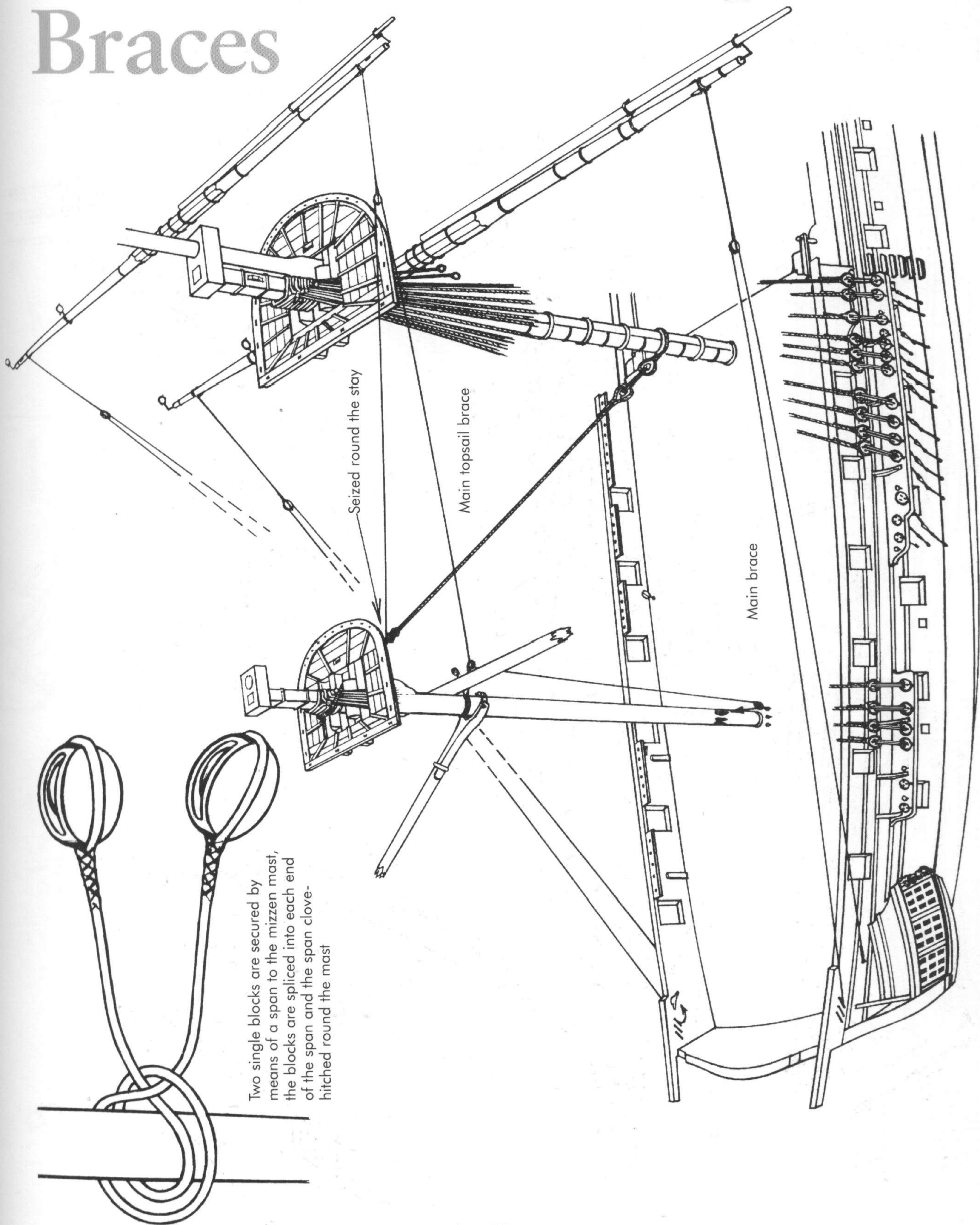
Fore Topgallant/ Royal Tye & Halliard



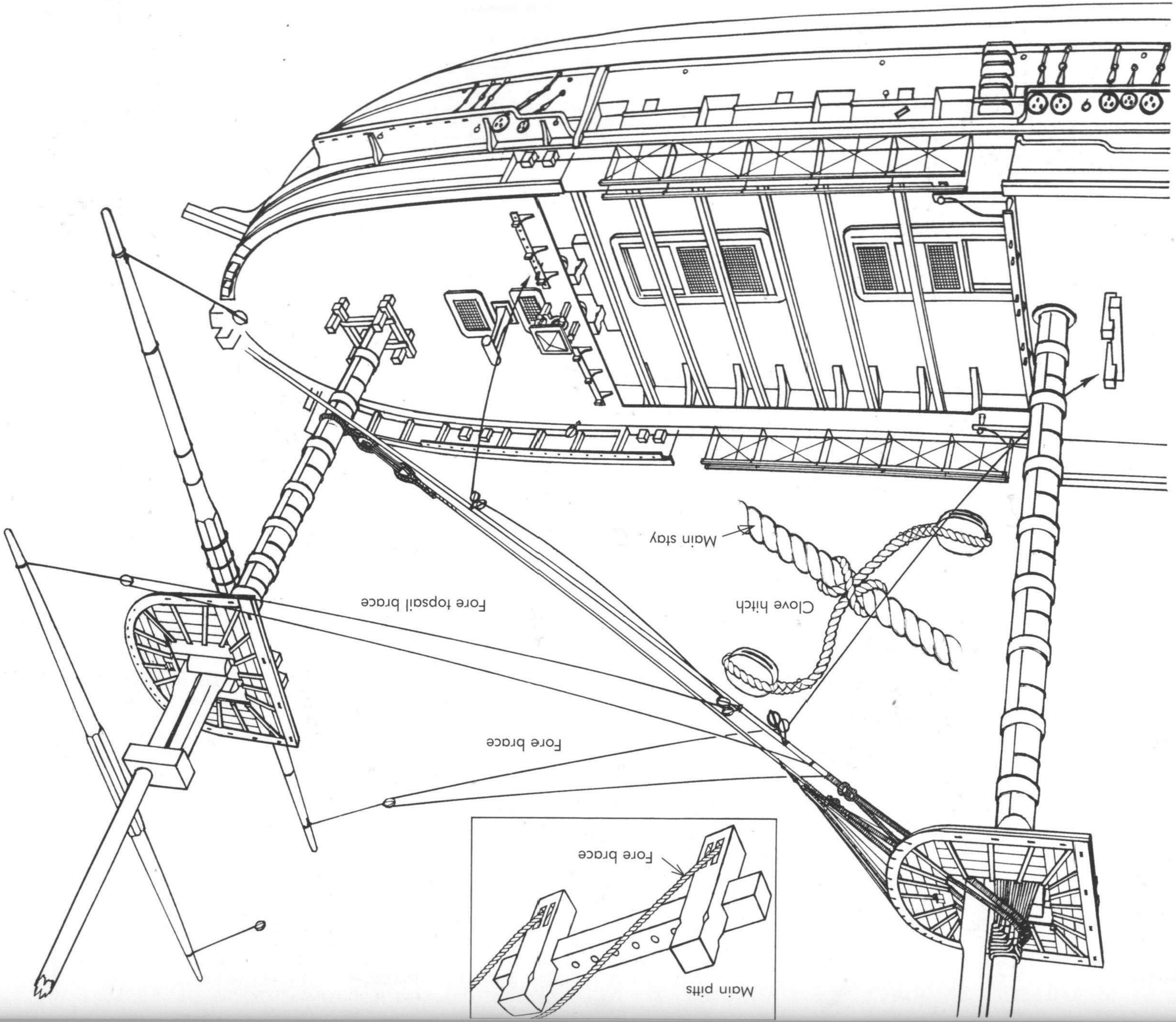
Fore Topsail, Topgallant & Royal Lifts



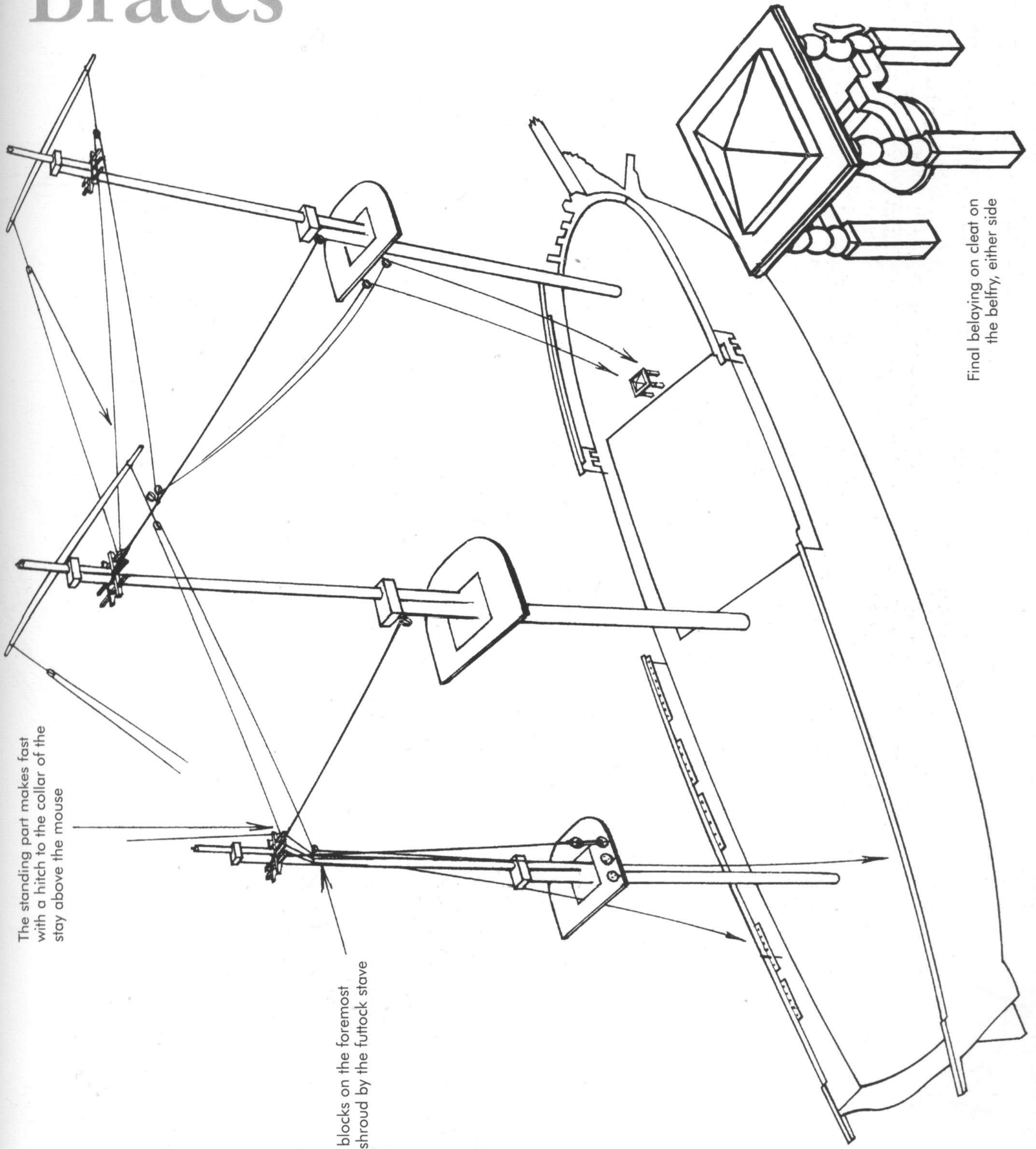
Main & Main Topsail Braces



Fore & Fore Topsail Braces



Fore & Main Topgallant Braces

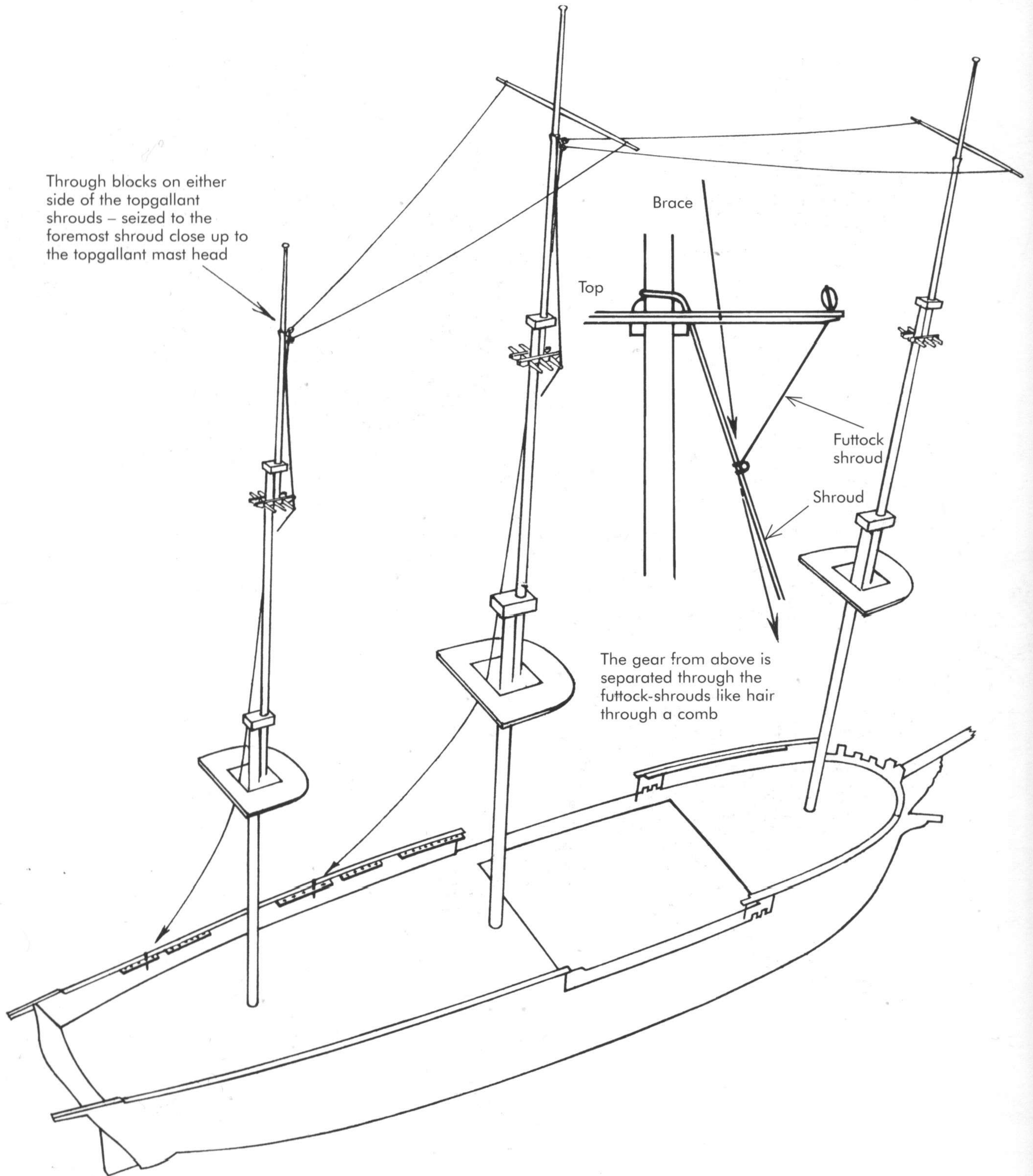


The standing part makes fast with a hitch to the collar of the stay above the mouse

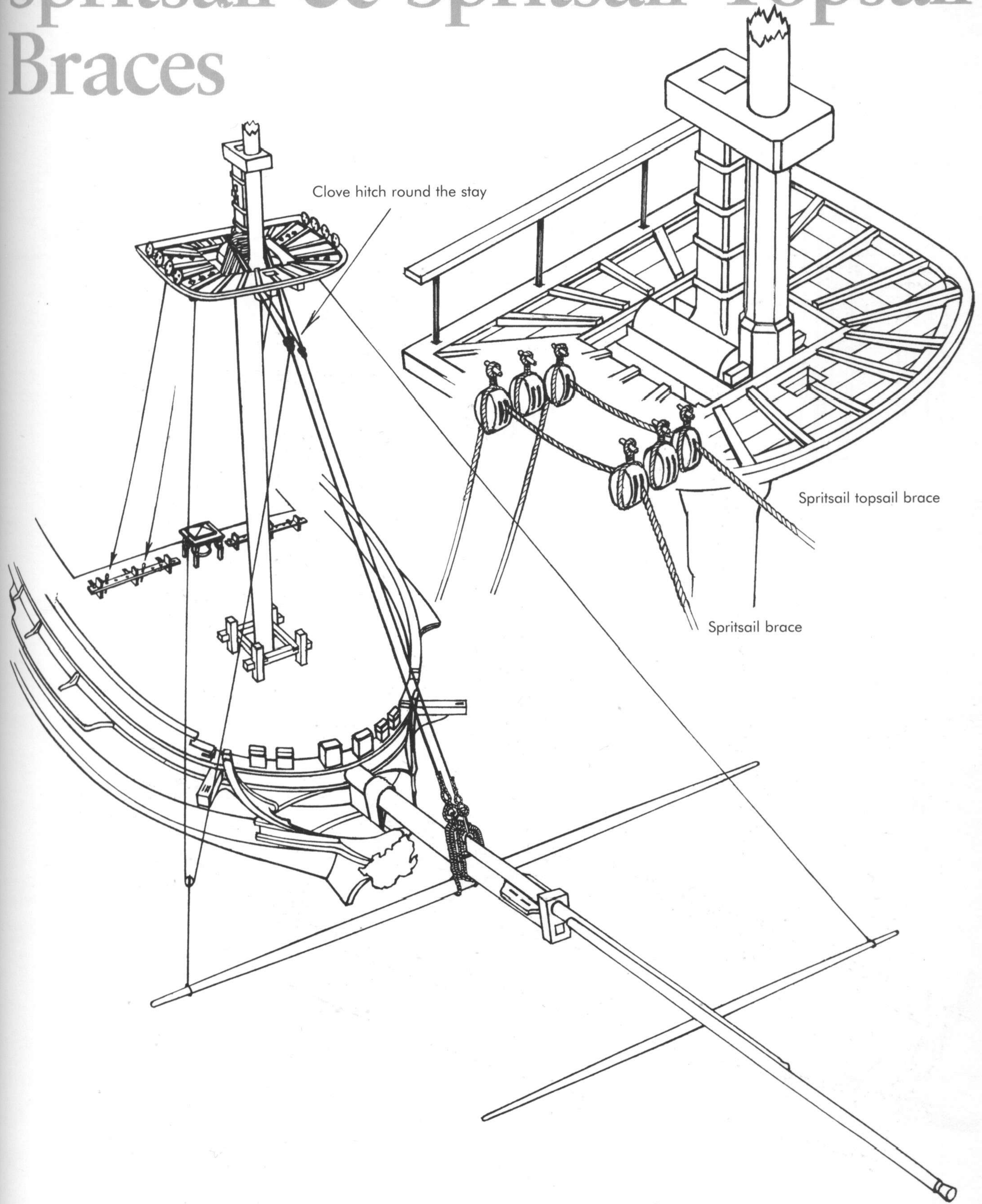
Through blocks on the foremost topmast shroud by the futtock stave

Final belaying on cleat on the belfry, either side

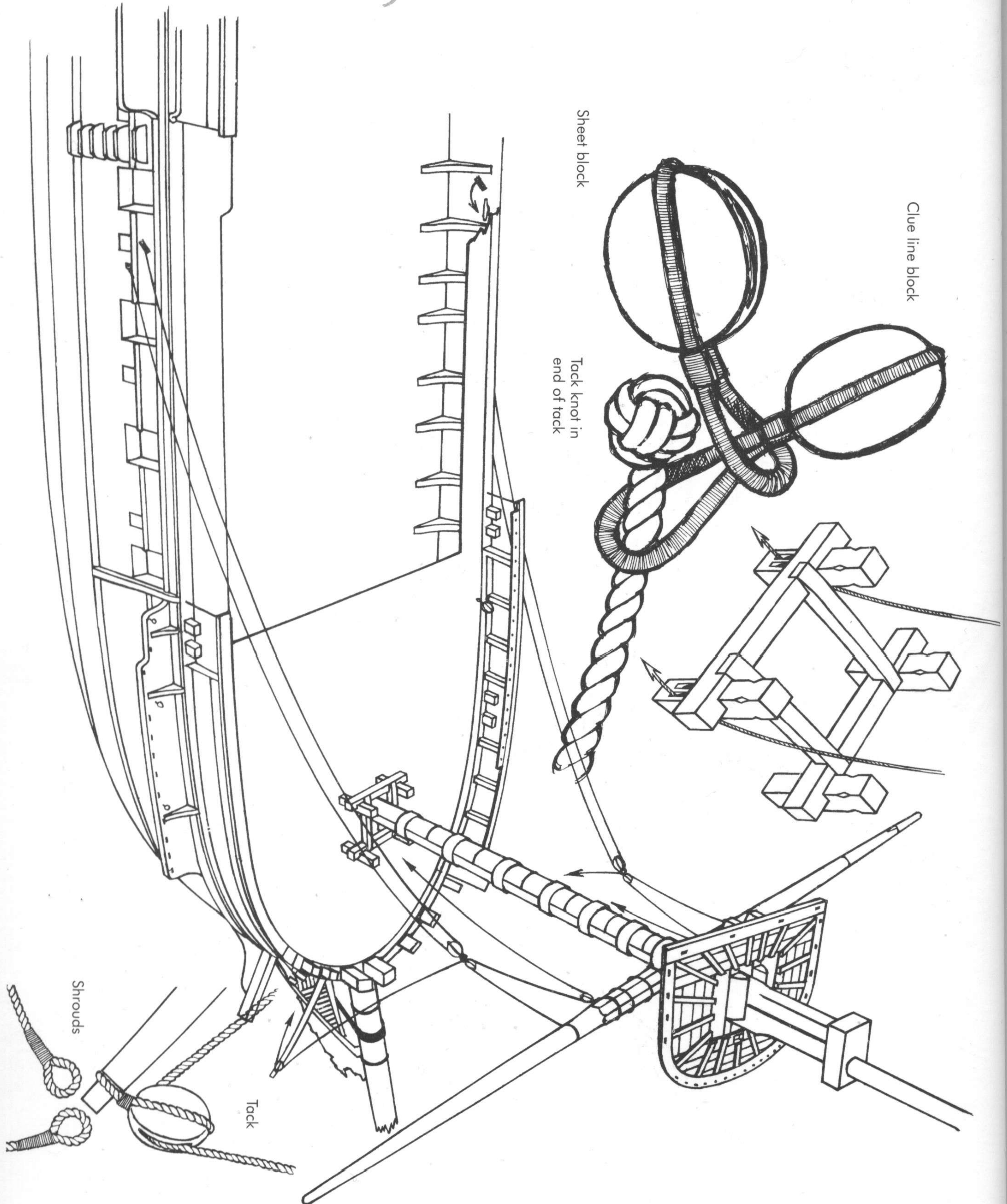
Fore & Main Royal Braces



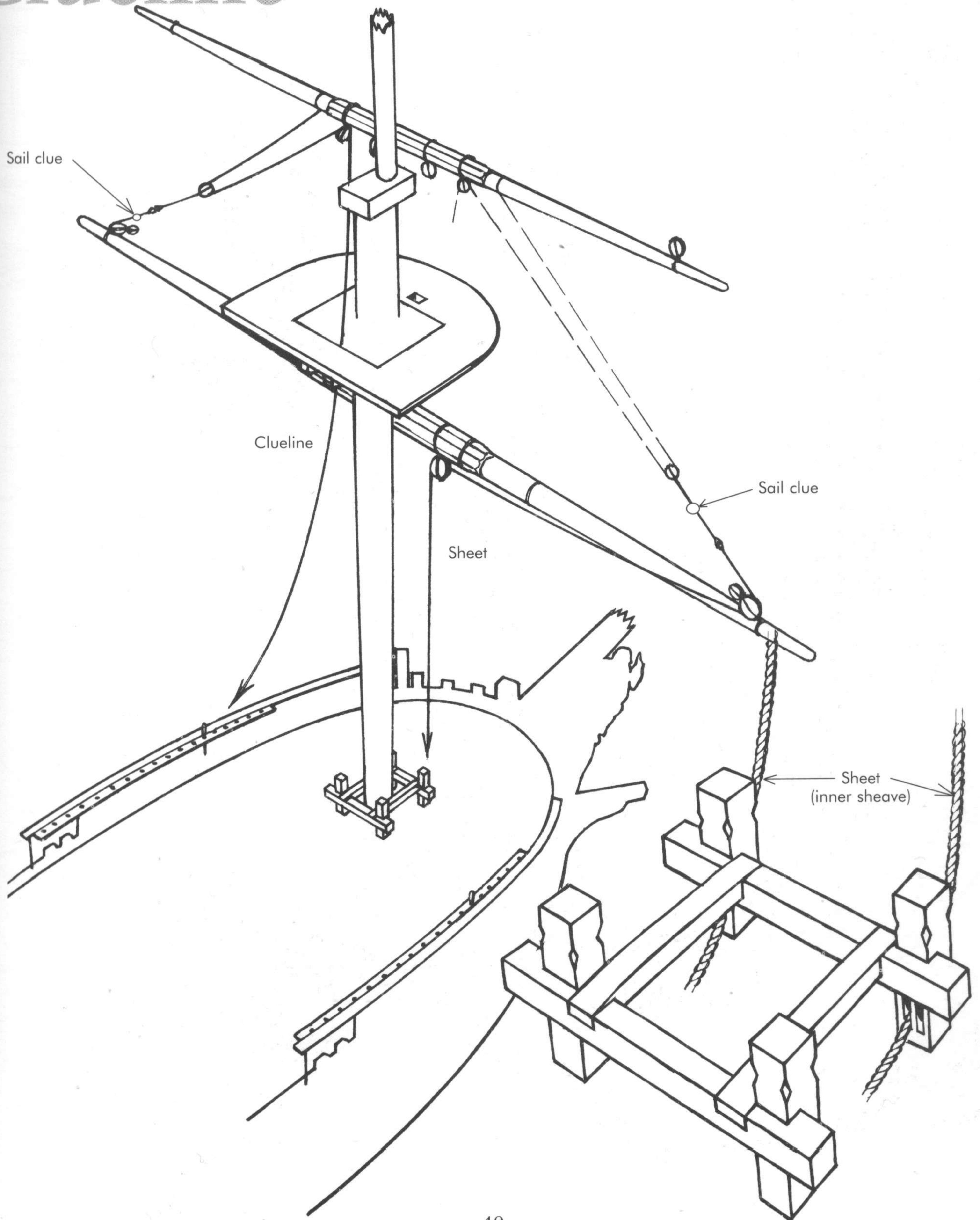
Spritsail & Spritsail Topsail Braces



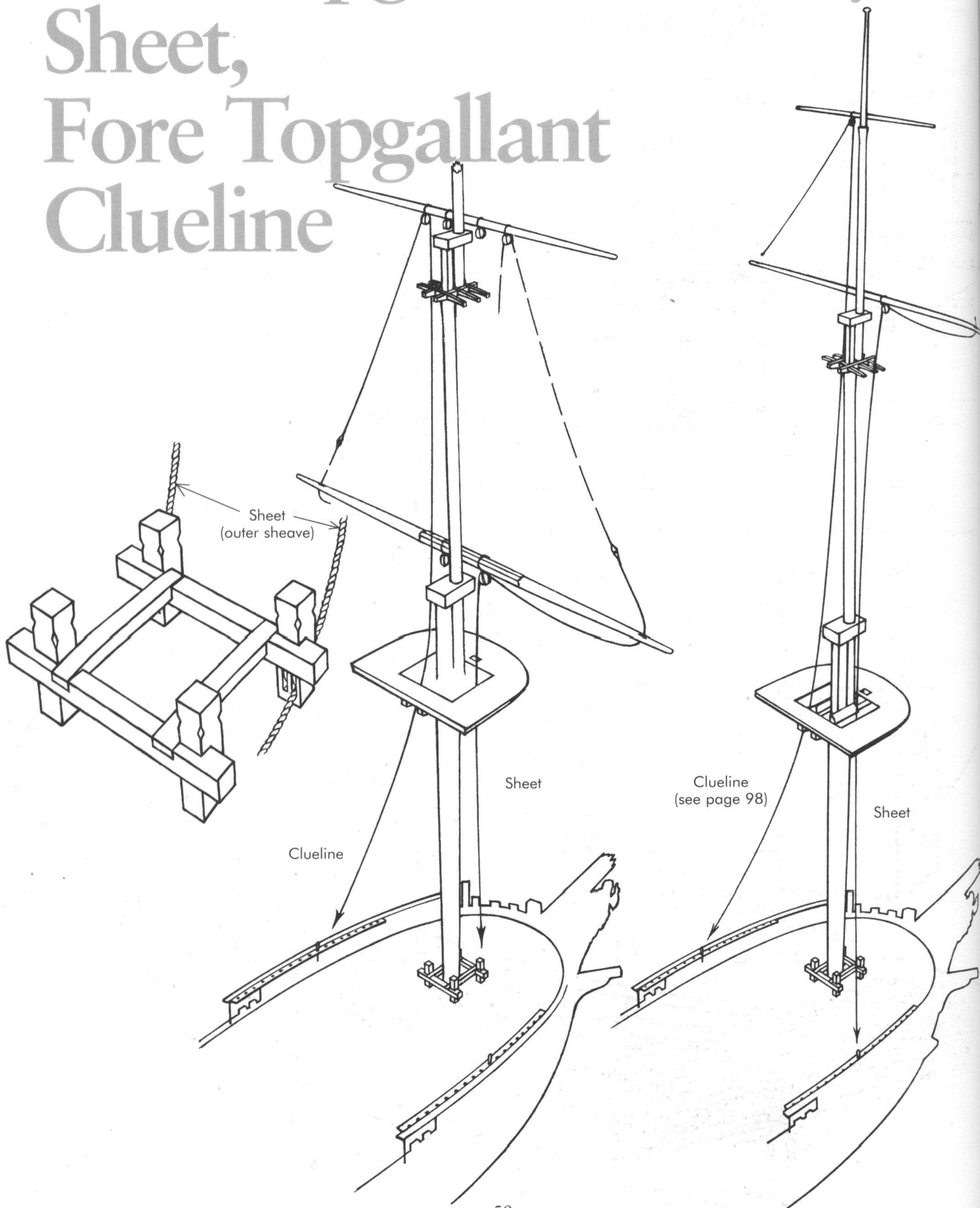
Fore Sheet, Tack & Clueline



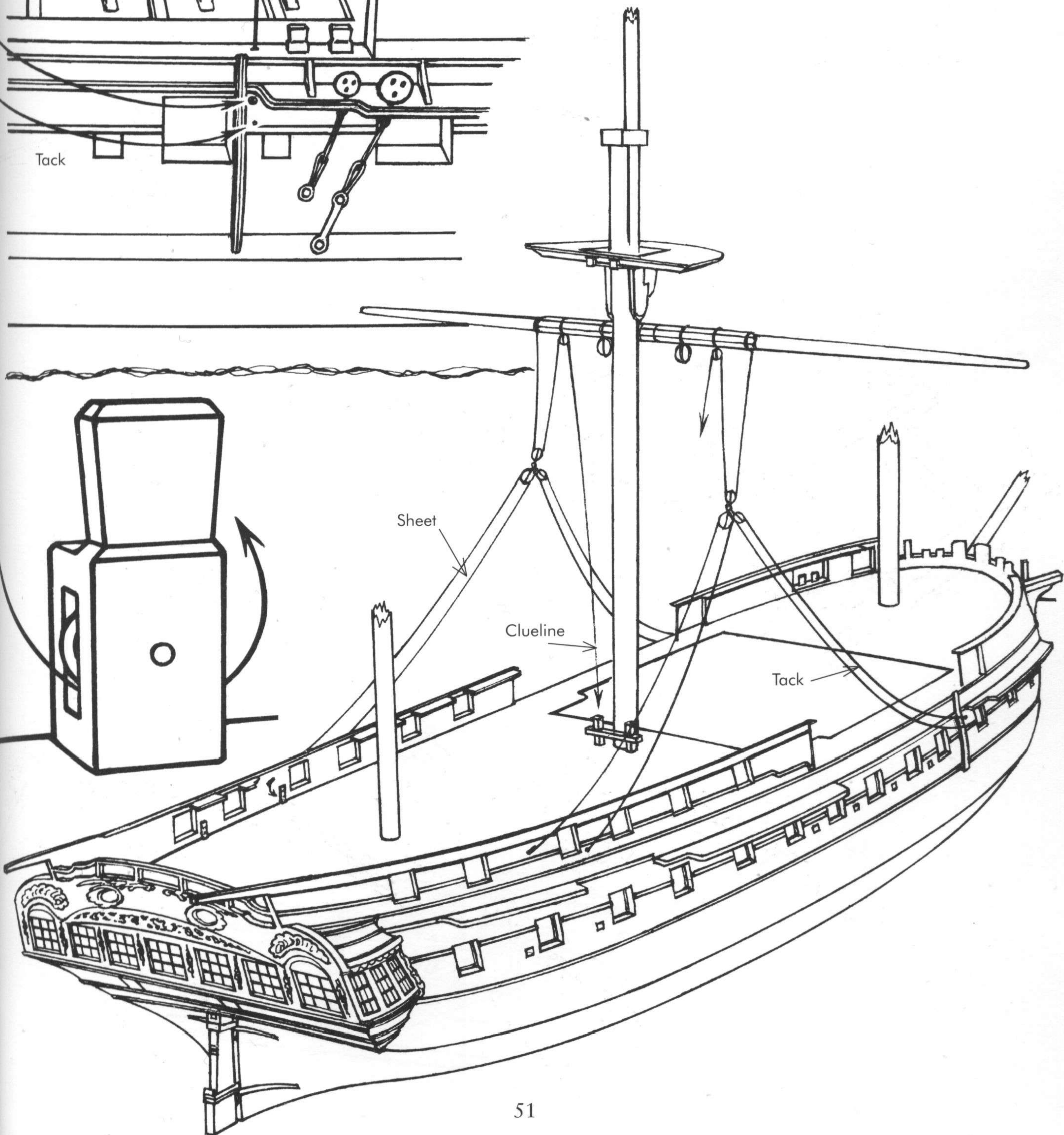
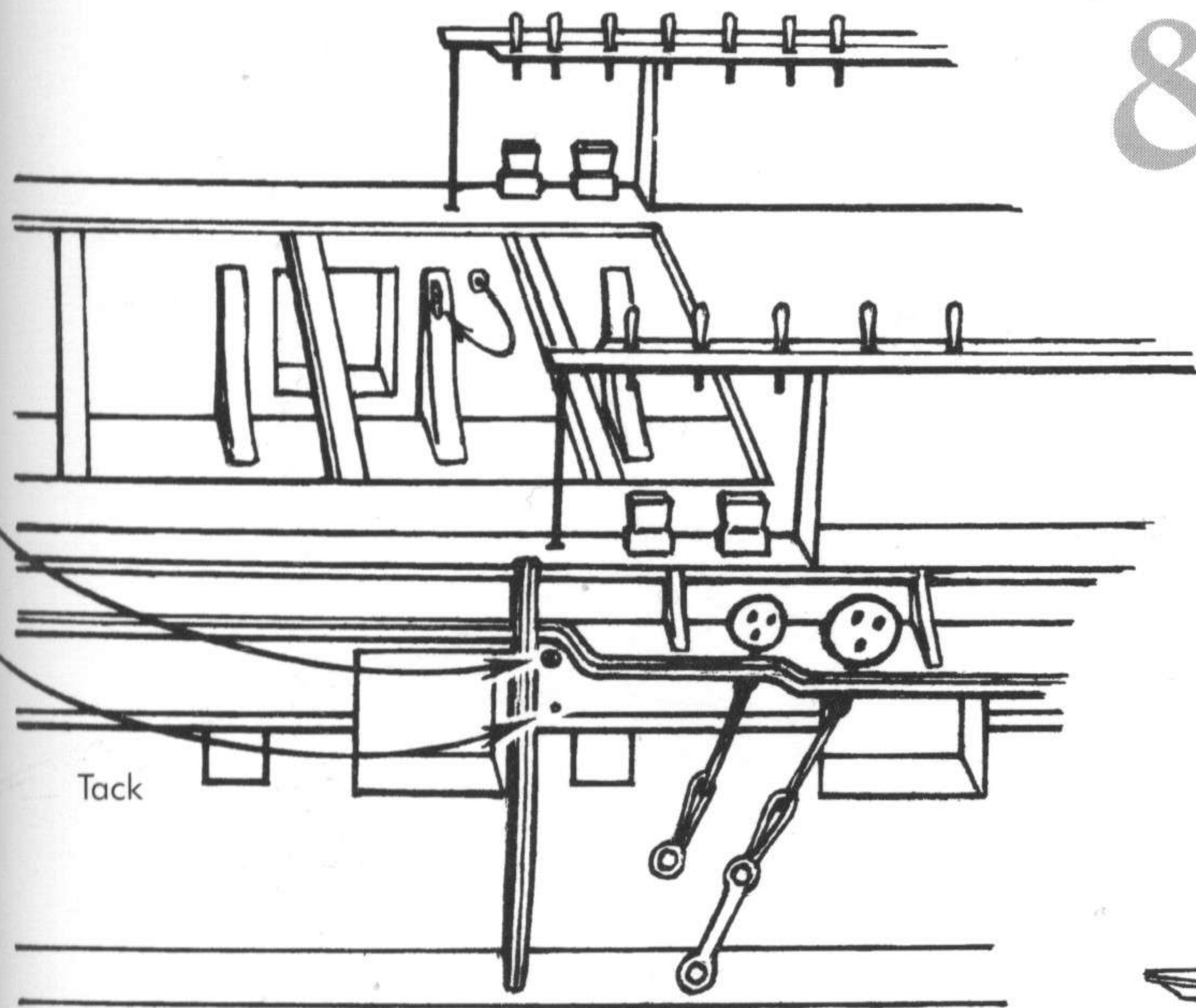
Fore Topsail Sheet & Clueline



