

Rigging

PERIOD SHIP MODELS



LENNARTH
PETERSSON





Rigging Period Ship Models

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

Lennarth Petersson

CHATHAM PUBLISHING

L O N D O N

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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Contents

<i>Introduction</i>	1	Mizzen Topsail Sheet & Clue	56
Fore Channels & Dead-Eyes	2	Mizzen Topgallant Sheet & Clue, Mizzen Royal Sheet	57
Main Channels & Ratlines	3	Jibboom & Flying Jibboom Guys	58
Mizzen Channels	4	Spritsail Sling, Spritsail Yard & Spritsail Topsail Yard Halliards	59
Fore Shrouds	5	Royal Stay	60
Main & Mizzen Shrouds	6	Fore Topgallant Stay & Bumpkin Shrouds	61
Fore Topmast Shrouds	7	Jib Outhaul	62
Mizzen Backstays	8	Flying Jib Outhaul	63
Main Backstays	9	Spritsail Lift, Spritsail Topsail Clue & Sheet	64
Fore Backstays & Shrouds	10	Spritsail Clue & Sheet Spritsail Topsail Lift	65
Fore Backstay, Topmast & Topgallant Shrouds	11	Fore Topsail Reef Tackle	66
Stays (overall view)	12	Main Topsail Reef Tackle	67
Mizzen Stay	13	Mizzen Topsail Reef Tackle	68
Main Stay & Preventer Stay	14	Spritsail Buntlines	69
Fore Stay & Preventer Stay	15	Fore Course Buntlines & Leechlines	70
Mizzen Topmast Stay & Topgallant Stay	16	Fore Topsail Buntlines	71
Main Topmast Stay, Preventer Stay, Topgallant and Royal Stay	17	Main Course Buntlines & Leechlines	72
Fore Topmast & Preventer Stay	18	Main Topsail Buntlines	73
Jibstay, Fore Topgallant, Flying Jib & Royal Stay	19	Mizzen Topsail Buntlines	74
Bobstay, Bowsprit Shrouds	20	Fore Course & Topsail Bowlines	75
Jibstay & Martingale Stays	21	Fore Topgallant Bowlines	76
Cross Jack Truss Pendant	22	Main Course & Topsail Bowlines	77
Cross Jack Sling	23	Main Topgallant Bowlines	78
Cross Jack Lift	24	Mizzen Topsail & Topgallant Bowlines	79
Spanker Boom Sheet & Guy Pendants	25	Mizzen Mast Square Sails	80
Boom Topping Lift	26	Spanker	81
Vangs	27	Mainmast Square Sails	82
Peak Halliard	28	Fore Mast Square Sails	83
Throat Halliard	29	Yard Tackle & Tricing Lines	84
Mizzen Tyes: Topsail, Topgallant & Royal Yard	30	Yards	85
Mizzen Lifts: Topsail & Topgallant	31	Main Yard with Stunsail Boom & Stunsail Boom Irons	86
Cross Jack Braces	32	Fore Staysail	87
Mizzen Topsail & Topgallant Braces	33	Main Staysail	88
Fore & Main Sling	34	Mizzen Staysail	89
Fore & Main Jeers	35	Fore Topmast Staysail Stay	90
Truss Pendants & Nave Line	36	Fore Topmast Staysail	91
Main Lift	37	Fore Topmast Staysail	92
Fore Lift	38	Main Topmast Staysail	93
Main Topsail Yard Tye & Halliard	39	Mizzen Topmast Staysail	94
Fore Topsail Yard Tye & Halliard	40	Main Topgallant Staysail	95
Fore Topgallant/Royal Tye & Halliard	41	Jib	96
Fore Topsail, Topgallant & Royal Lifts	42	Flying Jib	97
Main & Main Topsail Braces	43	Belaying plans	98
Fore & Fore Topsail Braces	44	Cross-section	102
Fore & Main Topgallant Braces	45	External Hull	104
Fore & Main Royal Braces	46	Square Sails	106
Spritsail & Spritsail Topsail Braces	47	All Fore and Aft Sails	107
Fore Sheet, Tack & Clue	48	Studding Sails	108
Fore Topsail Sheet & Clue	49	Quarter Deck	111
Fore Topgallant & Royal Sheet, Fore Topgallant Clue	50	The Bow	112
Main Sheet, Clue & Tack	51	The Stern	113
Main Topsail Sheet	52	Waist & Forecastle	114
Main Topsail Lift (Topgallant & Royal Lifts)	53	Index	116
Main Topsail Clue	54		
Main Topgallant Sheet & Clue, Main Royal Sheet	55		



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

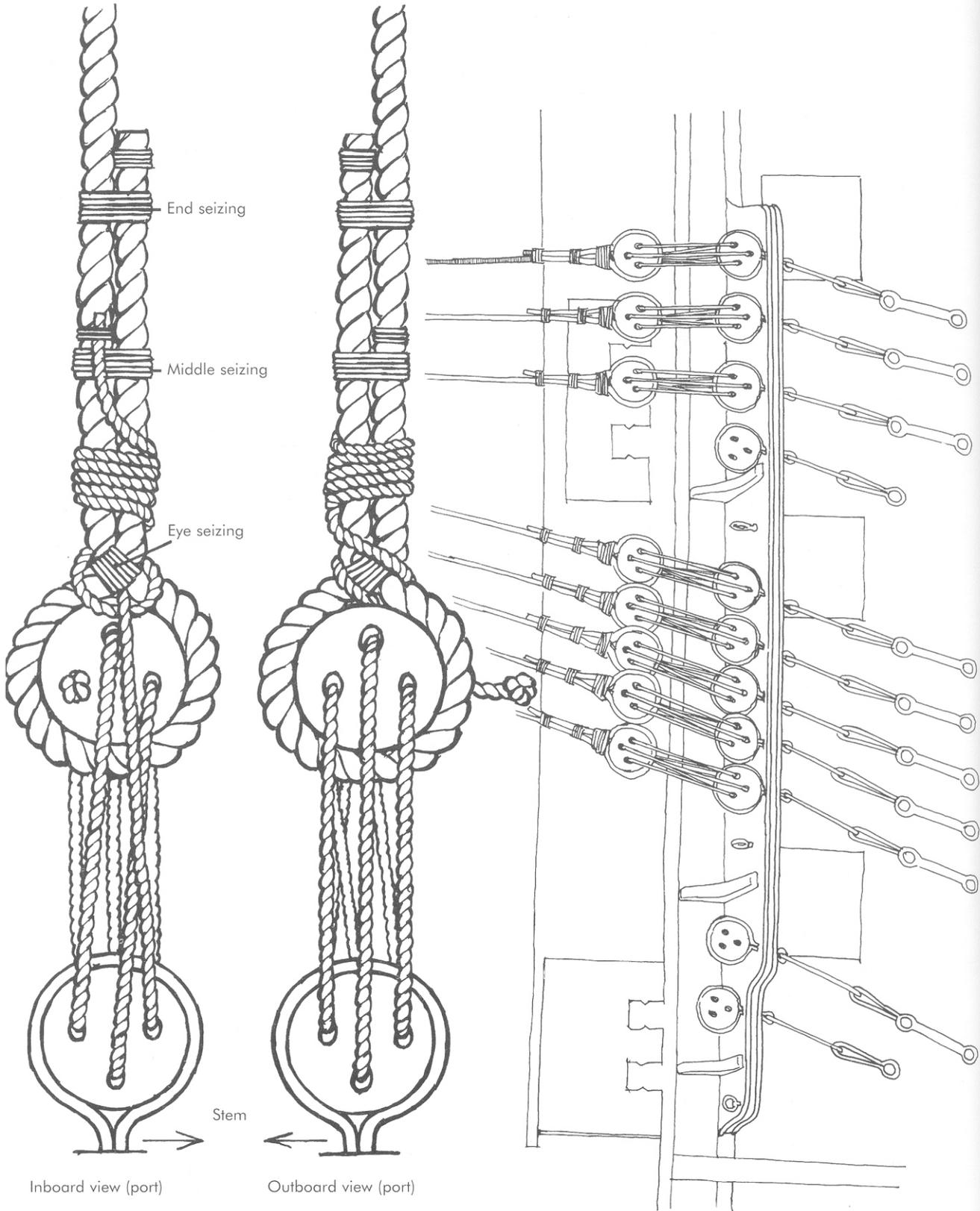
During her thirty years of service in the Royal Navy she took part in a number of actions. In 1794, for instance, she was with the *Arethusa* and two other frigates in Warren's action against Desgarnaux's squadron, which ended in the capture of three French frigates. Under the command of Sir Richard Strachan, *Melampus*, along with four other frigates, chased a French convoy into Carteret Bay where every ship but 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*.

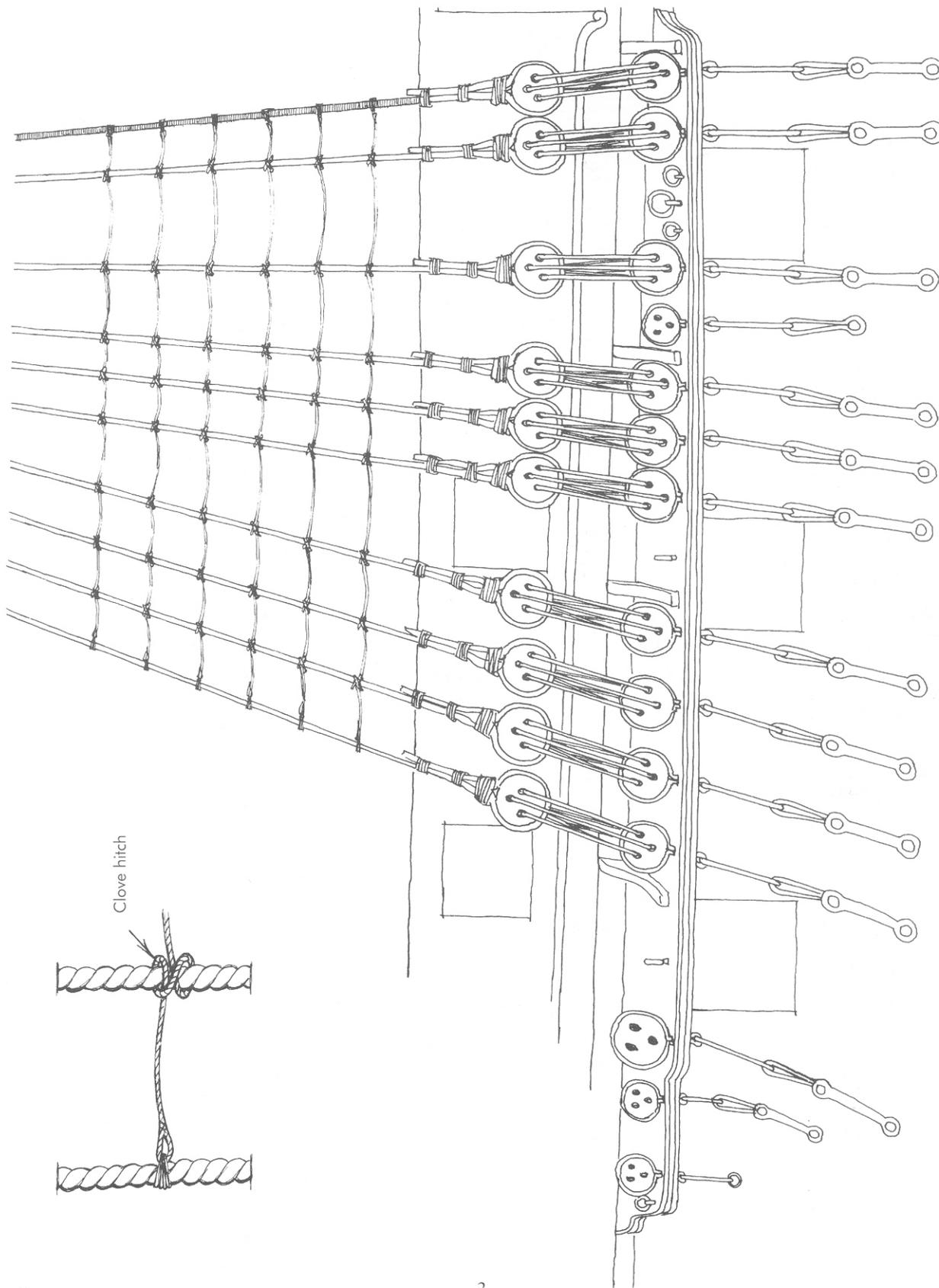
Finally, the journal *Seaways* and *The Nautical Research Journal*, from Nautical Research Guild in the US, have been useful guides for me.

