

the CUTTY SARK

Revell

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In the 1860's the China Clippers, a delight to the eye with their sleek hulls, many sails, and long sharp bows, sped from Shanghai to London — filled to capacity with perishable cargoes of tea. Cash prizes were offered by London merchants for the first crop of the season. Public excitement ran high and rivalry between these tea clippers was keen. The great annual tea race was the World Series of its day.

No man was more determined to win this race than colorful "Old White Hat" John Willis, a Scottish shipowner and former sailing ship master. He set out to build the most perfect clipper the world had ever seen; and he built it to beat *Thermopylae*, the undefeated champion of the China sea trade.

This masterpiece was *Cutty Sark*. Her lithe and slender hull might have belonged to a yacht rather than a cargo vessel. She was 212' in length, 36' in beam, with a draft of 21'. Her sails covered three-fourths of an acre (32,000 square feet), and her maximum speed was more than 17 knots, the power equal to a 3,000 hp engine.

Only the best materials were to go into her. Most of her woodwork was of long-wearing teak, while her keel was of American rock elm. Her frames were of iron, and her planking was of wood, copper-sheathed below the waterline. The upper masts and yards were Oregon pine, but her lower masts and yards were iron. Most of her standing rigging was of wire. Her shrouds were carried inside the bulwarks, an unusual feature for this period.

For the *Cutty Sark* figurehead, "Old White Hat" selected Nannie the witch, arm outstretched, pursuing Tam O'Shanter, characters in a poem by Robert Burns. Hapless Tom had stumbled on the witch's revels late one night as he was galloping home from the local tavern. It was the practice among the crew to place remnants of a mare's tail in the witch's hand whenever *Cutty Sark* neared port. *Cutty Sark* is actually the Scottish name used by Burns to describe the shirt worn by the witch. *Cutty Sark* first felt the waters of the River Clyde on her keel late in November, 1869. Her maiden voyage, from London to Shanghai, was made in February, 1870.

"I never sailed a finer ship," said her first Captain, George Moodie. "She was the fastest ship of her day, a grand ship, and a ship that will last forever." This was not idle boasting, for the *Cutty Sark* and her great rival *Thermopylae* are credited with being the fastest ships that ever moved through water under power of sail alone.

And in 1872, the first showdown race with *Thermopylae* took place. This was to be the only time in their China racing days that they met on equal terms: sailing at the same time and under the same conditions.

Both ships were loaded at Shanghai. When they entered the Indian Ocean, *Thermopylae* was leading by 1½ miles; but within twenty-six days *Cutty Sark* pushed 400 miles ahead of her rival.

And then a heavy gale came up. Only *Cutty Sark's* iron frames kept her together as she rolled and heaved against the smashing sea. Suddenly there was a loud crack as her rudder ripped away. The winds spun the clipper wildly off course.

The struggle to make a new rudder from spare wood and to forge the ironwork, while battling the heavy seas that swept the deck, was a brilliant feat of seamanship. The entire fire for forging spilled over the mate who was blowing the bellows. The blacksmith, while holding a red-hot bar, was knocked from his feet. The bar just missed the face of a nearby sail-maker. Within six days the new rudder was in place.

Much credit for this extraordinary performance goes to the ship's carpenter, Henry

Henderson. He had been part of *Cutty Sark* from her beginnings, even selecting the timber that went into her construction. It was Henderson who made the new rudder, and his materials were spare wood and iron stanchions.

Cutty Sark, with her improvised rudder, finally made port — one week behind *Thermopylae*.

But the era of China Clippers was coming to a close. Steamers began carrying cargoes of tea from the East through the new shortcut, the Suez Canal, easily beating the clippers. For sailing ships, which needed the Trade Winds on the longer route around the Cape of Good Hope, the China trade was no longer profitable. *Cutty Sark* had to seek other cargoes, such as wool and coal.

This marked a turning point in *Cutty Sark's* history and began an unhappy phase. There had been a succession of Captains after Moodie, who was a competent and conscientious seaman but never a real "driver."

In 1879 a new Captain took over. He was an excellent seaman and, above all, had "drive." But a shipboard episode that came close to mutiny so preyed on his mind that he committed suicide.

Another Captain was a curious mixture of cruelty, drunkenness, and piety, and so unconcerned with the ship that *Cutty Sark* was pretty much on its own. Under his captaincy, the once proud ship became a wanderer on the high seas, begging what she could from passing ships.

In 1885 *Cutty Sark* met the man she had been waiting for — Captain R. Woodget. He was her last Captain, and under him, driven as never before, she became world famous as an Australian wool clipper.

Captain Woodget was a sea character who stood out among all sea characters. His tam o'shanter, umbrella, and his avid interest in photography marked him well enough as an individualist, but the Sable Collies he raised aboard ship were the crowning touch.

Under his command *Cutty Sark* finally took measure of her old rival, *Thermopylae*. The opportunity came on the return trip from Woodget's first voyage in command. In 1885 both ships left Port Jackson, Australia, together, and 73 days later *Cutty Sark* arrived in England, one week ahead of *Thermopylae*. *Cutty Sark* at last proved her superiority on the seas.

"Old White Hat" Willis had waited fifteen years for this victory and, in honor of the occasion, presented the ship with a golden shirt to be flown from her topmost mast.

Cutty Sark's later years were spent making fast runs in the wool trade. Under other owners she was renamed *Ferreira*, *Maria di Ampero*, and *Cutty Sark* once again.

A hundred years ago the first captain of the *Cutty Sark* was unknowingly prophetic when he said she would last forever. *Cutty Sark* did achieve immortality as the sole survivor of the glamorous China Clippers and may be seen today at Greenwich Pier, London, where she is on permanent display. Visitors can touch her teak woodwork and wire rigging, and imagine her keel slicing smoothly through the waves.

Your REVELL model is an exact replica of the beautiful, swift *Cutty Sark* in the days when she was queen of the clippers.



**KNIFE
TO DETACH
AND TRIM
PARTS
FILE
TO REMOVE
EXCESS
PLASTIC**



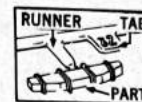
**CEMENT
USE
TOOTH PICK
PAINT
BRUSH
OR PIN
TO
APPLY IT**



**TWEEZERS
TO
PICK UP
AND
HOLD
SMALL
PARTS**



**TAPE AND
CLOTHES
PINS
TO CLAMP
AND HOLD
PARTS
UNTIL THEY
ARE DRY**



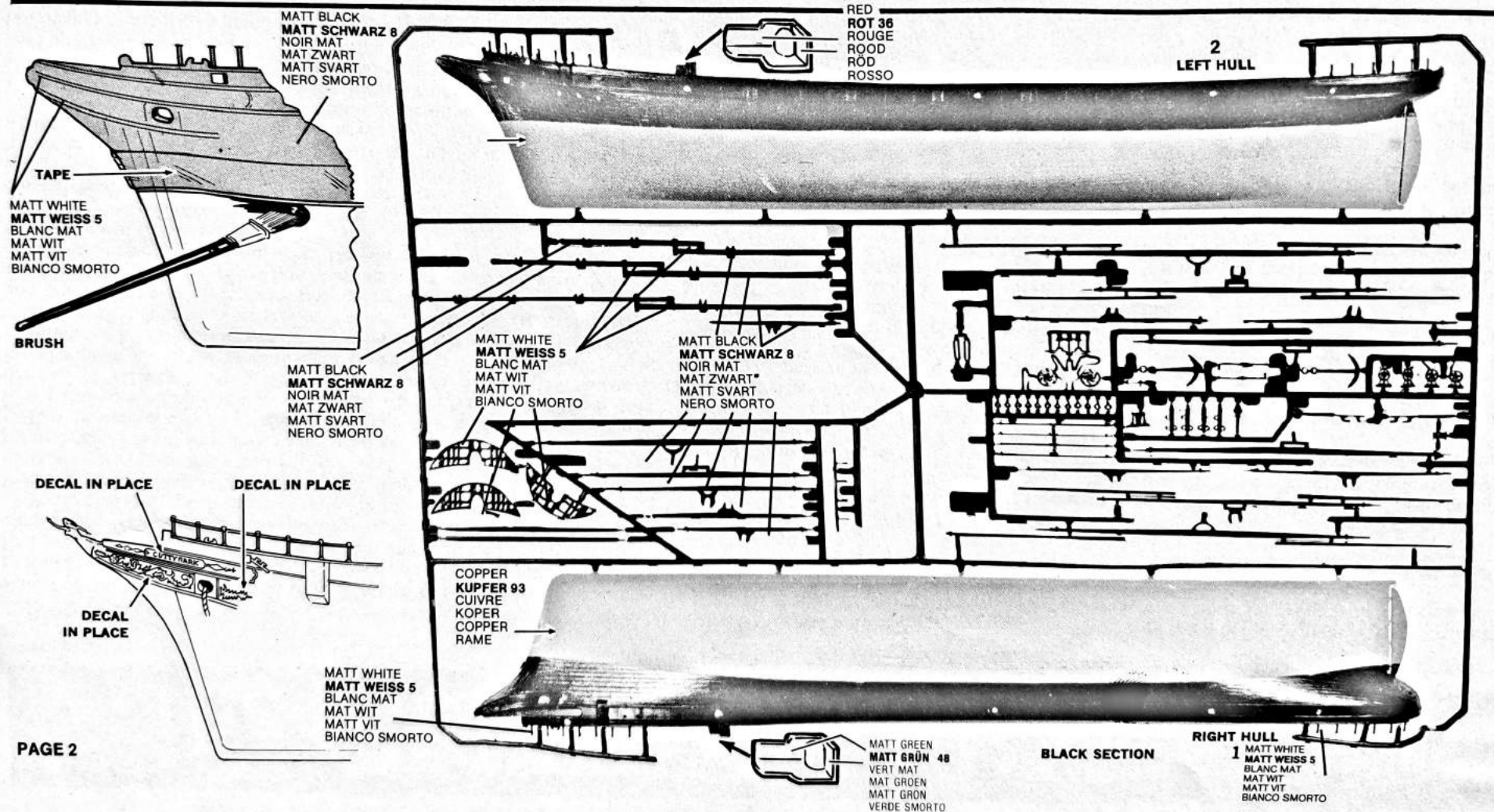
DO NOT DETACH PARTS UNTIL YOU ARE READY TO USE THEM. ALL PARTS ARE NUMBERED TO HELP YOU FIND THEM. LOOK FOR THE NUMBER ON THE TAB NEXT TO THE PART OR ON THE PART ITSELF. FIT PARTS TOGETHER AND TRIM ANY EXCESS PLASTIC BEFORE CEMENTING. IN DOING SO, YOU WILL KNOW WHERE TO APPLY CEMENT. APPLY CEMENT SPARINGLY WITH A TOOTH PICK, PIN OR BRUSH AS TOO MUCH CEMENT MAY DAMAGE YOUR MODEL.

HOW TO PAINT THE BLACK PARTS

- Carefully remove both HULL HALVES (Parts 1 and 2) from the runners.
- Apply masking tape to each side of the HULL above the top edge of the copper plating. Press down the edge of the tape firmly to prevent paint from going under the tape.
- Do not get paint on the inside edges as cement does not stick well over painted surfaces. If you do, scrape the

paint off before using cement.

- Paint the HULL below the Water Line. **KUPFER** Paint the LIGHT and the outside faces of box behind it **ROT** on the LEFT HULL HALF (2) and SEEGRÜN on the RIGHT HULL HALF (1).
- Follow directions on back of DECAL Sheet and apply THREE DECALS to the front of each HULL HALF, as shown, and set aside to dry.

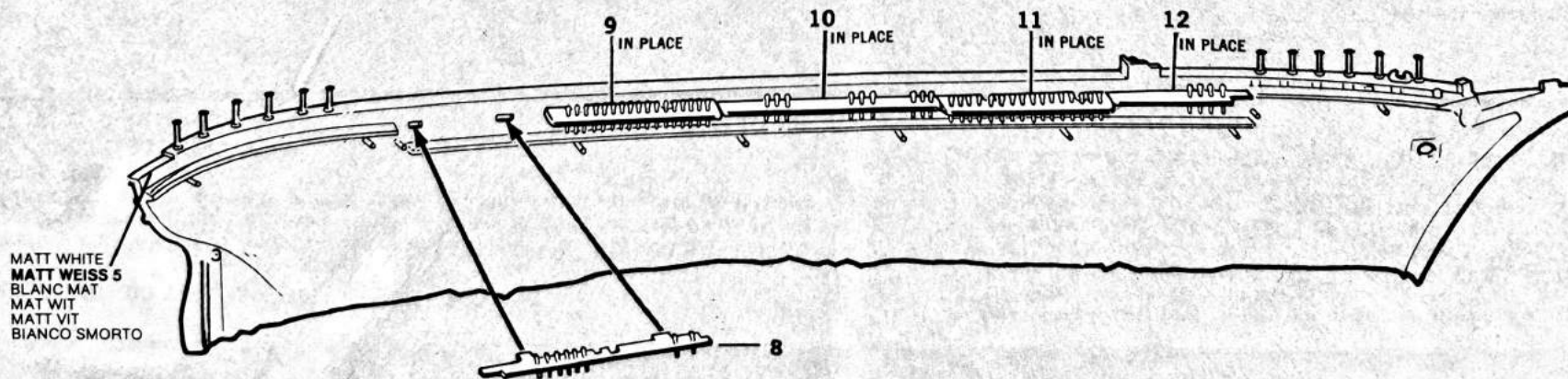
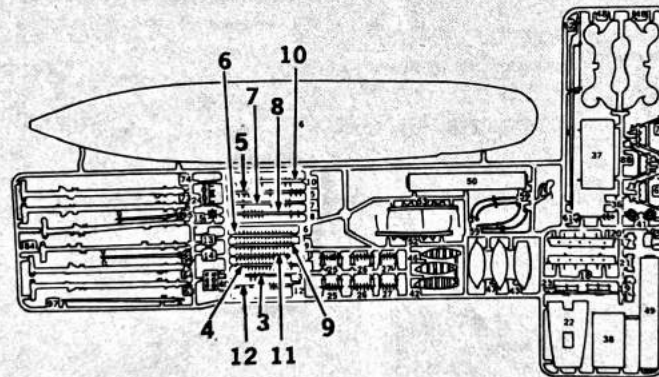
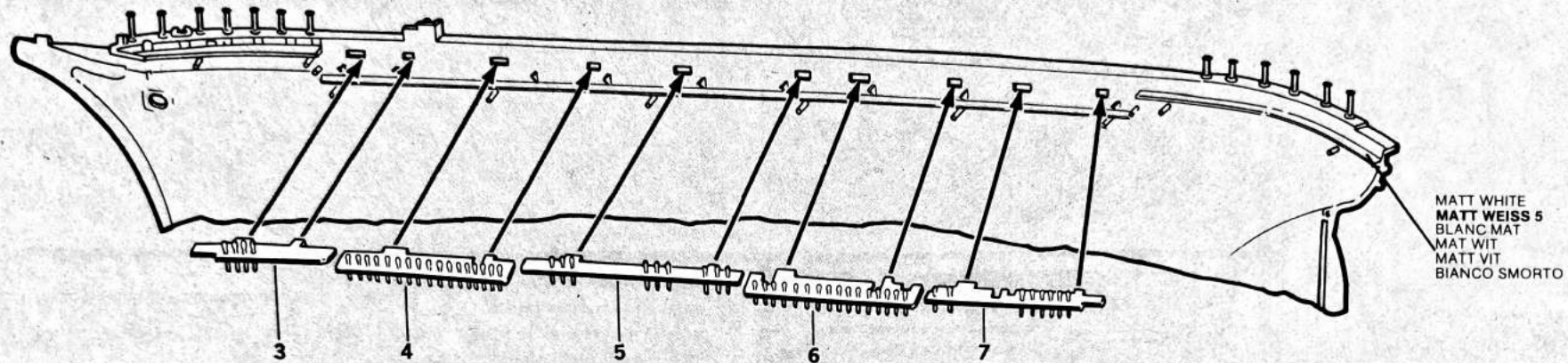