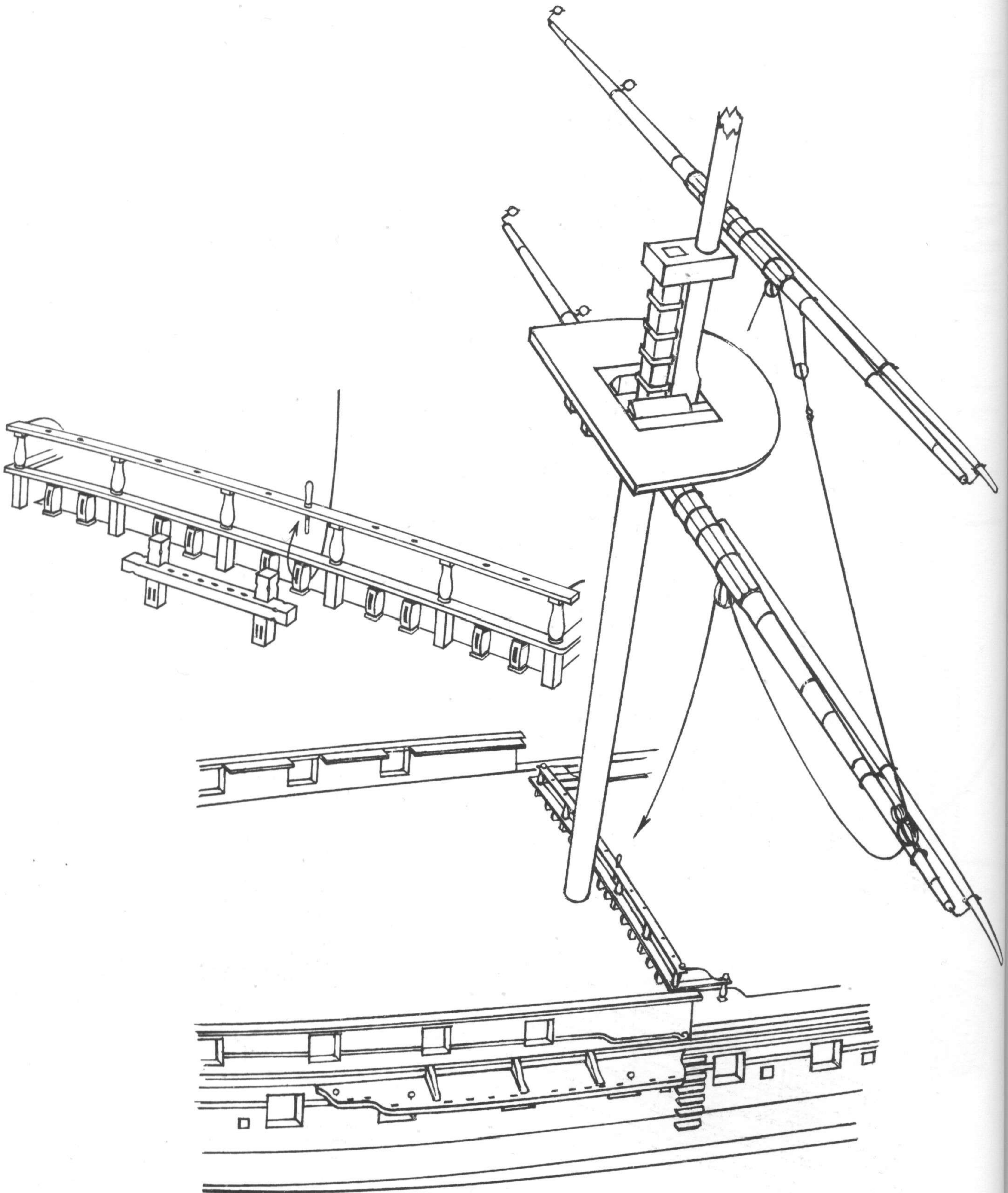
Fore Topgallant & Royal Sheet, Fore Topgallant Clueline



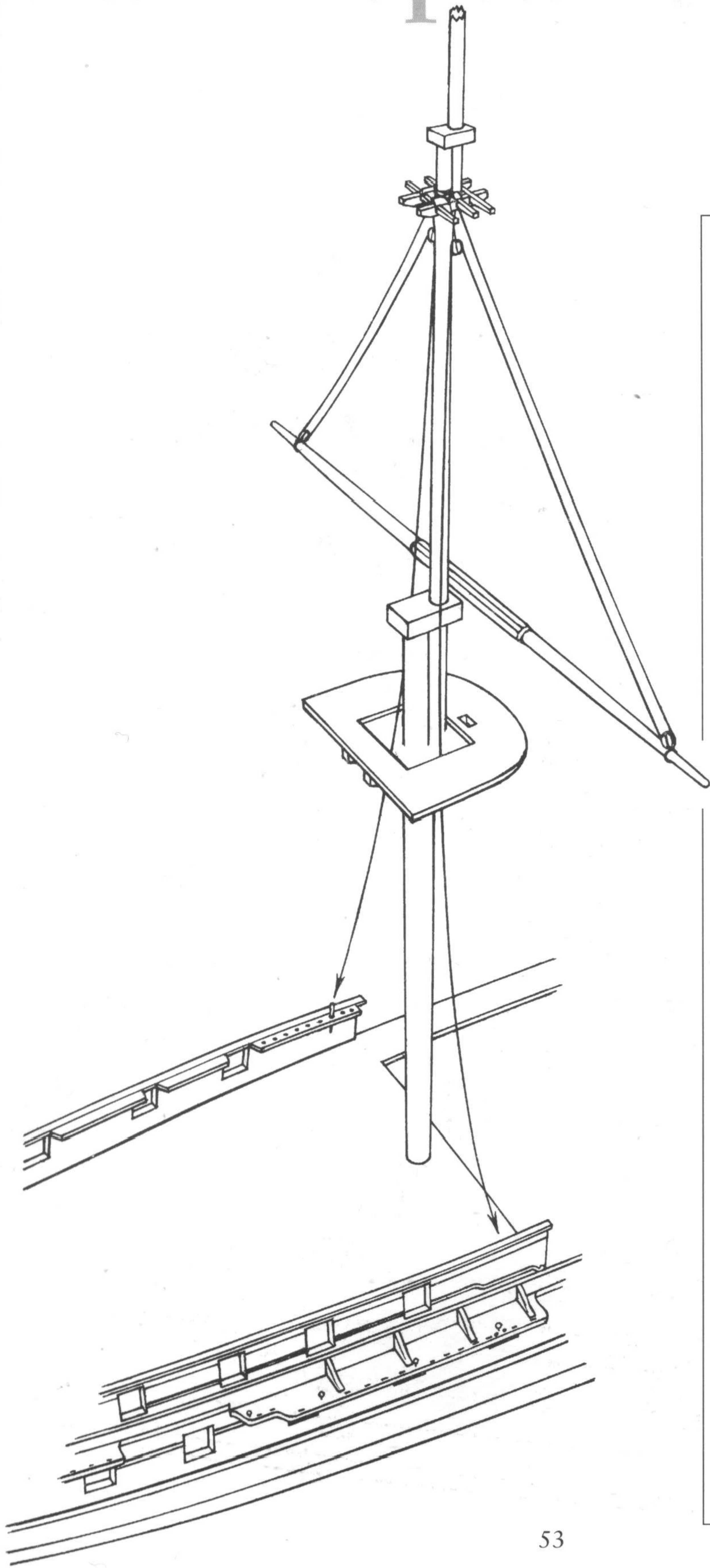
Main Sheet, Clueline & Tack



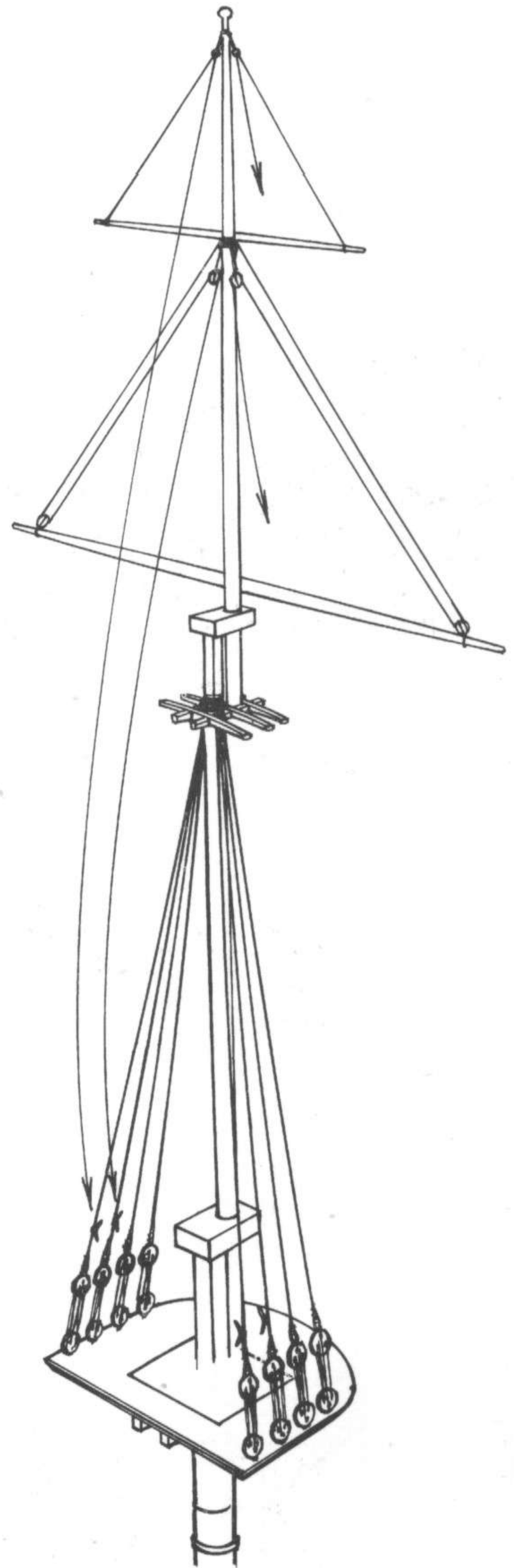
Main Topsail Sheet



Main Topsail Lift

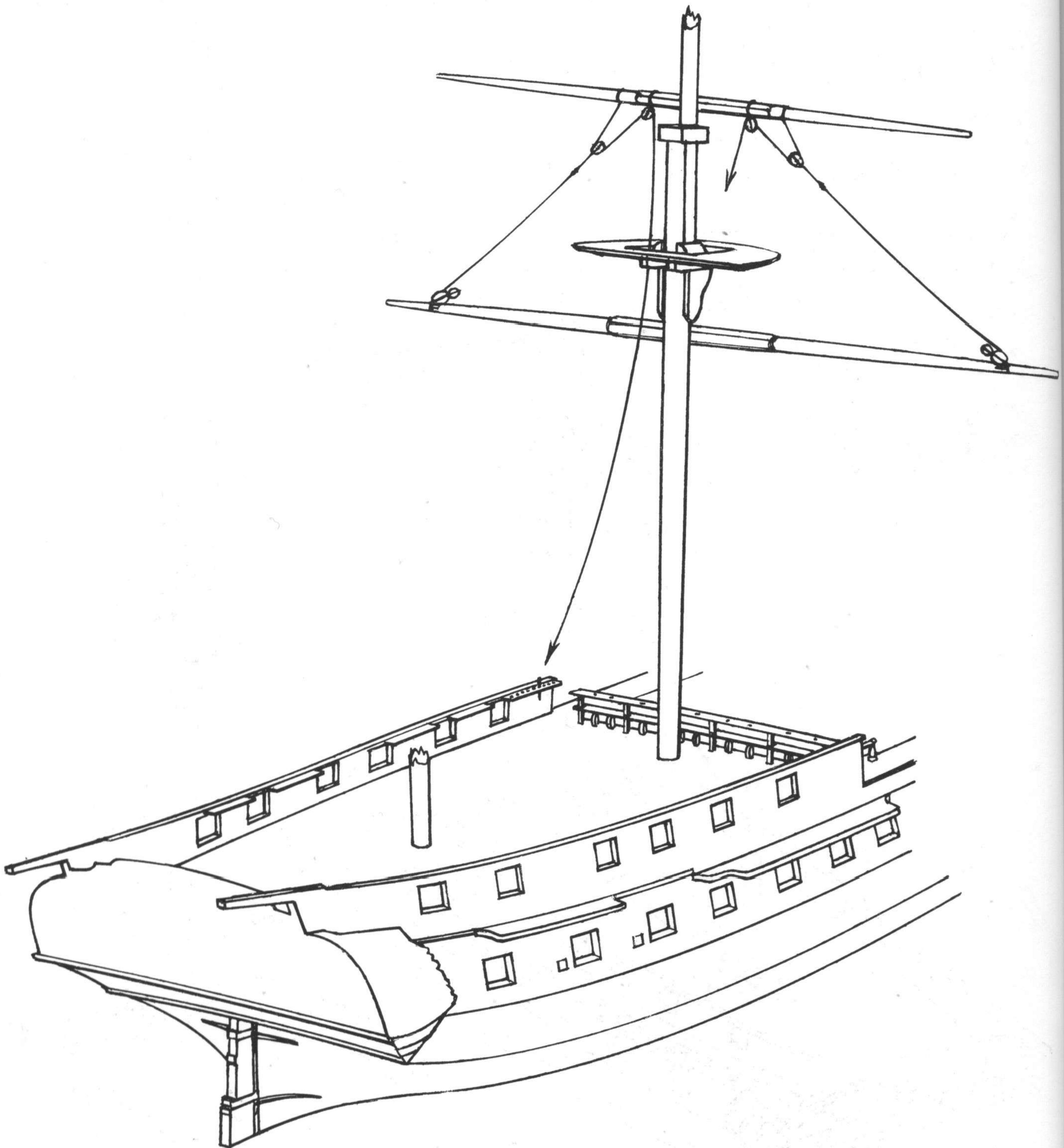


Topgallant & Royal Lifts

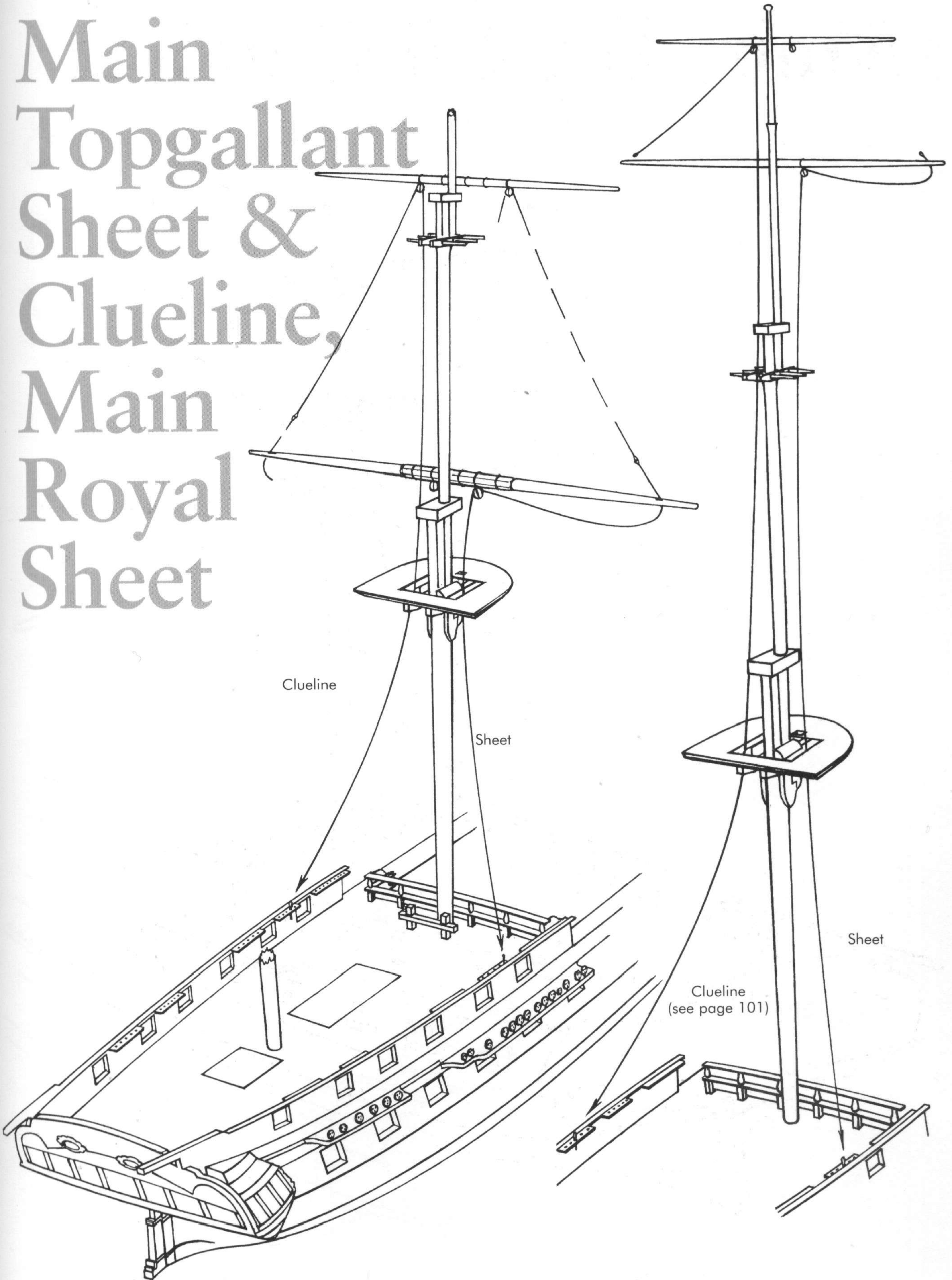


These were rigged in the same way as those on the fore topgallant and royal yard. See page 41.

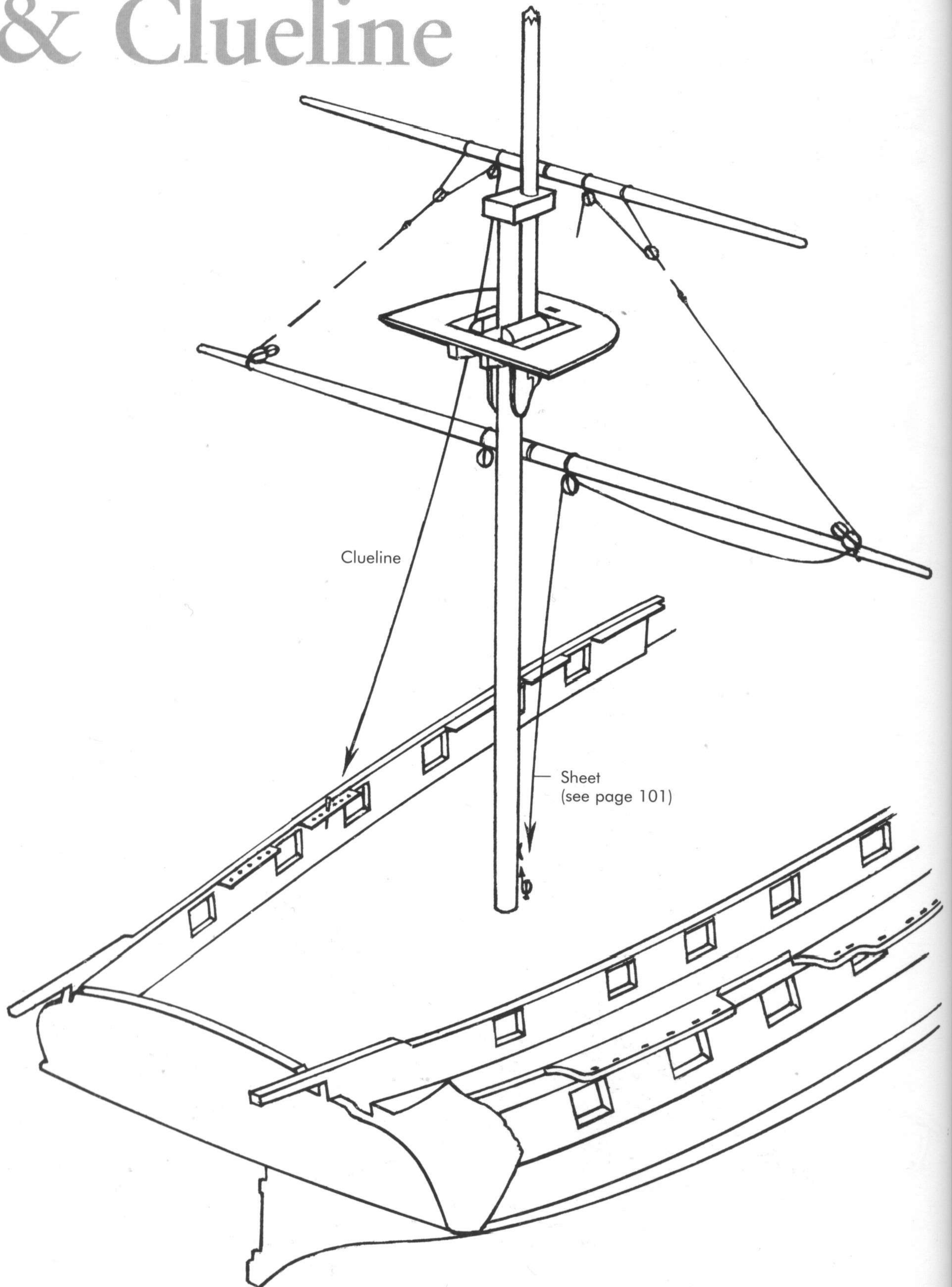
Main Topsail Clueline



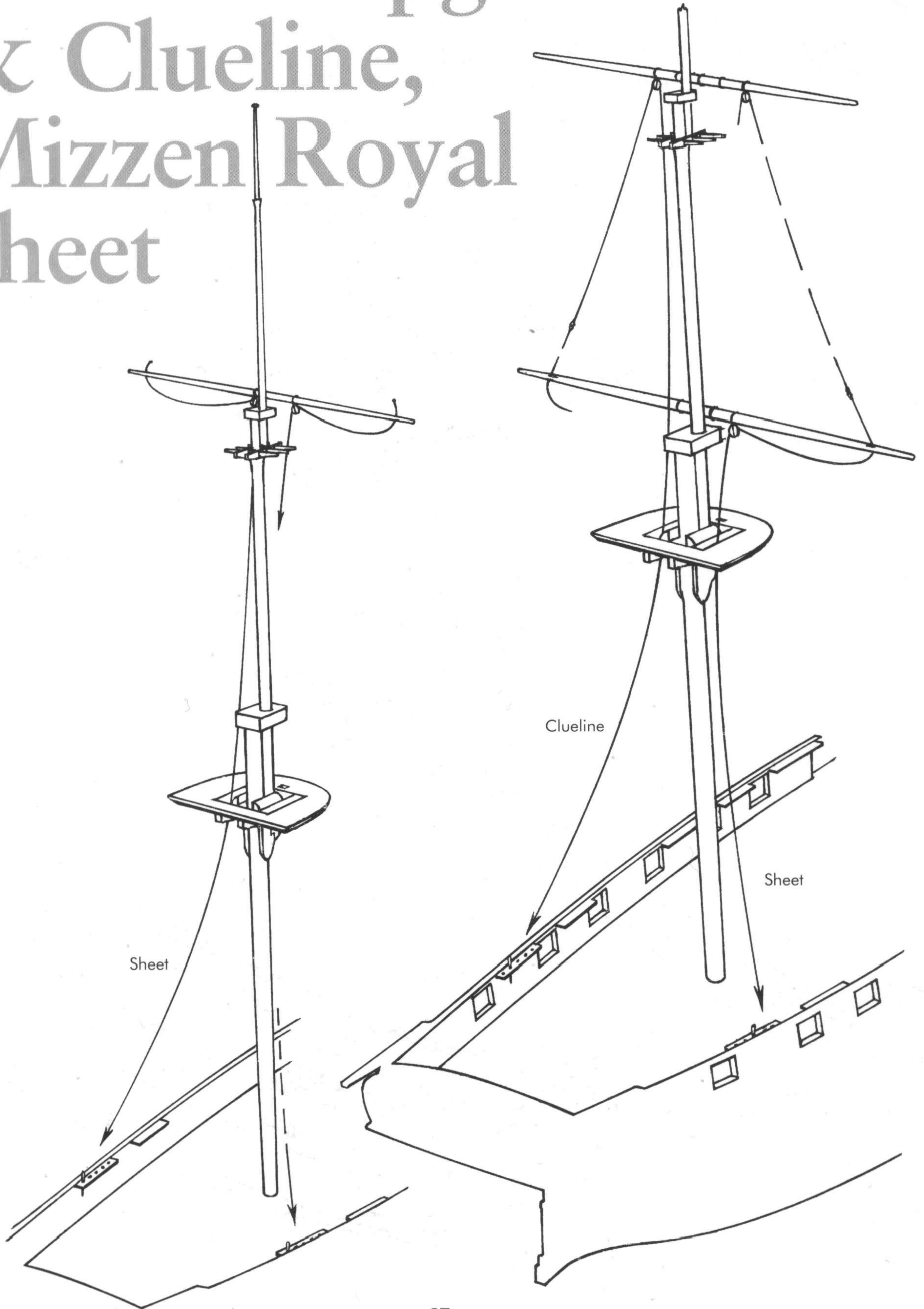
Main Topgallant Sheet & Clueline, Main Royal Sheet



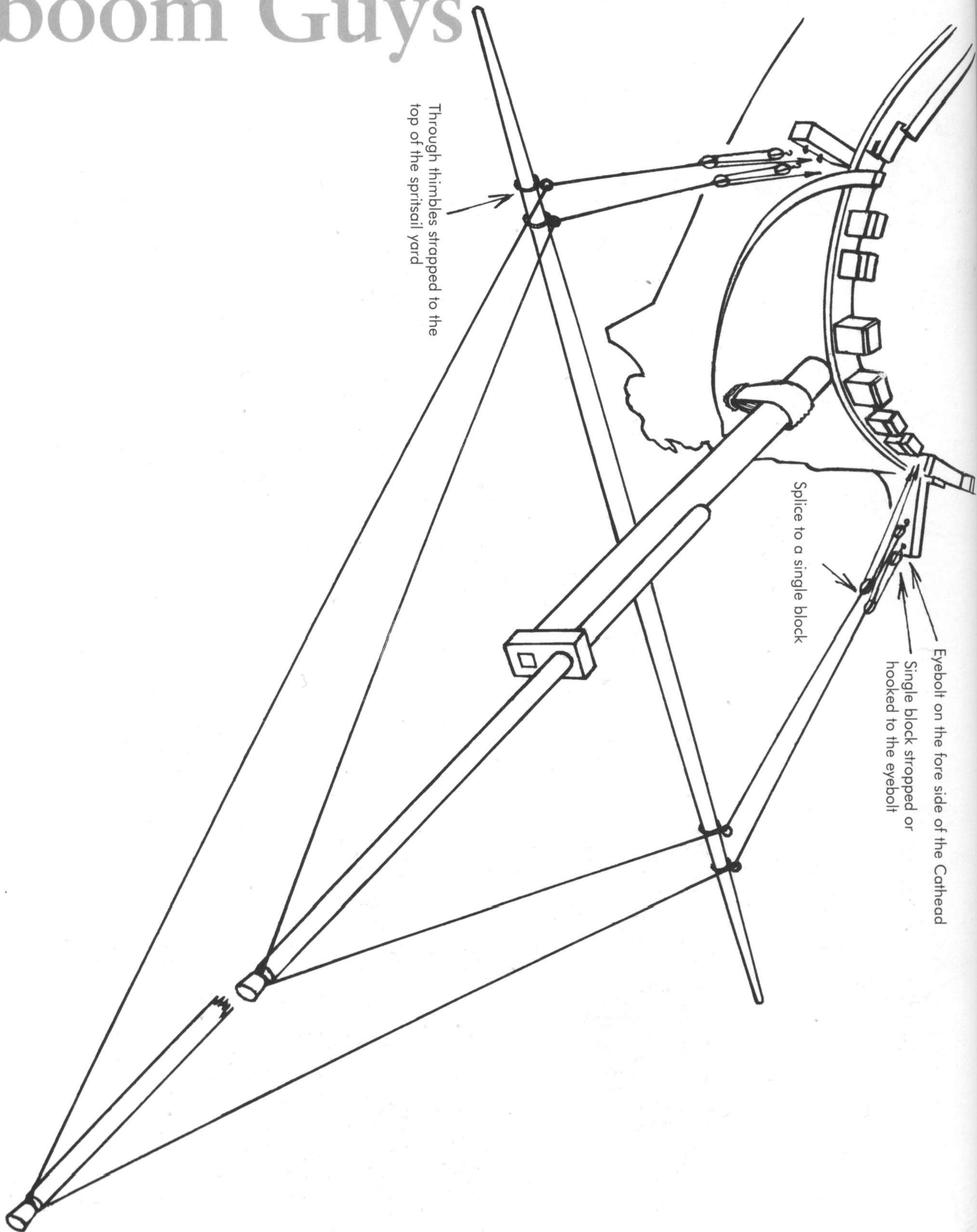
Mizzen Topsail Sheet & Clueline



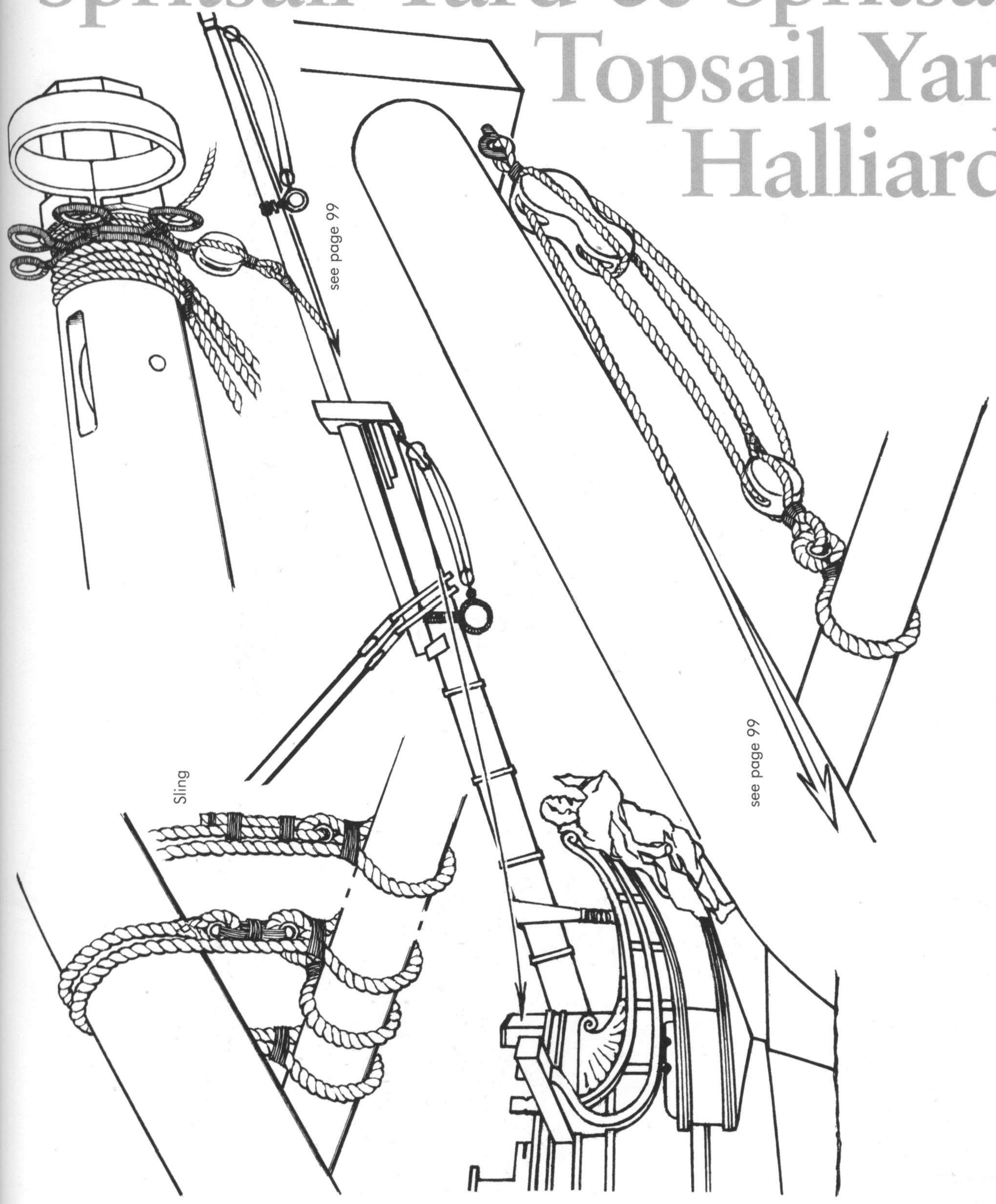
Mizzen Topgallant Sheet & Clueline, Mizzen Royal Sheet



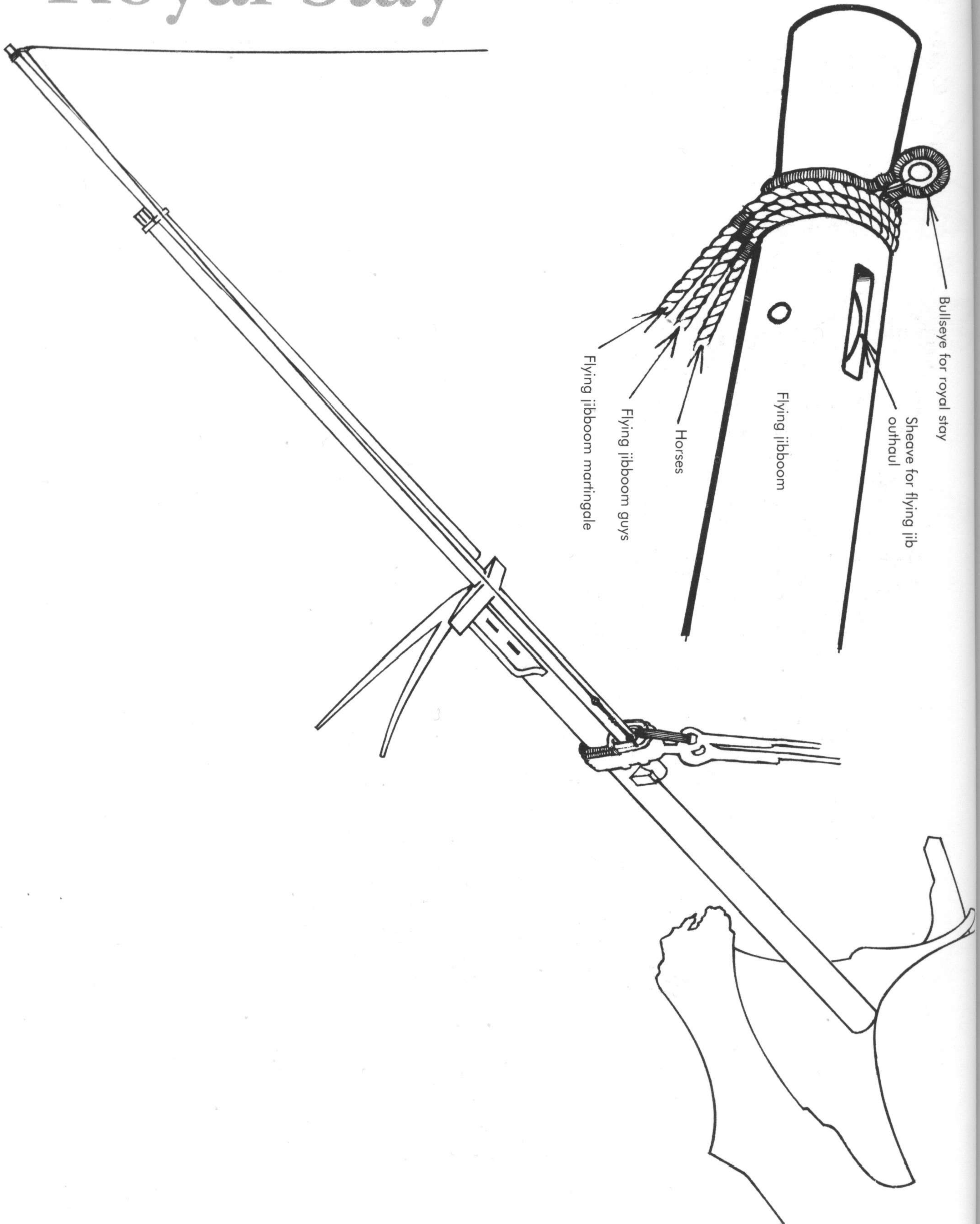
Jibboom & Flying Jibboom Guys



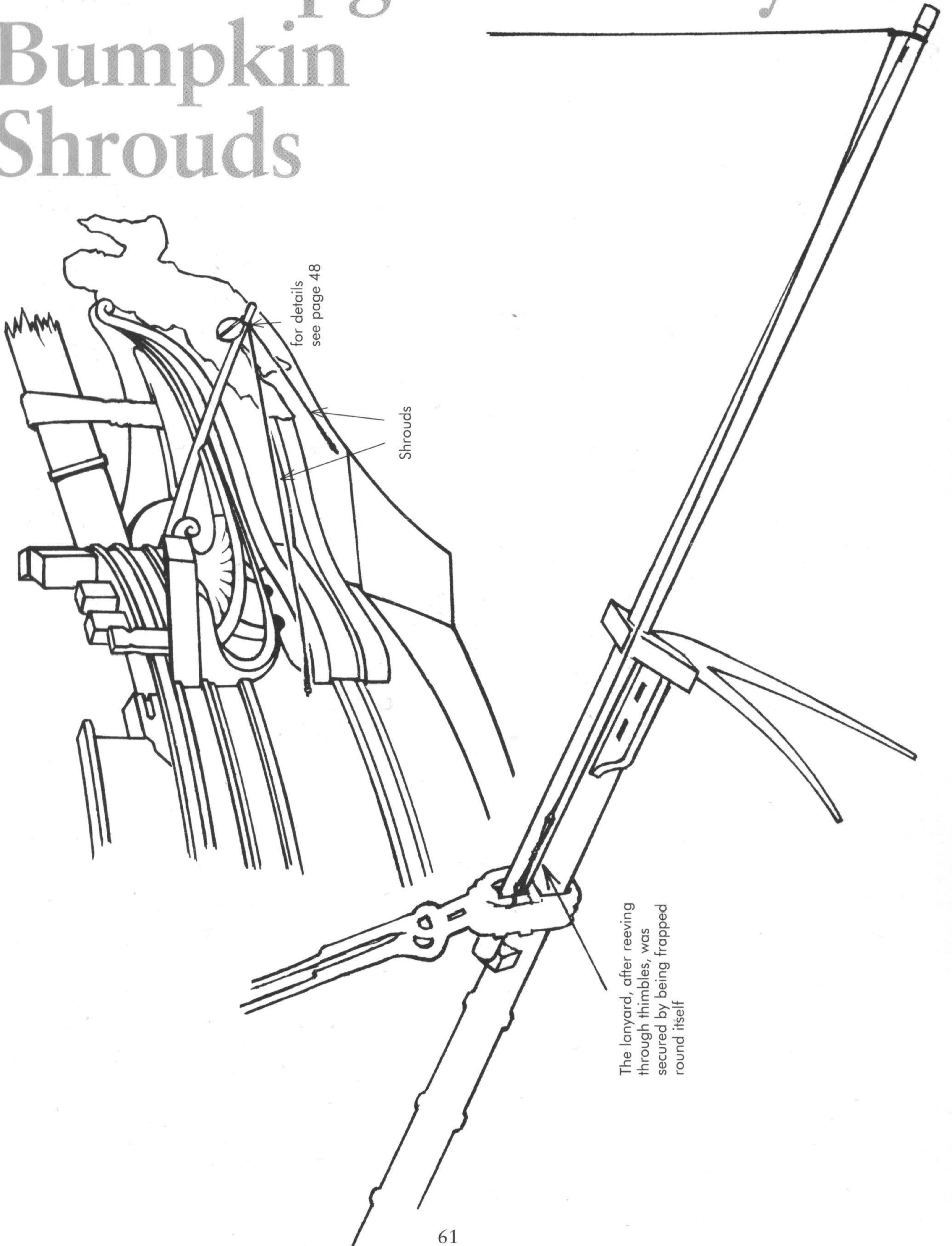
Spritsail Sling, Spritsail Yard & Spritsail Topsail Yard Halliards