LENNARTH PETERSSON
Habo, Sweden, 2000

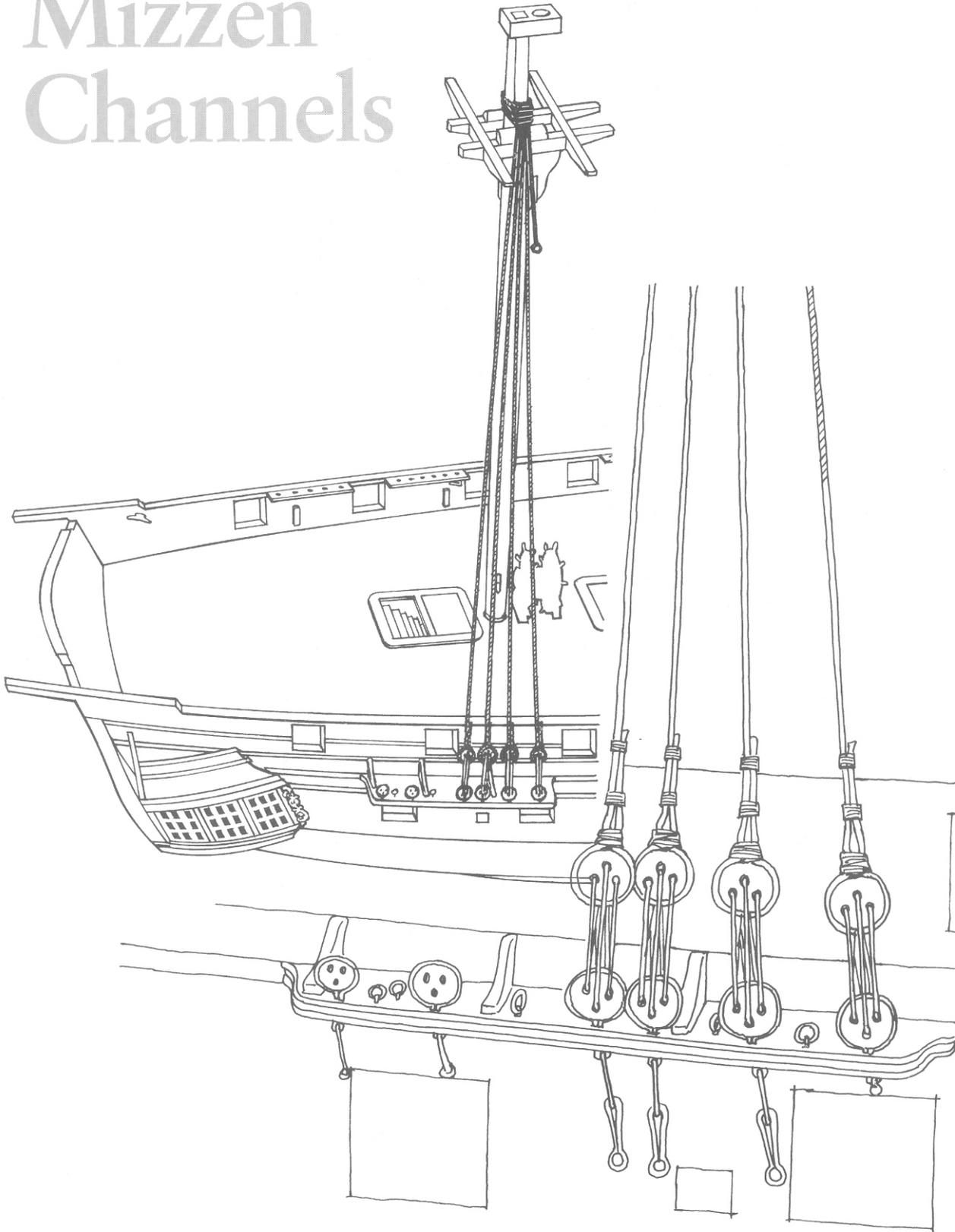
Fore Channels & Dead-Eyes



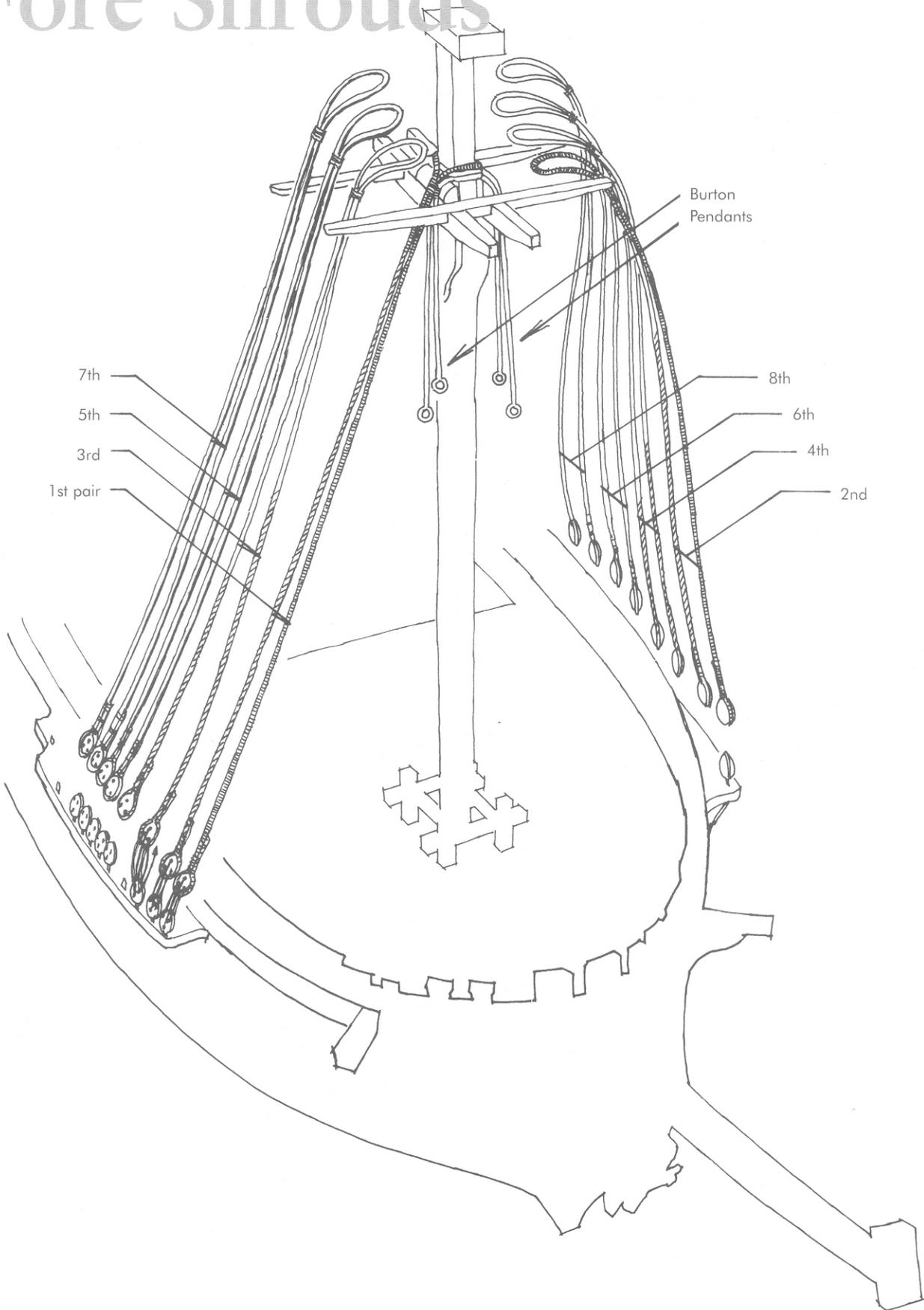
Main Channels & Ratlines



Mizzen Channels



Fore Shrouds

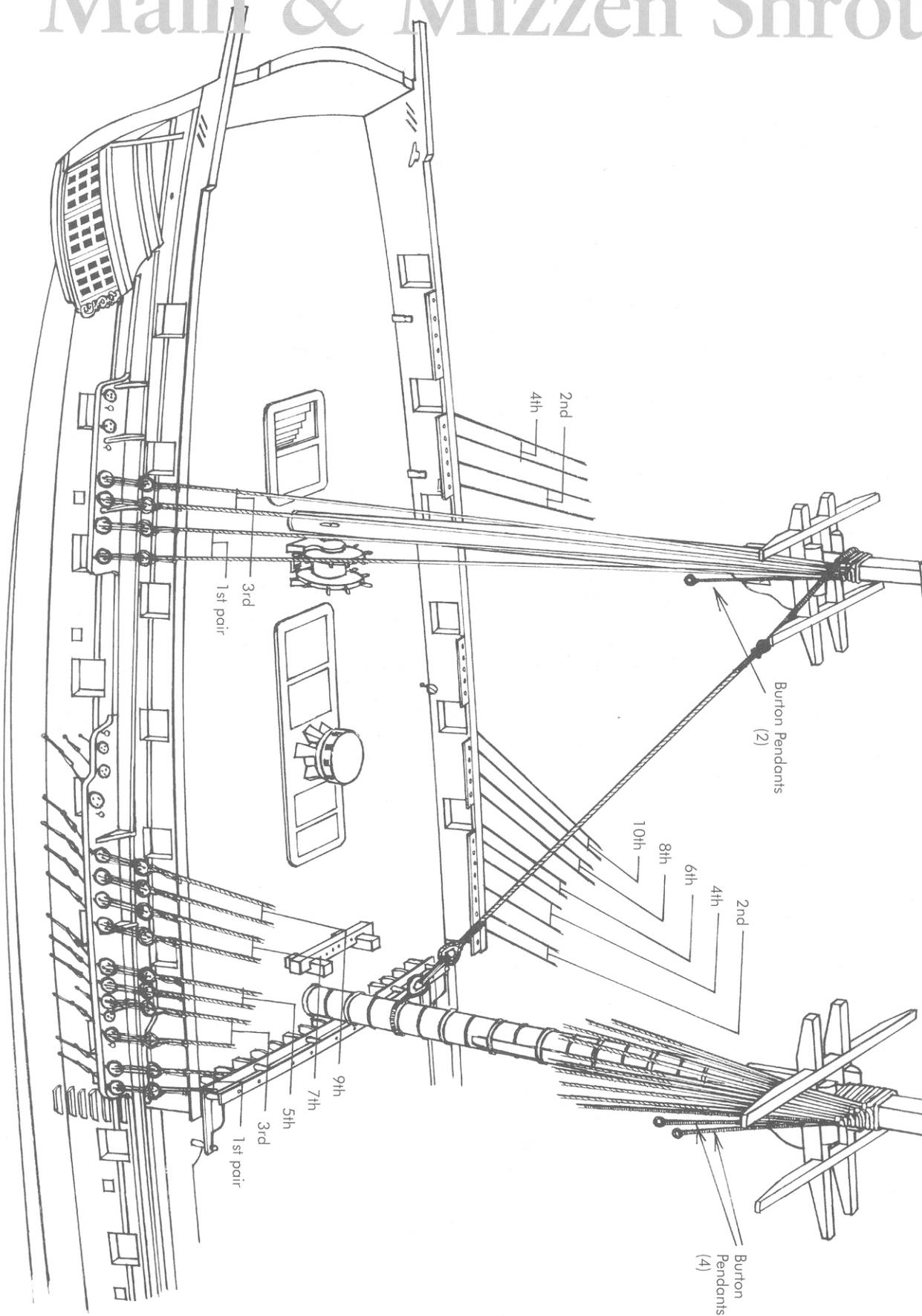


7th
5th
3rd
1st pair

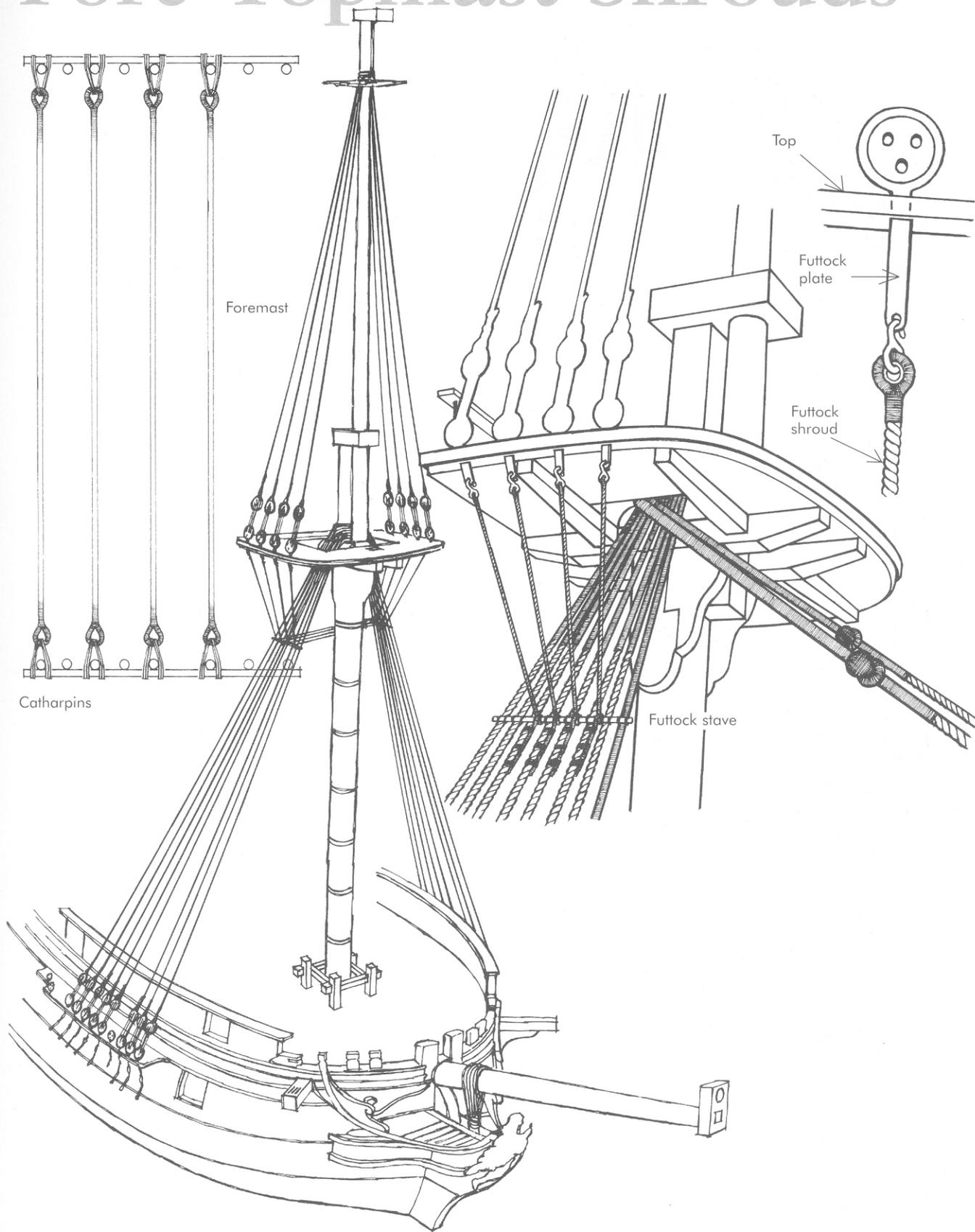
Burton
Pendants

8th
6th
4th
2nd

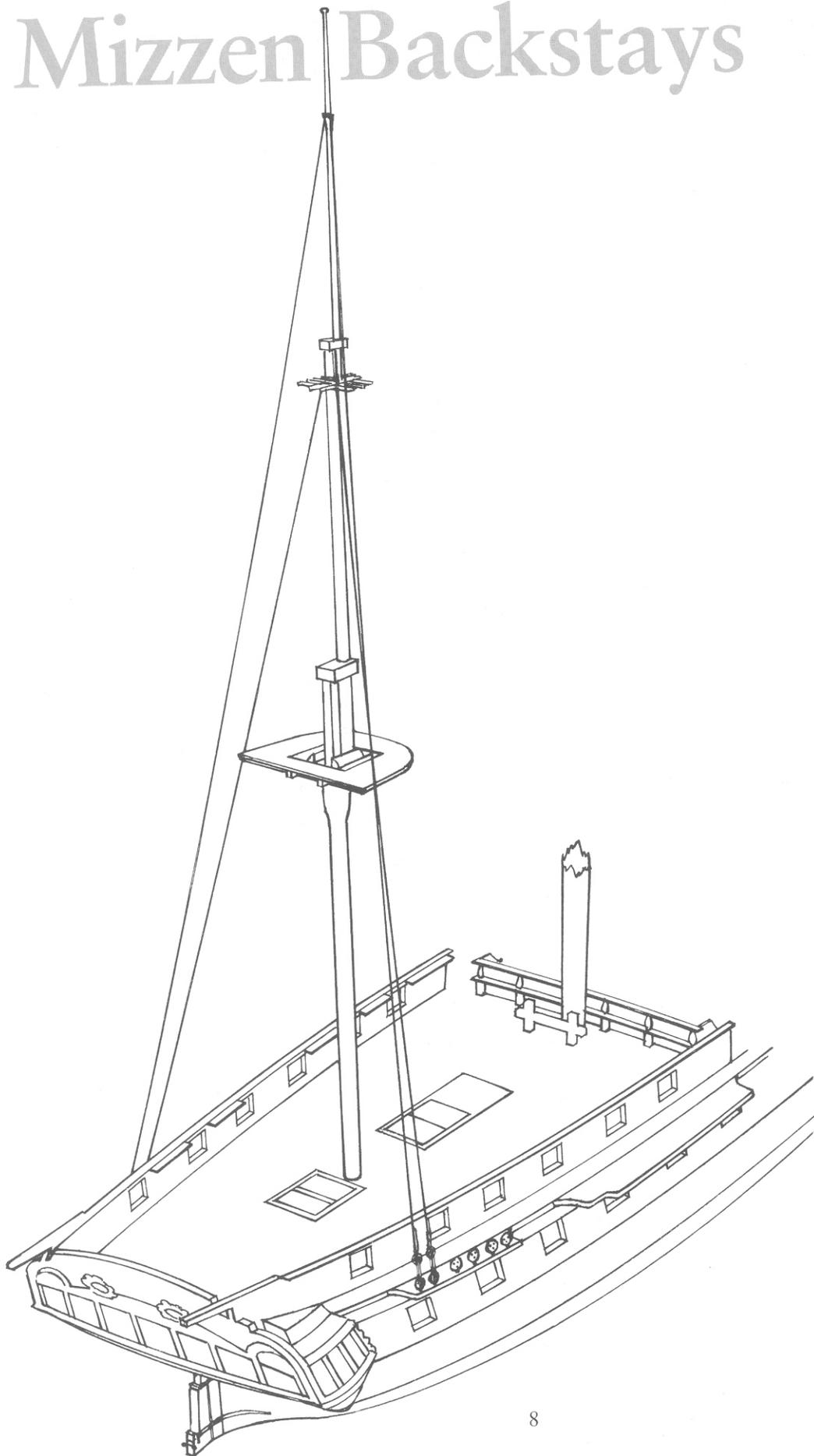
Main & Mizzen Shrou



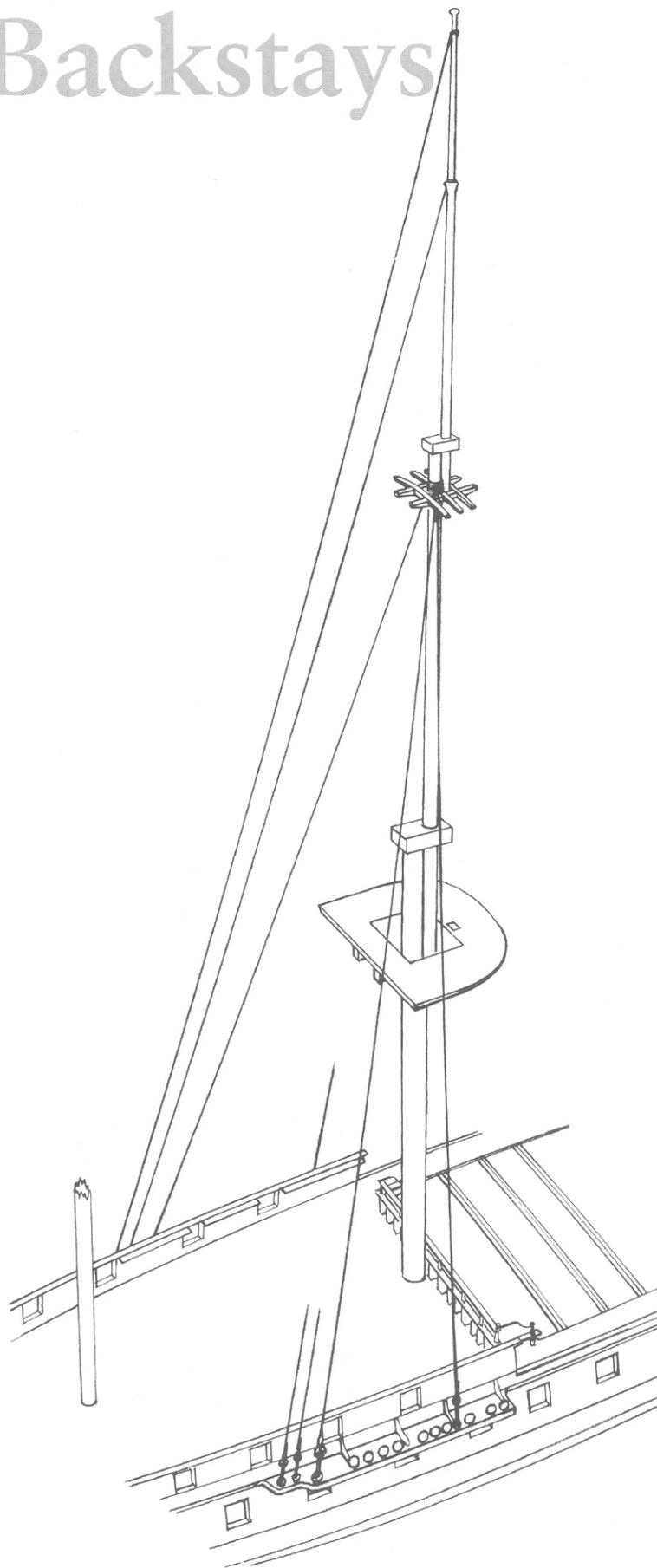
Fore Topmast Shrouds



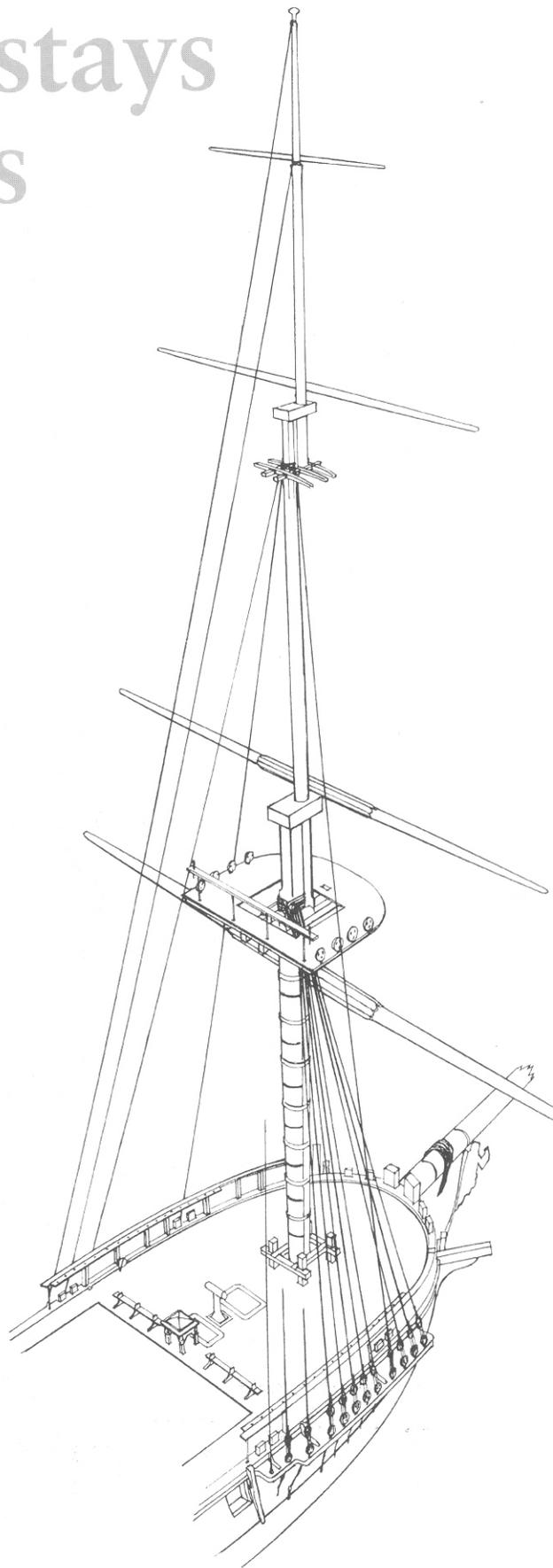
Mizzen Backstays



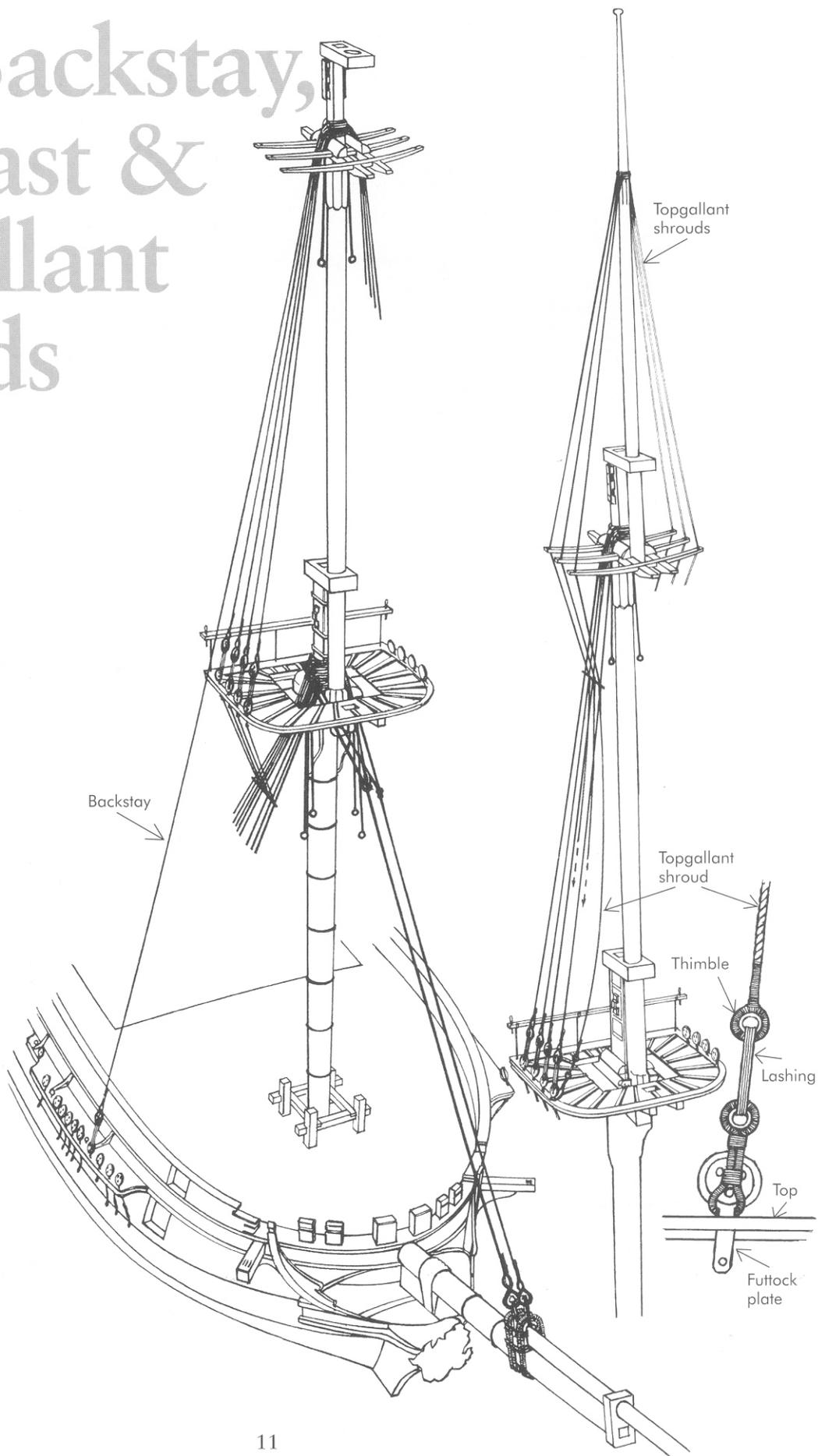
Main Backstays



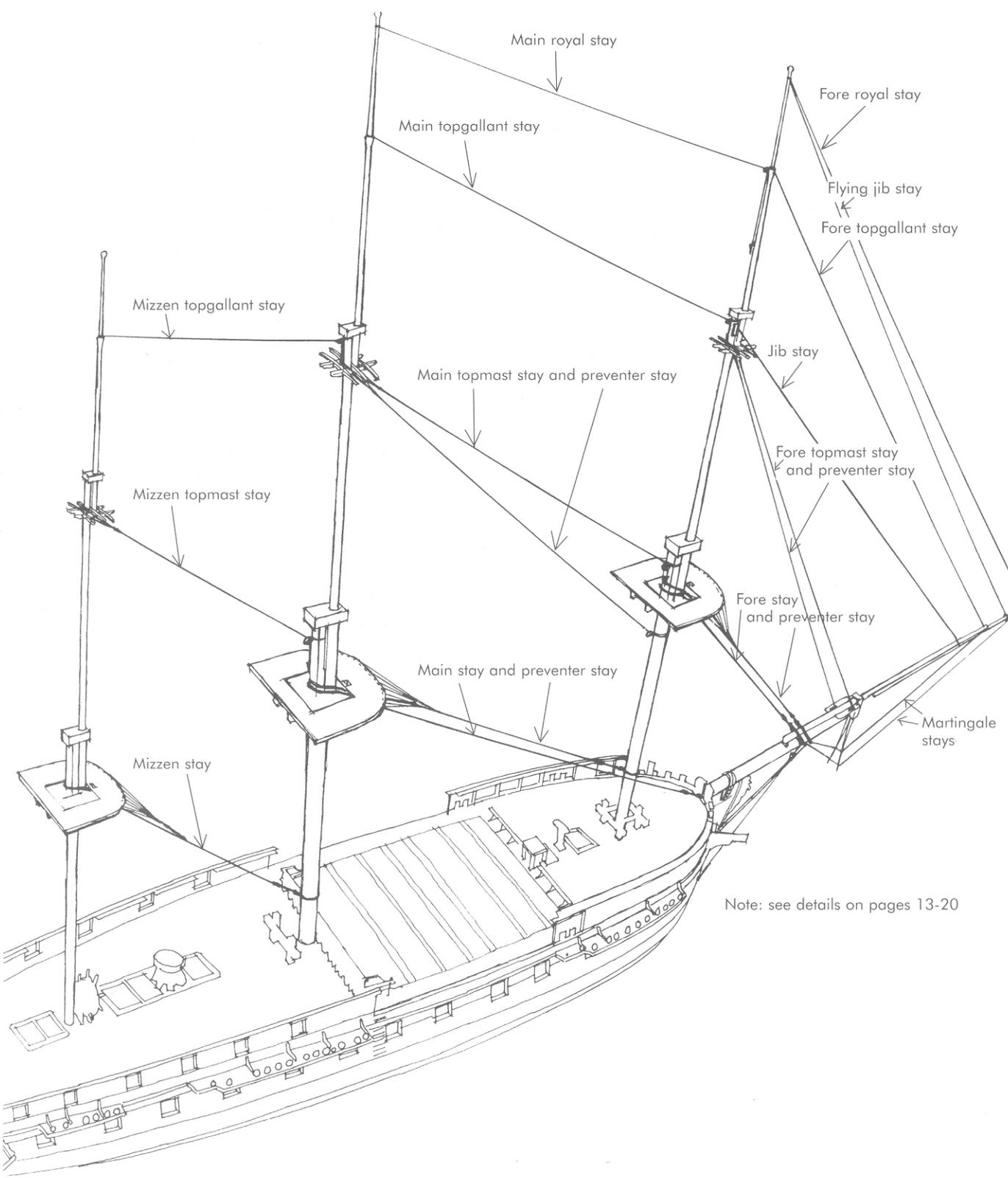
Fore Backstays & Shrouds



Fore Backstay, Topmast & Topgallant Shrouds

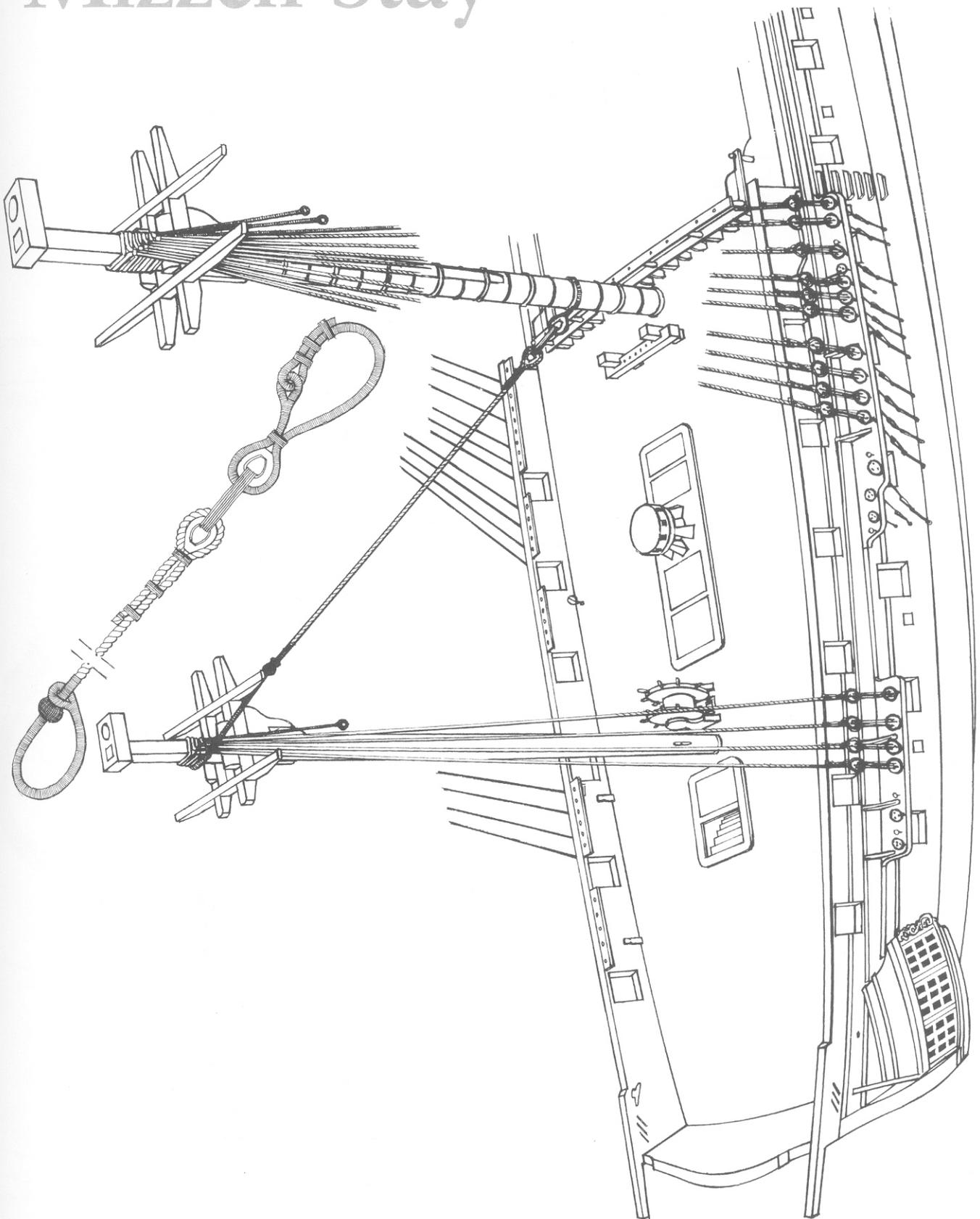


Stays

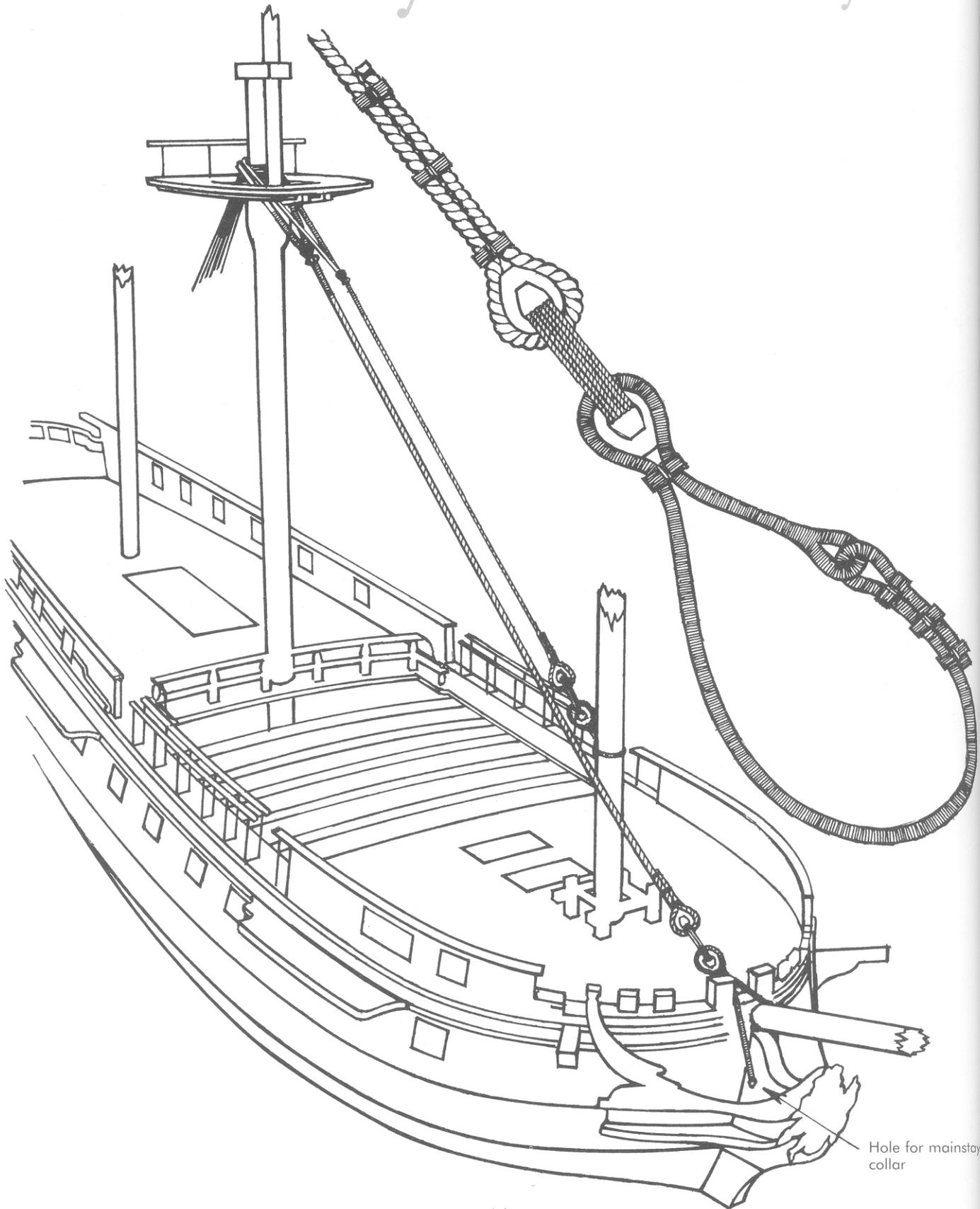


Note: see details on pages 13-20

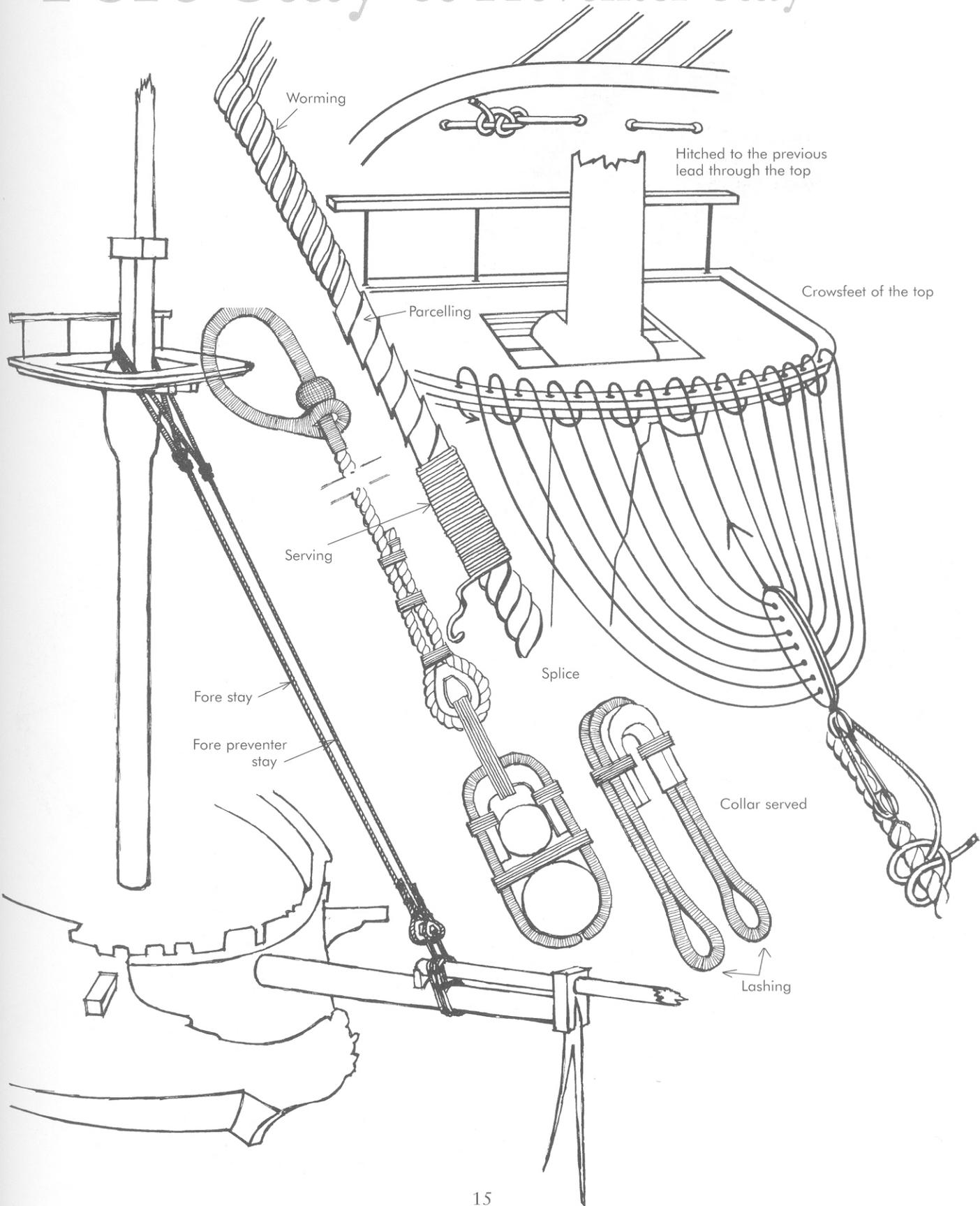
Mizzen Stay



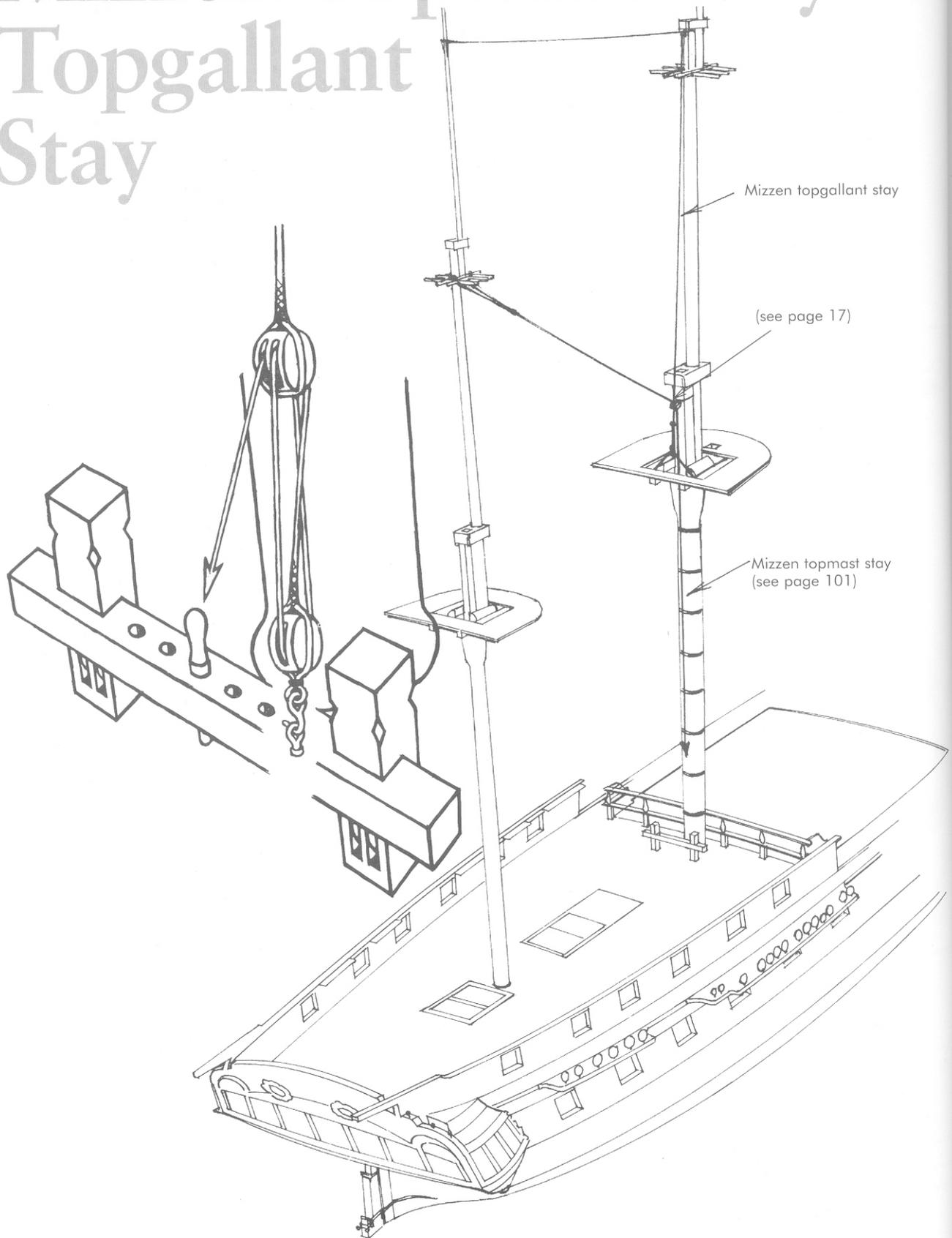
Main Stay & Preventer Stay



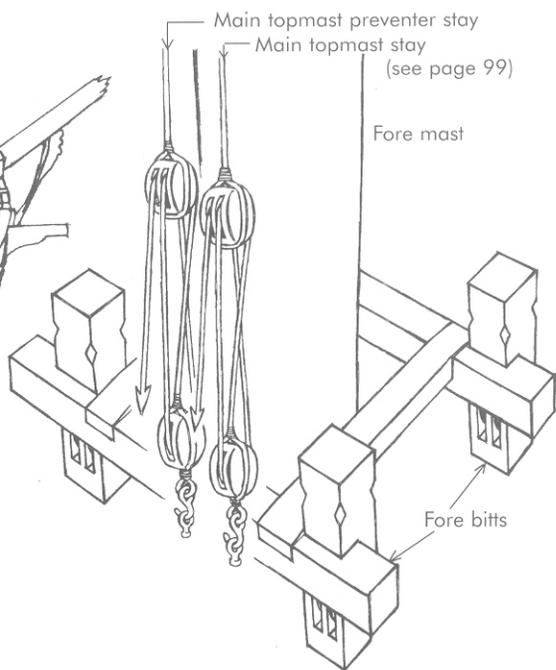
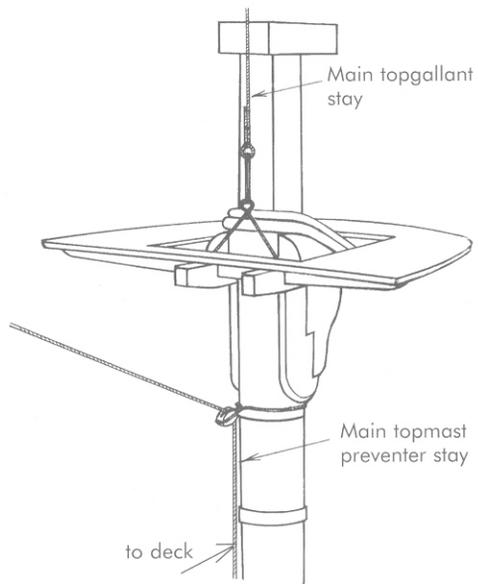
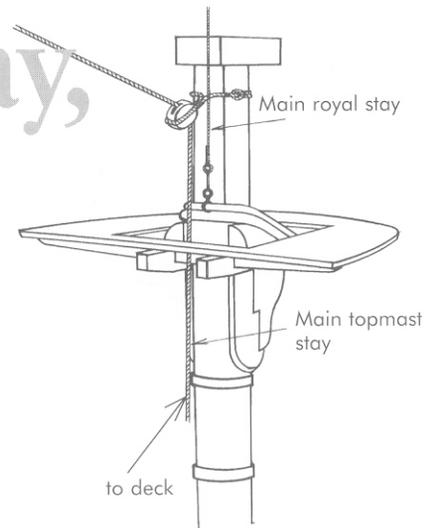
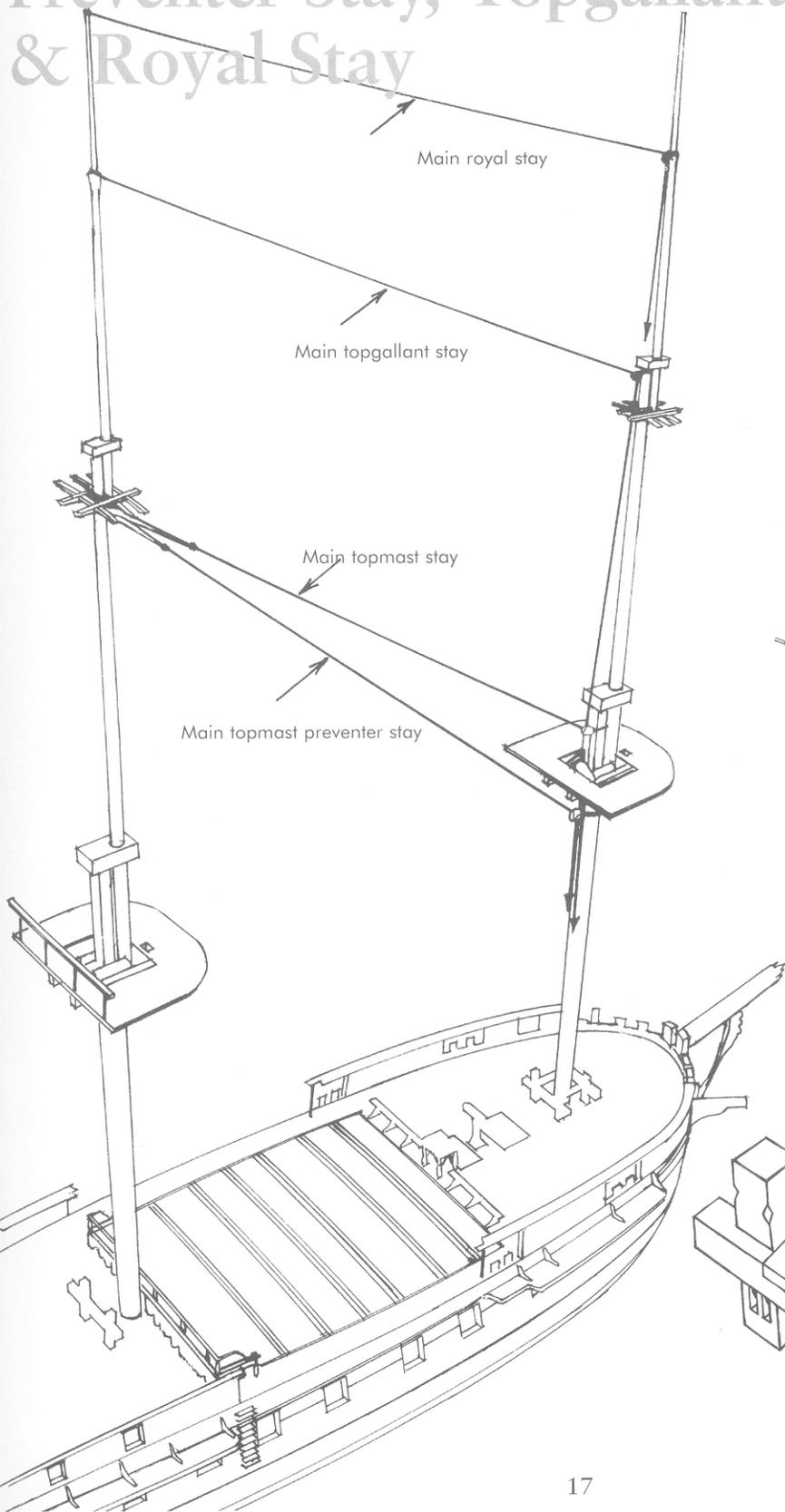
Fore Stay & Preventer Stay



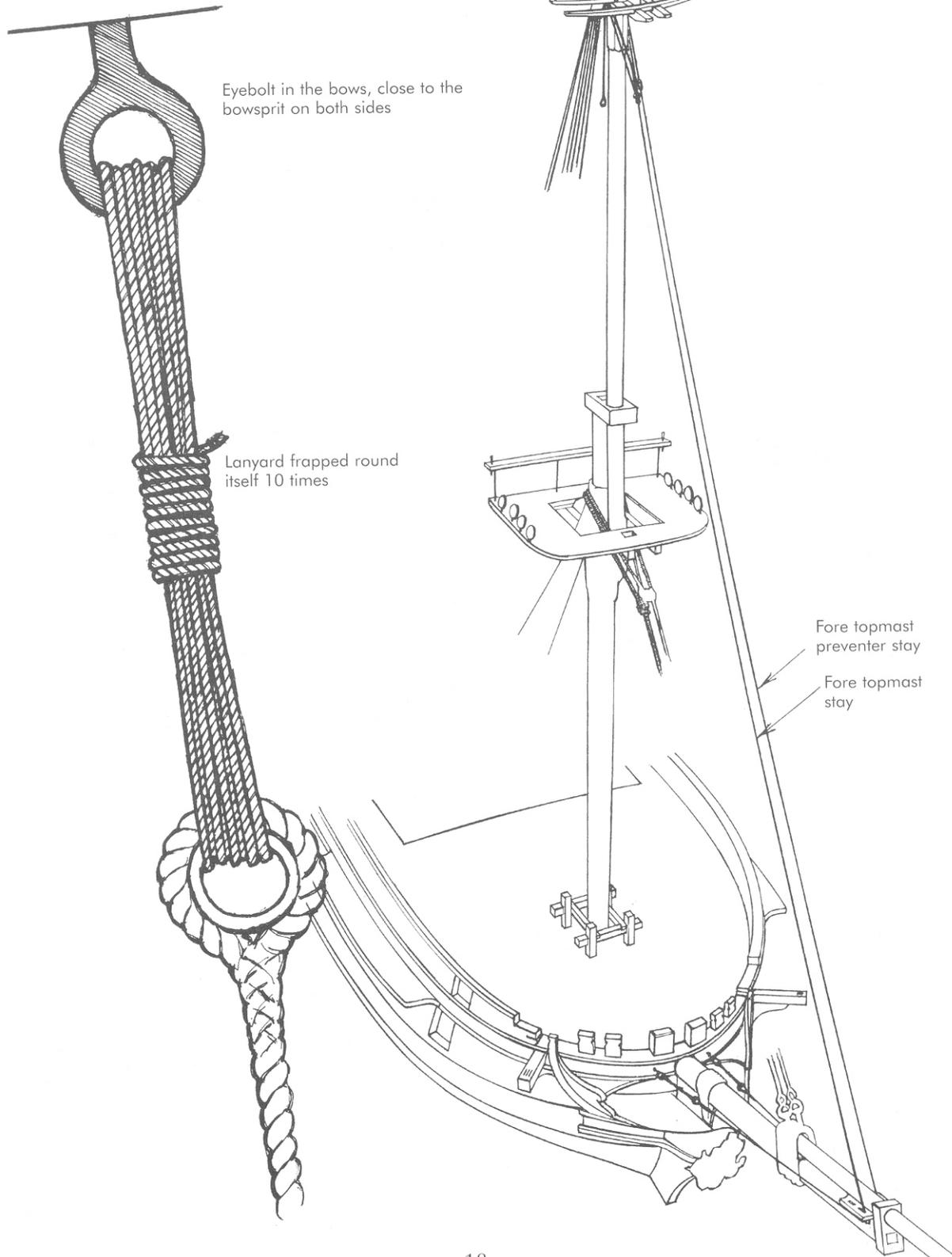
Mizzen Topmast Stay & Topgallant Stay



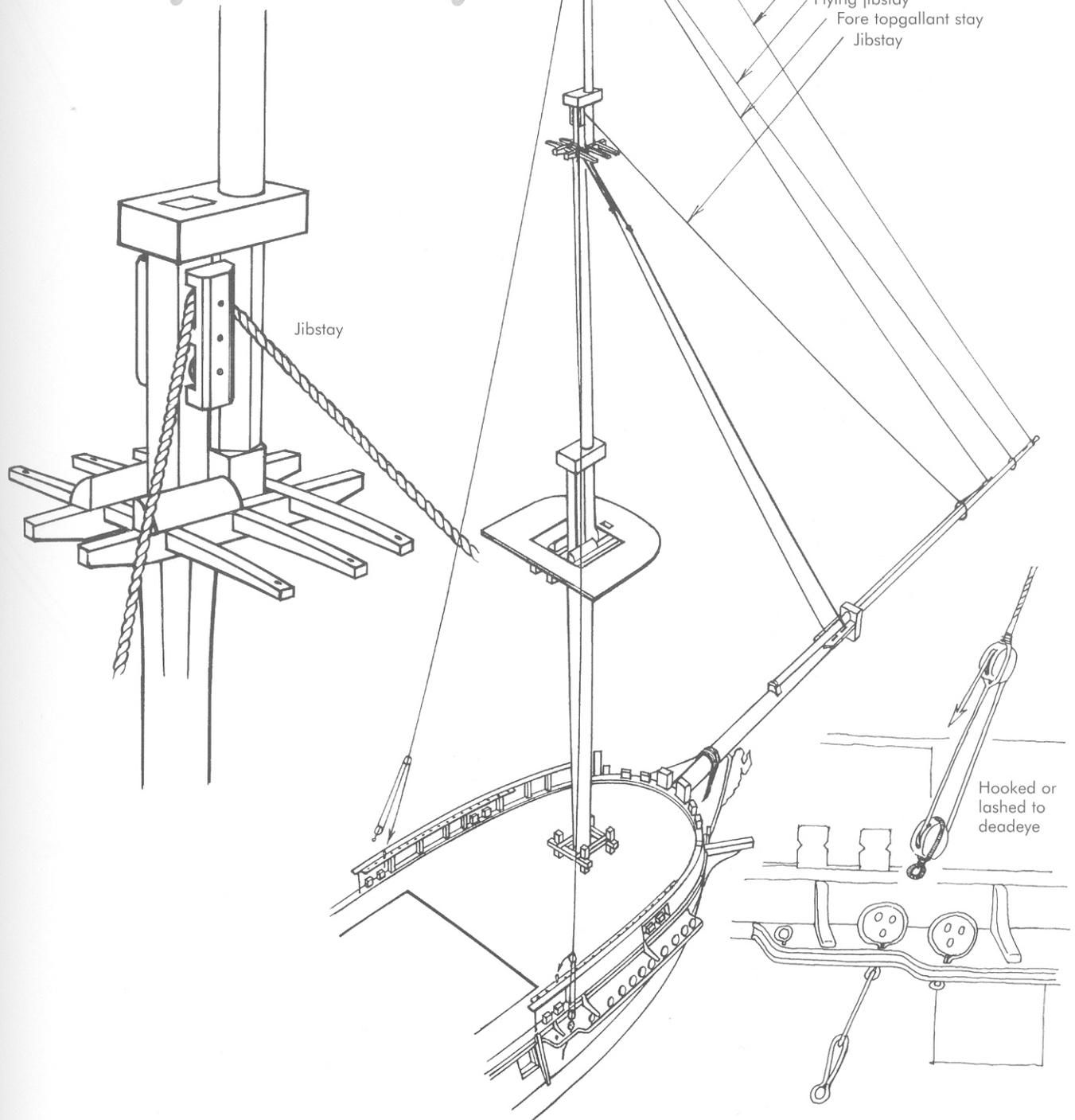
Main Topmast Stay, Preventer Stay, Topgallant & Royal Stay



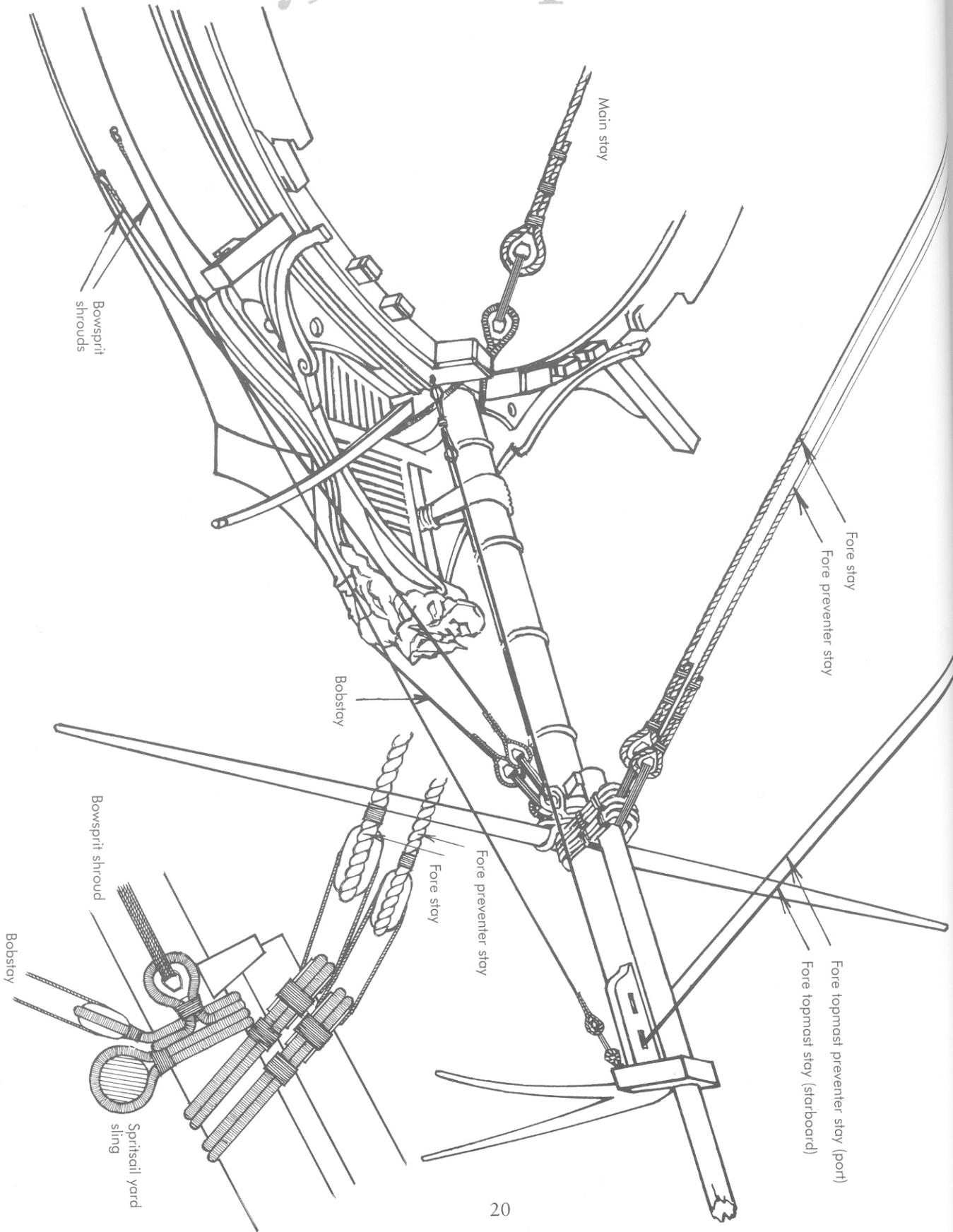
Fore Topmast & Preventer Stay



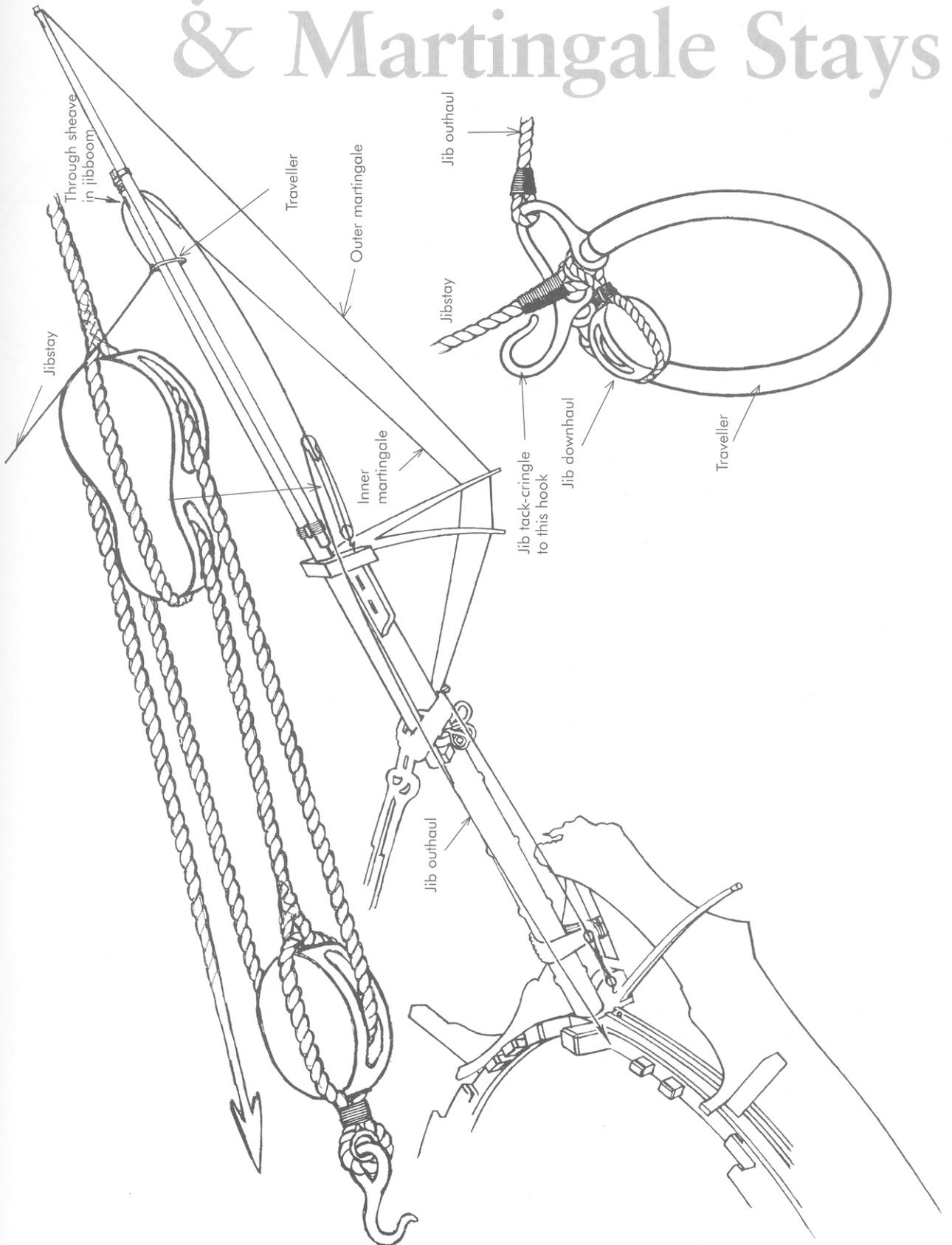
Jibstay, Fore Topgallant Flying Jib & Royal Stay



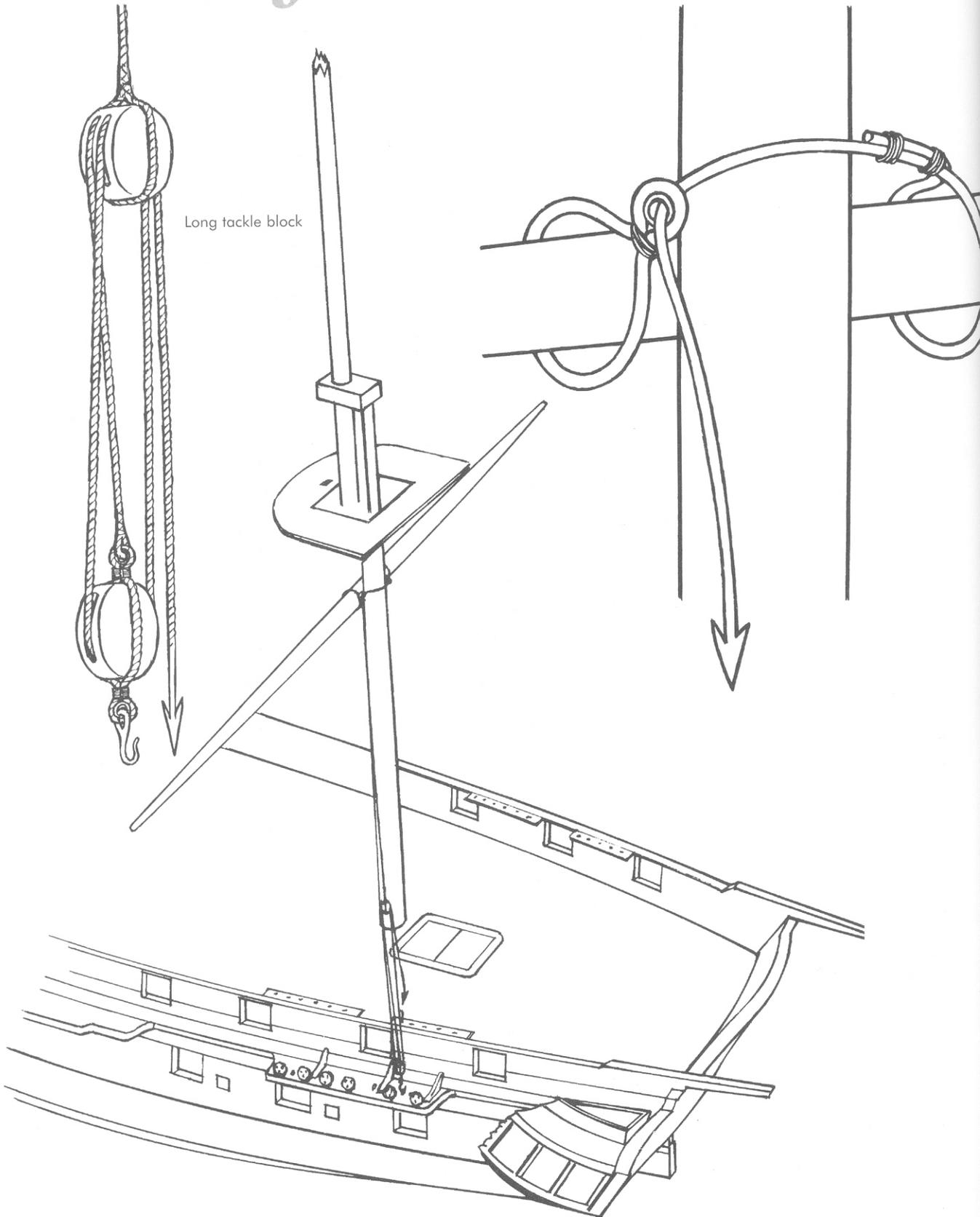
Bobstay, Bowsprit Shrouds



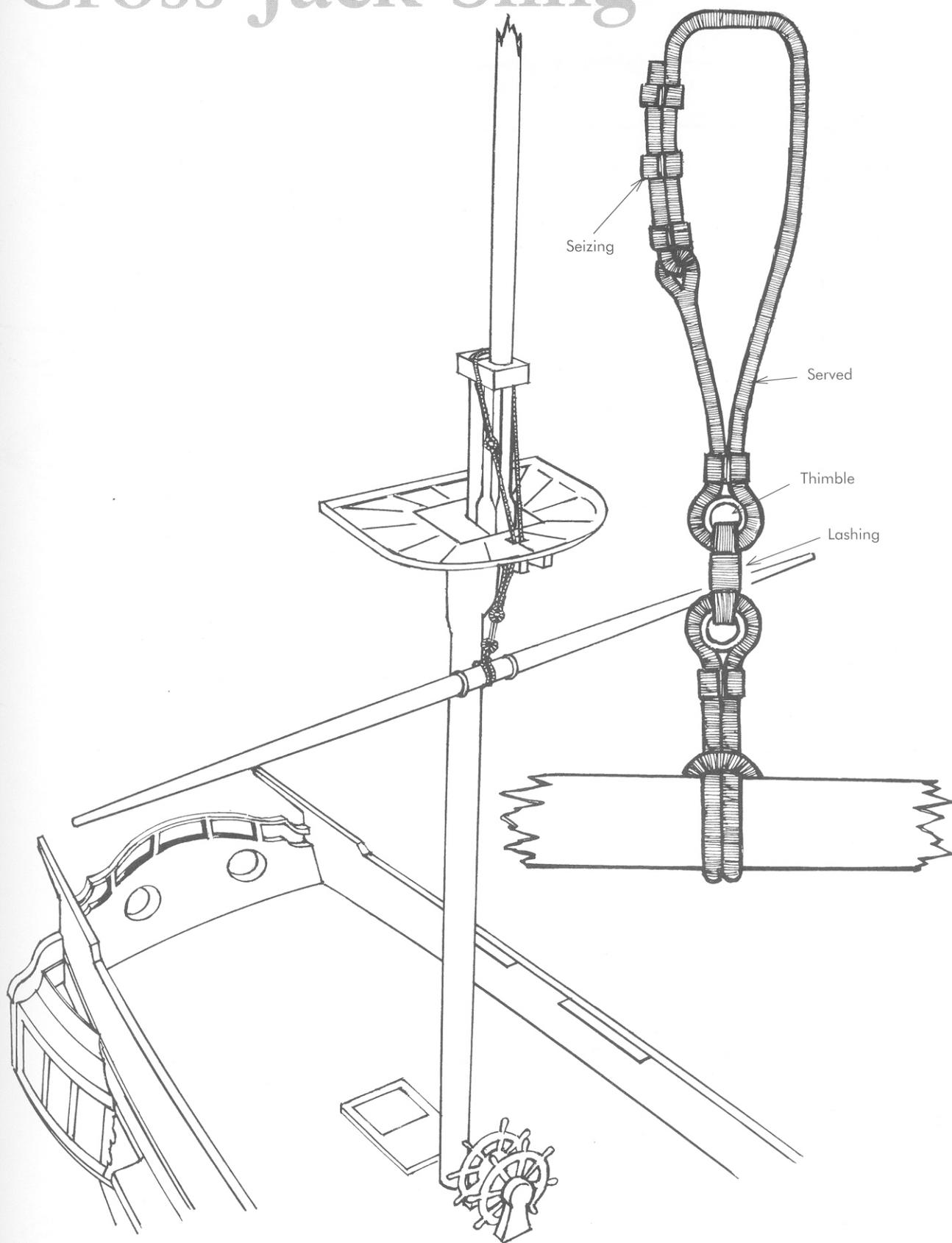
Jibstay & Martingale Stays



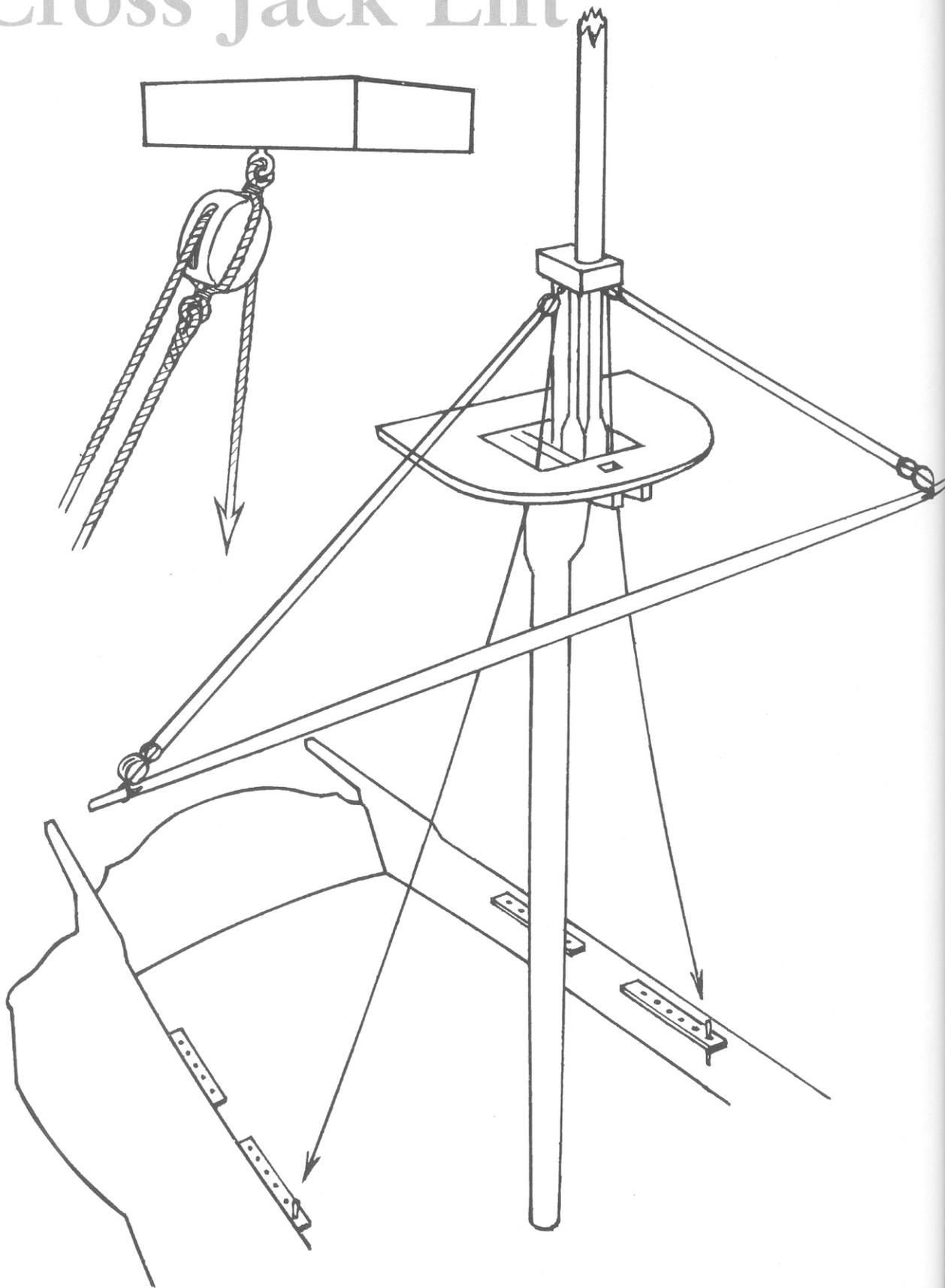
Cross Jack Truss Pendant



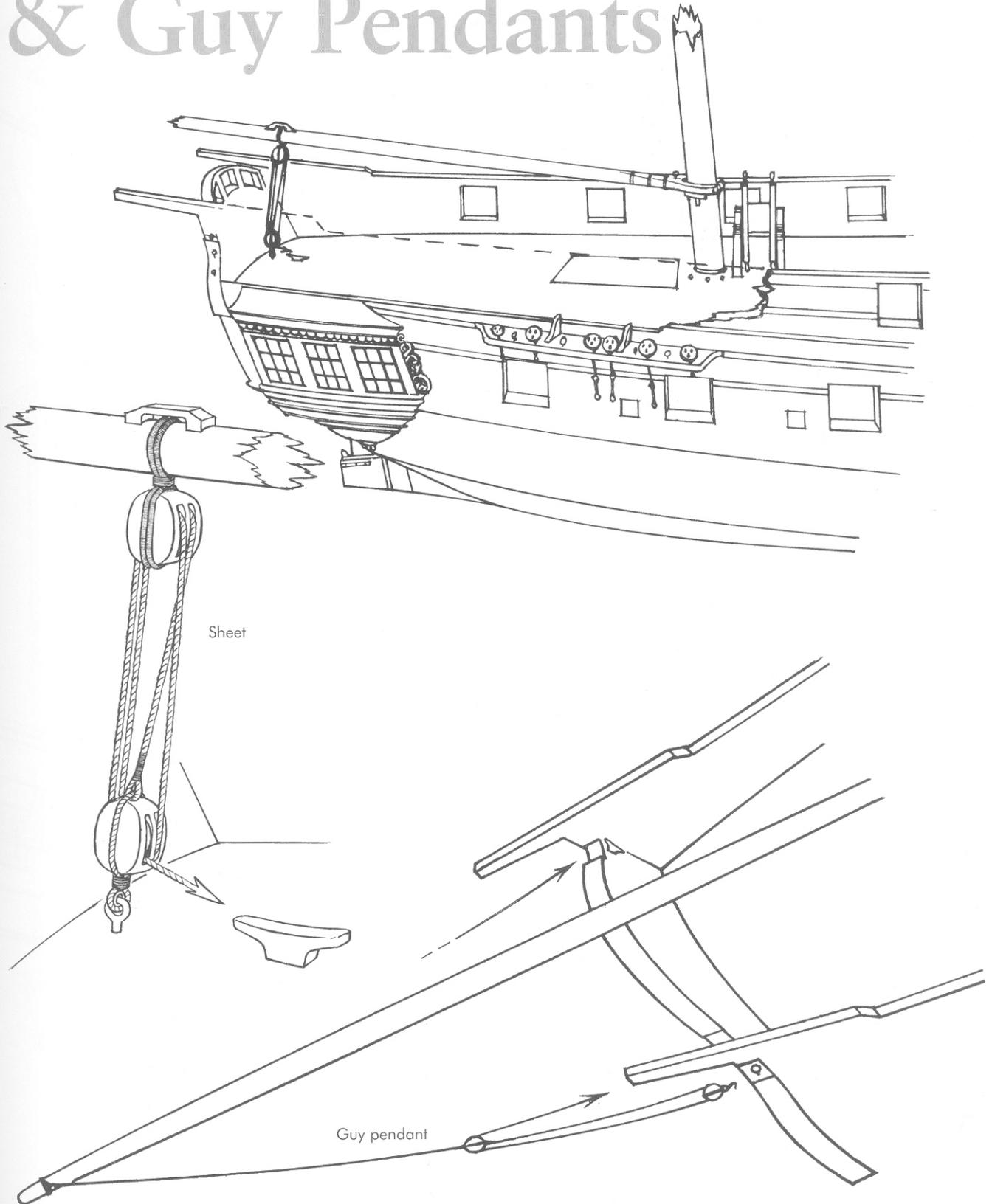
Cross Jack Sling



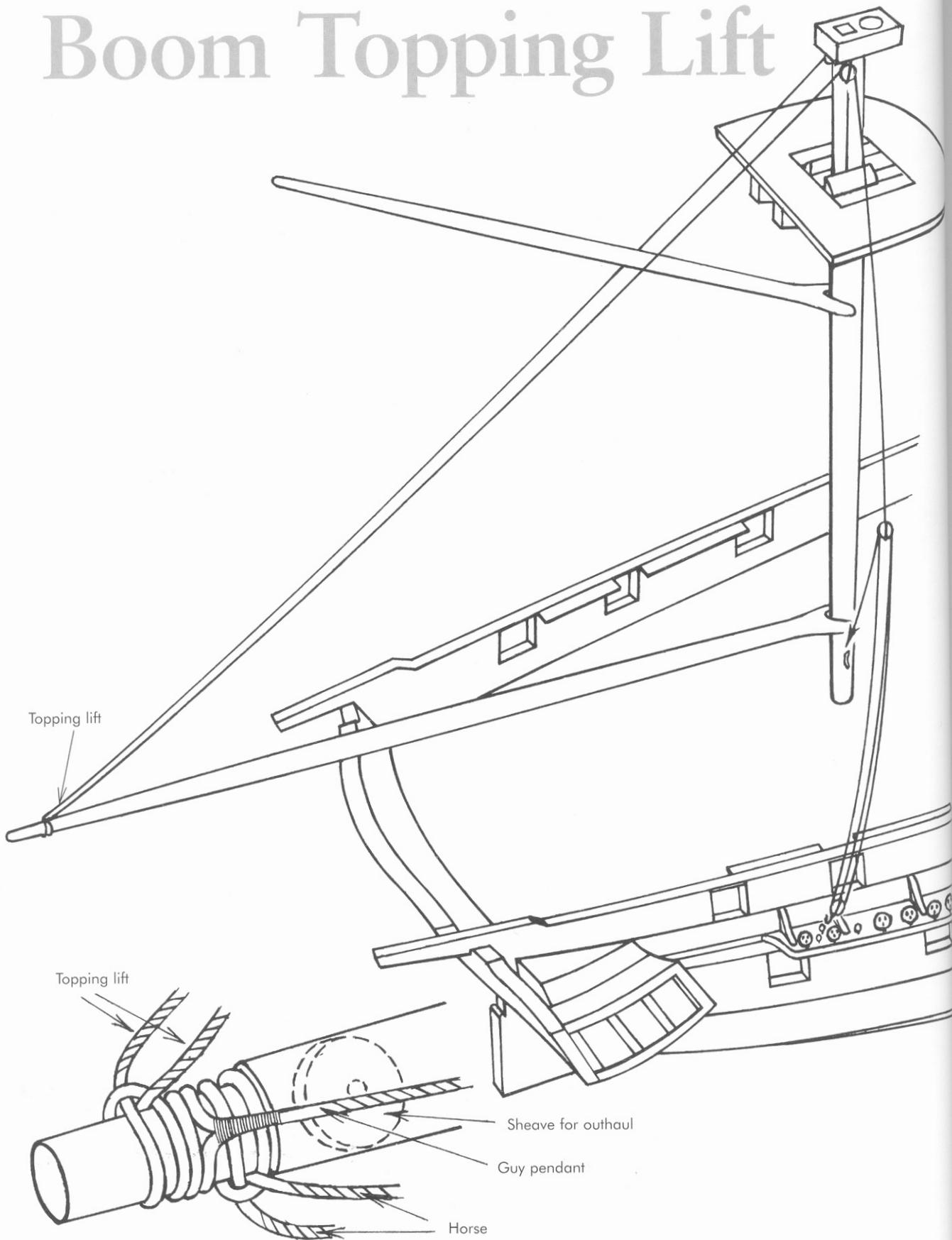
Cross Jack Lift



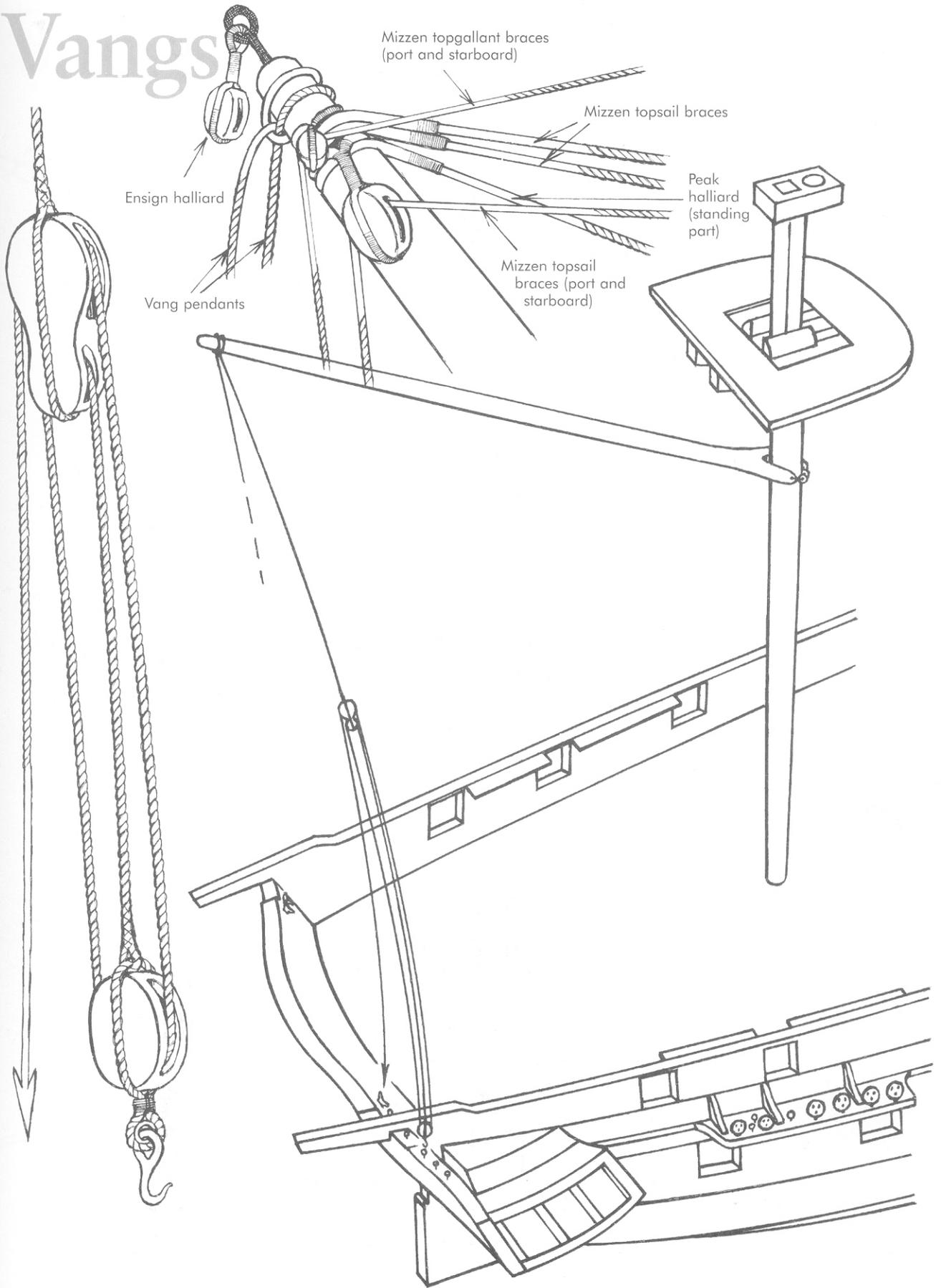
Spanker Boom Sheet & Guy Pendants



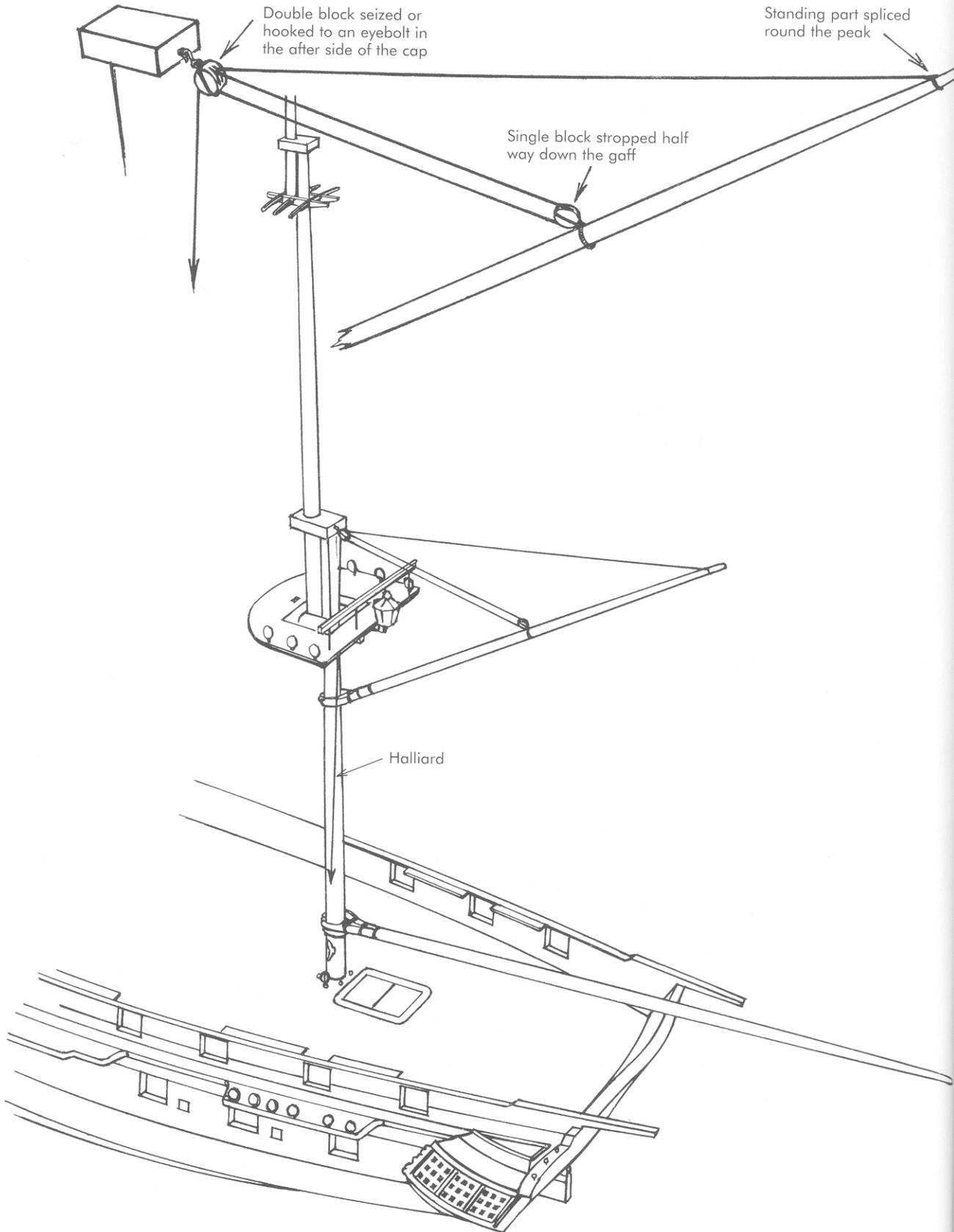
Boom Topping Lift



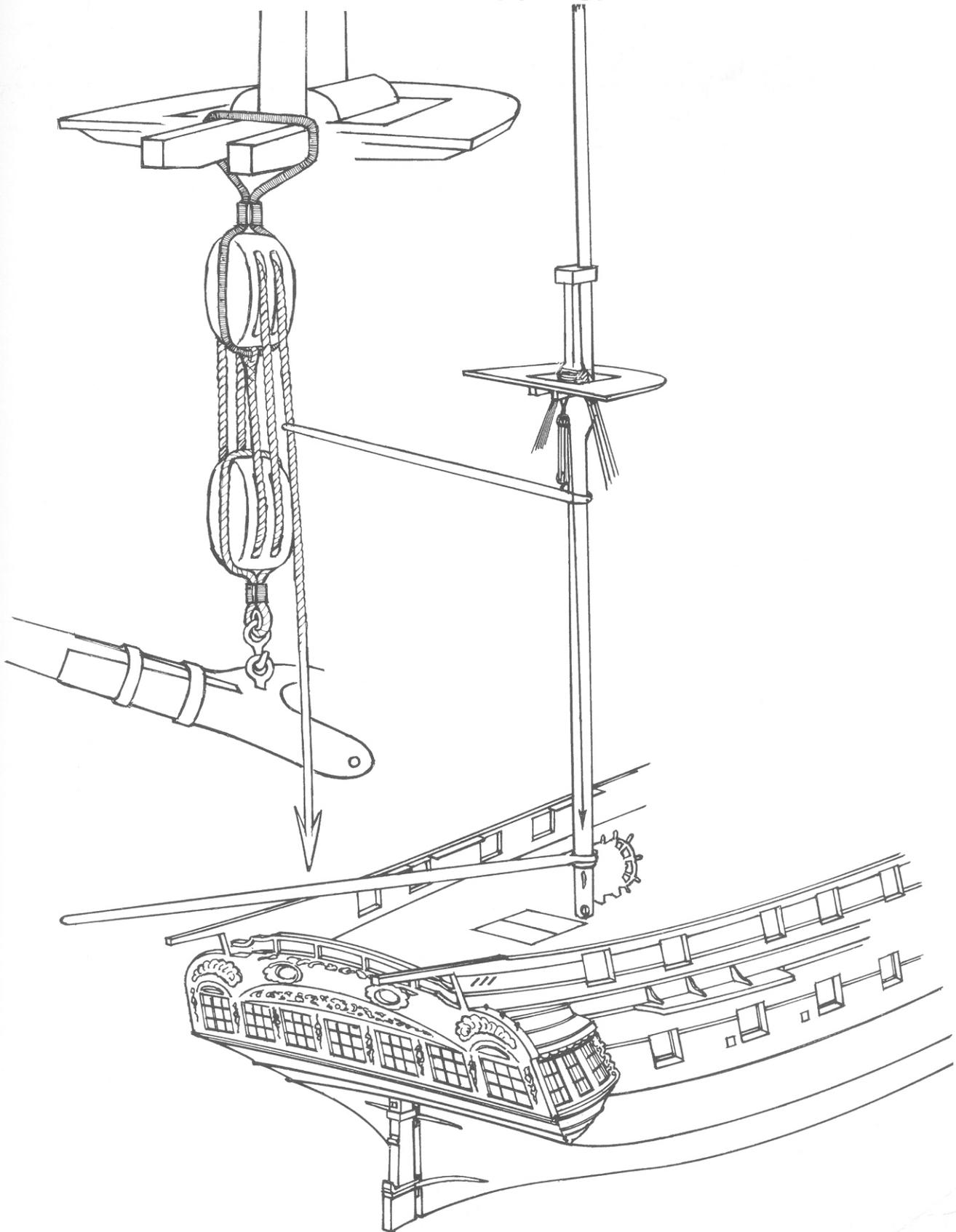
Vangs



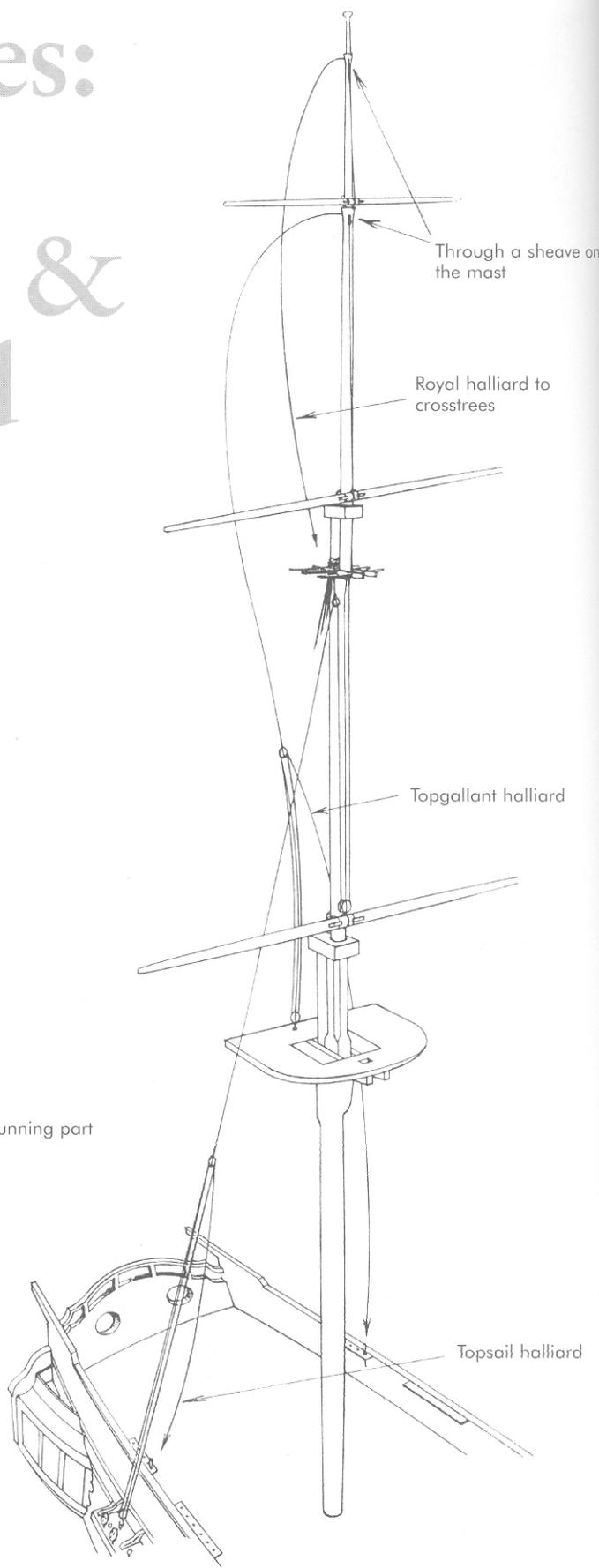
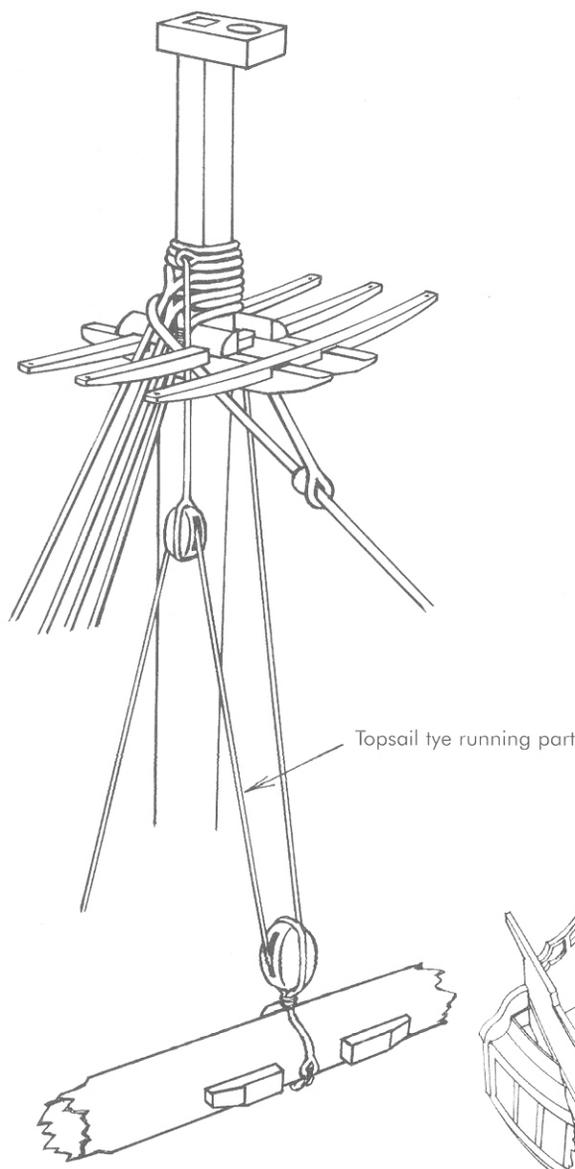
Peak Halliard