PARTS LIST

PIN RAILS TO HULL HALVES ASSEMBLY

- | | | | |
|---|--------------------------|----|-------------------------|
| 3 | PIN RAIL RIGHT FORWARD | 8 | PIN RAIL AFT LEFT |
| 4 | PIN RAIL FOREMAST RIGHT | 9 | PIN RAIL MAIN MAST LEFT |
| 5 | PIN RAIL AMIDSHIP RIGHT | 10 | PIN RAIL AMIDSHIP LEFT |
| 6 | PIN RAIL MAIN MAST RIGHT | 11 | PIN RAIL FOREMAST LEFT |
| 7 | PIN RAIL AFT RIGHT | 12 | PIN RAIL LEFT FORWARD |

1. Remove one at a time the PIN RAILS (3), (4), (5), (6), and (7), from the brown section and cement to the RIGHT HULL HALF (1).
2. Then cement the PIN RAILS (8), (9), (10), (11) and (12) to the LEFT HULL HALF (2).

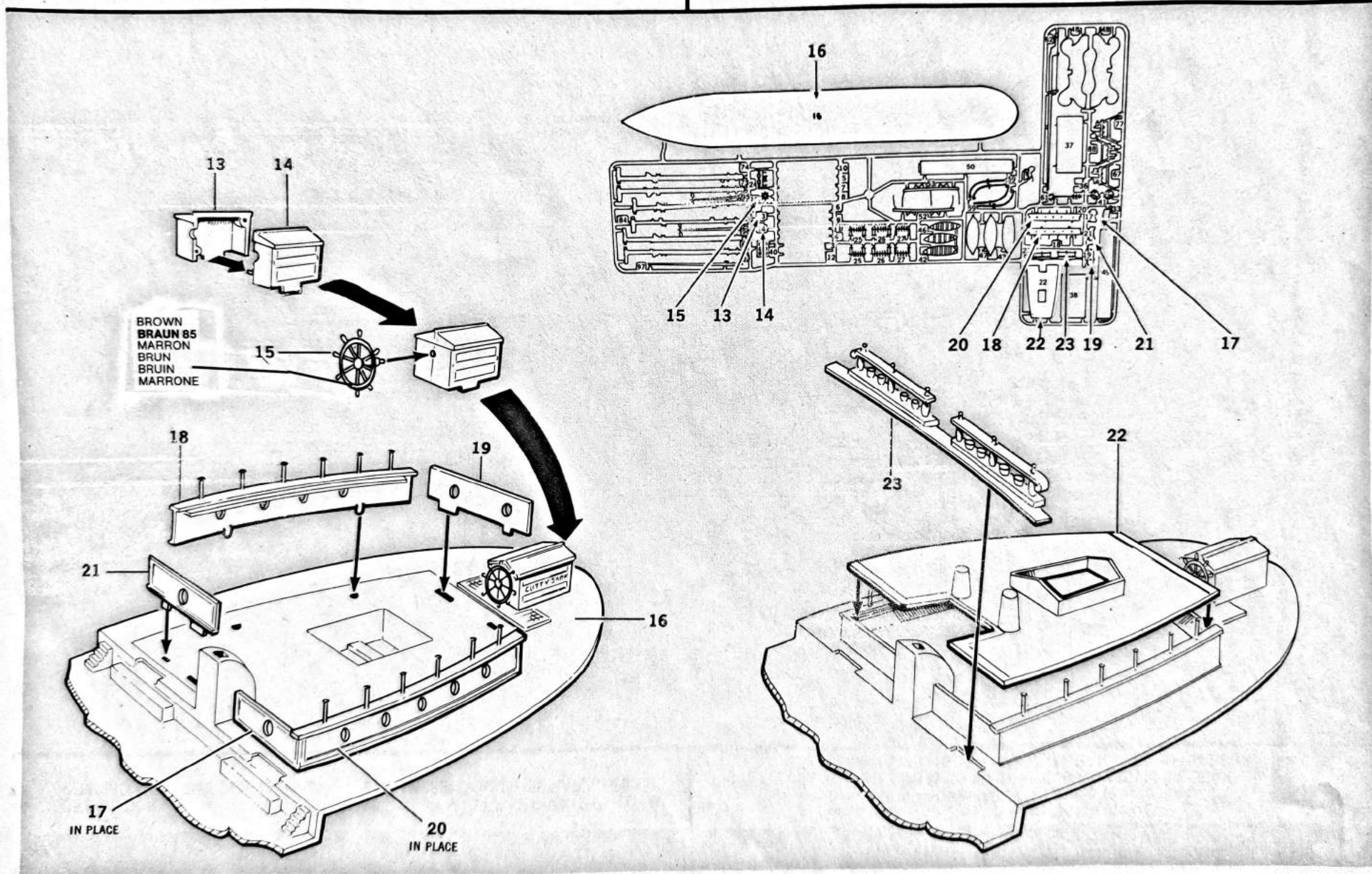


PARTS LIST

AFT DECK ASSEMBLY

- | | |
|-----------------------------------|------------------------------------|
| 13 WHEEL HOUSE RIGHT SIDE | 19 AFT DECK HOUSE AFT WALL |
| 14 WHEEL HOUSE LEFT SIDE | 20 AFT DECK HOUSE LEFT WALL |
| 15 HELM | 21 AFT DECK HOUSE FRONT WALL RIGHT |
| 16 DECK | 22 AFT DECK HOUSE ROOF |
| 17 AFT DECK HOUSE FRONT WALL LEFT | 23 AFT DECK RAIL |
| 18 AFT DECK HOUSE RIGHT WALL | |

1. Detach WHEEL HOUSE HALVES (13) and (14) from the brown section and cement together.
2. Cement HELM (15) to the WHEEL HOUSE.
3. Remove the DECK (16) from the brown section and cement the WHEEL HOUSE to it.
4. Cement DECK HOUSE WALLS (17), (18), (19), (20) and (21) to the DECK.
5. Cement DECK HOUSE ROOF (22) to the DECK HOUSE WALLS.
6. Cement AFT DECK RAIL (23) to the DECK.

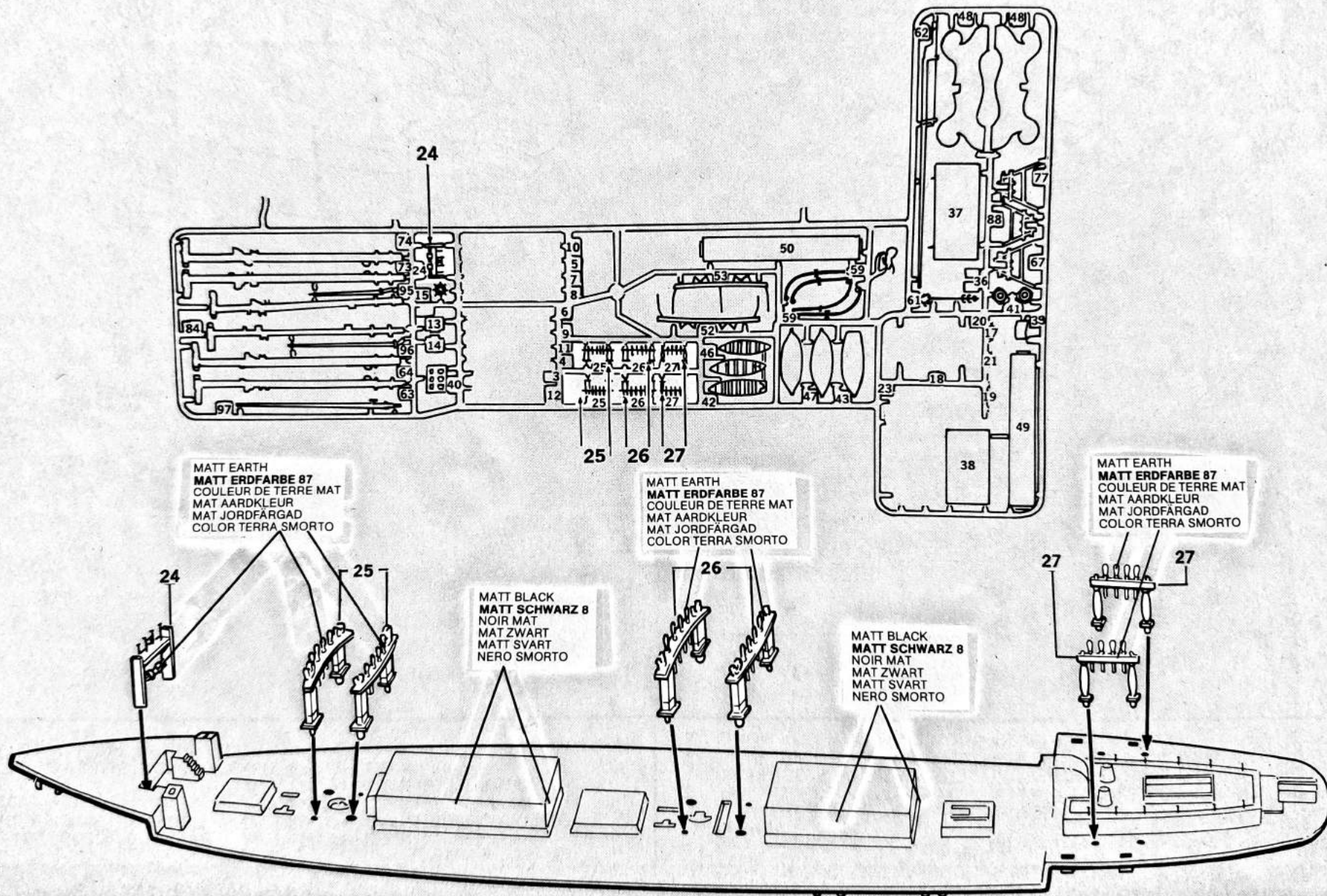


PARTS LIST

DECK DETAILS (BROWN PARTS)

- | | |
|-------------------------------------|------------------------------------|
| 24 FORE DECK RAIL | 26 MAIN MAST FIFE RAIL (2 Parts) |
| 25 FORWARD MAST FIFE RAIL (2 Parts) | 27 MIZZEN MAST FIFE RAIL (2 Parts) |

1. Cement the FORE DECK RAIL (24) to the DECK.
2. Cement TWO FOREMAST FIFE RAILS (25) to the DECK.
3. Cement TWO MAIN MAST FIFE RAILS (26) to the DECK.
4. Cement TWO MIZZEN MAST FIFE RAILS (27) to the DECK.