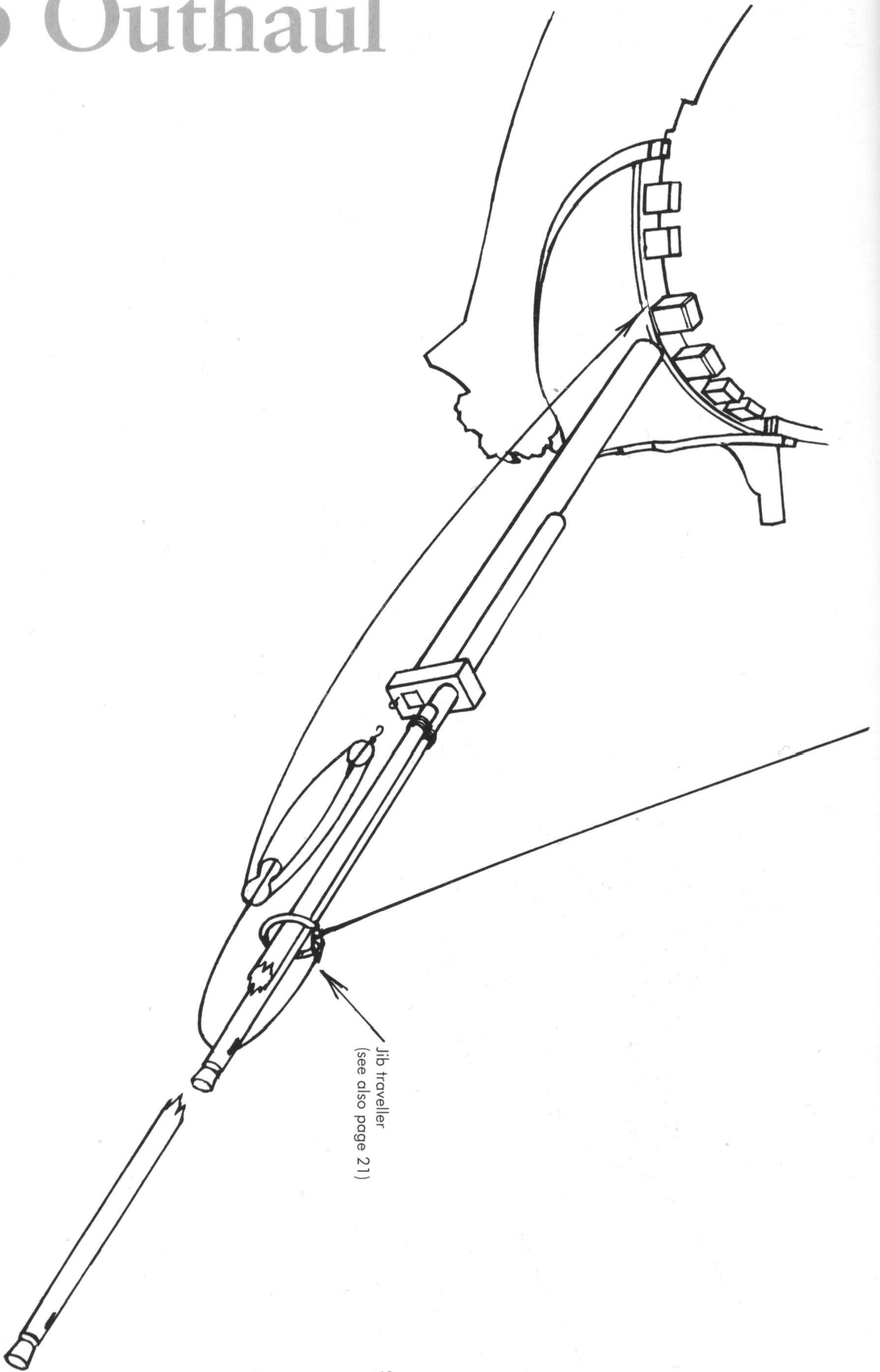
Royal Stay



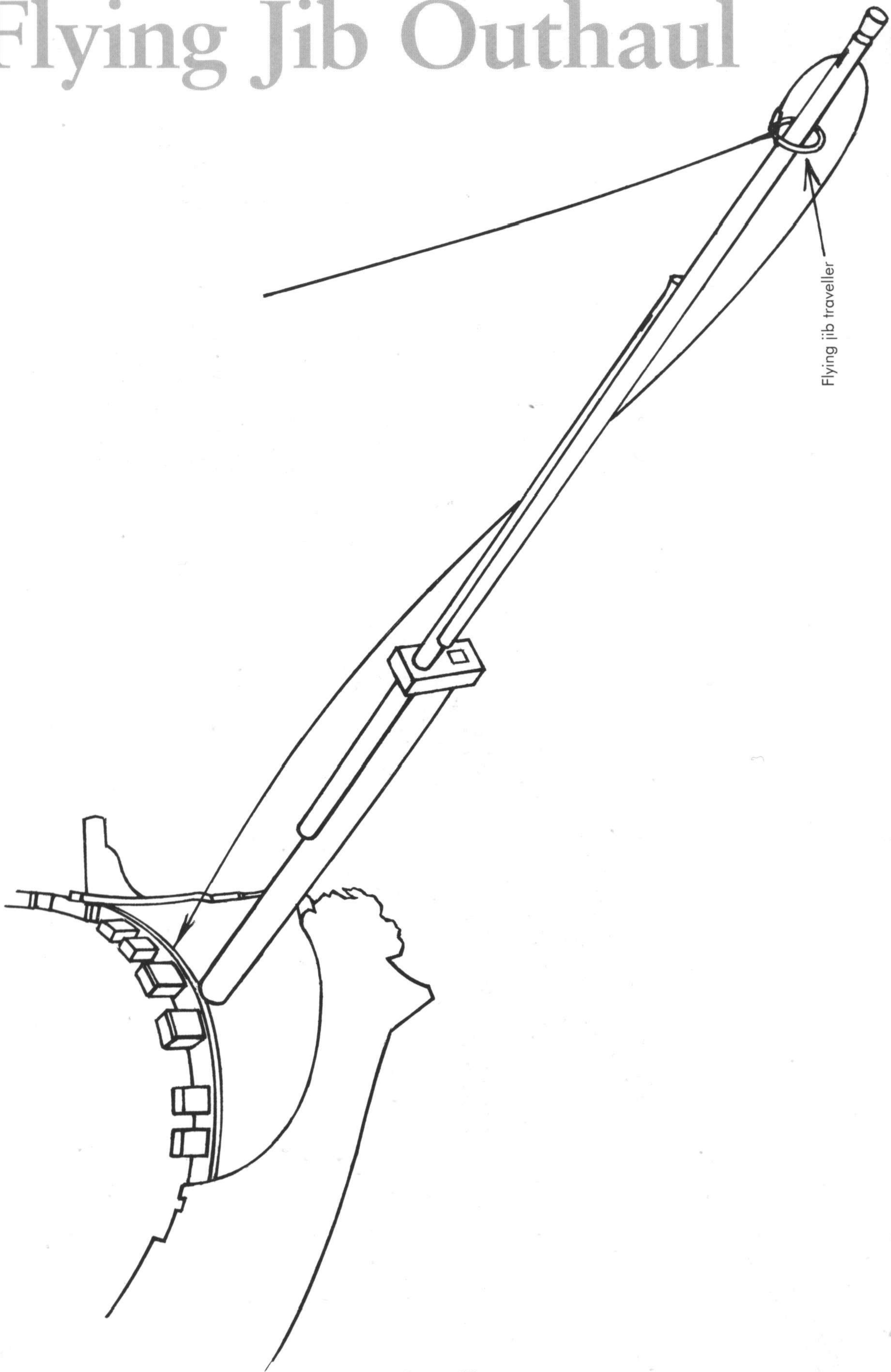
Fore Topgallant Stay & Bumpkin Shrouds



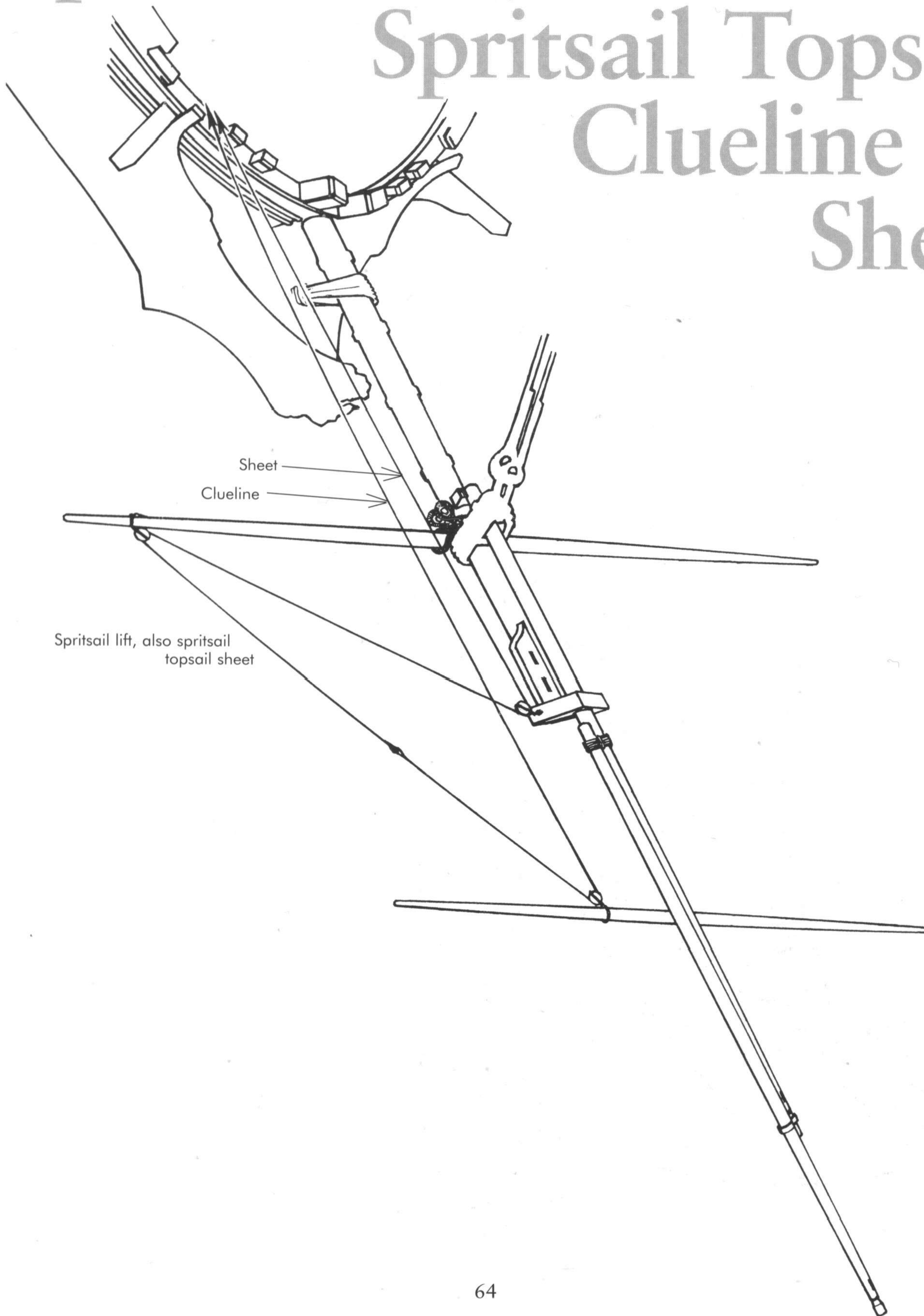
Jib Outhaul



Flying Jib Outhaul

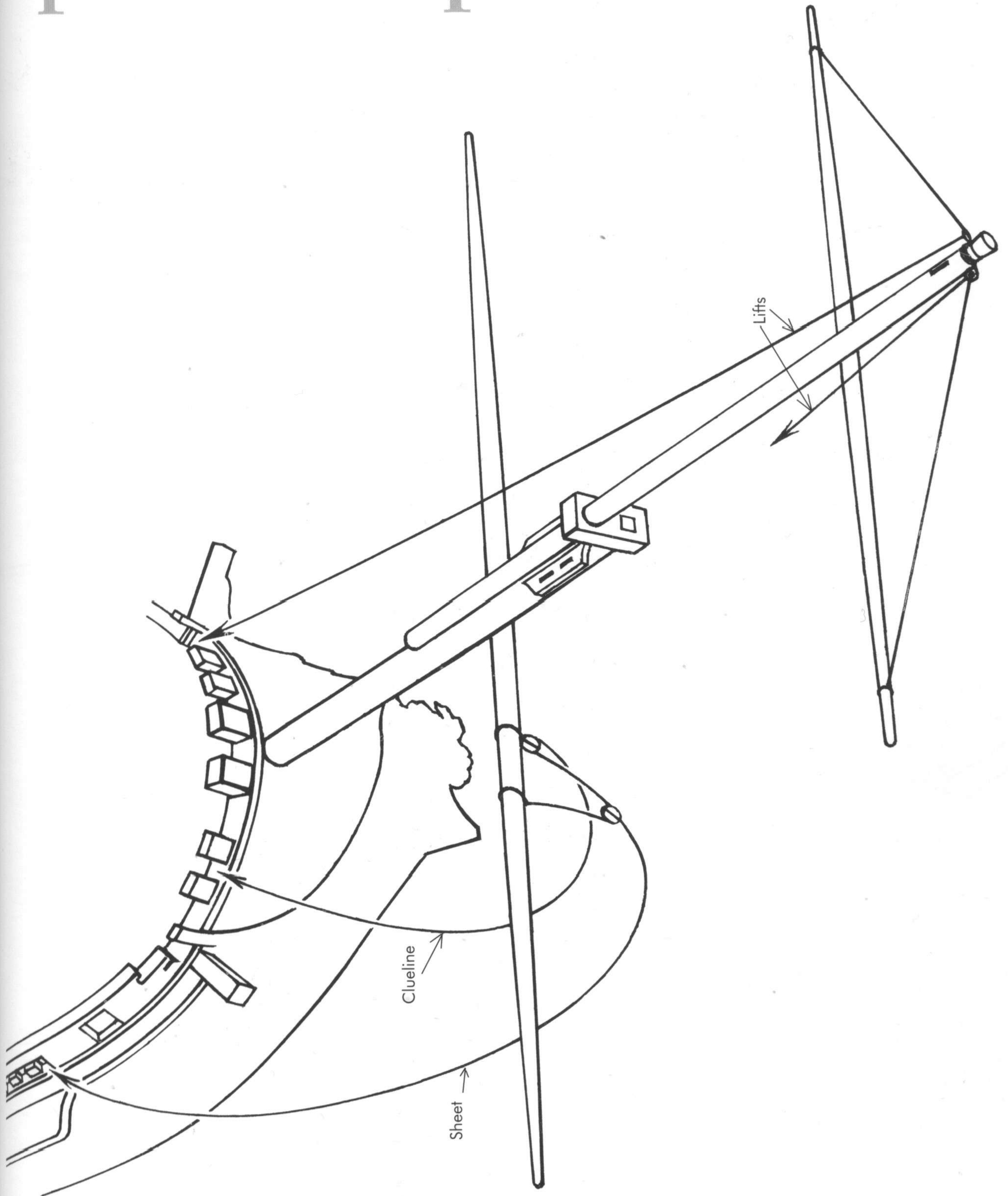


Spritsail Lift, Spritsail Topsail Clueline & Sheet

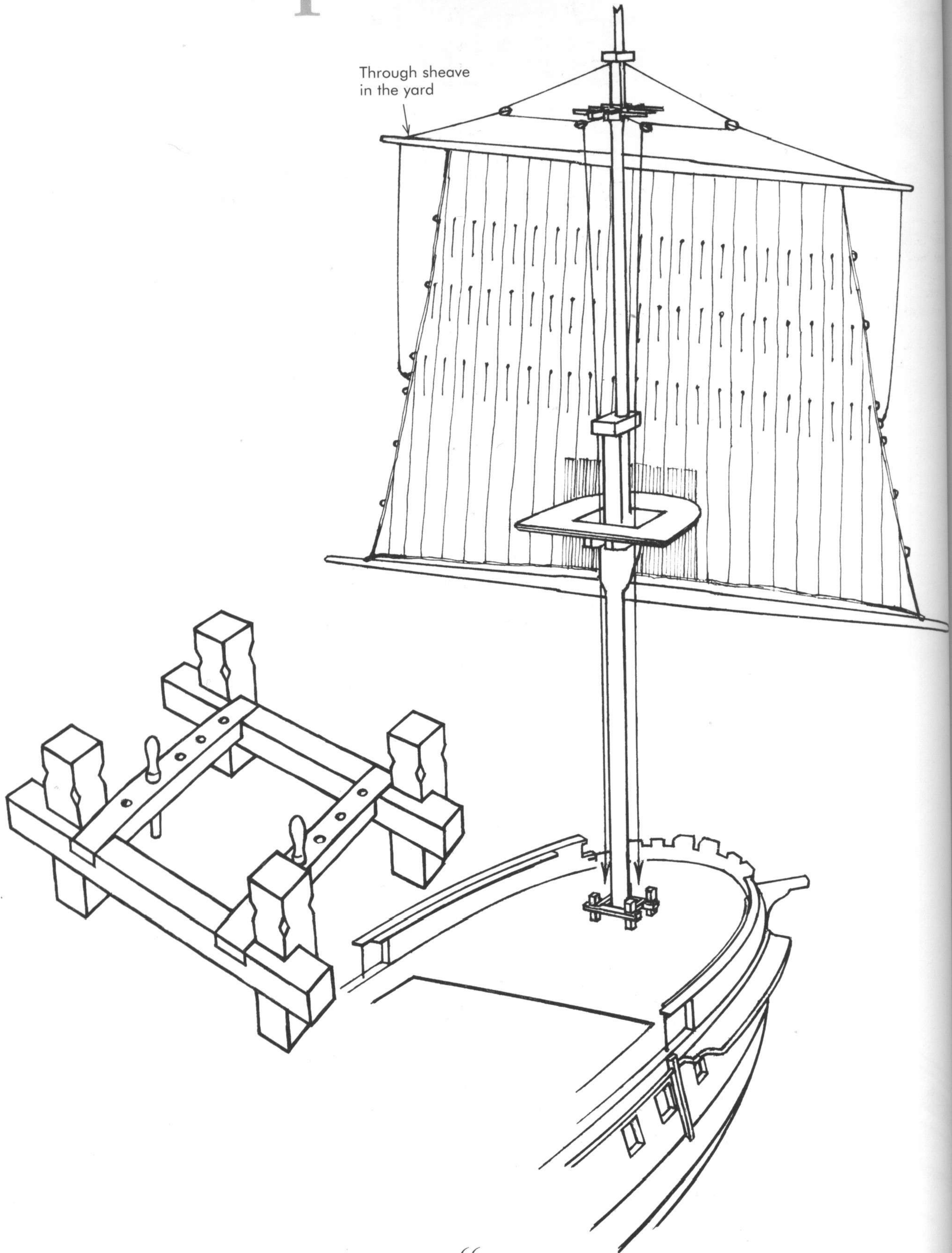


Spritsail Clueline & Sheet

Spritsail Topsail Lift



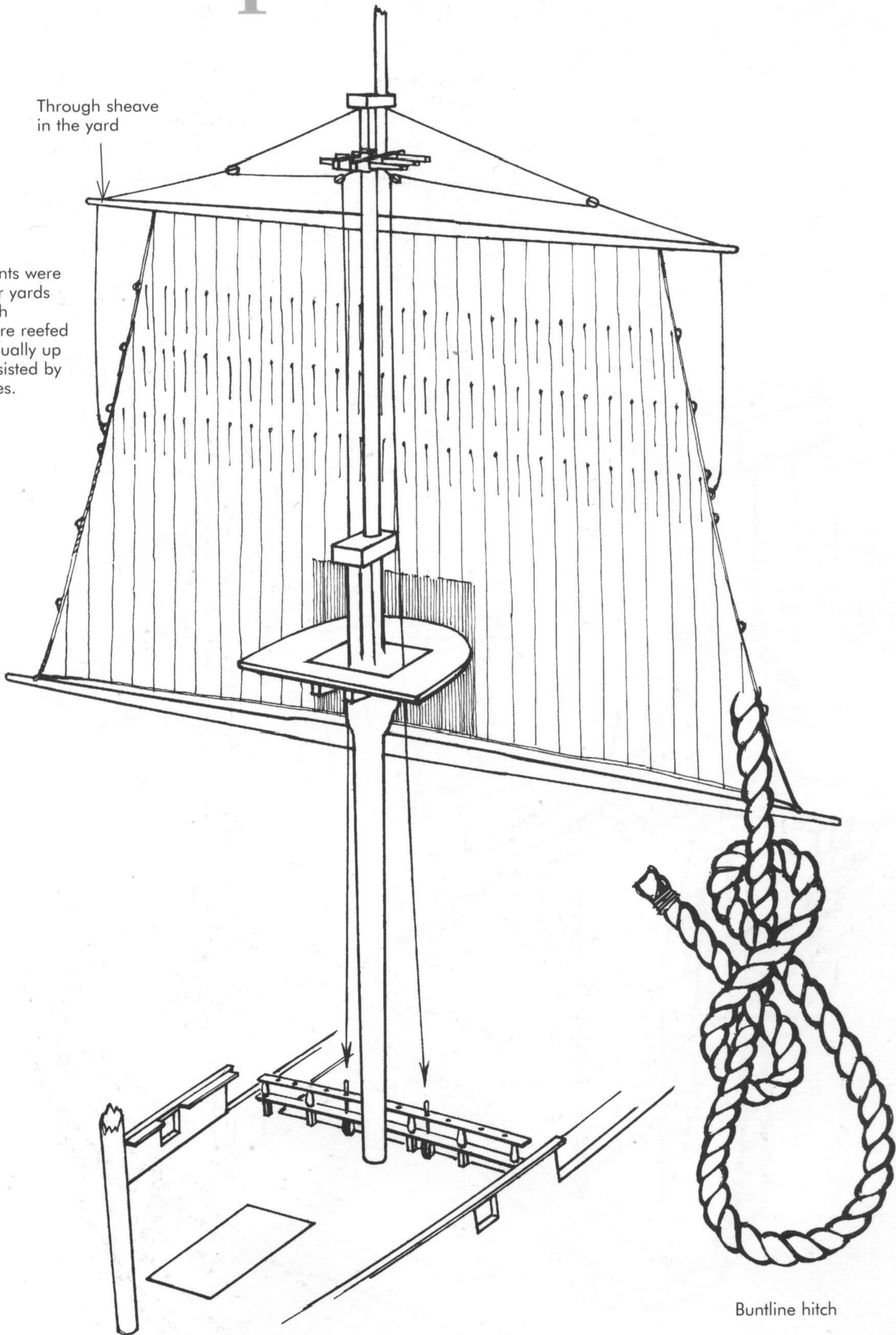
Fore Topsail Reef Tackle



Main Topsail Reef Tackle

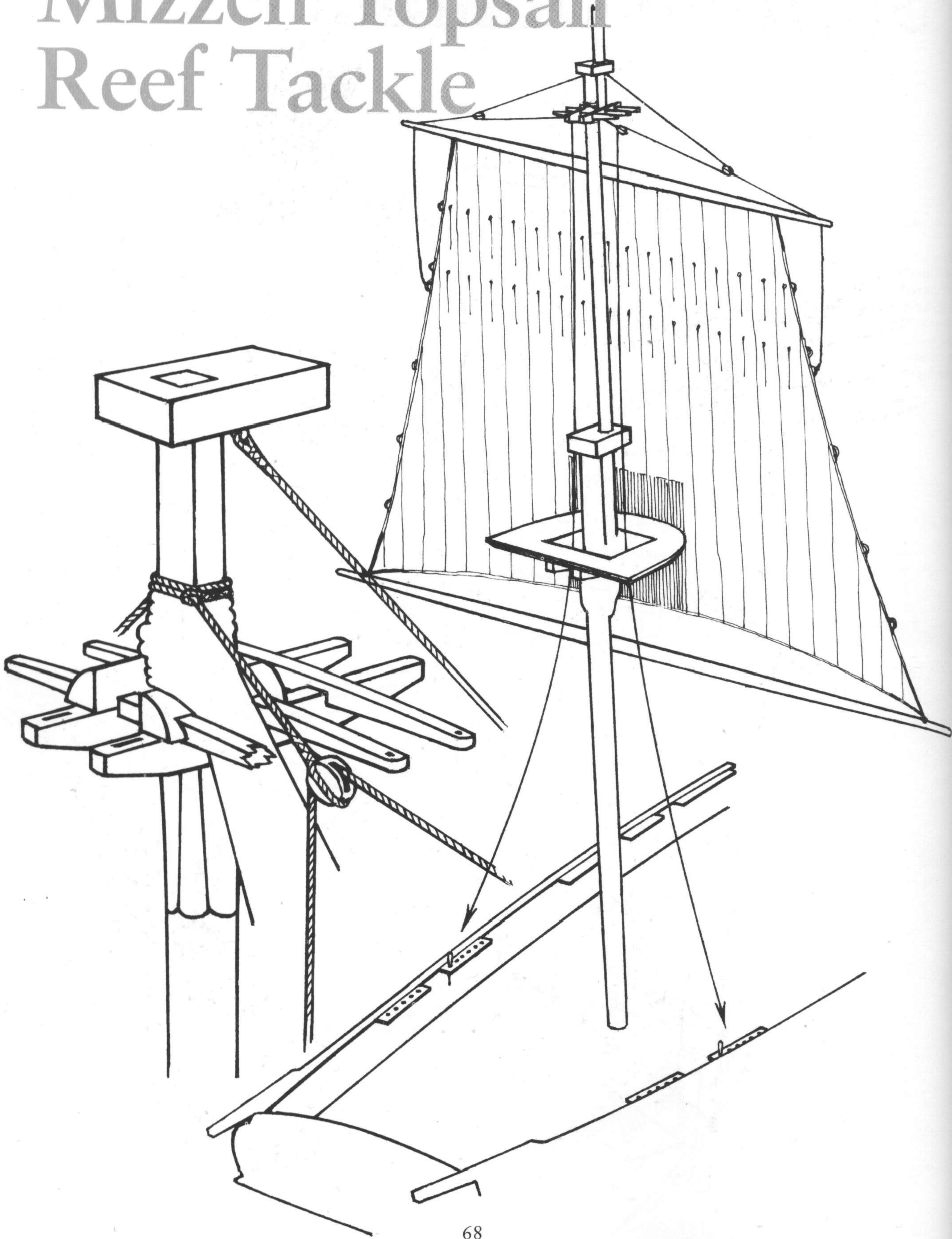
Through sheave
in the yard

Note:
Reef tackles and pendants were
not carried on the lower yards
until the early nineteenth
century. The courses were reefed
by hauling the sail manually up
to the yard, possibly assisted by
hauling on the leechlines.