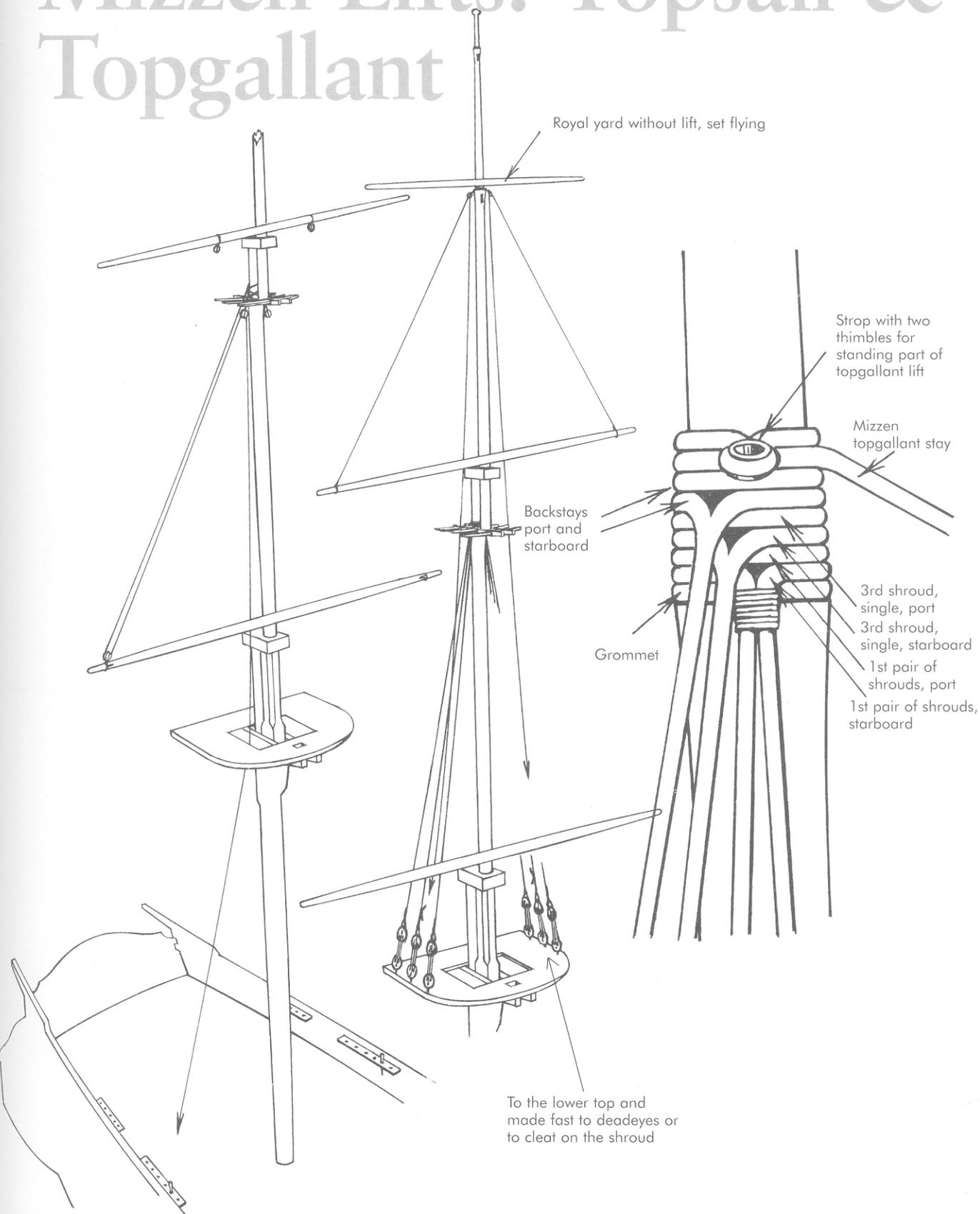
Throat Halliard



Mizzen Tyes: Topsail, Topgallant & Royal Yard



Mizzen Lifts: Topsail & Topgallant



Royal yard without lift, set flying

Backstays port and starboard

Grommet

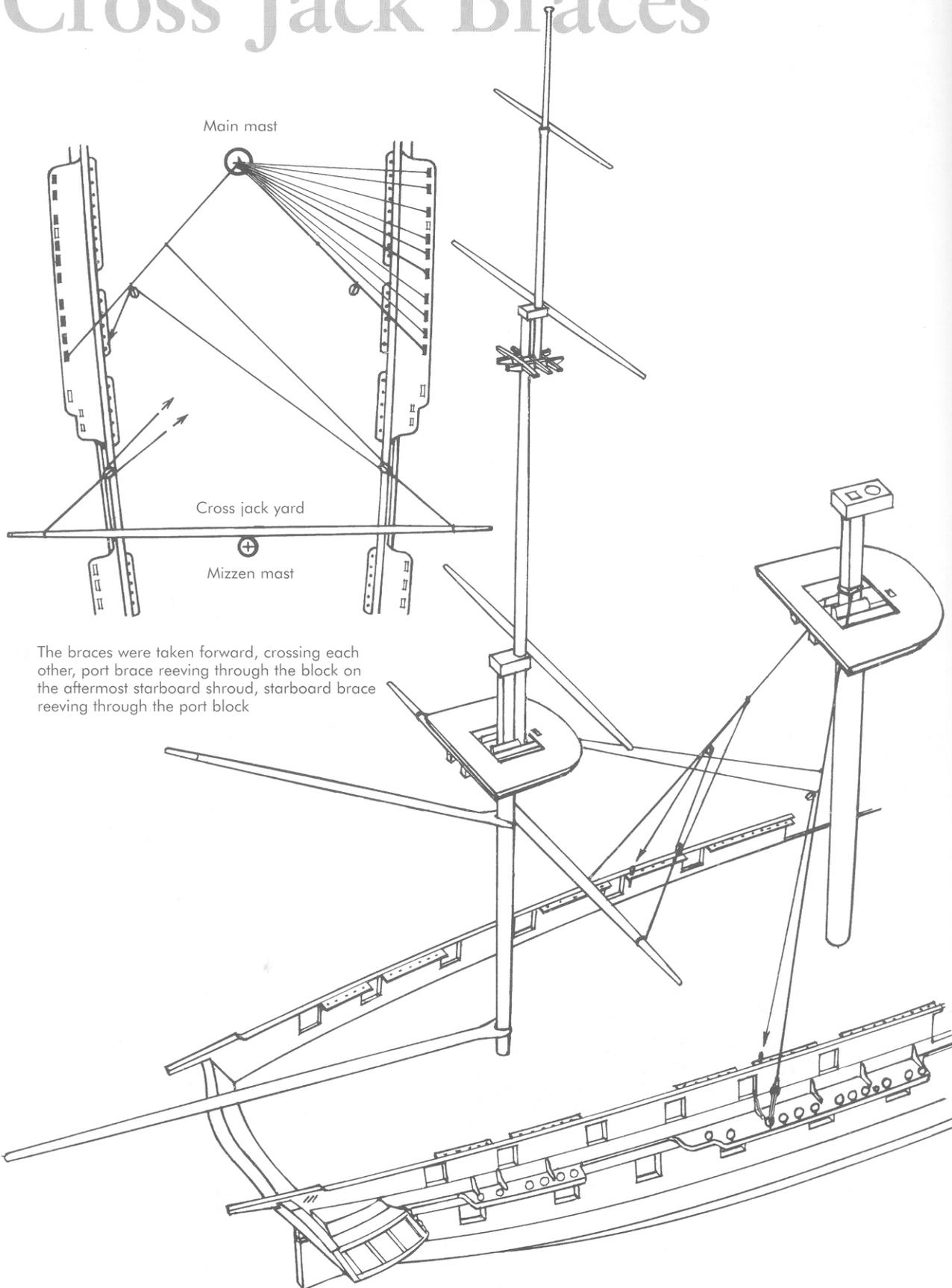
Strop with two thimbles for standing part of topgallant lift

Mizzen topgallant stay

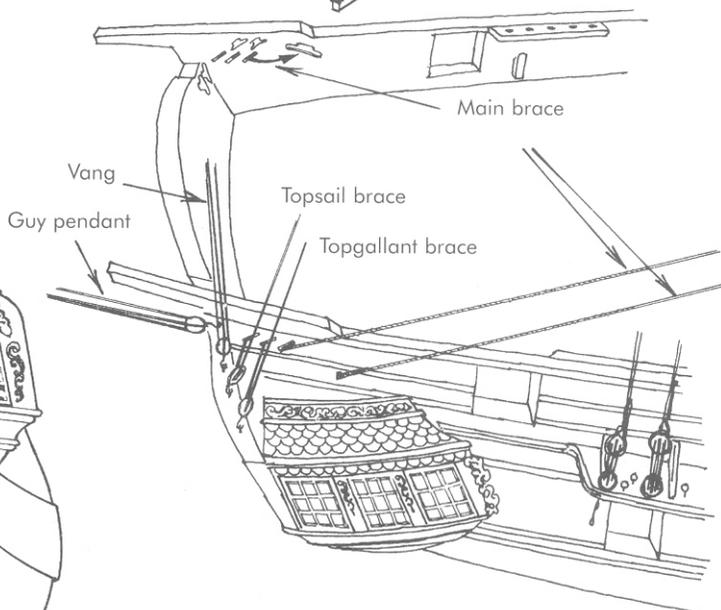
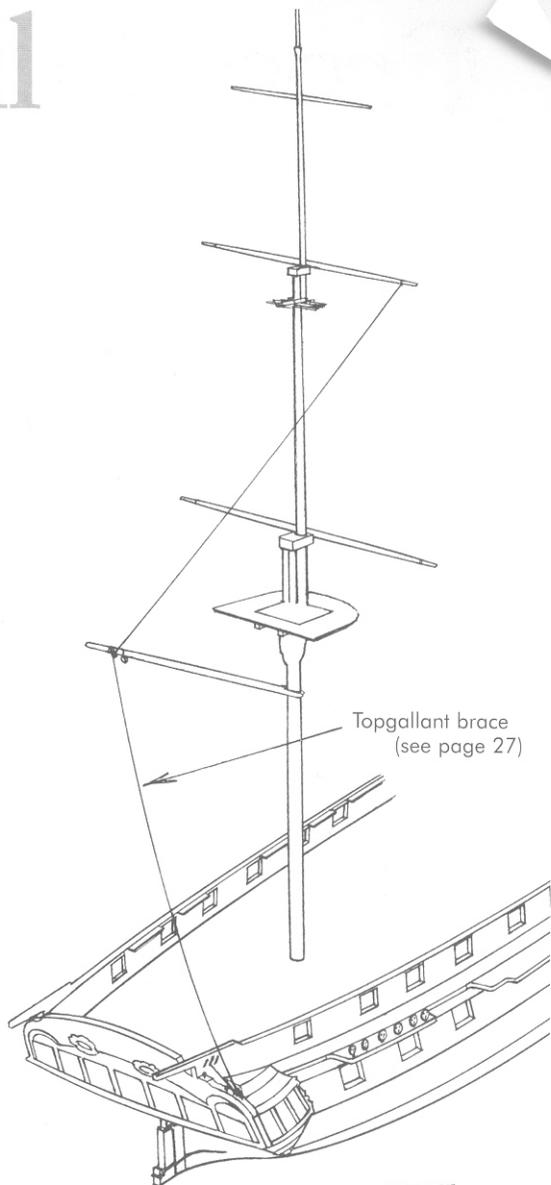
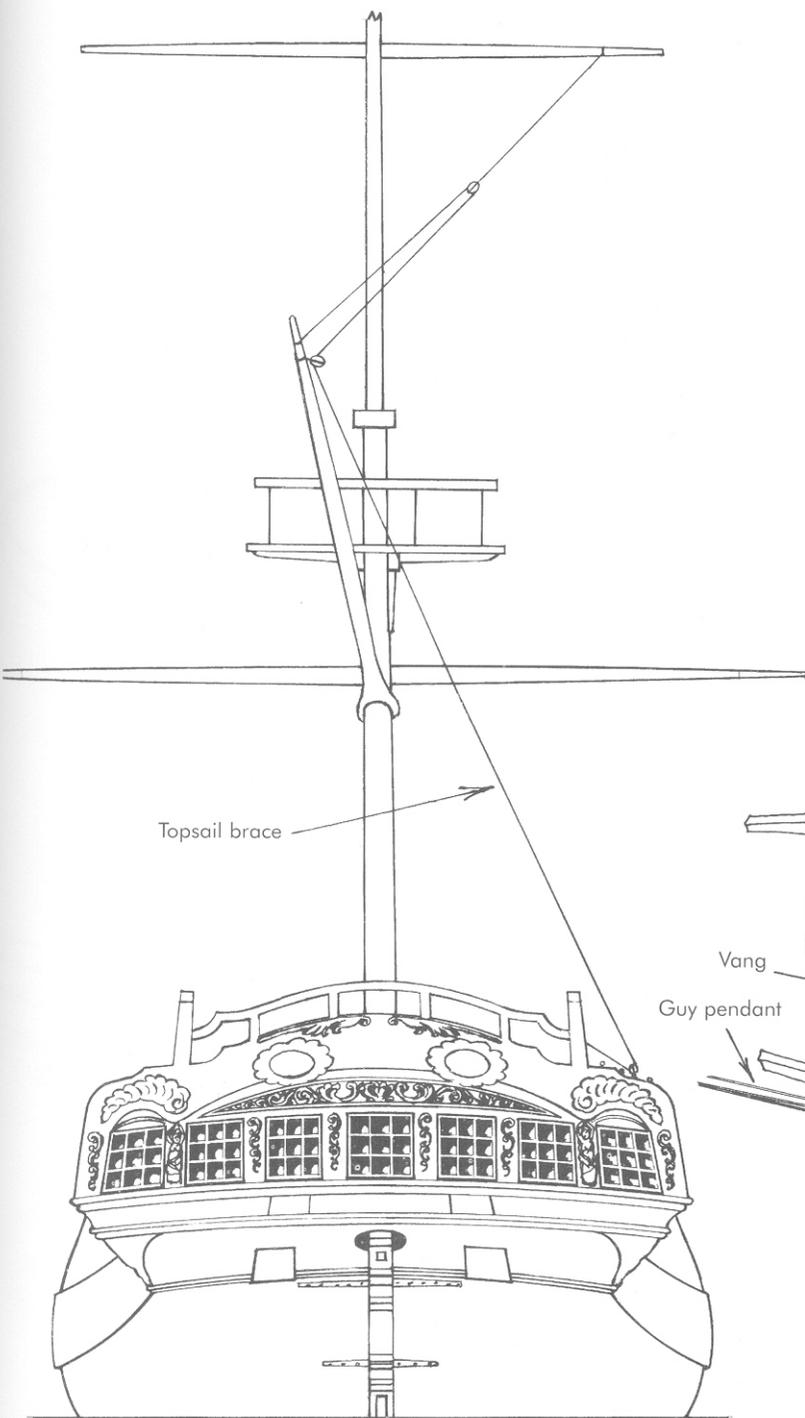
3rd shroud, single, port
 3rd shroud, single, starboard
 1st pair of shrouds, port
 1st pair of shrouds, starboard