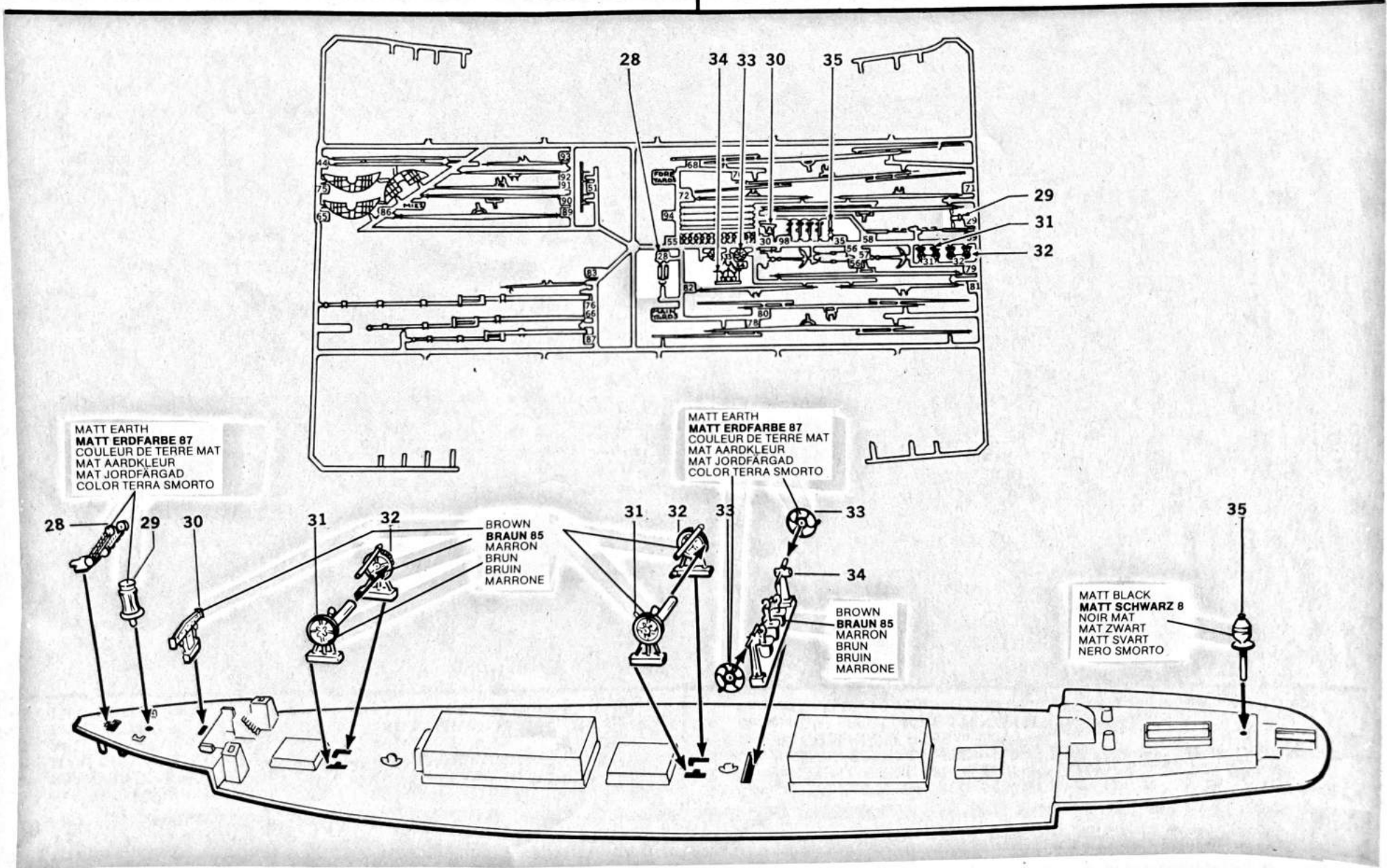


PARTS LIST

DECK DETAILS (BLACK PARTS)

- | | |
|-----------------------------------|------------------------------------|
| 28 BULLSEYE | 32 ROPE WINCH RIGHT HALF (2 Parts) |
| 29 CAPSTAN | 33 BILGE PUMP |
| 30 WINDLASS PUMP | 34 BILGE PUMP CRANK (2 Parts) |
| 31 ROPE WINCH LEFT HALF (2 Parts) | 35 BINNACLE |

1. Cement BULLSEYE (28), CAPSTAN (29), and WINDLASS PUMP (30) to the DECK.
2. Cement ROPE WINCH HALVES (31) and (32) to the DECK at two locations as shown.
3. Cement ONE CRANK (33) to each end of the BILGE PUMP (34) and then cement assembly to the DECK.
4. Cement BINNACLE (35) to the AFT DECK HOUSE ROOF.

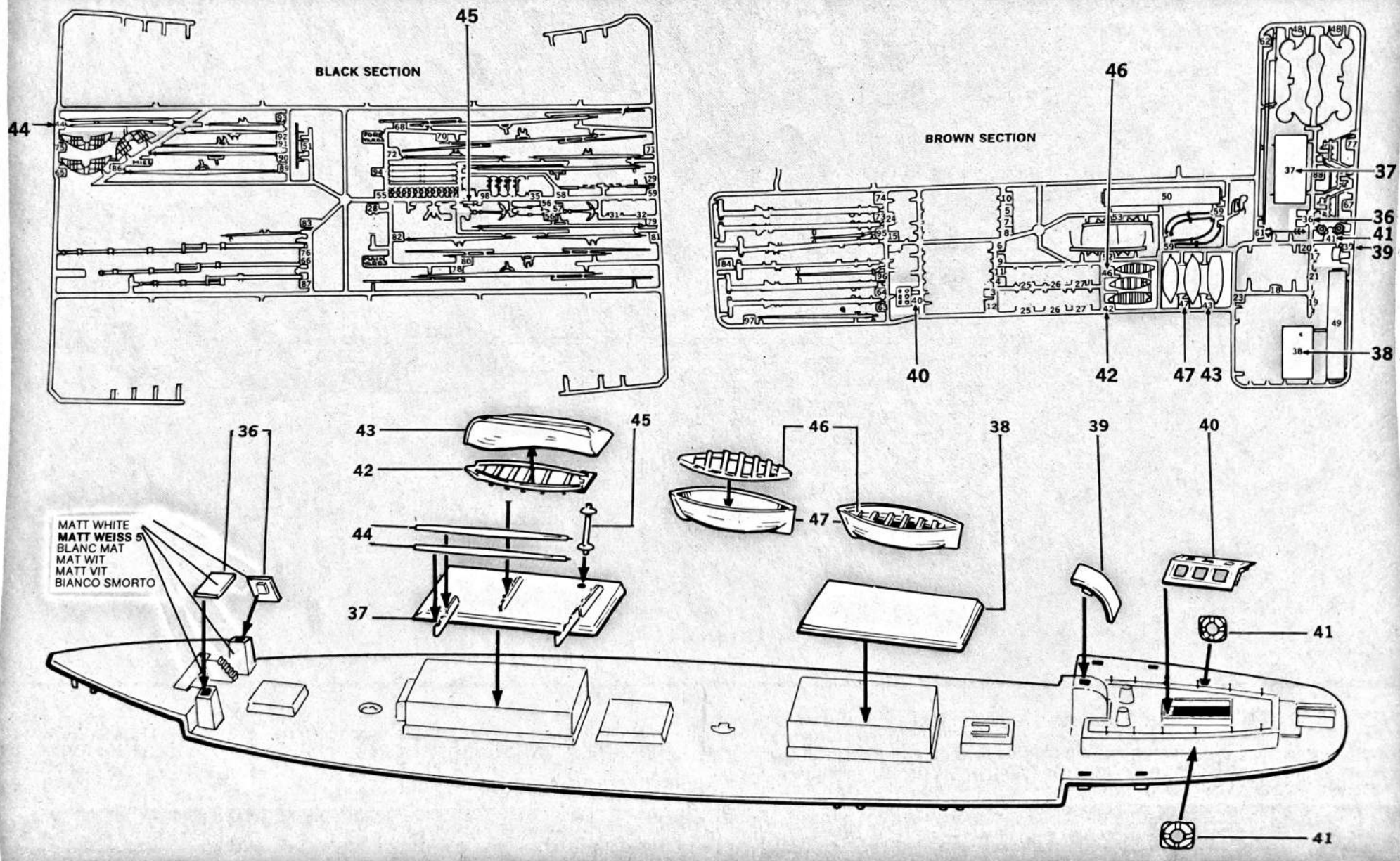


PARTS LIST

DECK DETAILS (BLACK AND PAINTED PARTS)

- | | | | |
|----|----------------------------|----|--------------------------|
| 36 | SAIL LOCKER ROOF (2 Parts) | 42 | LONGBOAT SEAT |
| 37 | FORWARD DECK HOUSE ROOF | 43 | LONGBOAT |
| 38 | MAIN DECK HOUSE ROOF | 44 | SPARS (2 Parts) |
| 39 | AFT COMPANIONWAY ROOF | 45 | GALLEY VENT |
| 40 | SKYLIGHT | 46 | LIFEBOAT SEATS (2 Parts) |
| 41 | LIFE RINGS (2 Parts) | 47 | LIFEBOAT (2 Parts) |

1. Cement TWO ROOFS (36), ROOFS (37), (38) and (39) and SKYLIGHT (40) to DECK.
2. Cement ONE LIFE RING (41) to each side of the AFT DECK HOUSE as shown.
3. Cement LONG BOAT SEAT (42) to LONG BOAT (43), turn upside down and cement to FORE DECK HOUSE ROOF as shown.
4. Cement TWO SPARS (44) and VENT (45) to the same ROOF.
5. Cement TWO SEATS (46) to TWO LIFEBOATS (47) and set aside until Step 7.



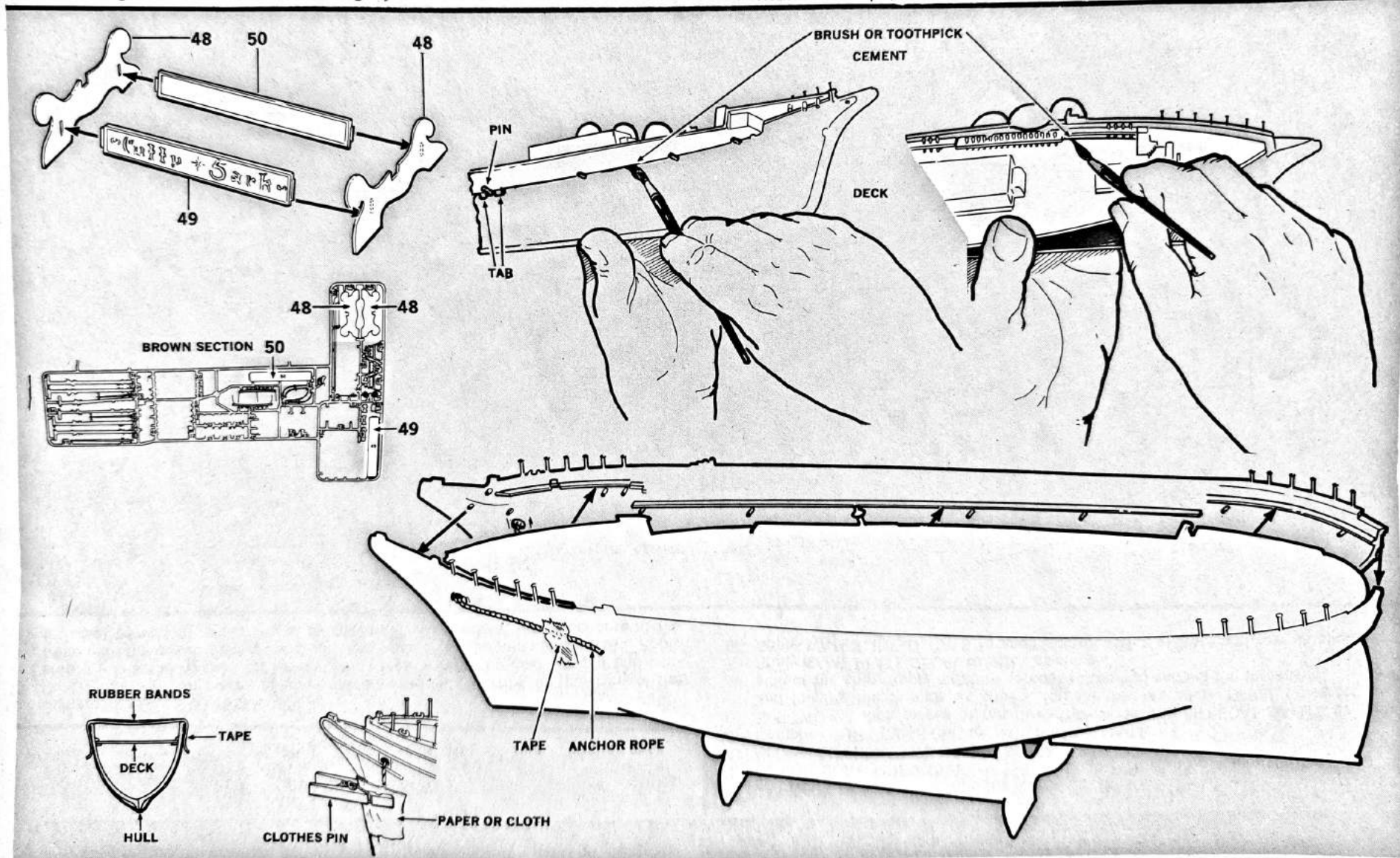
PARTS LIST

STAND, HULL AND DECK ASSEMBLY

- 48 SHIP'S STAND (2 Parts)
49 NAME PLATE
50 BACK PLATE

1. Assemble the STAND by cementing the TWO STAND SIDES (48) to the TWO PLATES (49) and (50). Set aside to dry.
2. Position DECK to LEFT HULL HALF, making sure that the DECK rests on top of round pins, and while still holding in one hand, apply cement to underside as shown. Hold until glue has had a chance to set slightly.

3. Apply cement to exposed edge of the DECK and along all mating surfaces on the RIGHT HULL HALF.
4. Join the TWO HULL HALVES together. Be sure DECK locates properly in RIGHT HULL HALF. Hold together with clothespin, rubber bands, and/or tape.
5. Push one end of the ANCHOR ROPE through the holes in HULL and temporarily tape to both sides of HULL above painted waterline.
6. Place completed HULL assembly on STAND to dry.
7. Remove the tape, rubber bands, and/or clothespin when dry.