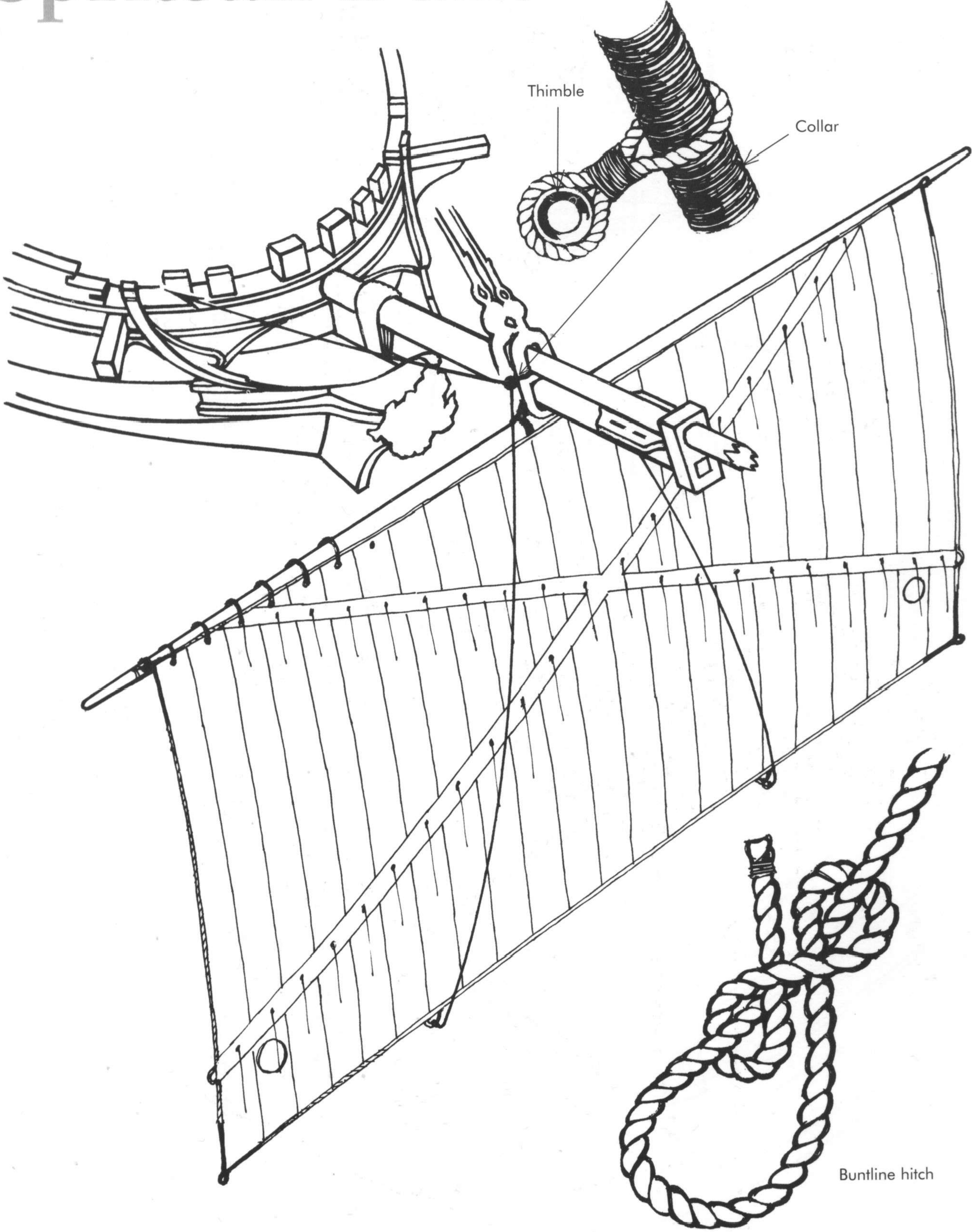


Buntline hitch

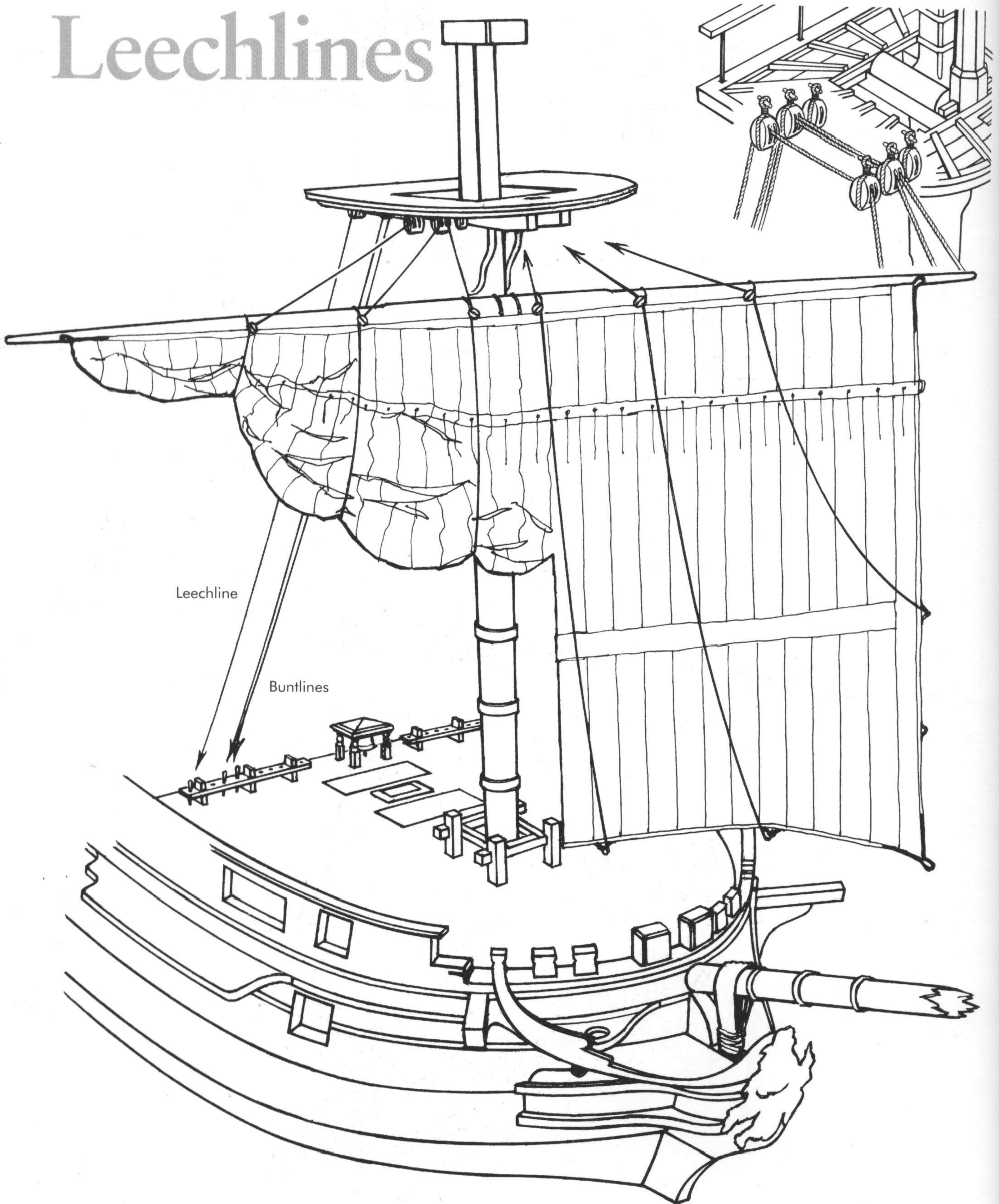
Mizzen Topsail Reef Tackle



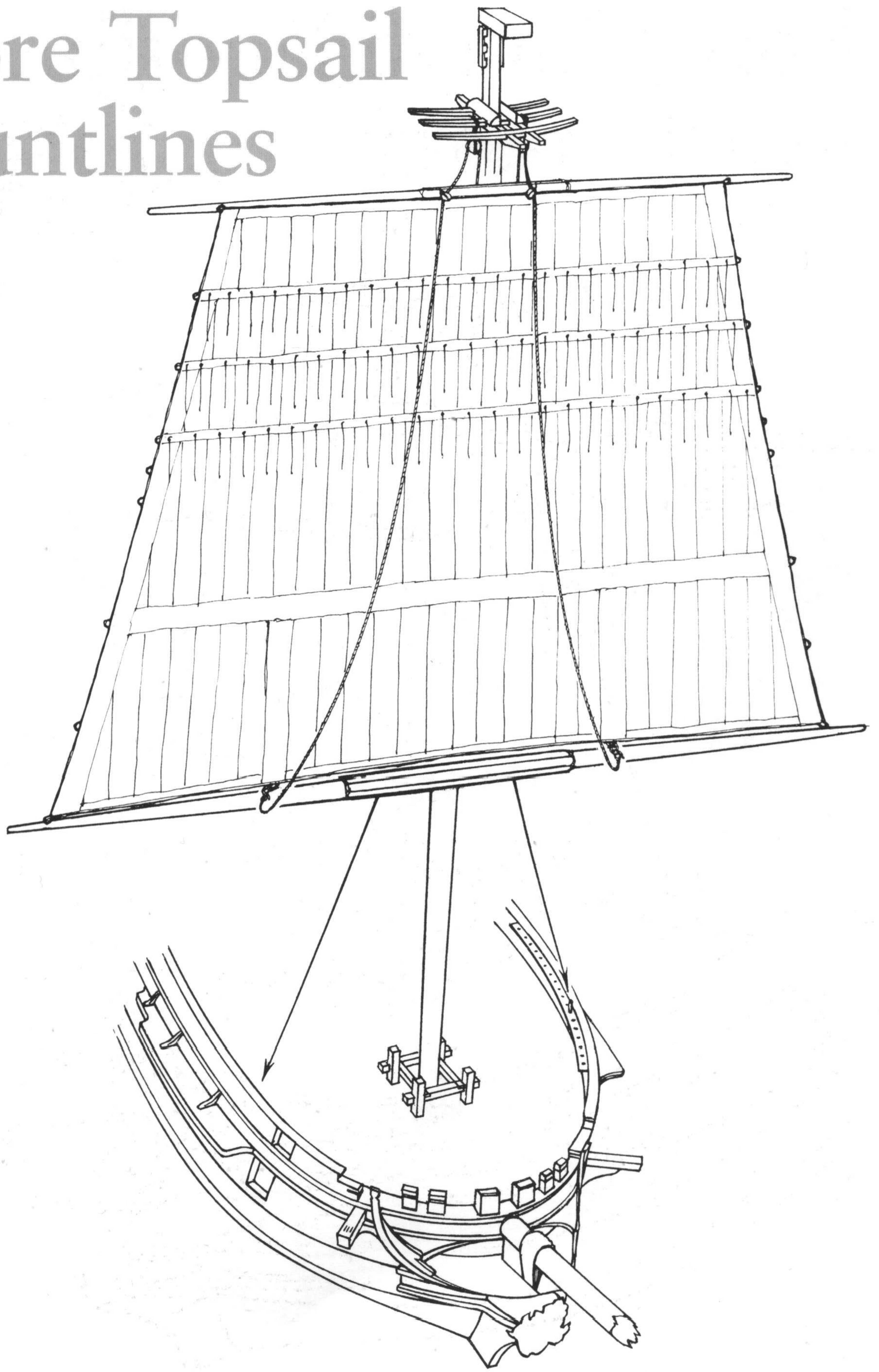
Spritsail Buntlines



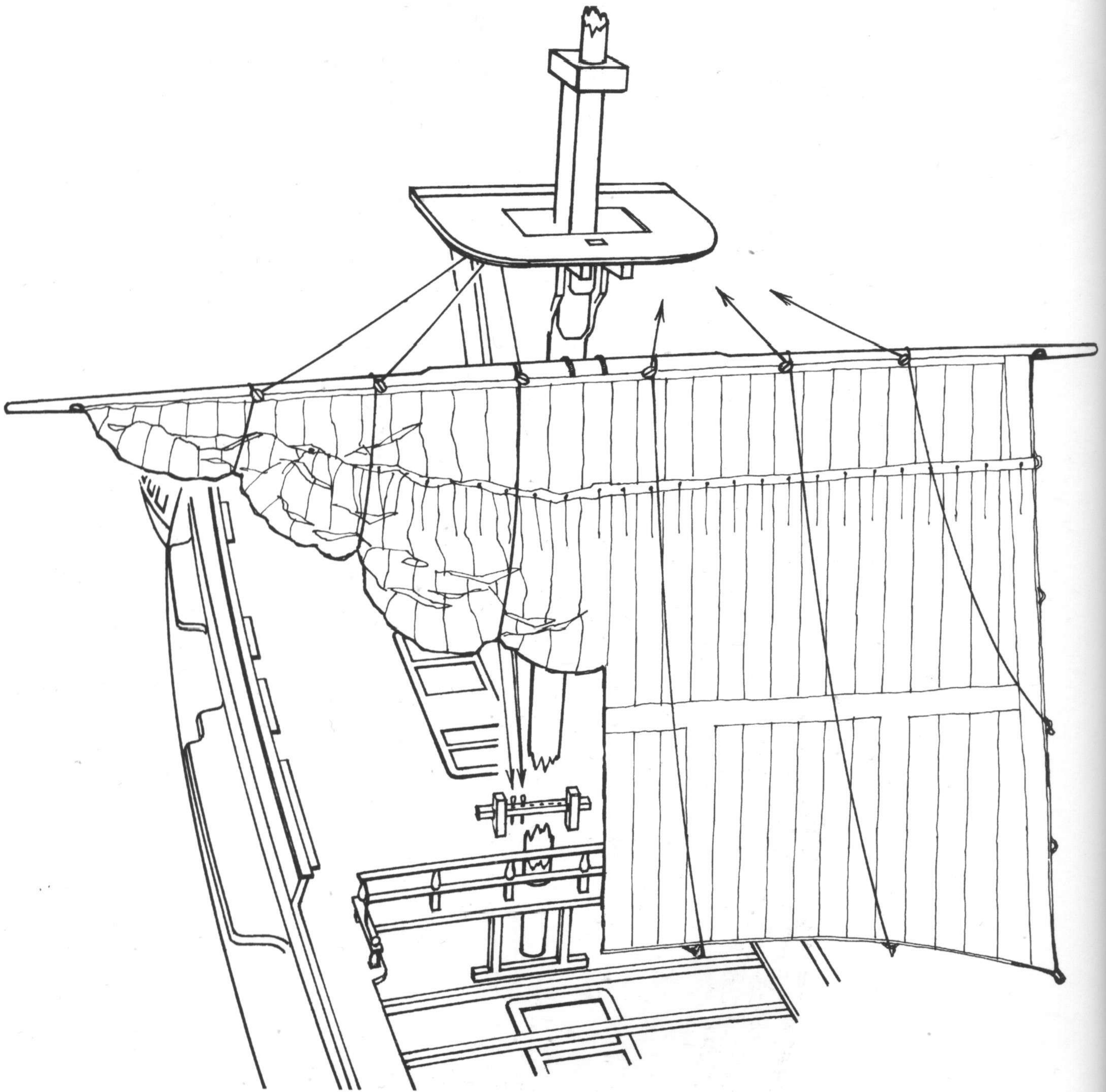
Fore Course Buntlines & Leechlines



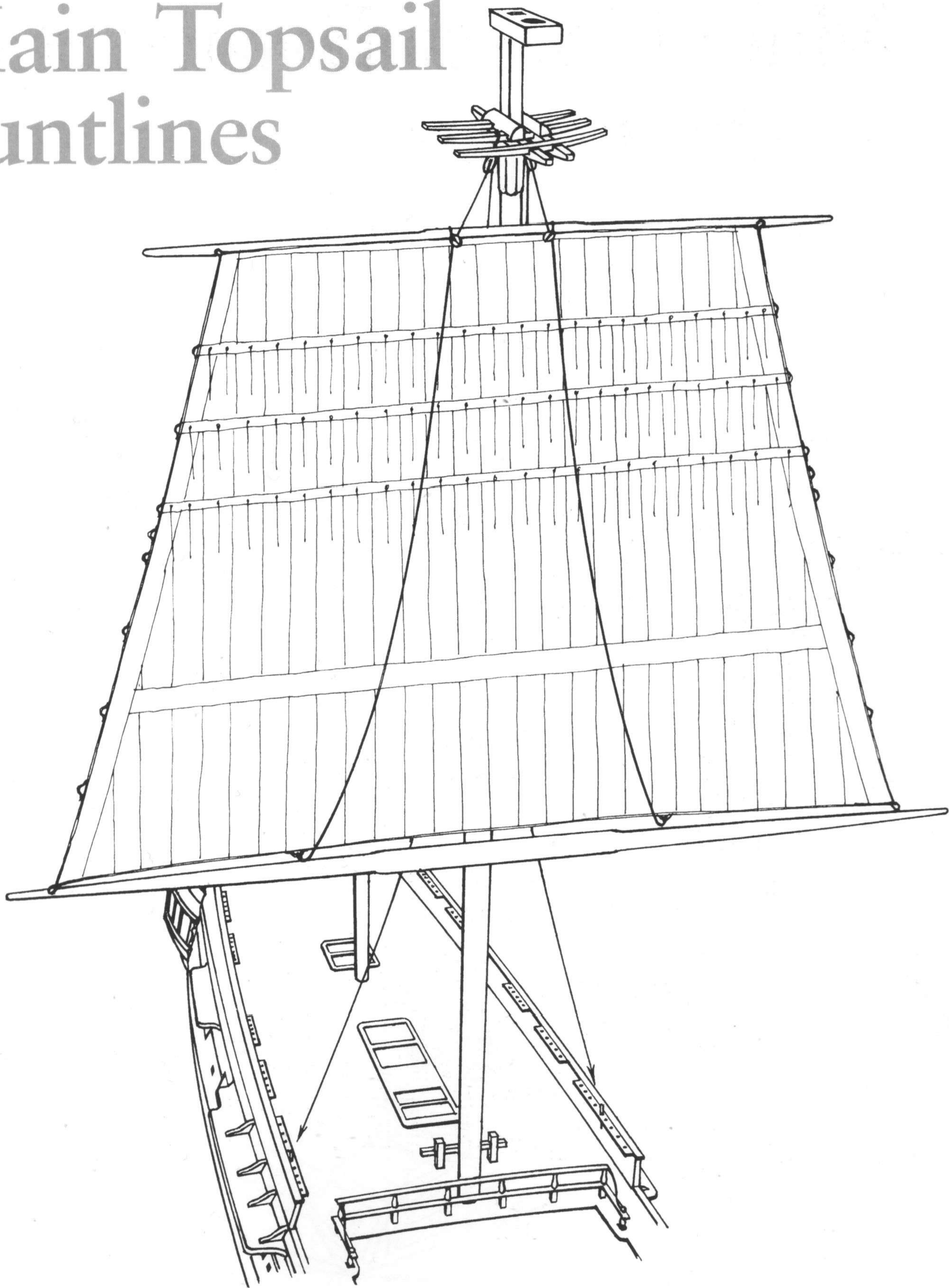
Fore Topsail Buntlines



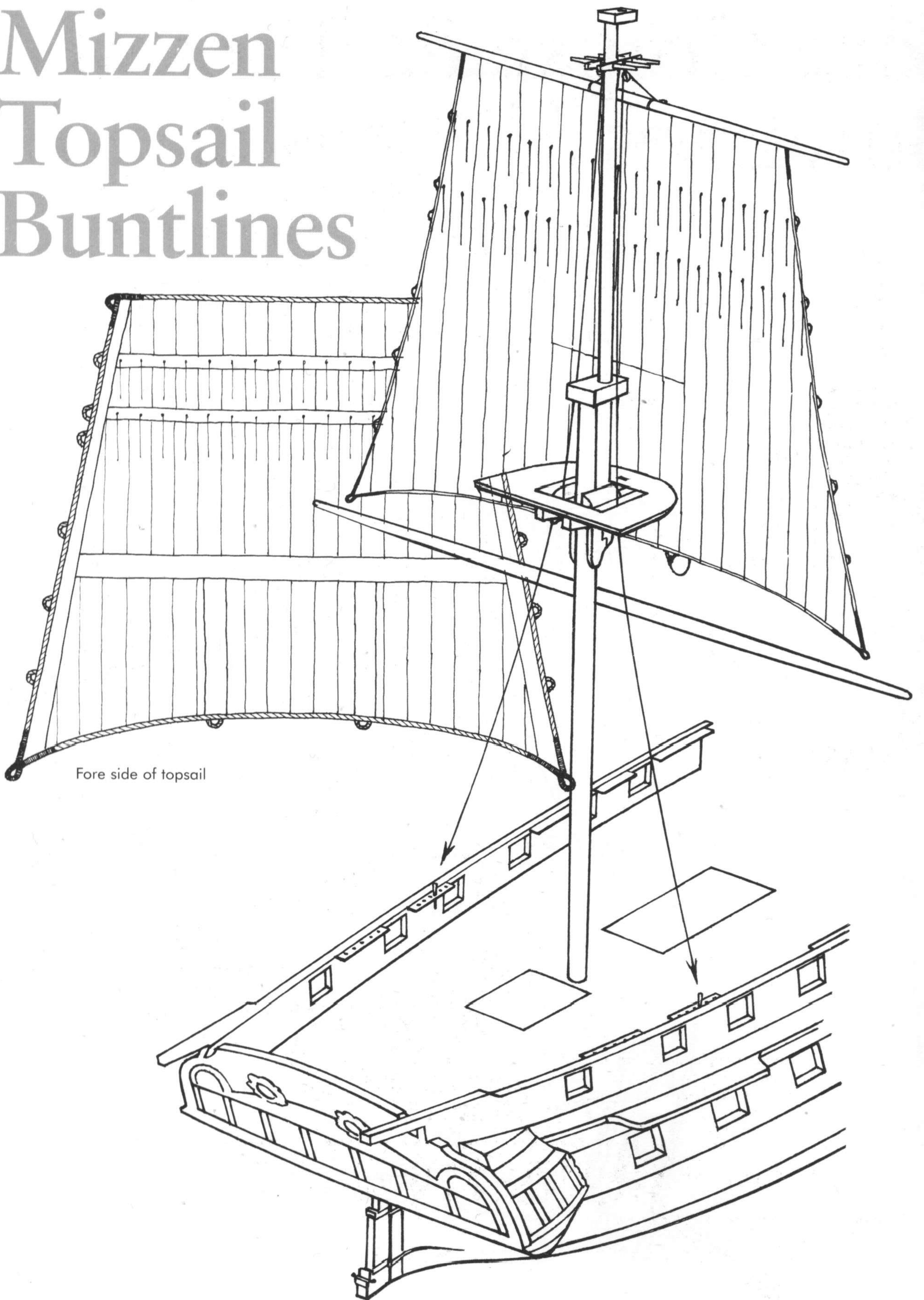
Main Course Buntlines & Leechlines



Main Topsail Buntlines

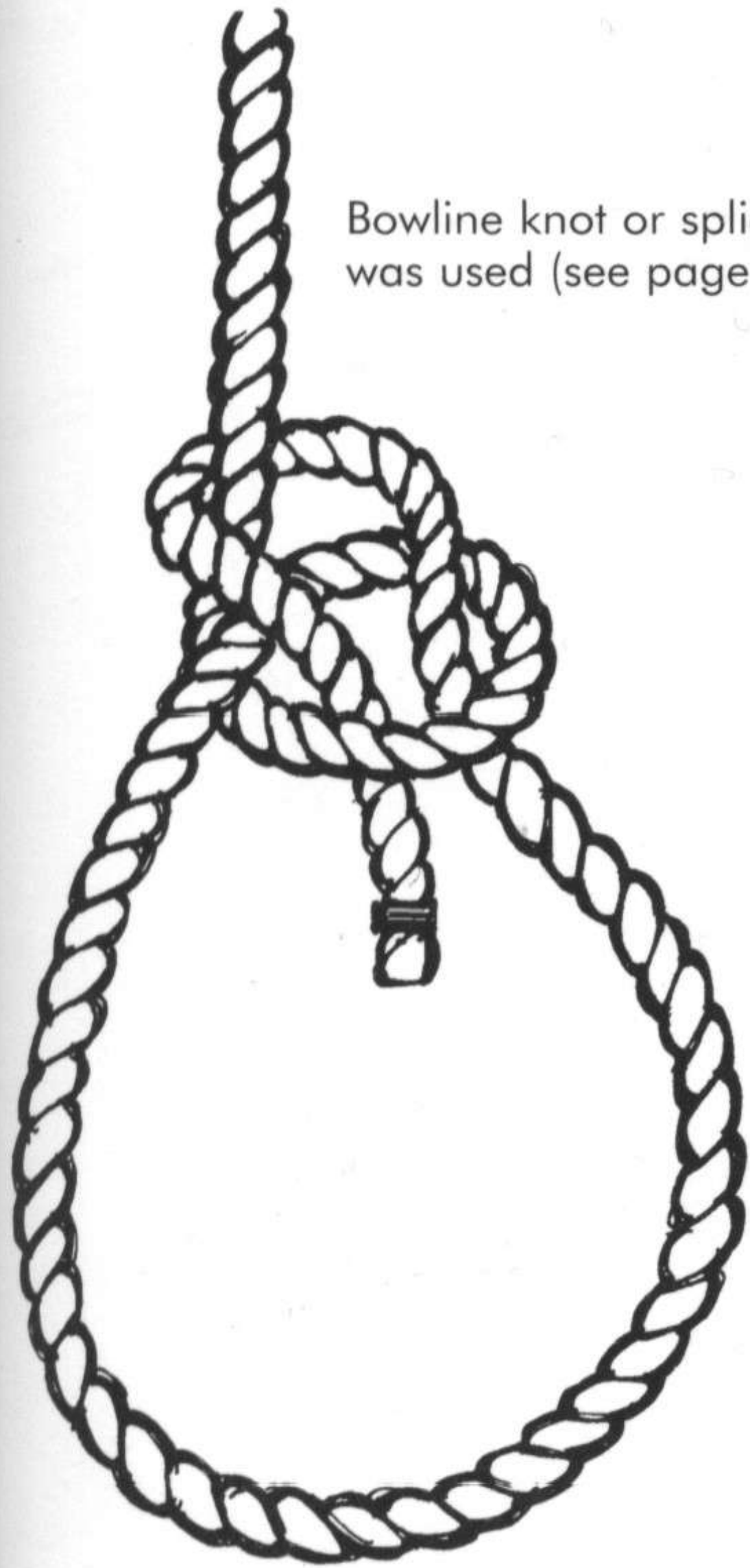


Mizzen Topsail Buntlines

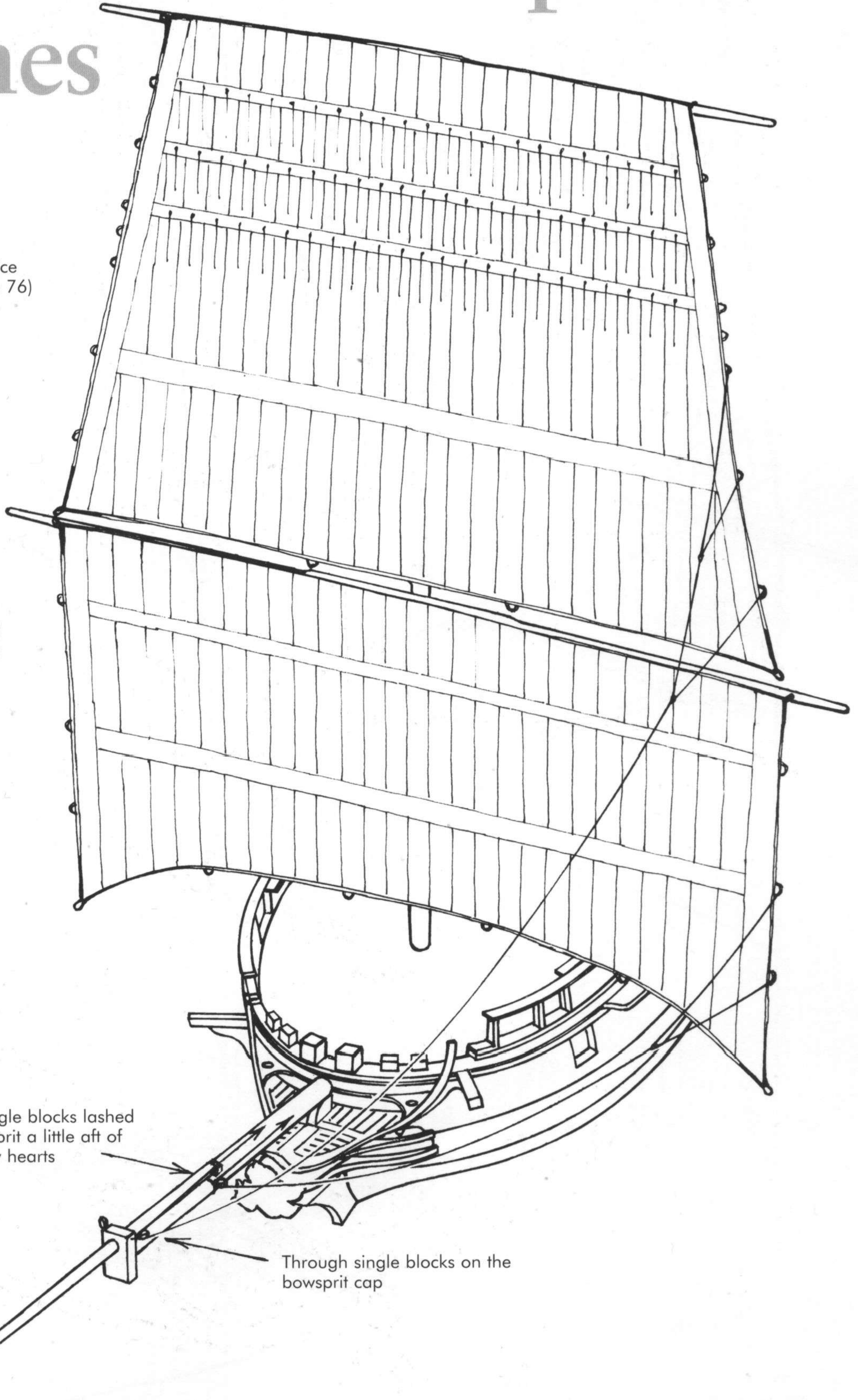


Fore side of topsail

Fore Course & Topsail Bowlines



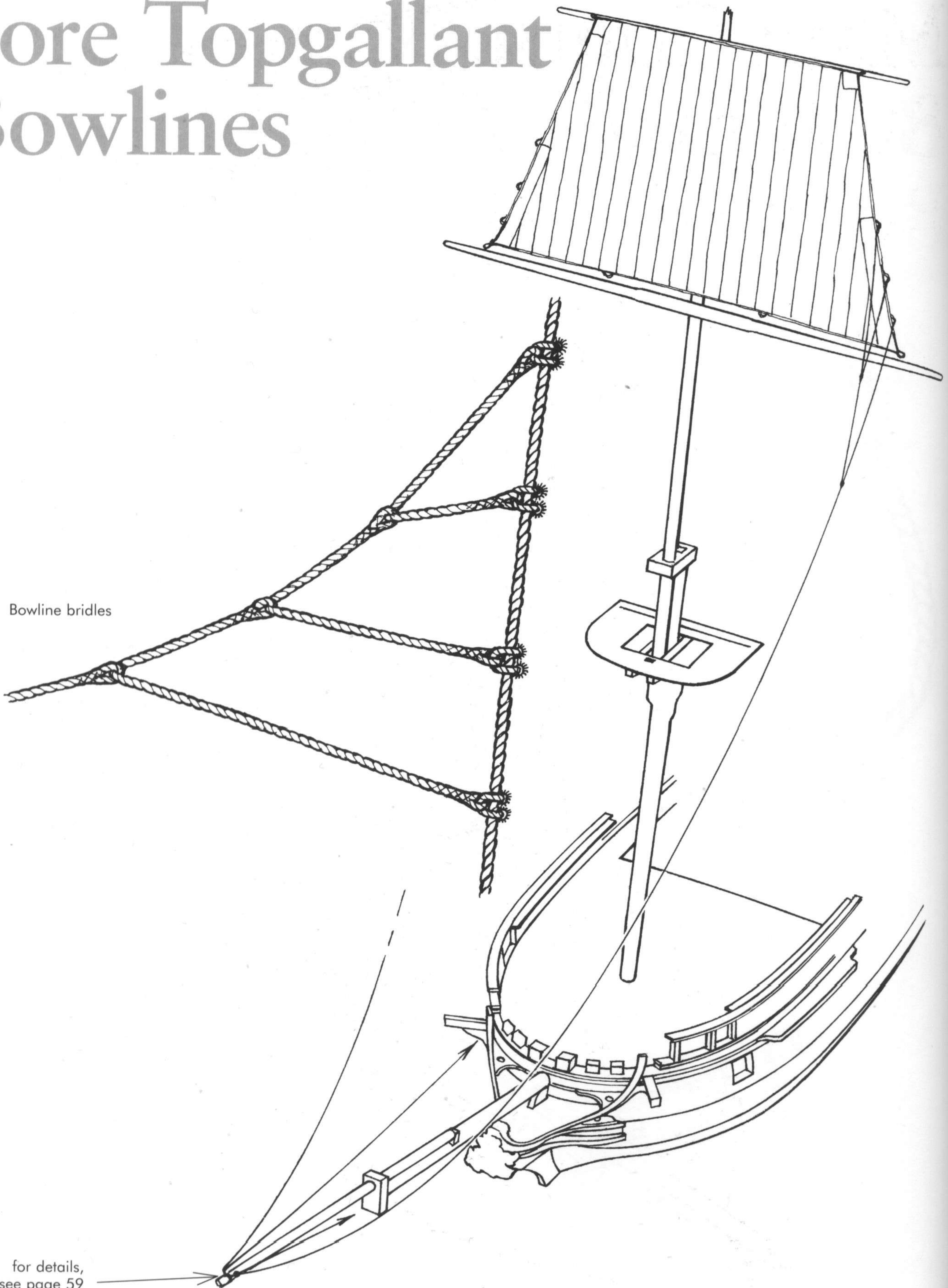
Bowline knot or splice
was used (see page 76)



Through single blocks lashed
to the bowsprit a little aft of
the fore stay hearts

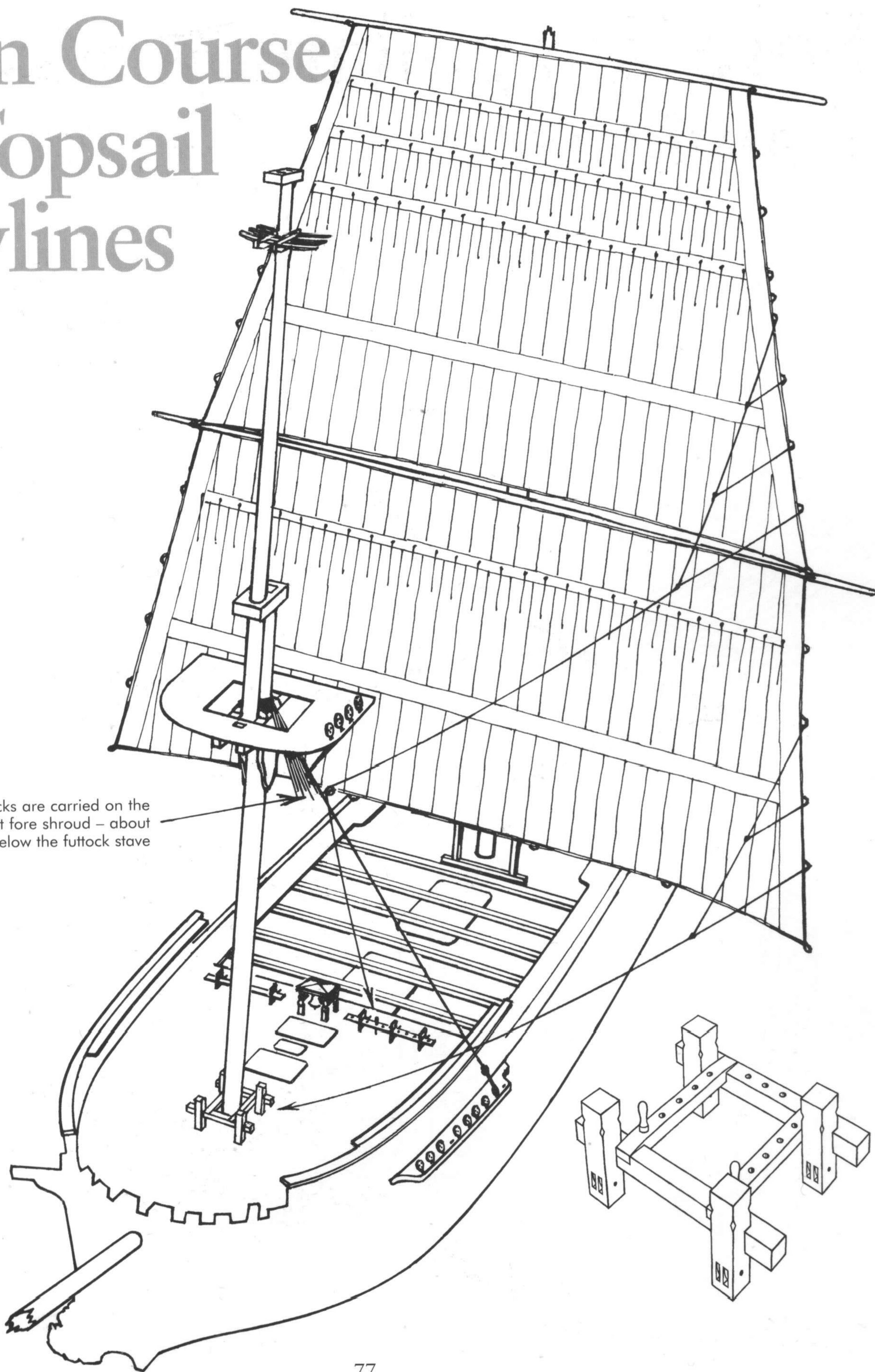
Through single blocks on the
bowsprit cap

Fore Topgallant Bowlines

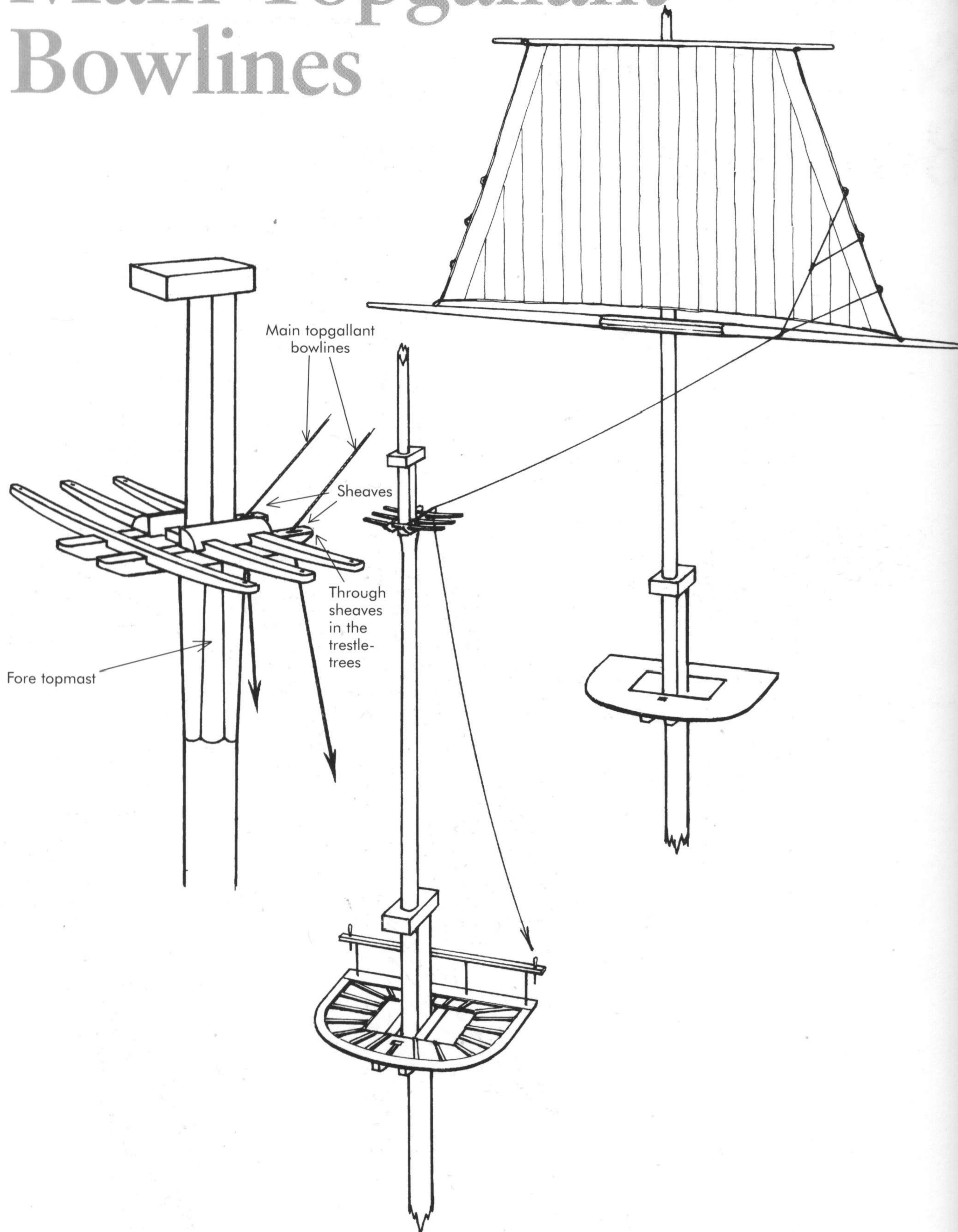


Main Course & Topsail Bowlines

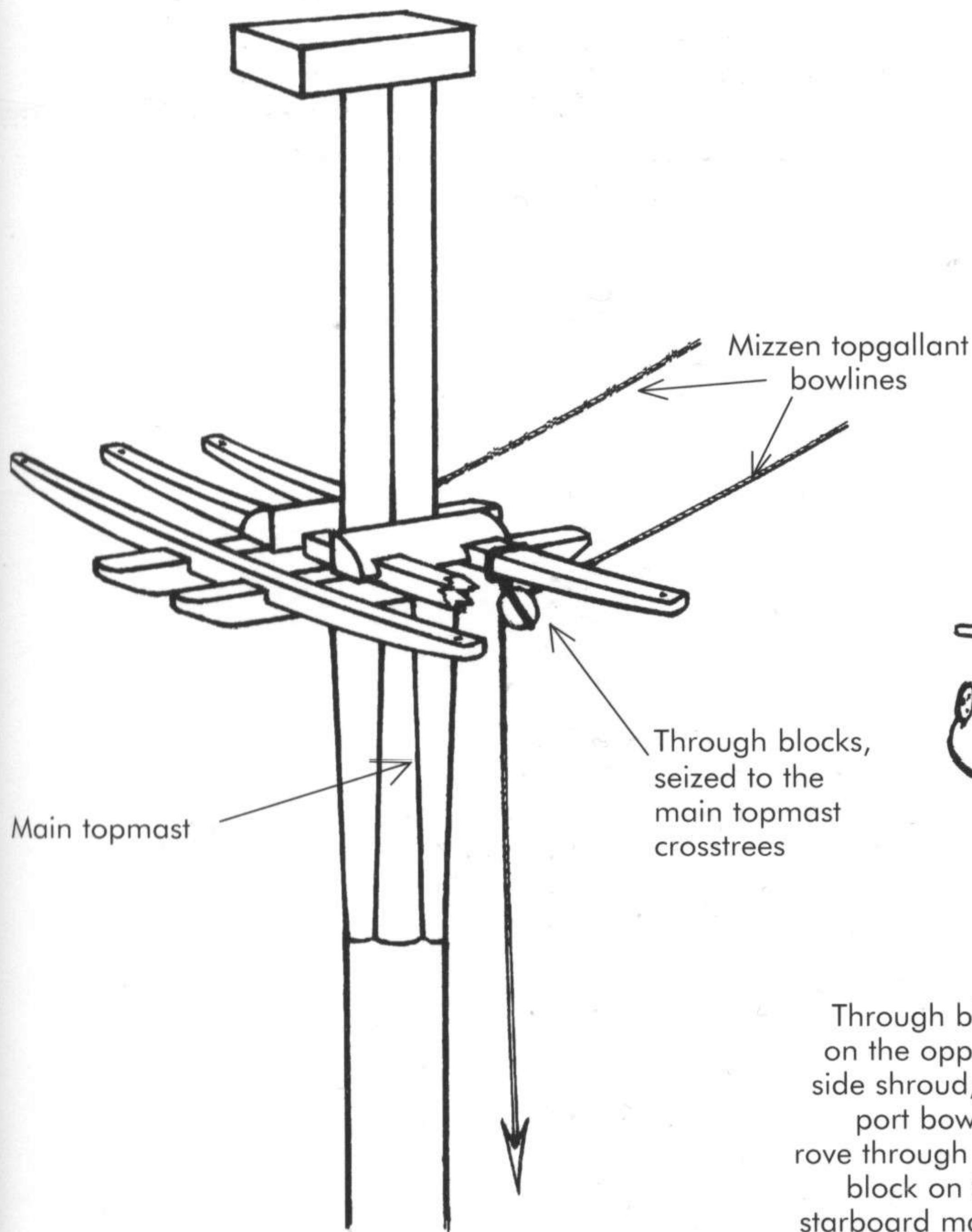
The lead blocks are carried on the
aftermost fore shroud – about
6 feet below the futtock stave