To the lower top and made fast to deadeyes or to cleat on the shroud

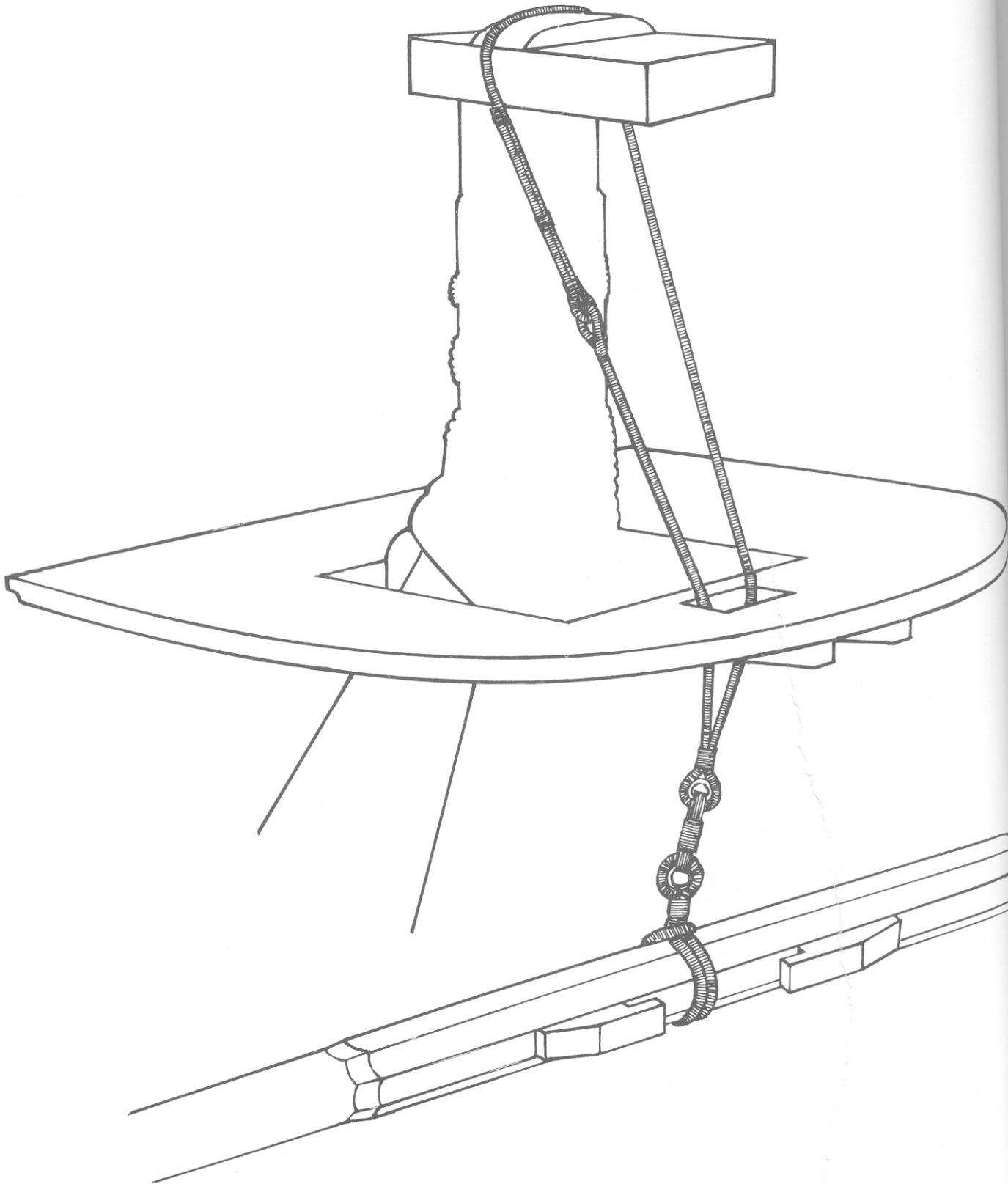
Cross Jack Braces



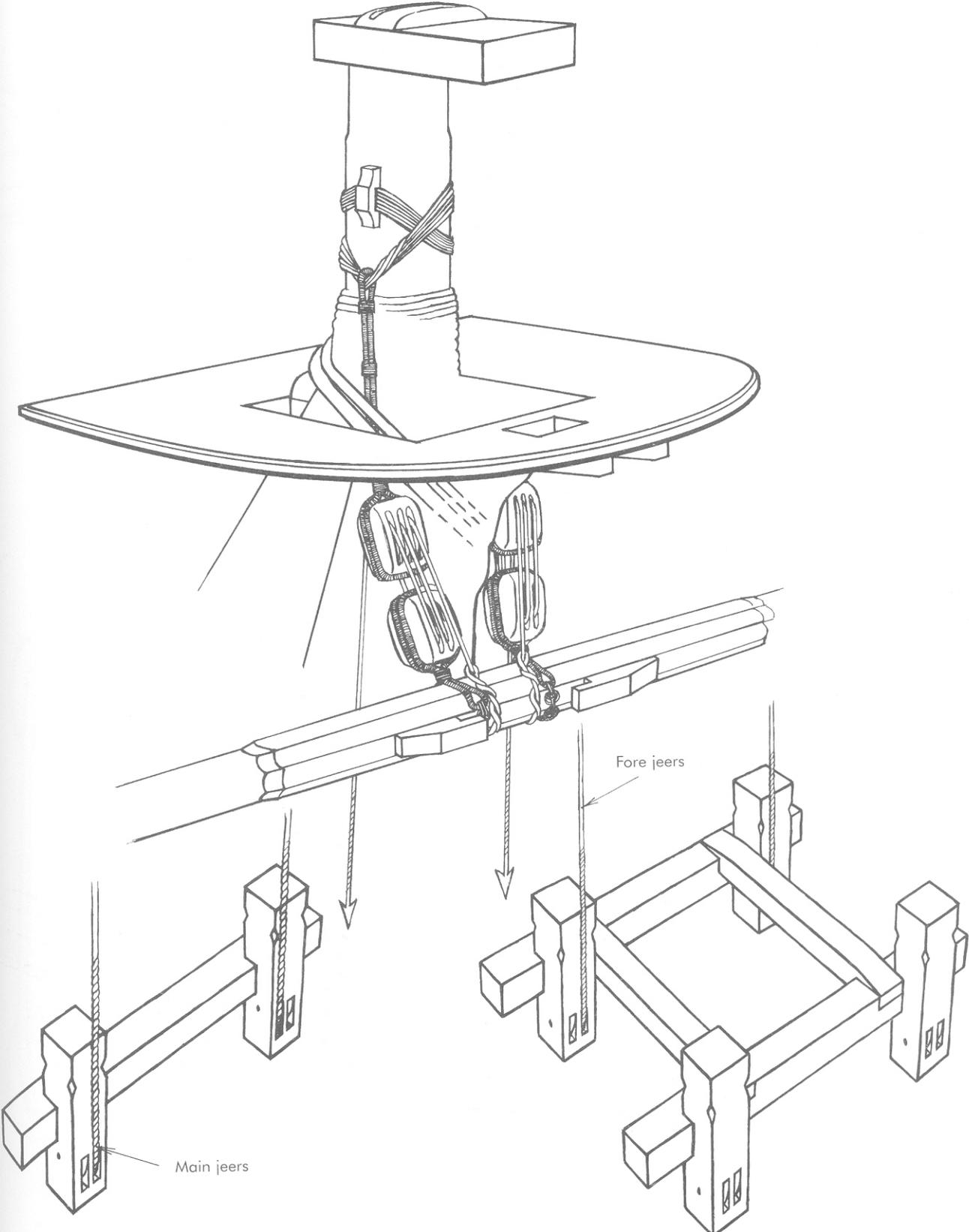
Mizzen Topsail & Topgallant Braces



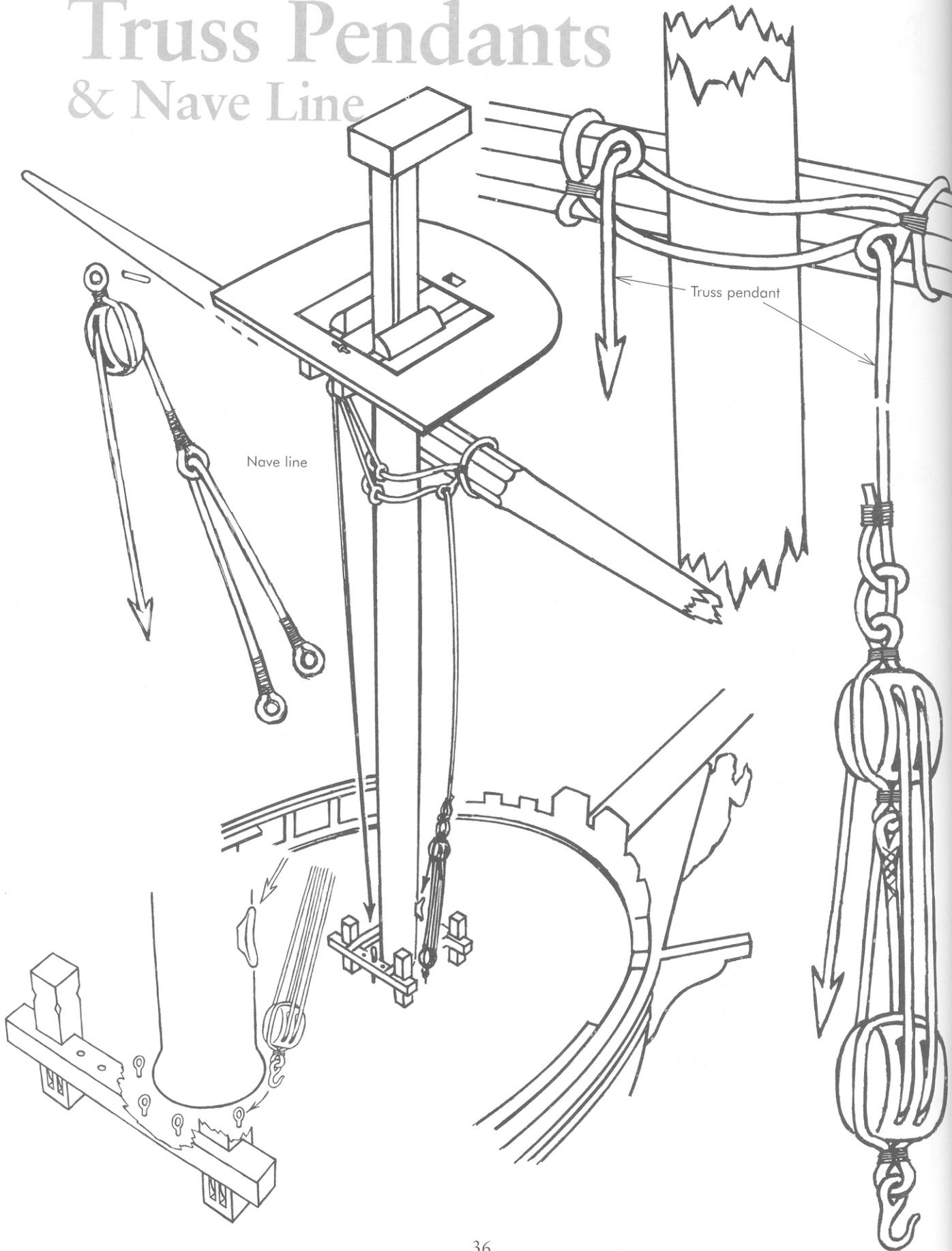
Fore & Main Slings



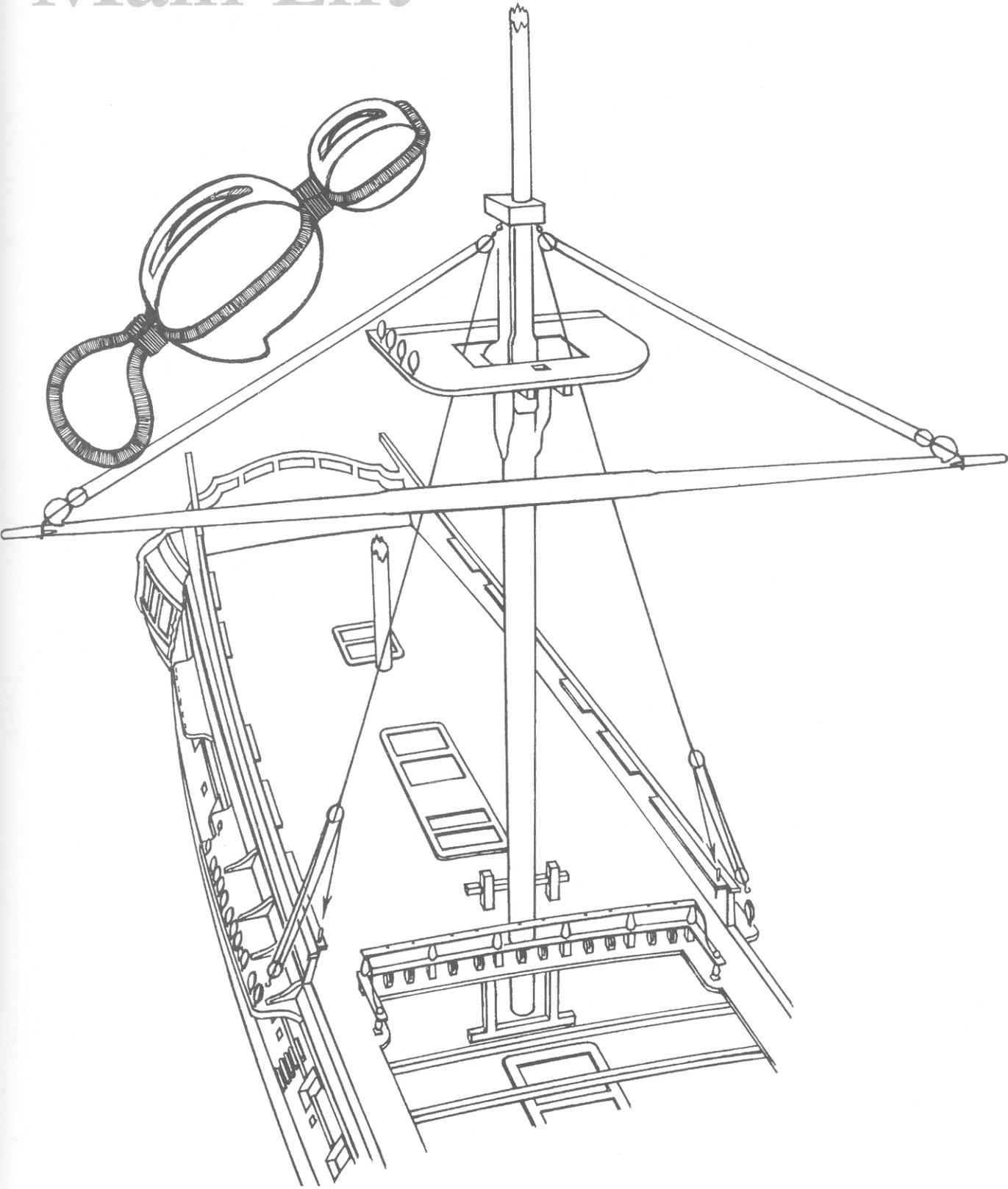
Fore & Main Jeers



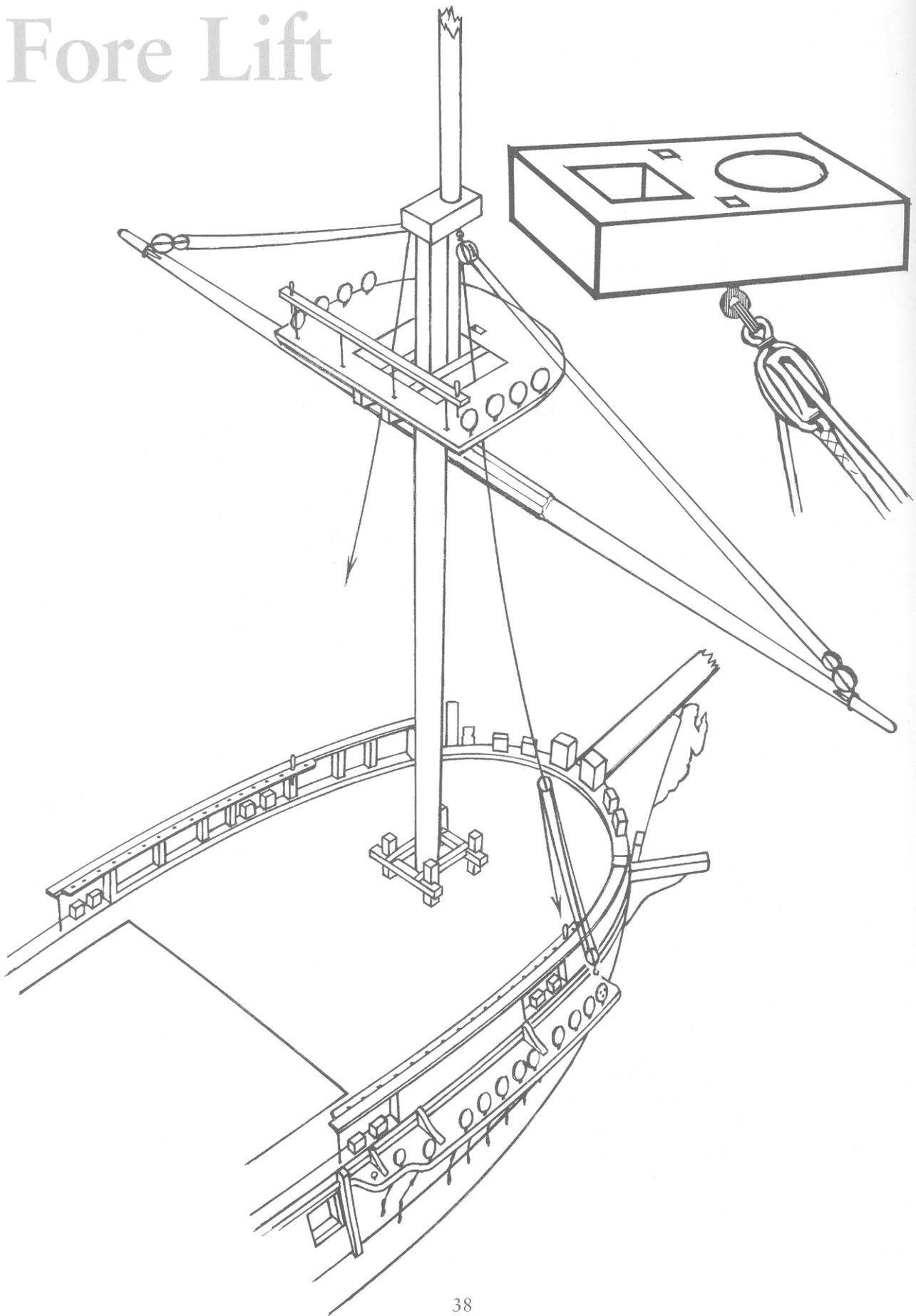
Truss Pendants & Nave Line



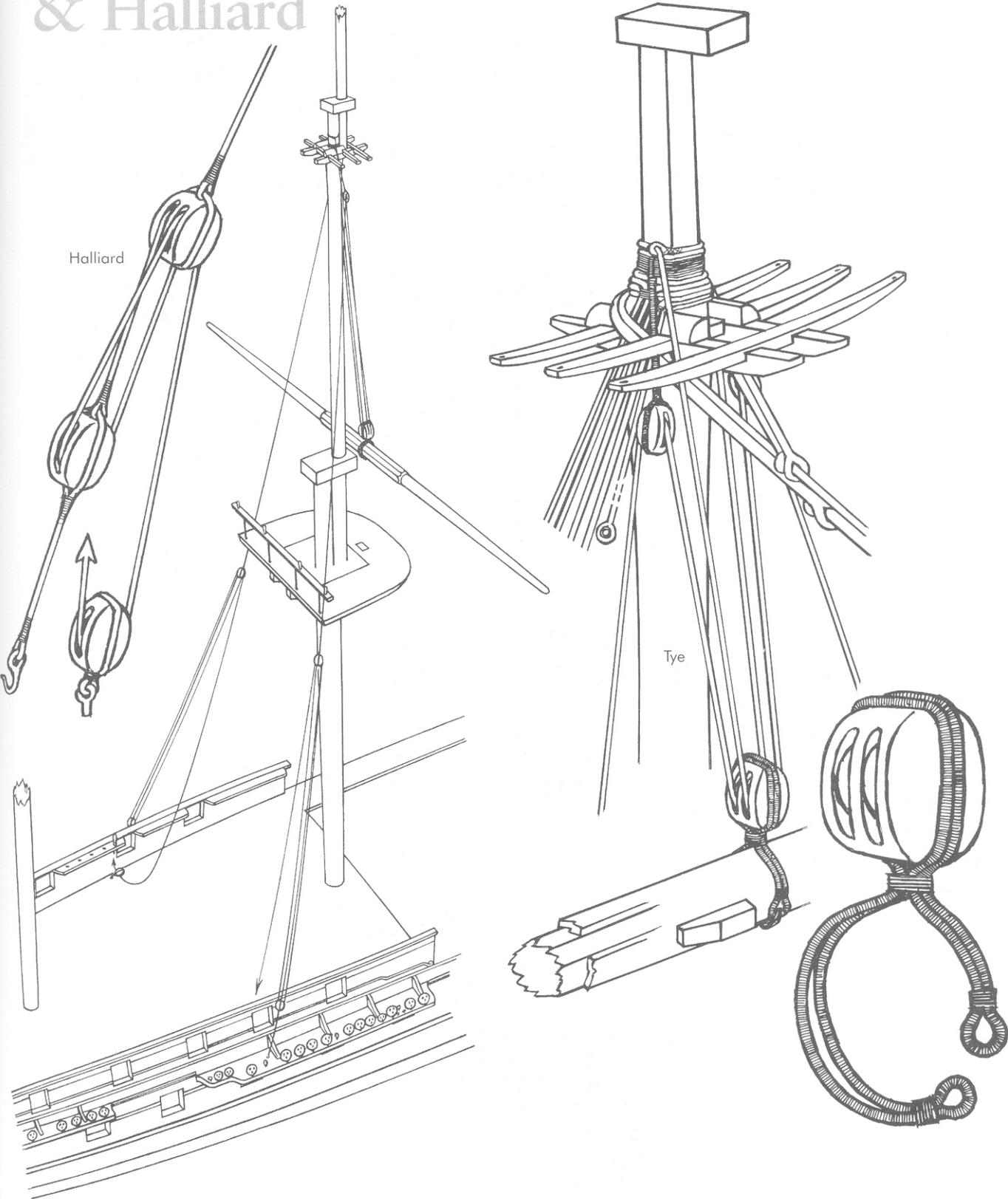
Main Lift



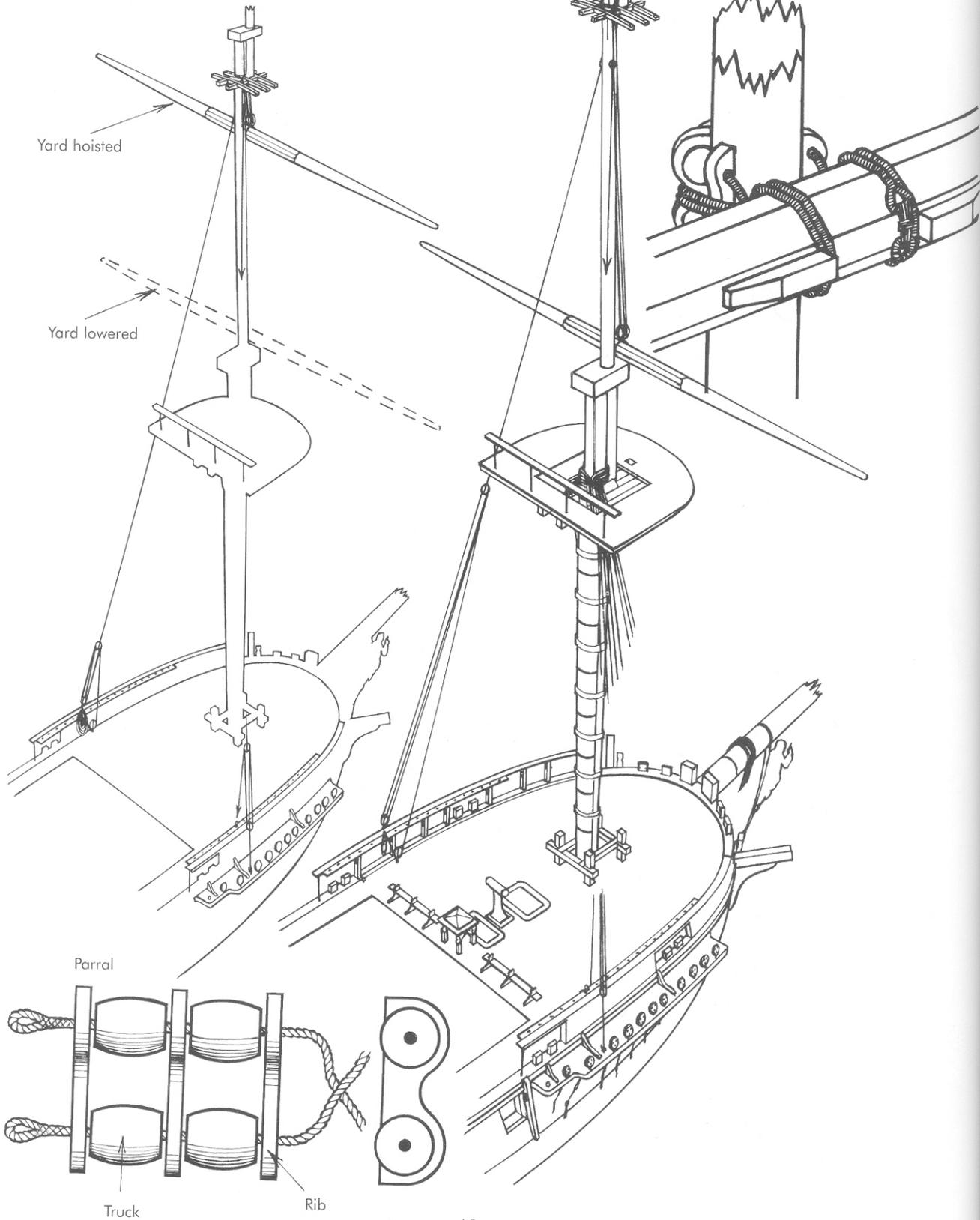
Fore Lift



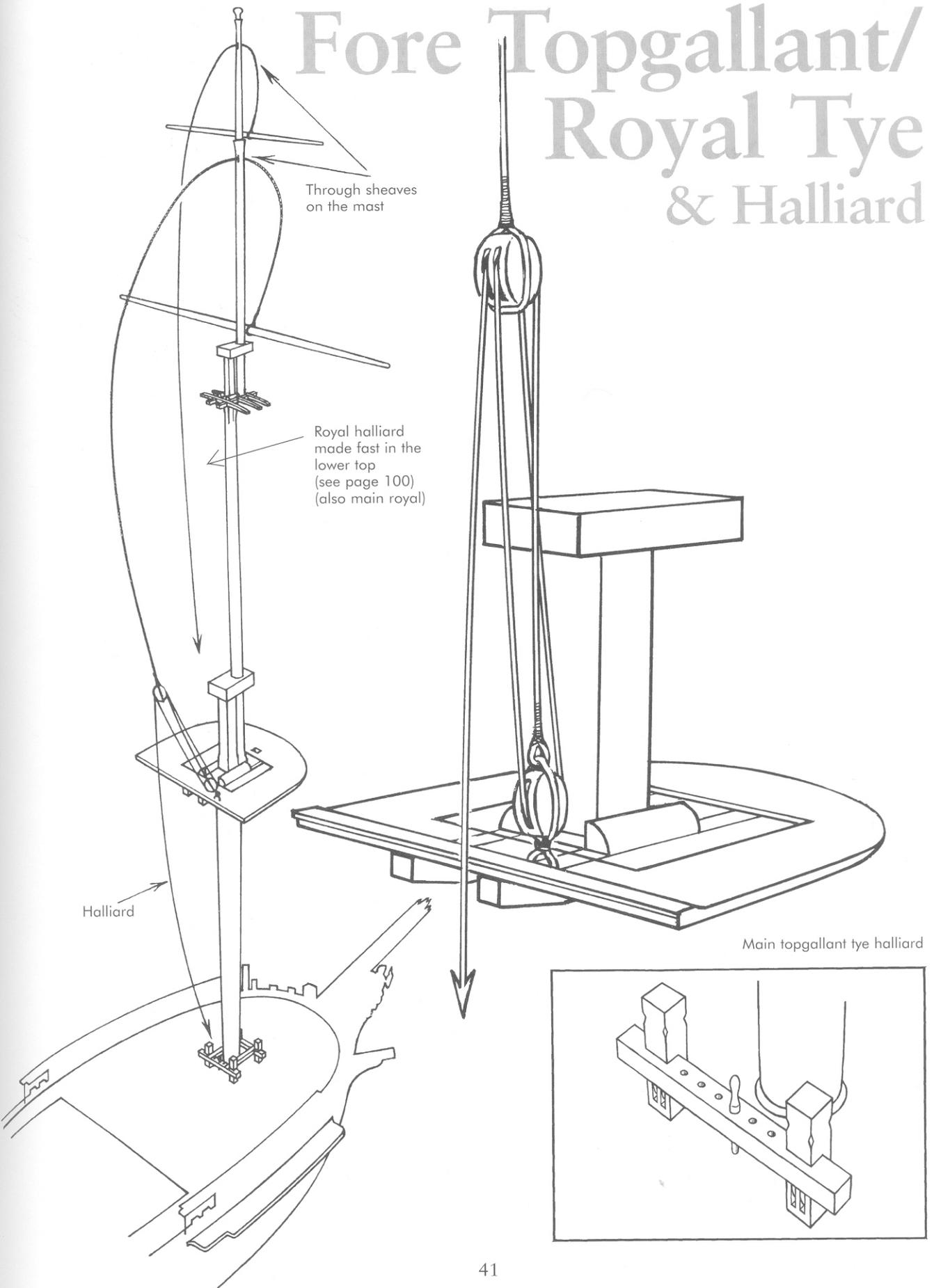
Main Topsail Yard Tye & Halliard



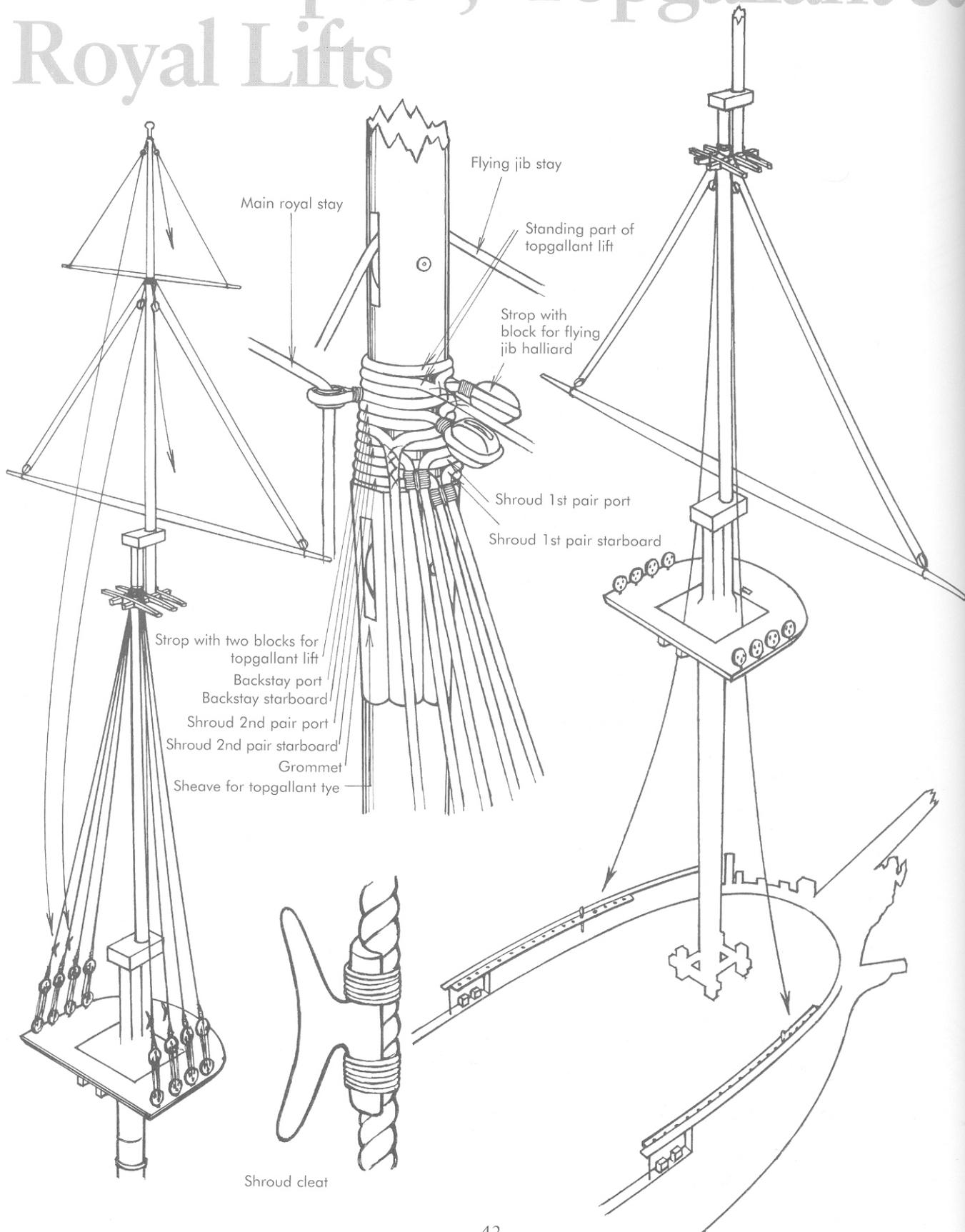
Fore Topsail Yard Tye & Halliard



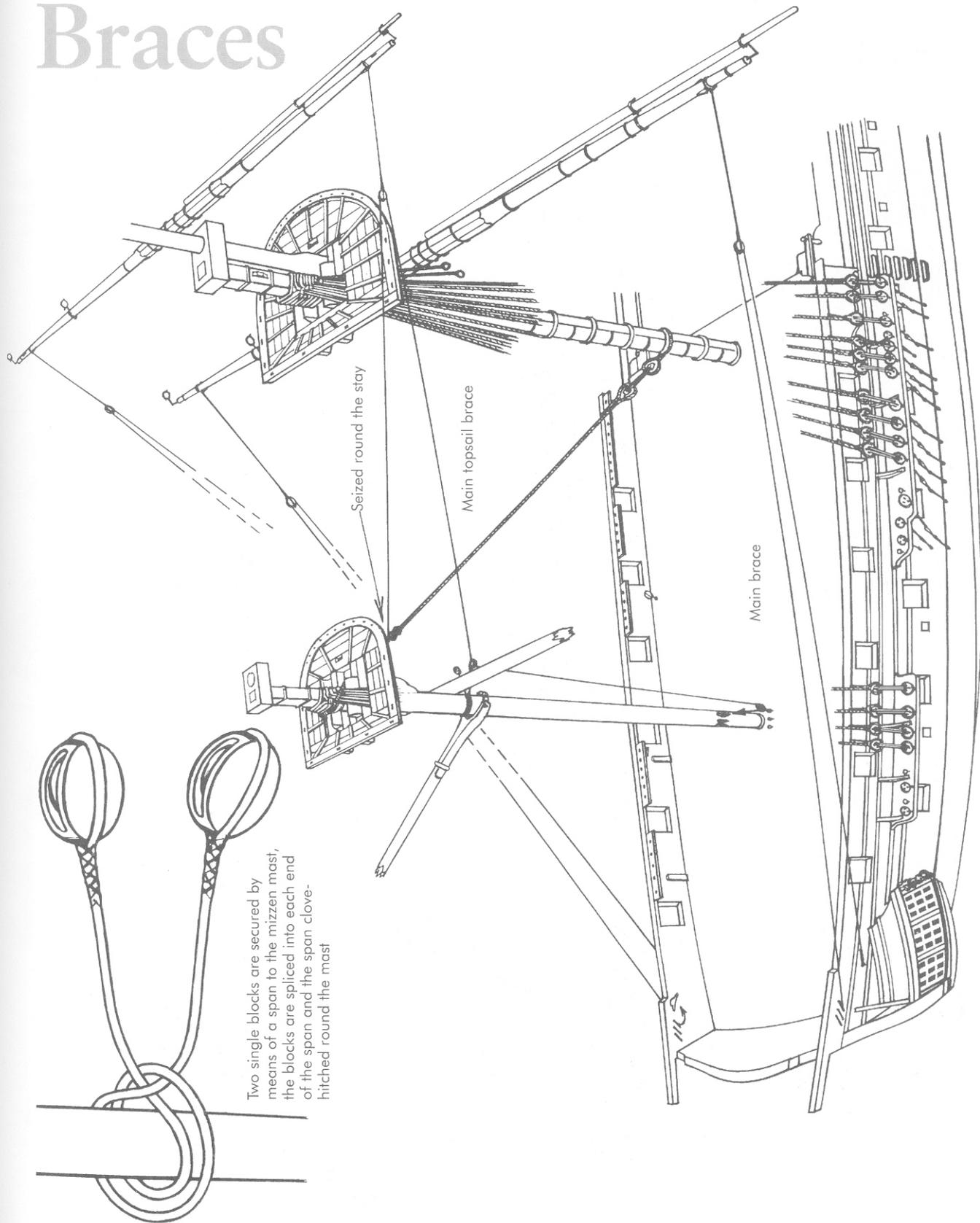
Fore Topgallant/ Royal Tye & Halliard



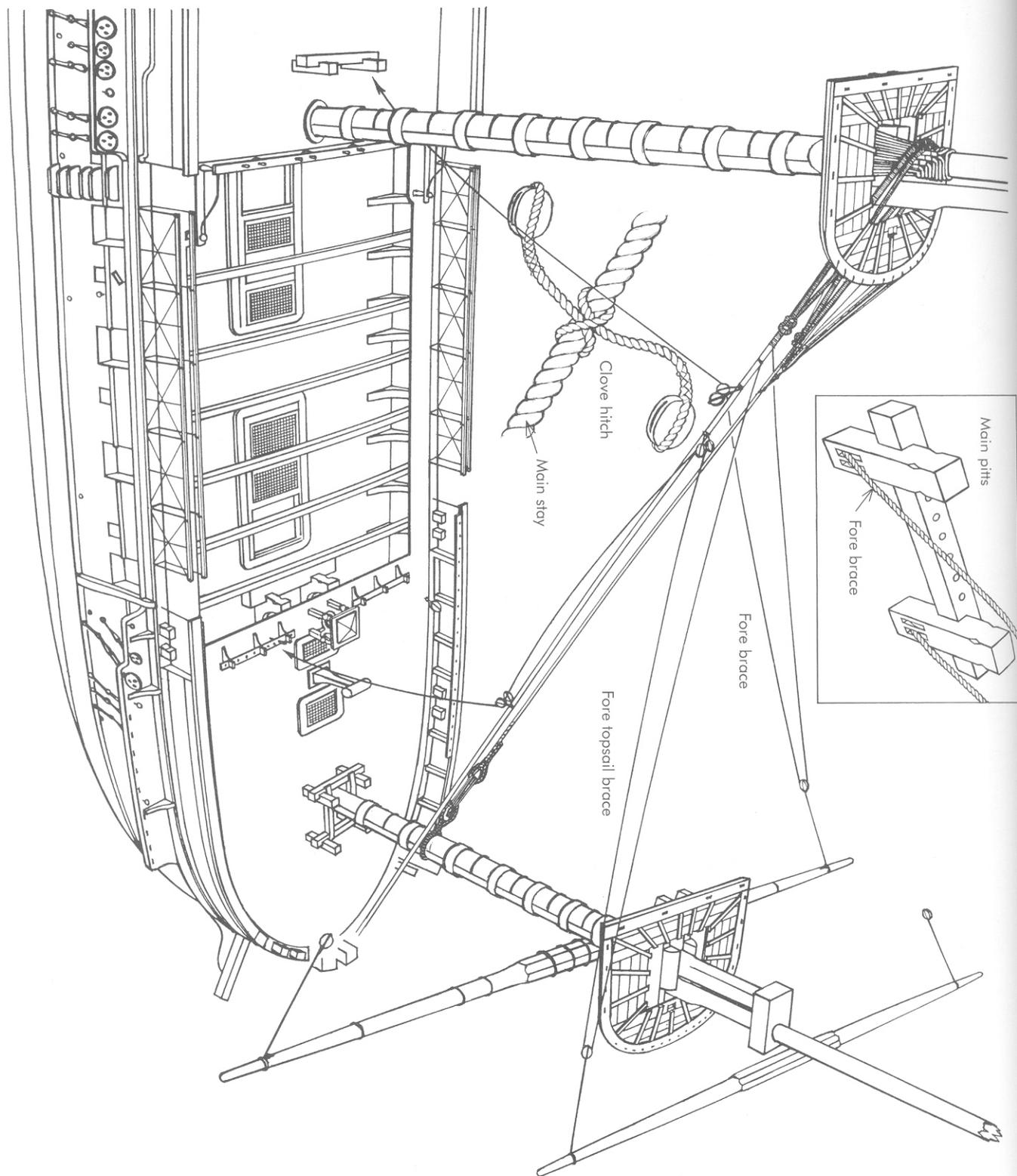
Fore Topsail, Topgallant & Royal Lifts



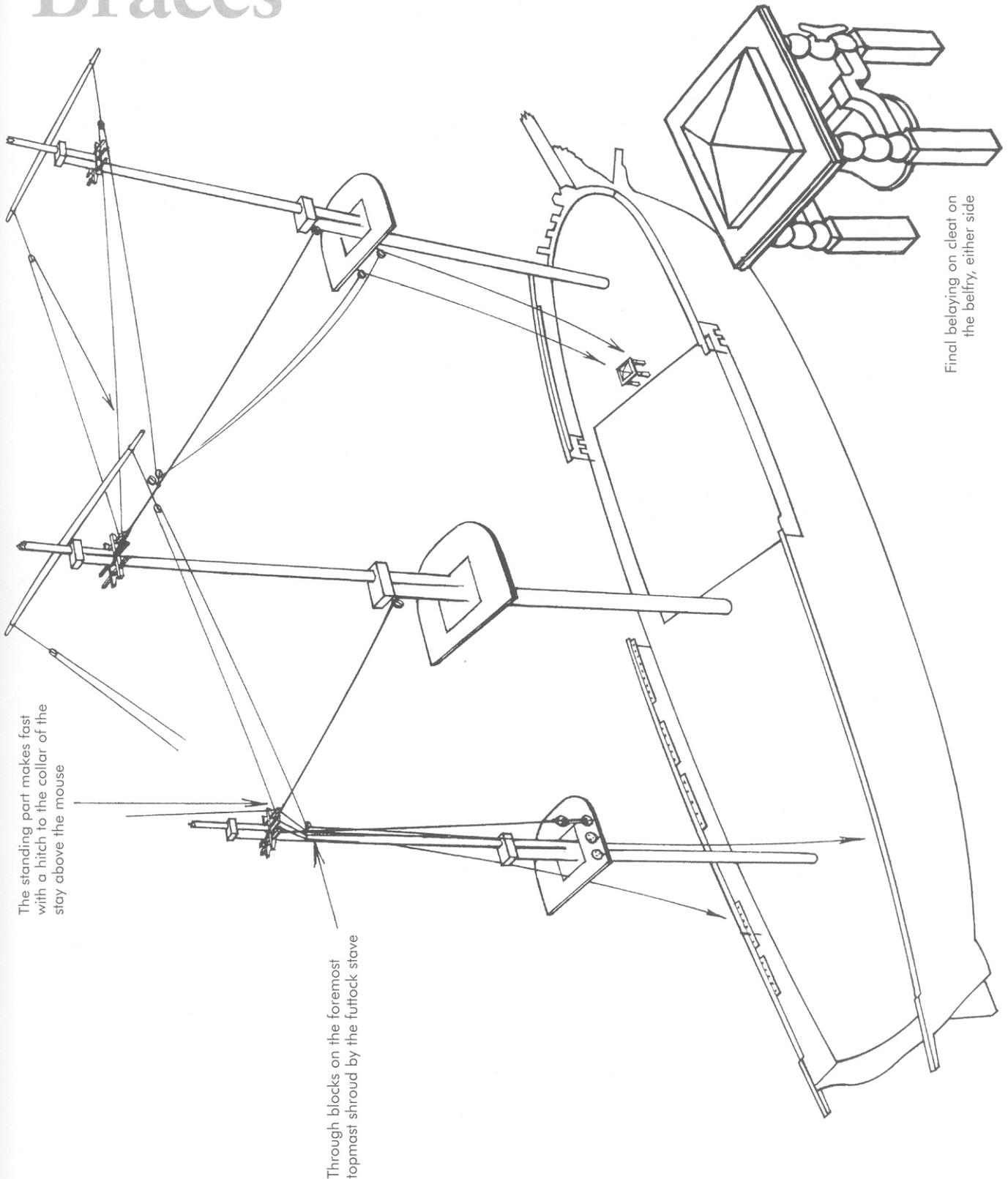
Main & Main Topsail Braces



Fore & Fore Topsail Braces



Fore & Main Topgallant Braces

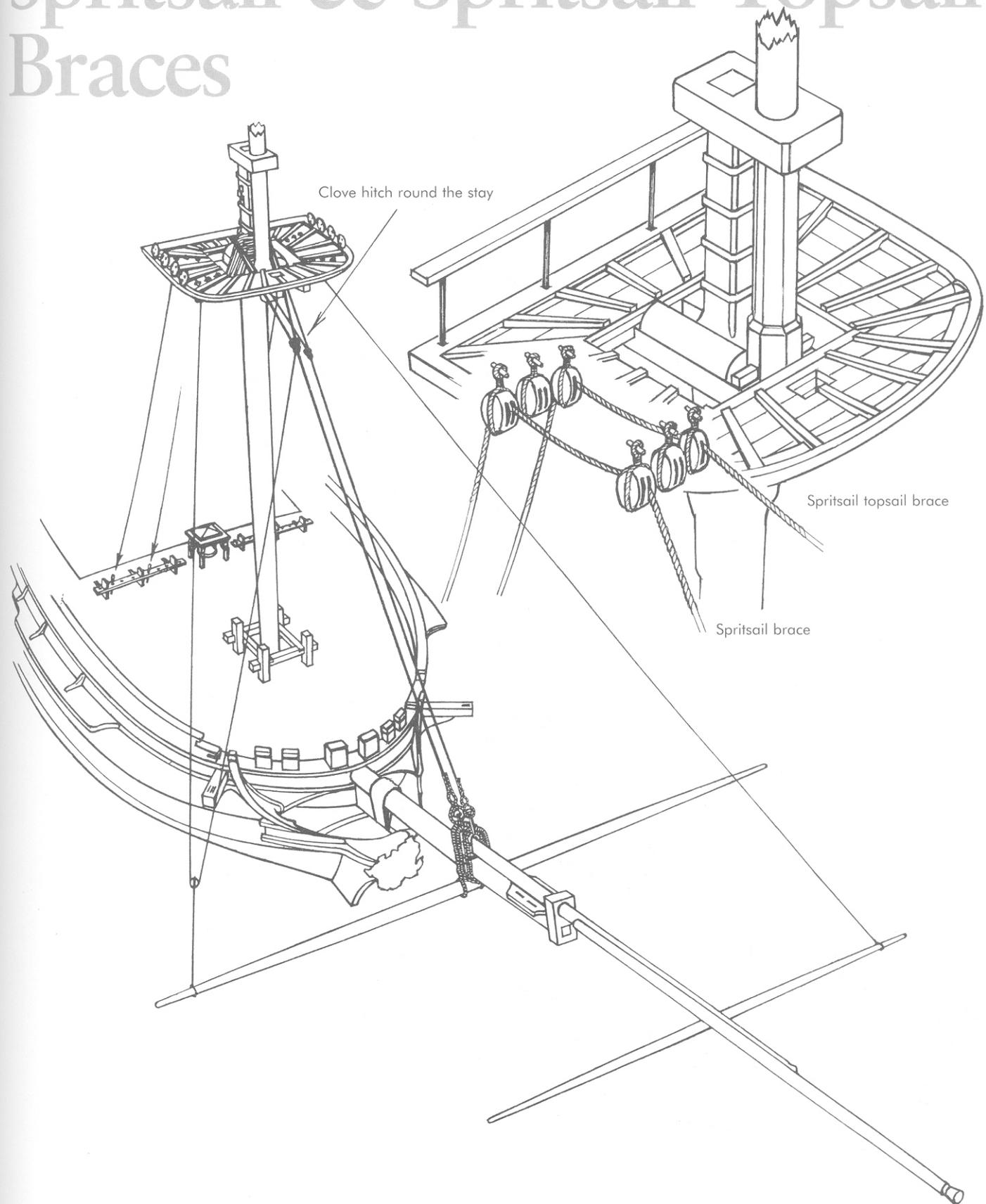


The standing part makes fast with a hitch to the collar of the stay above the mouse

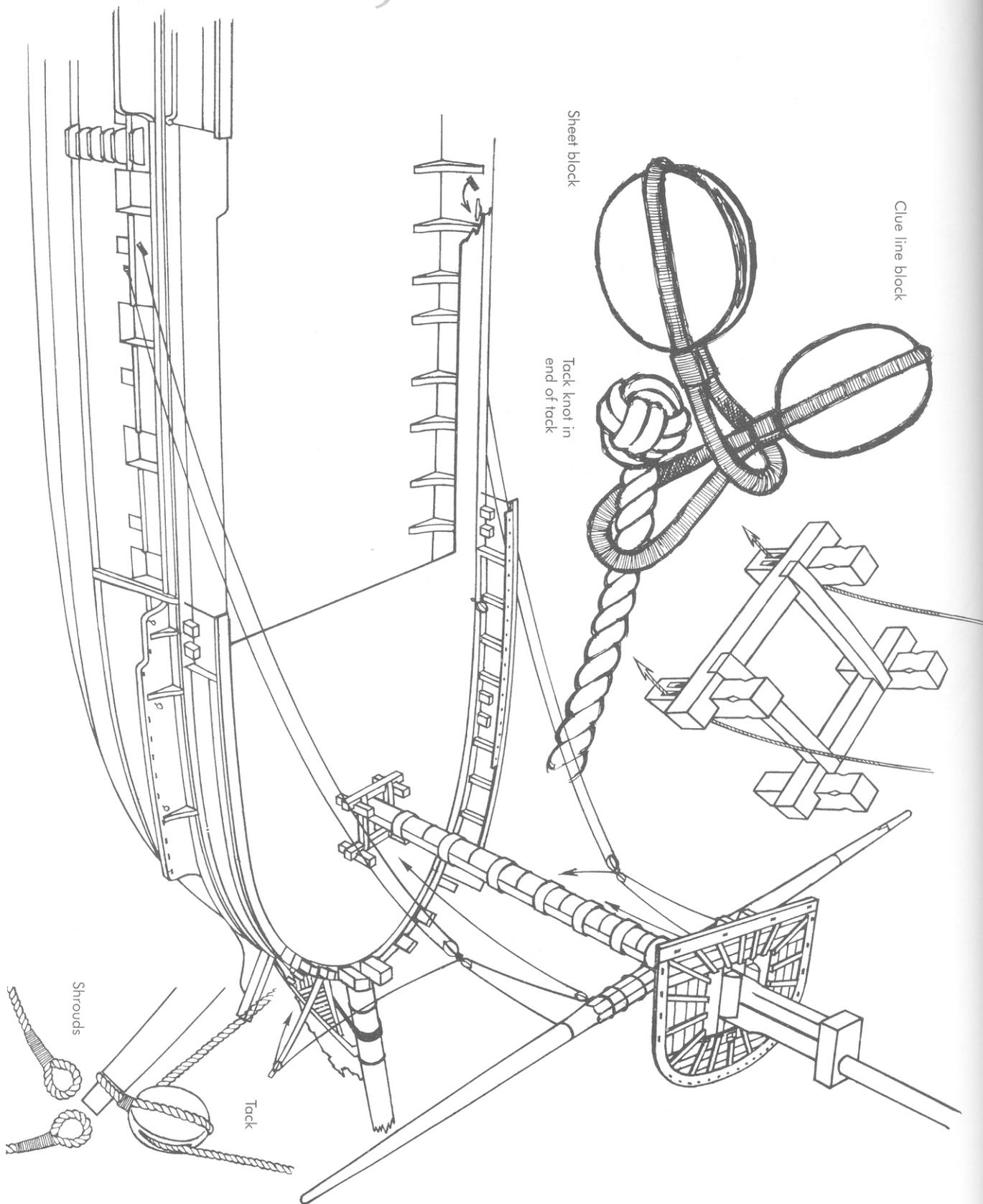
Through blocks on the foremast topmast shroud by the futtock stave

Final belaying on cleat on the belfry, either side

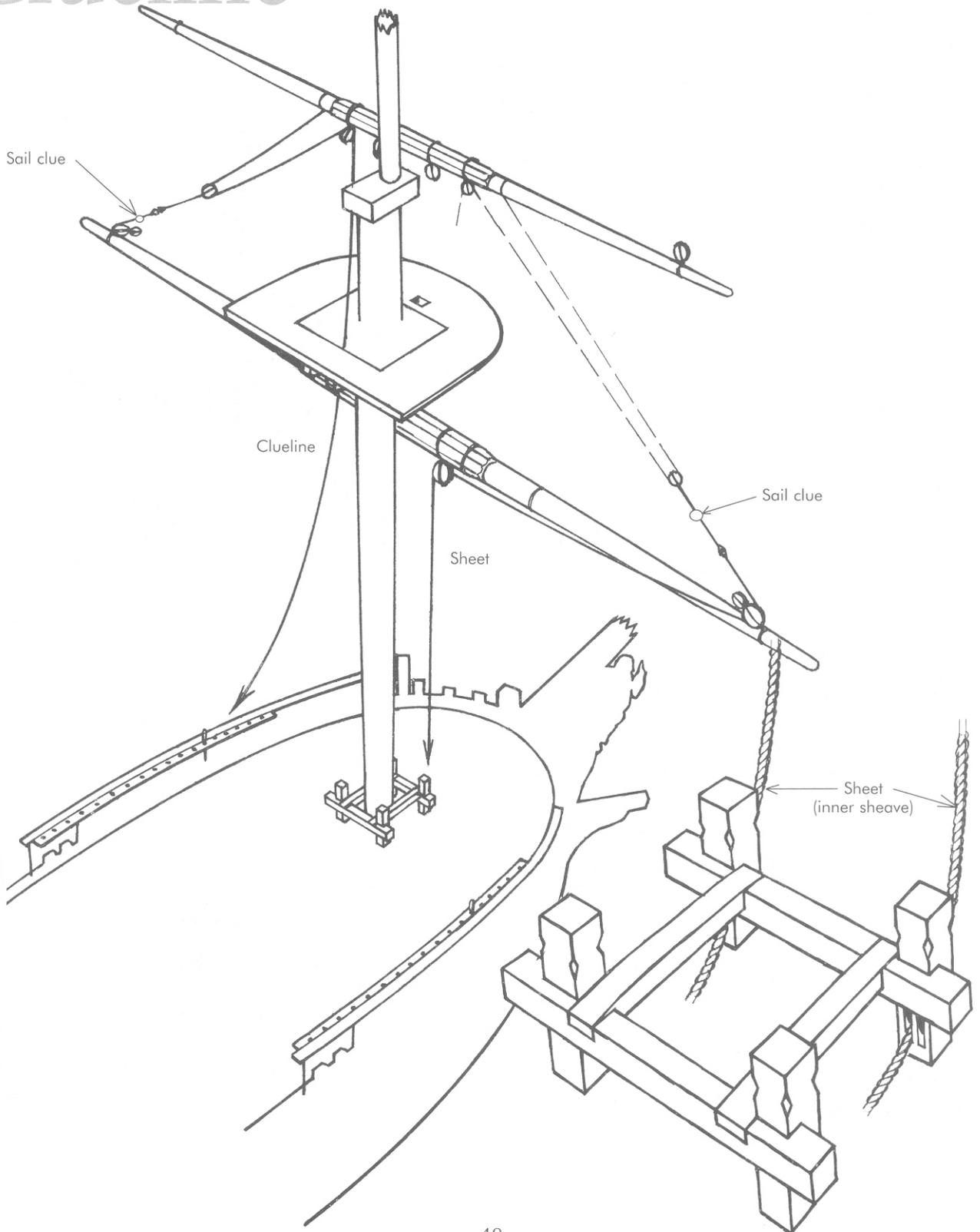
Spritsail & Spritsail Topsail Braces



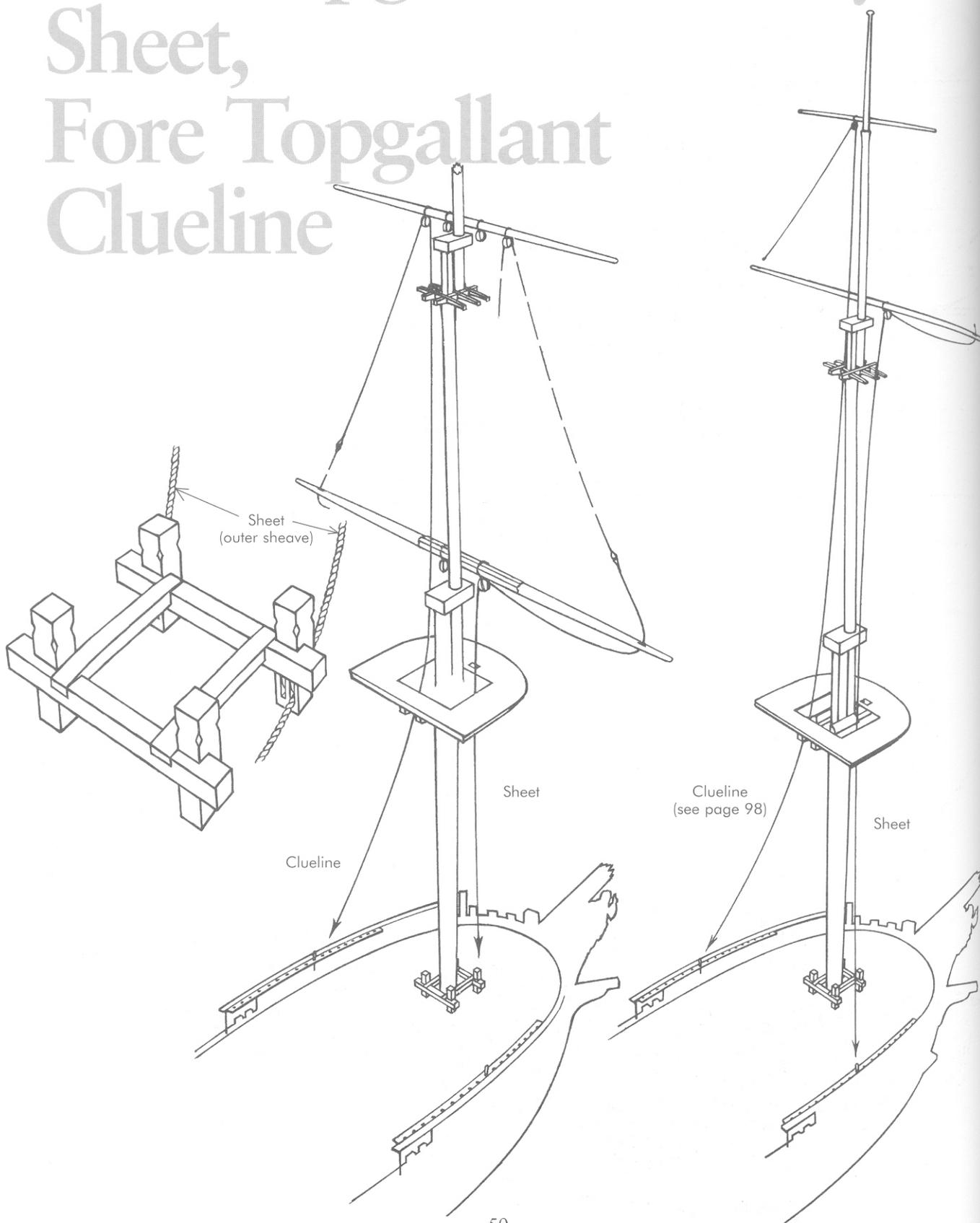
Fore Sheet, Tack & Clueline



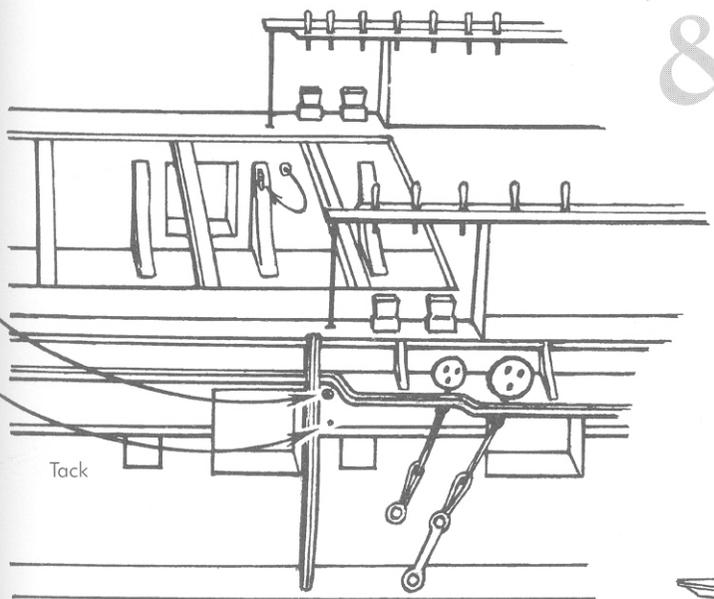
Fore Topsail Sheet & Clueline



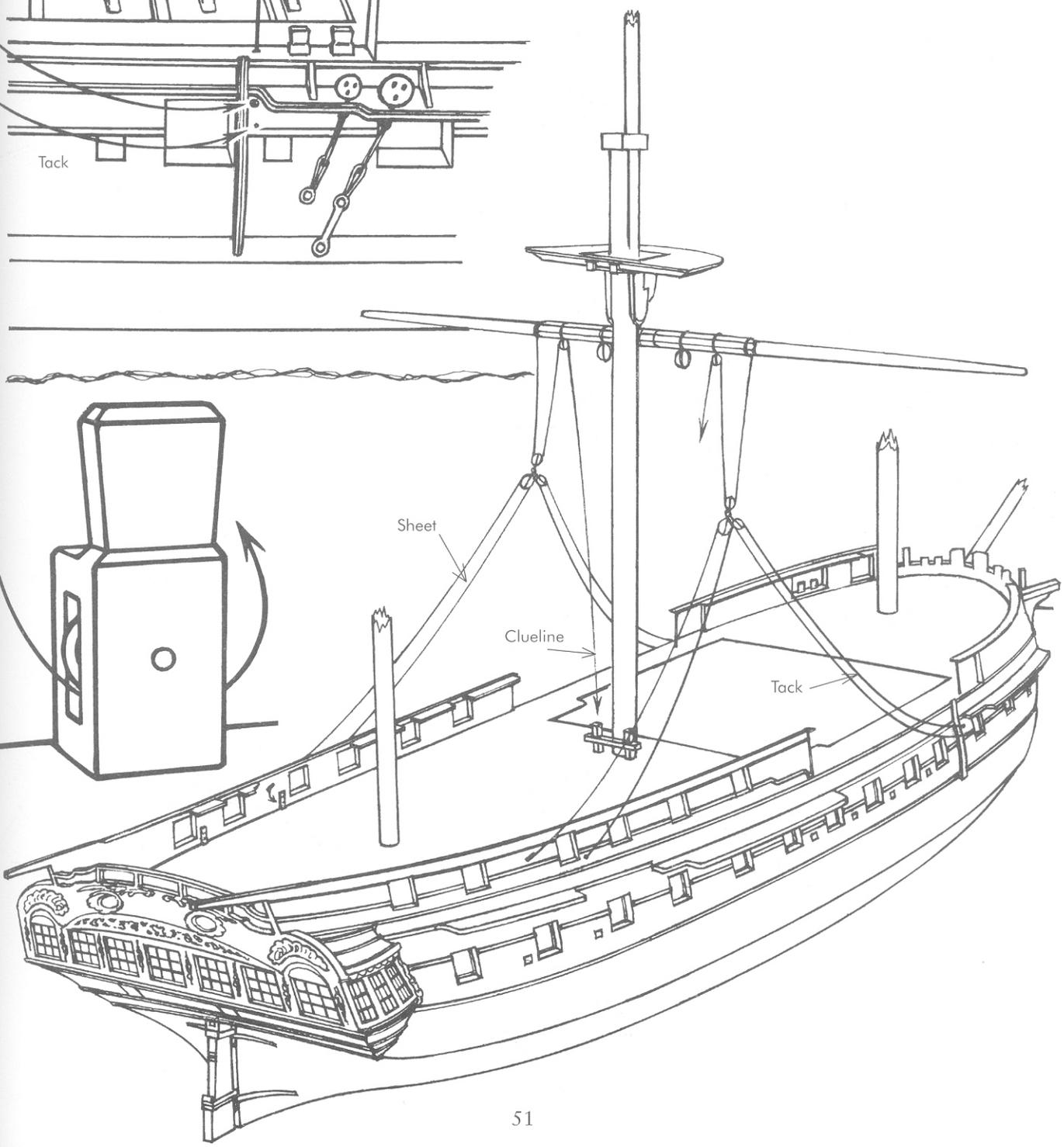
Fore Topgallant & Royal Sheet, Fore Topgallant Clueline



Main Sheet, Clueline & Tack



Tack

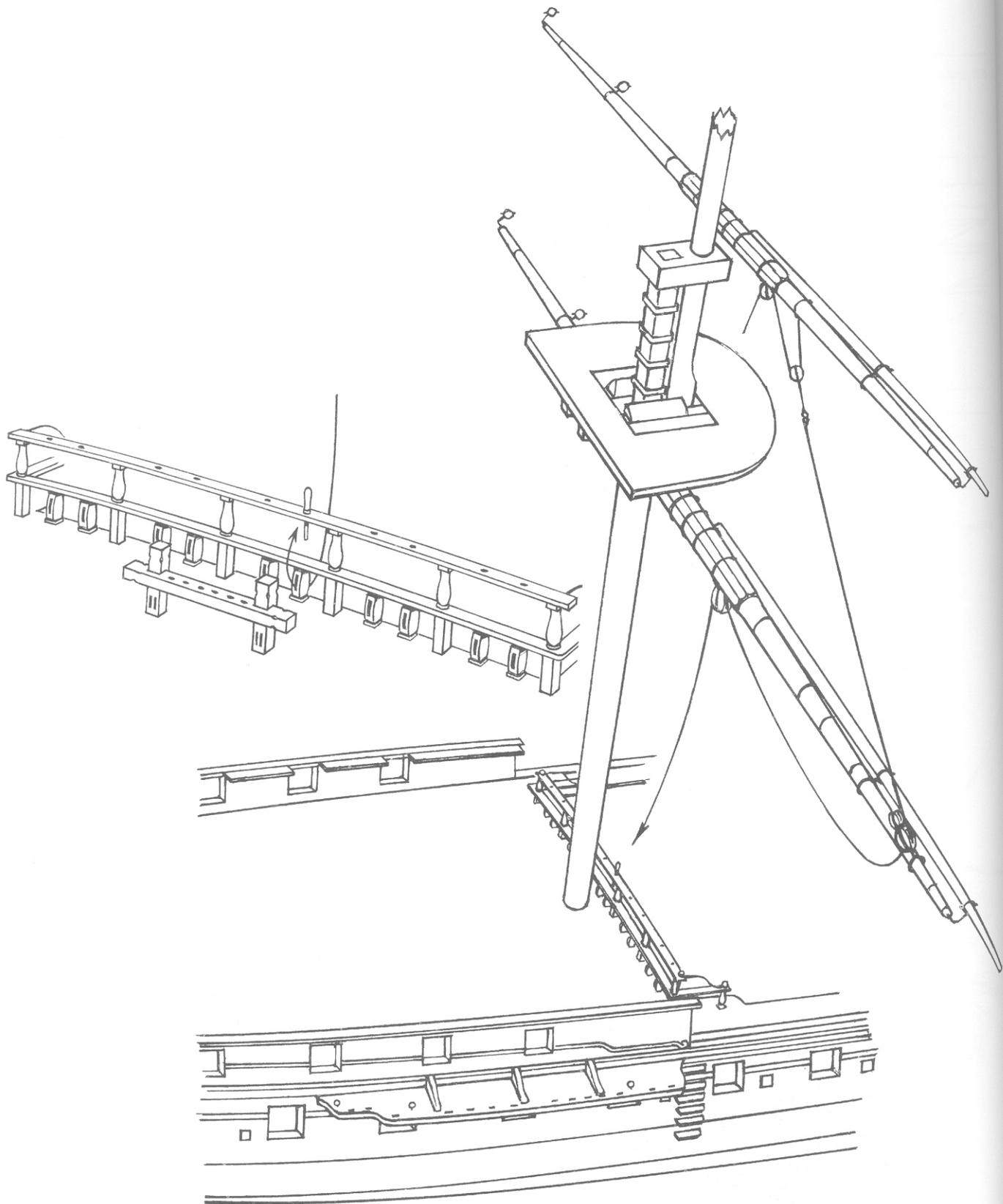


Sheet

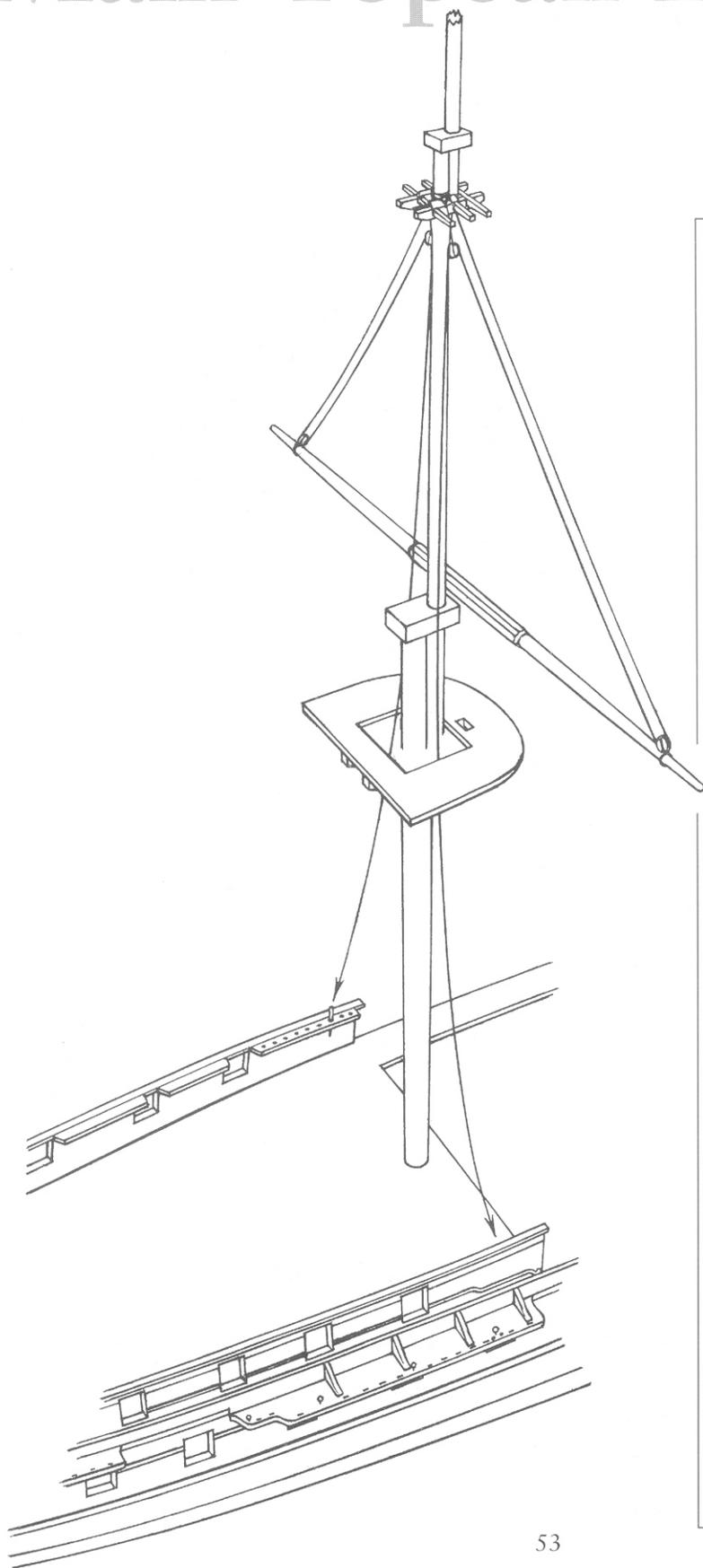
Clueline

Tack

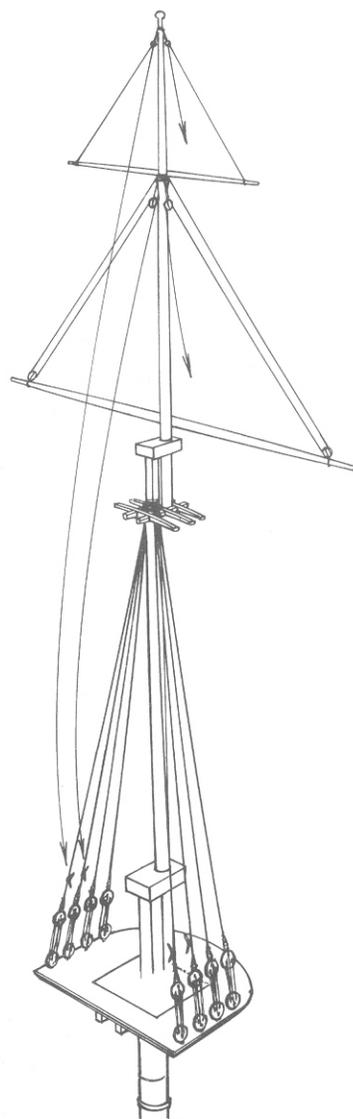
Main Topsail Sheet



Main Topsail Lift

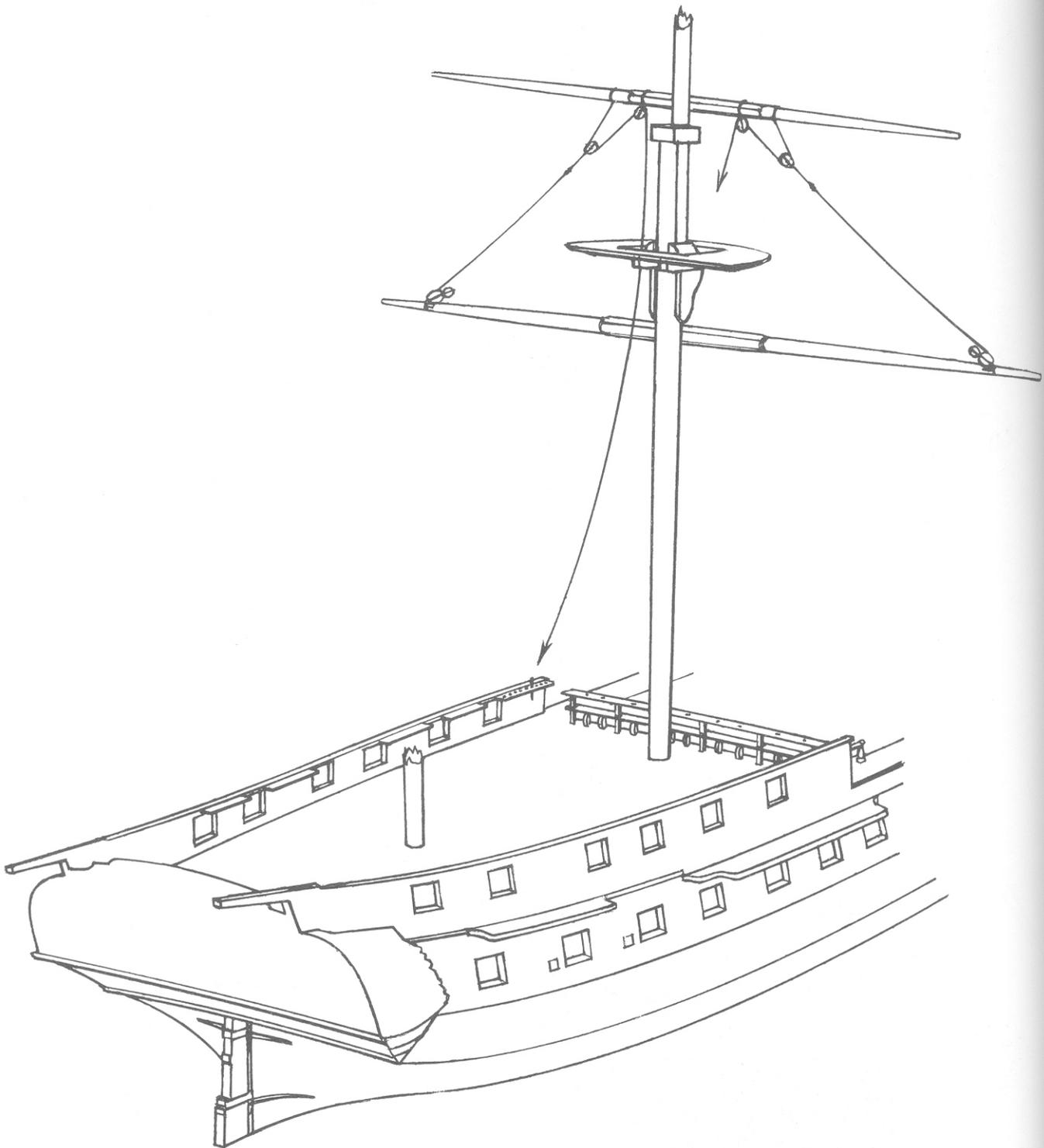


Topgallant & Royal Lifts

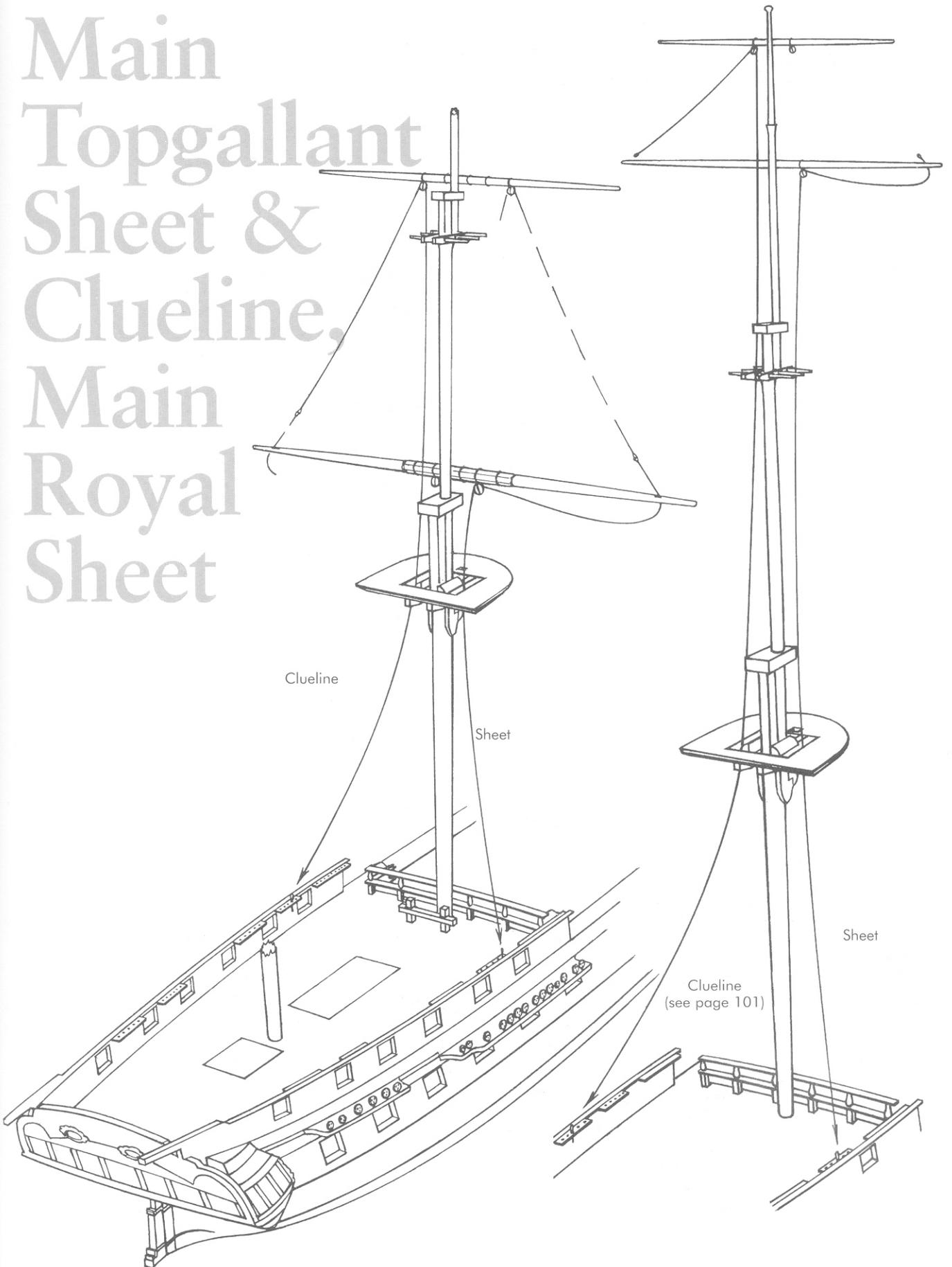


These were rigged in the same way as those on the fore topgallant and royal yard.
See page 41.

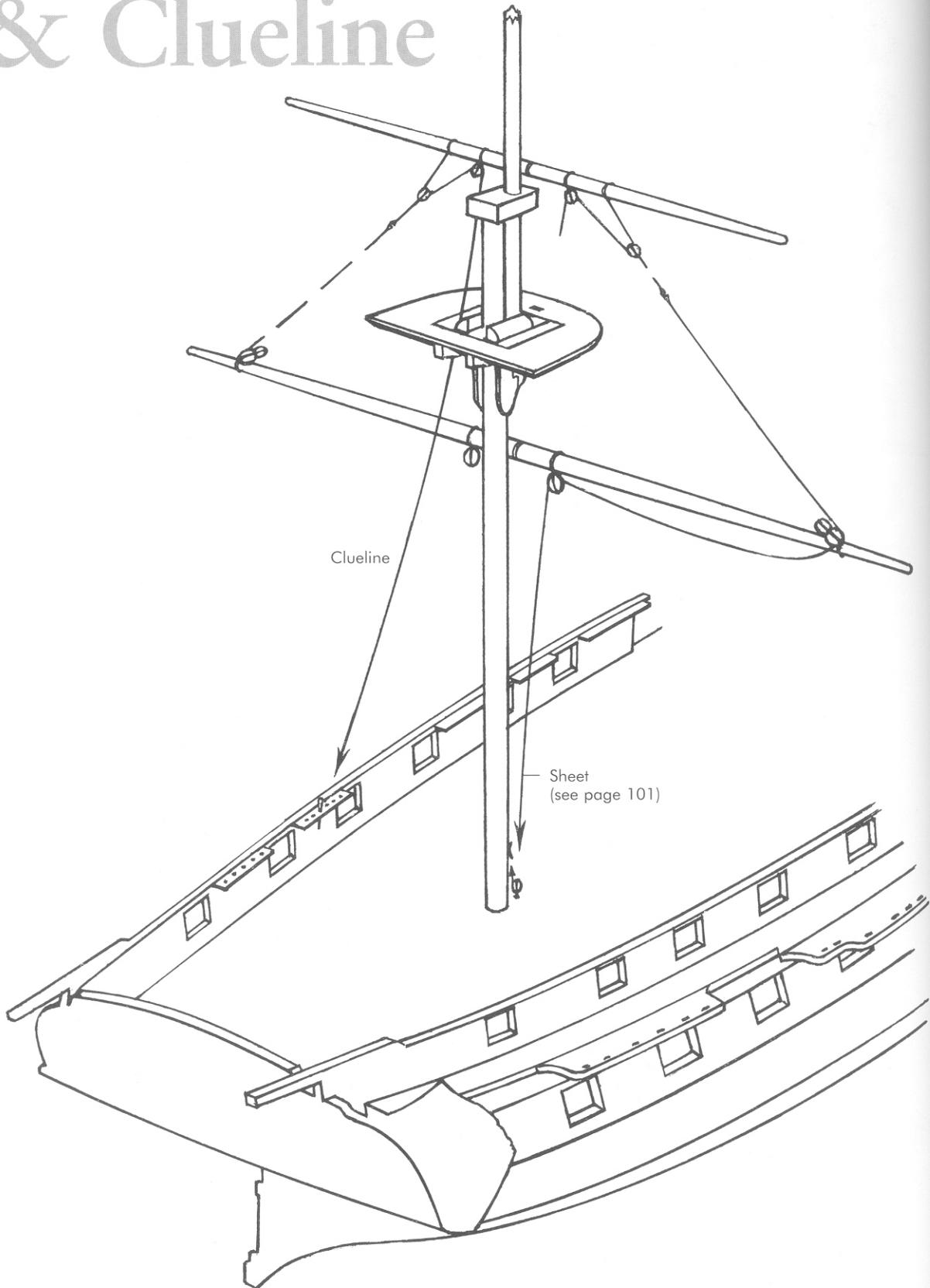
Main Topsail Clueline



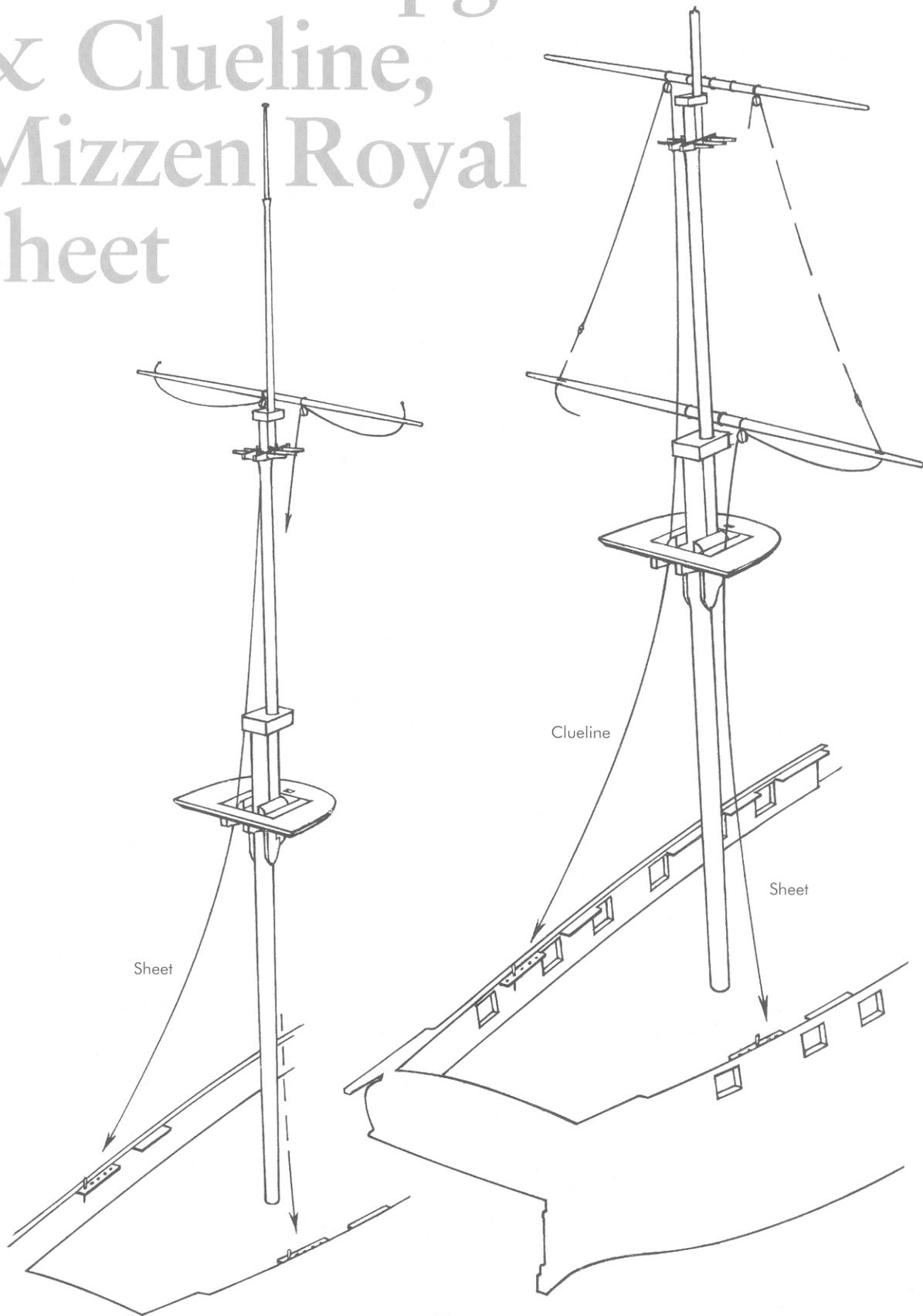
Main Topgallant Sheet & Clueline, Main Royal Sheet



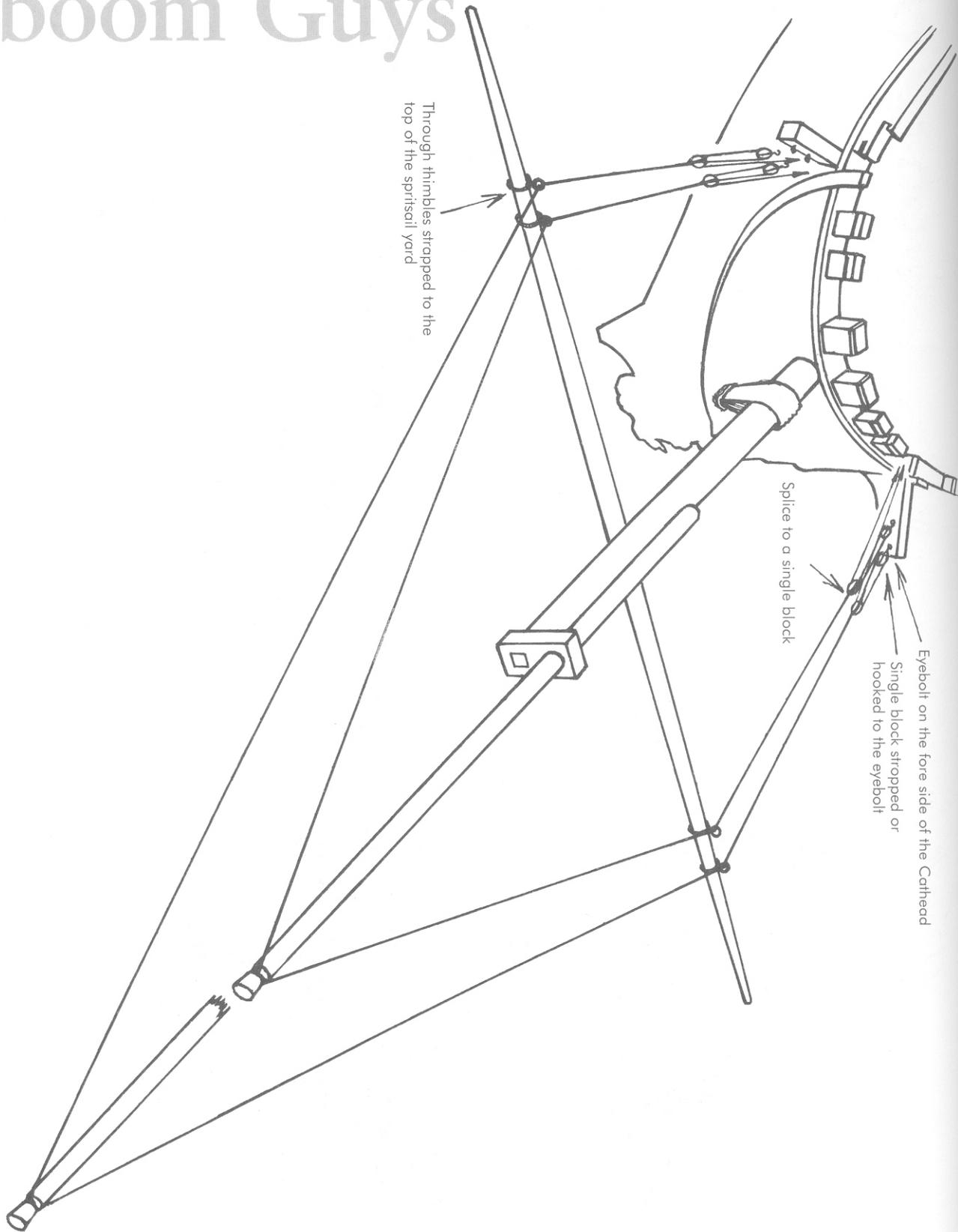
Mizzen Topsail Sheet & Clueline



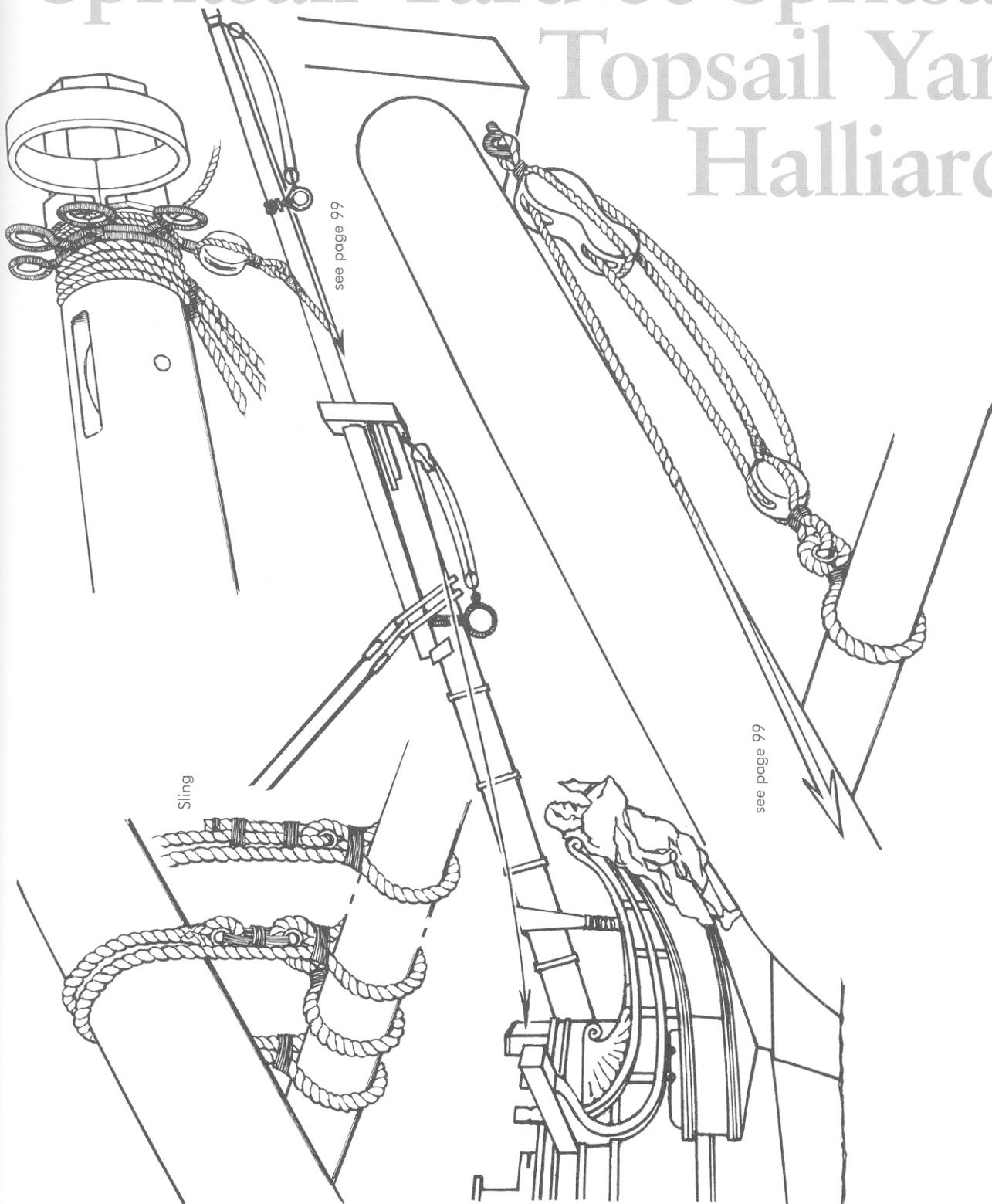
Mizzen Topgallant Sheet & Clueline, Mizzen Royal Sheet