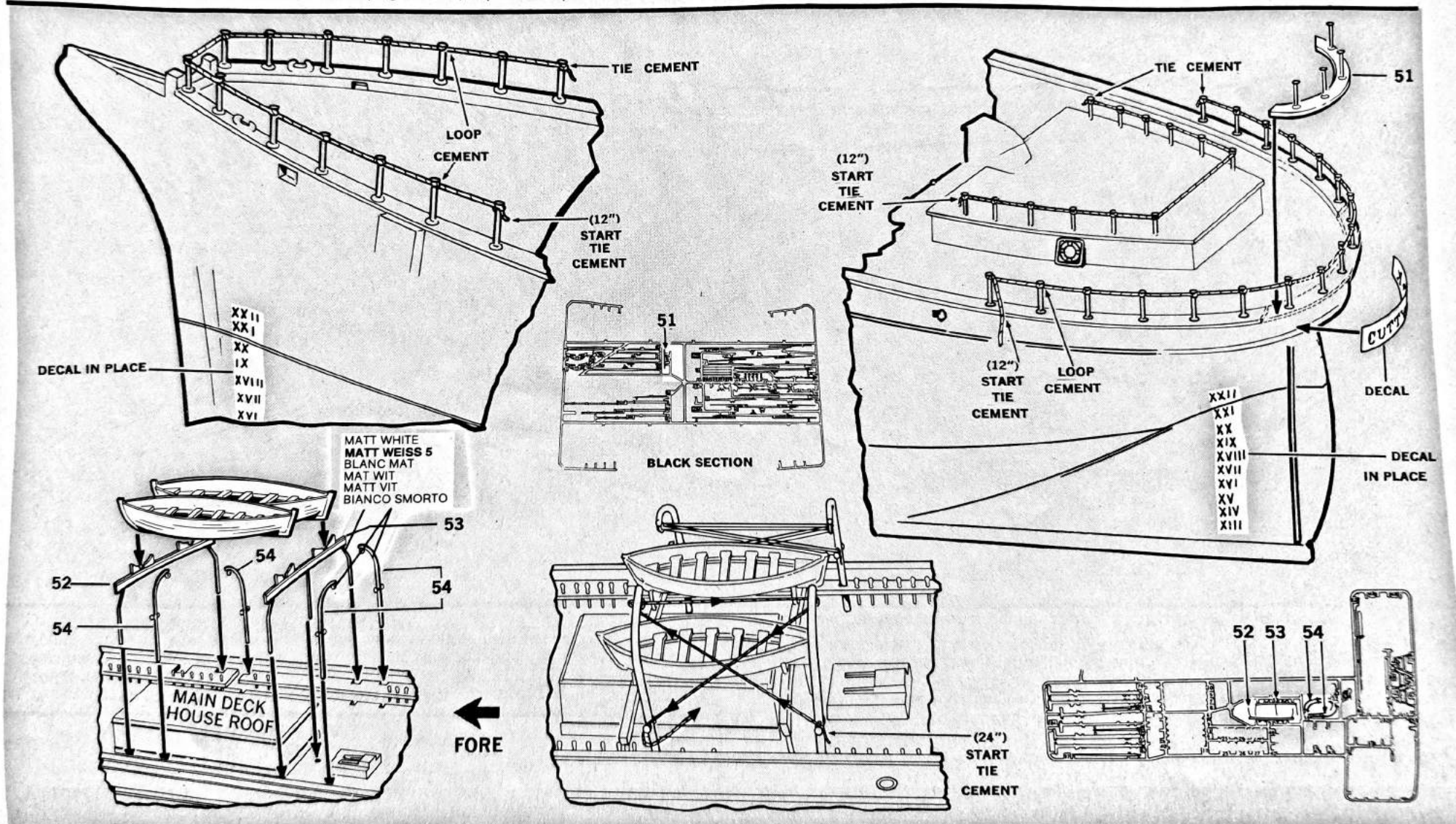
PARTS LIST

- 51 FANTAIL RAIL
 52 FORWARD BOAT SKID
 53 AFT BOAT SKID
 54 LIFEBOAT DAVITS (4 Parts)

DECK RAILS AND LIFEBOATS

1. Cement FANTAIL RAIL (51) to HULL.
2. Cut THREE 12 inch pieces of black thread provided. Starting at the front of the ship, tie one end to the first upright, then loop around the next upright and continue until the last upright is reached. Then tie and cut the remaining thread. Apply a dab of cement to the thread at each upright. Also, repeat this procedure at the

3. Cement BOAT SKIDS (52) and (53) through PIN RAILS and into DECK.
4. Cement LIFEBOATS from STEP (5) to BOAT SKIDS.
5. Cement FOUR DAVITS (54) to DECK and PIN RAILS.
6. Cut TWO 24 inch pieces of tan thread provided. Rig LIFEBOAT DAVITS by tying and looping the threads as shown. Repeat this procedure THREE times for each side of the ship. Apply a dab of cement to the tied ends of the threads.
7. Apply NAME PLATE DECAL to HULL as shown.
8. Apply WATERLINE DECALS to each side of HULL at front and rear as shown.

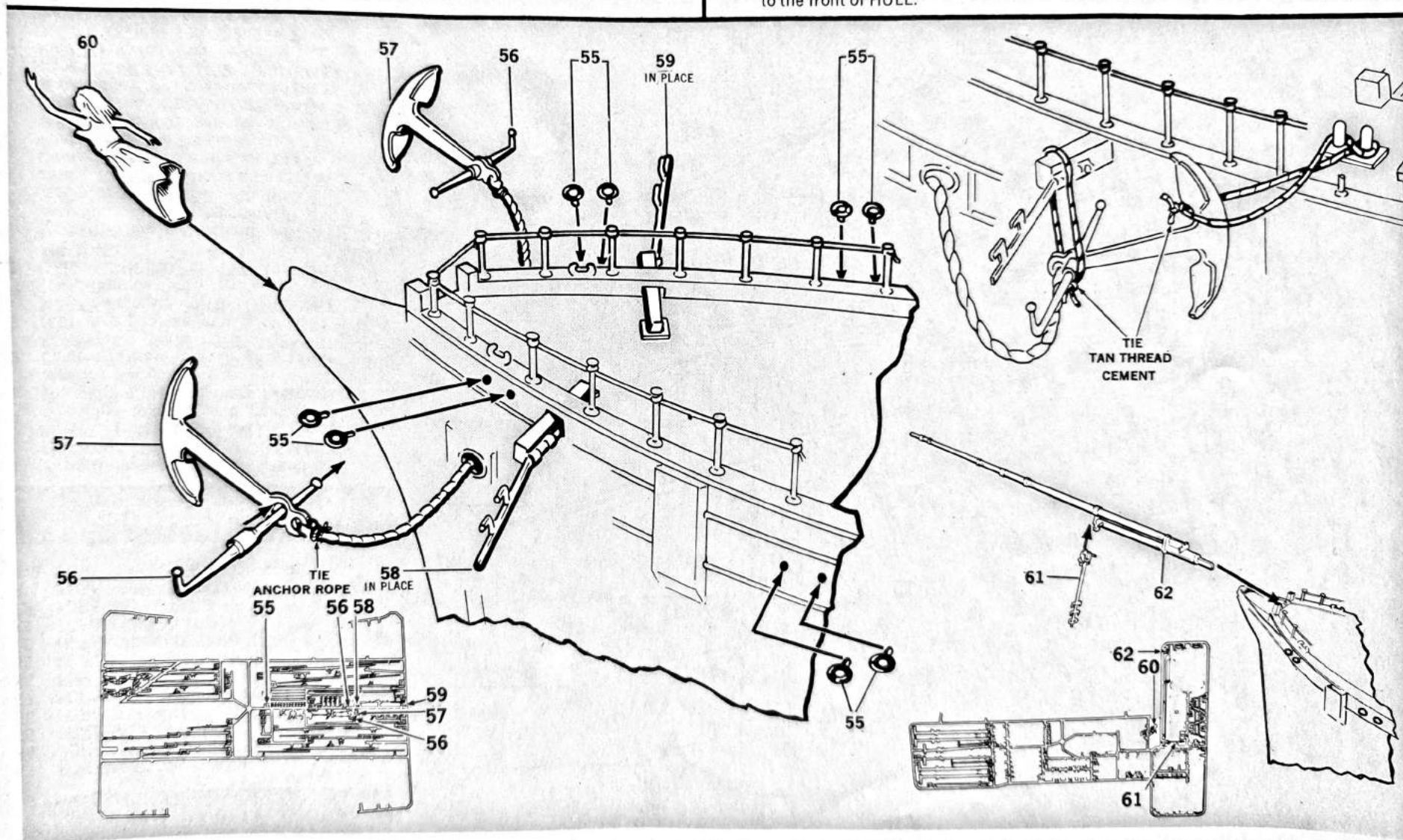


PARTS LIST

- 55 EYEBOLTS (12 Parts)
 56 ANCHOR STOCKS (2 Parts)
 57 ANCHOR BITS (2 Parts)
 58 CATHEAD LEFT
 59 CATHEAD RIGHT
 60 FIGUREHEAD
 61 DOLPHIN STRIKER
 62 JIB BOOM

BOW DETAILS

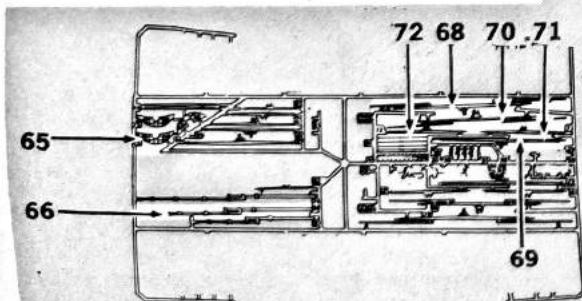
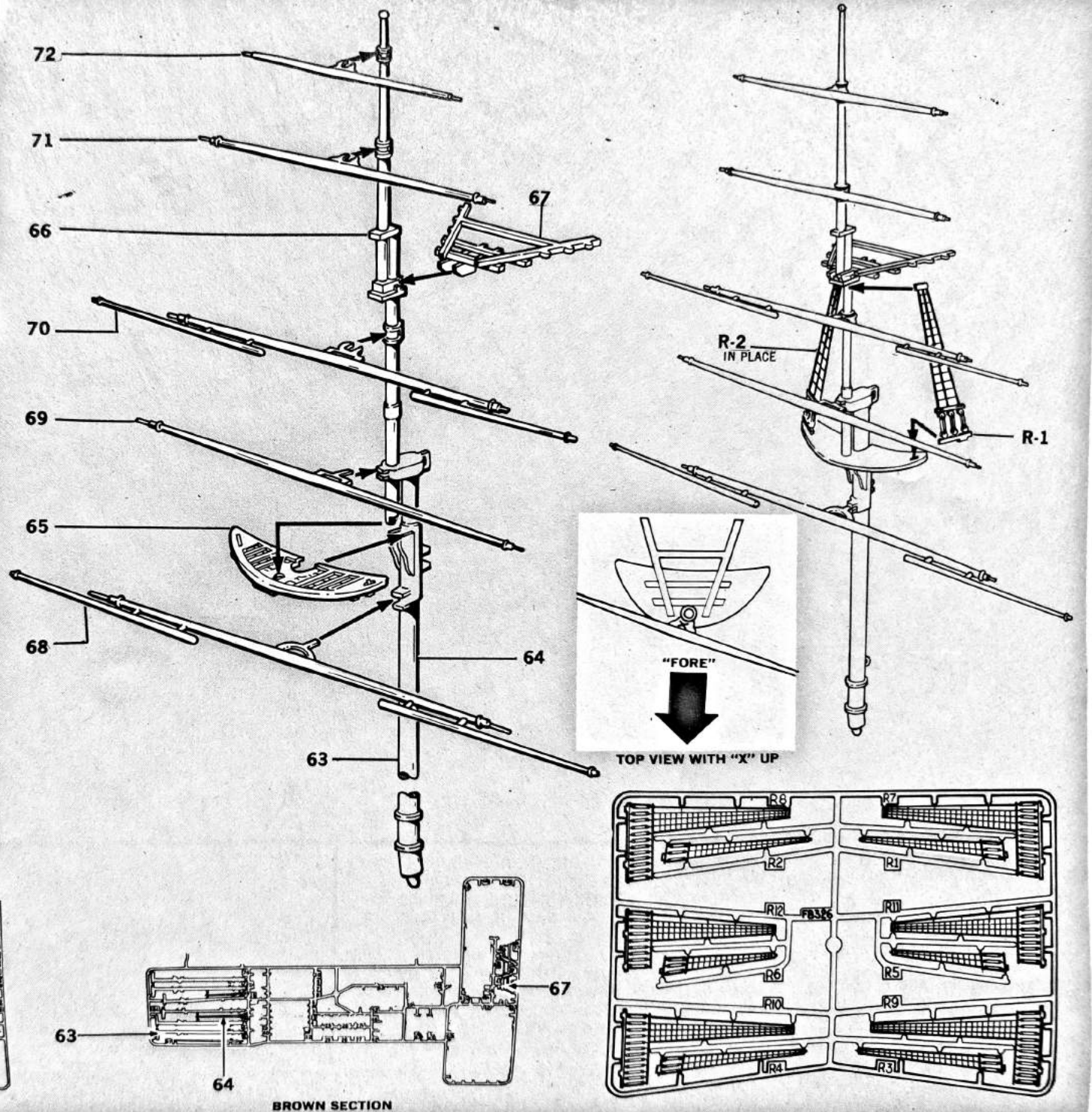
1. Cement EIGHT EYEBOLTS (55) to front of HULL, four to each side as shown. (FOUR extra parts are provided.)
2. Cement TWO ANCHOR STOCKS (56) to the ANCHOR BITS (57).
3. Remove the tape holding the ANCHOR ROPE to the HULL, and tie the ends of the ANCHOR ROPE to the ANCHOR as shown.
4. Locate the CATHEADS (58) and (59) through the holes in HULL and cement to DECK.
5. Cut FOUR 6 inch pieces of tan thread. Tie ANCHORS to sides of the ship as shown.
6. Cement FIGUREHEAD (60) to front of HULL.
7. Cement the DOLPHIN STRIKER (61) to the JIB BOOM (62). Cement this assembly to the front of HULL.