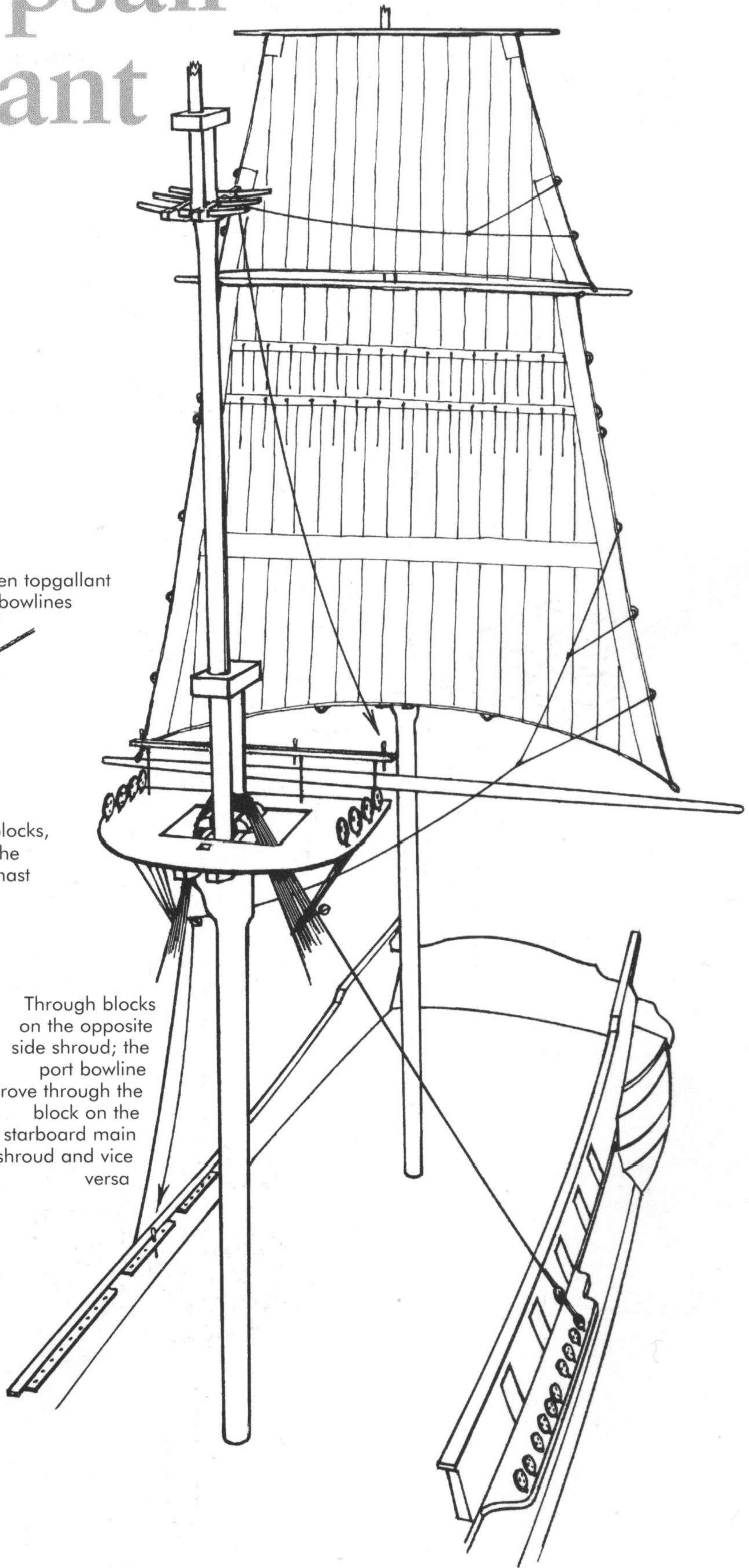
Main Topgallant Bowlines



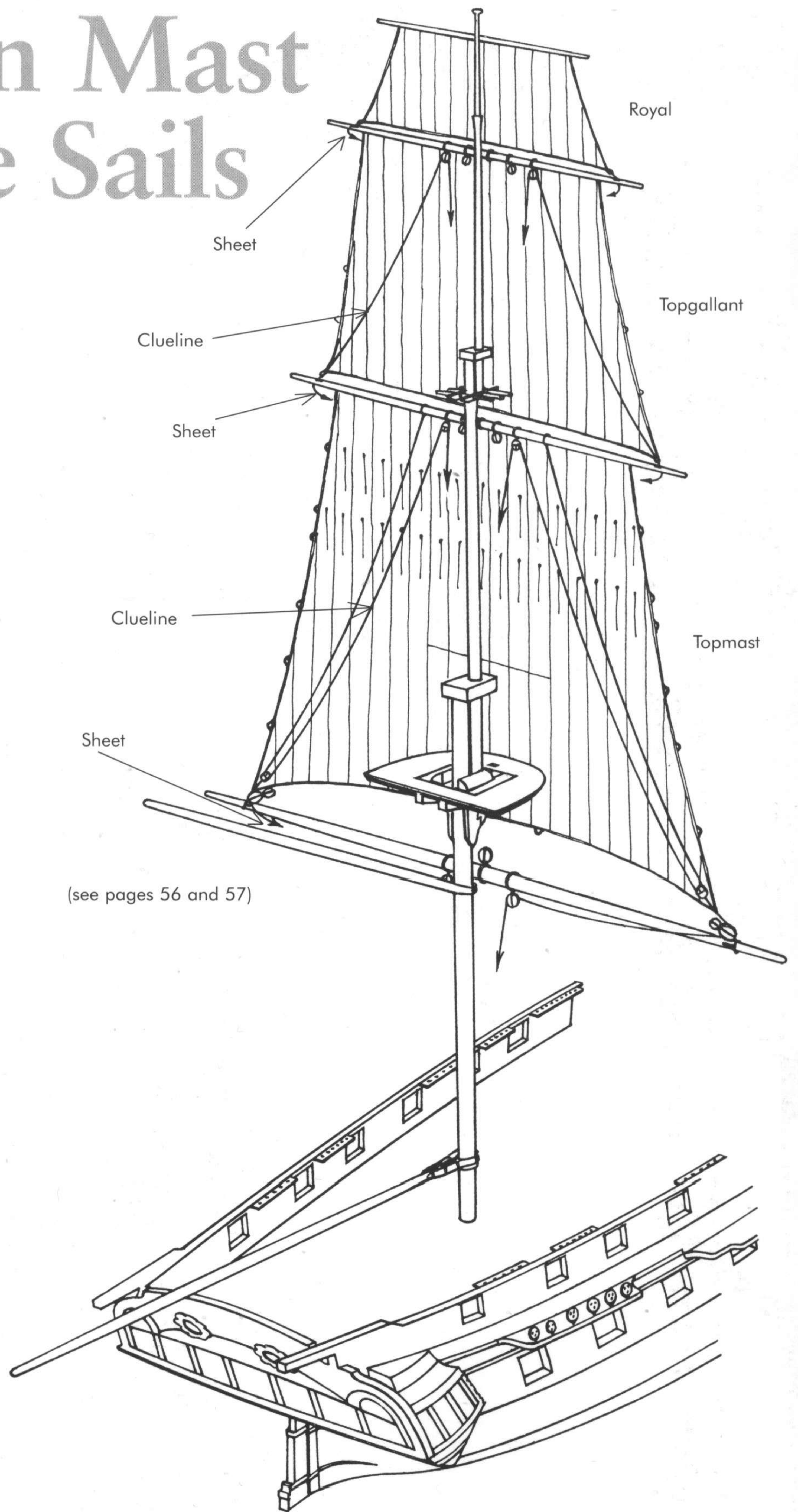
Mizzen Topsail & Topgallant Bowlines



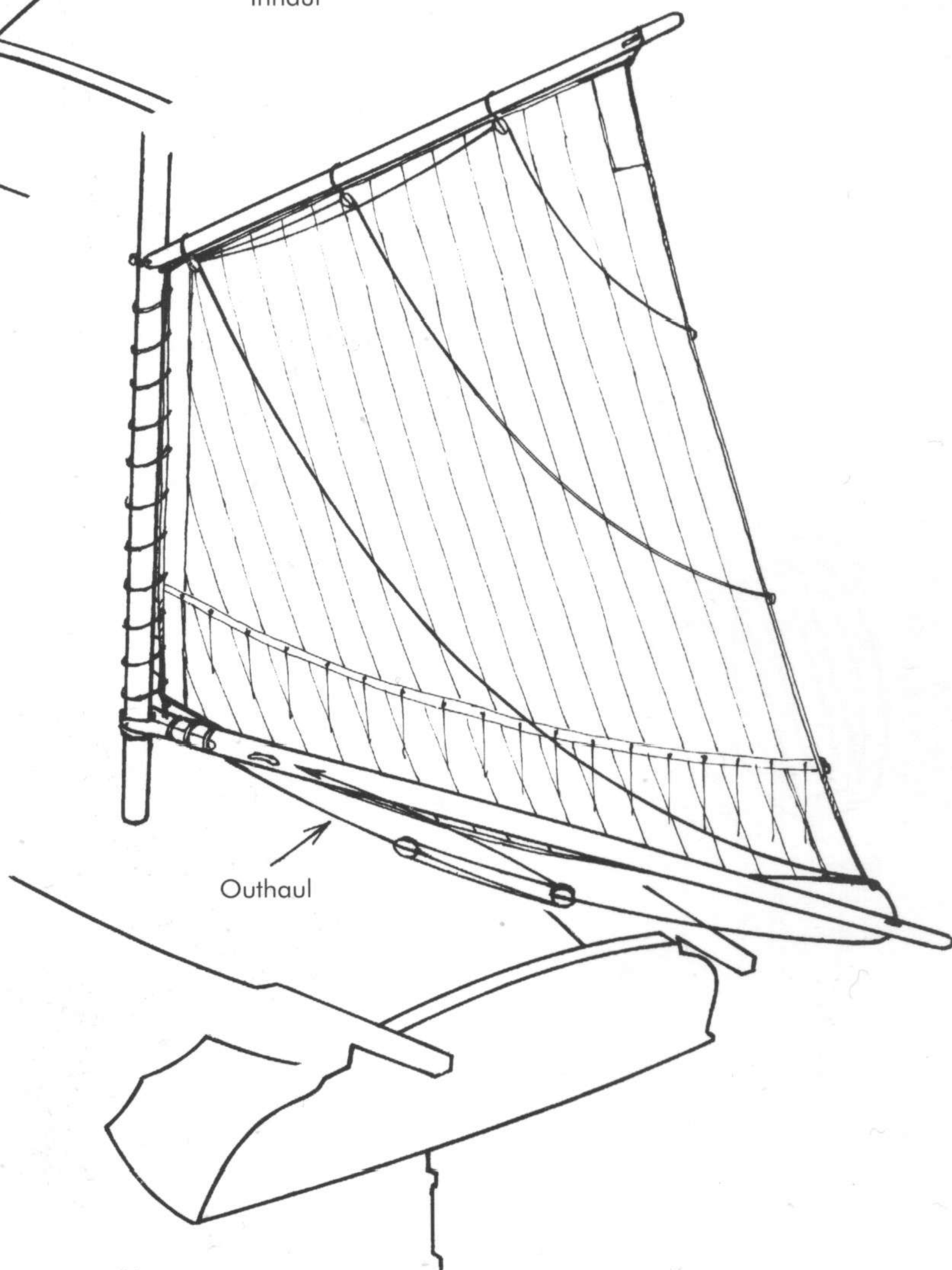
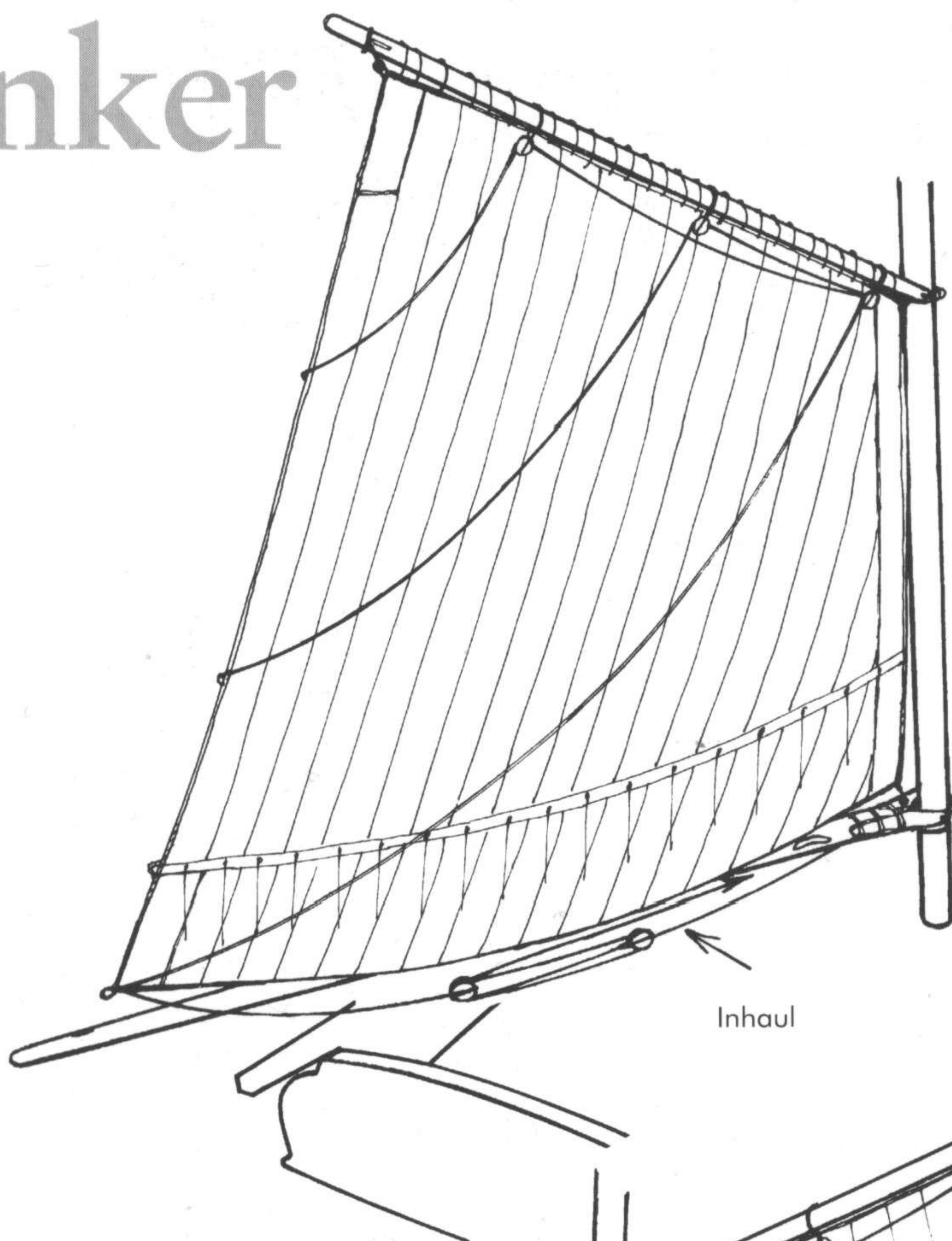
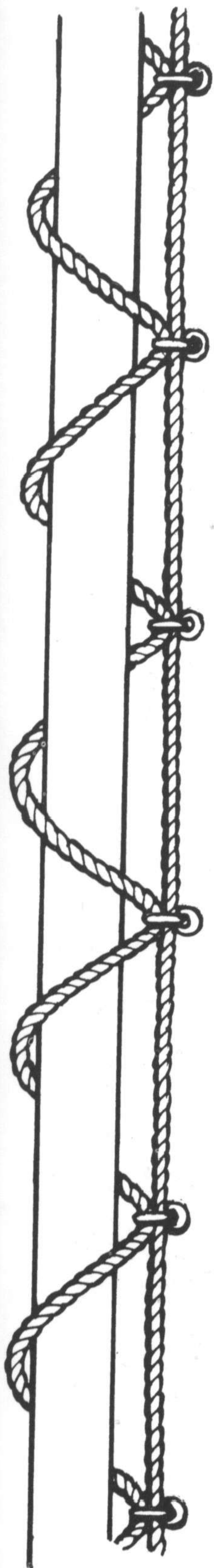
Through blocks on the opposite side shroud; the port bowline rove through the block on the starboard main shroud and vice versa



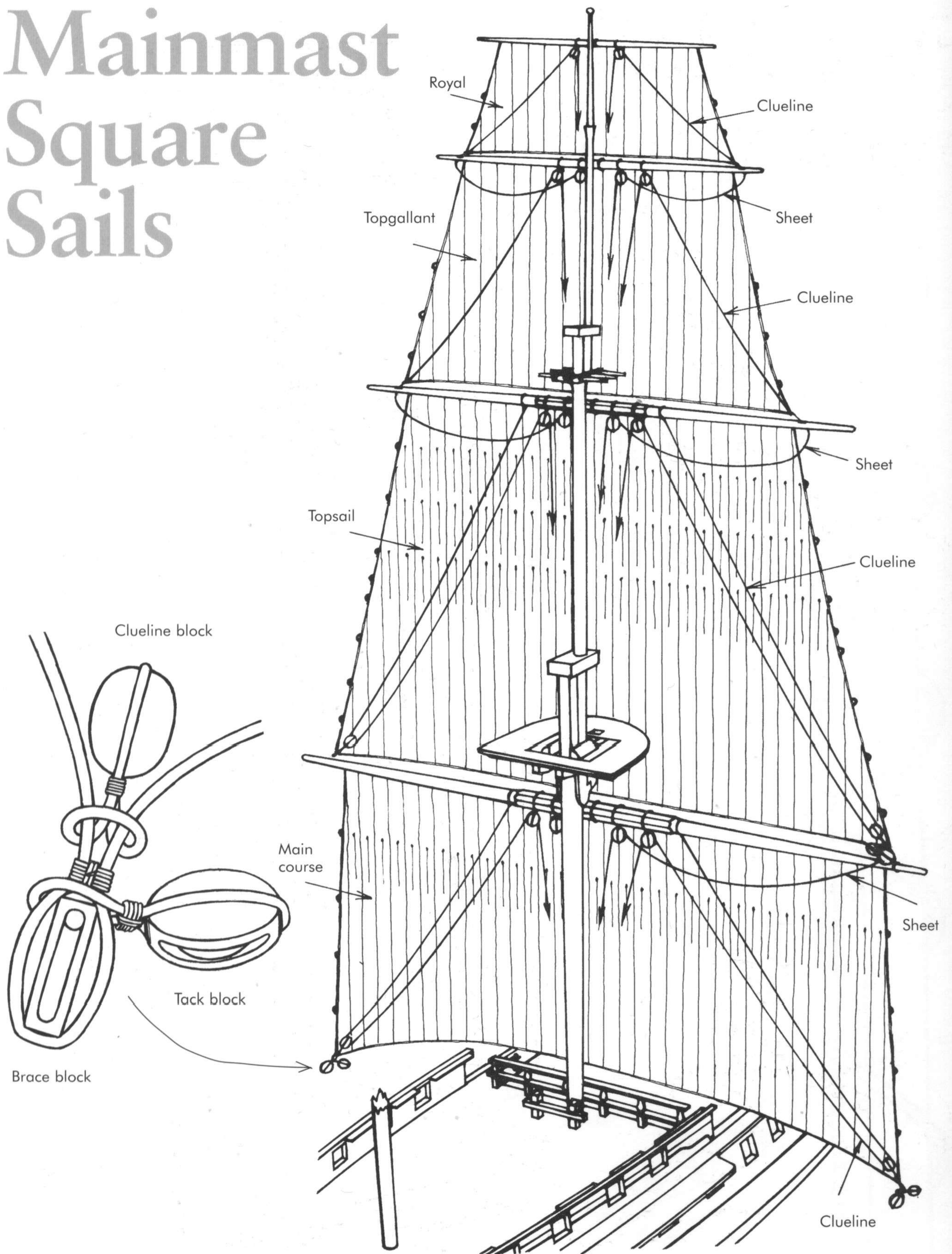
Mizzen Mast Square Sails



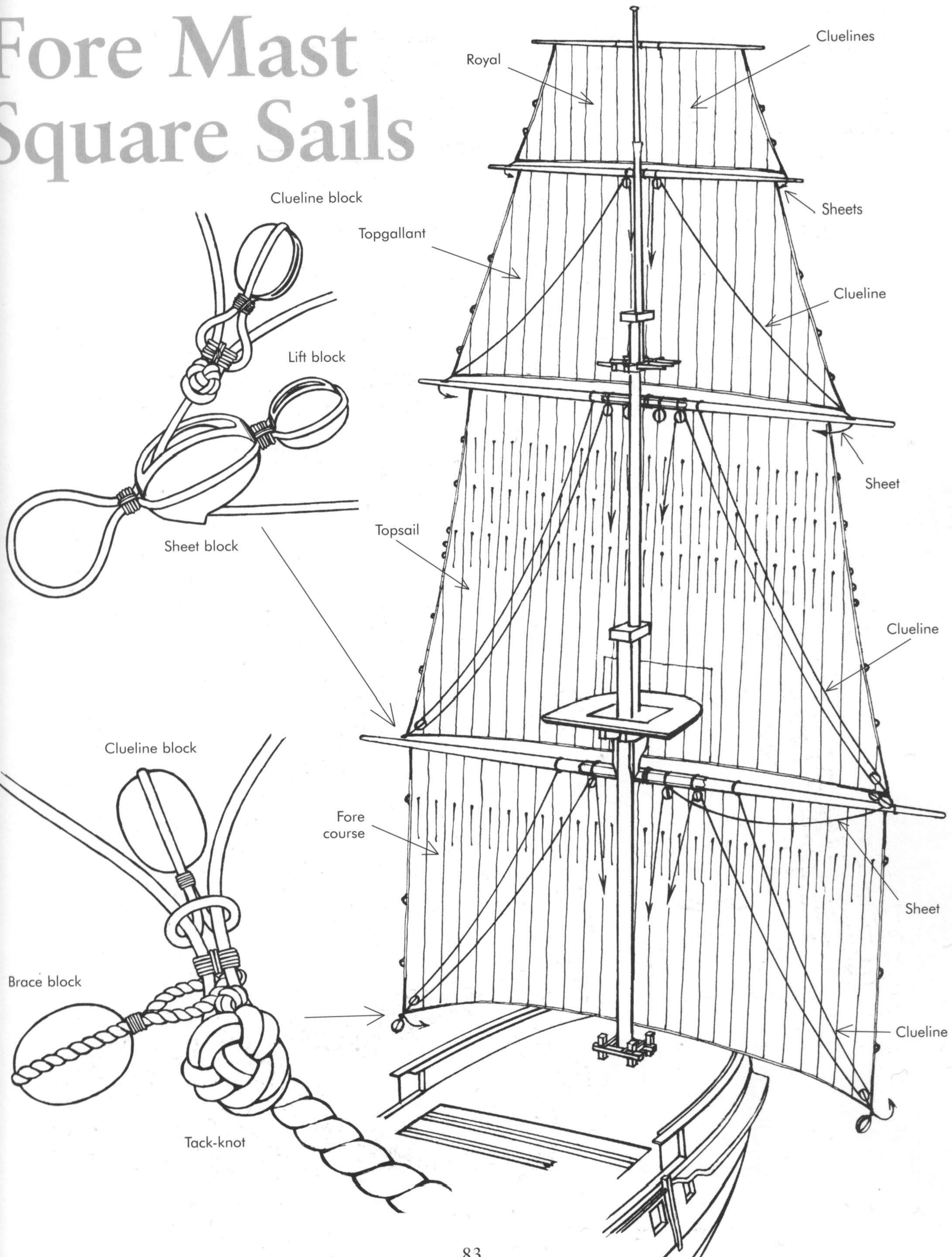
Spanker



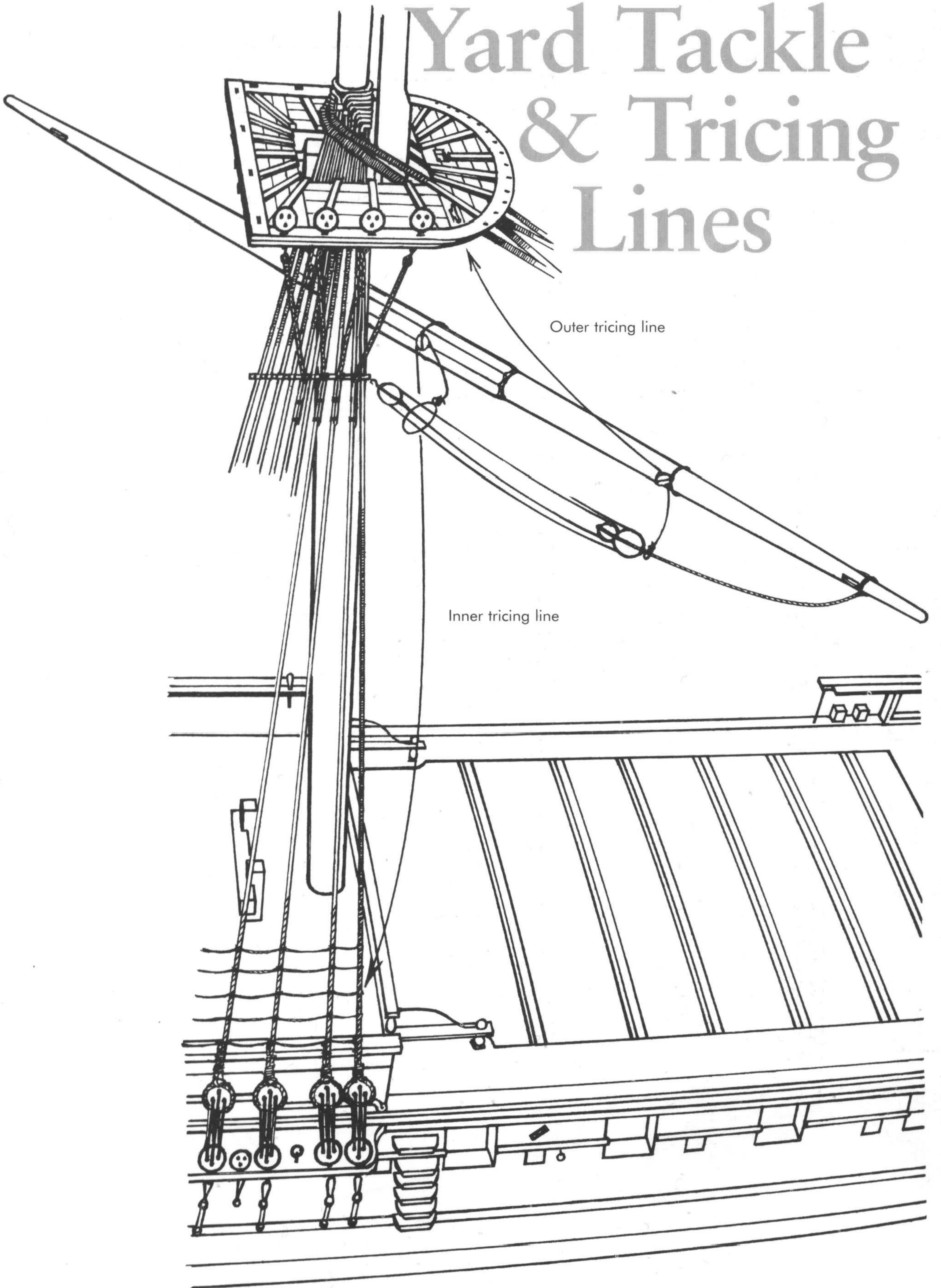
Mainmast Square Sails



Fore Mast Square Sails



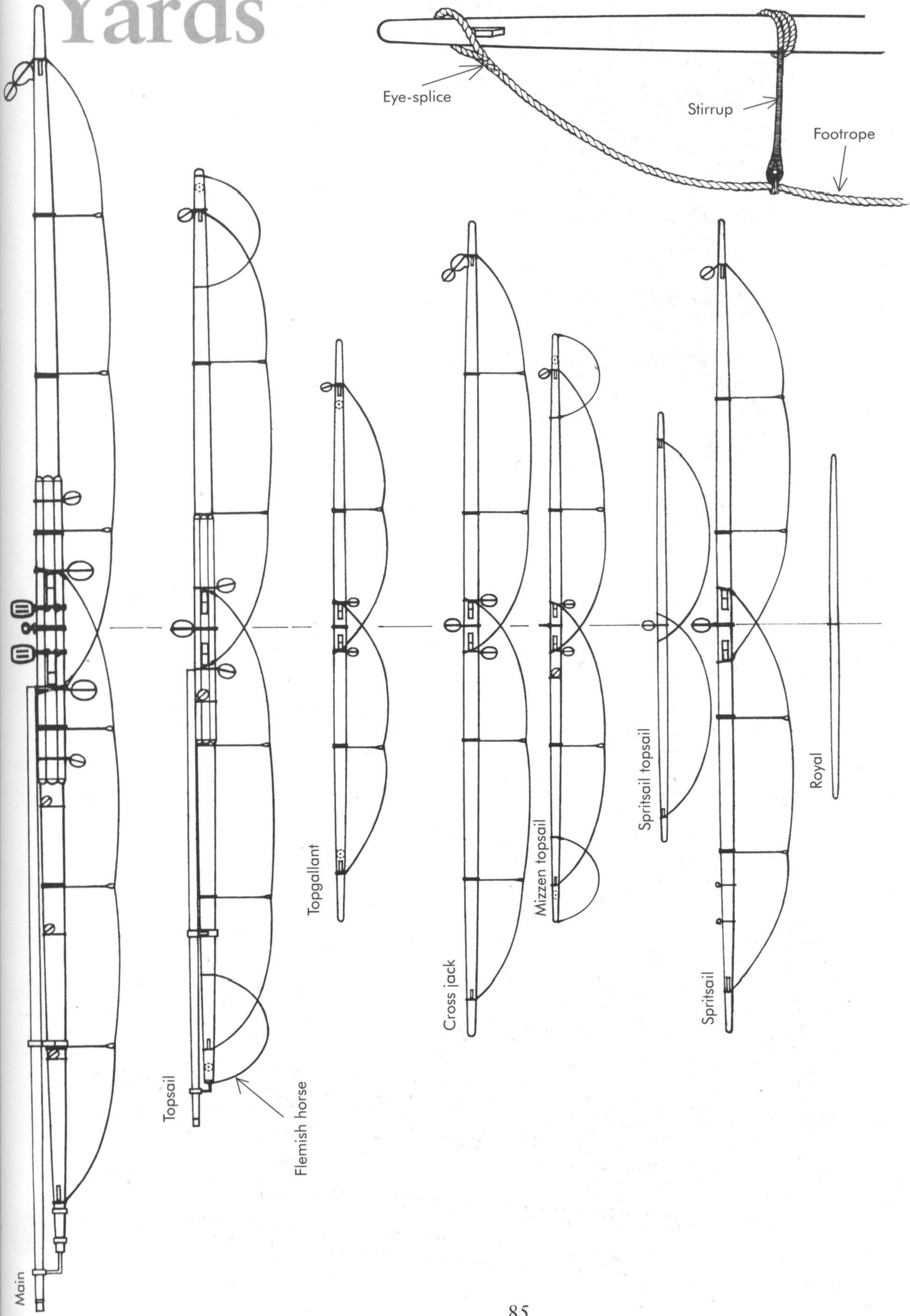
Yard Tackle & Tricing Lines



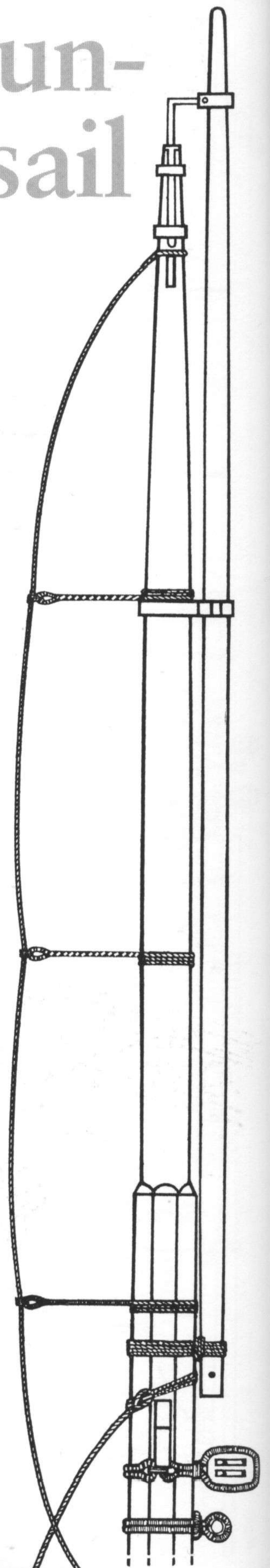
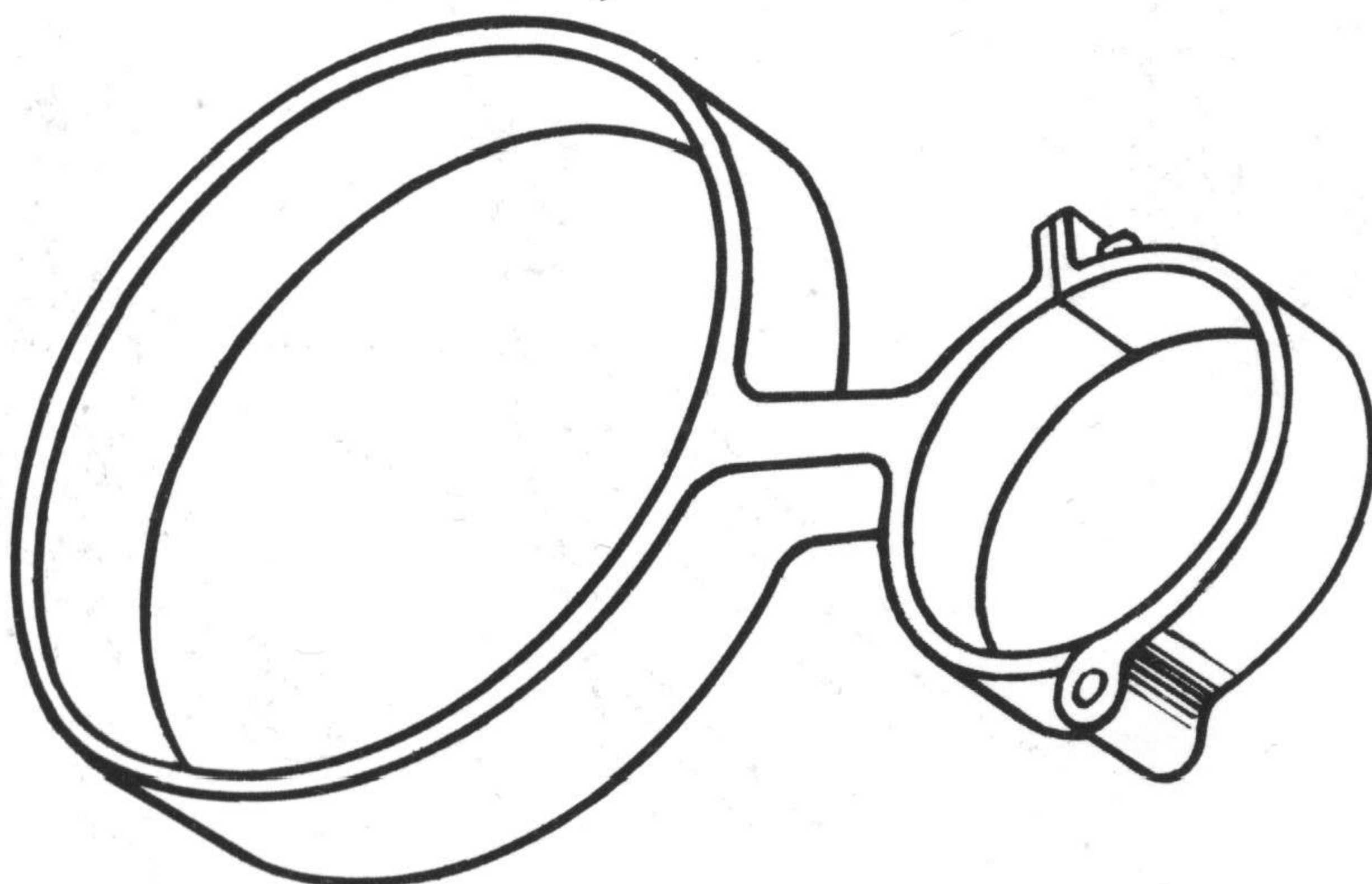
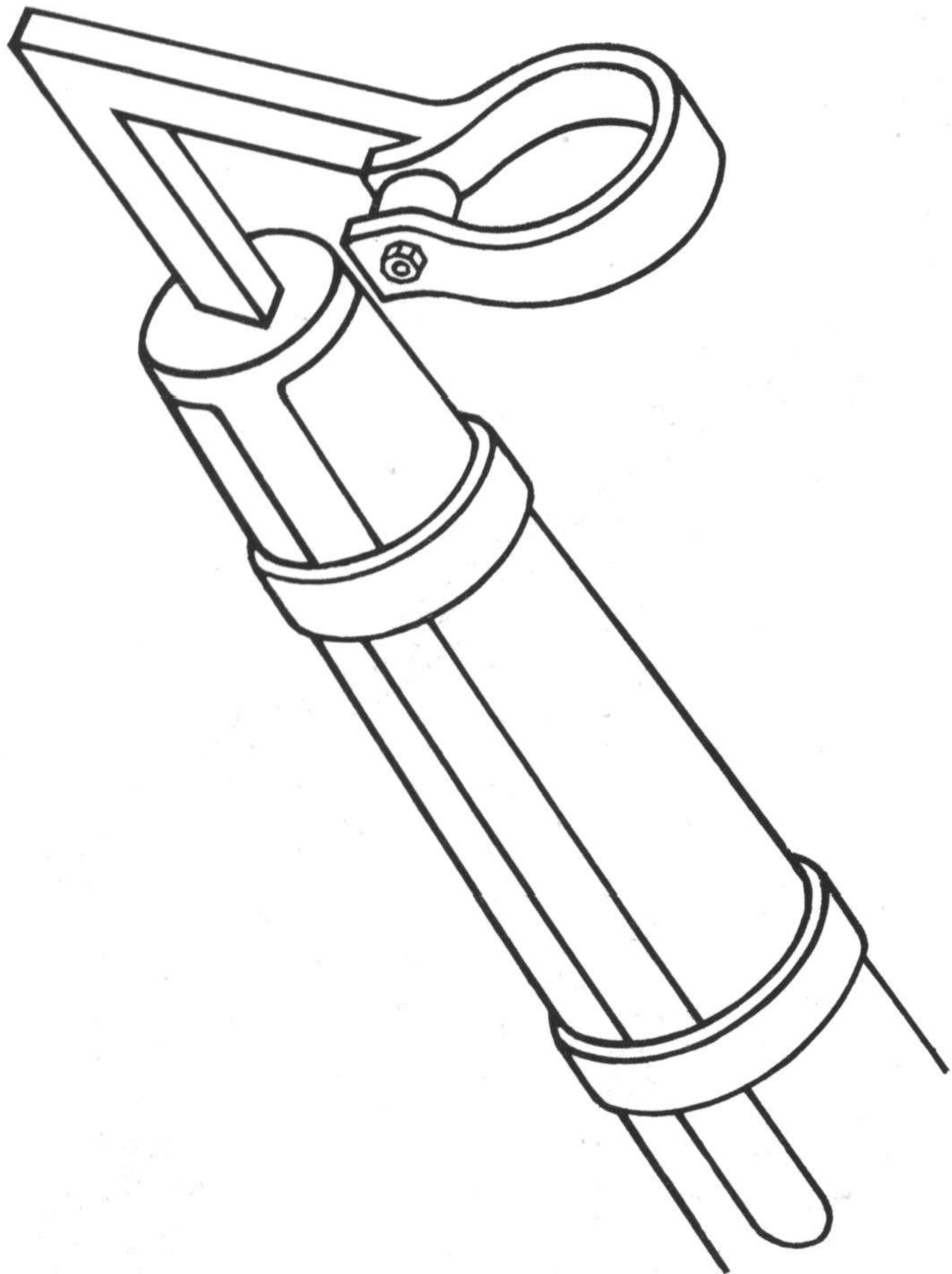
Outer tricing line