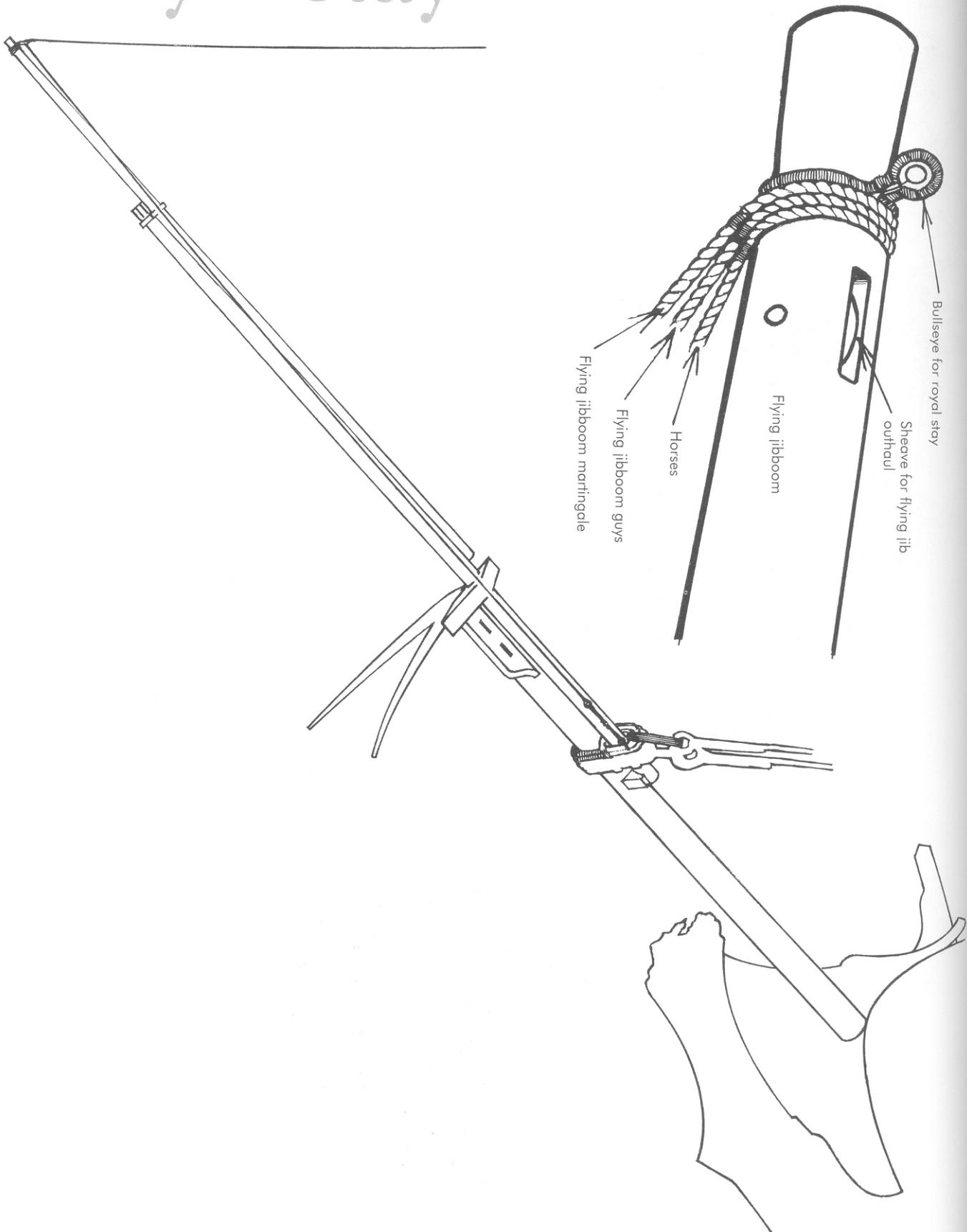
Jibboom & Flying Jibboom Guys



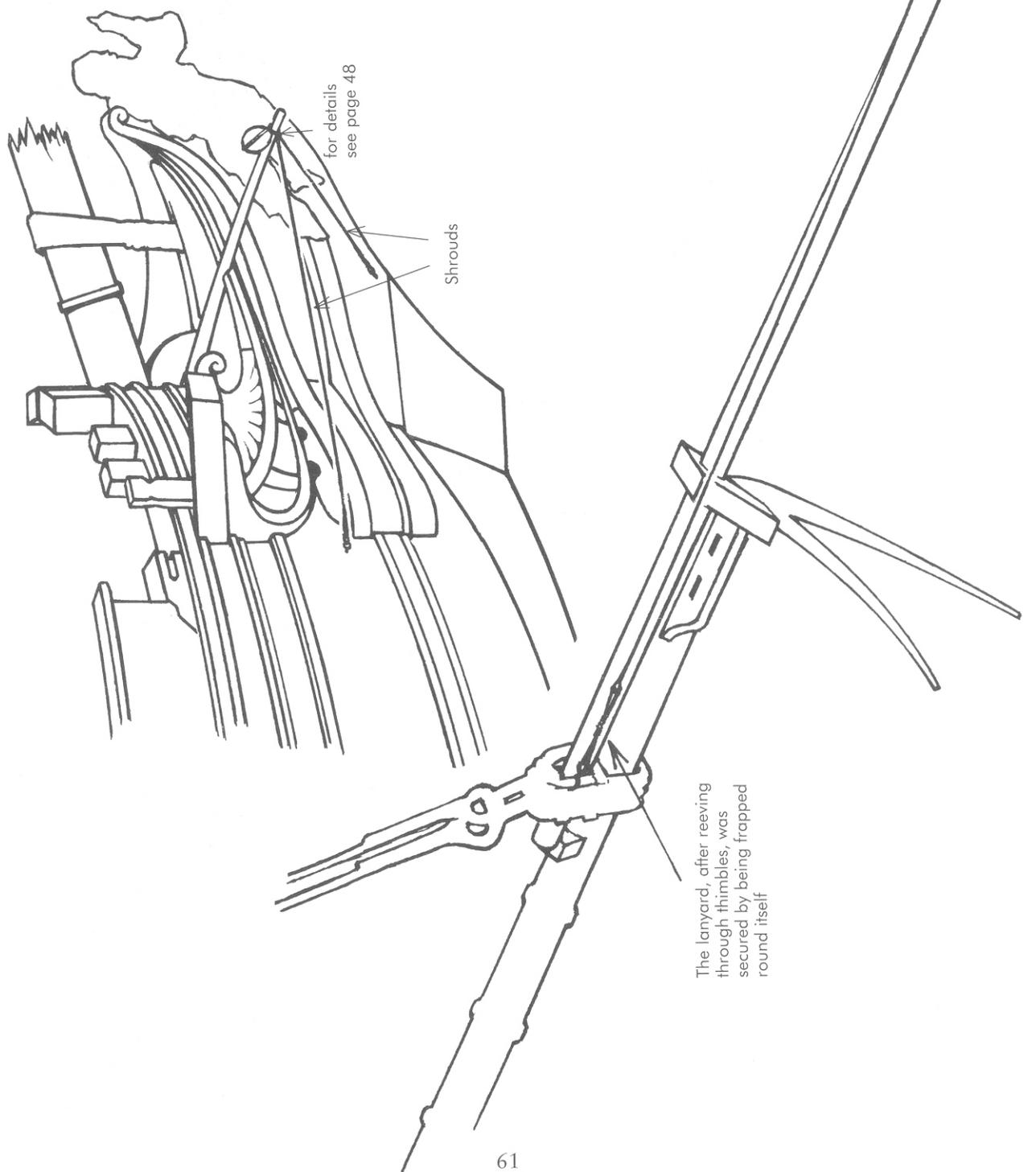
Spritsail Sling, Spritsail Yard & Spritsail Topsail Yard Halliards



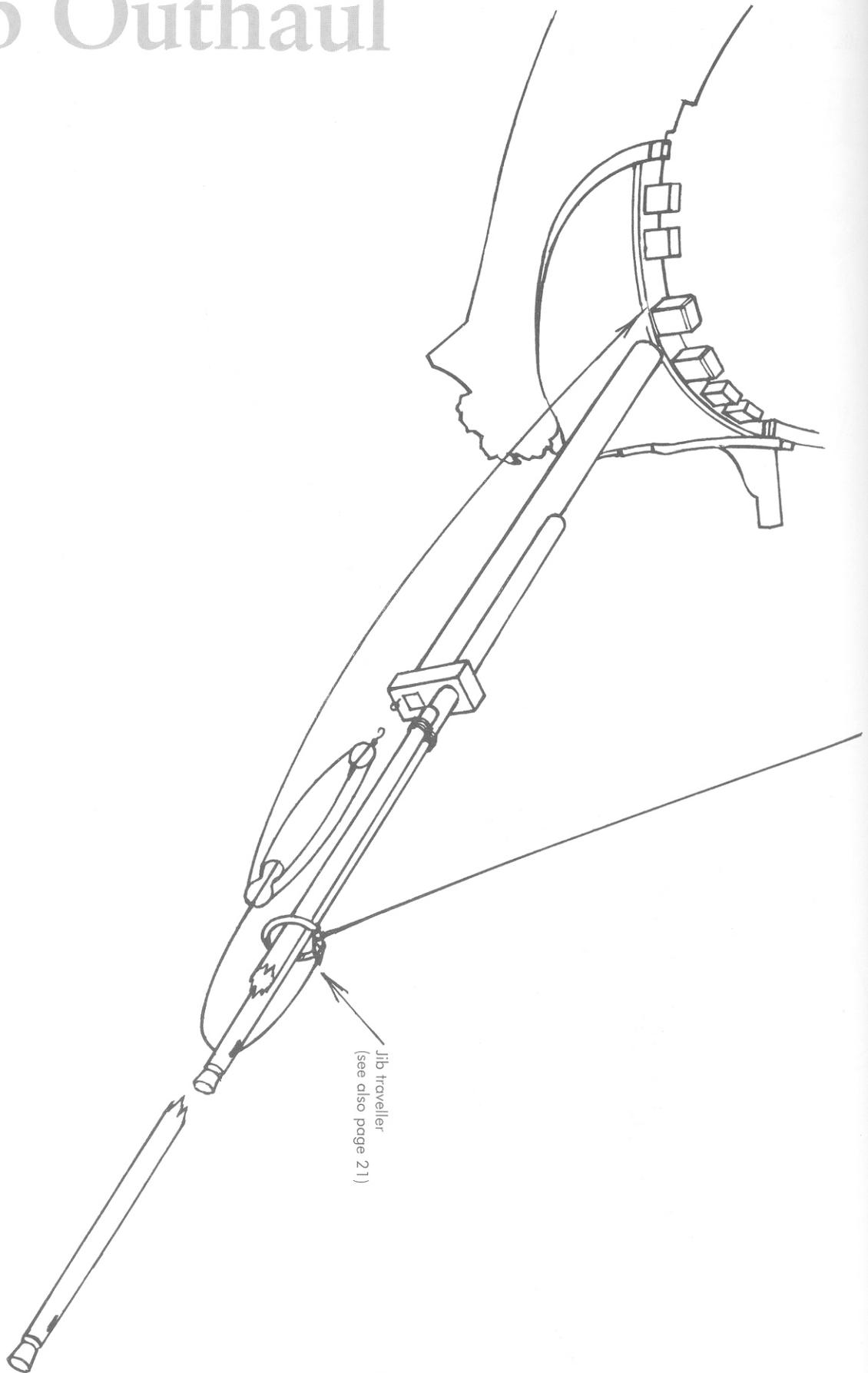
Royal Stay



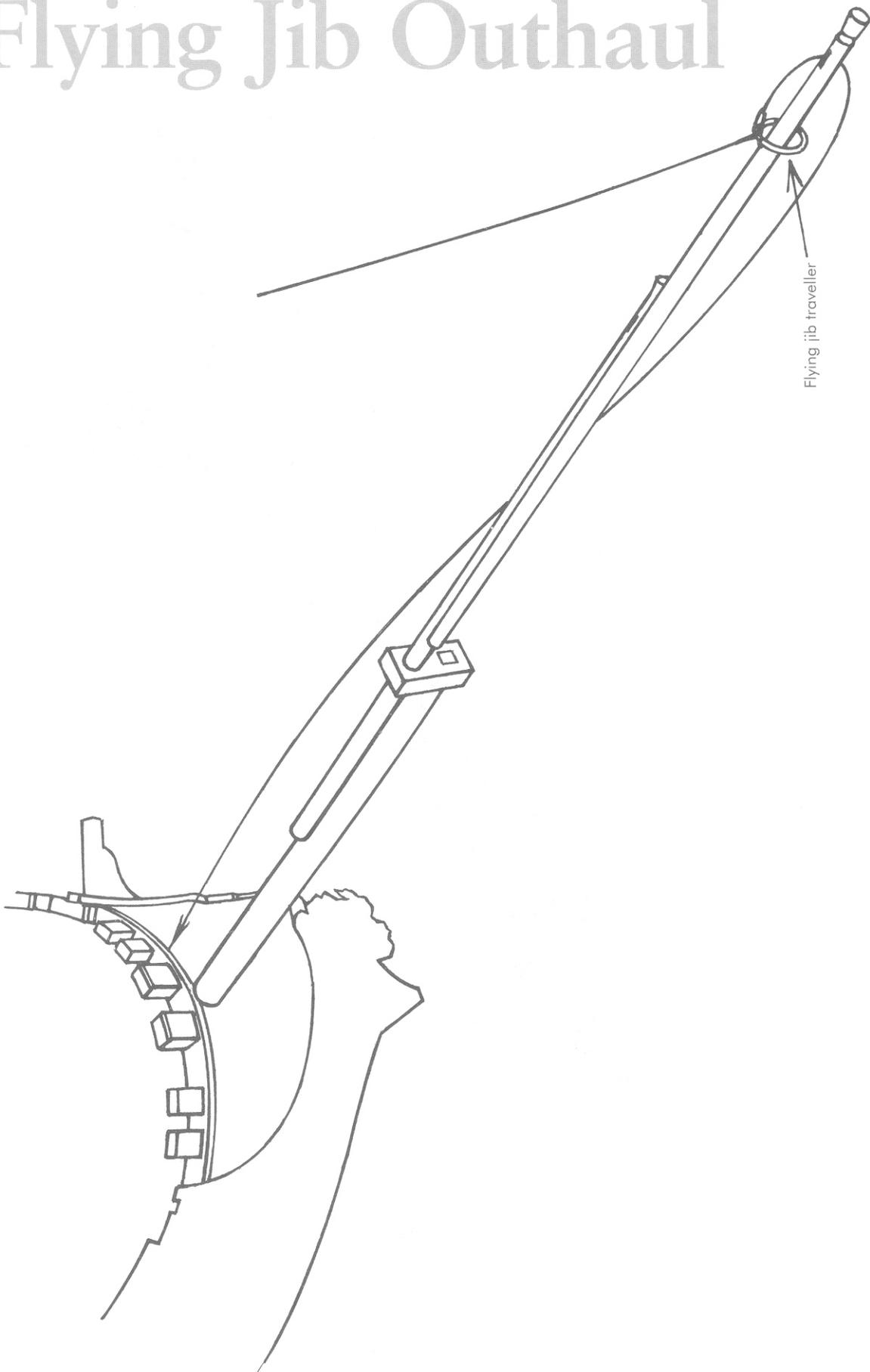
Fore Topgallant Stay & Bumpkin Shrouds



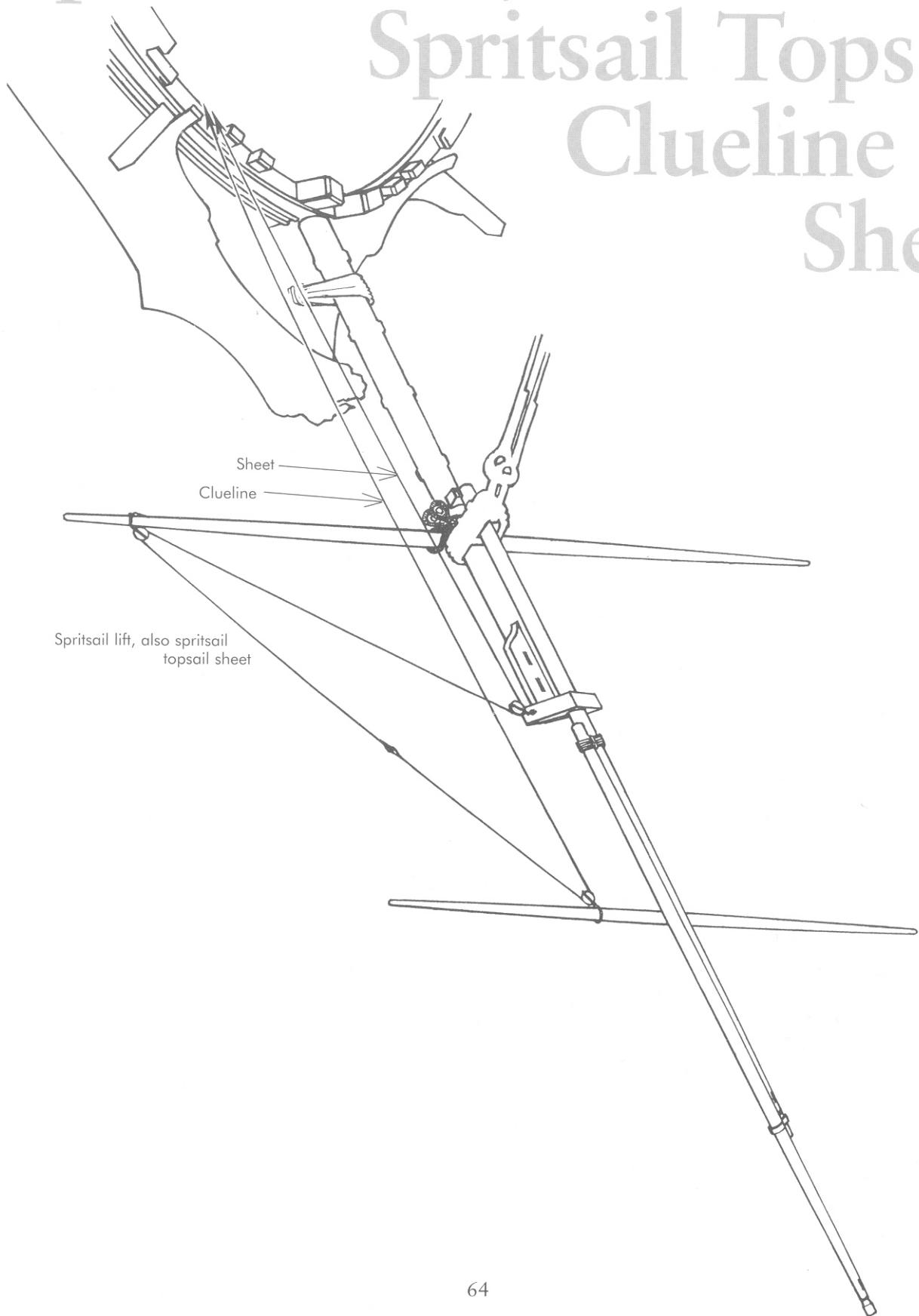
Jib Outhaul



Flying Jib Outhaul



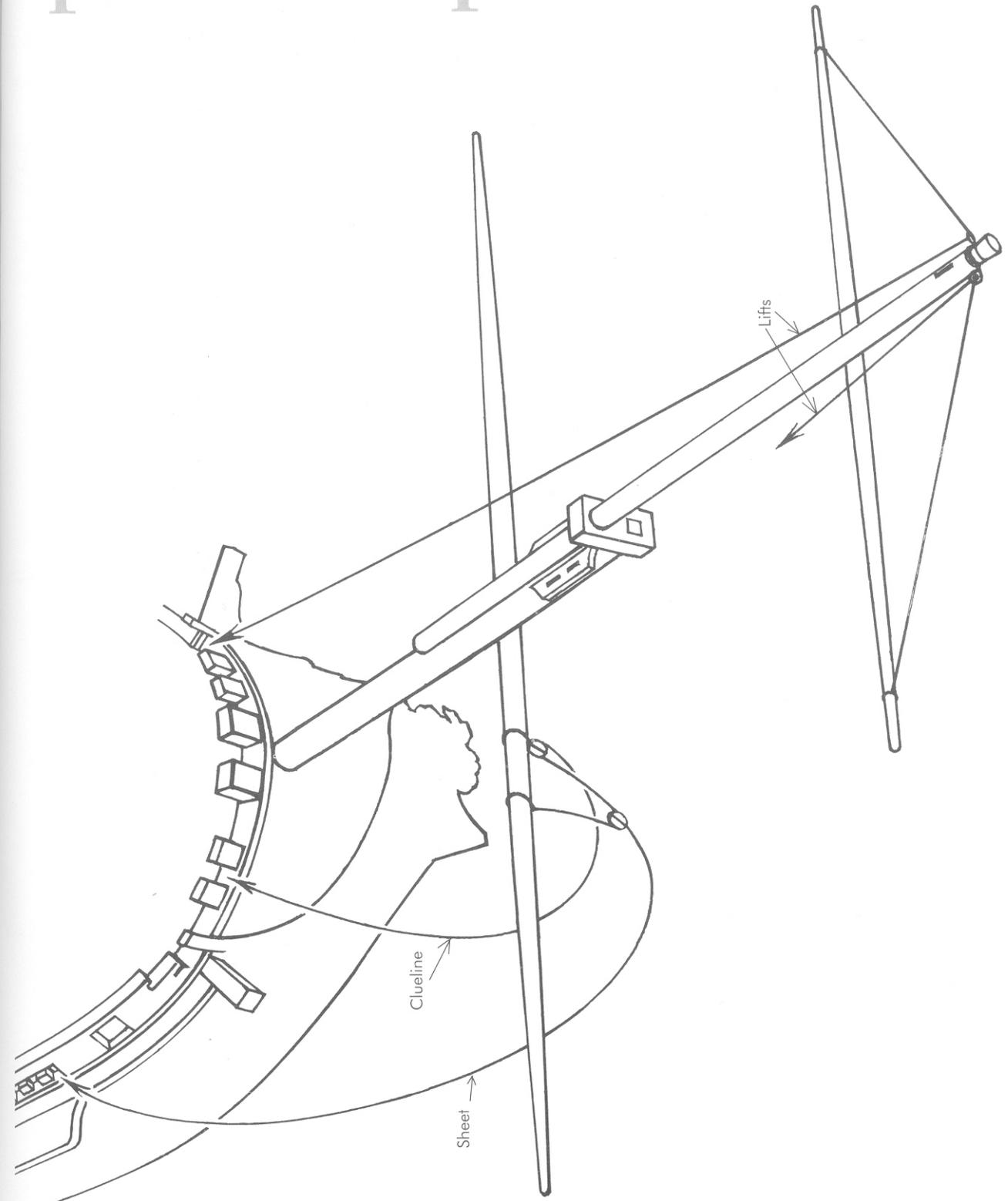
Spritsail Lift, Spritsail Topsail Clueline & Sheet



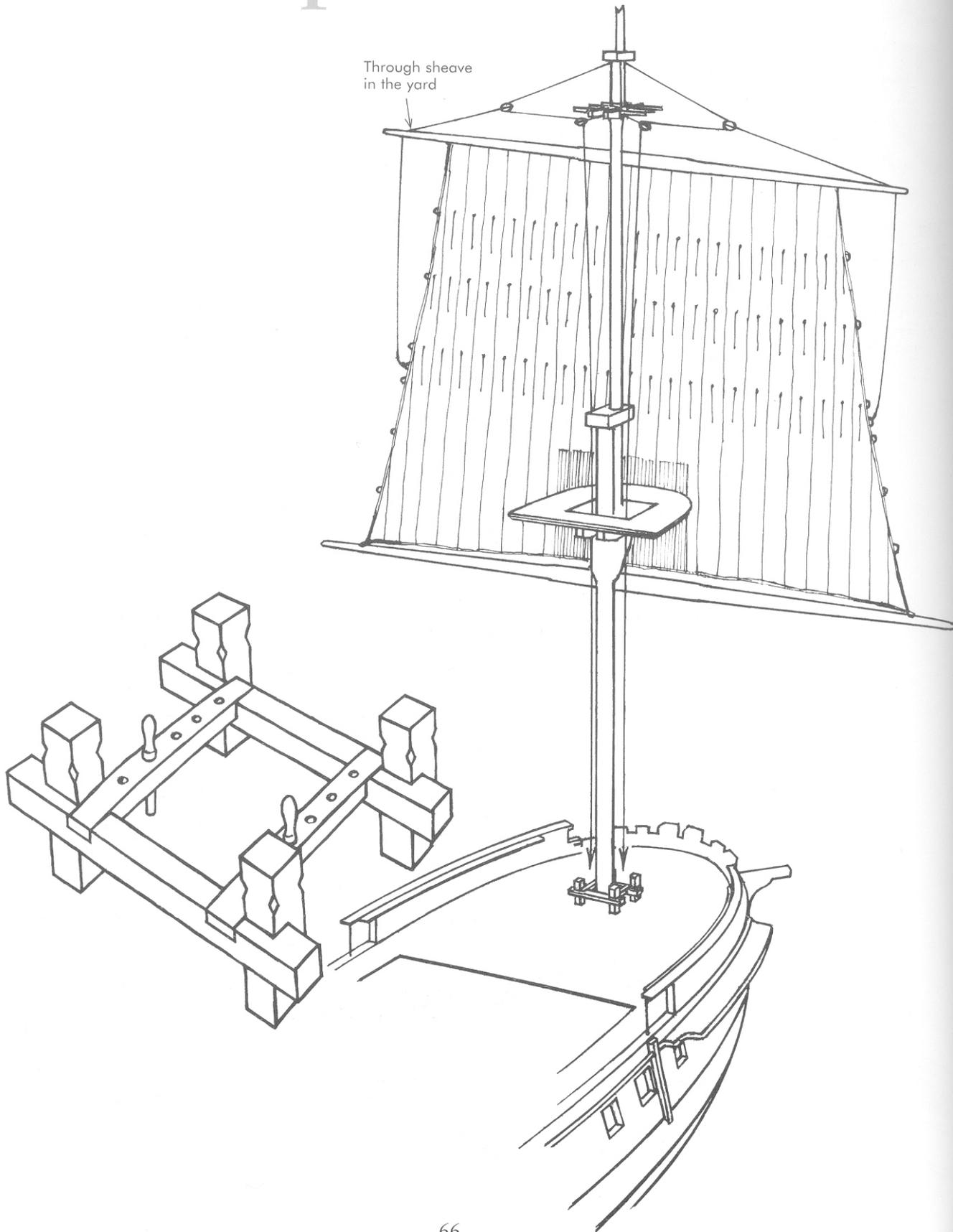
Spritsail lift, also spritsail
topsail sheet

Spritsail Clueline & Sheet

Spritsail Topsail Lift



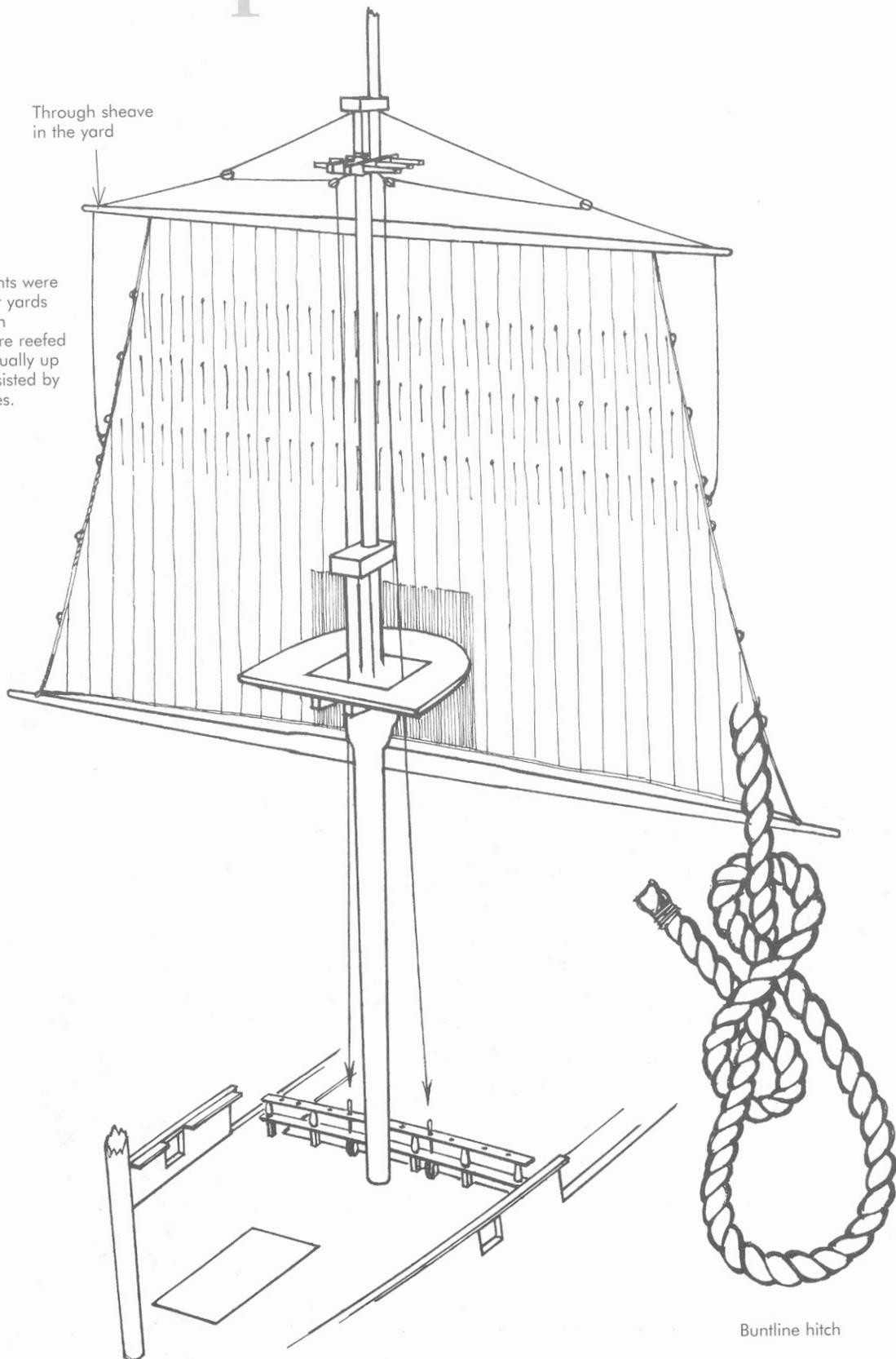
Fore Topsail Reef Tackle



Main Topsail Reef Tackle

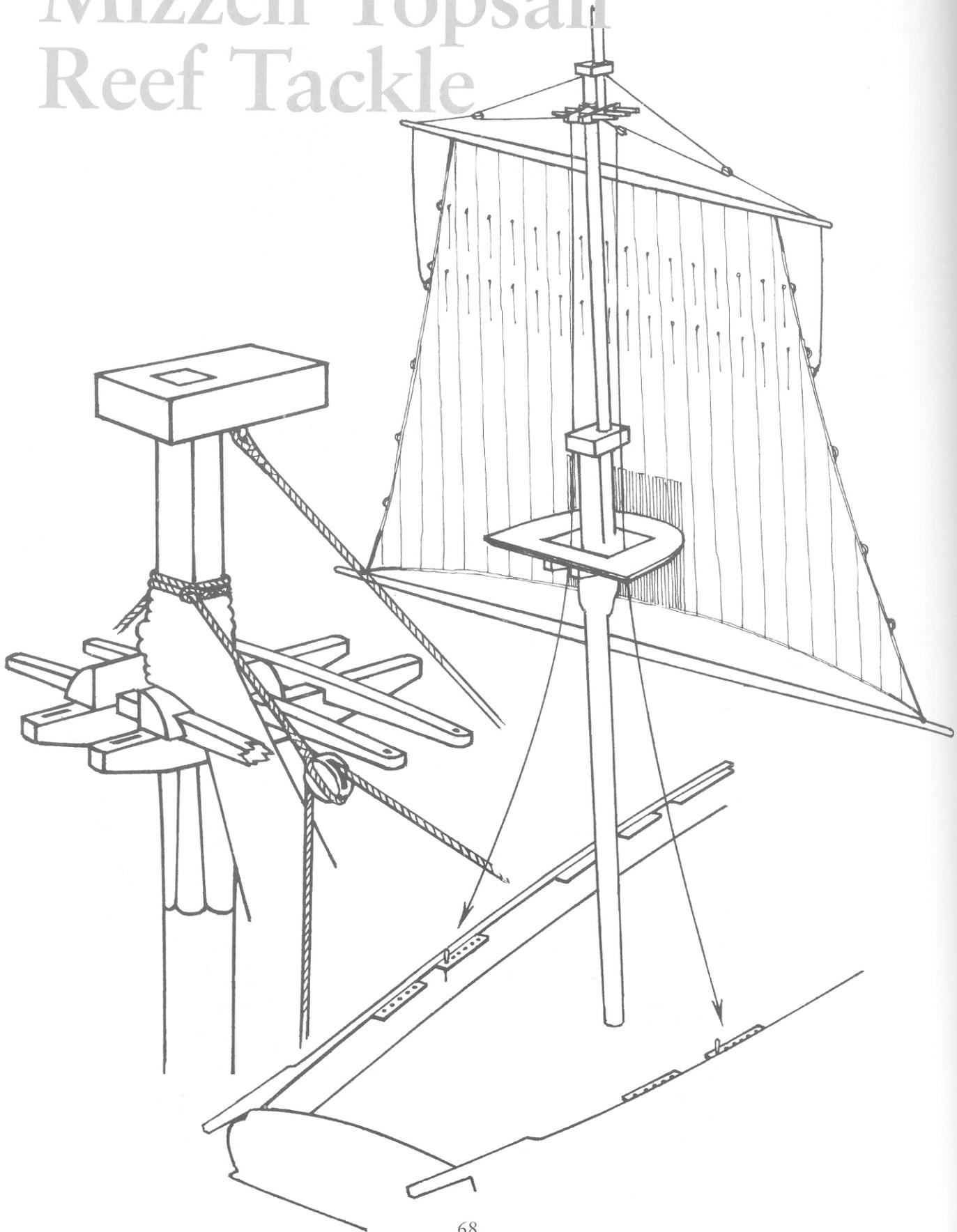
Through sheave
in the yard

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.

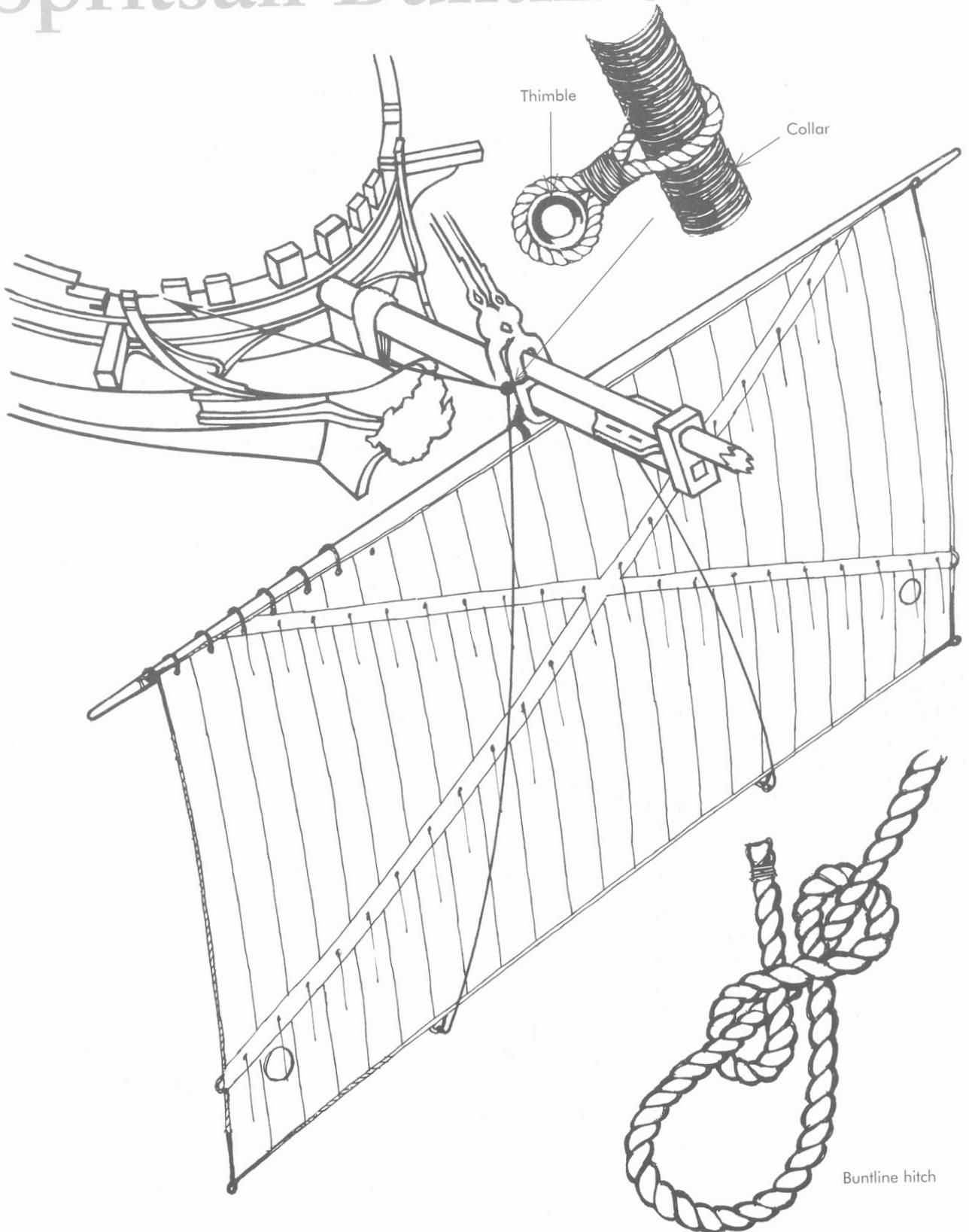


Buntline hitch

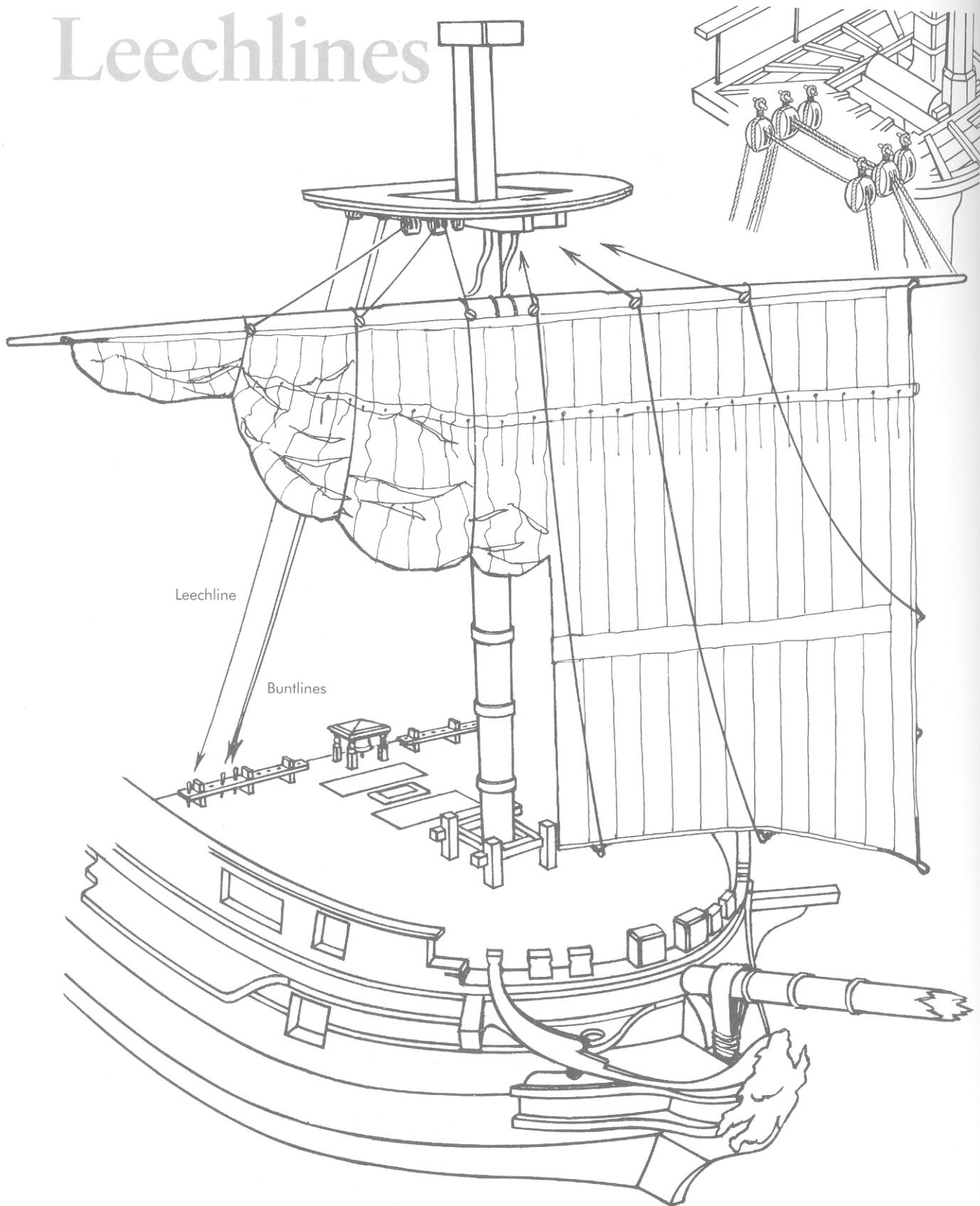
Mizzen Topsail Reef Tackle



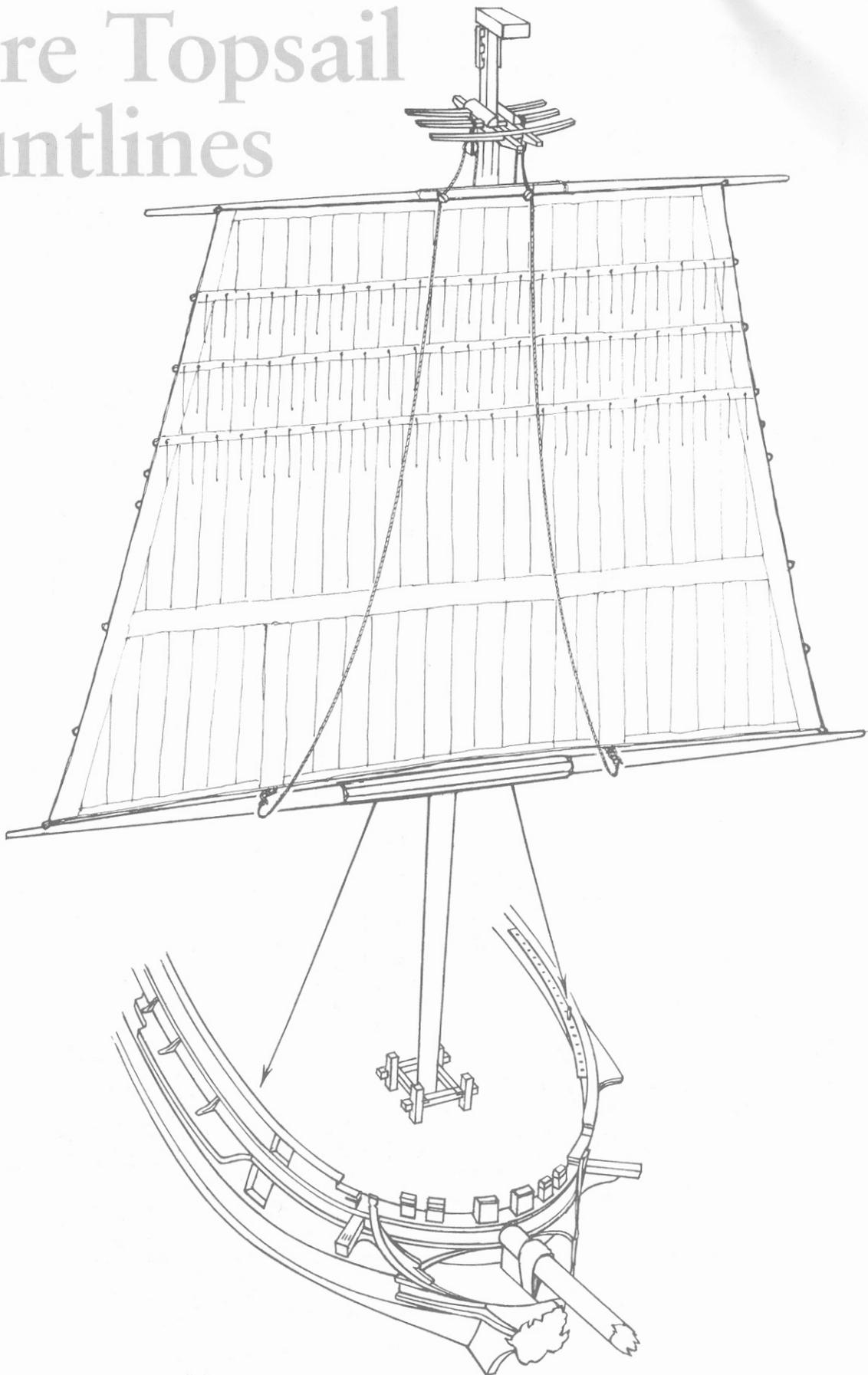
Spritsail Buntlines



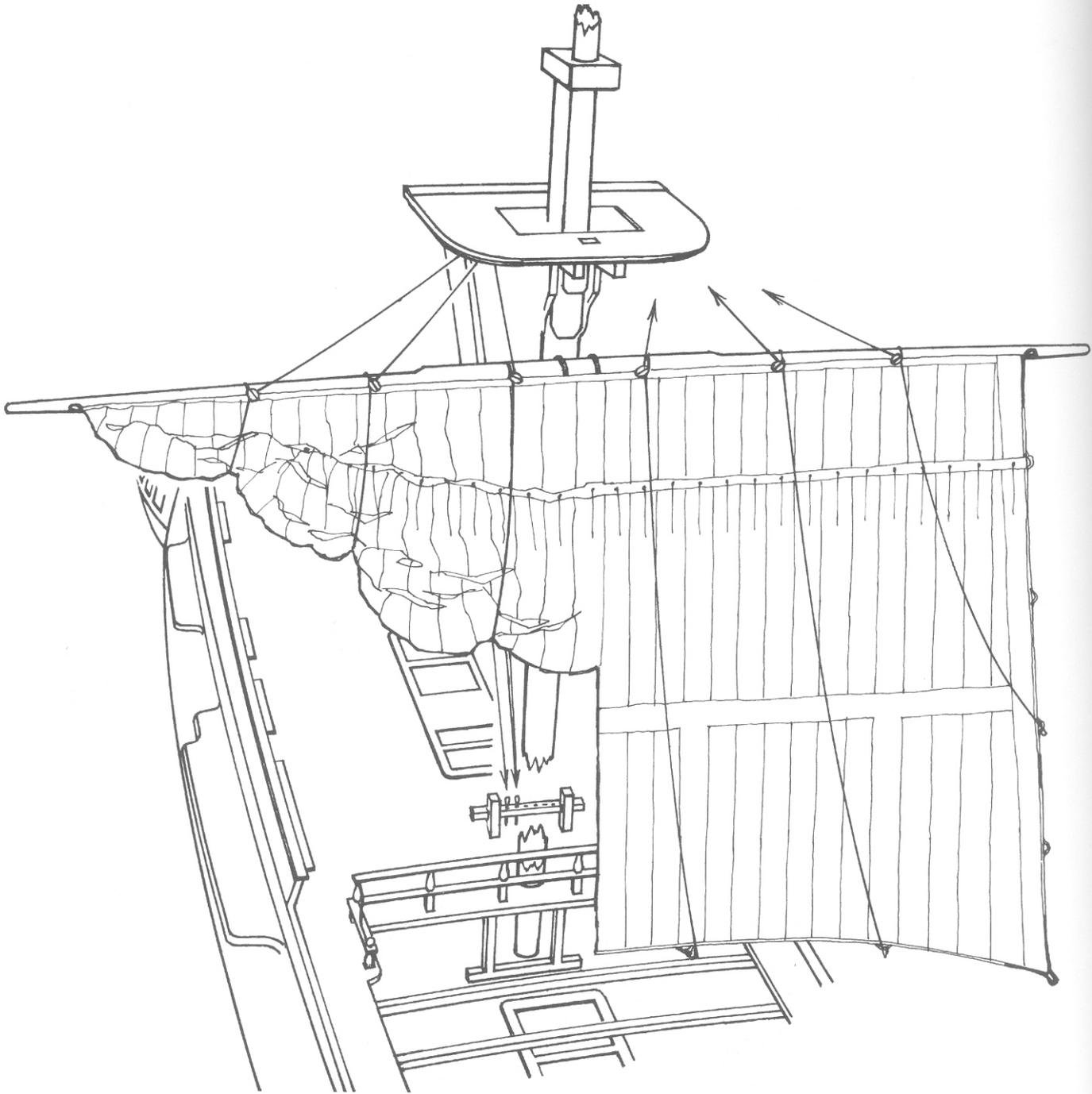
Fore Course Buntlines & Leechlines



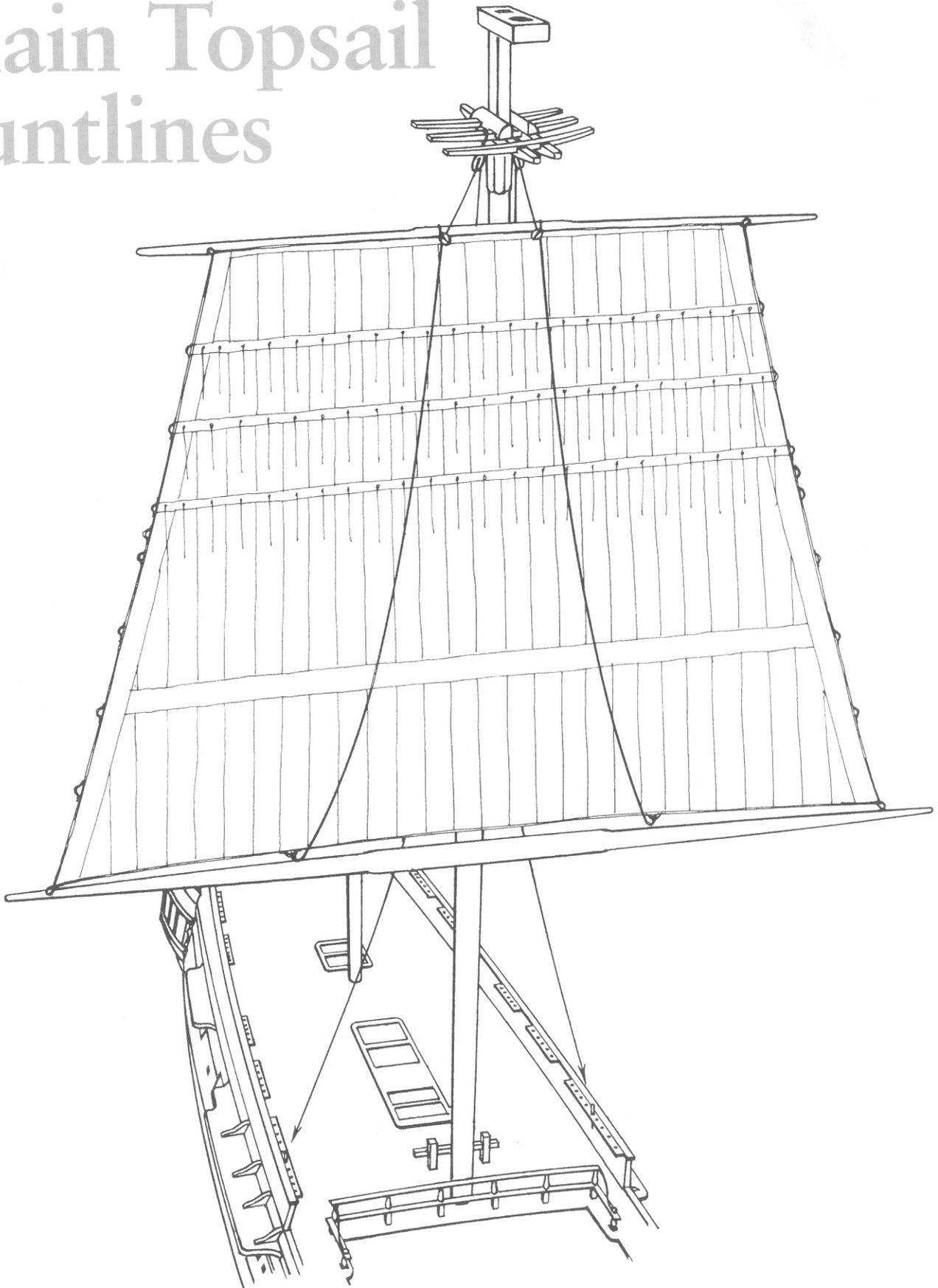
Fore Topsail Buntlines



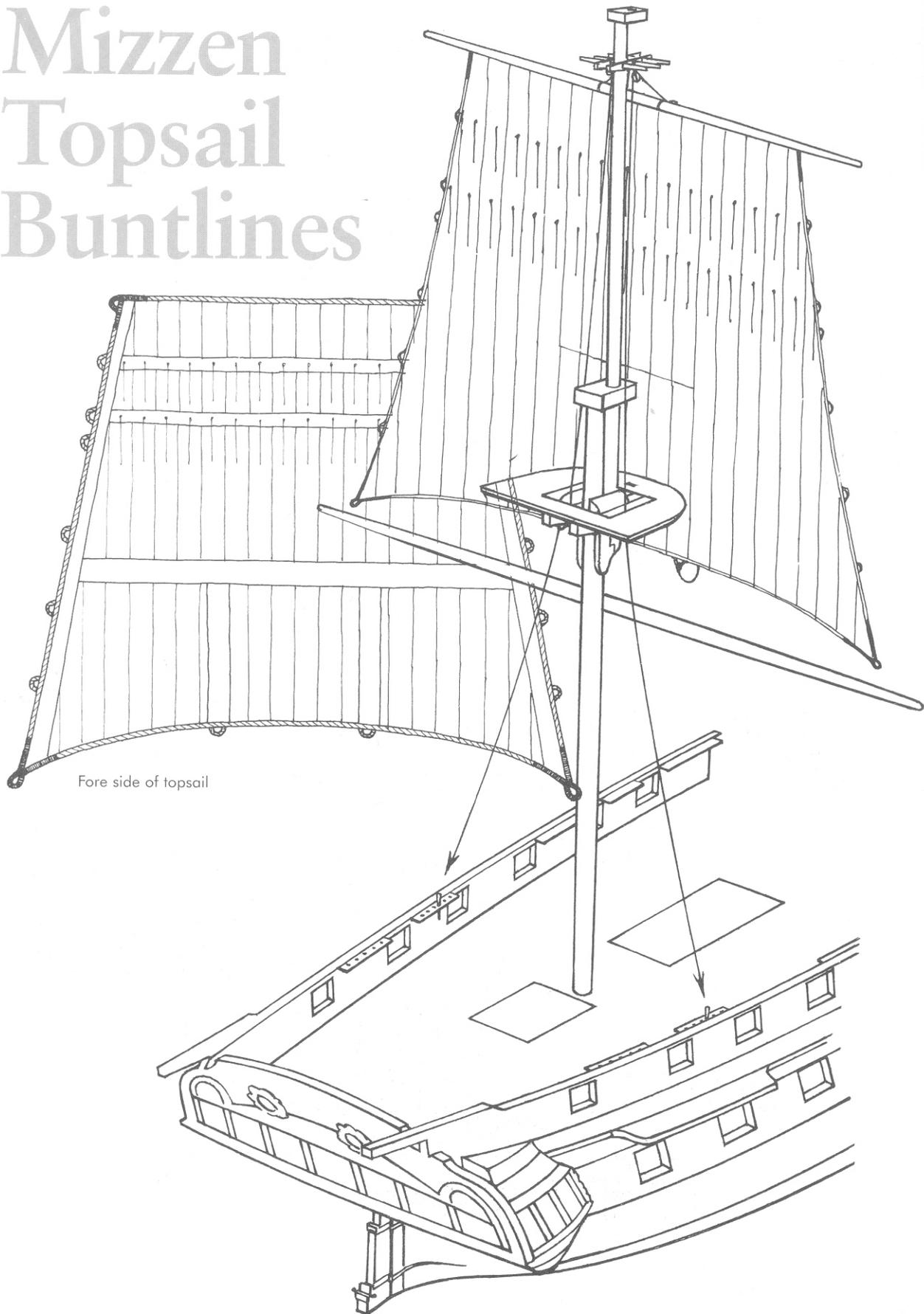
Main Course Buntlines & Leechlines



Main Topsail Buntlines

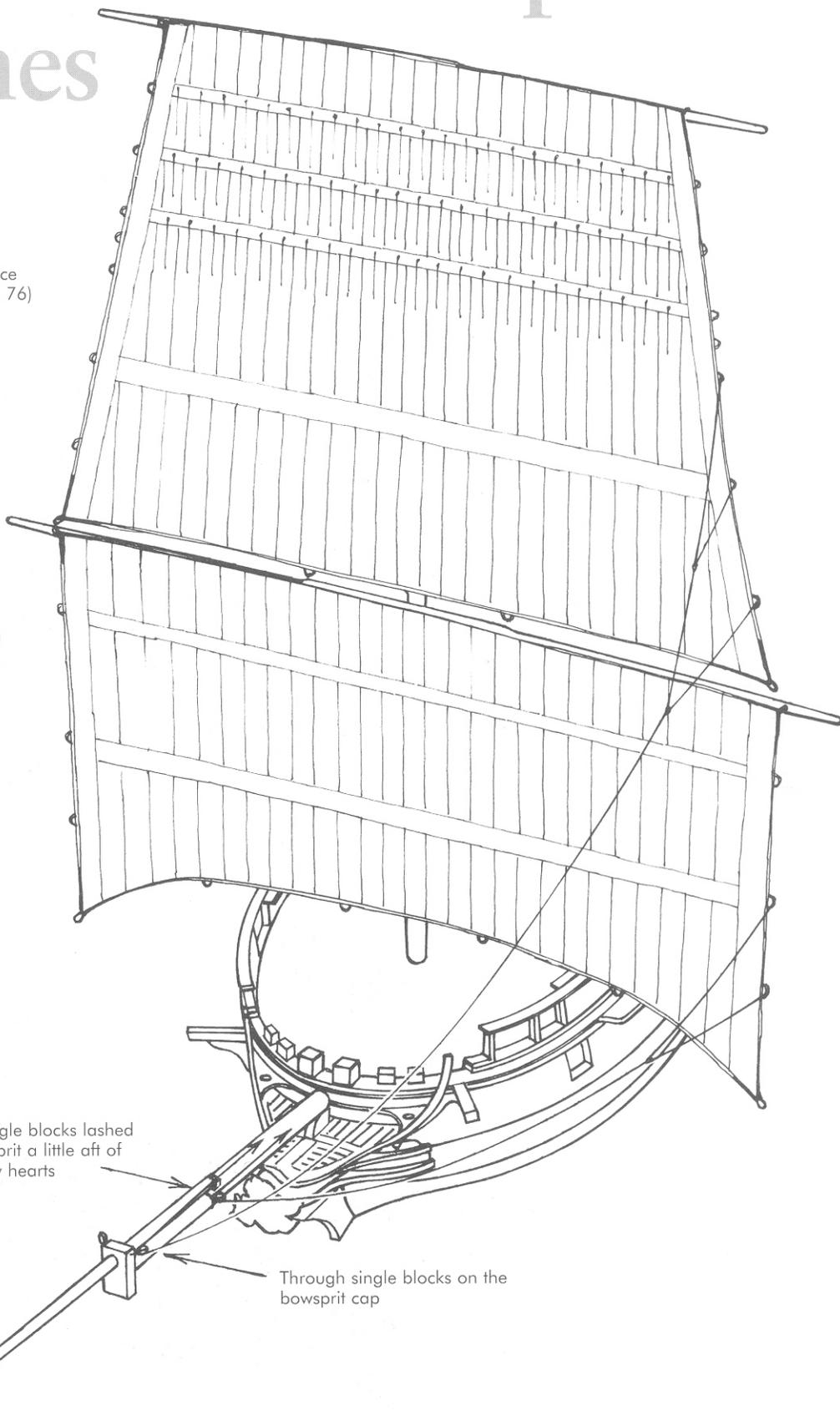
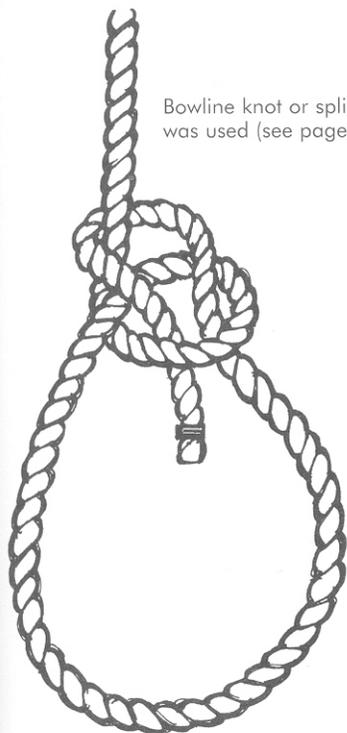