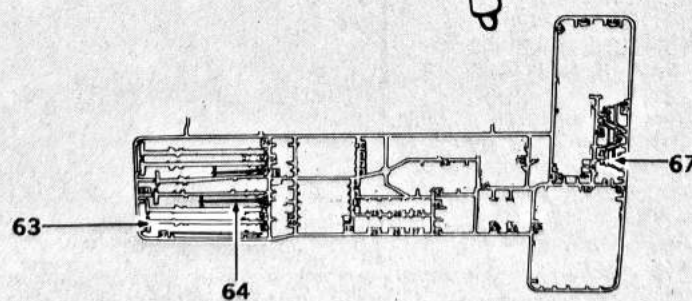
- 63 FOREMAST RIGHT SIDE
 64 FOREMAST LEFT SIDE
 65 FOREMAST TOP
 66 FORE TOPMAST
 67 FOREMAST CROSSTREE
 68 FOREYARD
 69 LOWER TOPSAIL YARD
 70 UPPER TOPSAIL YARD
 71 TOPGALLANT YARD
 72 FORE ROYAL YARD
 R-1 FORE TOPMAST RATLINE — LEFT
 R-2 FORE TOPMAST RATLINE — RIGHT

FOREMAST ASSEMBLY

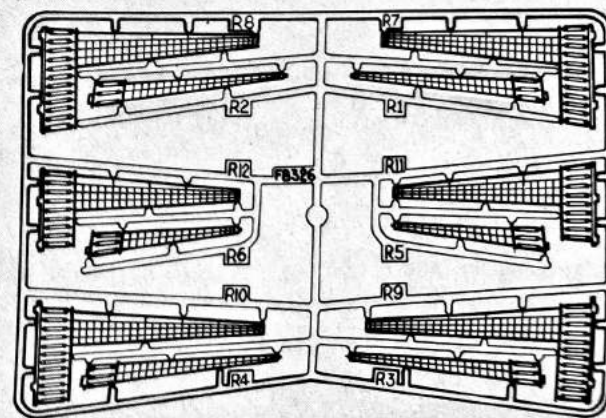
1. If you followed the painting instructions on PAGE 3, FOREMAST HALVES (63) and (64) will be already cemented together and painted. If you did not, cement these two parts together now.
2. Cement FOREMAST TOP (65) to the FOREMAST. Slide FORE TOPMAST (66) through hole in top of FOREMAST and locate into the FOREMAST TOP, then cement.
3. Cement CROSSTREE (67) to FORE TOPMAST.
4. All YARDS are marked with an "X" near the locator on one side. If you assemble the YARDS with the "X" up the YARDS will be at an angle as shown in small drawing. If you assemble the YARDS with the "X" down the YARDS will be at right angles to the ship's center line. Determine the YARD angle desired then cement YARDS (68), (69), (70), (71) and (72) in order from bottom to top.
5. Cement RATLINES (R-1) and (R-2) to the MAST assembly as shown.



BLACK SECTION



BROWN SECTION

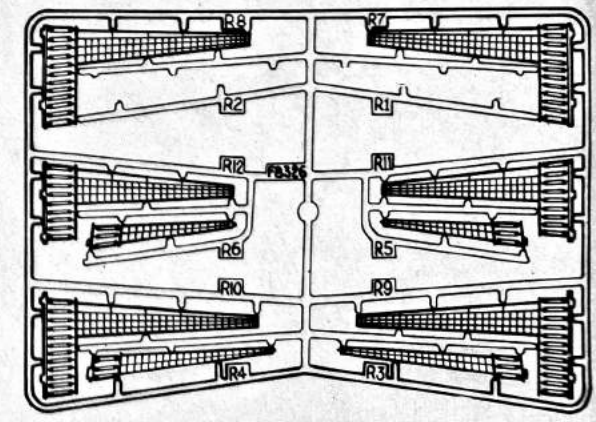
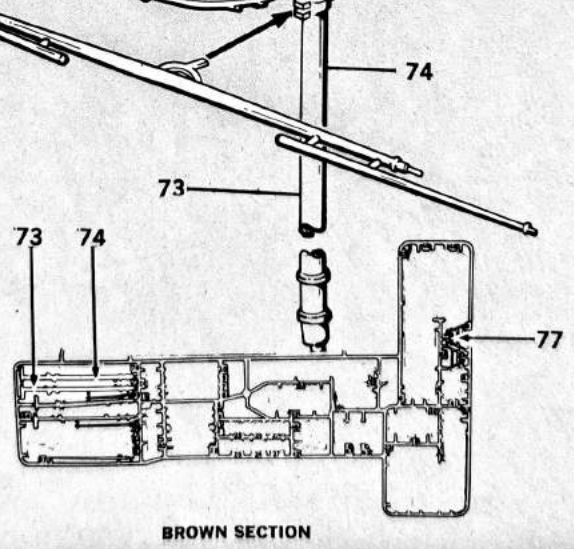
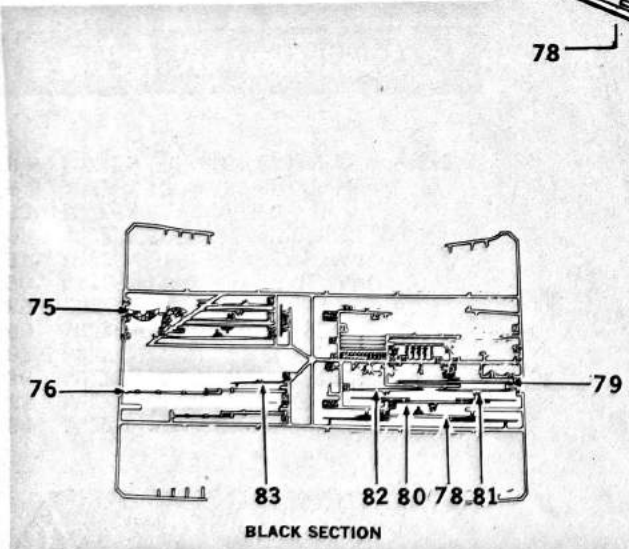
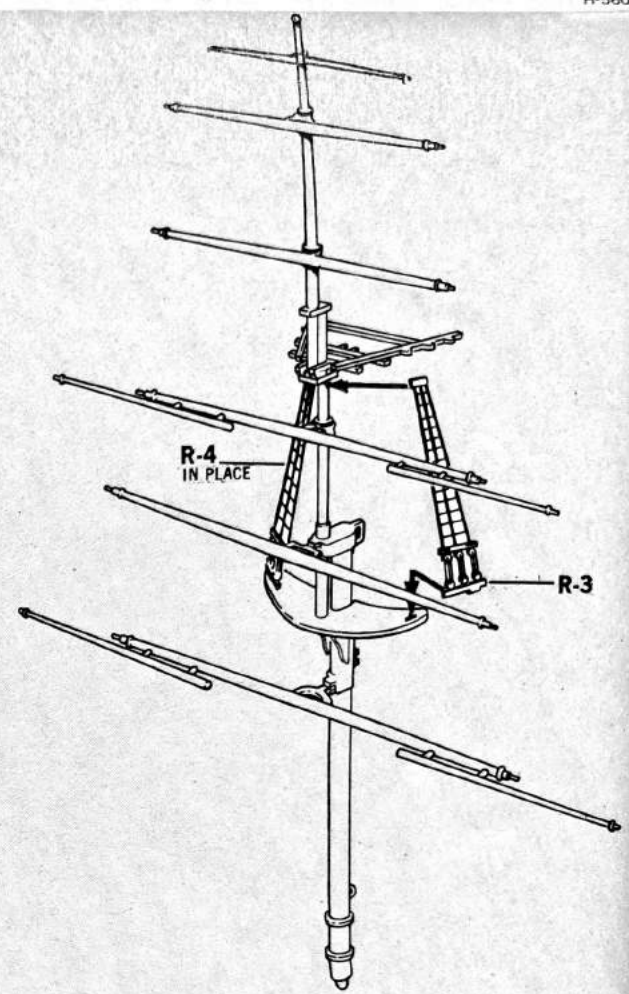
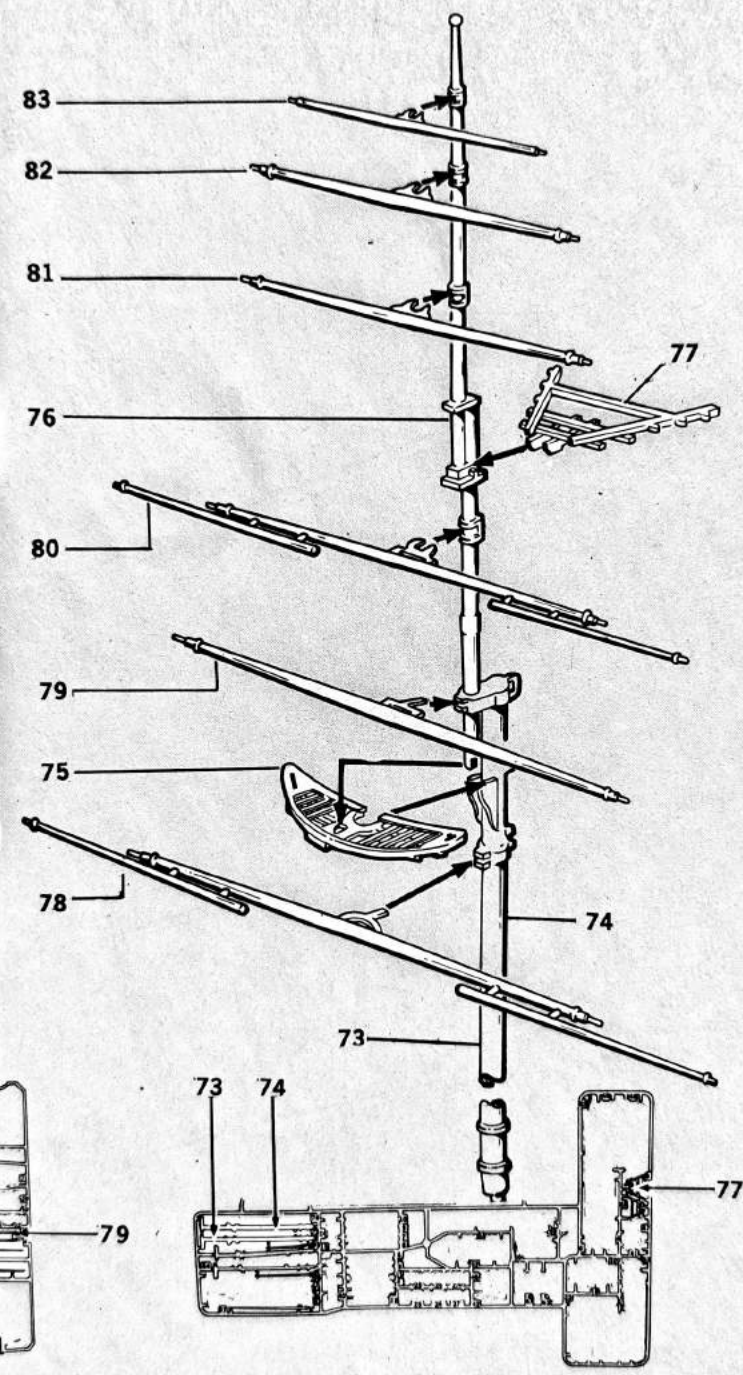


10 PARTS LIST

- 73 MAIN MAST RIGHT SIDE
- 74 MAIN MAST LEFT SIDE
- 75 MAIN MAST TOP
- 76 MAIN TOPMAST
- 77 MAIN MAST CROSSTREE
- 78 MAIN YARD
- 79 LOWER TOPSAIL YARD
- 80 UPPER TOPSAIL YARD
- 81 MAIN TOPGALLANT YARD
- 82 MAIN ROYAL YARD
- 83 MAIN SKYSAIL YARD
- R-3 MAIN TOPMAST RATLINES — LEFT
- R-4 MAIN TOPMAST RATLINES — RIGHT