Inner tricing line

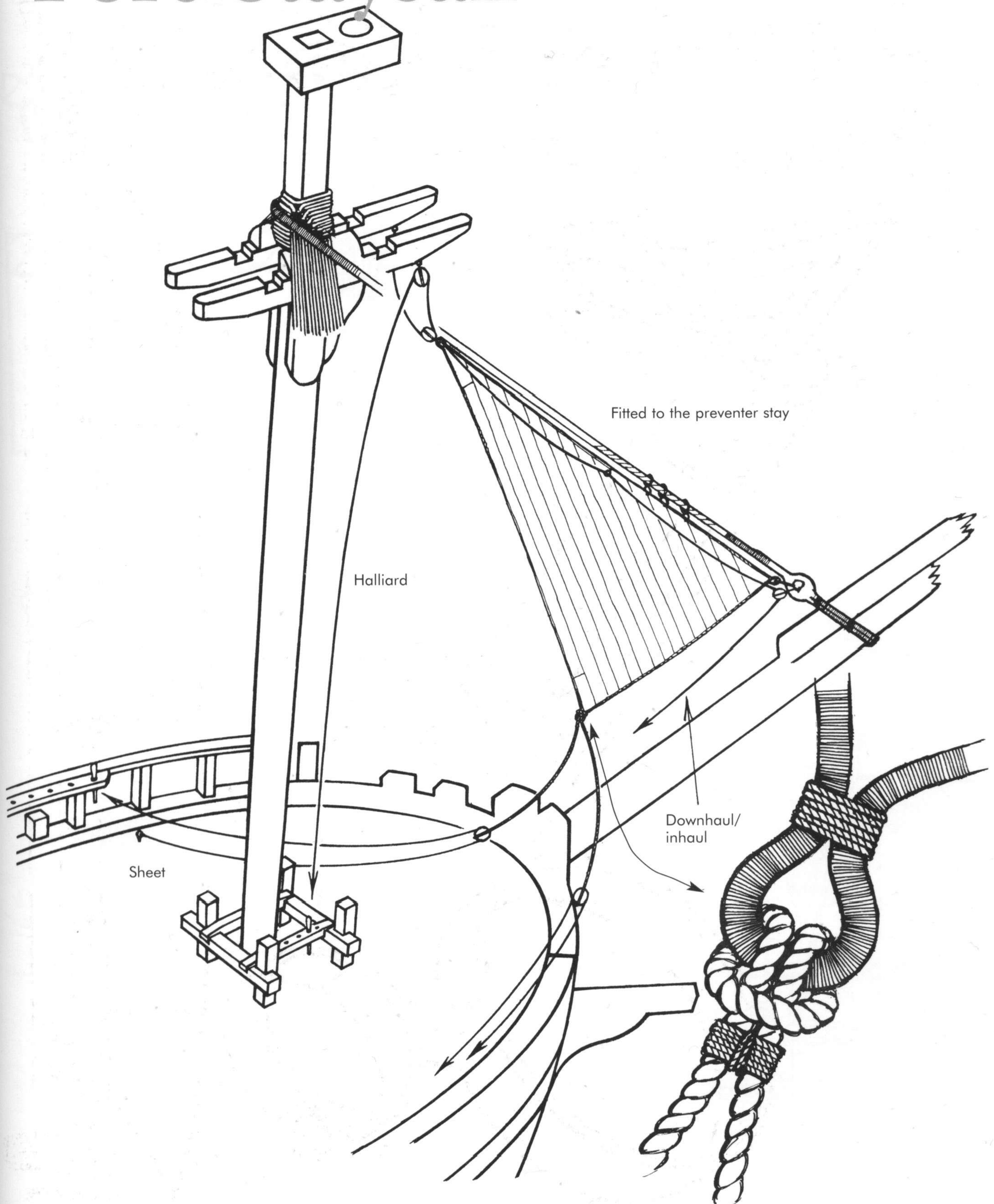
Yards



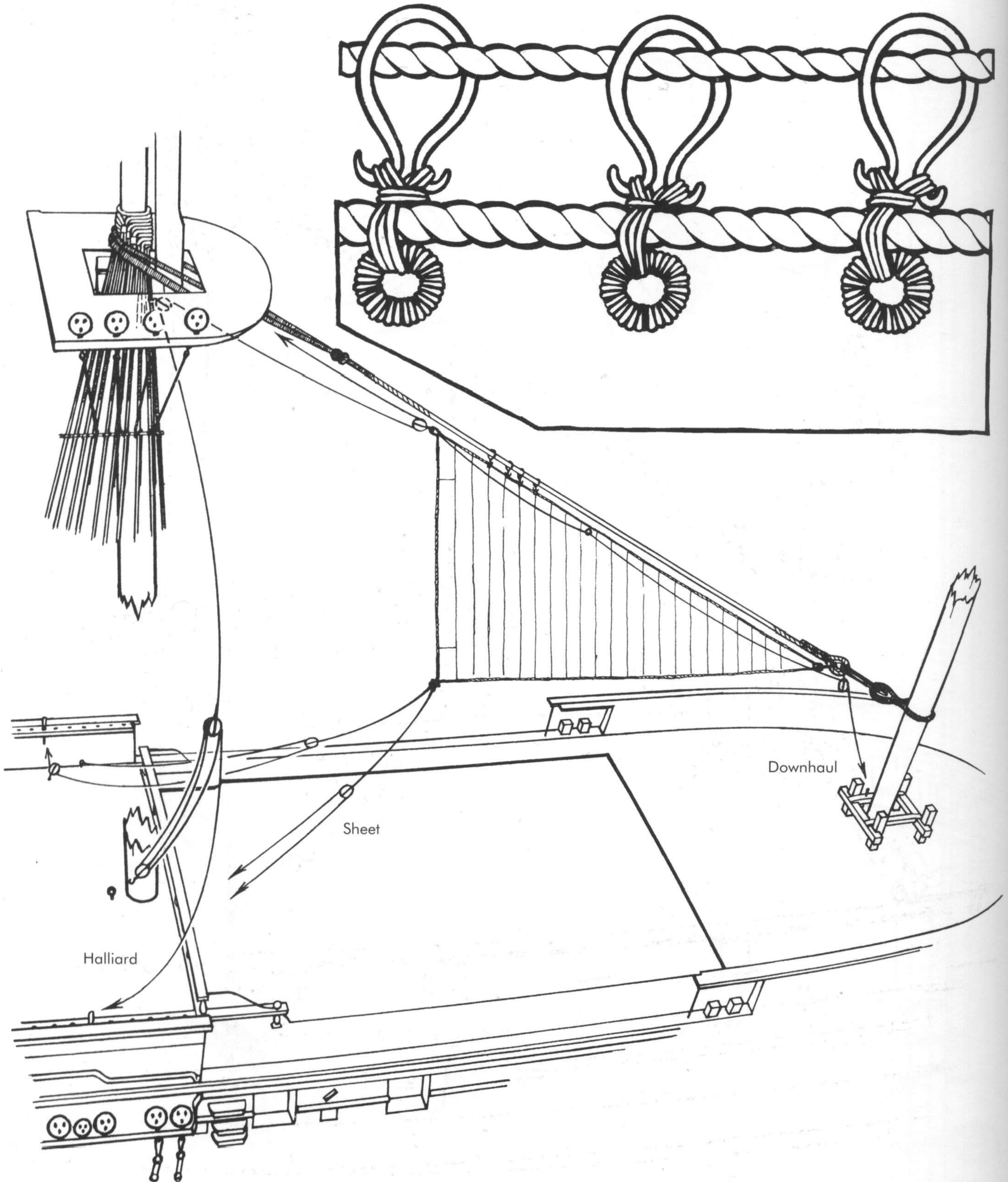
Main Yard with Stun- Sail Boom & Stunsail Boom Irons



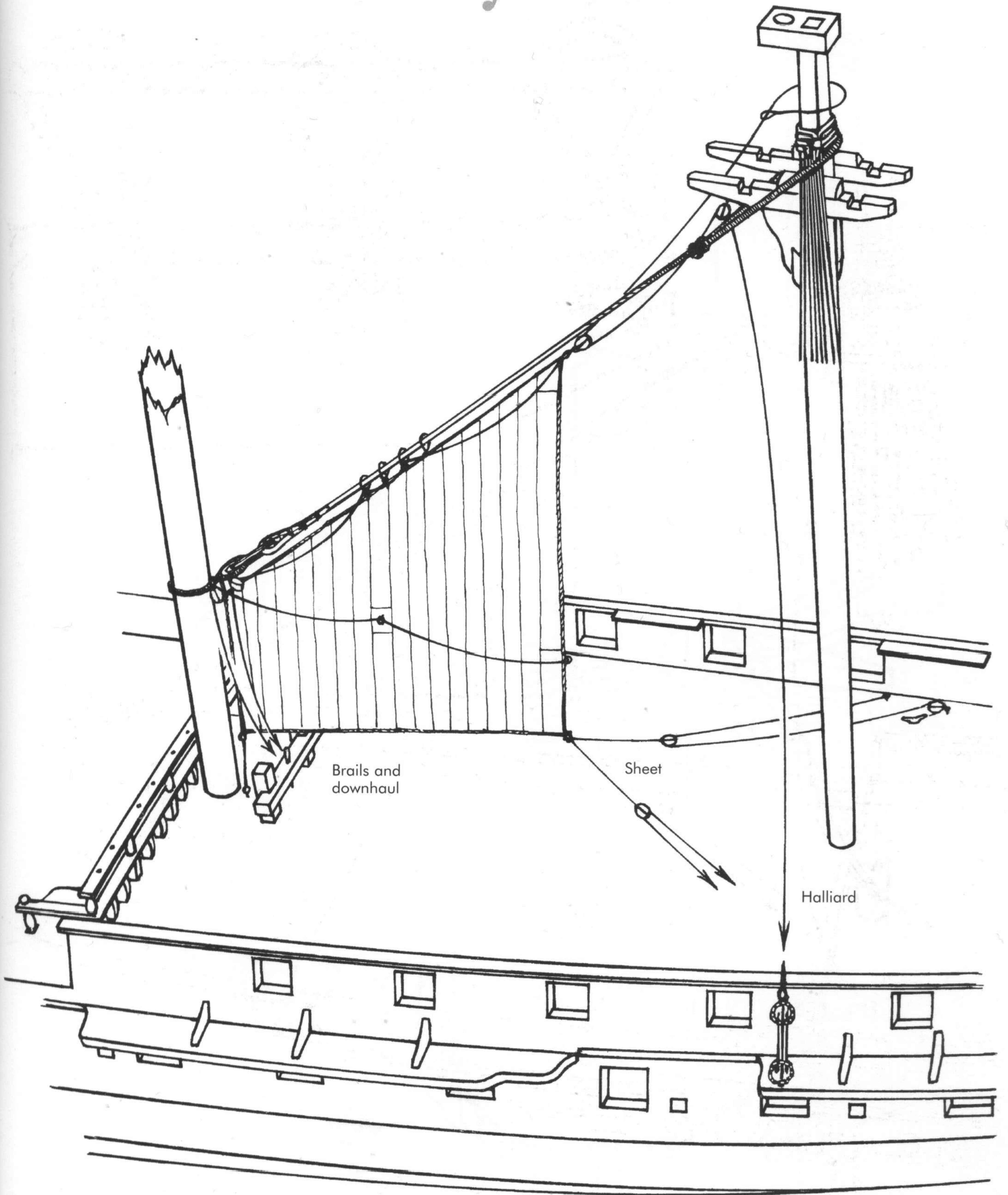
Fore Staysail



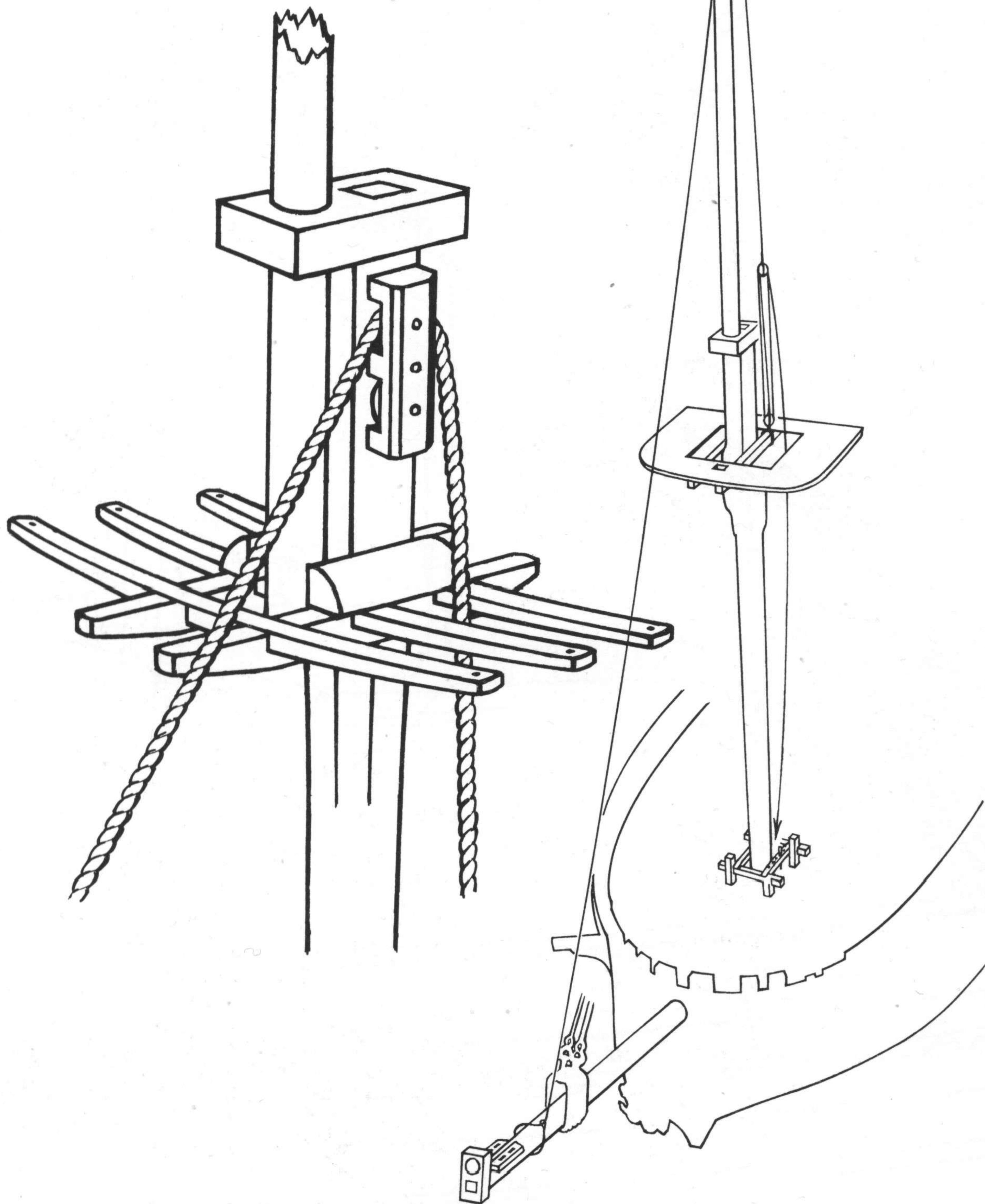
Main Staysail



Mizzen Staysail

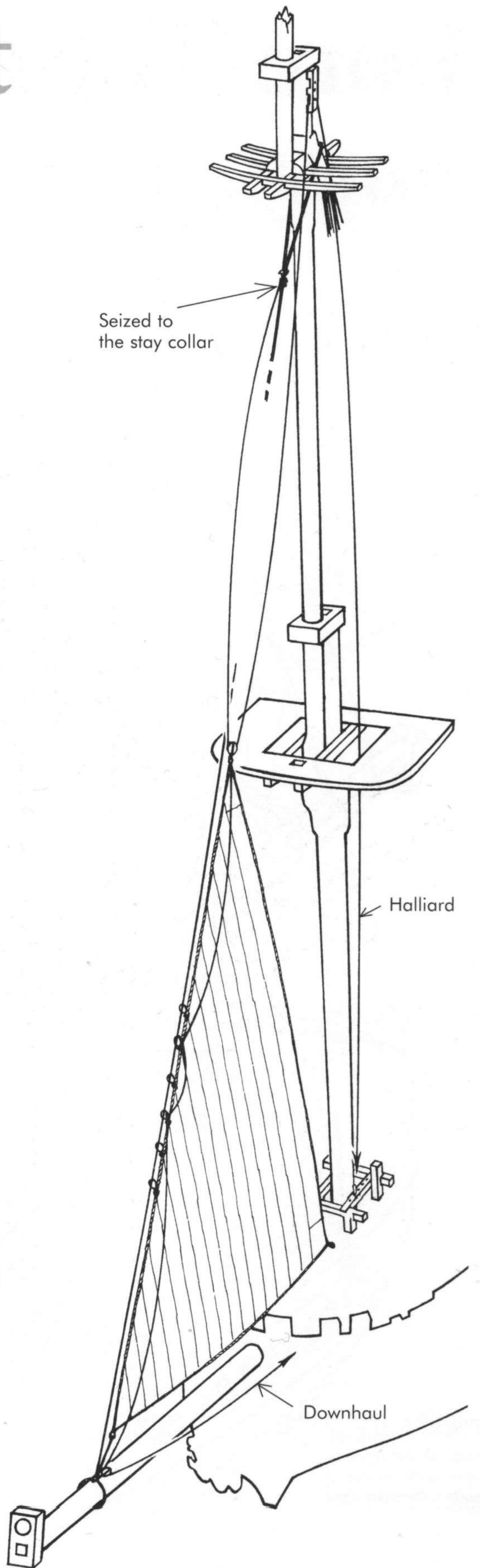
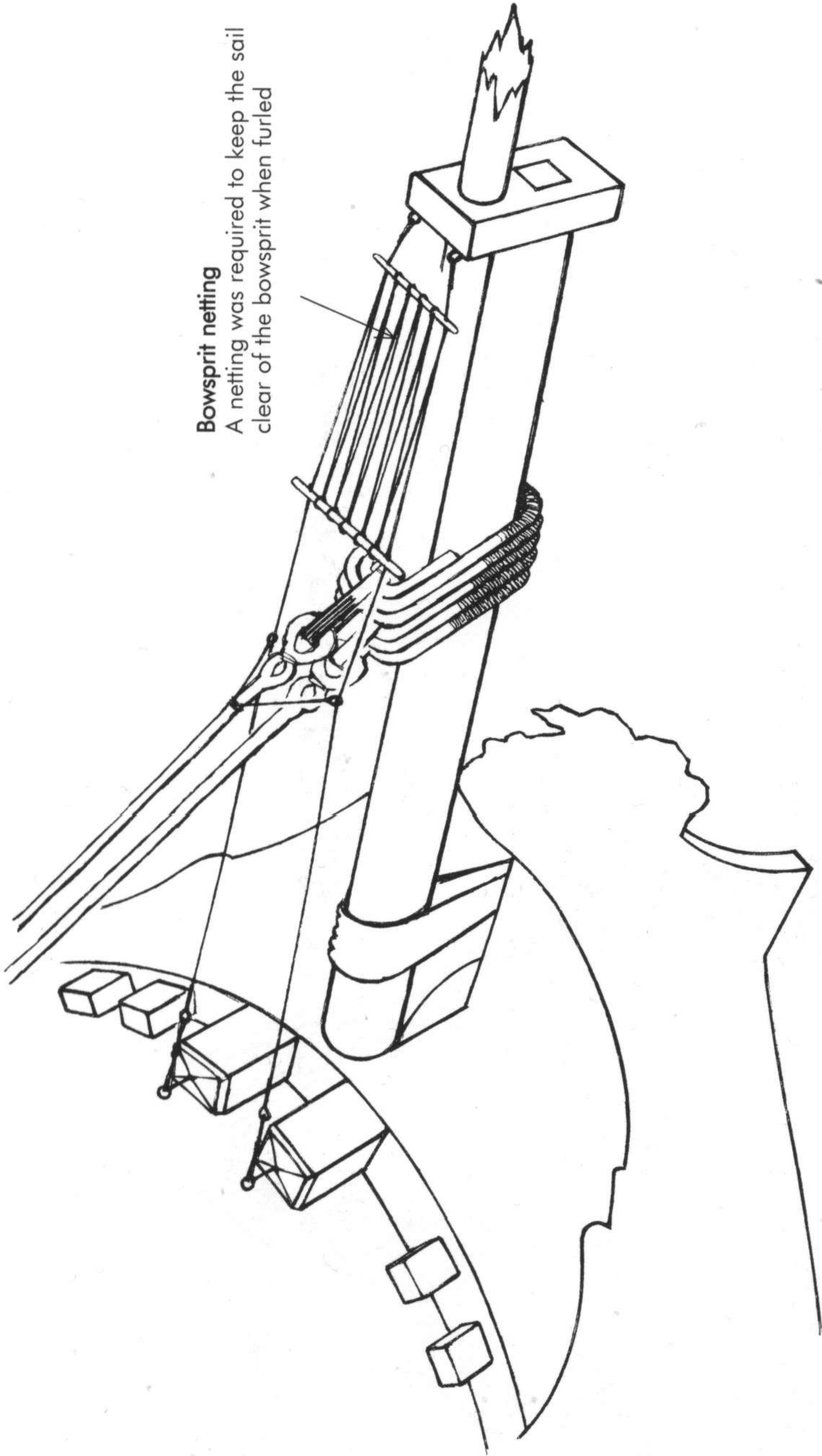


Fore Topmast Staysail Stay

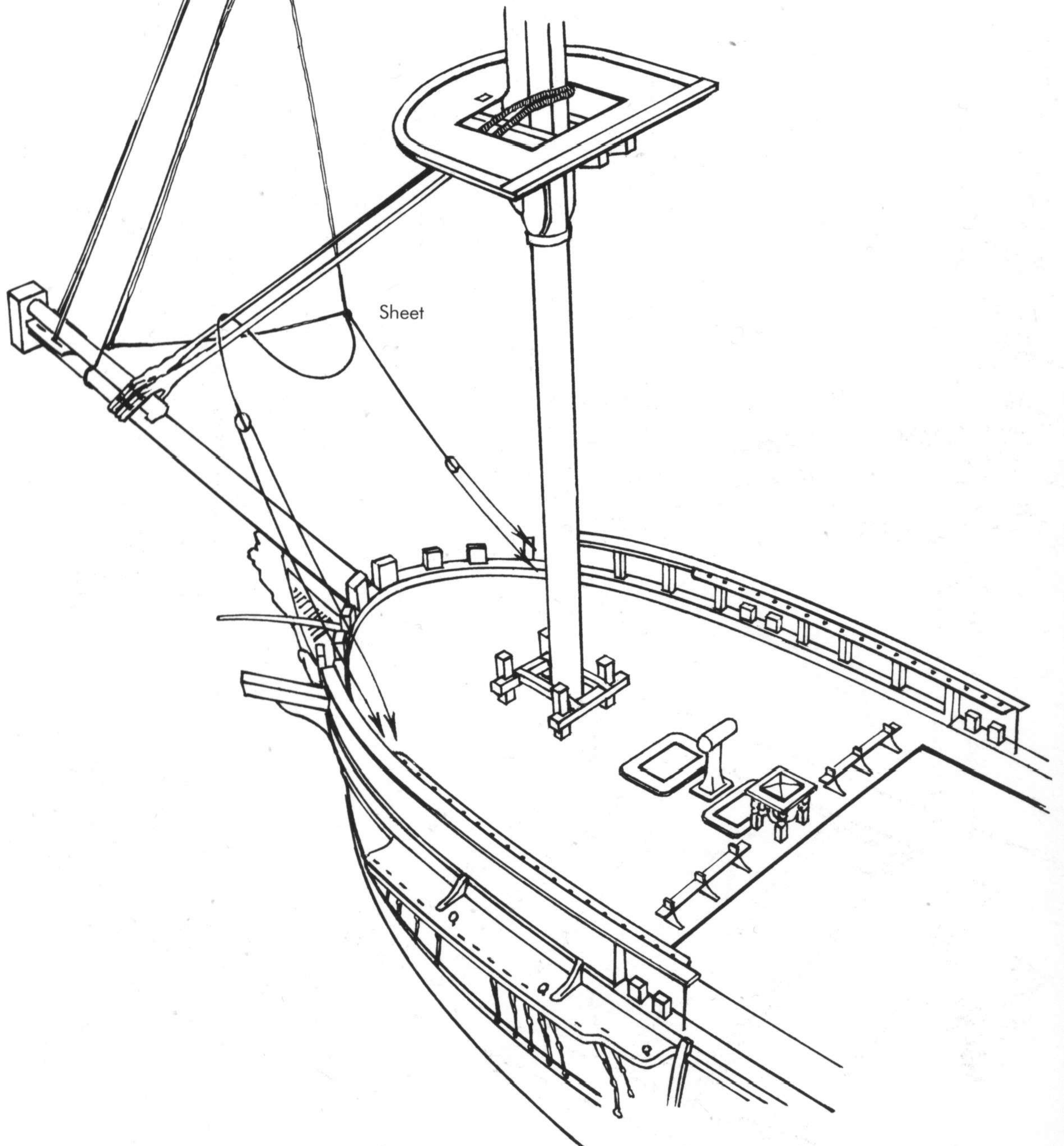


Fore Topmast Staysail

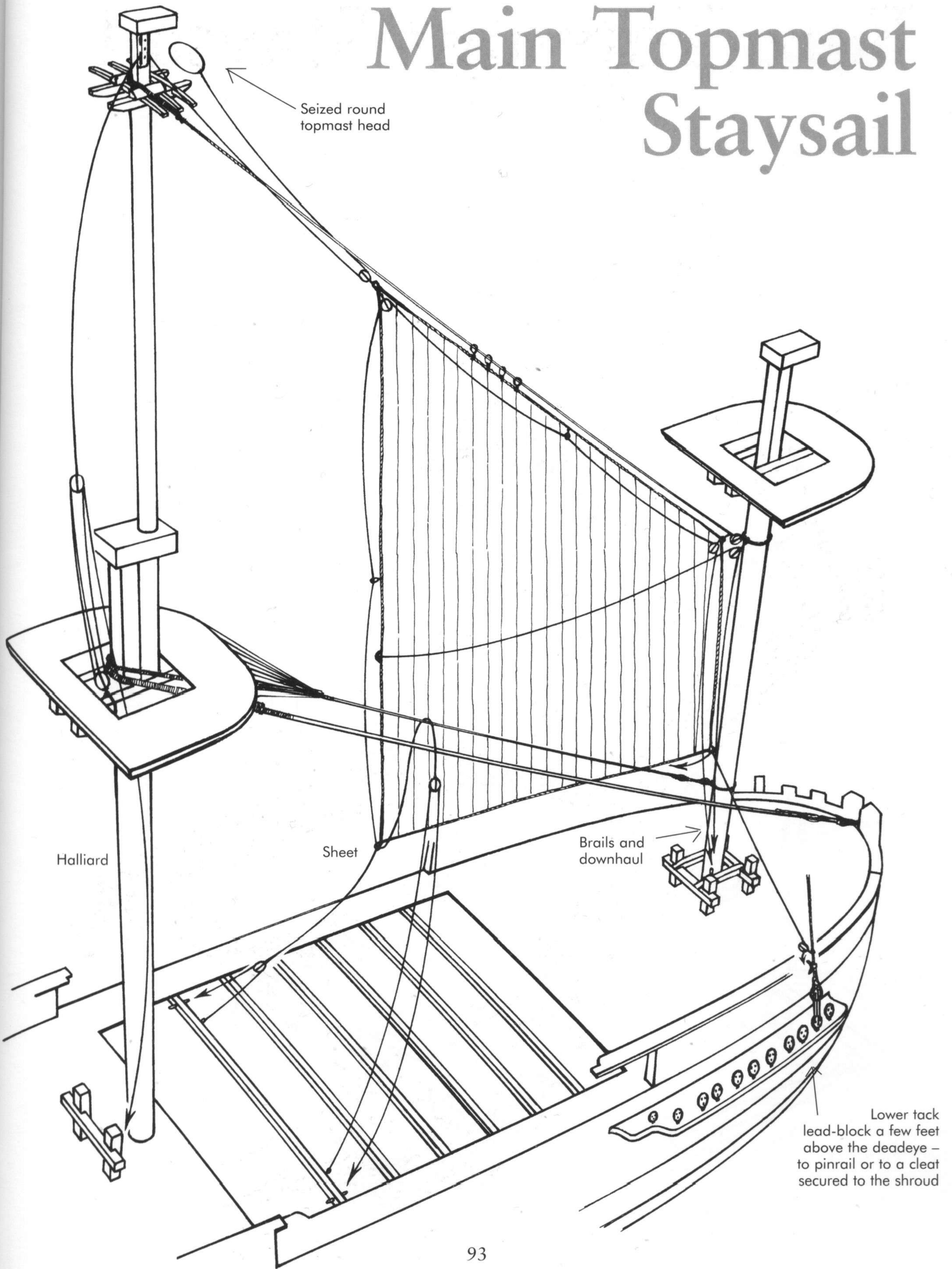
Bowsprit netting
A netting was required to keep the sail clear of the bowsprit when furled