Mizzen Topsail Buntlines



Fore Course & Topsail Bowlines

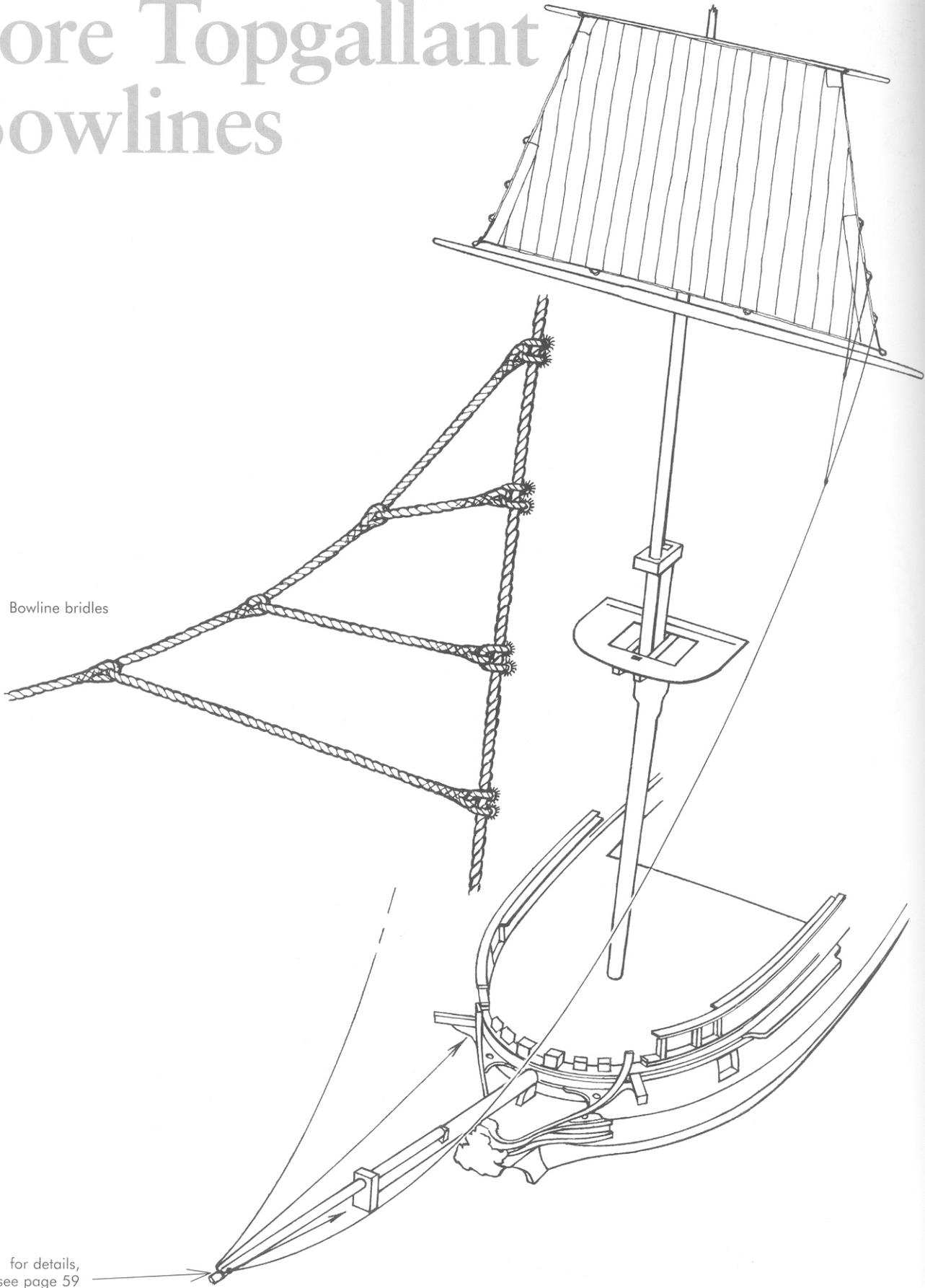
Bowline knot or splice
was used (see page 76)



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

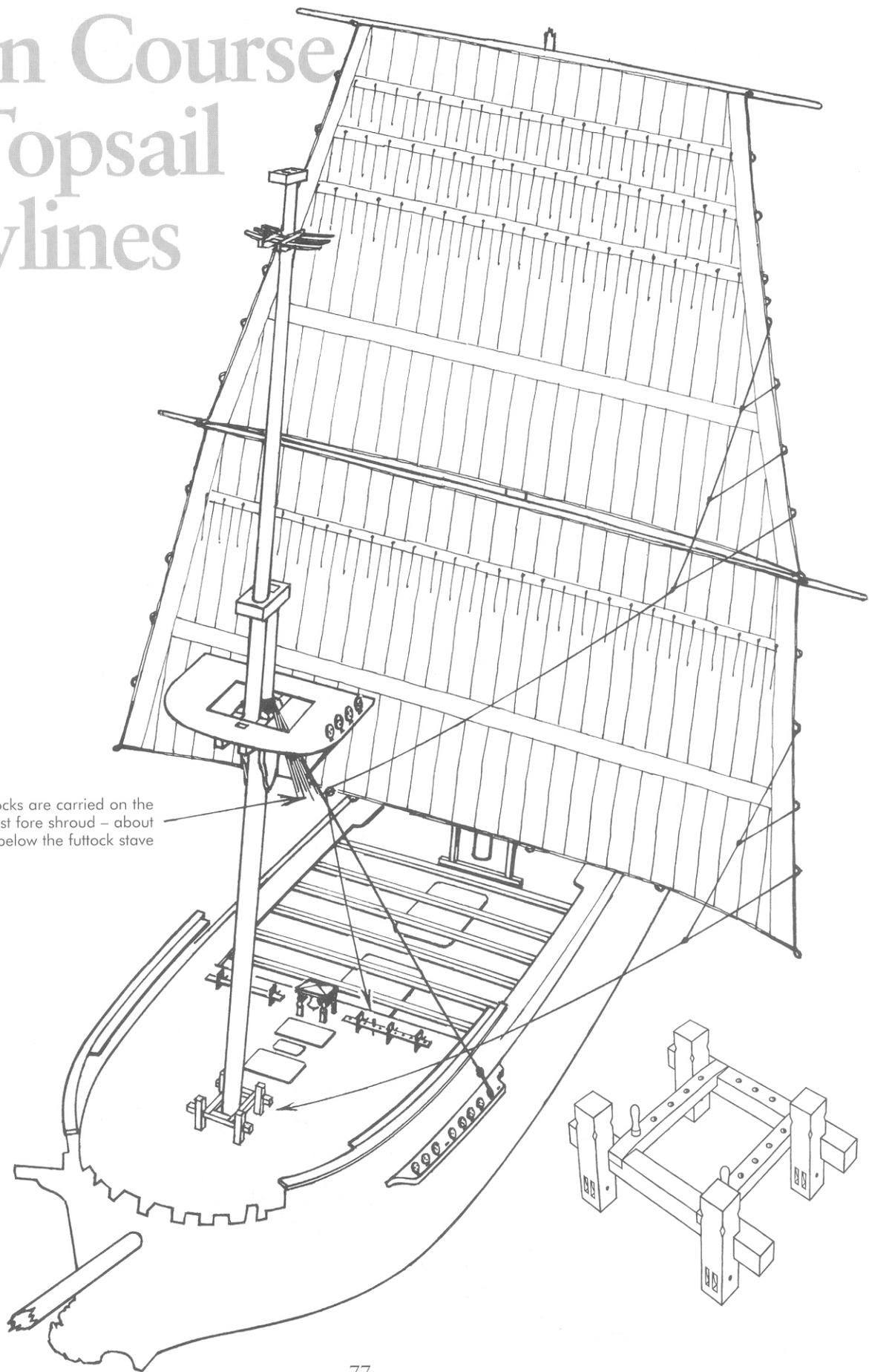
Through single blocks on the
bowsprit cap

Fore Topgallant Bowlines

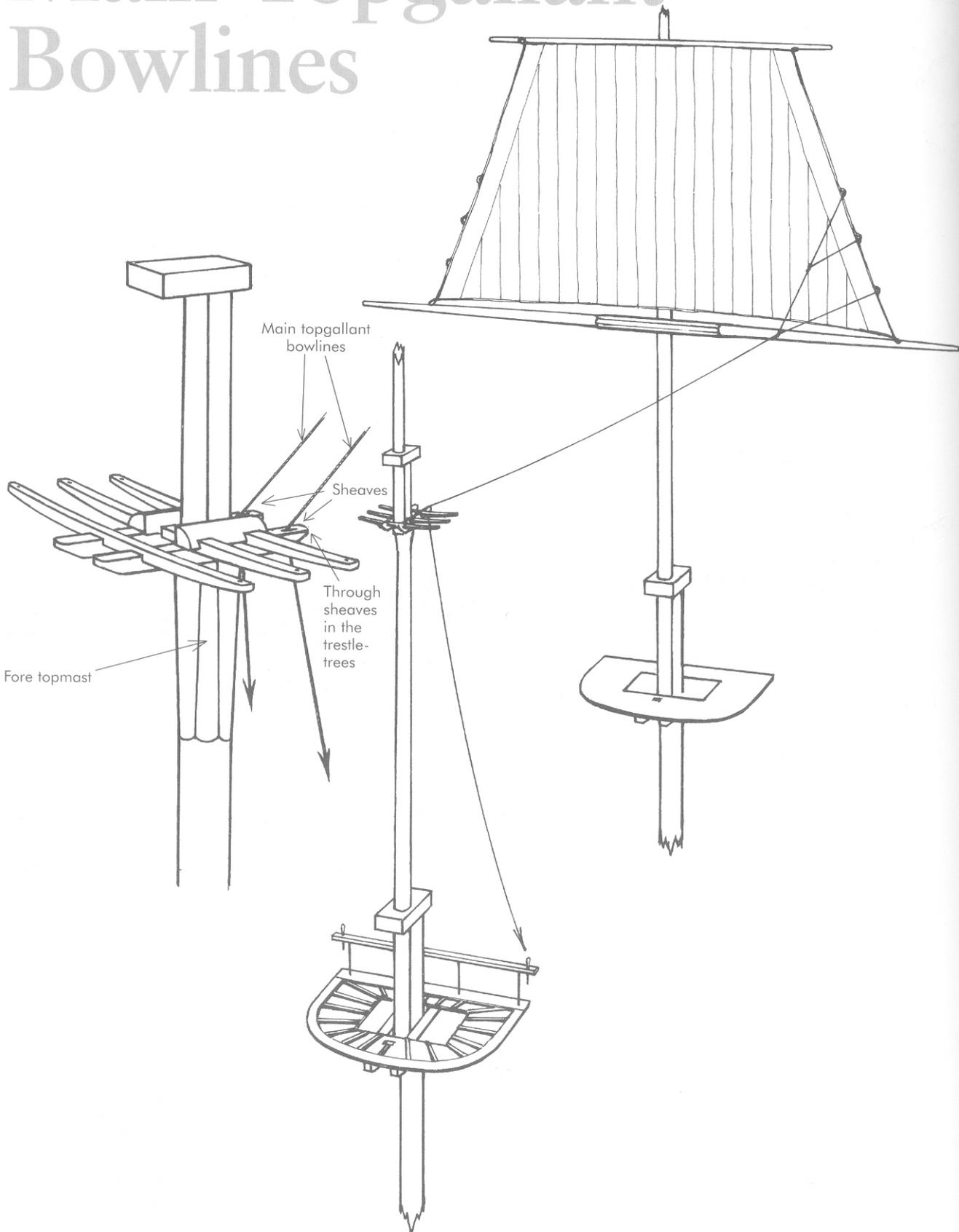


Main Course & Topsail Bowlines

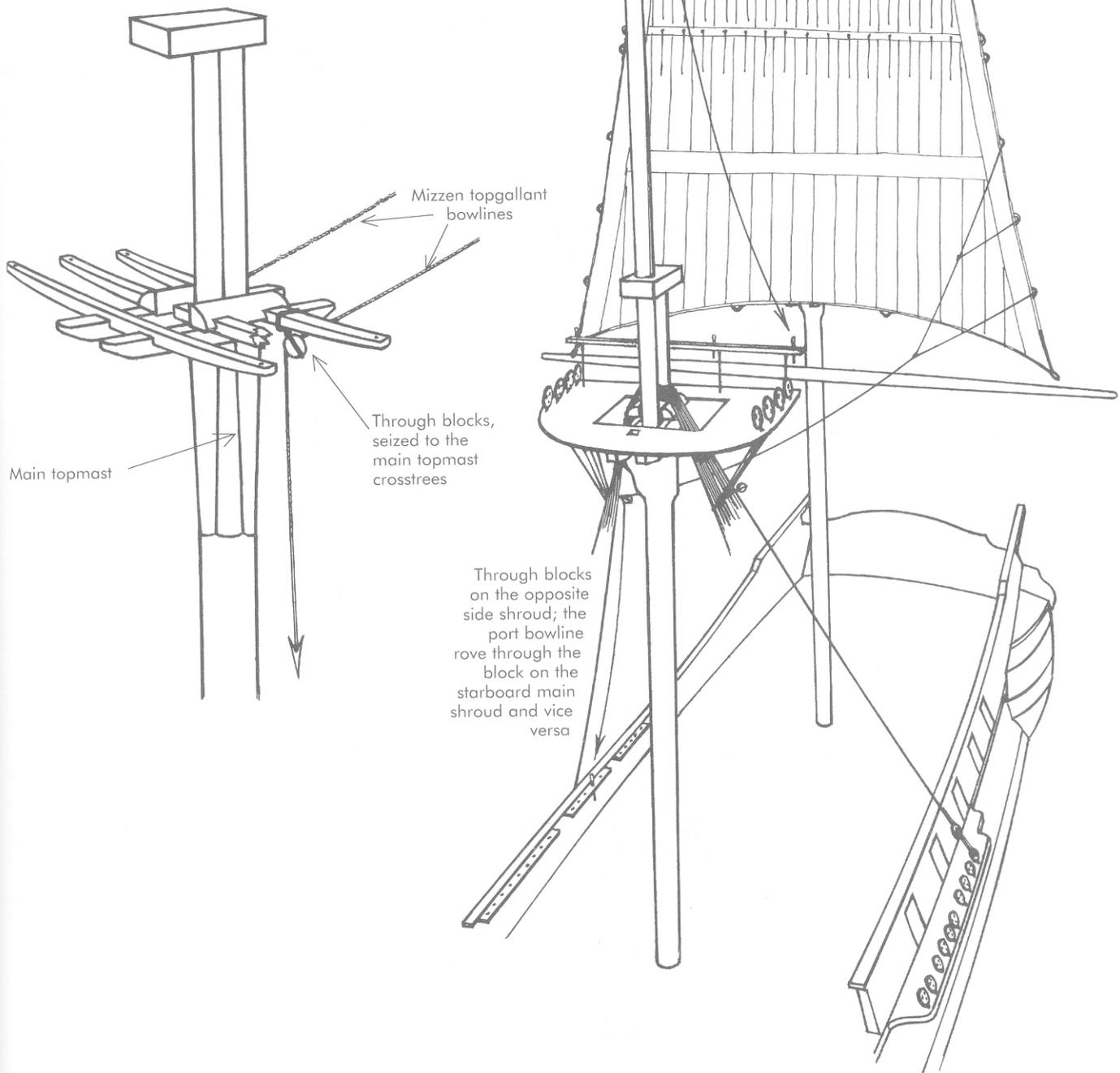
The lead blocks are carried on the
aftermost fore shroud – about
6 feet below the futtock stave



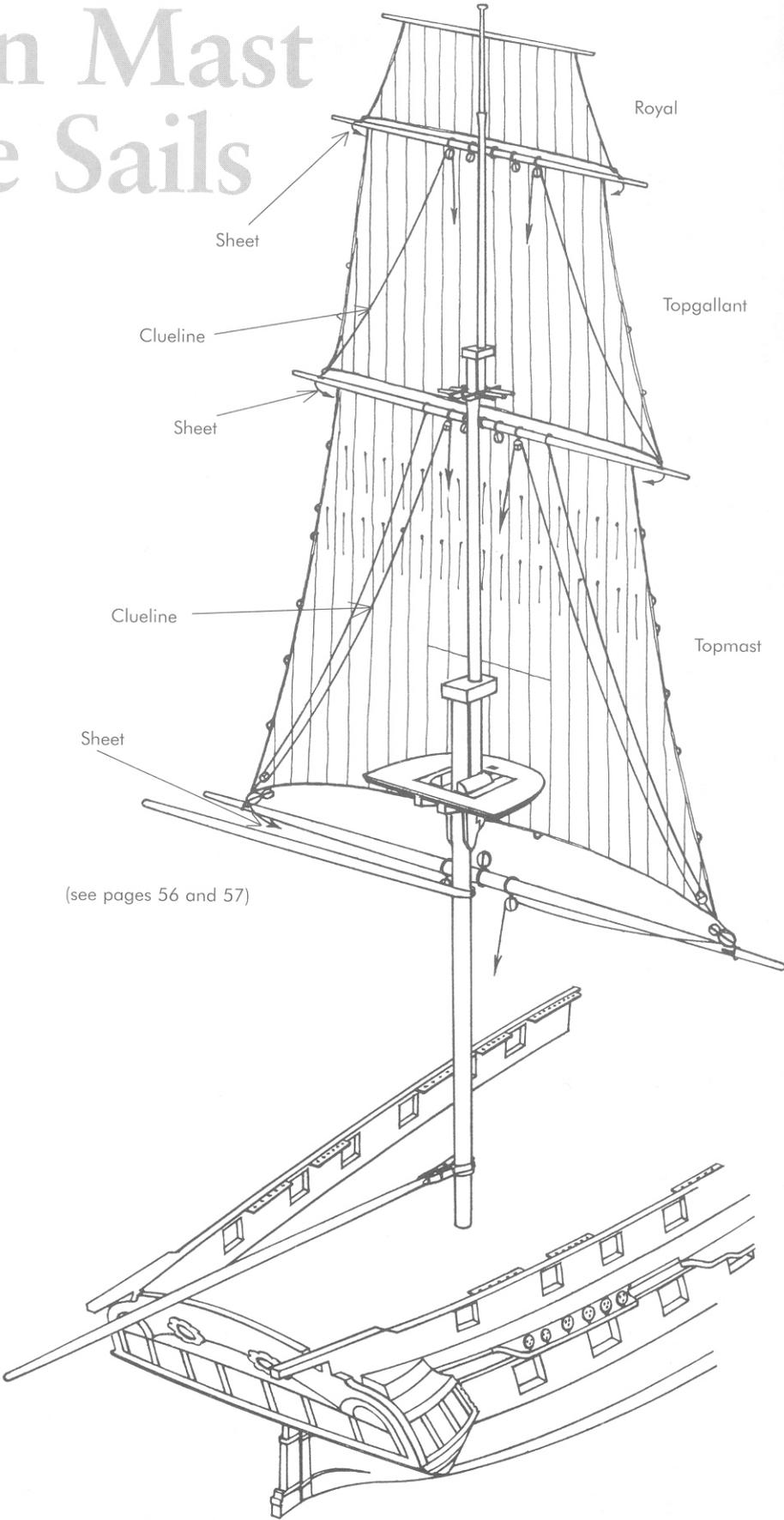
Main Topgallant Bowlines



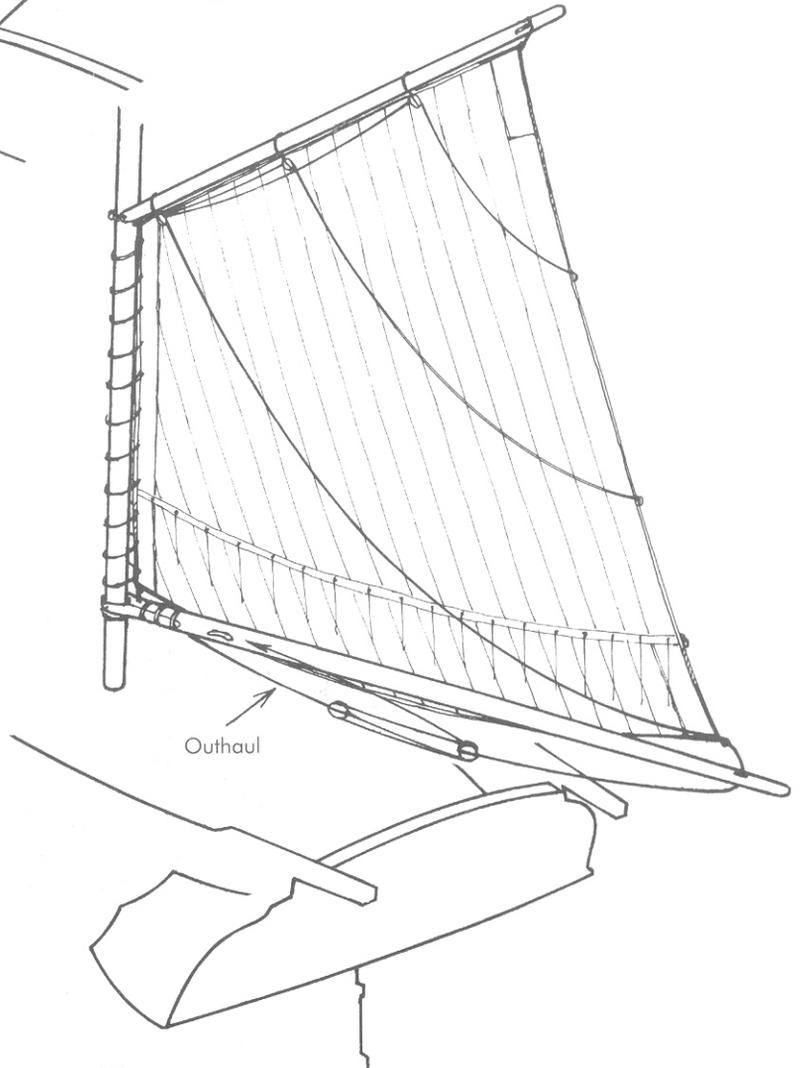
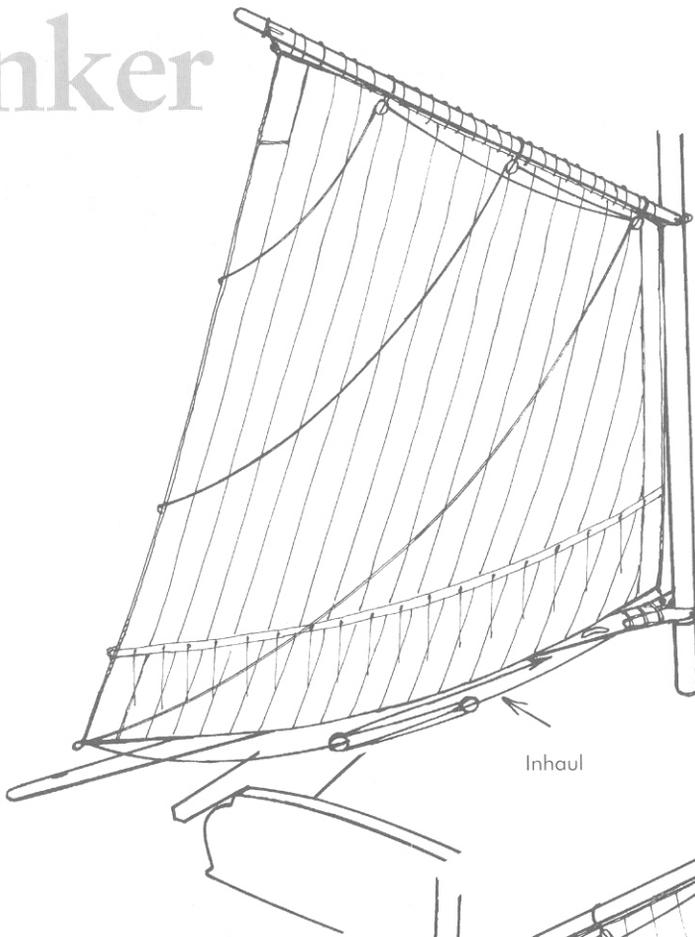
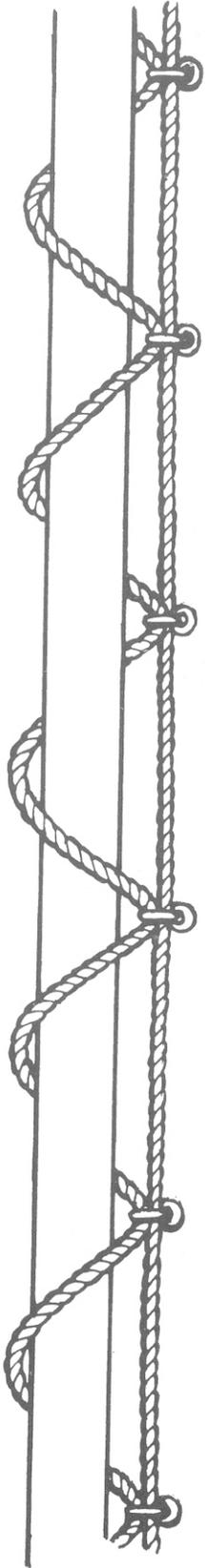
Mizzen Topsail & Topgallant Bowlines



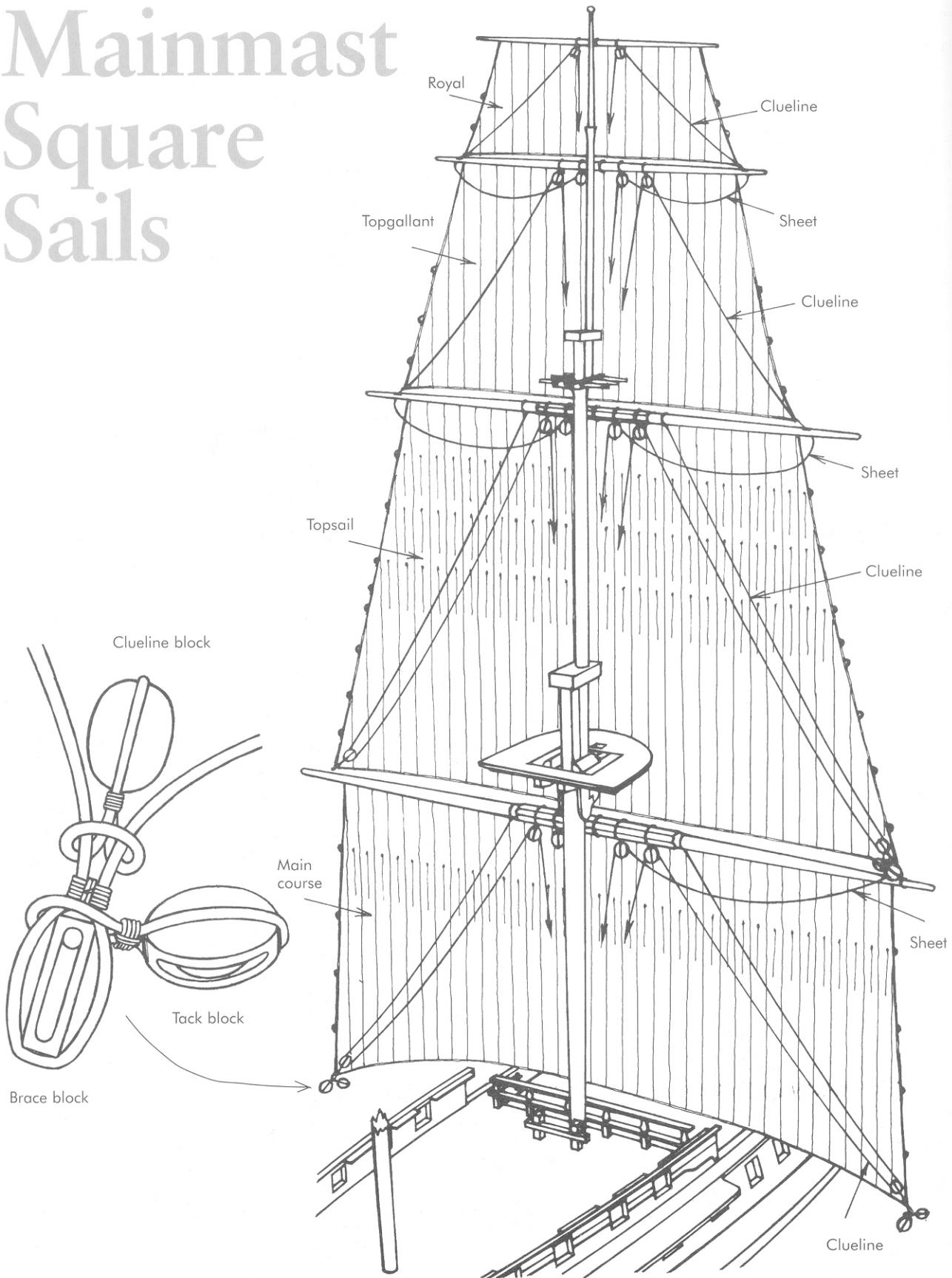
Mizzen Mast Square Sails



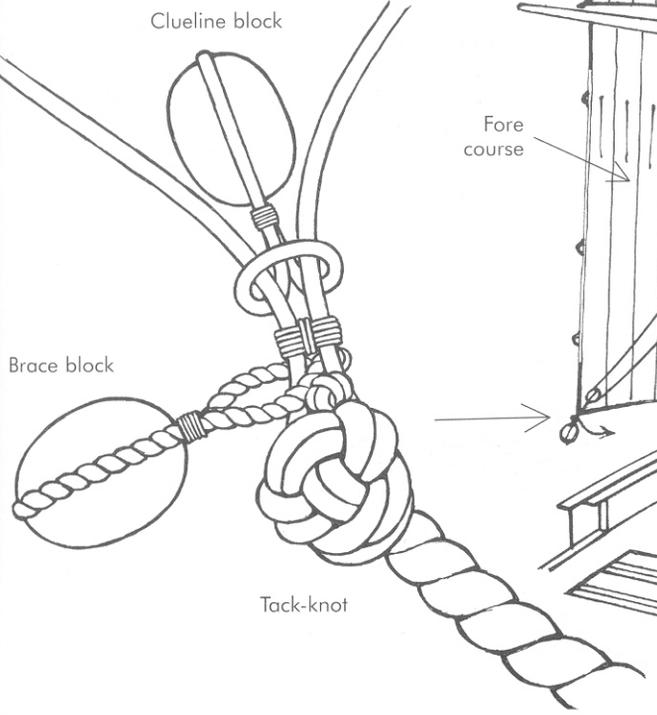
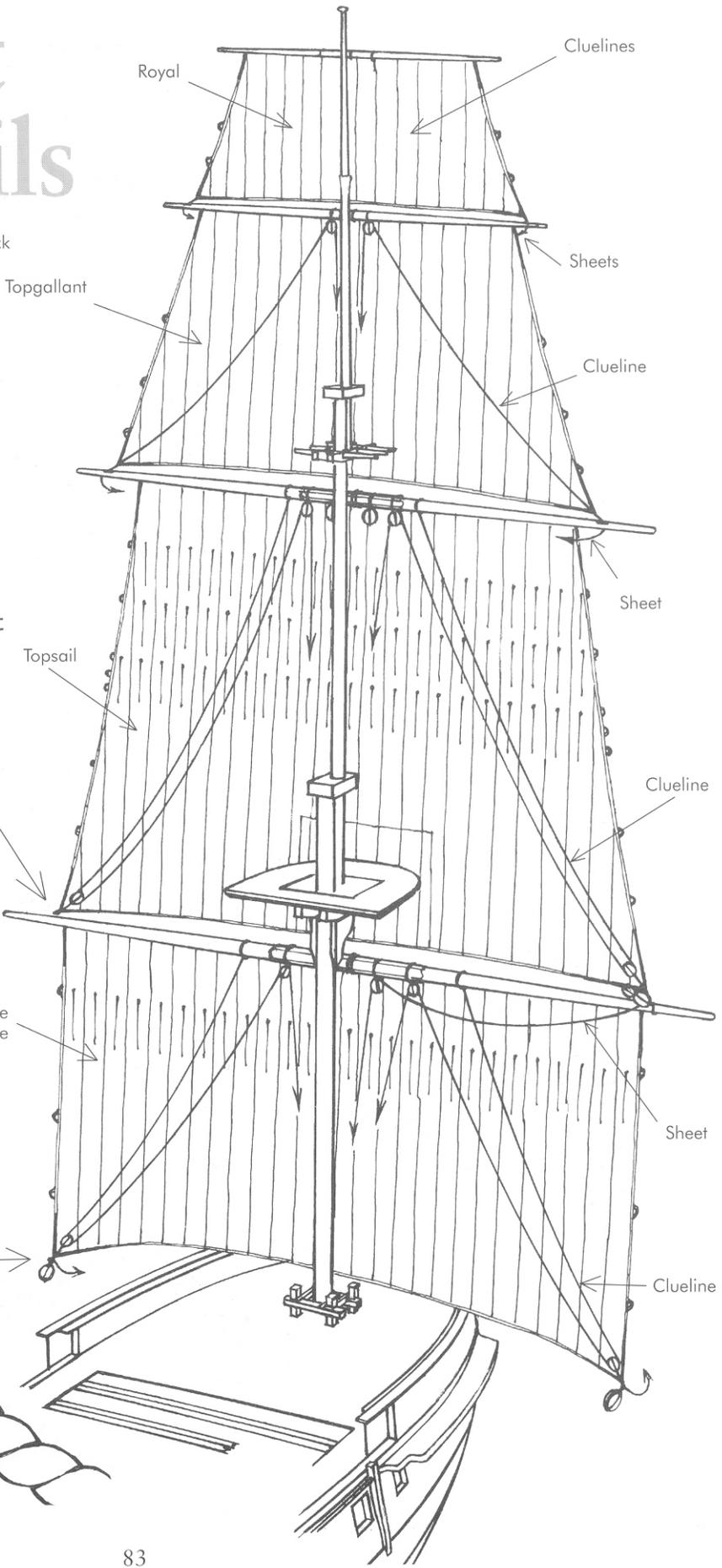
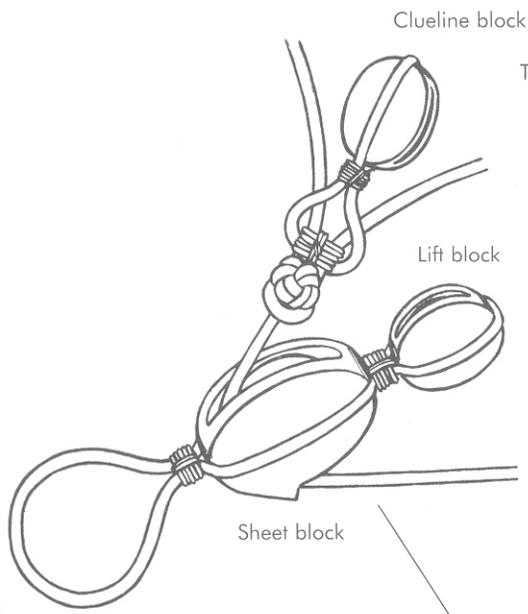
Spanker



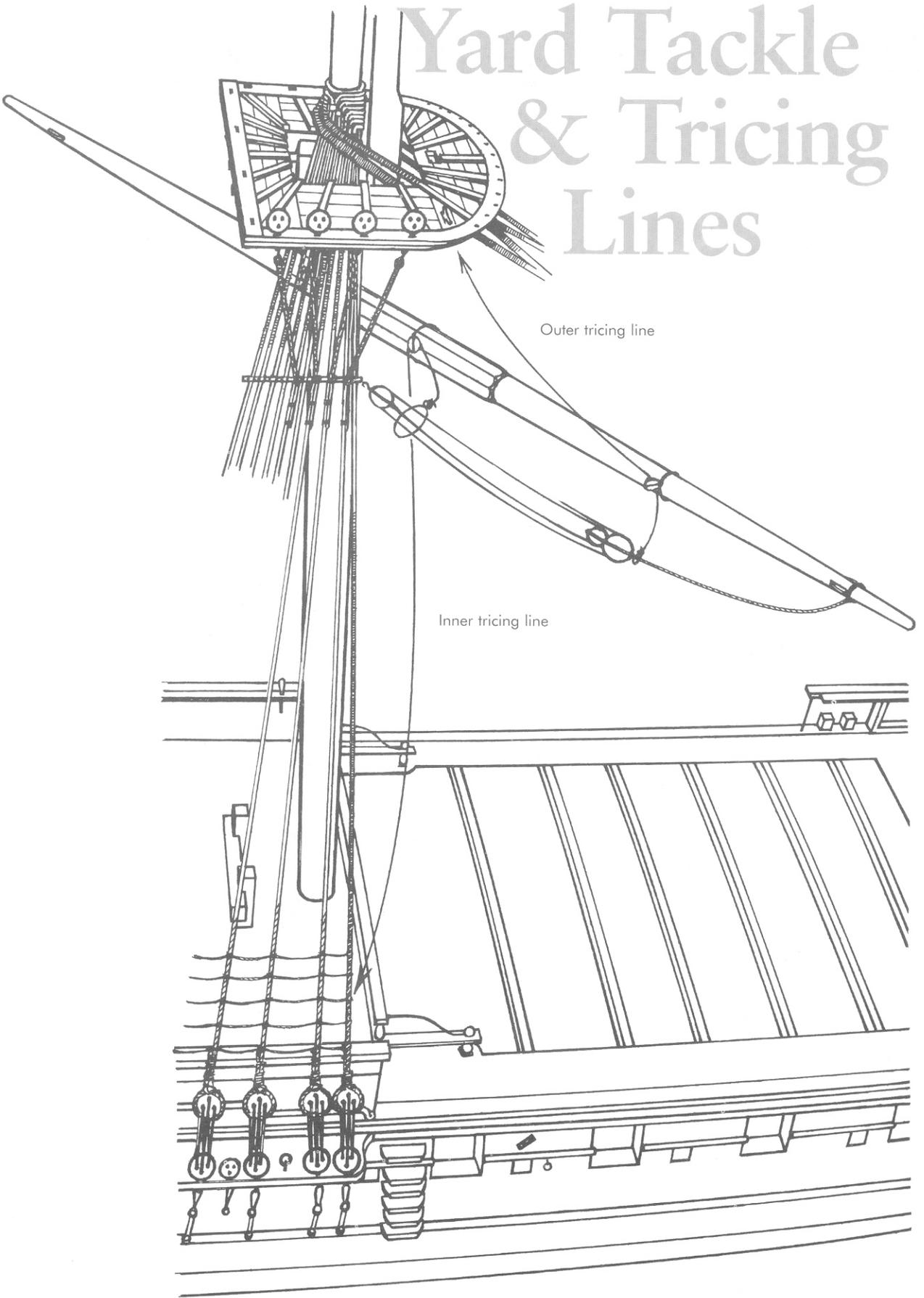
Mainmast Square Sails



Fore Mast Square Sails



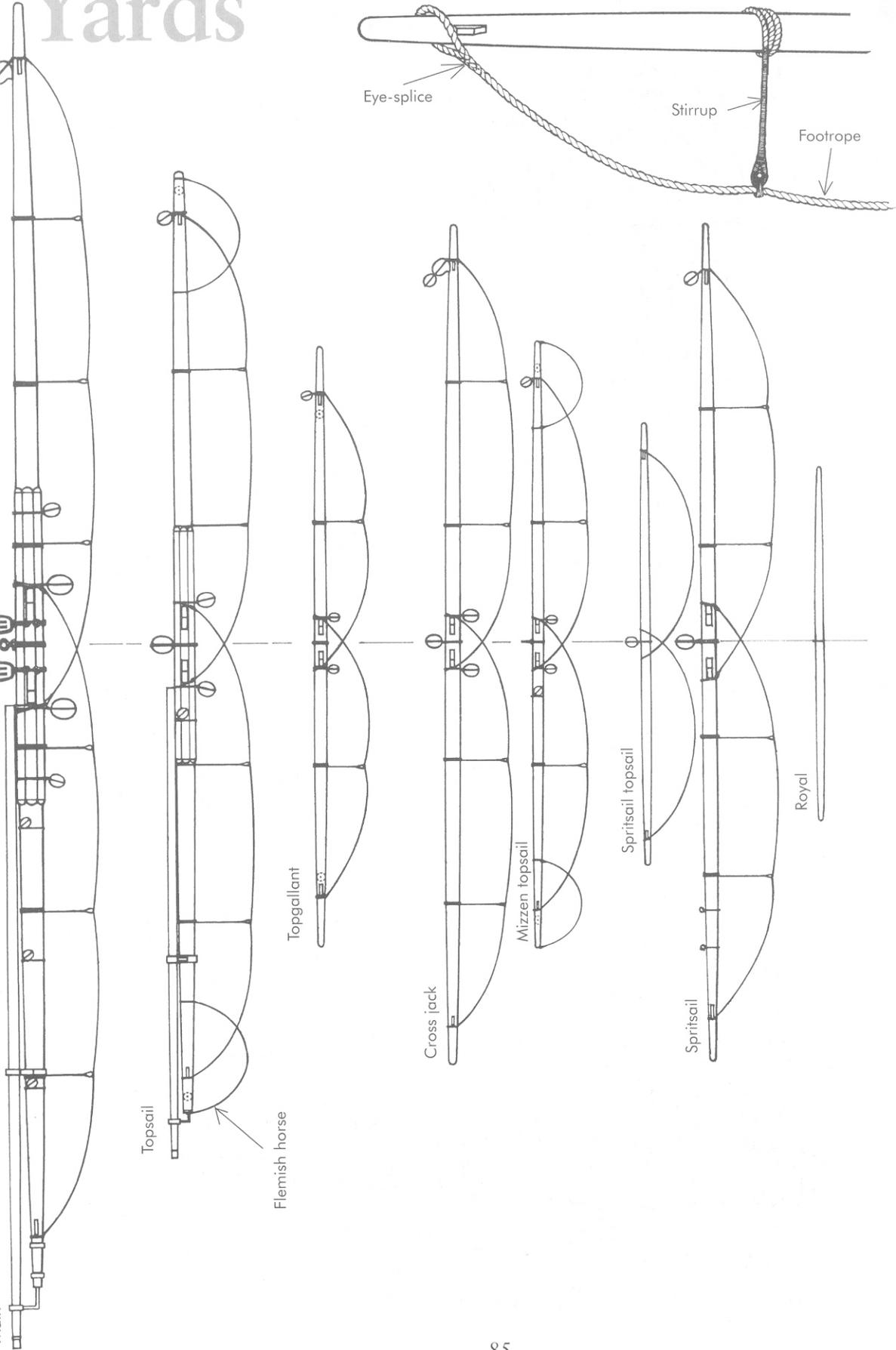
Yard Tackle & Tricing Lines



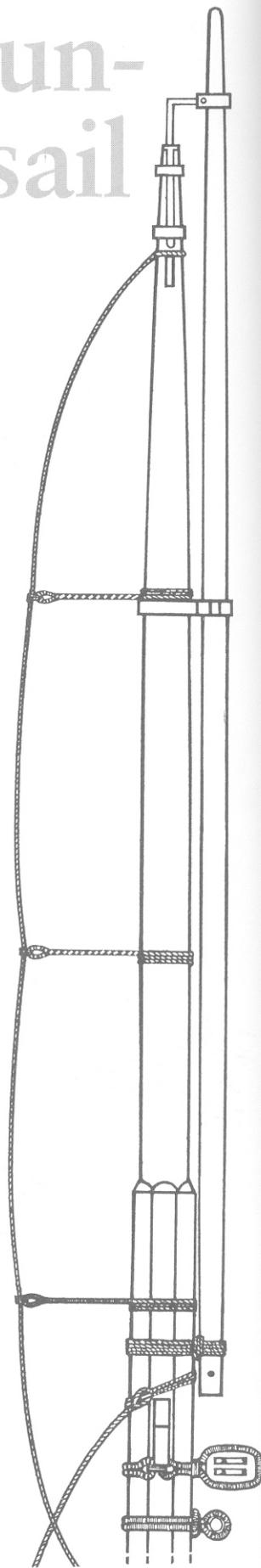
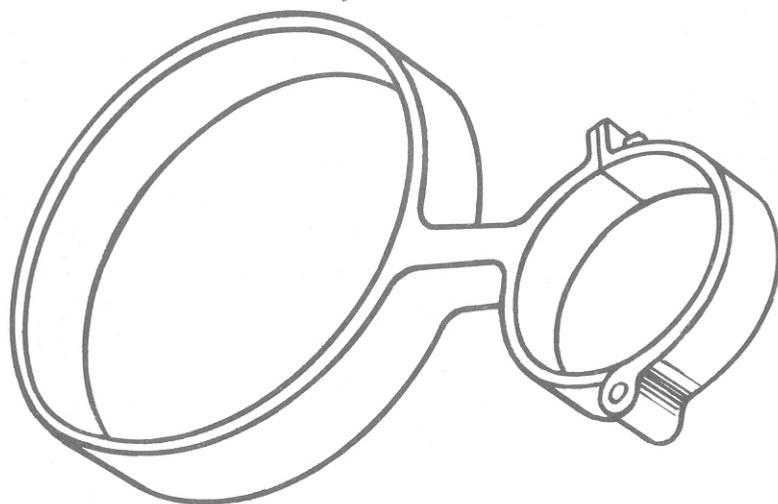
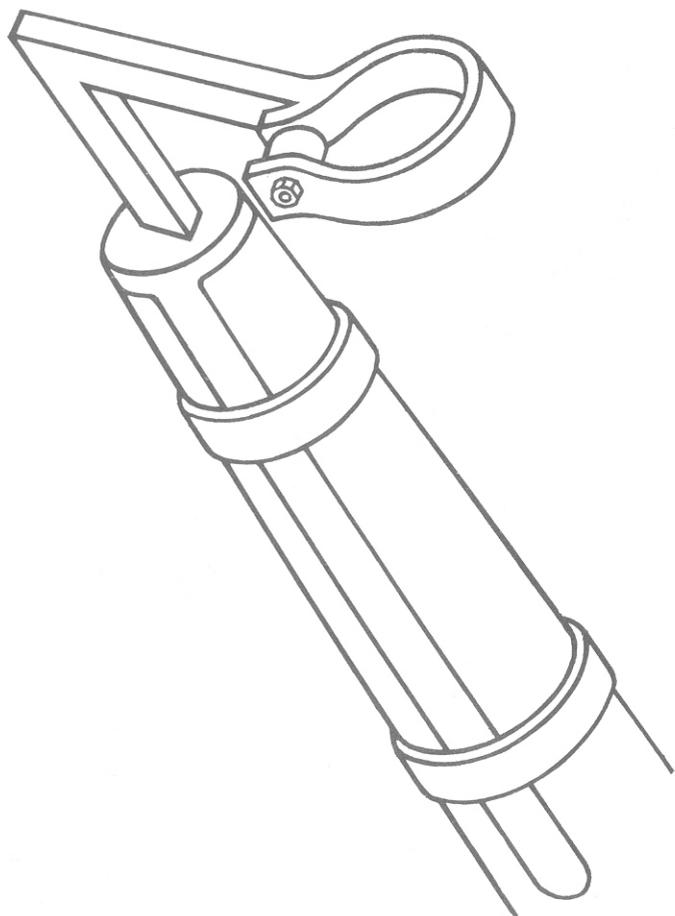
Outer tricing line