MAIN MAST ASSEMBLY

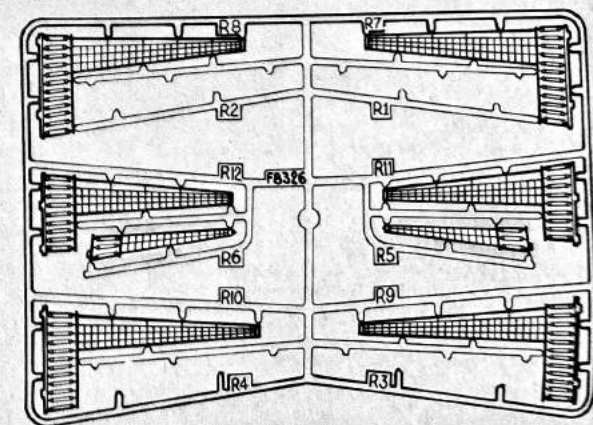
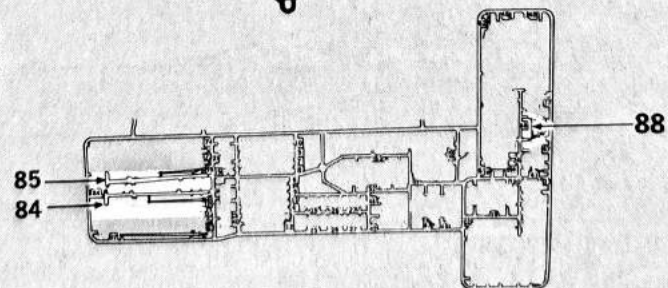
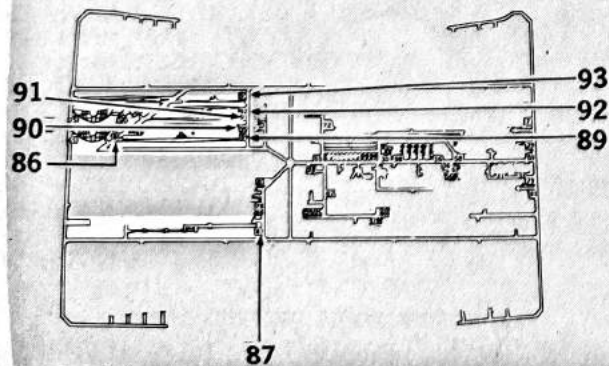
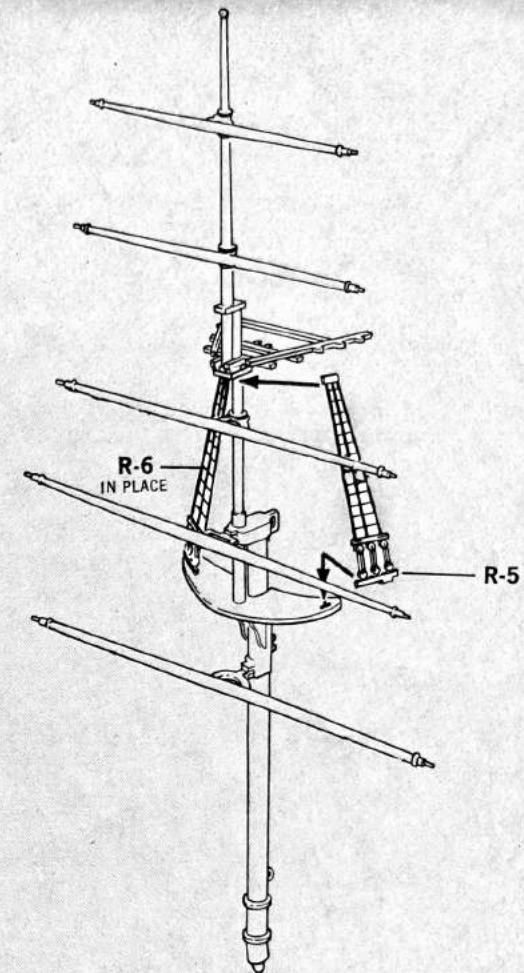
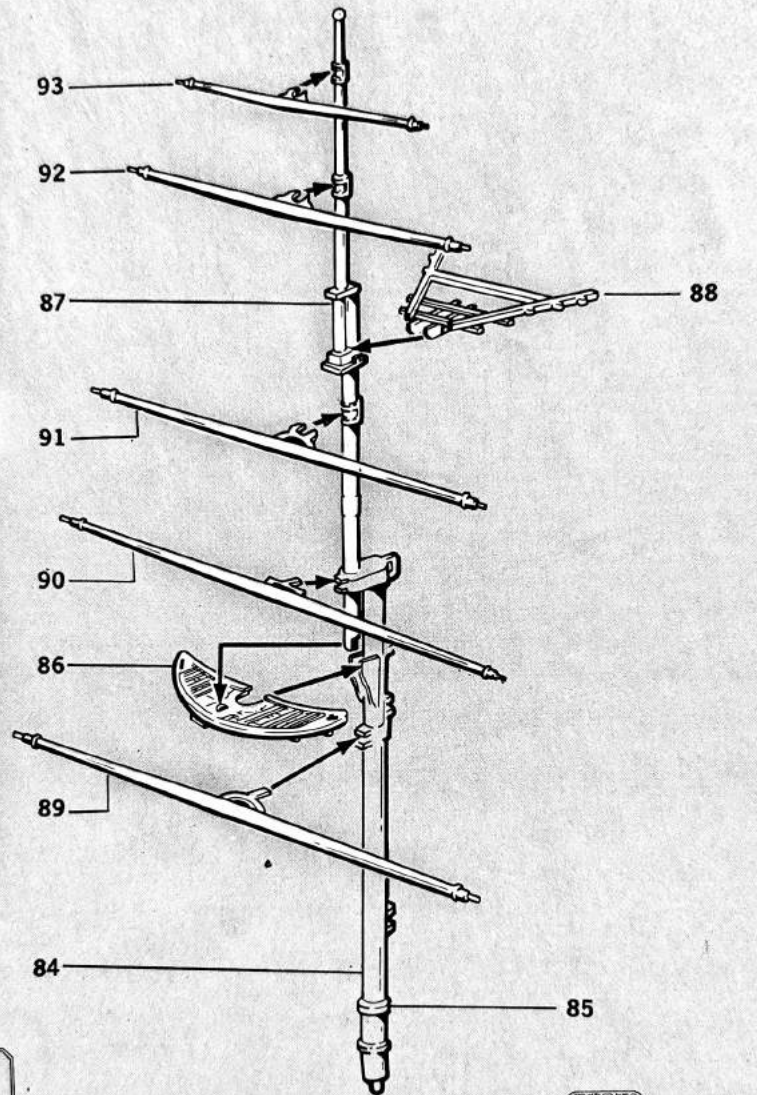
1. Remove assembled and painted MAIN MAST HALVES (73) and (74) from the brown section. Cement MAIN MAST TOP (75), MAIN TOP MAST (76) and CROSSTREE (77) to the MAIN MAST in the same manner as the FOREMAST Assembly.
2. Cement YARDS (78), (79), (80), (81), (82) and (83) to the MAIN MAST assembly. Place "X's" in same direction as on FOREMAST assembly.
3. Cement RATLINES (R-3) and (R-4) to MAST assembly as shown.



- 84 MIZZEN MAST RIGHT SIDE
- 85 MIZZEN MAST LEFT SIDE
- 86 MIZZEN MAST TOP
- 87 MIZZEN MAST TOP MAST
- 88 MIZZEN MAST CROSSTREE
- 89 CROSSJACK YARD
- 90 MIZZEN LOWER TOPSAIL YARD
- 91 MIZZEN UPPER TOPSAIL YARD
- 92 MIZZEN TOPGALLANT YARD
- 93 MIZZEN ROYAL YARD
- R-5 MIZZEN TOPMAST RATLINES — LEFT
- R-6 MIZZEN TOPMAST RATLINES — RIGHT

MIZZEN MAST ASSEMBLY

1. This assembly is identical to the FOREMAST. Assemble in the same manner. (84) and (85) are the assembled painted parts. To the assembled MIZZEN MAST HALVES (84) and (85) cement MIZZEN MAST TOP (86), TOP MAST (87) and CROSSTREE (88). Then cement YARDS (89), (90), (91), (92) and (93) to the MIZZEN MAST assembly. Place "X's" in same direction as on previous MAST assemblies.
2. Cement RATLINES (R-5) and (R-6) to MAST assembly as shown.

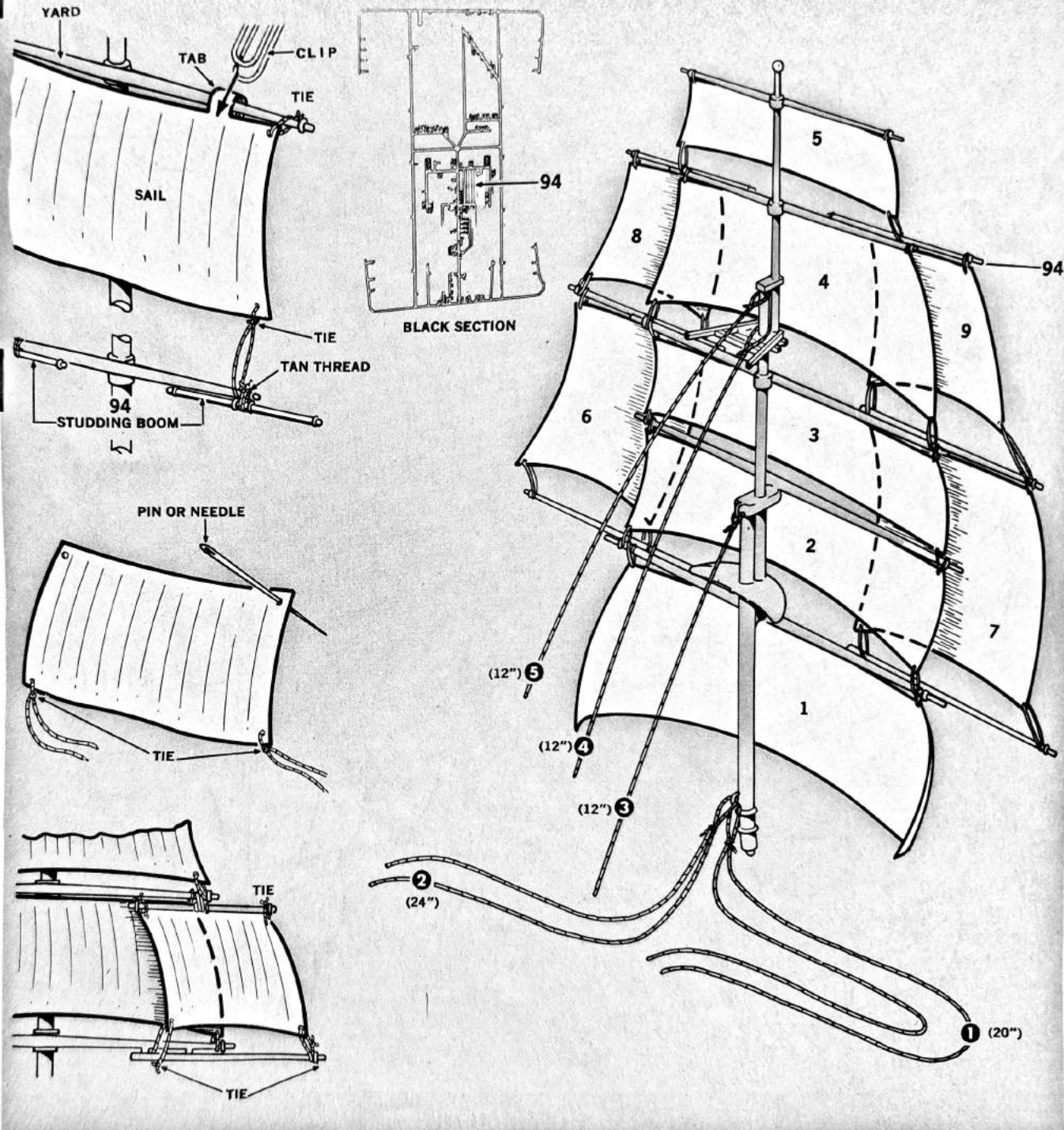


94 TOPGALLANT STUDDING SAIL BOOM (2 Parts)

- SAILS
- 1 FORESAIL
 - 2 FORE LOWER TOPSAIL
 - 3 FORE UPPER TOPSAIL
 - 4 FORE TOP GALLANT
 - 5 FORE ROYAL
 - 6 FORE TOP MAST STUDDING SAIL (LEFT)
 - 7 FORE TOP MAST STUDDING SAIL (RIGHT)
 - 8 FORE TOPGALLANT STUDDING SAIL (LEFT)
 - 9 FORE TOPGALLANT STUDDING SAIL (RIGHT)

FOREMAST SAIL ASSEMBLY

1. Cut SAILS from SAIL SHEET, one at a time only as needed for each step to avoid loss of identity.
 2. SAILS may be installed in two ways. The tabs may be folded over YARDS and cemented, and bottom corners tied to LOWER YARD, or TABS can be cut off and all corners tied with tan thread. Both methods are shown.
 3. The two STUDDING BOOMS (94) must be tied to the YARDS with tan thread as shown.
 4. Use a pin or needle to pierce holes in corners of the SAIL. Tie threads to SAIL, then SAIL to YARDS, using either method described above. Start with SAIL 1 and continue in the same manner until all 9 SAILS are attached.
- NOTE: The length of thread required (in inches) for each LINE is indicated in parenthesis by the identification number of each LINE.
5. Cut black threads to length shown for LINES 1 and 2. Tie middle of thread to MAST for each line.
 6. Cut black thread to length shown for LINES 3, 4 and 5. Tie one end to MAST as shown.
 7. The loose ends of all LINES will be tied at a later time.
 8. Touch all knots with cement.



- 94 TOP GALLANT STUDDING SAIL YARD (2 Parts)
 95 SPENCER GAFF
 96 SPANKER GAFF
 97 SPANKER BOOM

SAILS

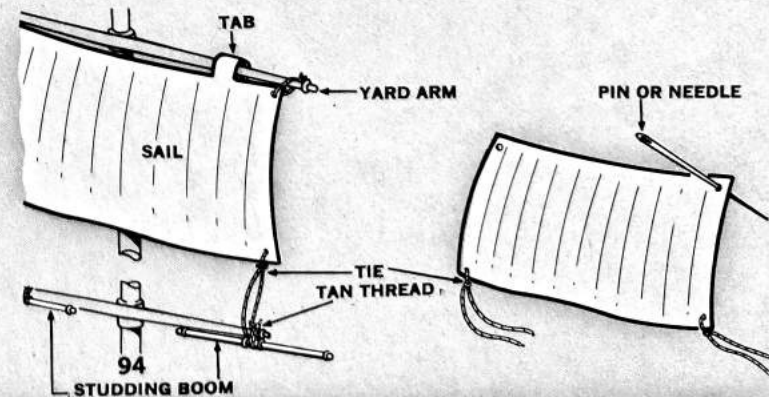
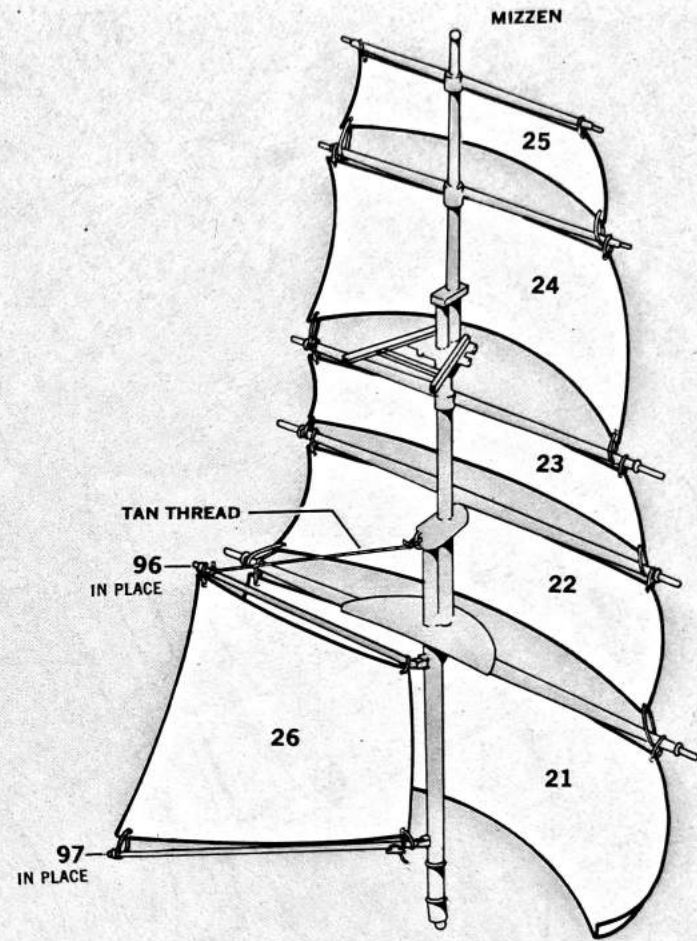
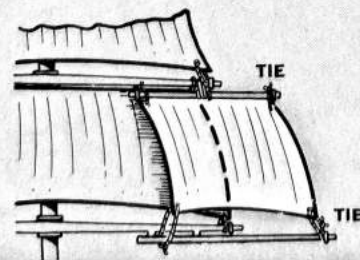
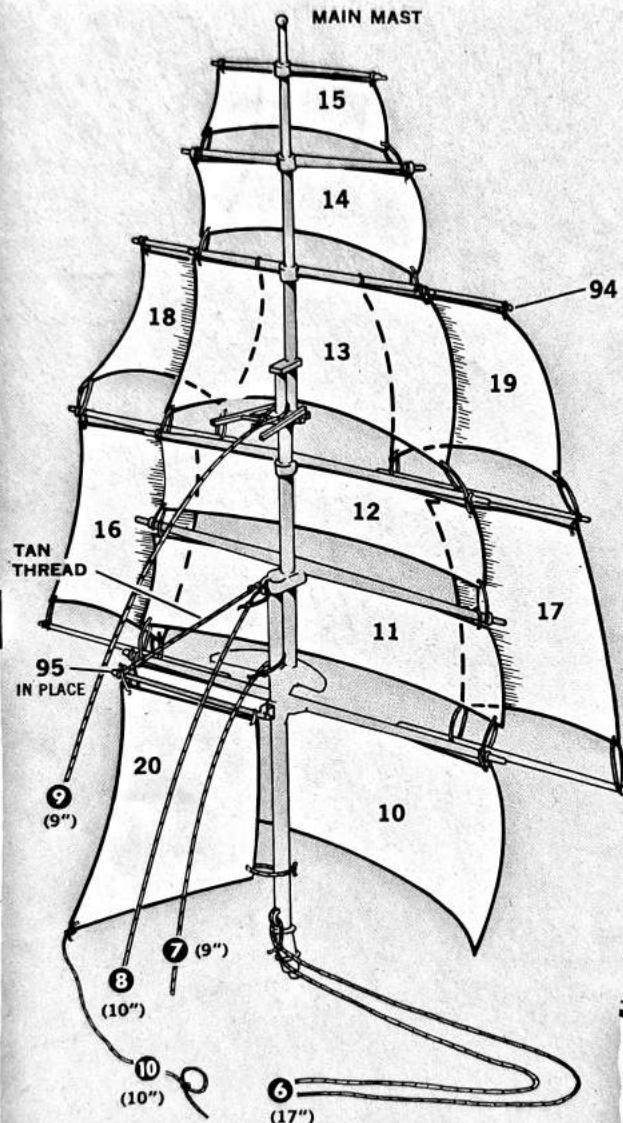
- 10 MAINSAIL
 11 MAIN LOWER TOPSAIL
 12 MAIN UPPER TOPSAIL
 13 MAIN TOPGALLANT
 14 MAIN ROYAL
 15 MAIN SKYSAIL
 16 MAIN TOPMAST STUDDING SAIL (LEFT)
 17 MAIN TOPMAST STUDDING SAIL (RIGHT)
 18 MAIN TOP GALLANT STUDDING SAIL (LEFT)
 19 MAIN TOP GALLANT STUDDING SAIL (RIGHT)
 20 SPENCER SAIL
 21 MIZZEN SAIL
 22 MIZZEN LOWER TOPSAIL
 23 MIZZEN UPPER TOPSAIL
 24 MIZZEN TOPGALLANT
 25 MIZZEN ROYAL
 26 SPANKER