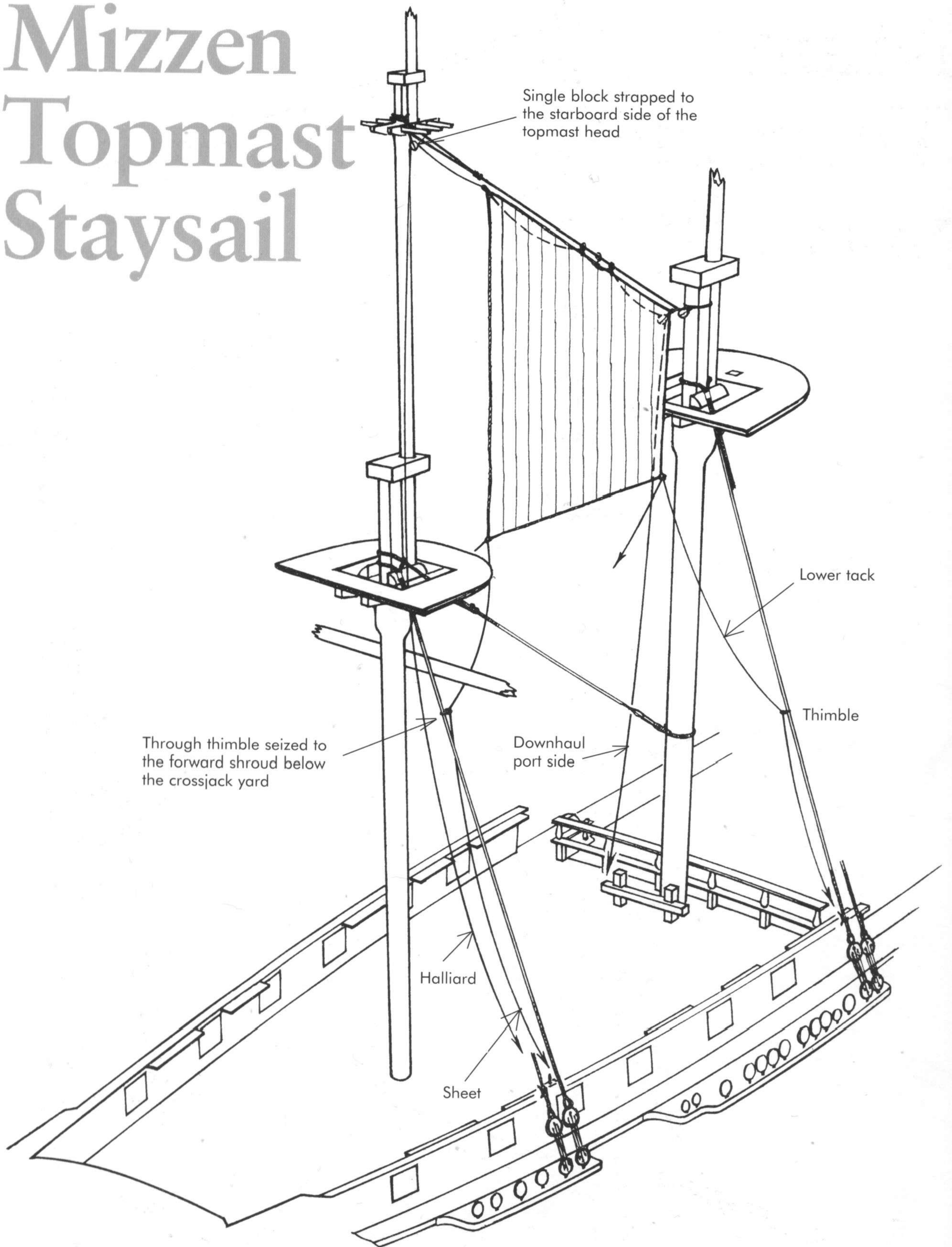
Fore Topmast Staysail



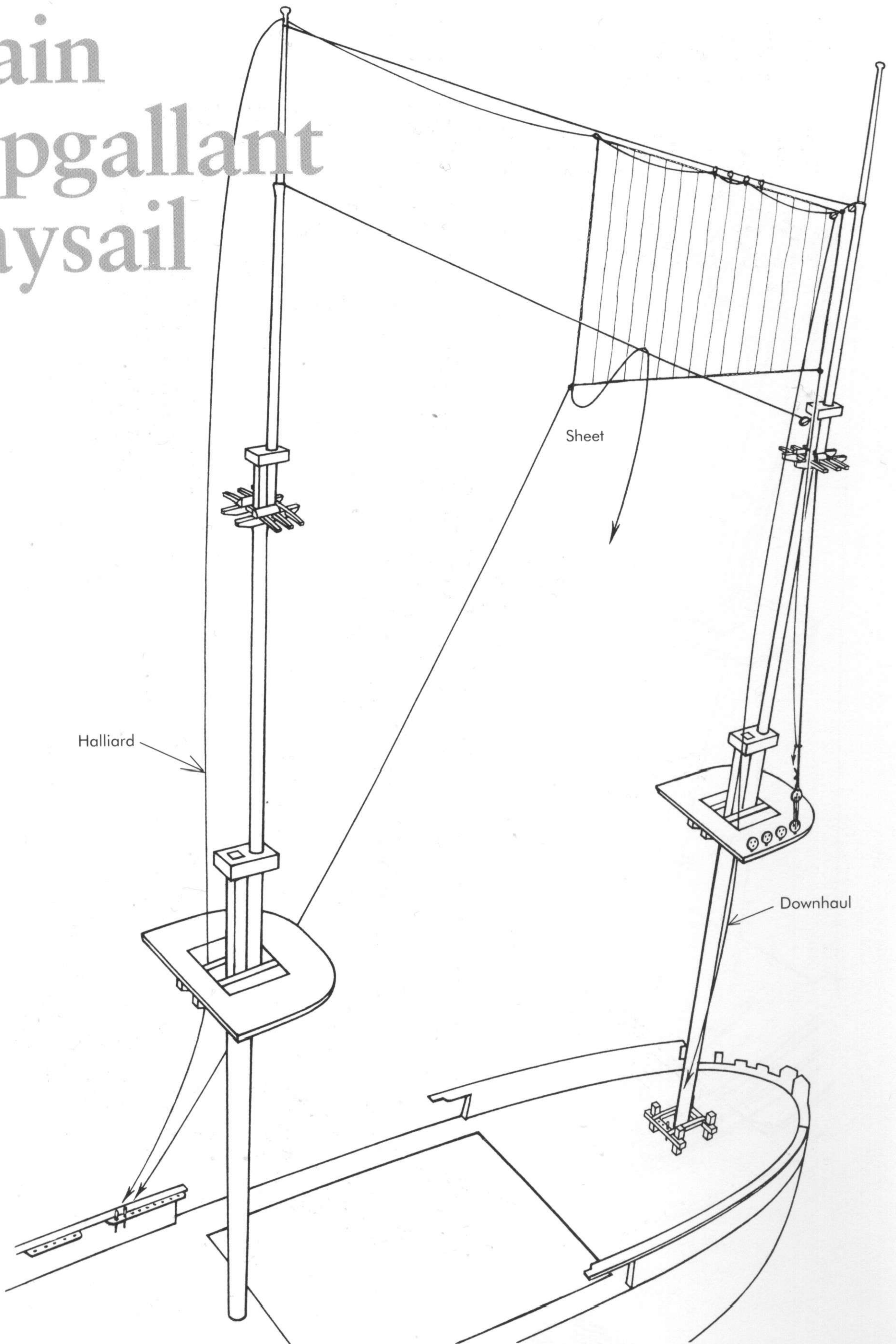
Main Topmast Staysail



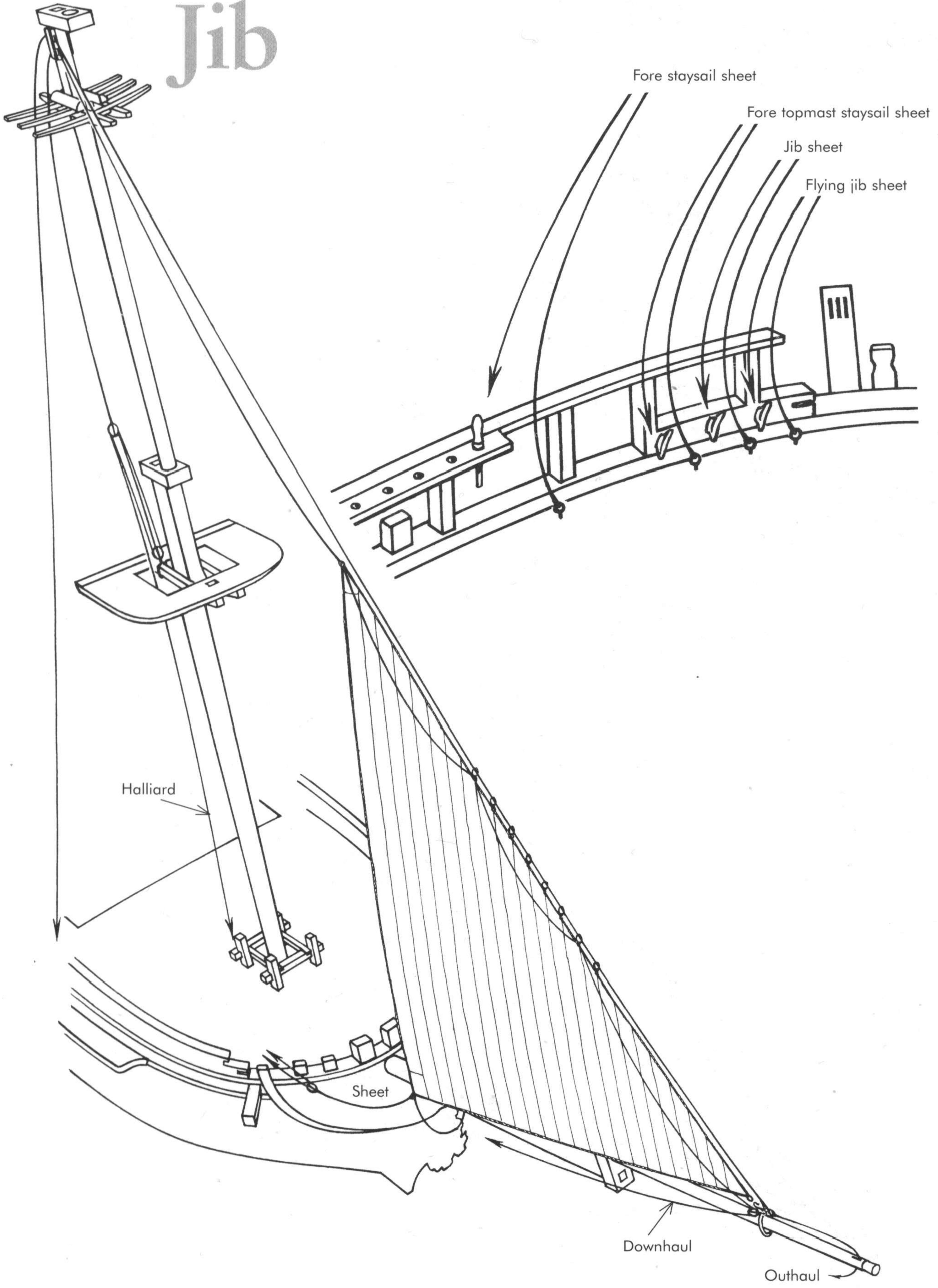
Mizzen Topmast Staysail



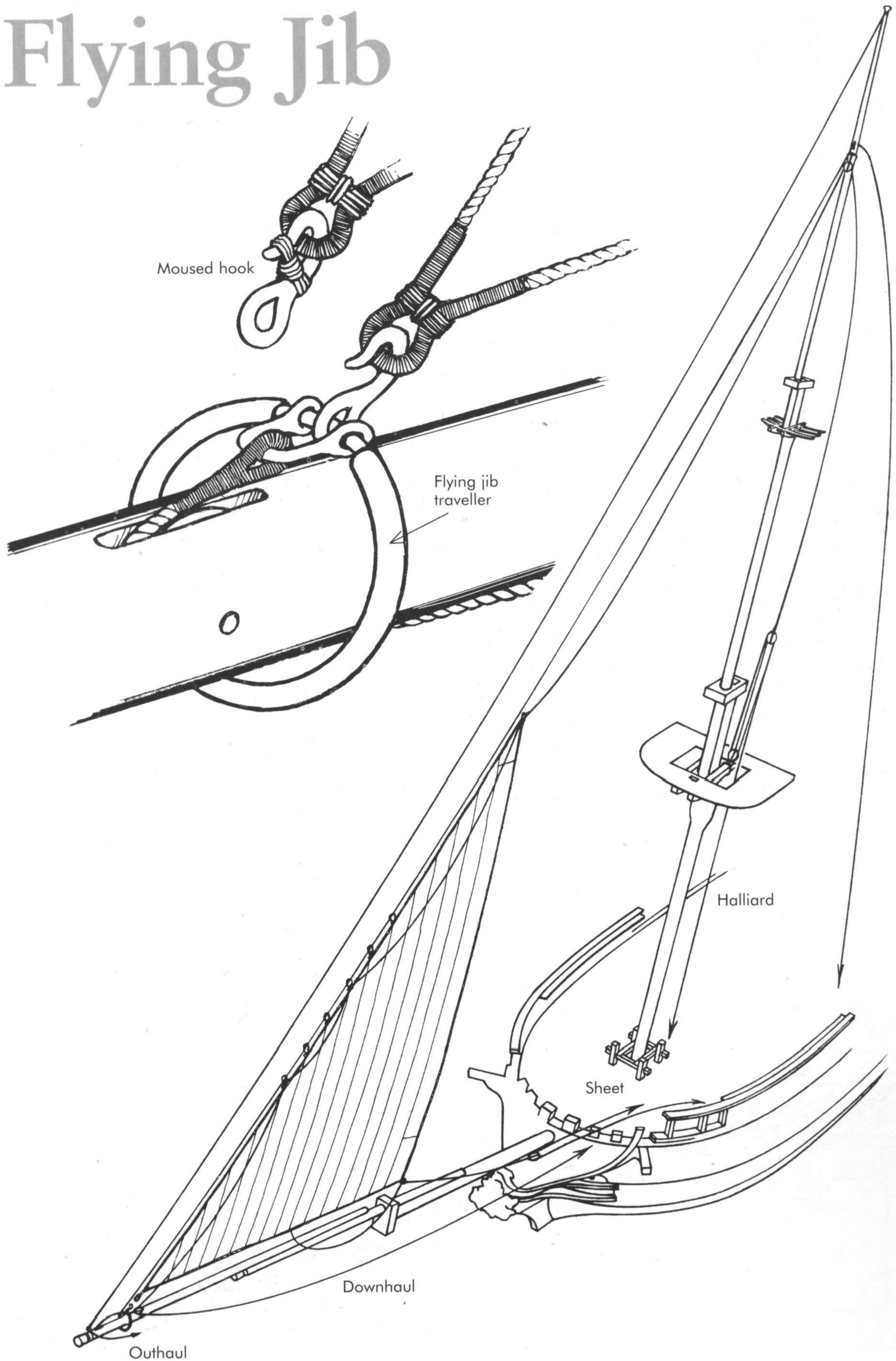
Main Topgallant Staysail



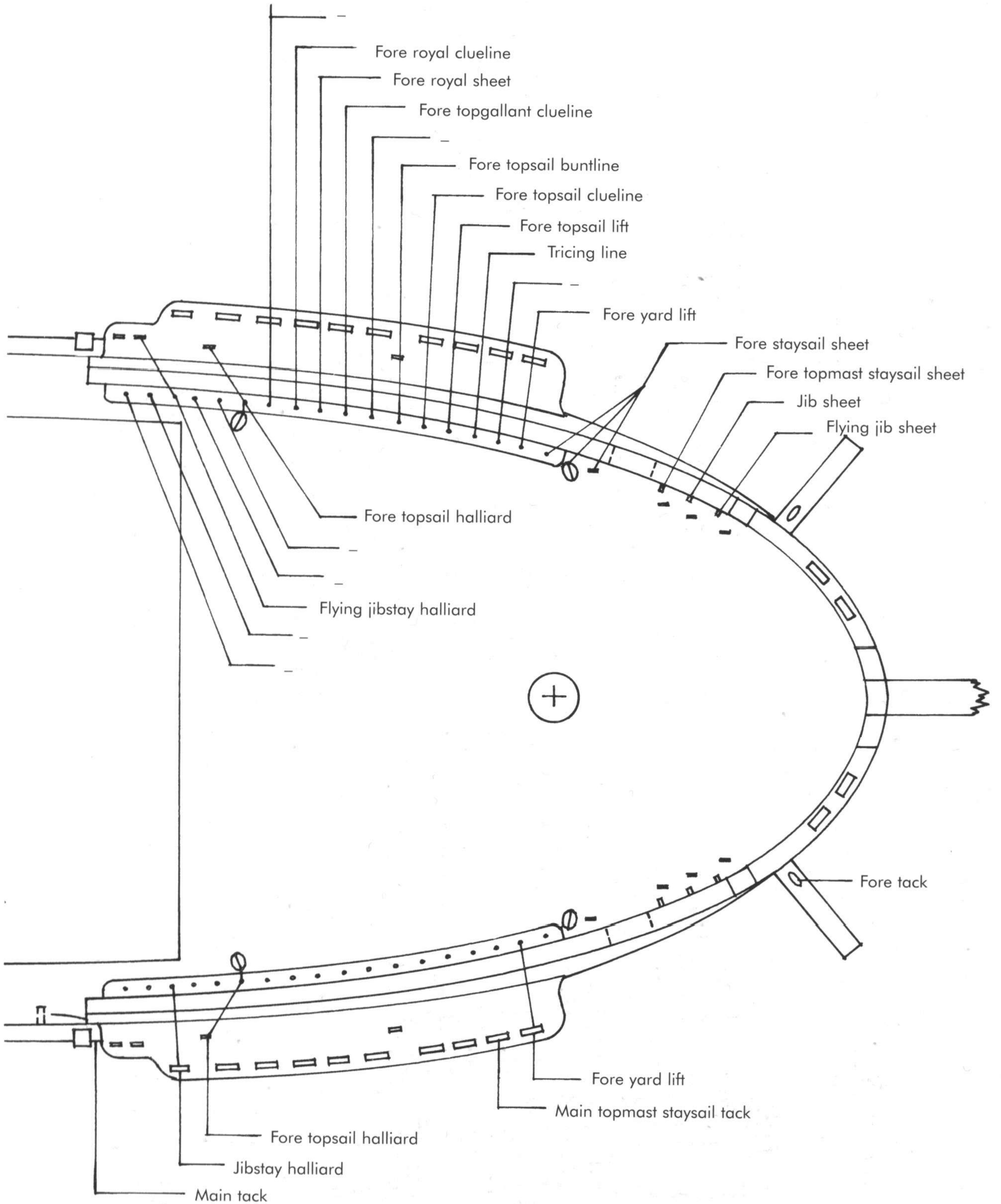
Jib



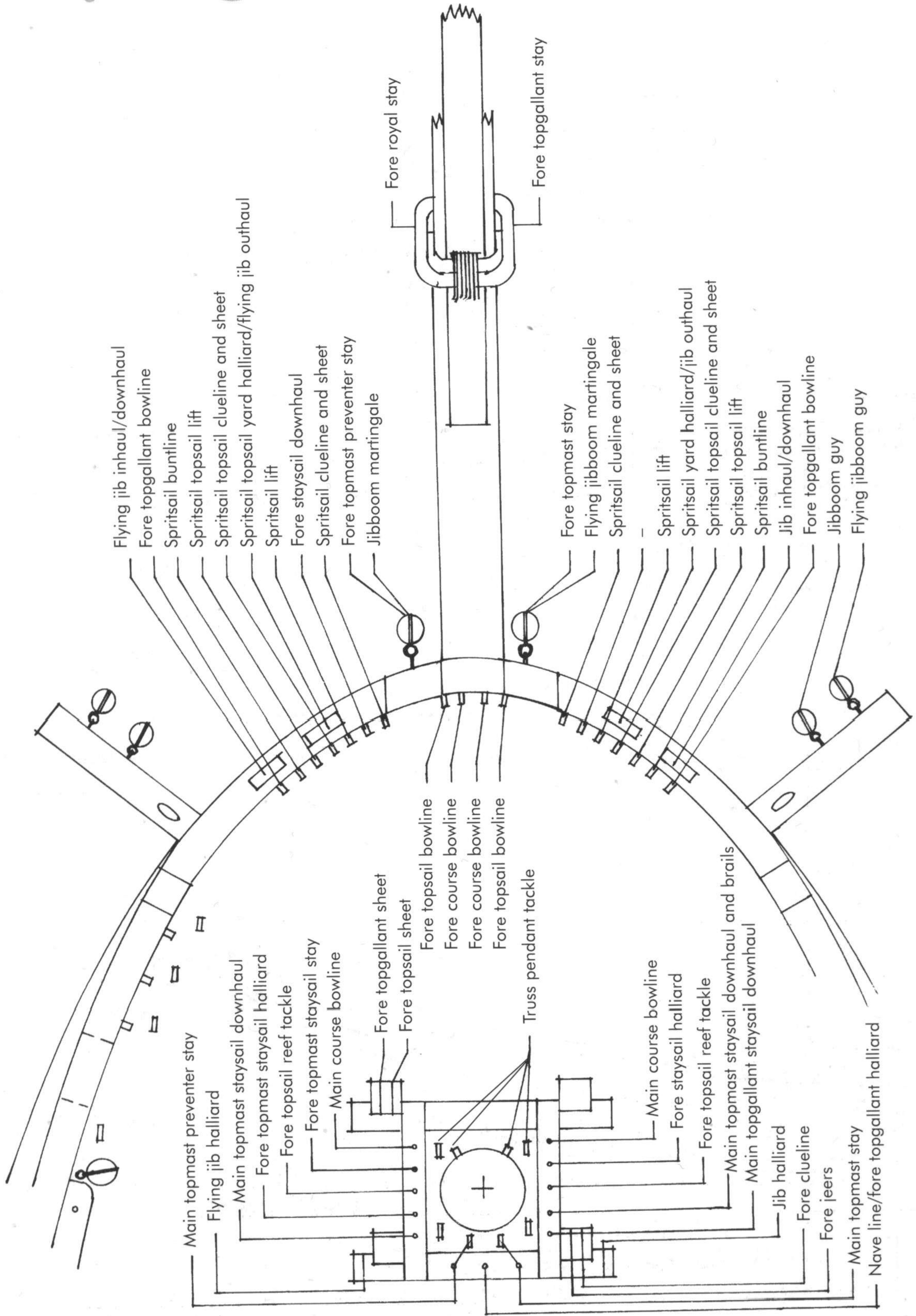
Flying Jib



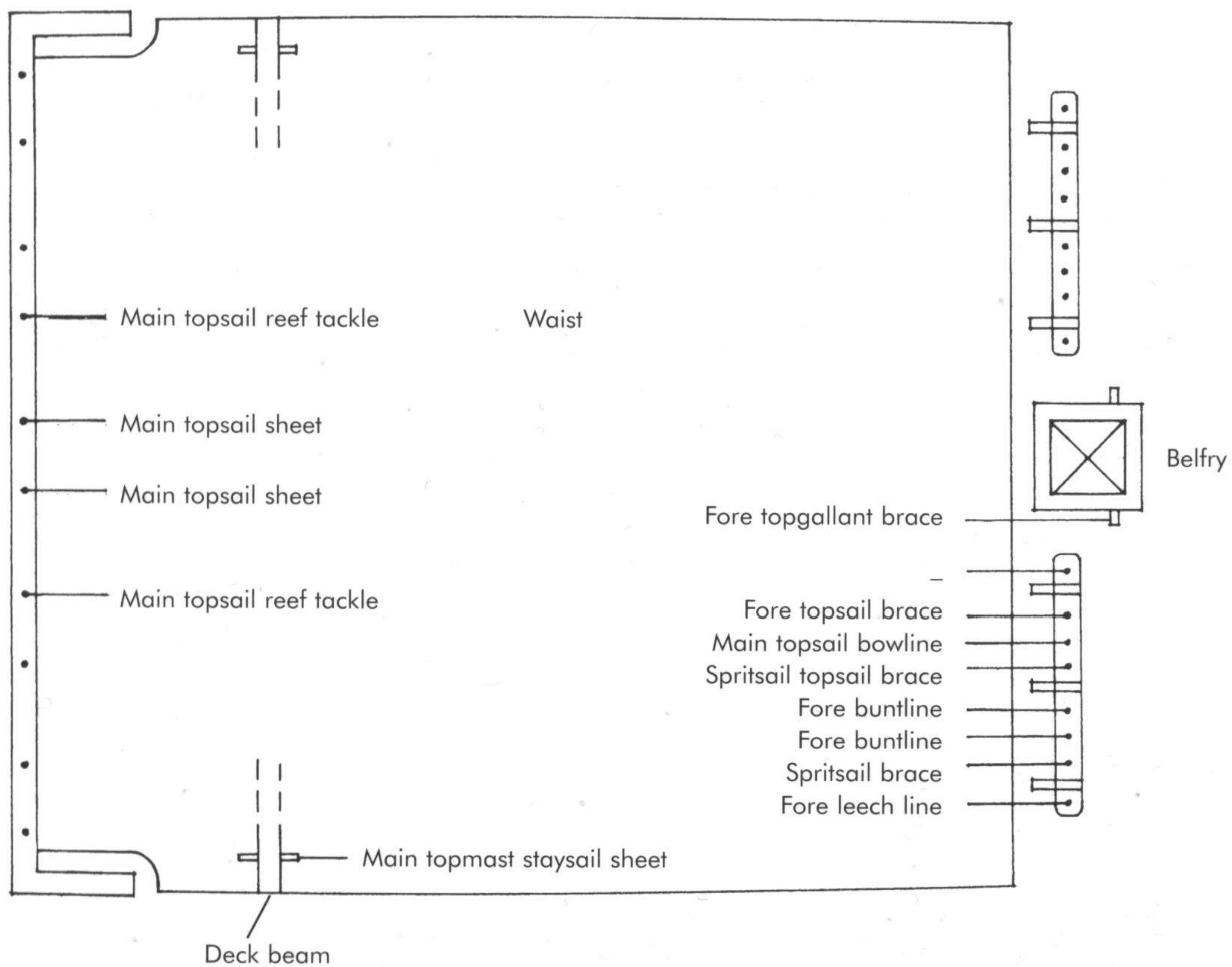
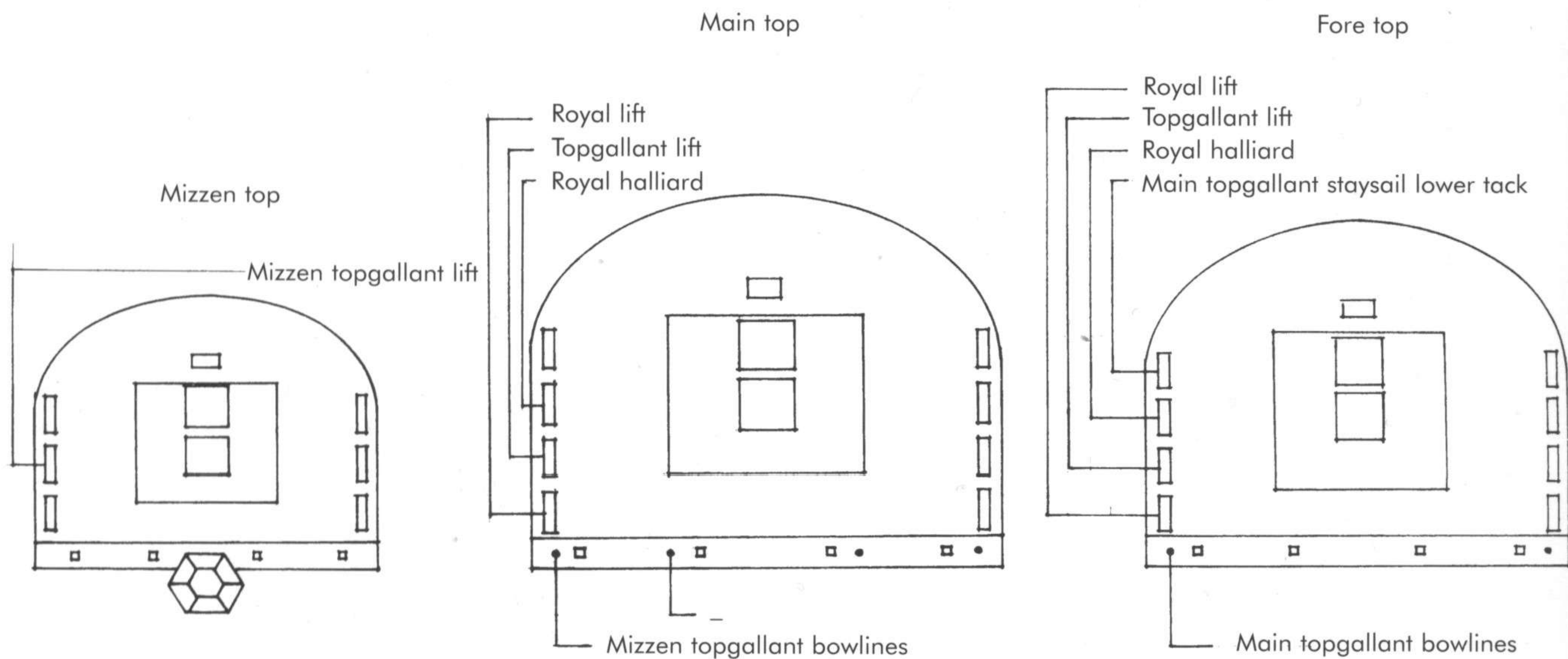
Belaying Plan A



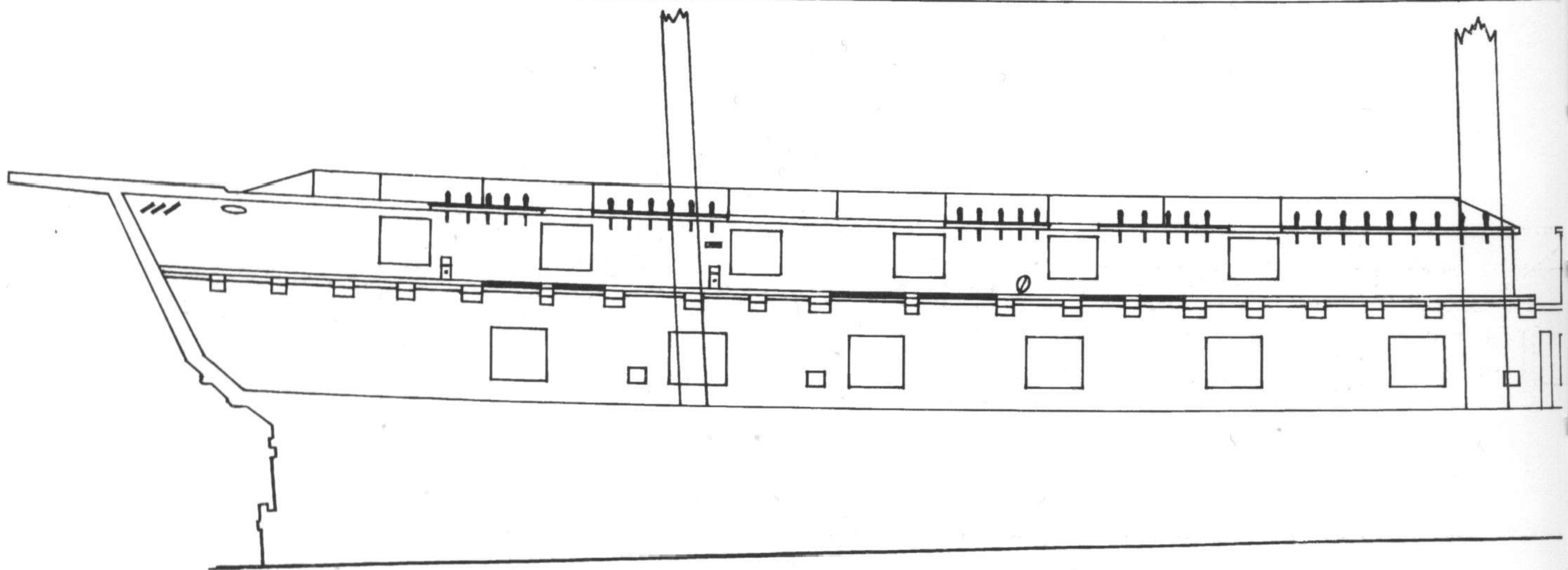
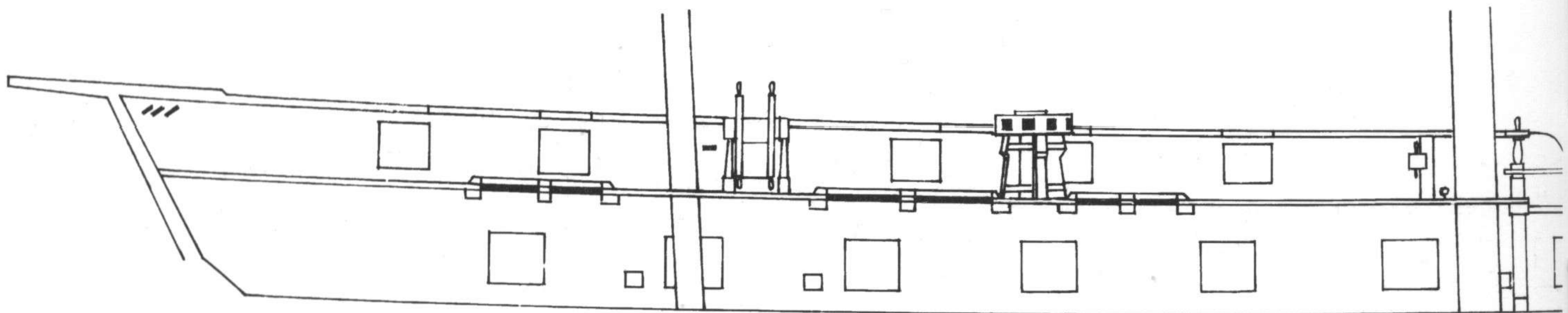
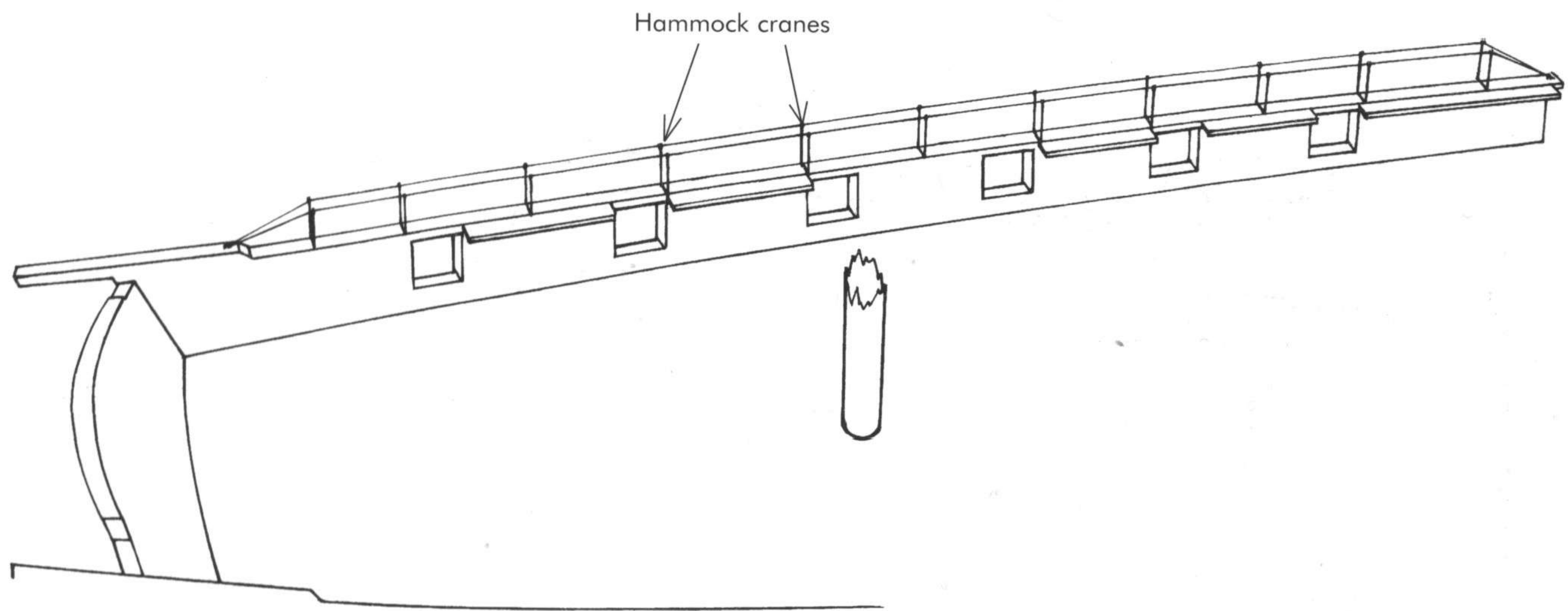
Belaying Plan B



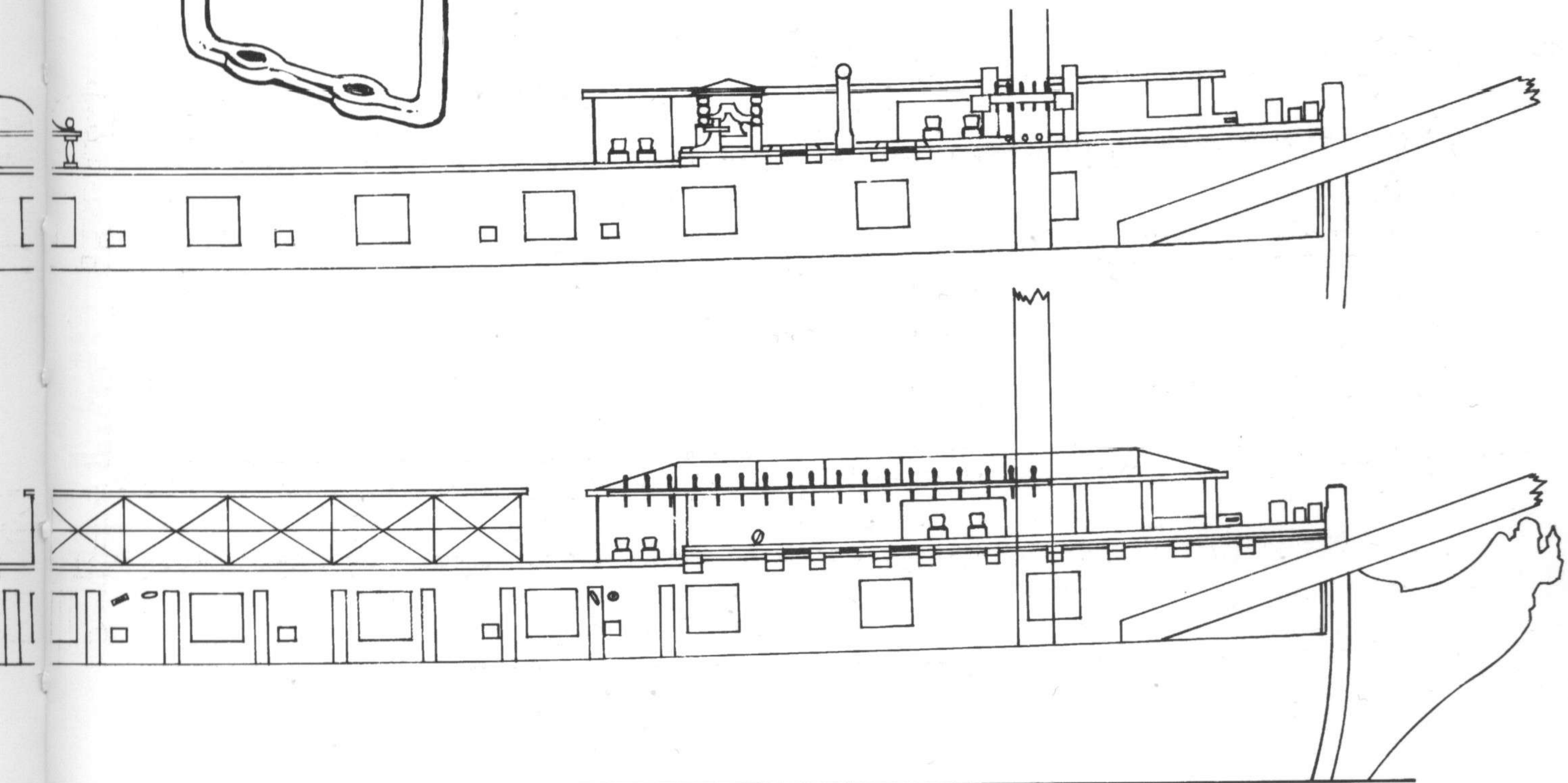
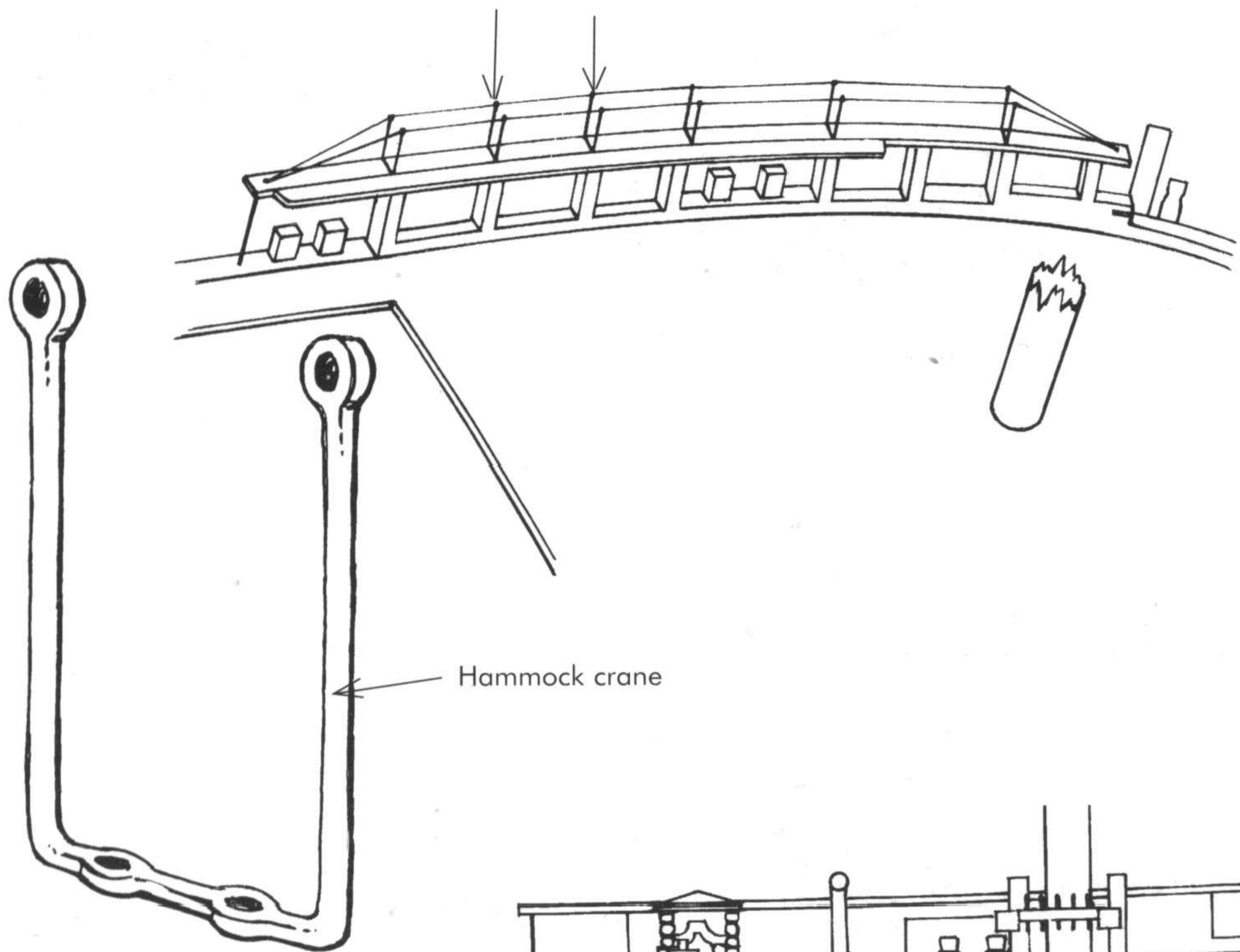
Belaying Plan C