Inner tricing line

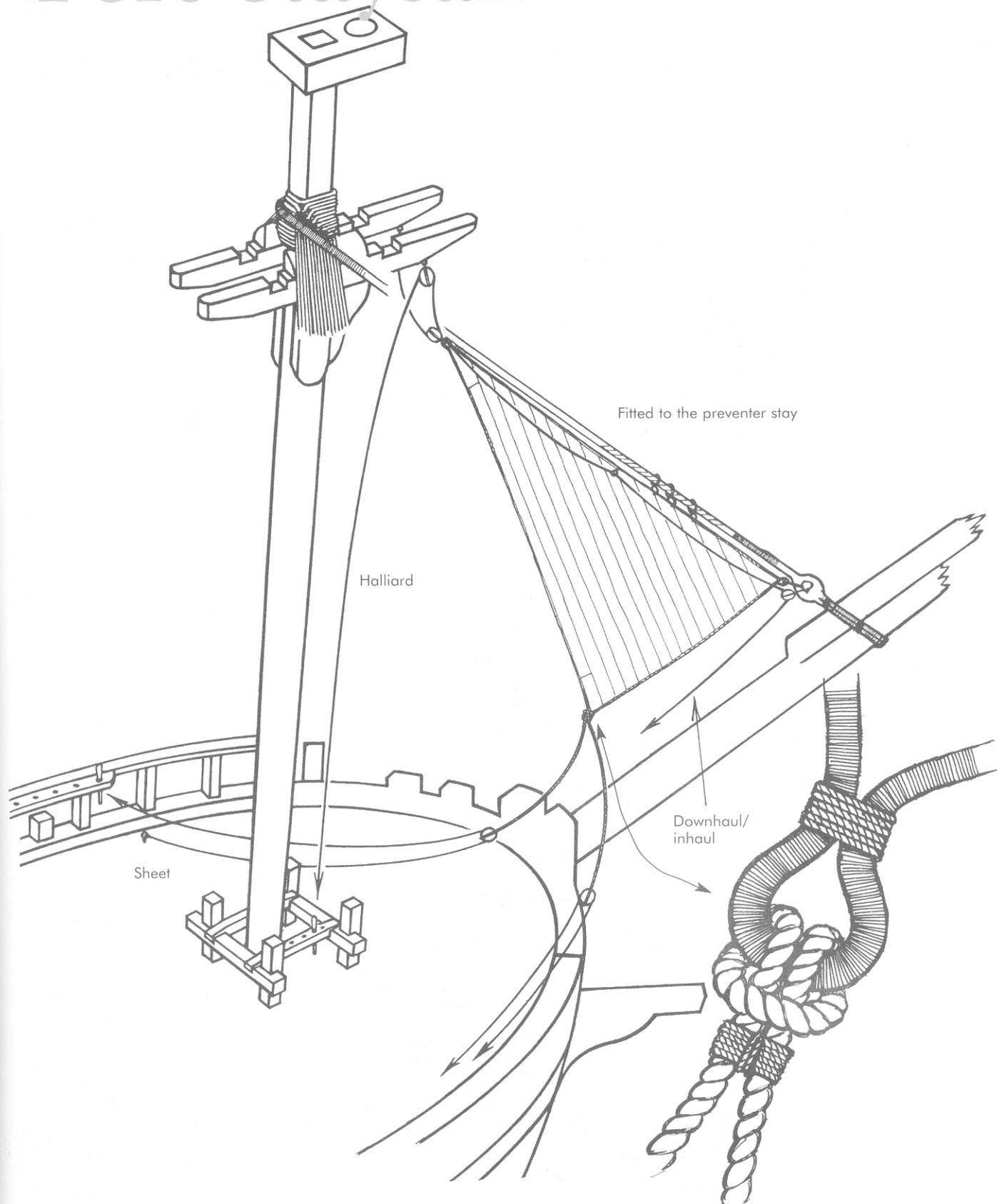
Yards



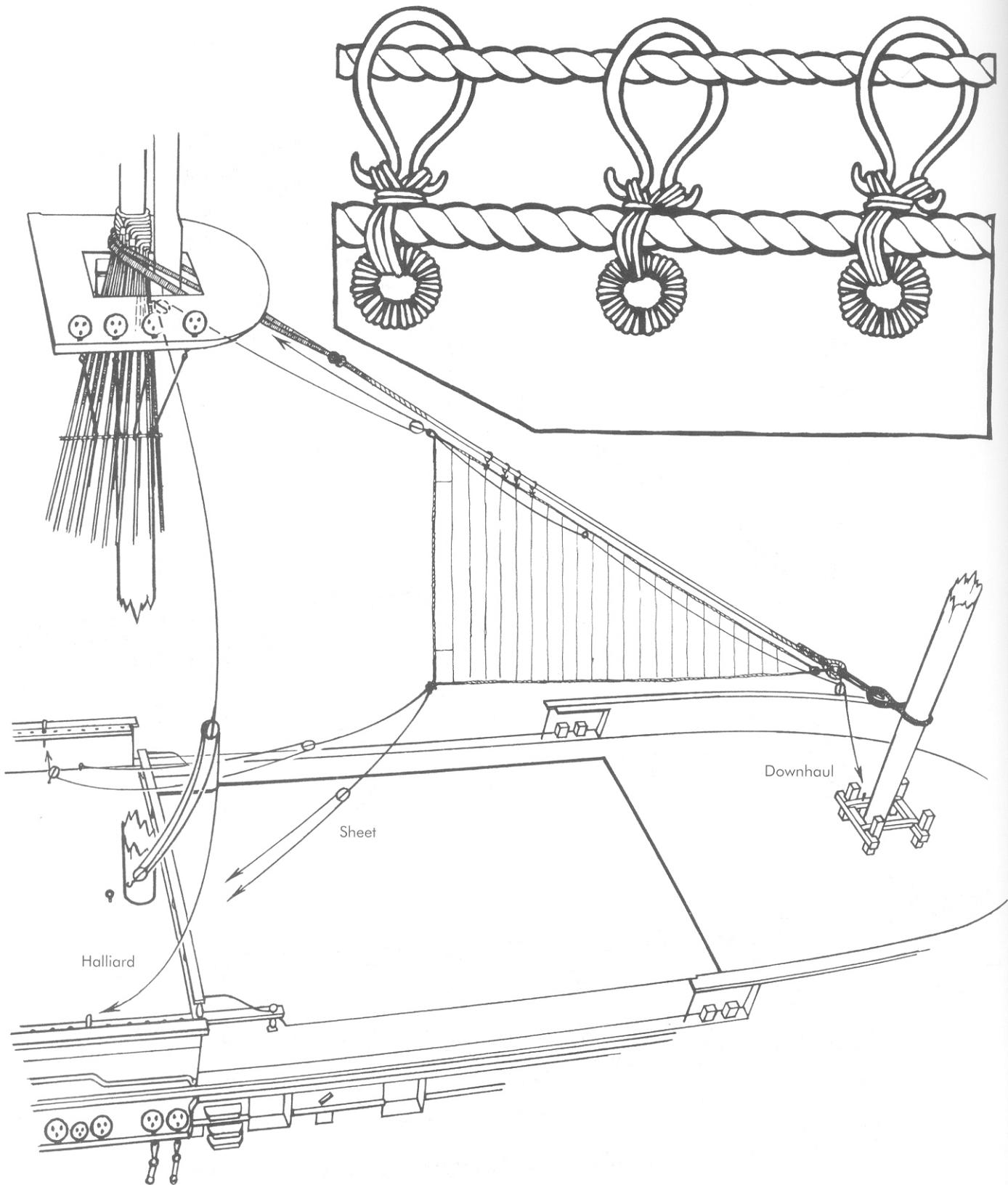
Main Yard with Stun- Sail Boom & Stunsail Boom Irons



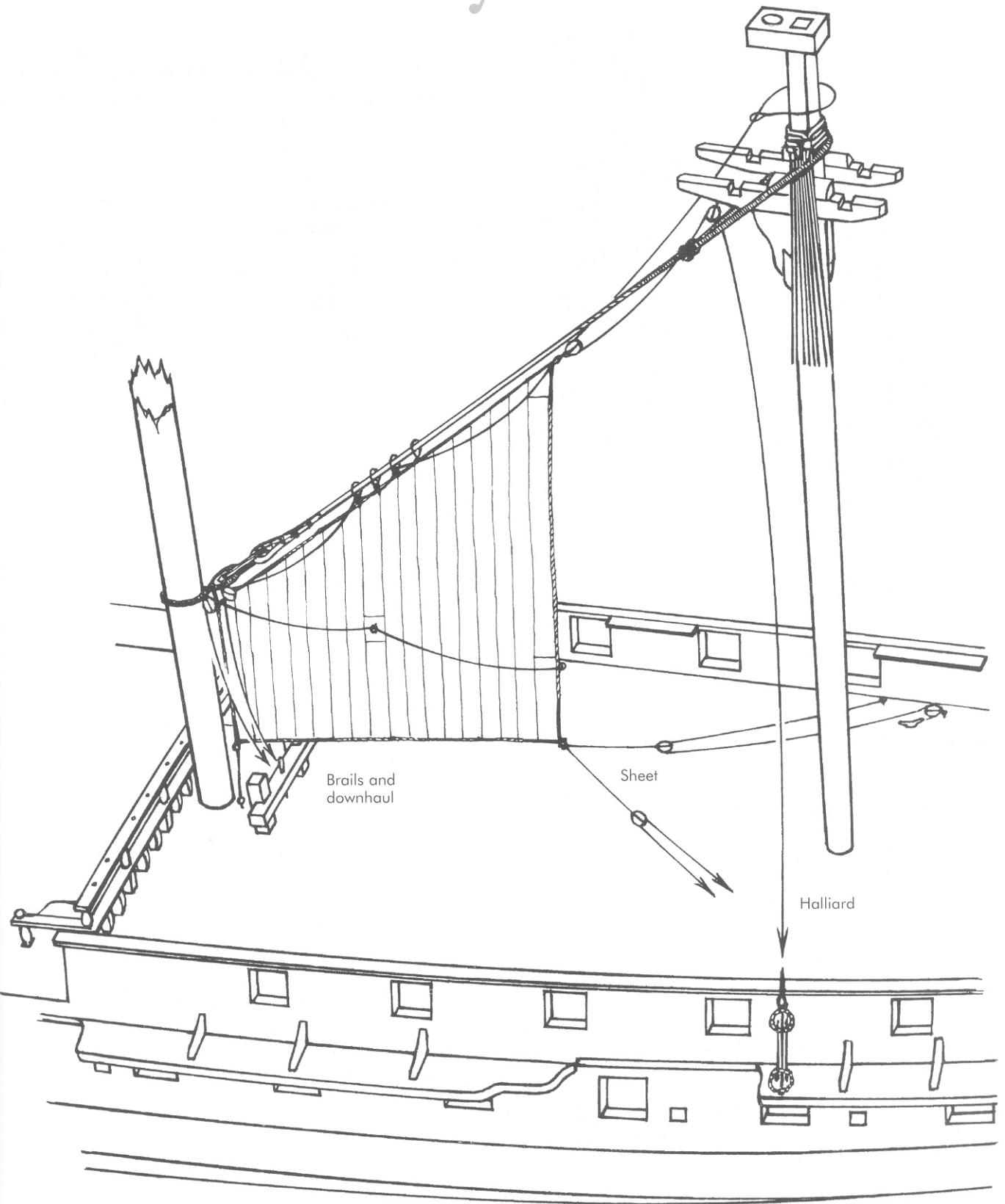
Fore Staysail



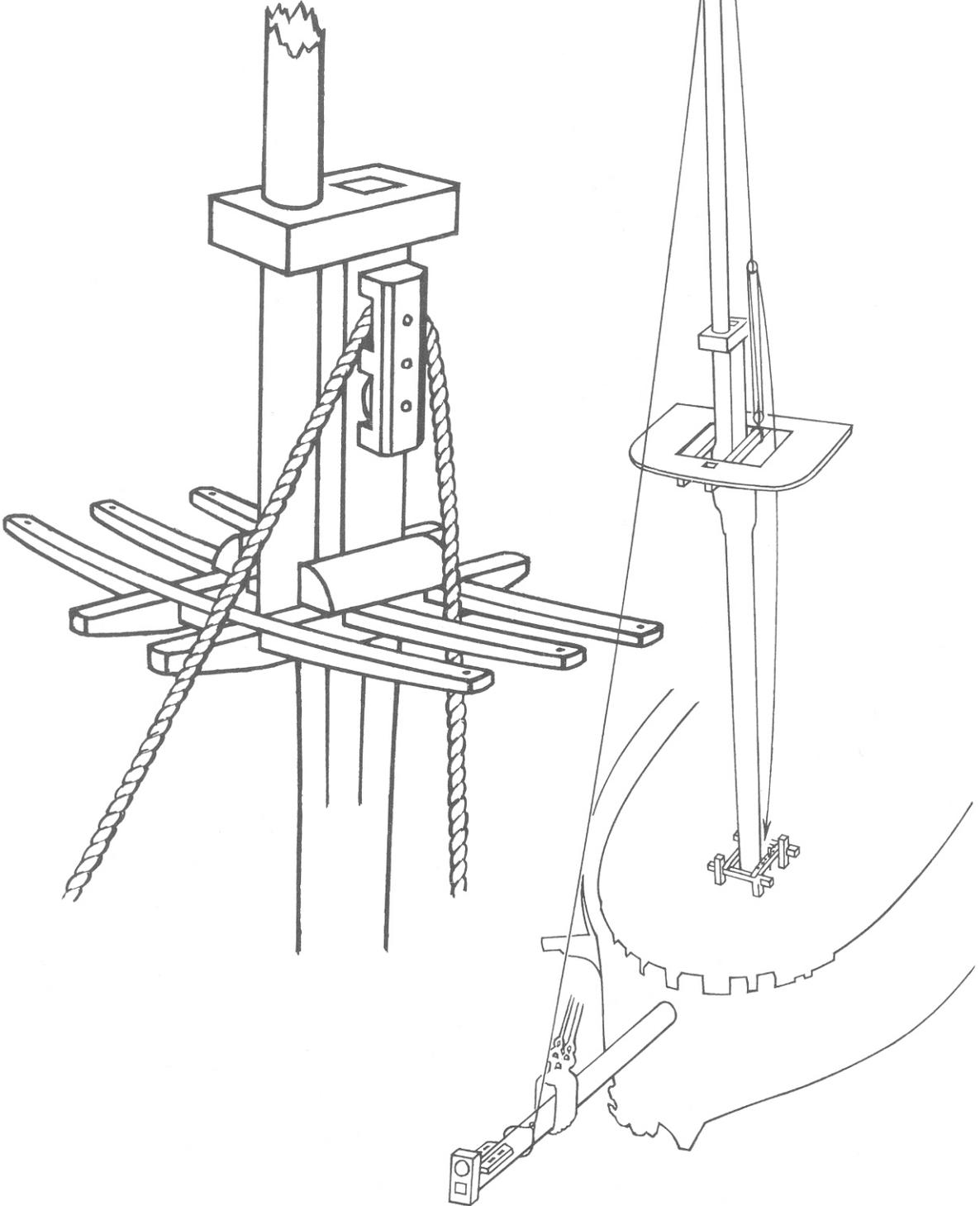
Main Staysail



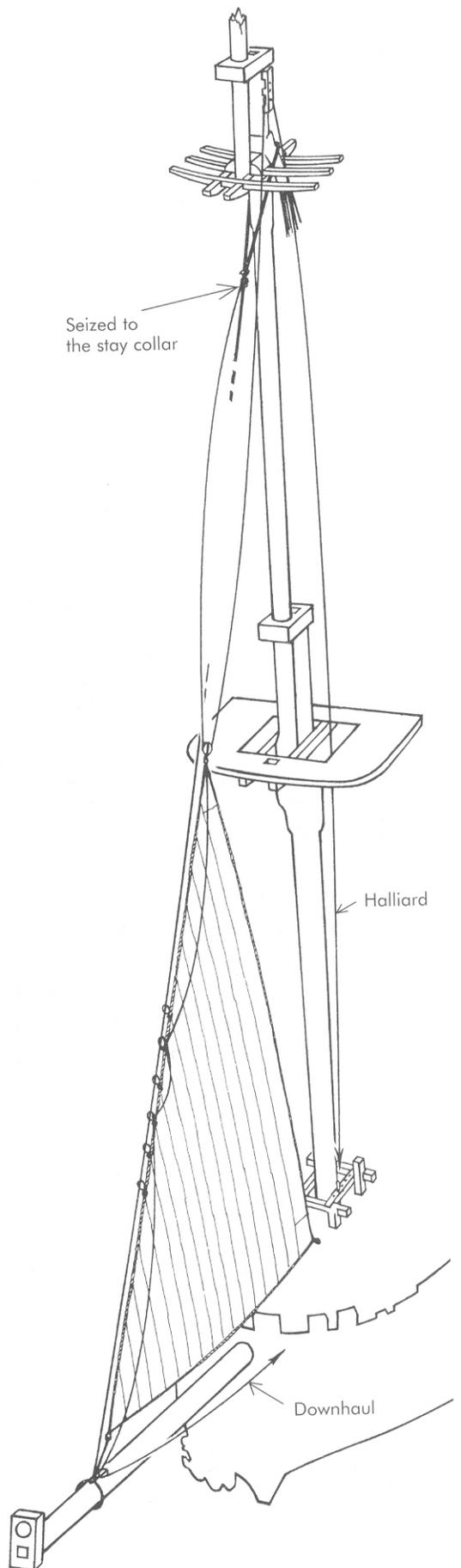
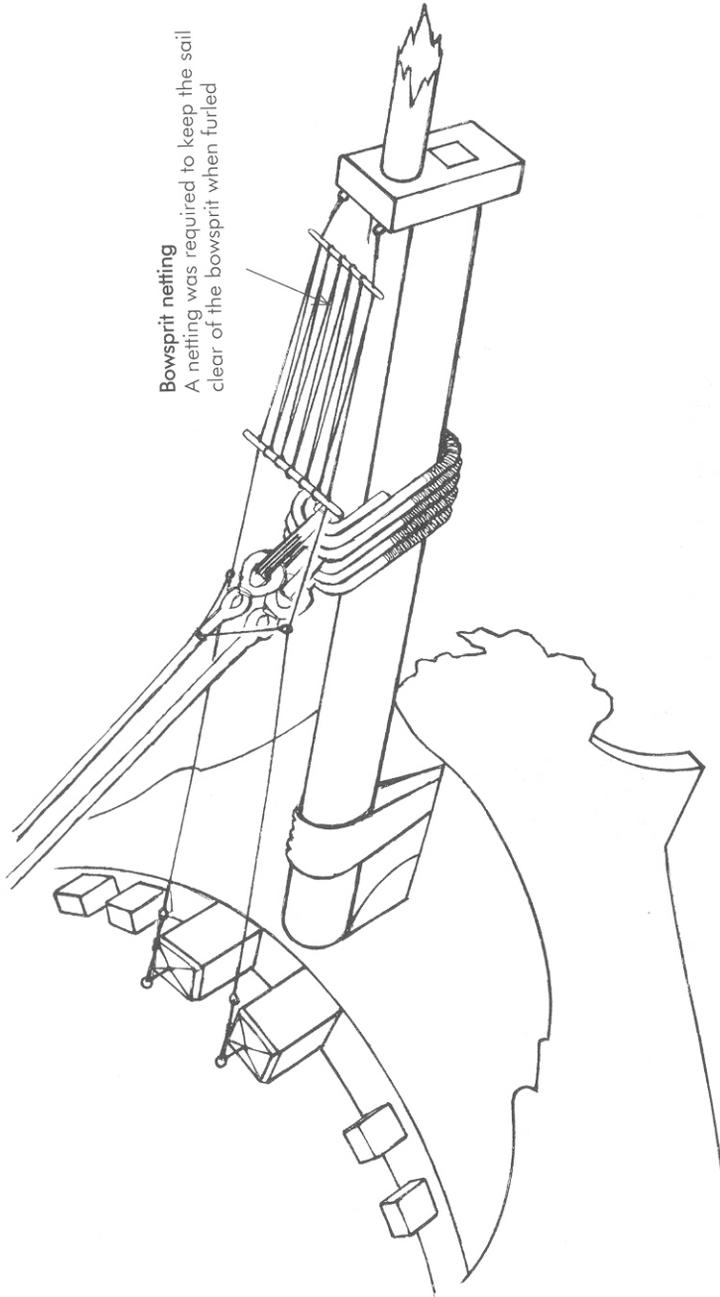
Mizzen Staysail



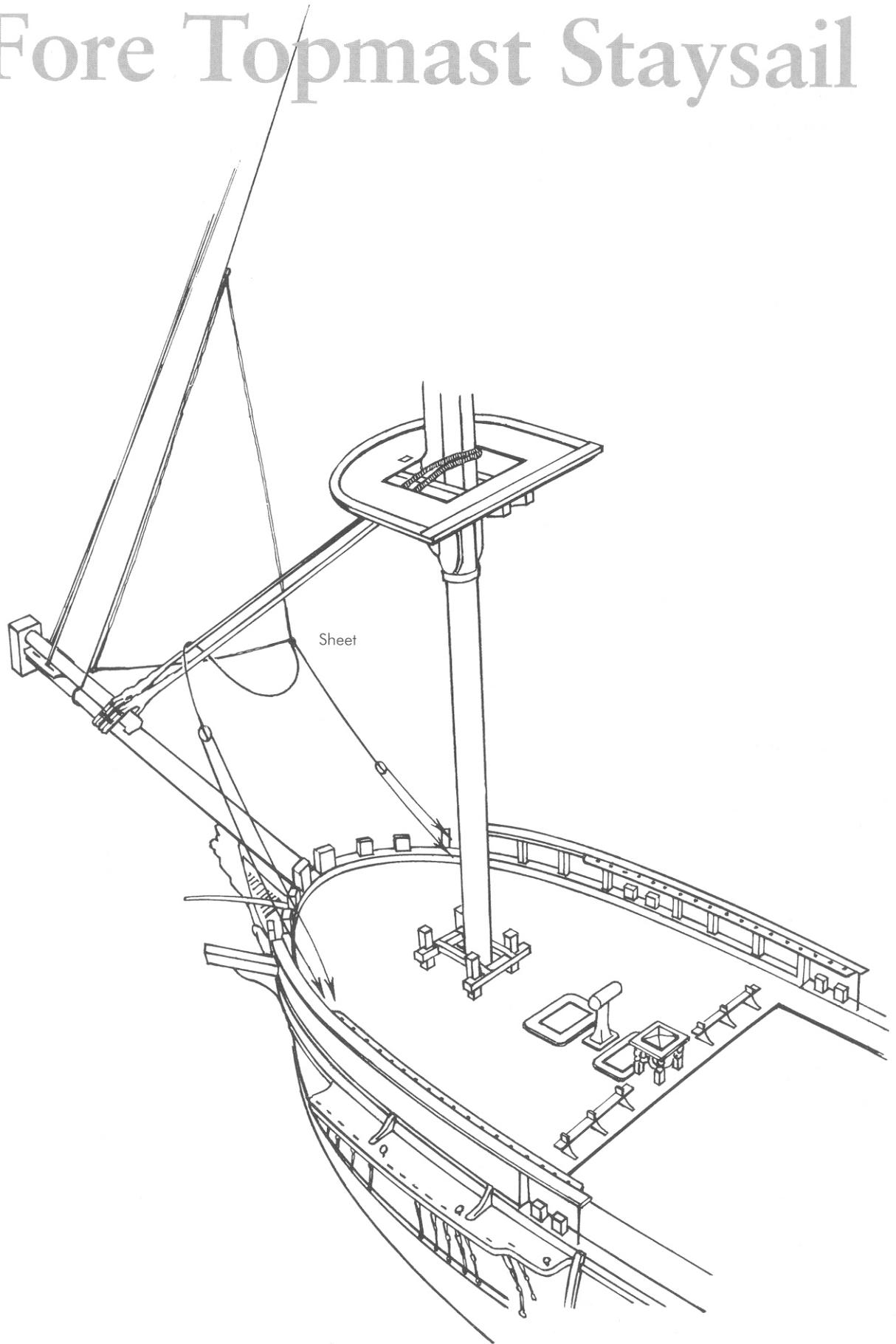
Fore Topmast Staysail Stay



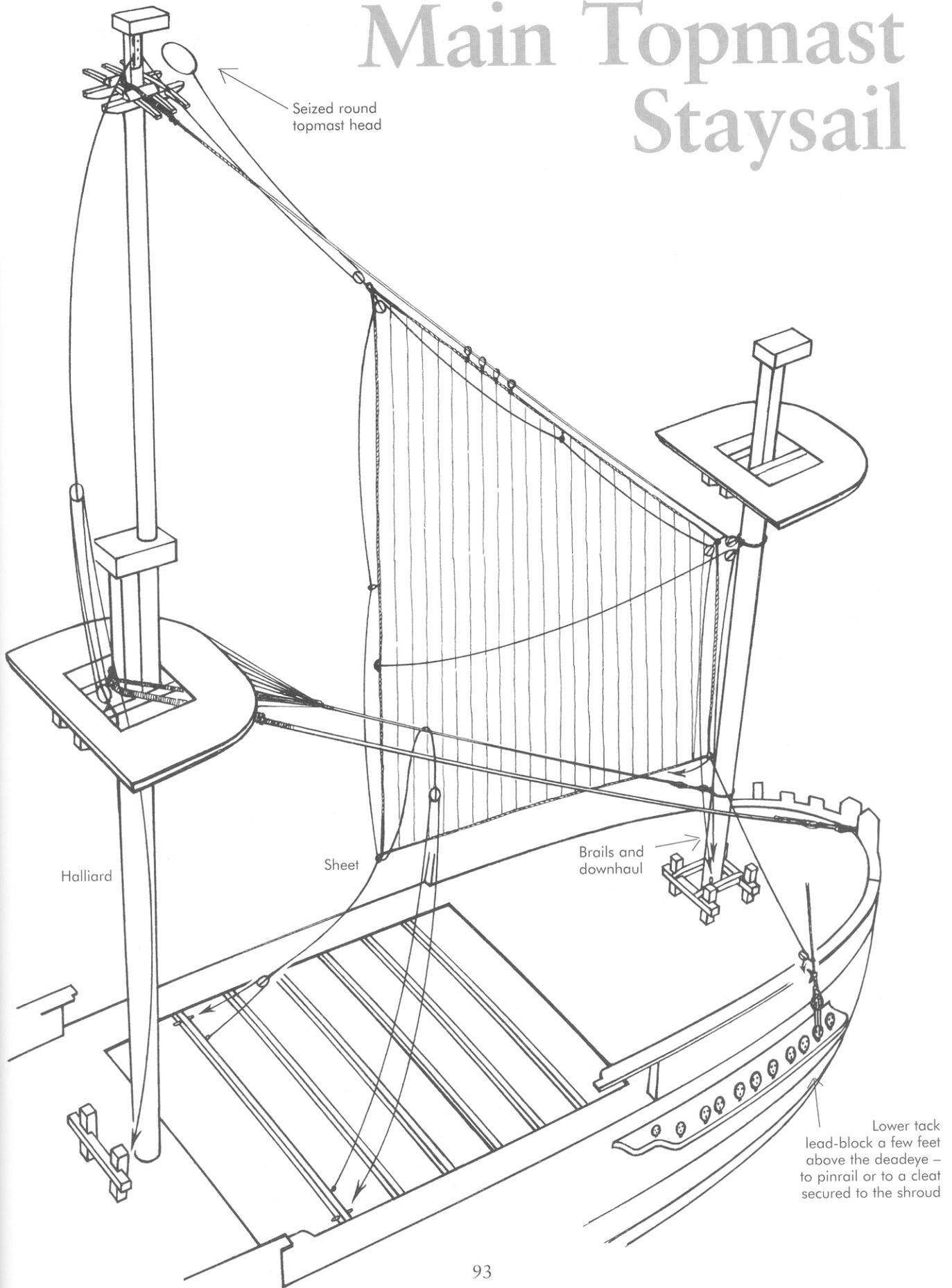
Fore Topmast Staysail



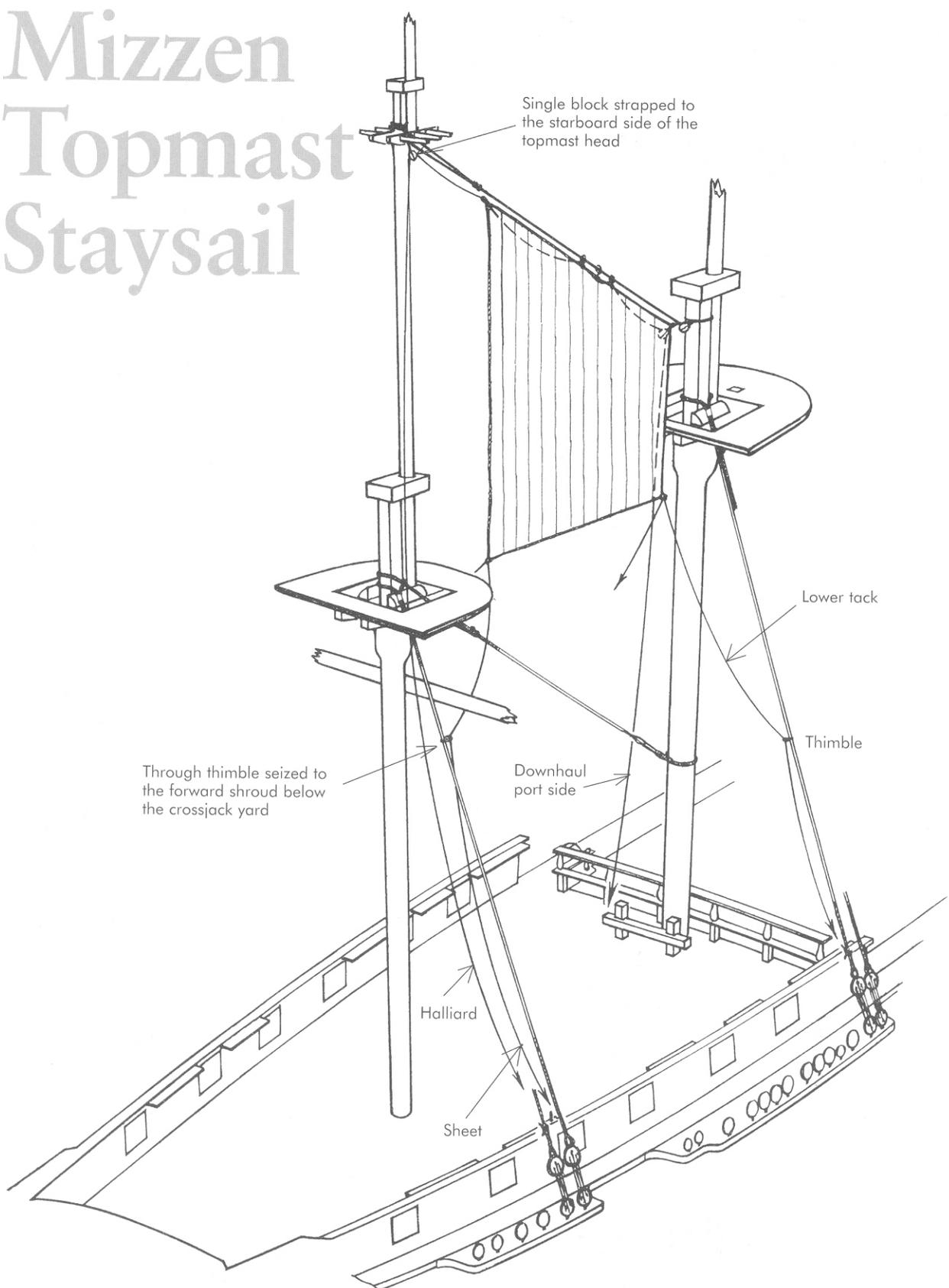
Fore Topmast Staysail



Main Topmast Staysail



Mizzen Topmast Staysail



Single block strapped to the starboard side of the topmast head

Lower tack

Thimble

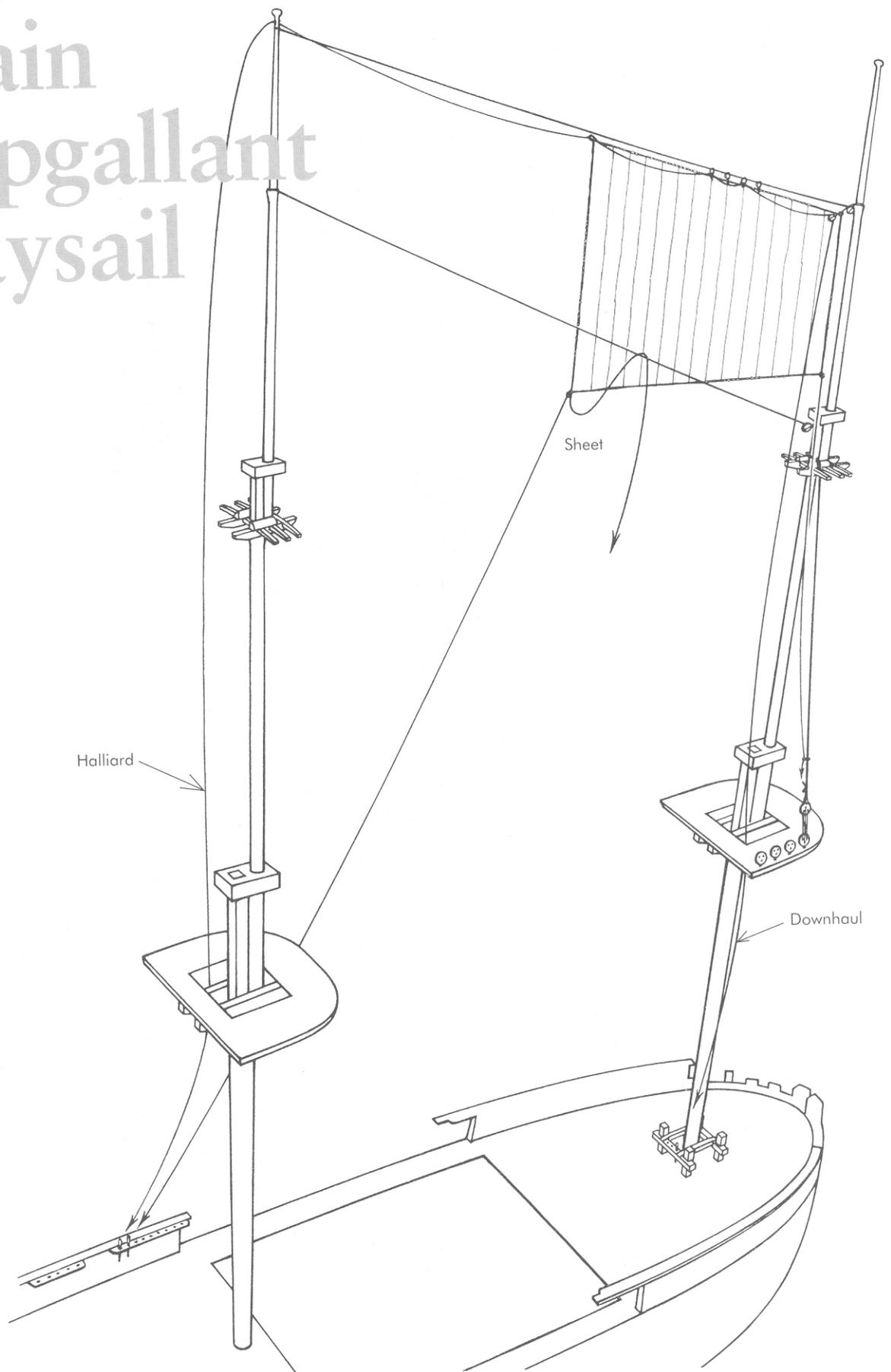
Downhaul port side

Through thimble seized to the forward shroud below the crossjack yard

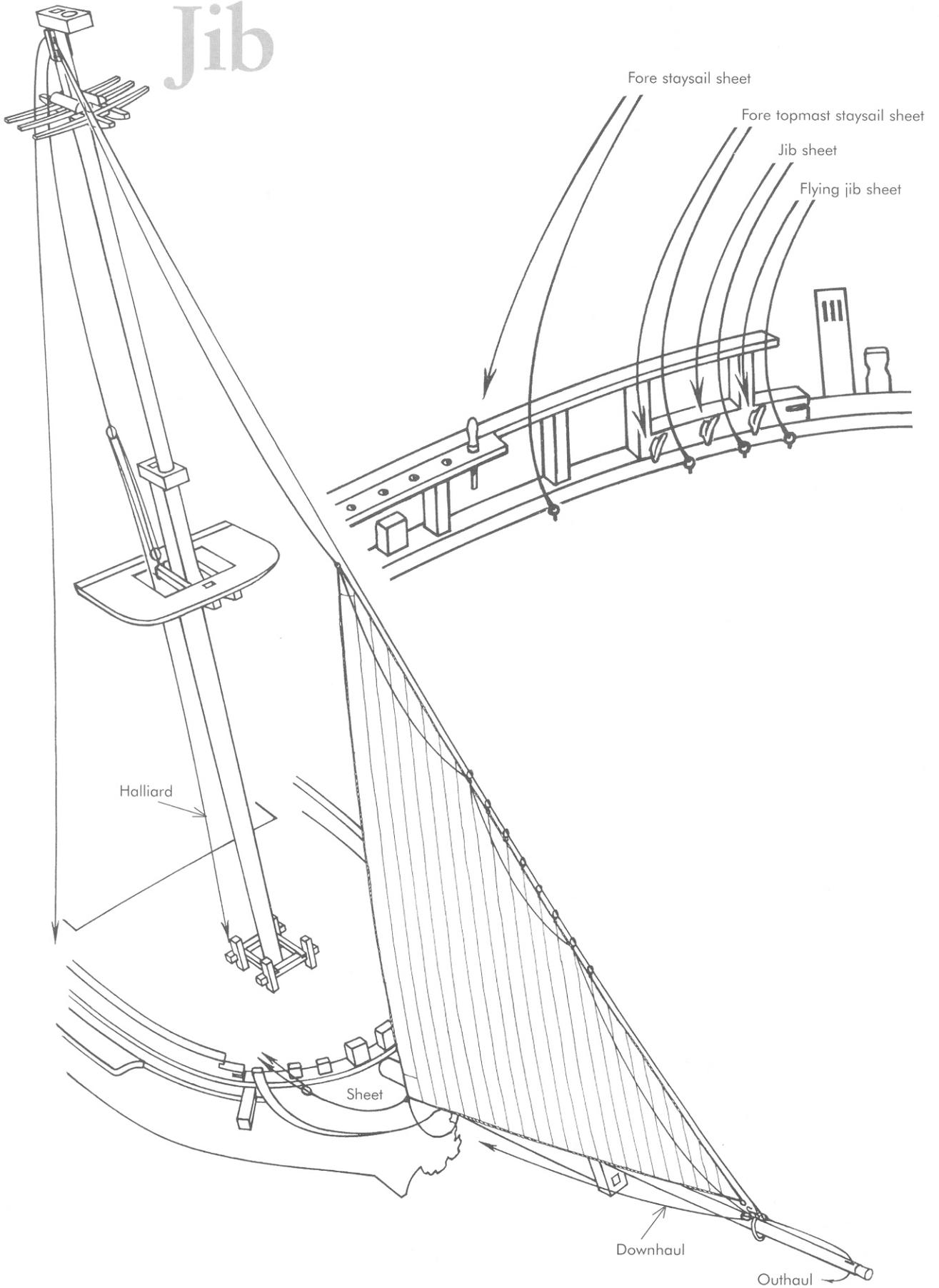
Halliard

Sheet

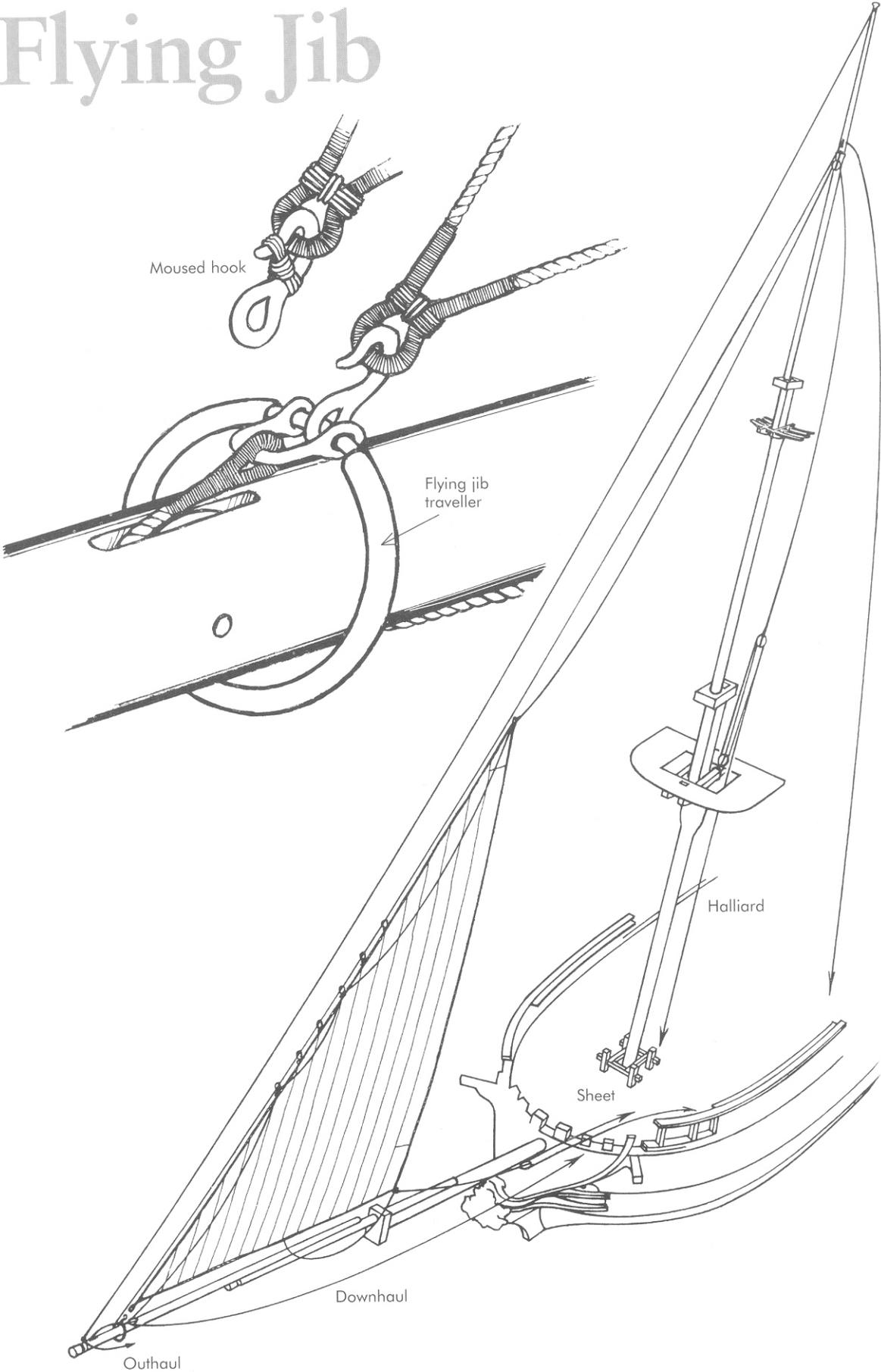
Main Topgallant Staysail



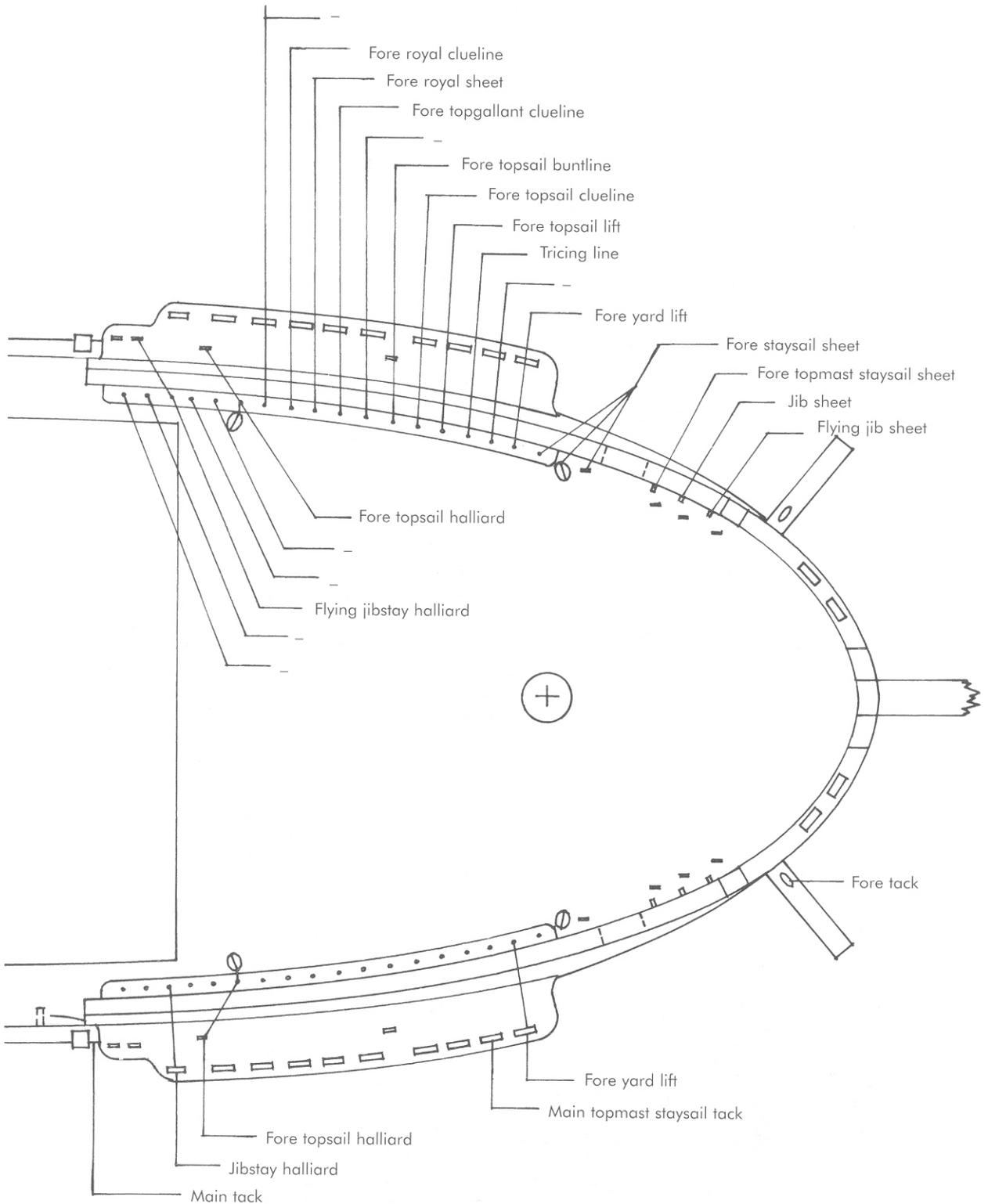
Jib



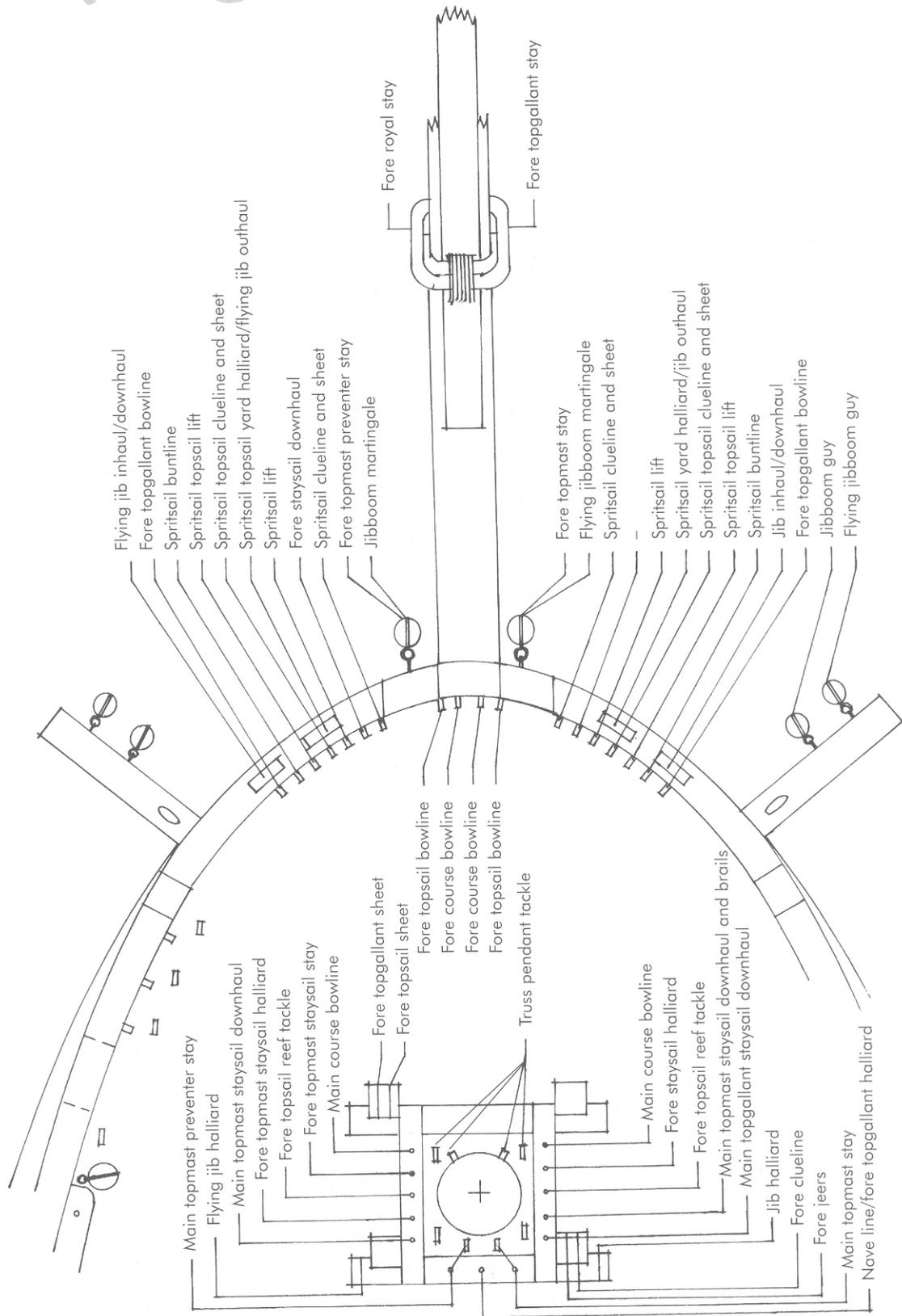
Flying Jib



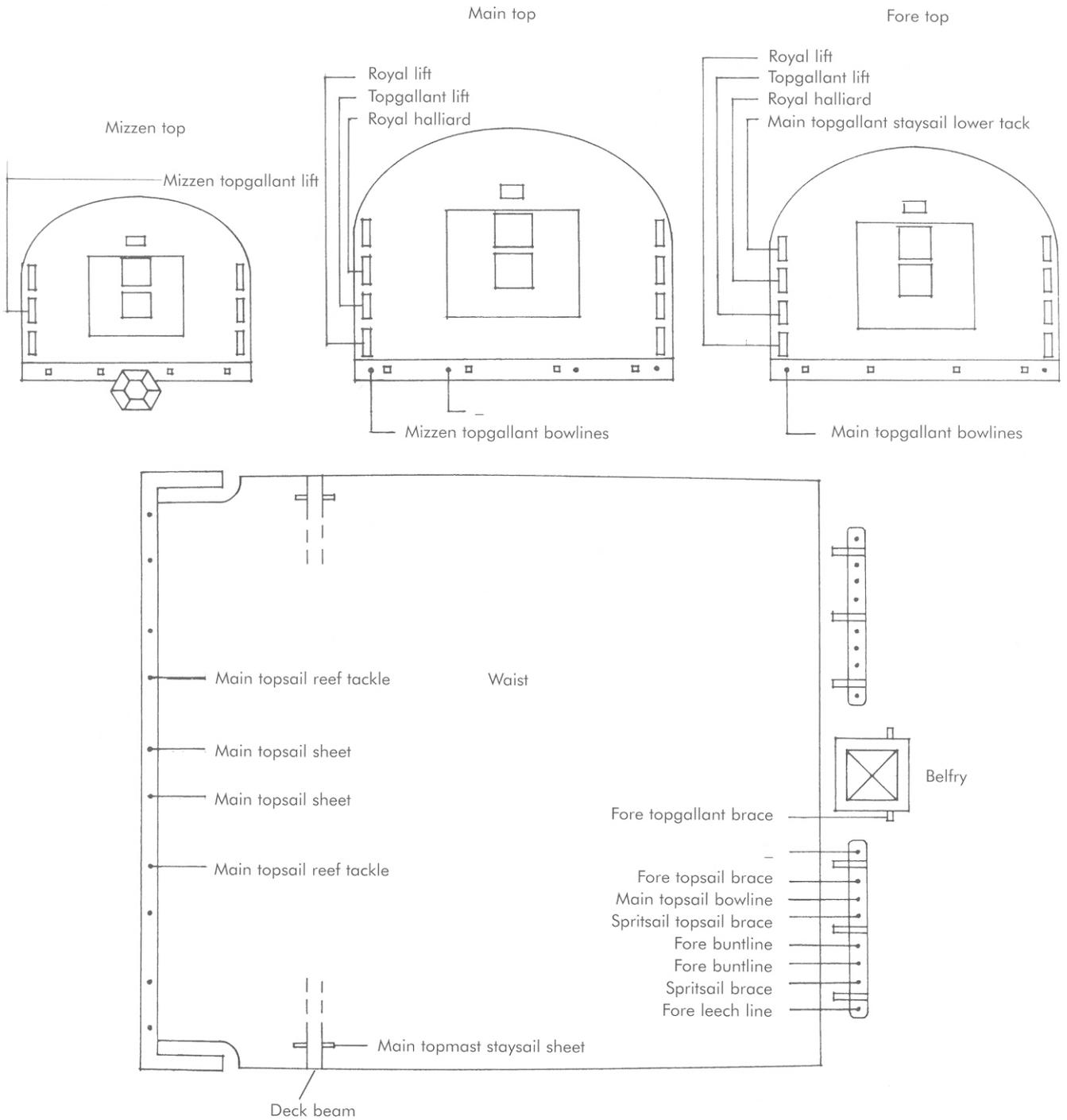
Belaying Plan A



Belaying Plan B

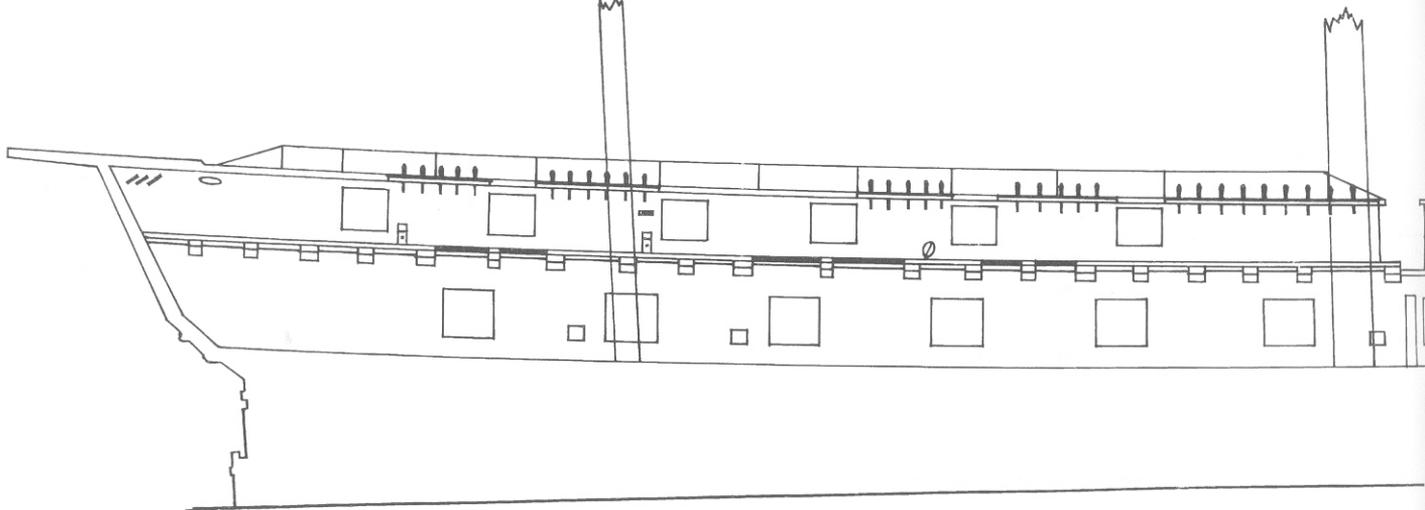
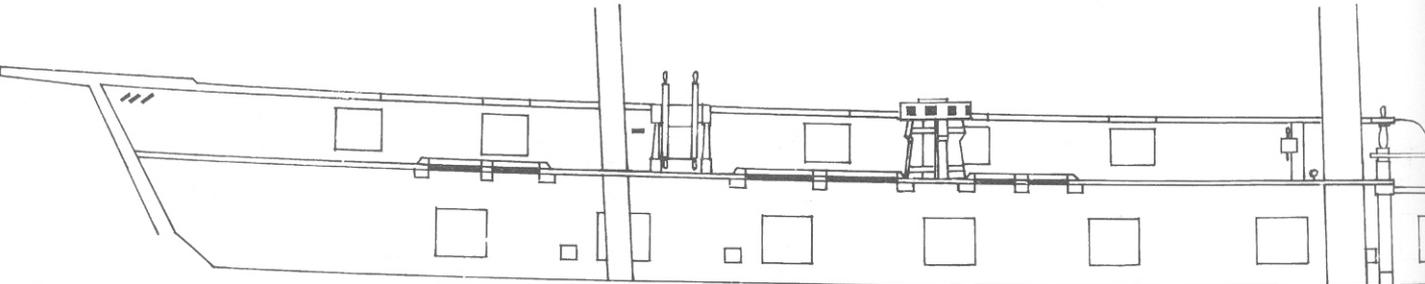
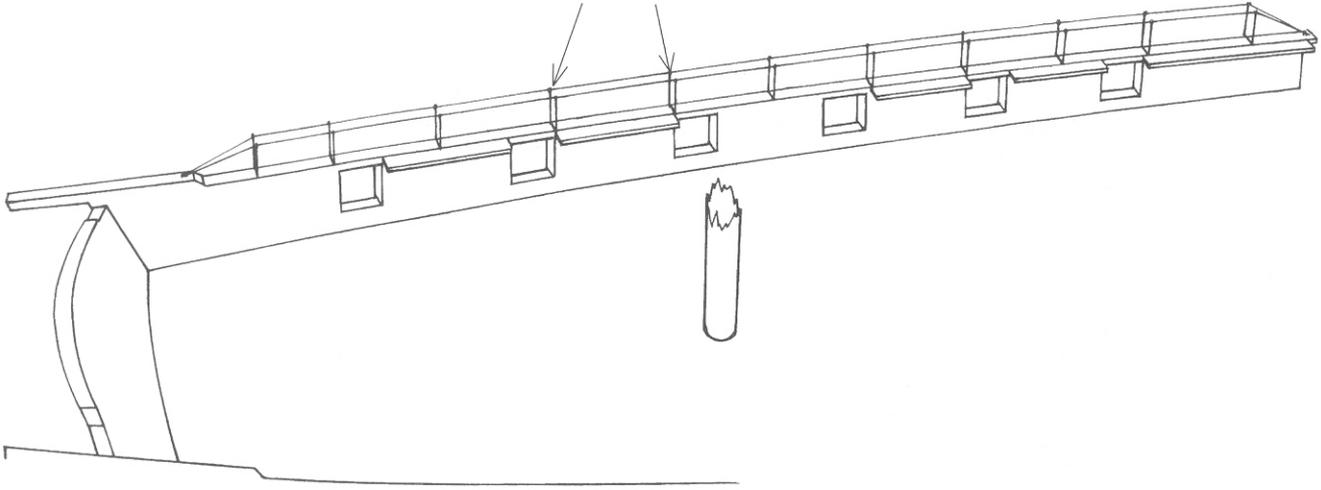