INSTRUCTIONS:

1. Attach two STUDDING BOOMS (94).
2. Assemble the MAIN MAST SAILS (10) through (19) to the MAST in the same way as on the just completed FOREMAST SAIL ASSEMBLY.
3. SAIL (20) attaches to the SPENCER GAFF (95) which cements to back-side of MAIN MAST as shown. Tie lower corner of SAIL to MAST. Cut and tie tan thread from GAFF to MAIN MAST. Tie LINE (10) to SAIL (20).
4. Cut black thread to length shown for LINE (6) and tie the middle of the thread to the MAST. Cut LINES (7) (8) and (9) and tie one end to MAST as shown.
5. The loose ends of LINES will be tied at a later time.

MIZZEN MAST SAILS ASSEMBLY

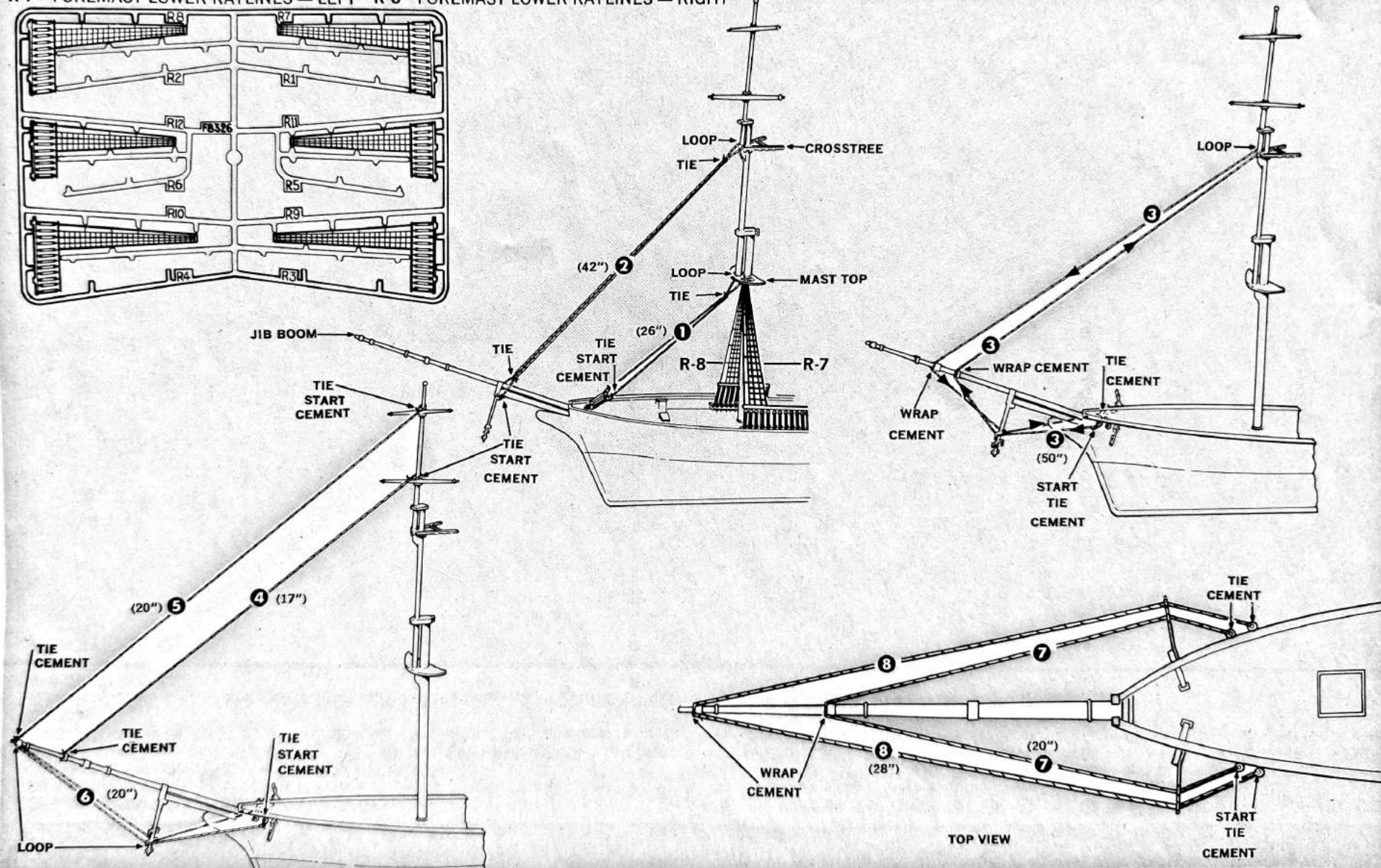
1. Sail Installation on this mast follows the same pattern as other MASTS except that no STUDDING BOOMS or STUDDING SAILS are used. Attach SAILS (21) through (25), then cement SPANKER GAFF (96) and SPANKER BOOM (97) to backside of MIZZEN MAST. SAIL (26) attaches to these two parts.
2. Cut and tie tan thread between MIZZEN MAST and end of SPANKER GAFF (96) as shown.



1. Cement FOREMAST assembly to DECK, then cement RATLINES (R-7) and (R-8) to PIN RAIL and MAST as shown.
2. Use all black thread for RIGGING in this step. Cut lengths indicated which allow extra length to tie at both ends. Install LINES in order, starting with ①. Start and finish as indicated. Touch all knots, ties, or wraps with a small amount of cement. After cement has set, cut off excess thread.
3. Cut LINE ① and tie the middle of thread to one side of BULLSEYE. Loop both

4. ends of thread around MAST and tie to opposite side of BULLSEYE.
5. Cut LINE ② to length, and tie one end to JIB BOOM as shown. The other end should be looped around the MAST, then back to the JIB BOOM and looped around the MAST again, and tied to the JIB BOOM.
6. Cut, tie, wrap (loop at least twice) and tie LINES ③, ④, ⑤, ⑥, ⑦ and ⑧ as shown.
7. Dab cement to threads as previously done.

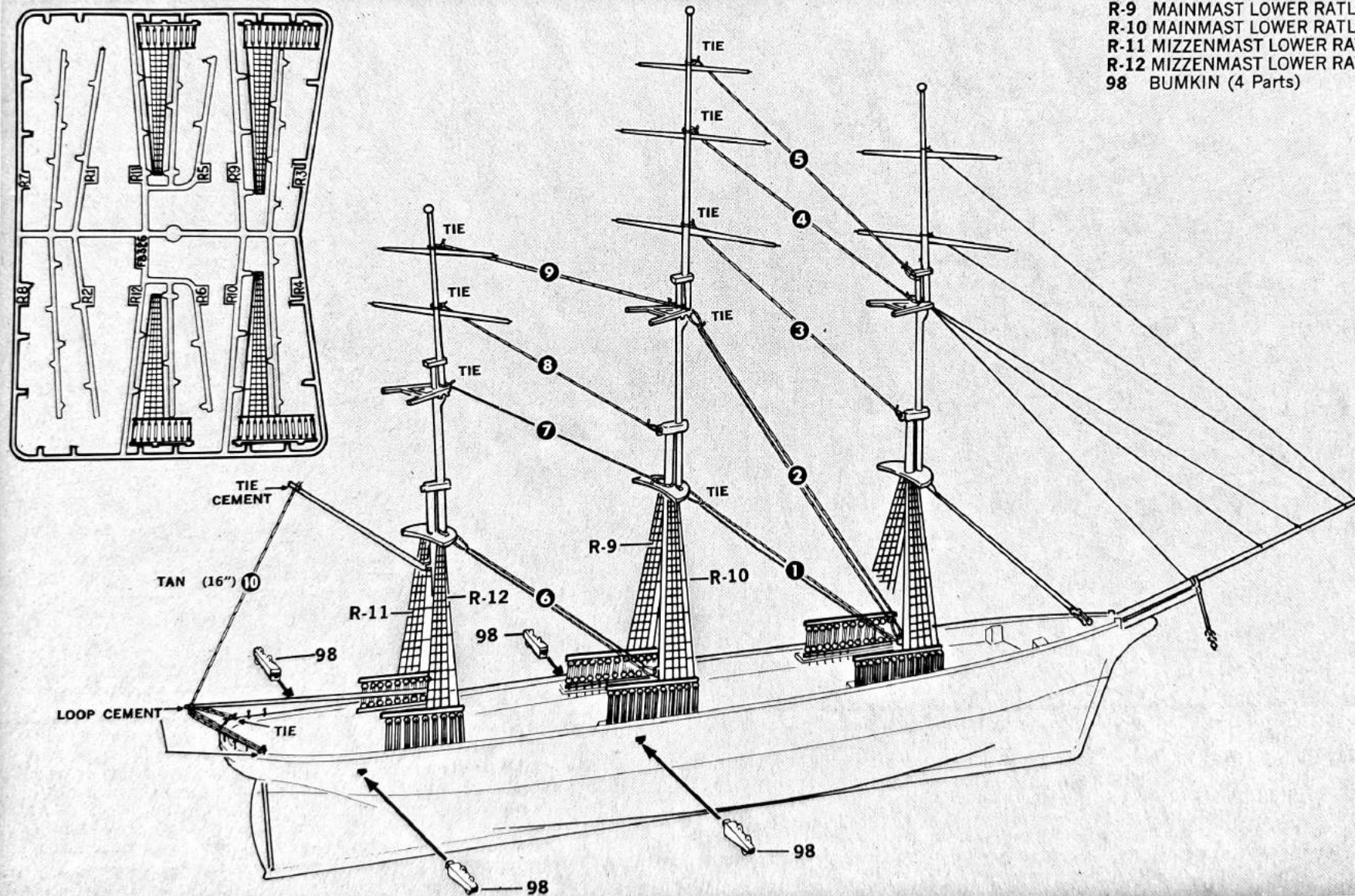
R-7 FOREMAST LOWER RATLINES — LEFT R-8 FOREMAST LOWER RATLINES — RIGHT



STANDING RIGGING

1. Cement the MAIN MAST assembly to the DECK.
2. Cement RATLINES (R-9) and (R-10) in place.
3. Cement two BUMKINS (98) to each side of HULL as shown.
4. Now tie loose ends of LINES ①, ②, ③, ④ and ⑤, previously tied to FORE-MAST, to the MAIN MAST as shown. Start with the lower LINES and work toward the top.
5. Cement MIZZEN MAST assembly to the DECK and then cement RATLINES (R-11) and (R-12) in place.
6. Tie loose ends of LINES ⑥, ⑦, ⑧ and ⑨ from the MAIN MAST to the MIZZEN MAST as shown. Start with the lower LINES and work toward the top.
7. Cut length of tan thread ⑩ indicated, tie one end to the GAFF. Then wrap to the end of BOOM, down to an UPRIGHT or right side of HULL. Wrap around UPRIGHT and back up to BOOM. Wrap around BOOM, and then down to an UPRIGHT on left side of HULL. Wrap around UPRIGHT and tie at BOOM.
8. Dab cement to thread as previously done.