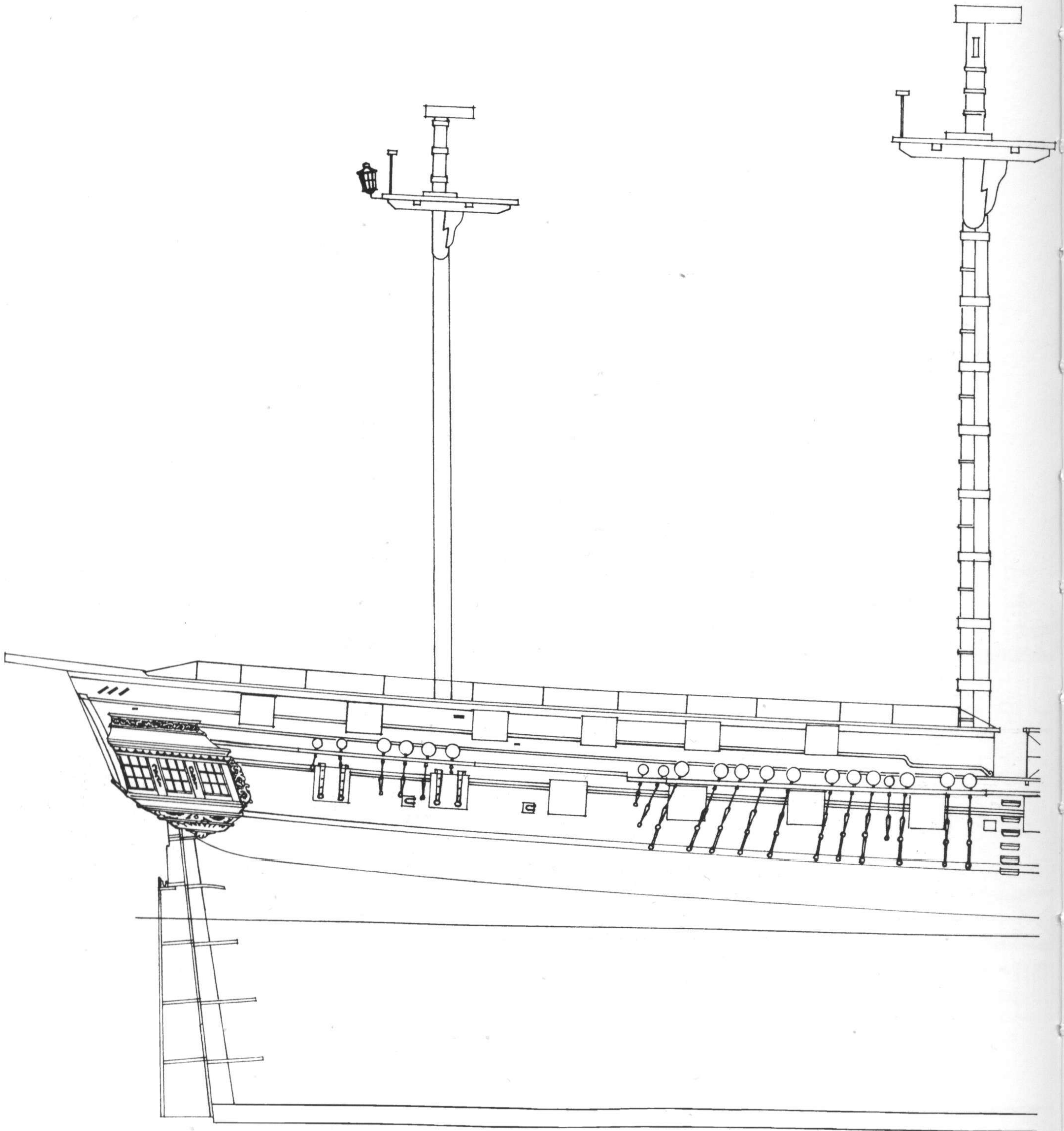
Cross-section

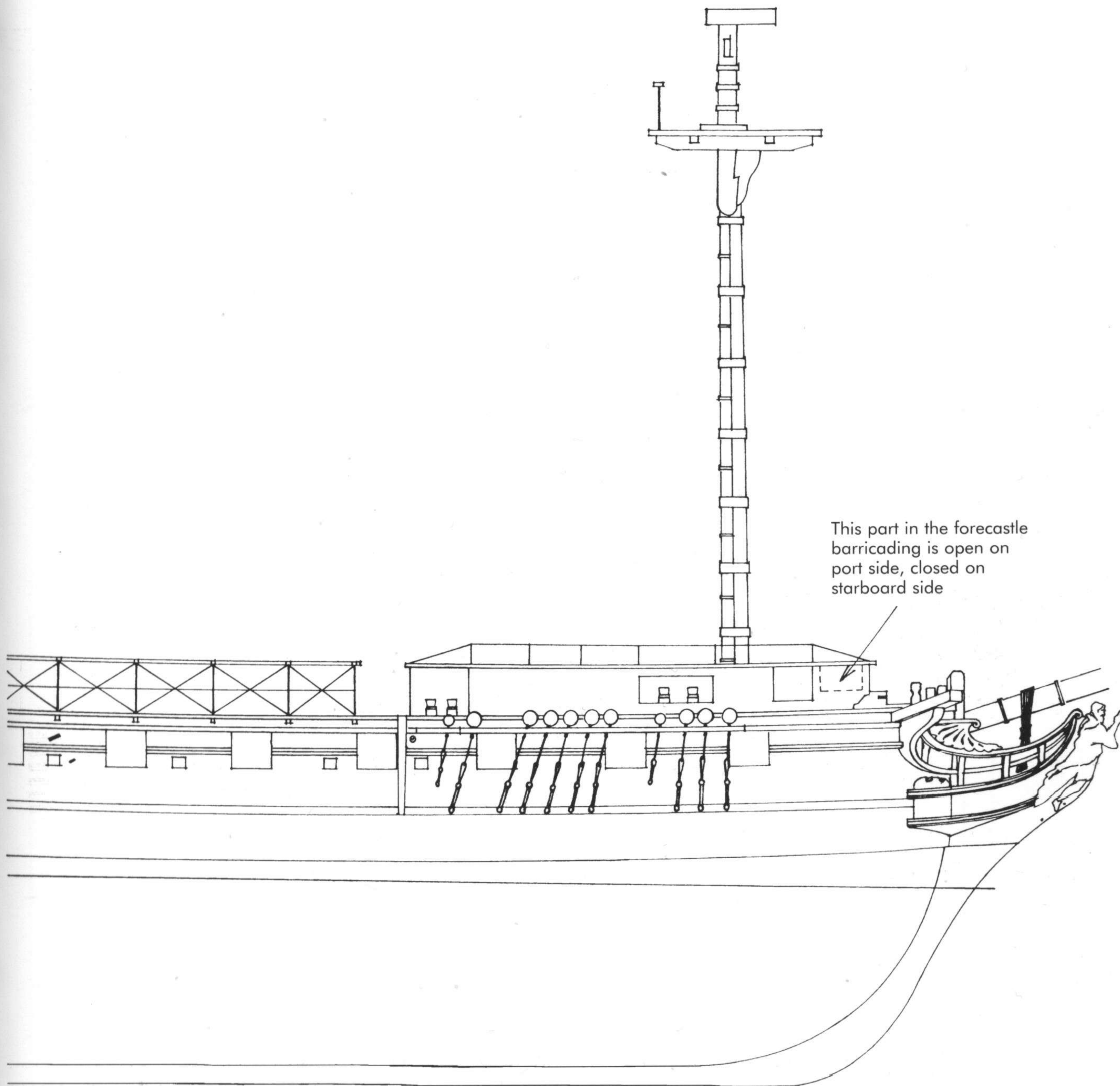


Hammock cranes



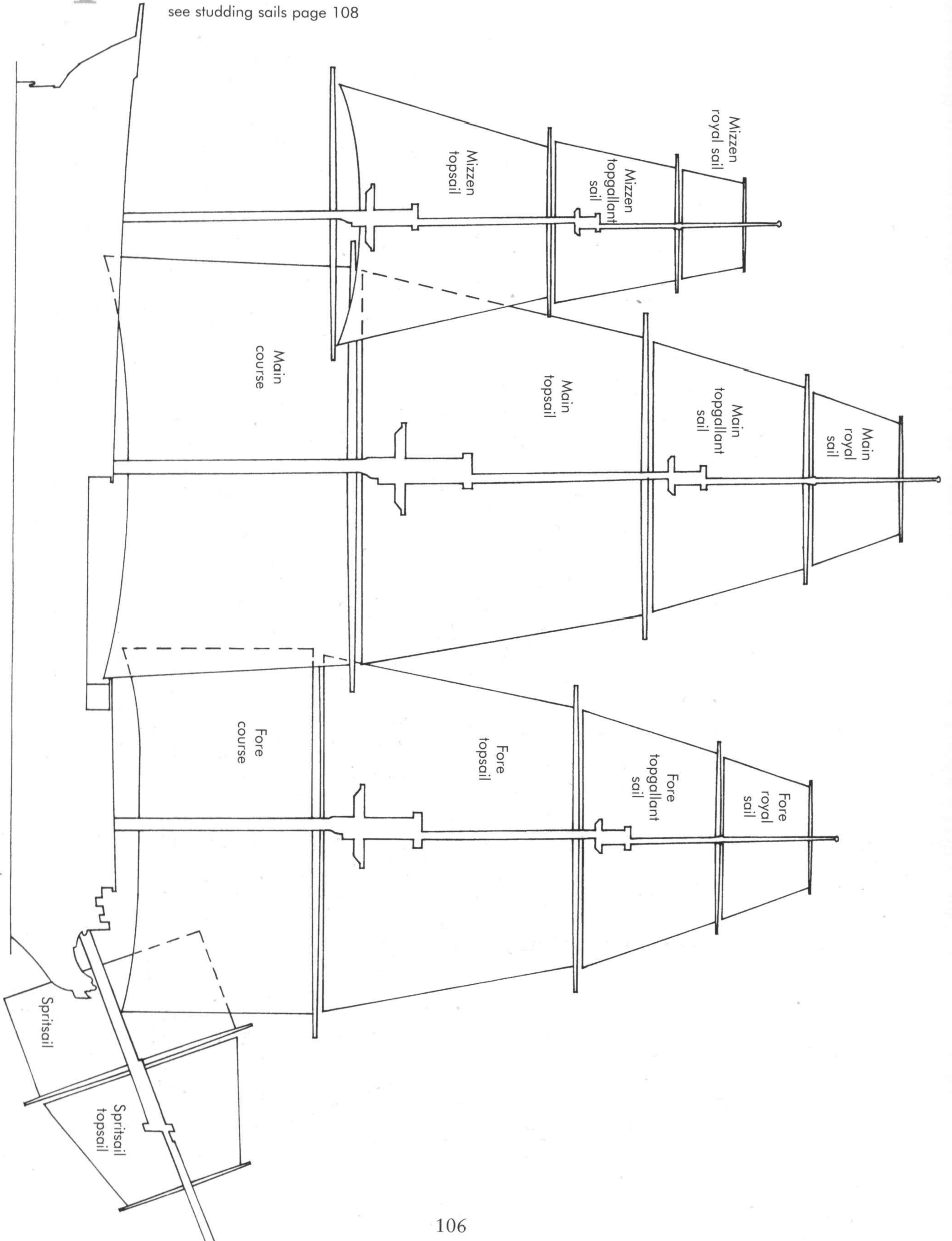
External Hull



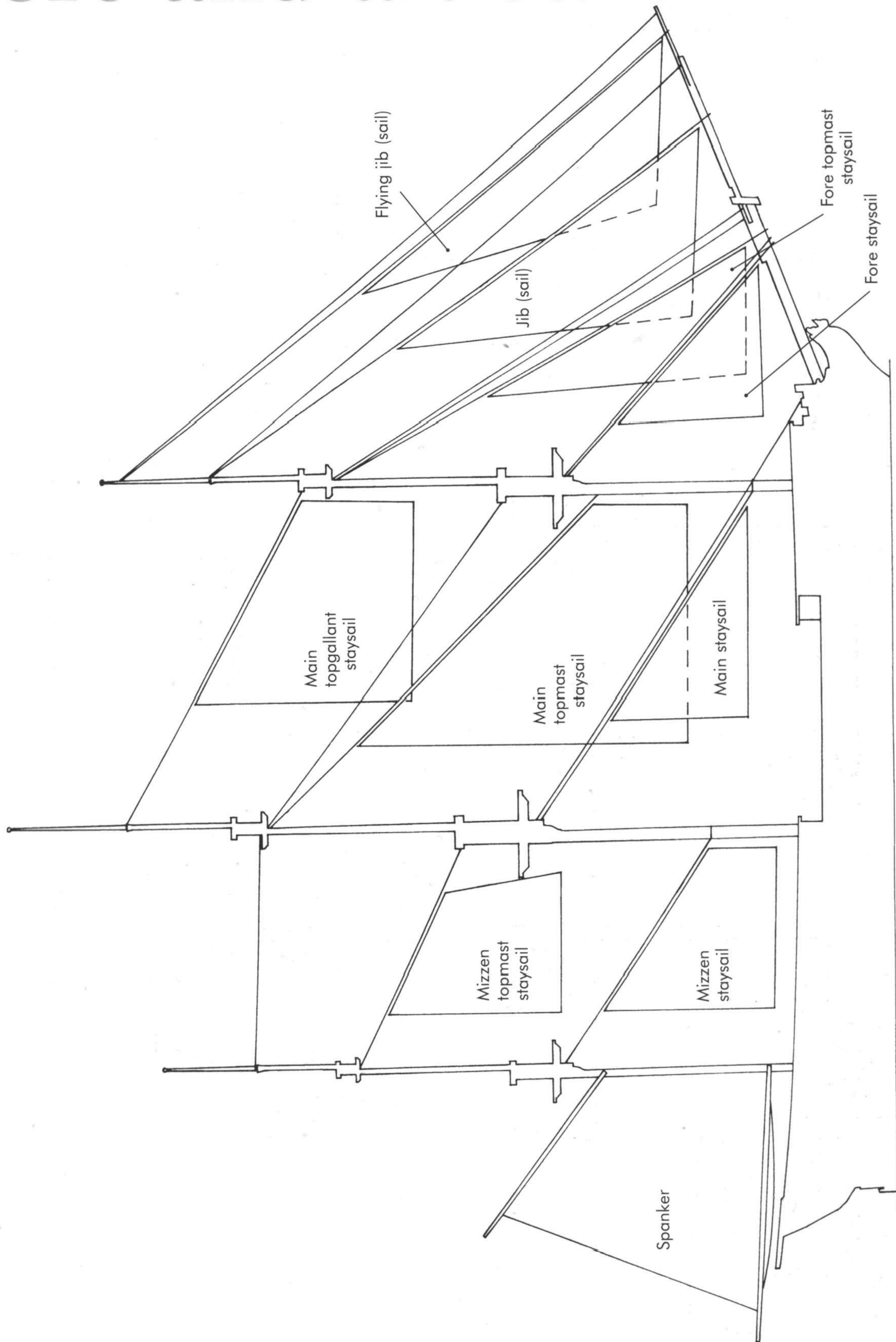


Square Sails

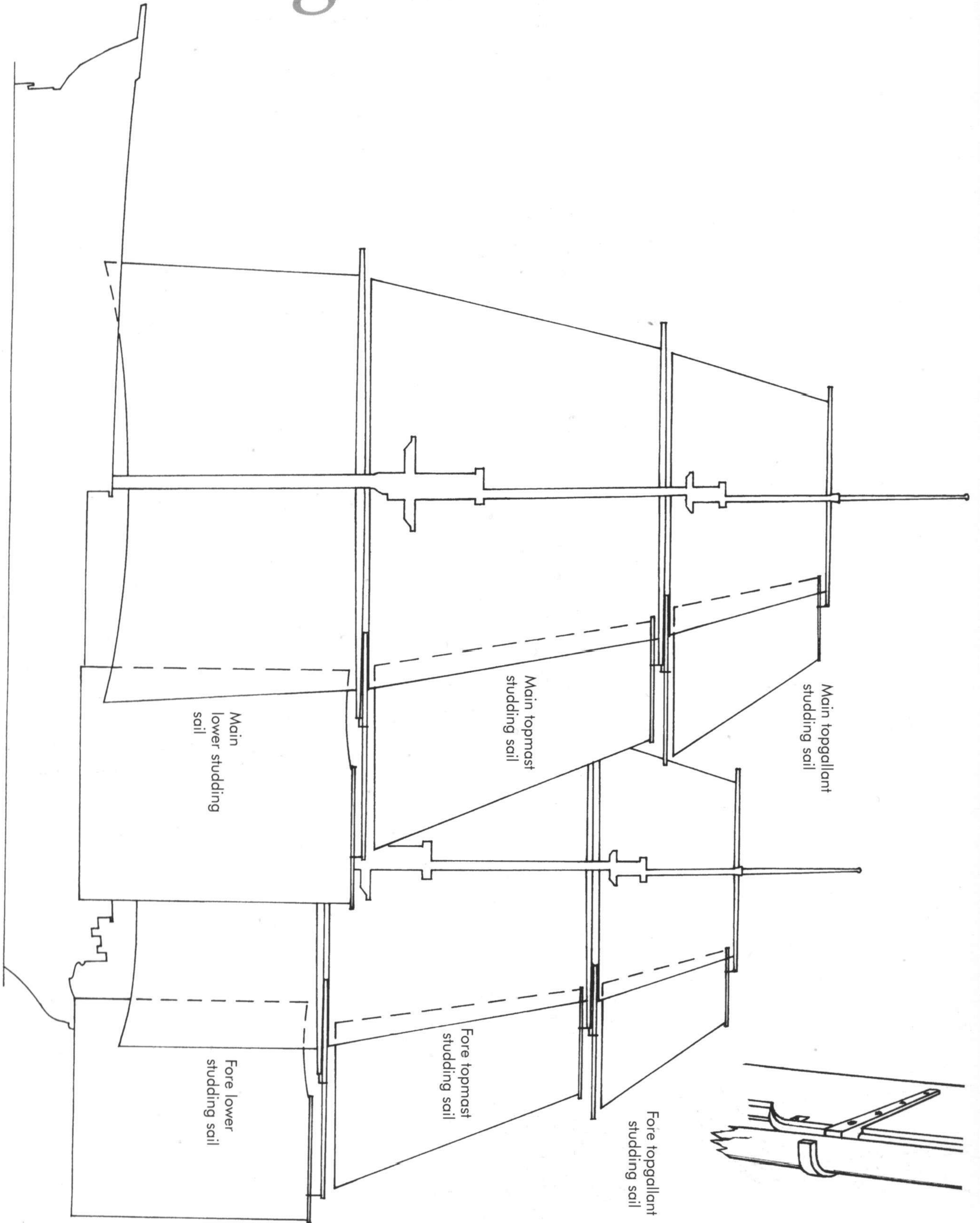
see studding sails page 108

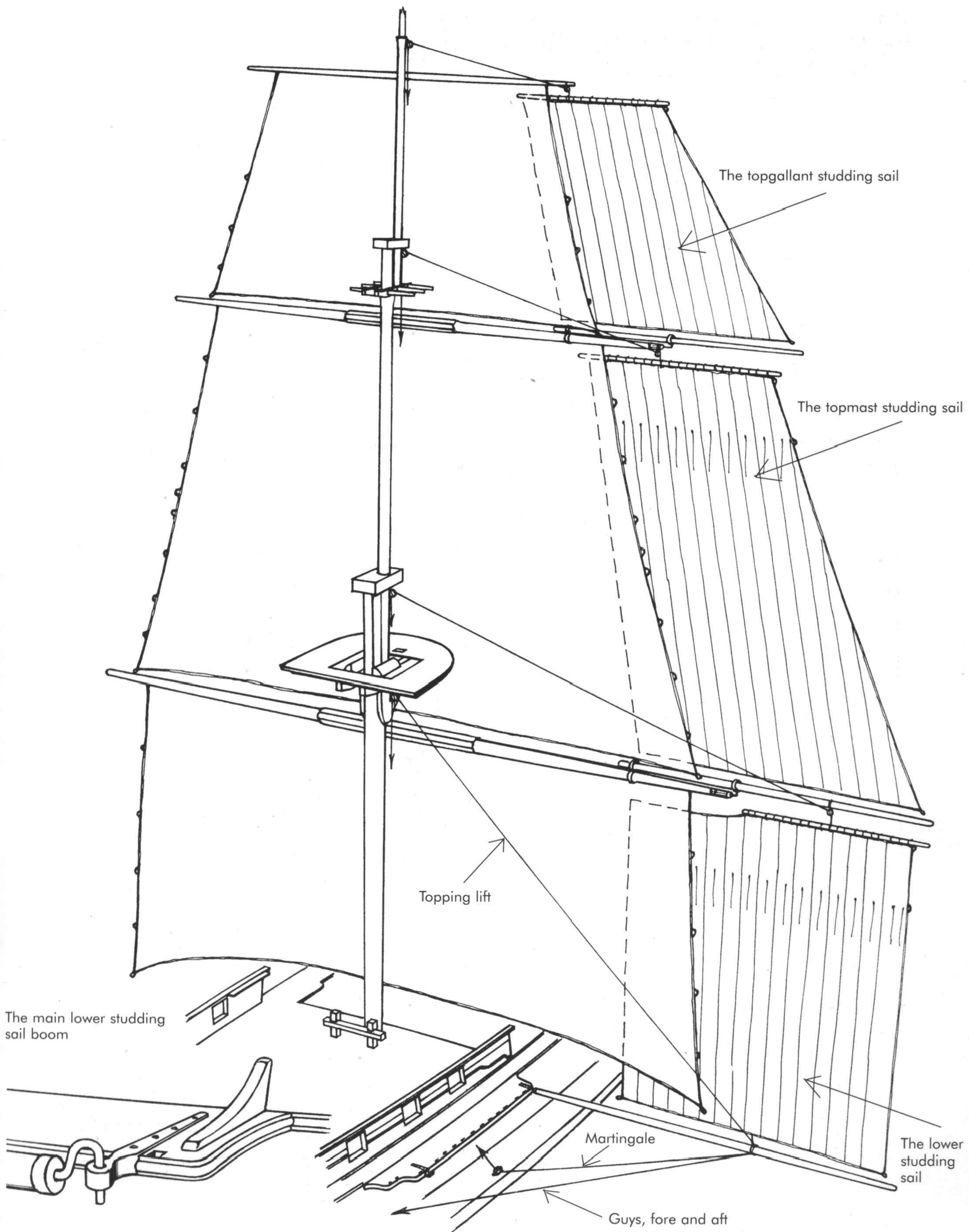


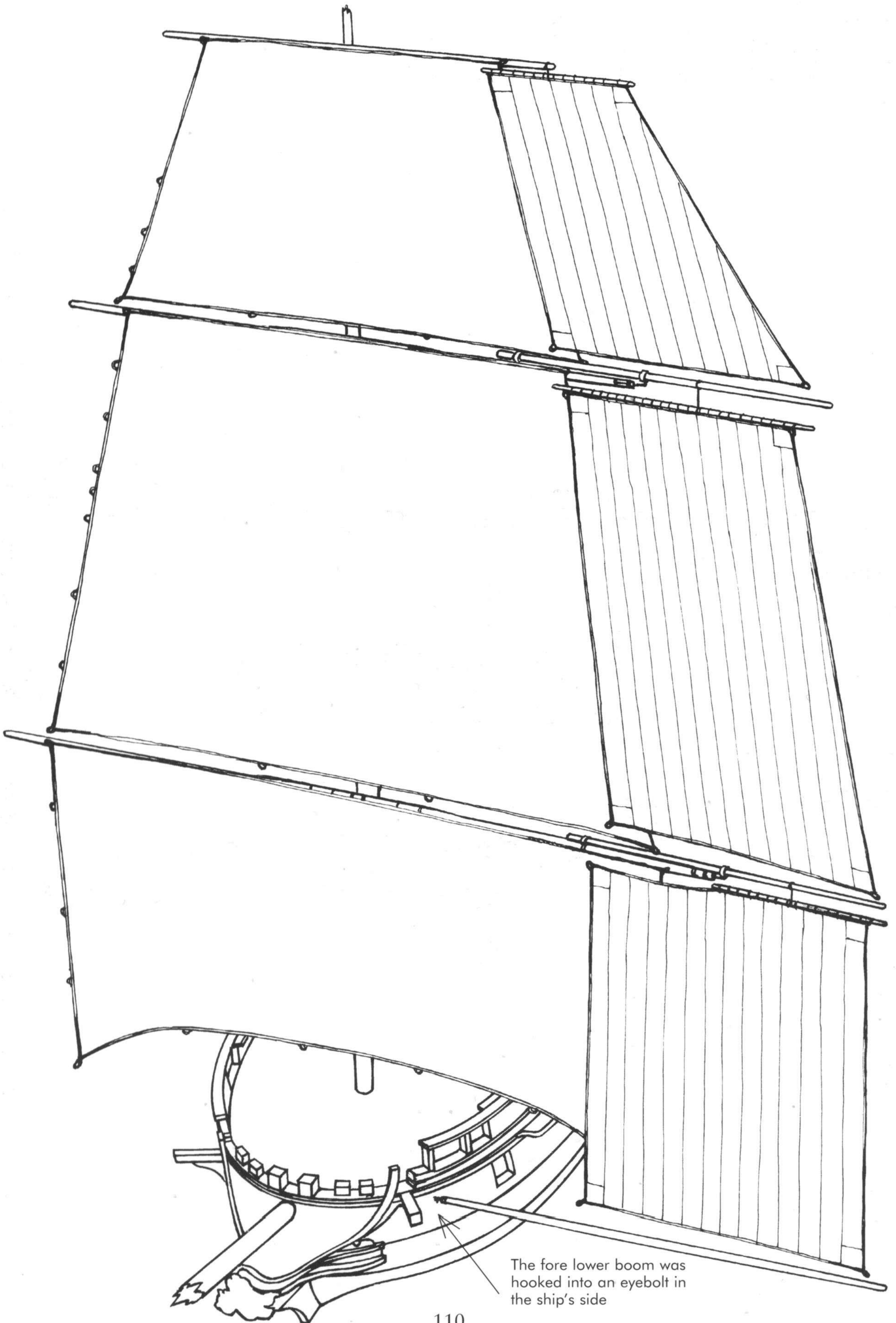
Fore and aft Sails



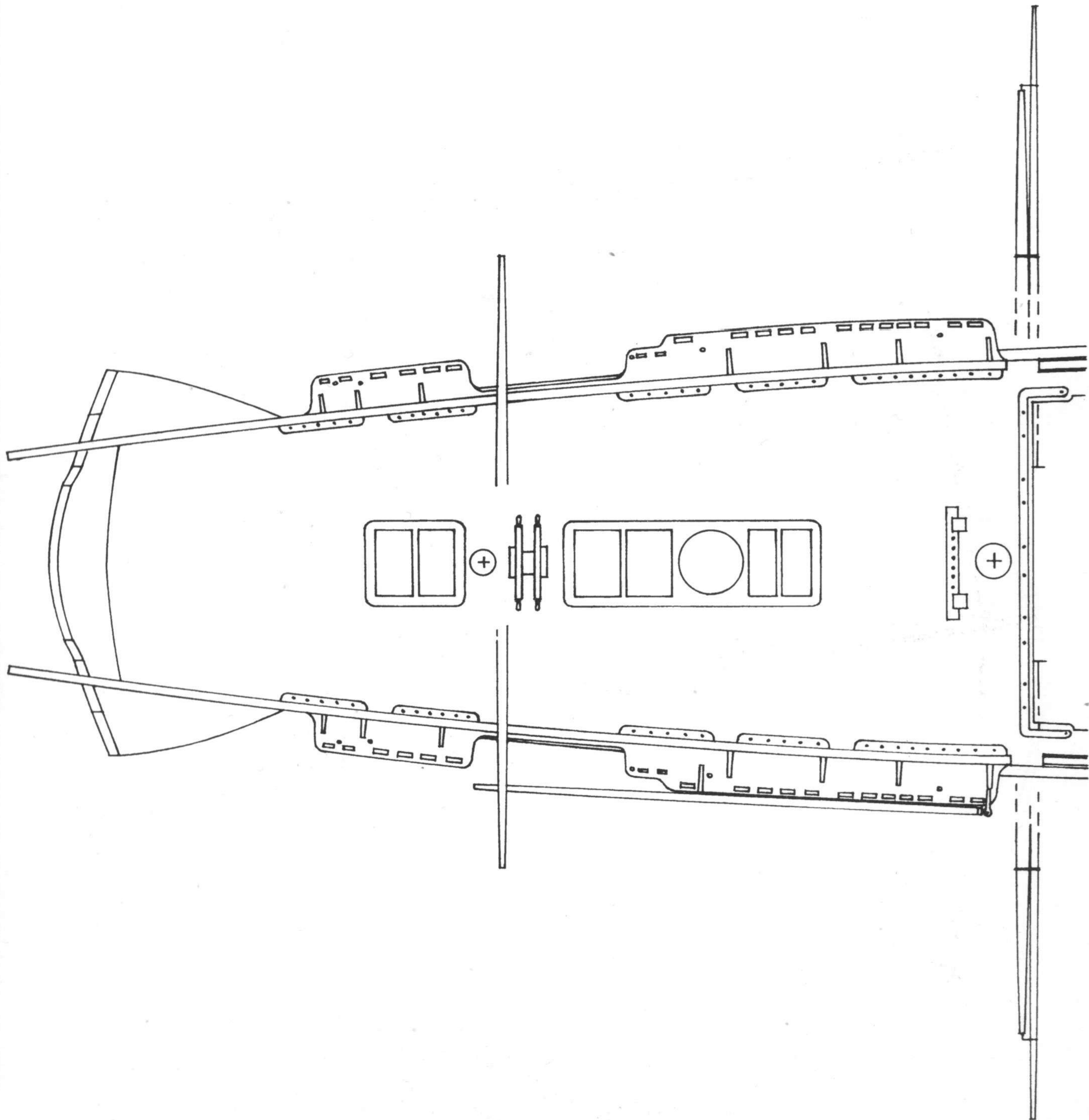
Studding Sails



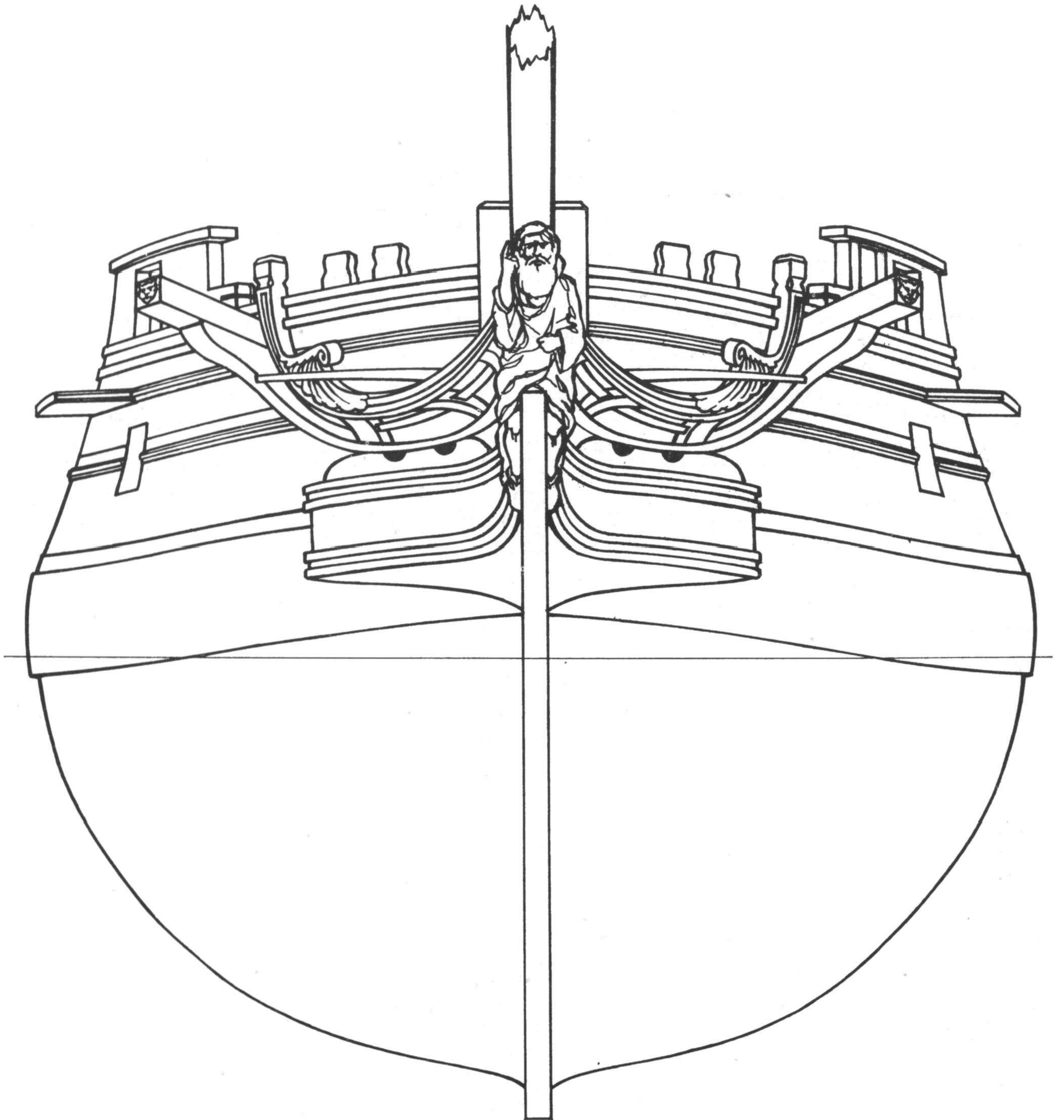




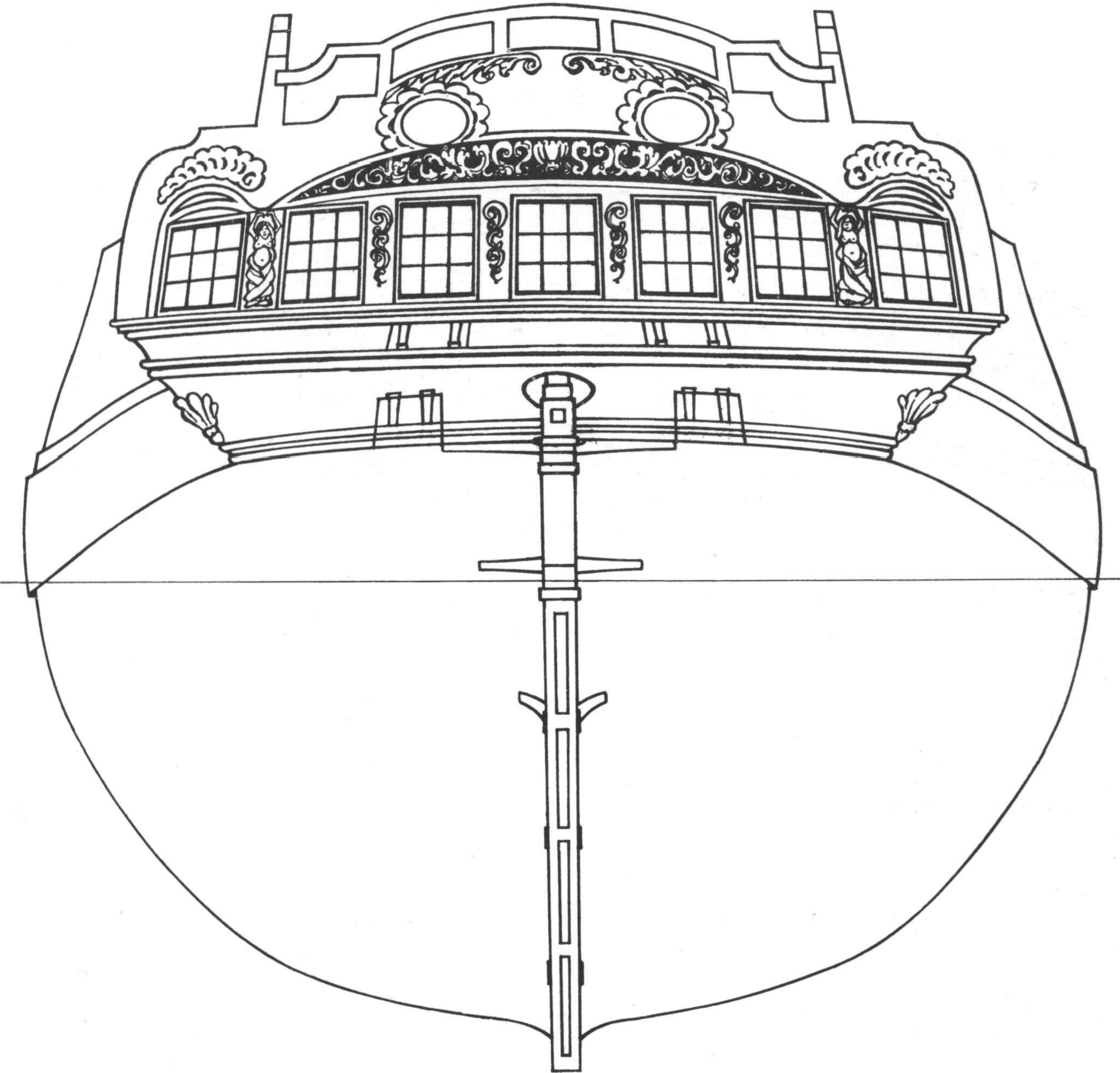
Quarter Deck



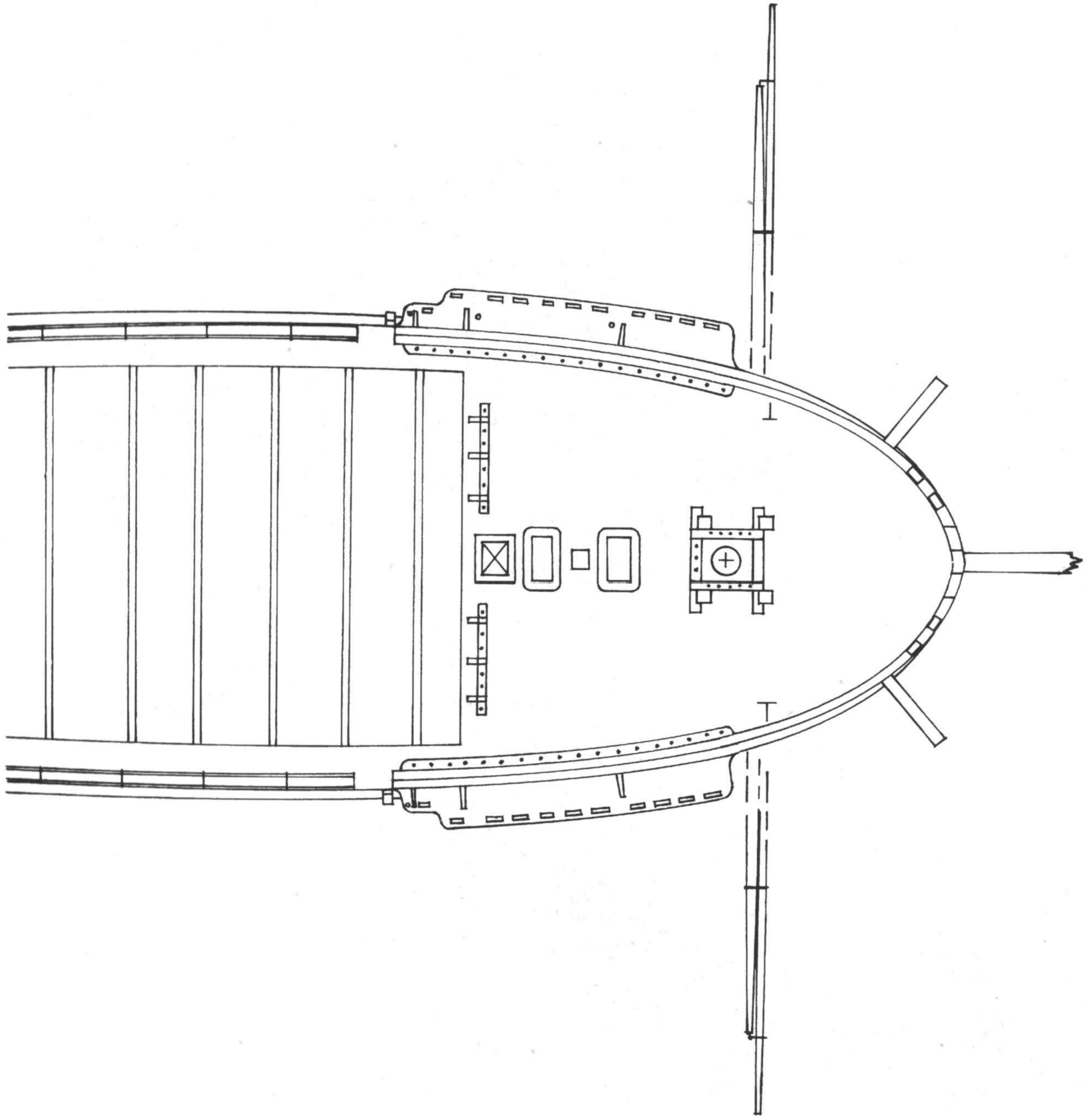
The Bow

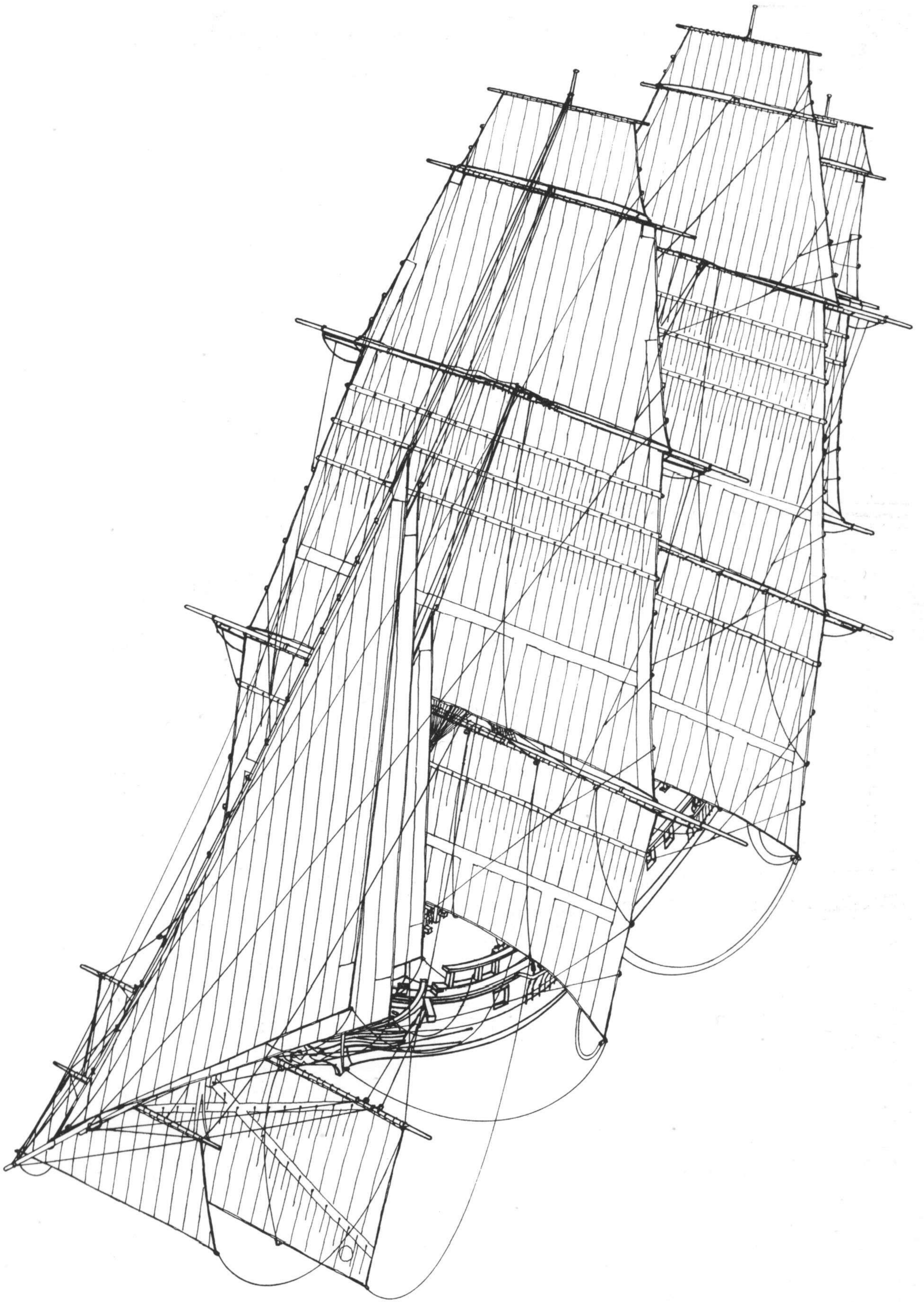


The Stern



Waist & Forecastle





Index

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