Belaying Plan C

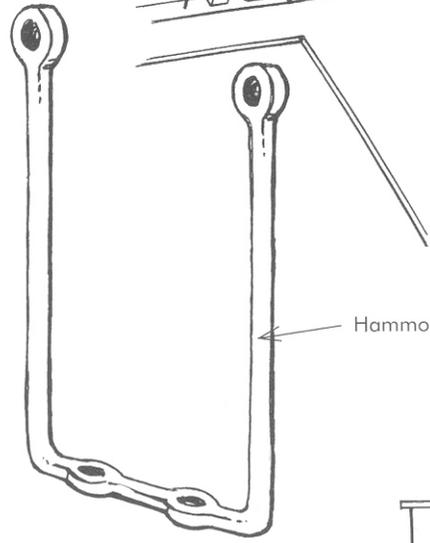
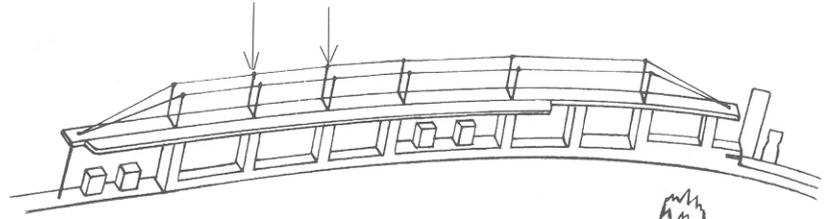


Cross-section

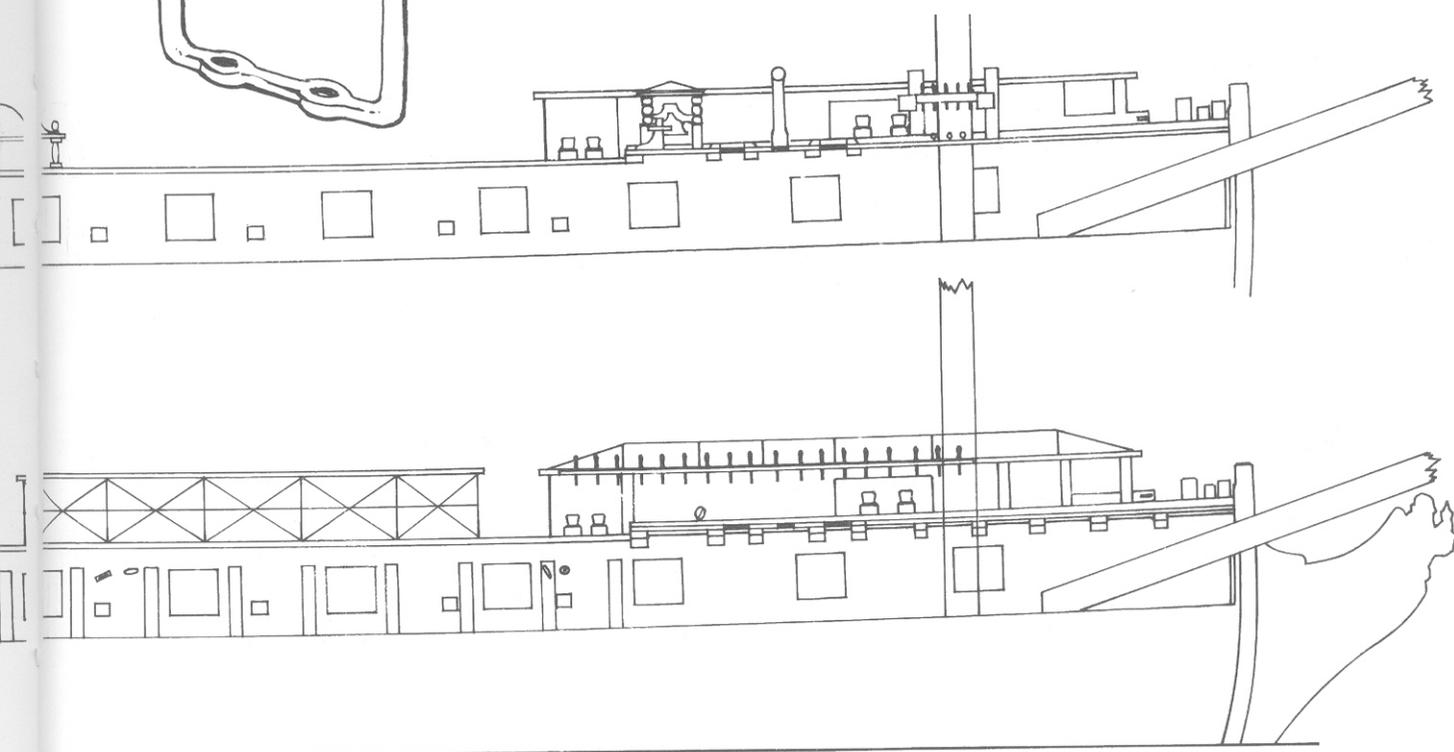
Hammock cranes



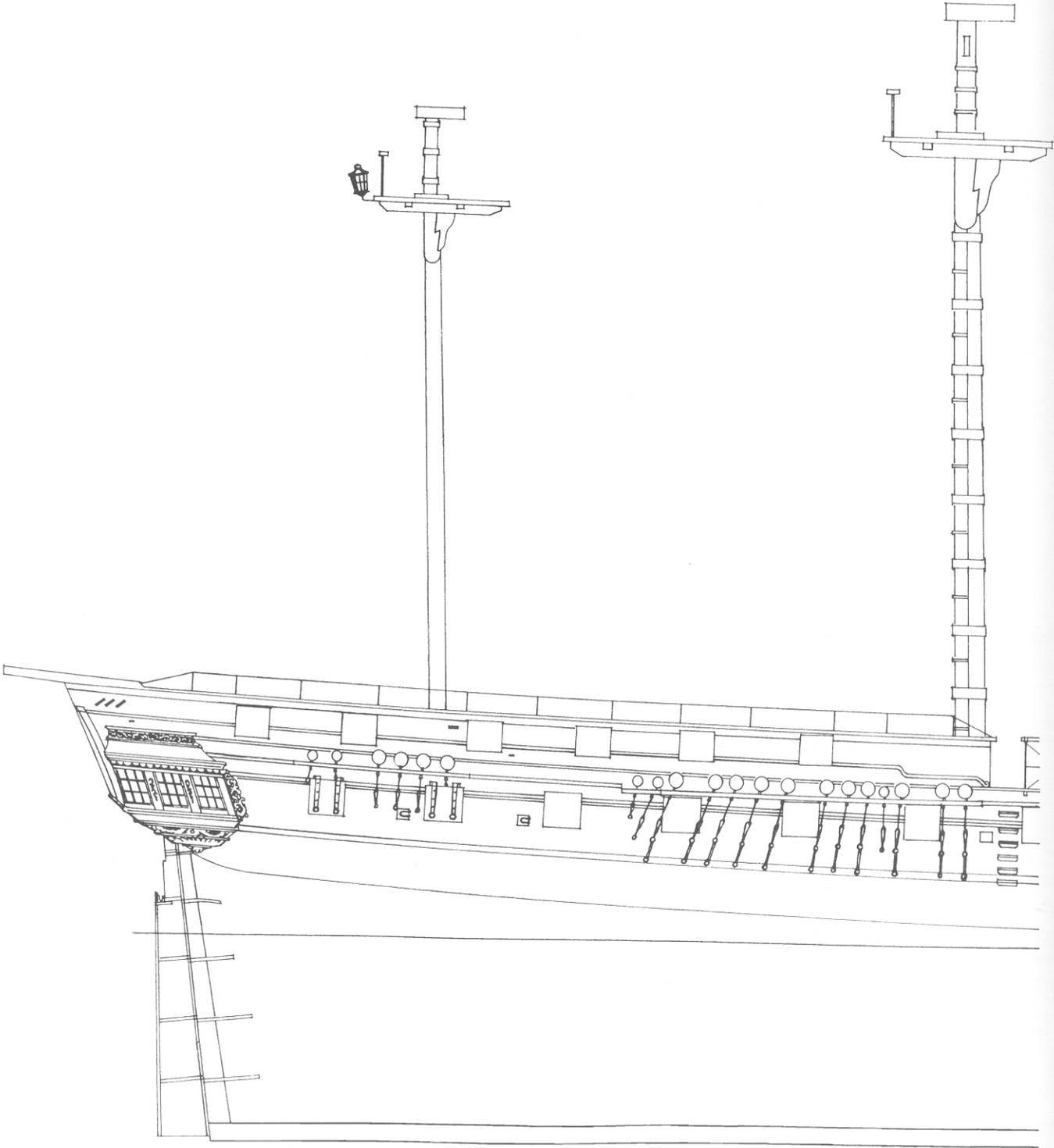
Hammock cranes

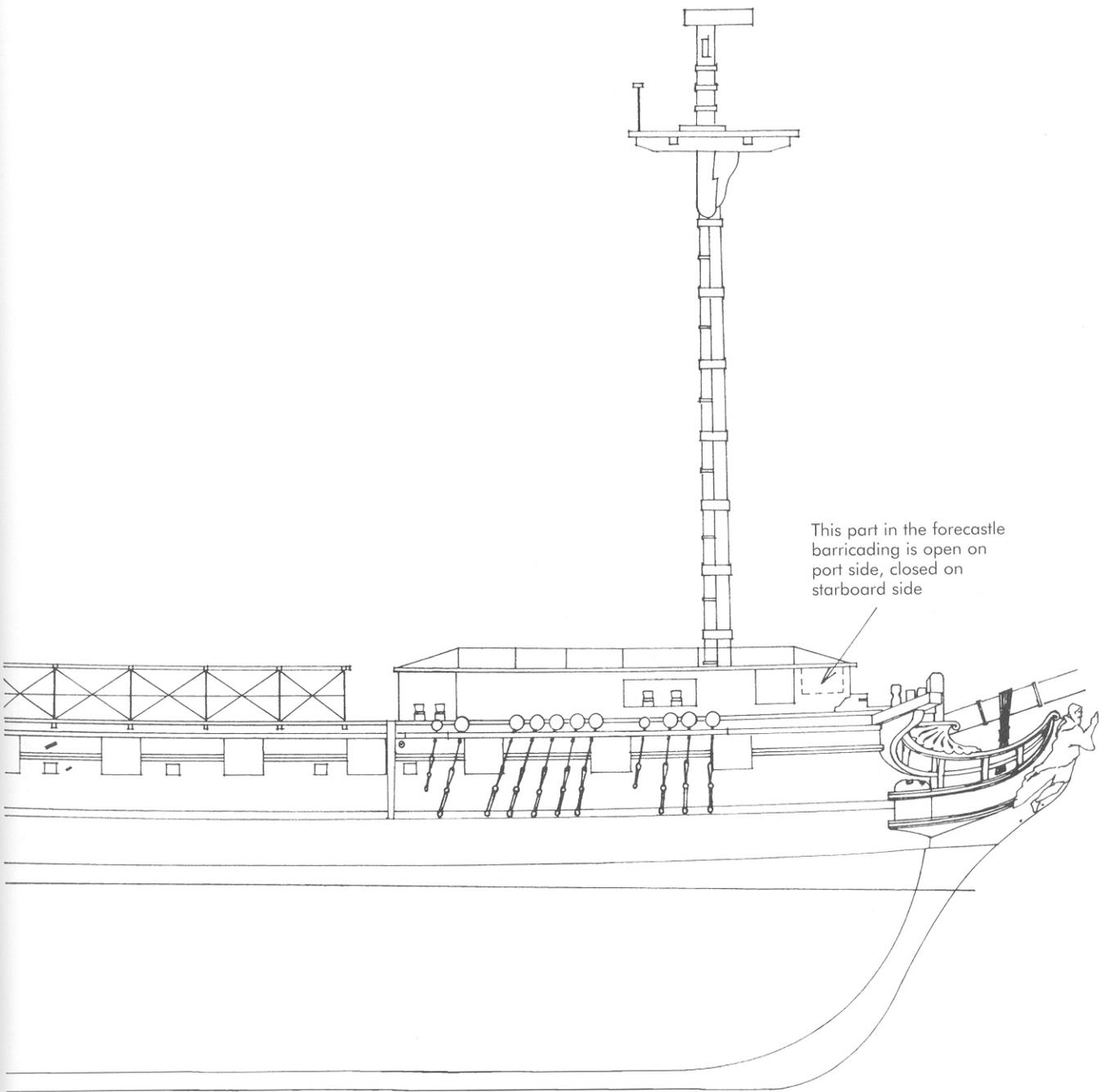


Hammock crane



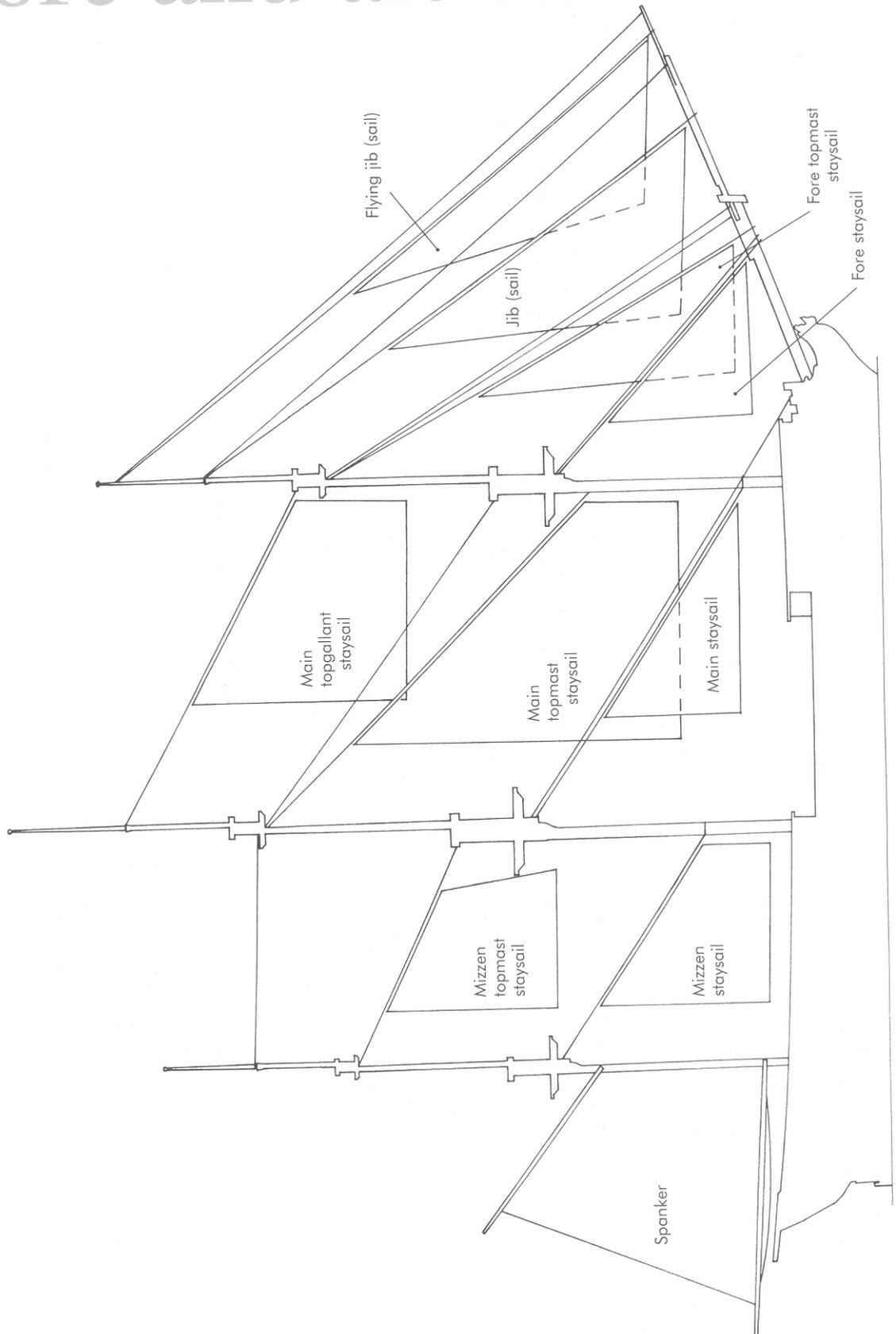
External Hull



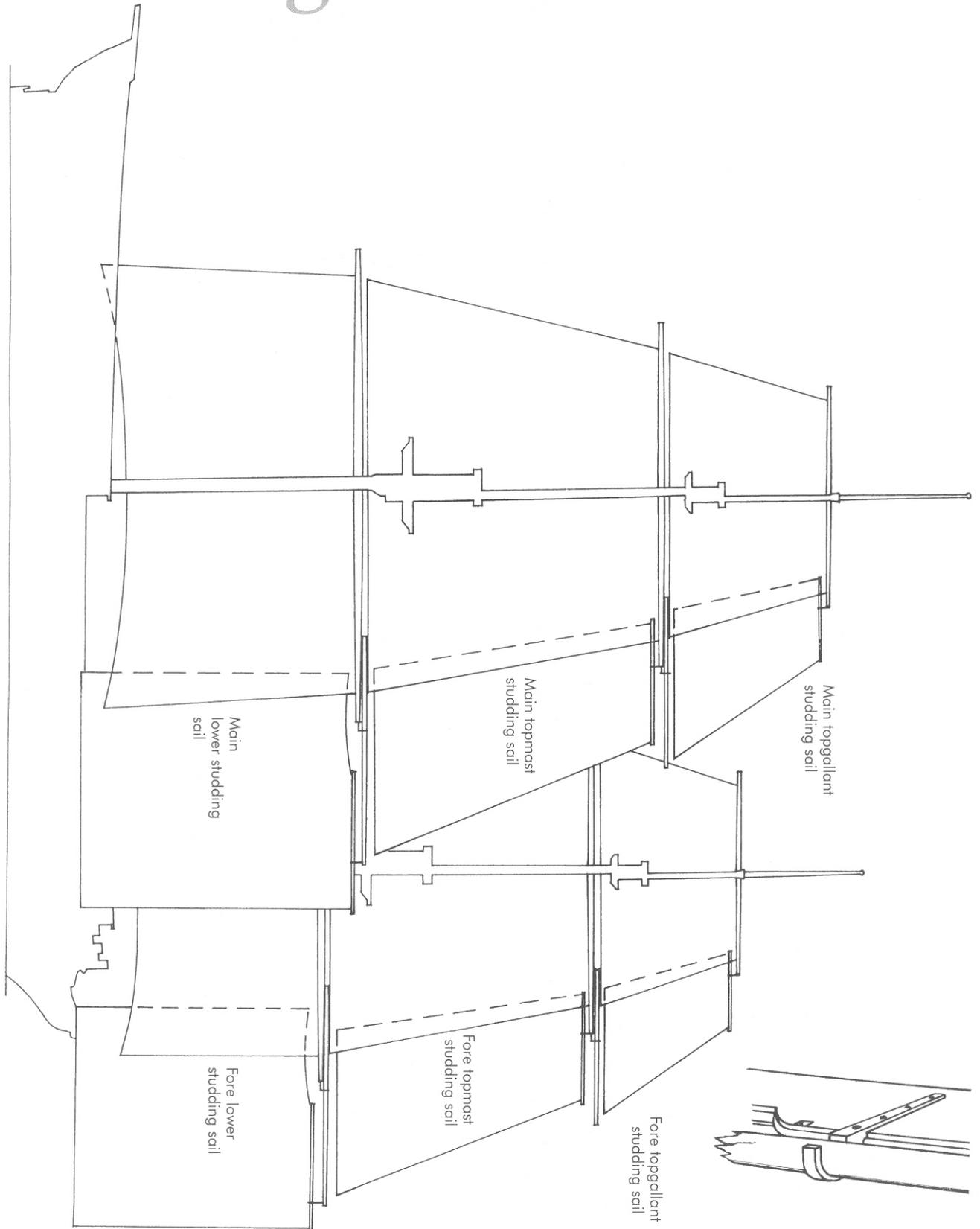


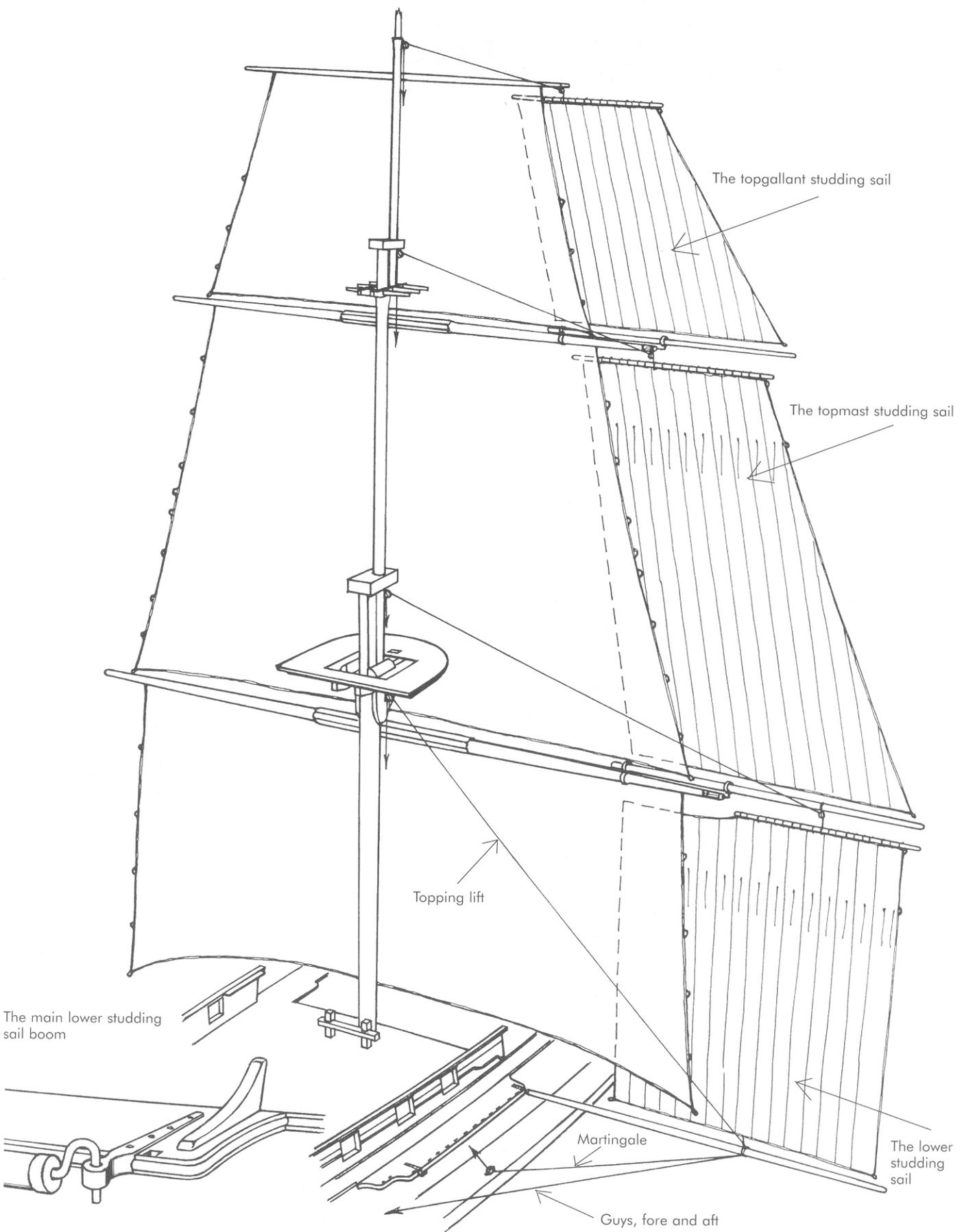
This part in the forecabin
barricading is open on
port side, closed on
starboard side

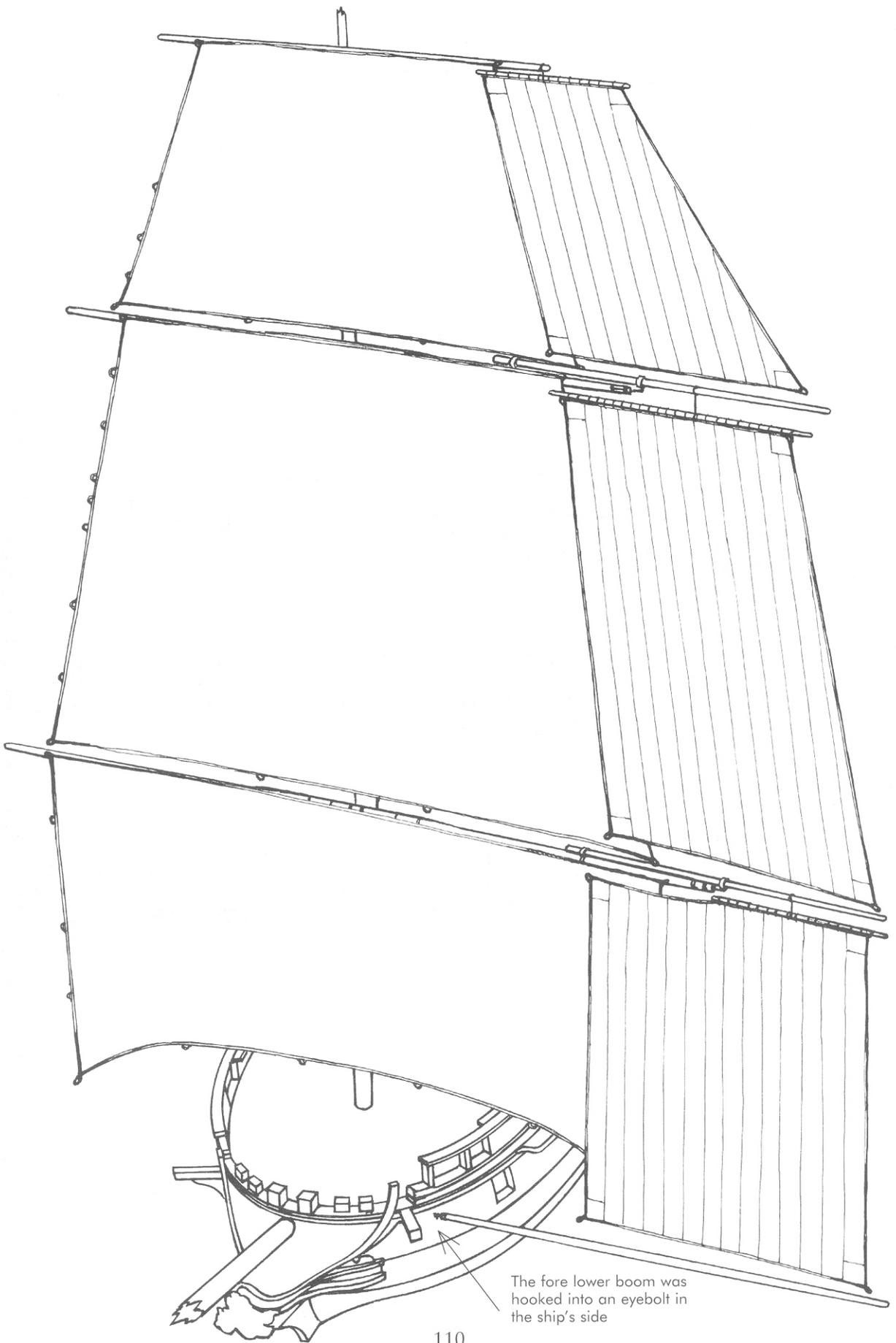
Fore and aft Sails



Studding Sails

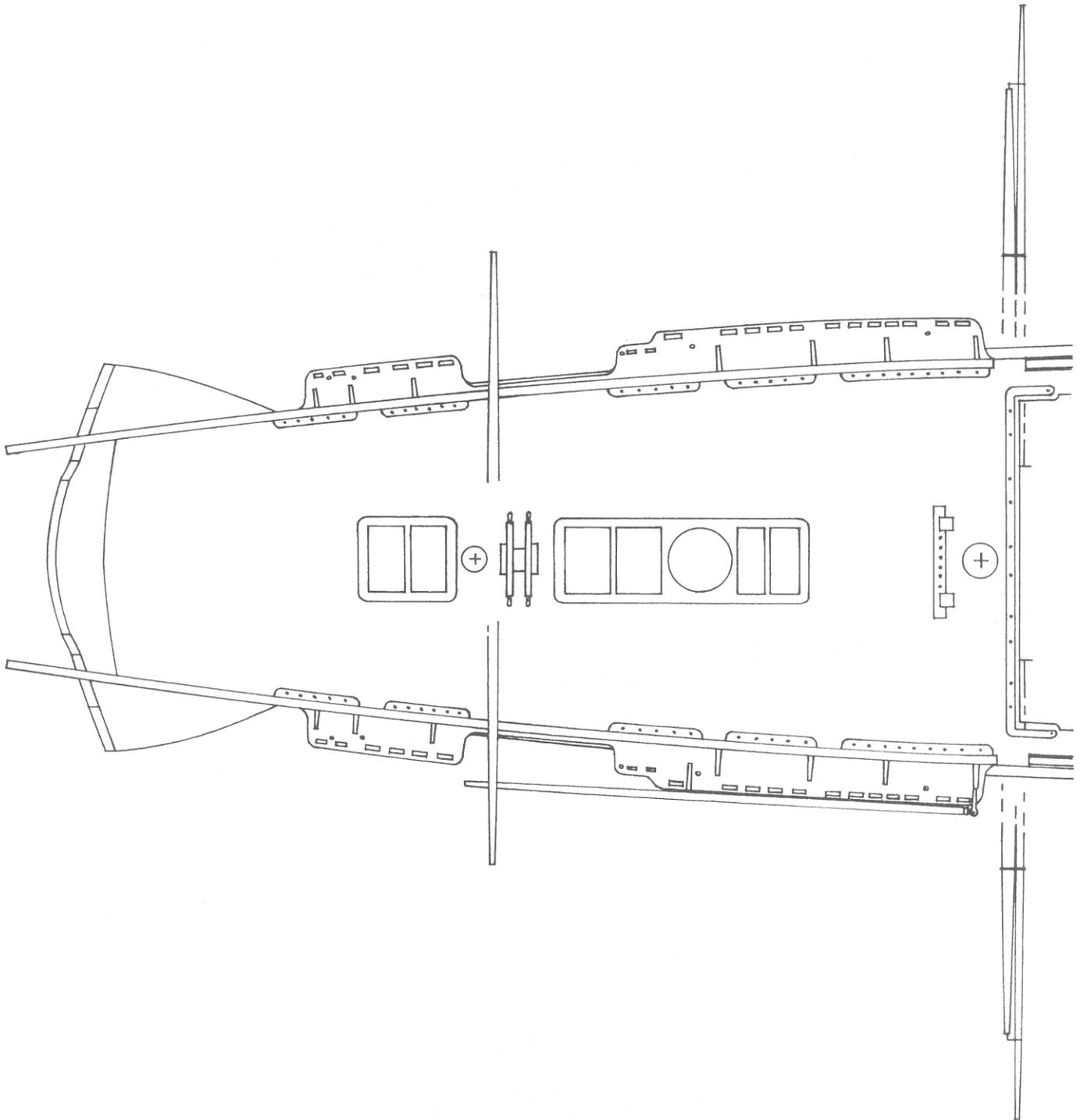




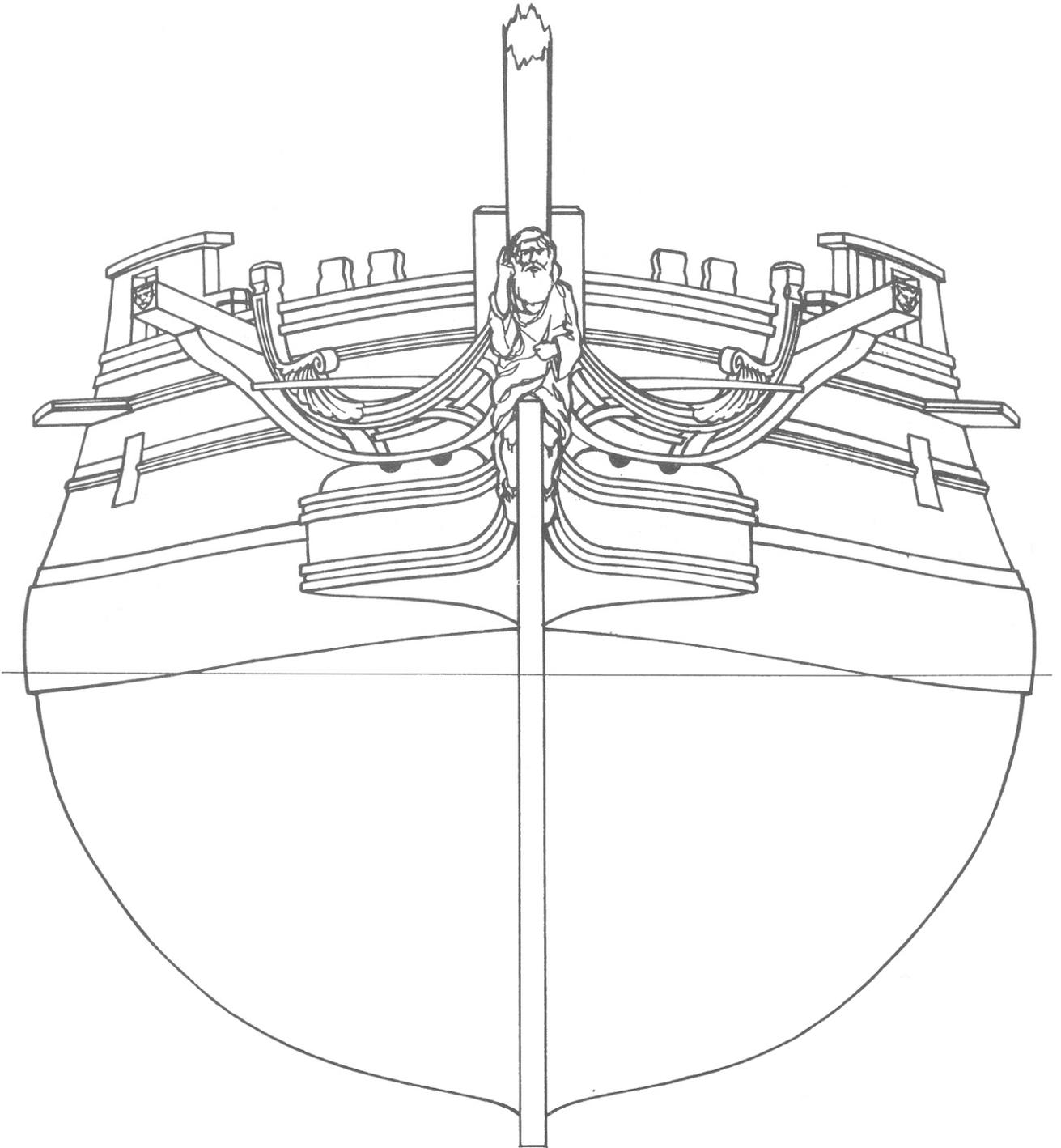


The fore lower boom was hooked into an eyebolt in the ship's side

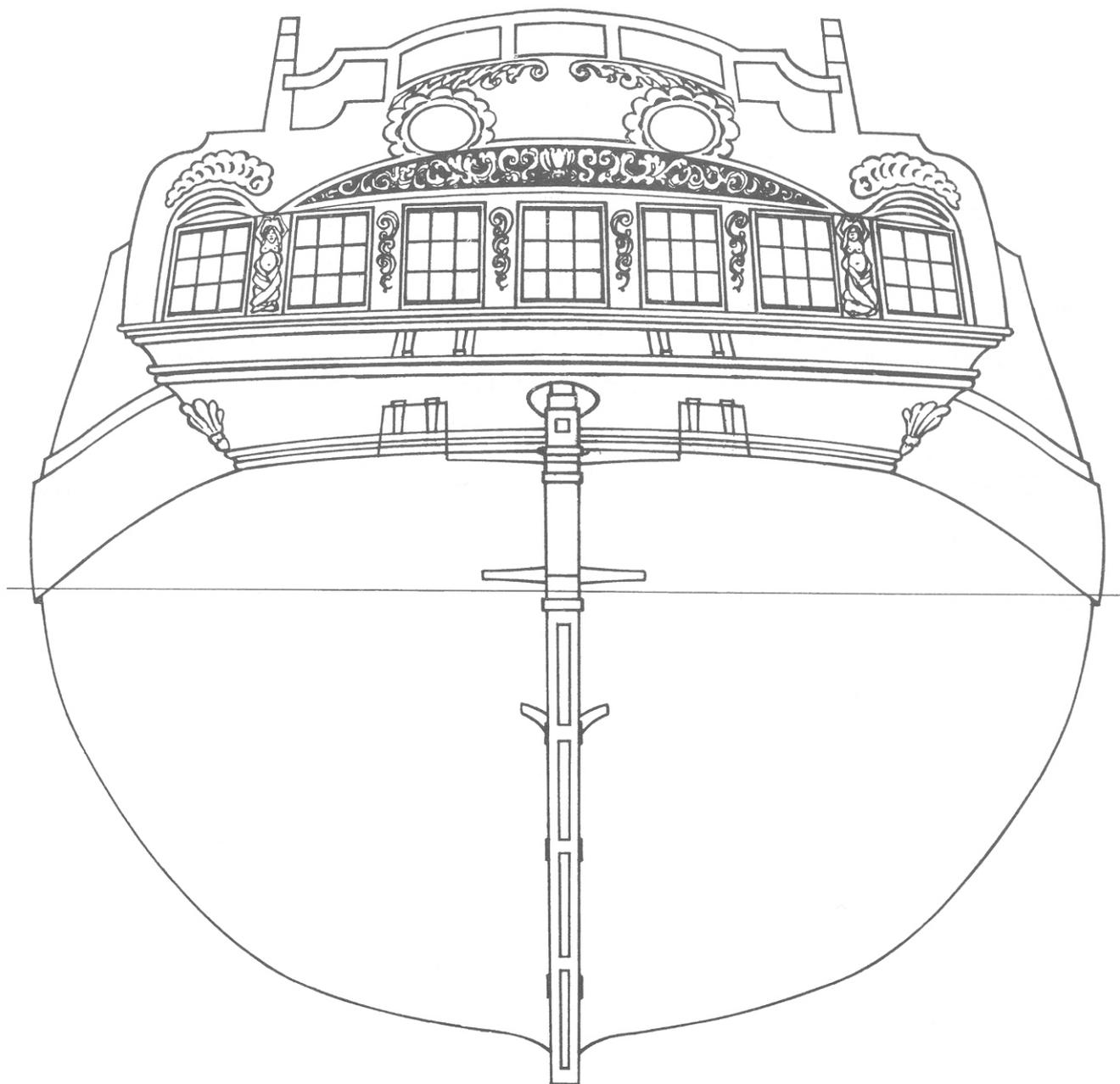
Quarter Deck



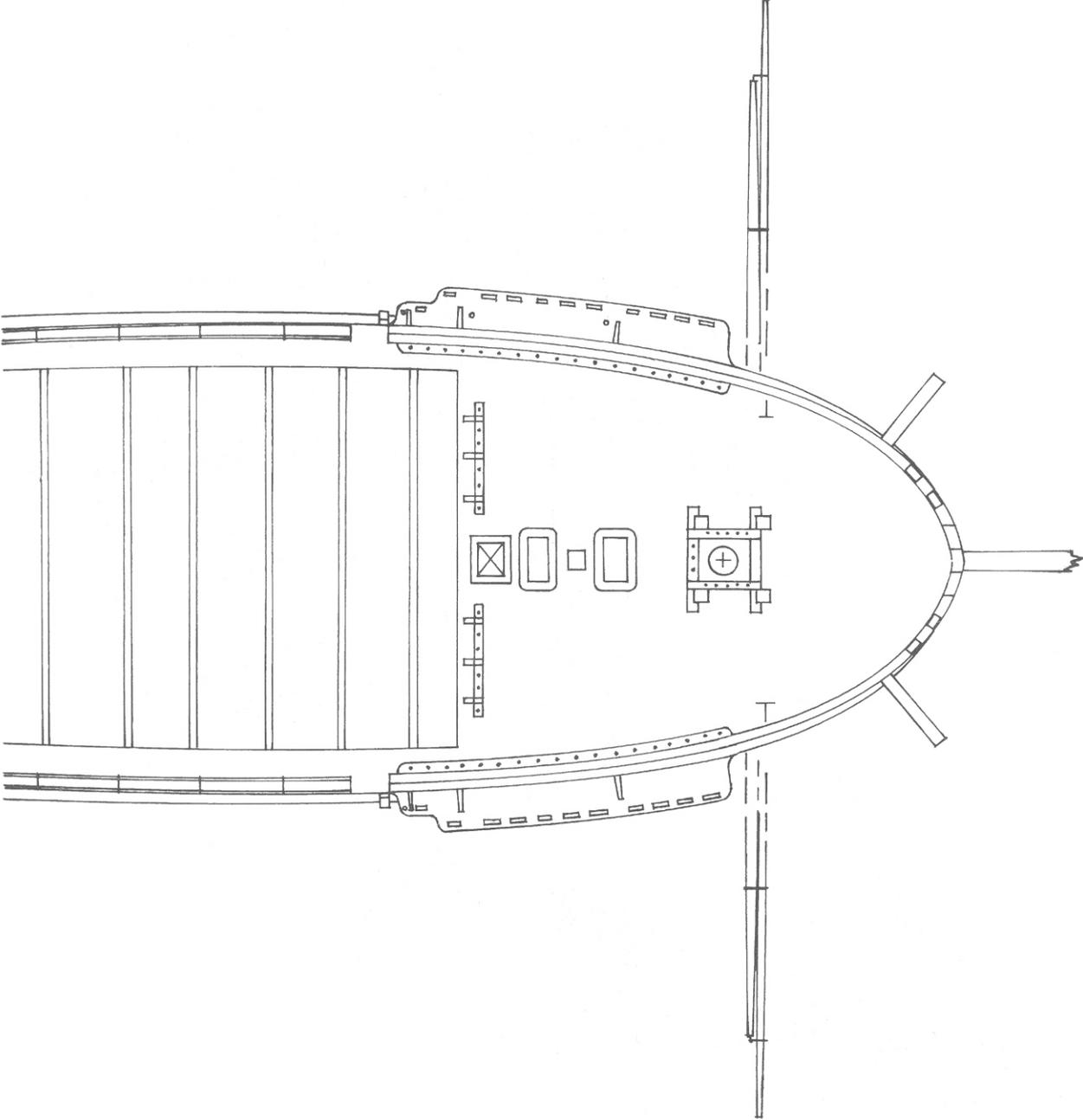
The Bow

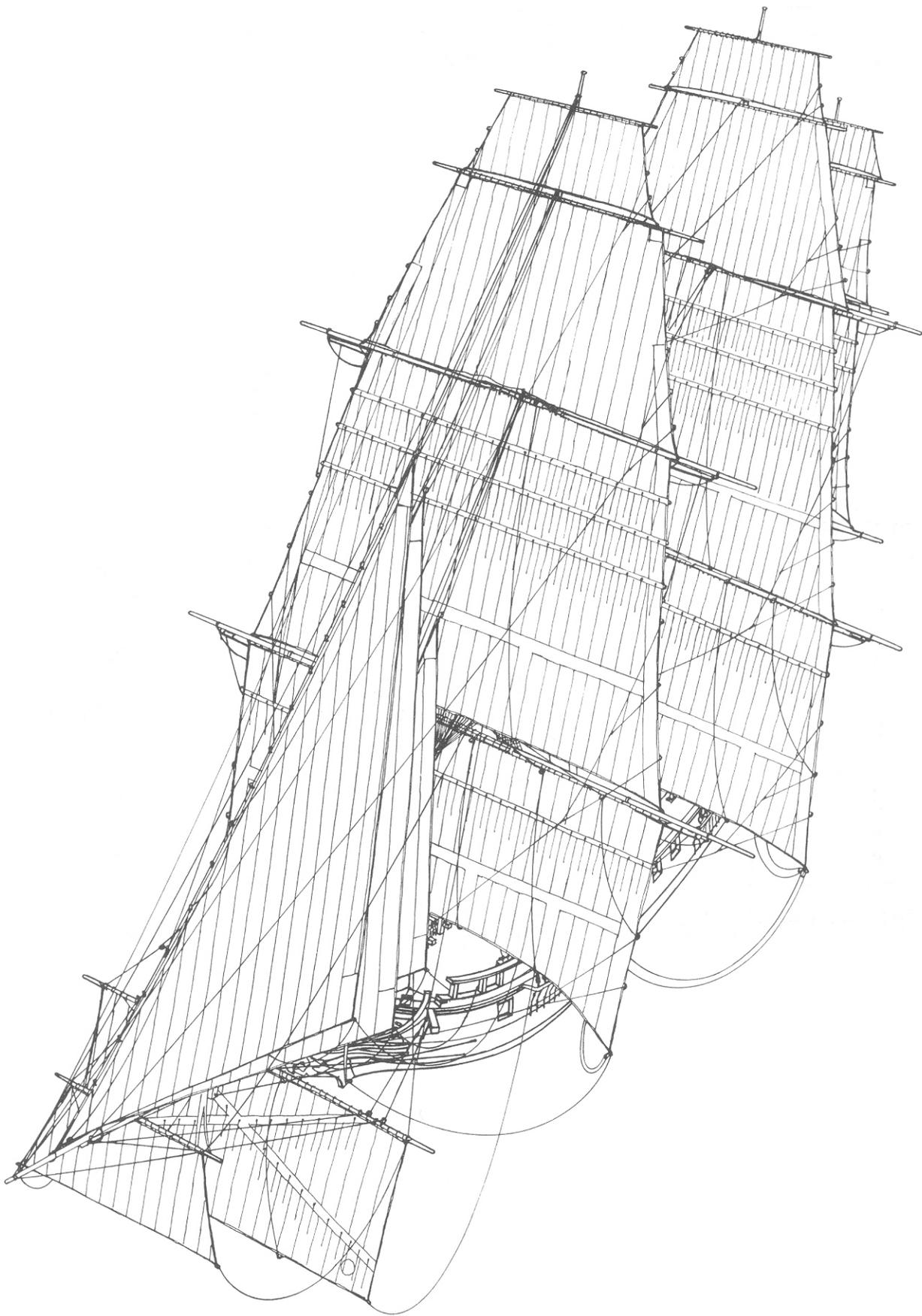


The Stern



Waist & Forecastle





Index

	Page		Page
Backstays	8, 9, 10, 11	Cluelines, main topsail	54
Belaying points	98, 99, 100, 101	Cluelines, mizzen topgallant	57
Belfry	45	Cluelines, mizzen topsail	56
Blocks	37, 39, 43, 44, 48, 82, 83	Cluelines, spritsail	65
Bobstay	20	Cluelines, spritsail topsail	64
Boom, spanker	25	Cranes, forecastle	103
Boom, irons	86	Cranes, quarter deck	102
Boom, lower studding sail	108, 109, 110, 111	Cranes, waist	44, 103
Boom, topgallant studding sail	43, 108, 109, 110	Crossjack yard	22, 23, 24, 85
Boom, topmast studding sail	43, 108, 109, 110	Cross trees, fore mast	7, 10, 11
Bowline bridles	76	Cross trees, fore topmast	11, 19, 78
Bowlines, fore course	75	Cross trees, main mast	13
Bowlines, fore topgallant	76	Cross trees, main topmast	16, 17, 79
Bowlines, fore topsail	75	Cross trees, mizzen mast	4, 8
Bowlines, main course	77	Cross trees, mizzen topmast	28, 30
Bowlines, main topgallant	78	Deadeyes	2
Bowlines, main topsail	77	Deck, forecastle	103, 114
Bowlines, mizzen topgallant	79	Deck, quarter	102, 111
Bowlines, mizzen topsail	79	Dolphin striker	20, 21
Bowsprit, bees	20	Downhaul, flying jib	97
Bowsprit, cap	20	Downhaul, fore staysail	87
Bowsprit, shrouds	20	Downhaul, fore topmast staysail	91
Braces, crossjack	32	Downhaul, jib	96
Braces, fore royal	46	Downhaul, main staysail	88
Braces, fore topgallant	45	Downhaul, main topmast staysail	93
Braces, fore topsail	44	Downhaul, main topgallant staysail	95
Braces, fore yard	44	Downhaul, mizzen staysail	89
Braces, main royal	46	Downhaul, mizzen topmast staysail	94
Braces, main topgallant	45	End seizing	2
Braces, main topsail	43	Eye bolts	17, 36
Braces, mizzen topgallant	33	Eye seizing	2
Braces, mizzen topsail	33	Eye splice	18, 85
Braces, spritsail topsail	47	Figurehead	112
Braces, spritsail yard	47	Fittings of main yard	85, 86
Brails, spanker	81	Flemish horses	85
Bumpkin shrouds	48, 61	Flying jibboom	21, 47, 63
Buntlines, fore course	70	Flying jibboom, guys	58
Buntlines, fore topsail	71	Flying jibboom, horses	60
Buntlines, main course	72	Flying jibboom, purchase	59
Buntlines, main topsail	73	Flying jibboom, stay	19
Buntlines, mizzen topsail	74	Flying jibboom, traveller	97
Buntlines, spritsail	69	Forecastle deck	103, 114
Burton pendants	5, 6, 11, 13	Fore course rigging	48, 70, 75, 83
Catharpins	7	Fore lower mast	5, 7, 15
Channels, fore	2	Foremast crosstrees	7, 11, 18, 19
Channels, main	3	Foremast trestletrees	7, 11, 18, 19
Channels, mizzen	4	Foremast preventer stay	15
Cleat, shroud	31, 42, 94	Fore royal mast	19
Cluelines, fore topgallant	50	Fore royal stay	19
Cluelines, fore topsail	49	Fore stay	15
Cluelines, main topgallant	55	Fore topgallant mast	17, 19
		Fore topgallant stay	19

	Page		Page
Fore topgallant yard	50, 85	Jib traveller	21
Fore topmast	7, 11	Lanyards, lower deadeye	2
Fore topmast crosstrees	11, 18, 19	Lantern, stern	28, 104
Fore topmast preventer stay	18, 20	Lashing	3, 11, 15, 23
Fore topmast stay	18, 20	Leech lines, fore course	70
Fore topmast trestletrees	11, 18, 19	Leech lines, main course	72
Fore topsail yard	85	Lifts, crossjack yard	24
Fore yard	35, 36, 38, 44, 48, 49, 85	Lifts, fore topgallant yard	42
Futtock shrouds	7	Lifts, fore topsail yard	42
Futtock staves	7	Lifts, fore yard	38
Gaff, spanker	26, 27, 28, 29, 33	Lifts, main yard	37
Grommet, mast	31	Lifts, main topgallant yard	42
Guys, jibboom	58	(same as fore topgallant yard)	
Guy pendants, spanker boom	25	Lifts, main topsail yard	42
Guys, studding sails	109	(same as fore topsail yard)	
Halliard, flying jib	97	Lifts, mizzen topgallant yard	31
Halliard, jib	96	Lifts, mizzen topsail yard	31
Halliard, spritsail yard	59	Lifts, royal yard	42
Halliard, sprit topsail yard	59	Lifts, spritsail topsail yard	65
Halliard, staysail fore	87	Lifts, spritsail yard	64
Halliard, staysail fore topmast	91	Lower studding sails	108, 109, 110
Halliard, staysail main	88	Main brace	43
Halliard, staysail main topmast	93	Main jeers	35
Halliard, staysail main topgallant	95	Main mast	12, 13, 14
Halliard, staysail mizzen	89	Main preventer stay	14
Halliard, staysail mizzen topmast	94	Main royal mast	9, 12
Hammock cranes	44, 102, 103	Main royal stay	12, 17
Hawse holes	112	Main sheet	51
Hearts	14, 15	Main stay	12, 14
Horse, boom	26	Main top	34, 35, 43, 44, 52, 100
Horse, crossjack	85	Main topgallant mast	12, 17
Horse, flemish	85	Main topgallant stay	12, 17
Horse, flying jibboom	60	Main topgallant yard	45, 55, 82, 85,
Horse, fore topgallant	85	Main topmast preventer stay	12, 17
Horse, fore topsail	85	Main topsail yard	39, 43, 52, 53, 54, 67, 85
Horse, fore yard	85	Main yard	43, 51, 52, 84, 85,
Horse, main topgallant	85	Martingales	21, 109
Horse, main topsail	85	Middle seizing	2
Horse, main yard	85	Mizzen mast	4, 6, 8
Horse, mizzen topgallant	85	Mizzen mast, crosstrees	4, 13
Horse, mizzen topsail	85	Mizzen mast, top	23, 24, 26, 27, 43
Horse, spritsail topsail	85	Mizzen mast, trestle trees	4, 13
Horse, spritsail yard	85	Mizzen royal mast	8, 12
Inner martingale	21	Mizzen topgallant mast	8, 12
Inner tricing line, fore	98	Mizzen topgallant stay	12, 16
Jaws, spanker boom	81	Mizzen topgallant yard	85
Jaws, spanker gaff	29	Mizzen topmast crosstrees	30
Jeer blocks, fore yard	35	Mizzen topmast stay	12, 16
Jeer blocks, main yard	35	Mizzen topmast trestle trees	30
Jibboom guys	58	Mizzen topmast yard	30, 37, 56, 85
Jibstay	19, 21	Nave line, fore	36

	Page		Page
Nave line, main	36	Spritsail, yard	85
Open hearts	15	Spritsail topsail, braces	47
Outer martingale	21	Spritsail topsail, cluelines	64
Outer tricing line	84	Spritsail topsail, halliard	59
Outhauler, flying jib	63, 97	Spritsail topsail, lifts	65
Outhauler, jib	62, 96	Spritsail topsail, yard	65, 85
Parcelling	15	Staves, futtock	7
Parral	40	Stay, jib	12, 19, 21
Peak, spanker gaff	27, 28	Stays, overall view	12
Peak halliard	28	Staysails	107
Pendants, burton	5, 6, 11, 13	Stern	113
Quarter deck	102, 111	Stirrups	85, 86
Ratlines	3	Studding sail boom irons	86
Reef tackle purchase, fore topsail	66	Studding sail booms	108, 109, 110, 111, 114
Reef tackle purchase, main topsail	67	Studding sail yards	108, 109, 110
Reef tackle purchase, mizzen topsail	68	Tack, fore course	48
Ringbolts	17, 36	Tack, main course	51
Royal backstays	8, 9, 10	Throat halliard, spanker gaff	29
Royal stay, fore	12, 19, 60	Topgallant mast, mizzen	8, 16
Royal stay, main	12, 17	Topgallant mast, shrouds	11
Saddle, bowsprit	20, 59, 61	Topgallant mast, stays	12, 16, 17, 19
Serving	15	Topmast, backstays	8, 9, 11
Sheet blocks, spanker	25	Topmast, shrouds	7, 11
Sheets, fore course	48	Topmast, stays	12, 16, 17, 18, 20
Sheets, fore topgallant	50	Topping lift, spanker boom	26
Sheets, fore topsail	49	Topsail sheet, fore	49
Sheets, fore royal	50	Topsail sheet, main	52
Sheets, main course	51	Topsail sheet, mizzen	56
Sheets, main topgallant	55	Traveller, flying jib	97
Sheets, main topsail	52	Traveller, jib	21
Sheets, main royal	55	Tricing line	84
Sheets, mizzen topgallant	57	Trestle trees, fore topmast	19, 78
Sheets, mizzen topsail	56	Truss pendants, crossjack	22
Sheets, mizzen royal	57	Truss pendants, fore yard	36
Sheets, spritsail	65	Tye, fore topgallant	41
Sheets, spritsail topsail	64	Tye, fore topsail	40
Shroud cleats	31, 42, 94	Tye, fore royal	41
Shrouds, bowsprit	20	Tye, main topgallant	41
Shrouds, bumpkin	61	Tye, main topsail	39
Shrouds, futtock	7	Tye, main royal	41
Shrouds, lower	2, 3, 4, 5, 6, 7, 10	Tye, mizzen topgallant	30
Shrouds, topgallant	11	Tye, mizzen topsail	30
Shrouds, topmast	7, 11	Tye, mizzen royal	30
Slings	20, 23, 34, 59	Vangs	27
Spars	85, 86	Waist	103, 114
Spritsail, braces	47	Windows, quarter gallery	6
Spritsail, buntlines	69	Windows, stern	113
Spritsail, cluelines	65	Worming	15
Spritsail, halliard	59	Yards	85, 86
Spritsail, sheets	65		