R-9 MAINMAST LOWER RATLINES — LEFT
 R-10 MAINMAST LOWER RATLINES — RIGHT
 R-11 MIZZENMAST LOWER RATLINES — LEFT
 R-12 MIZZENMAST LOWER RATLINES — RIGHT
 98 BUMKIN (4 Parts)



SAILS

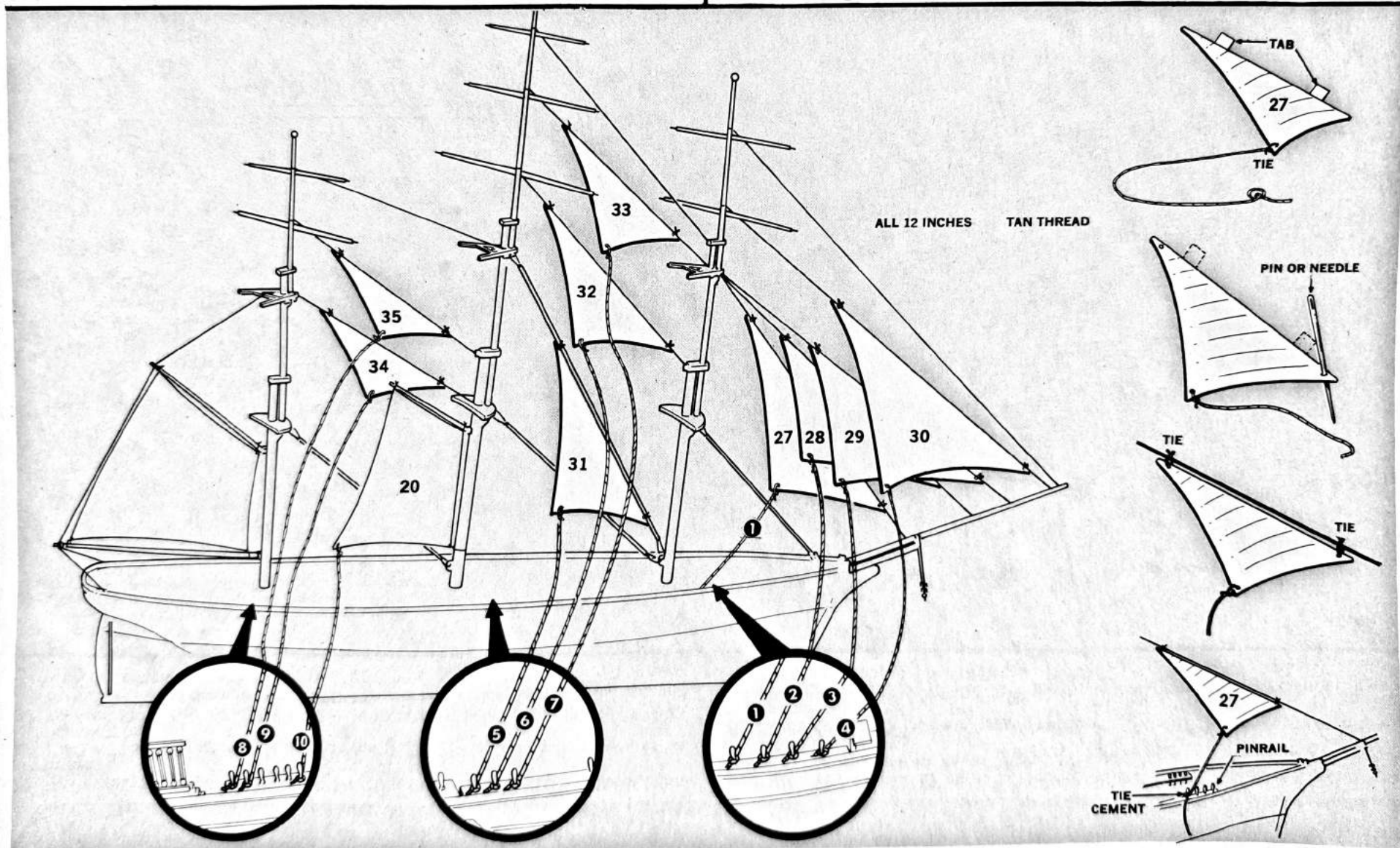
JIBS

- 27 FORE STAYSAIL
28 INNER JIB
29 OUTER JIB
30 FLYING JIB

STAYSAILS

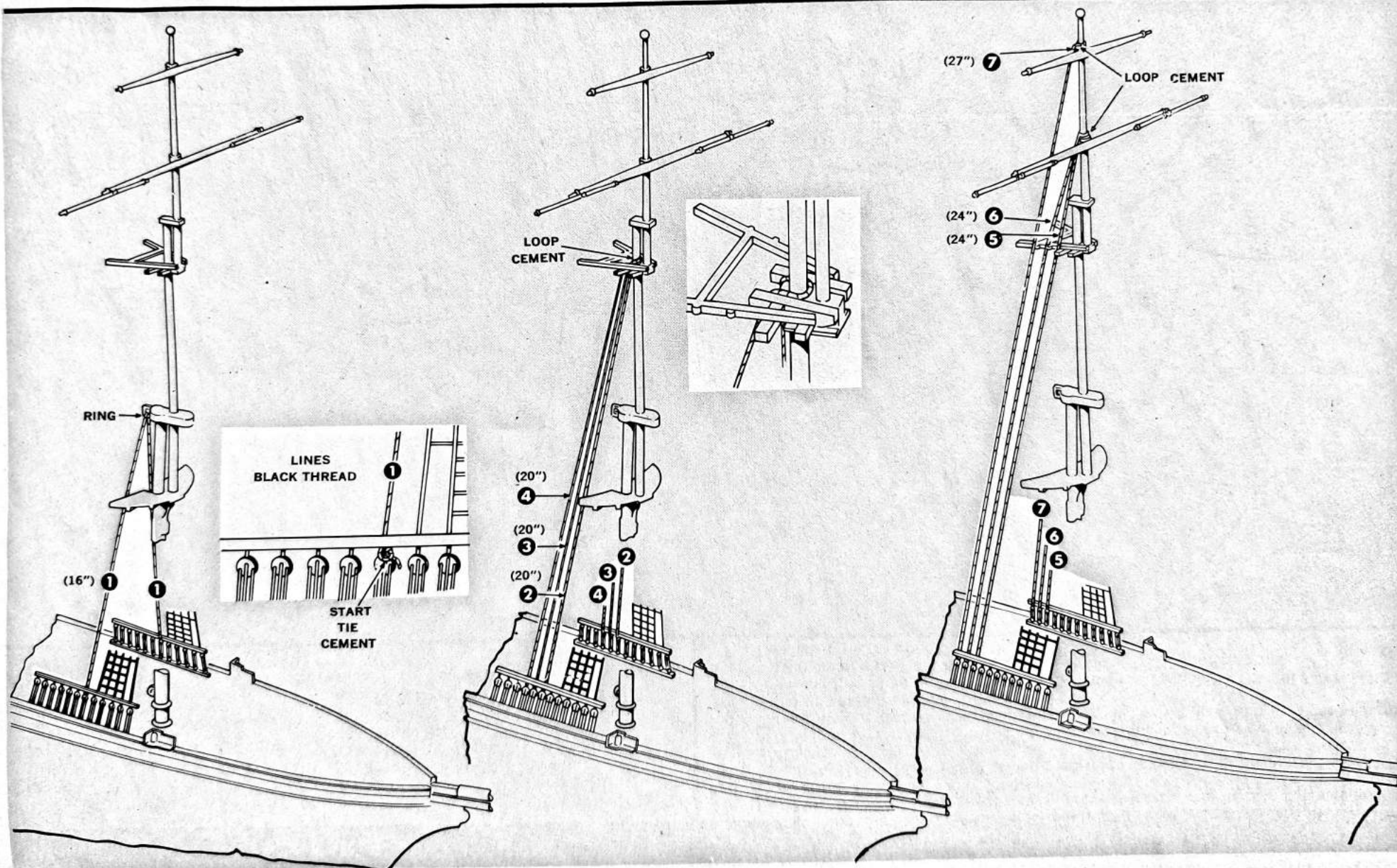
- 31 MAIN TOPMAST STAYSAIL
32 MAIN TOPGALLANT STAYSAIL
33 MAIN ROYAL STAYSAIL
34 MIZZEN TOPMAST STAYSAIL
35 MIZZEN TOPGALLANT STAYSAIL

1. Cut SAIL (27) from sheet with tabs attached. Pierce hole in corner opposite the tabs. Tie tan thread 12 inches long in hole.
2. Attach to STANDING RIGGING using the same method as previously used for MAIN SAILS.
3. Attach long thread to PIN RAIL in position shown in enlarged view of this area.
4. Thread may be looped around pin and cemented or you may find it easier to form a knot in thread and slip it down over pin.
5. Following this same procedure install in sequence remaining JIBS and STAY SAILS. A 12 inch length of tan thread is adequate for all SAILS in this step.
6. Tie LINE 10 from SPENCER SAIL (20) to PIN RAIL.



FOREMAST BACKSTAY RIGGING

1. This installation is part of the STANDING RIGGING so all LINES will be of black thread.
2. The LINES work progressively back on the DEADEYES on each side as well as up the MAST.
3. Tie LINE ① to first DEADEYE in back of RATLINES, lead up and through EYE on back of MAST and down to front DEADEYE on opposite side. Tie LINE, cement, and when dry, cut off excess thread.
4. LINES ②, ③ and ④ all go to the CROSSTREE and between MAST sections, as shown in enlarged diagram. Those LINES should be tied to the DEADEYES as LINE ①.
5. LINES ⑤ and ⑥ locate in forward notches in CROSSTREE and wrap around MAST as shown.
6. LINE ⑦ ties to last DEADEYE on each side and locates in rear notch in CROSSTREE, and wraps around MAST.



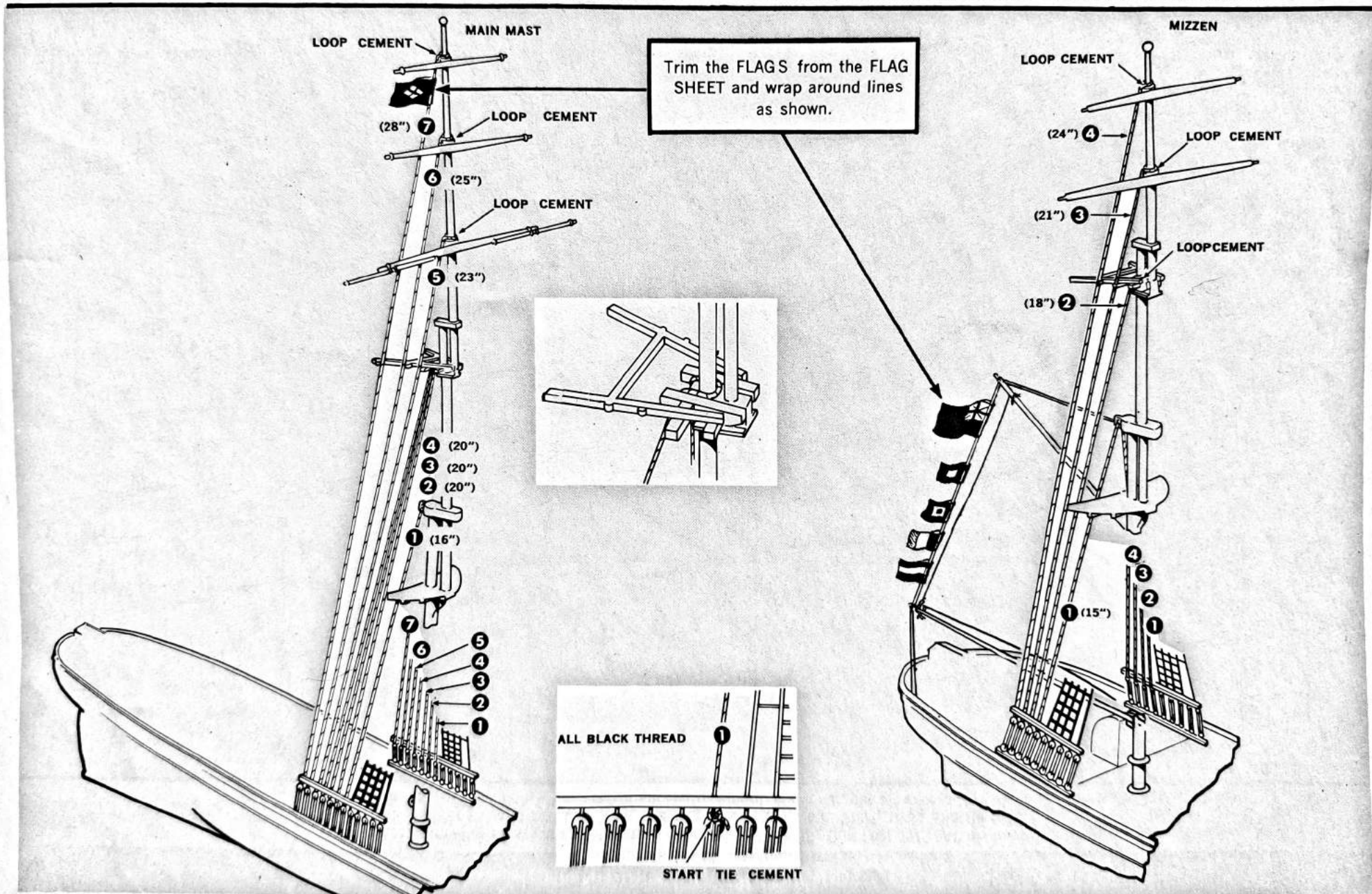
MAIN MAST RIGGING

1. The MAIN MAST BACKSTAYS are identical in number to the FOREMAST and in position except for LINES 5, 6 and 7 locate on the MAST as shown on the illustration.
2. Install LINES in same manner as FOREMAST: LINE 1 goes through the EYE.

3. LINES 2, 3 and 4 to CROSSTREE and between MAST sections, and 5, 6 and 7 to YARDS.

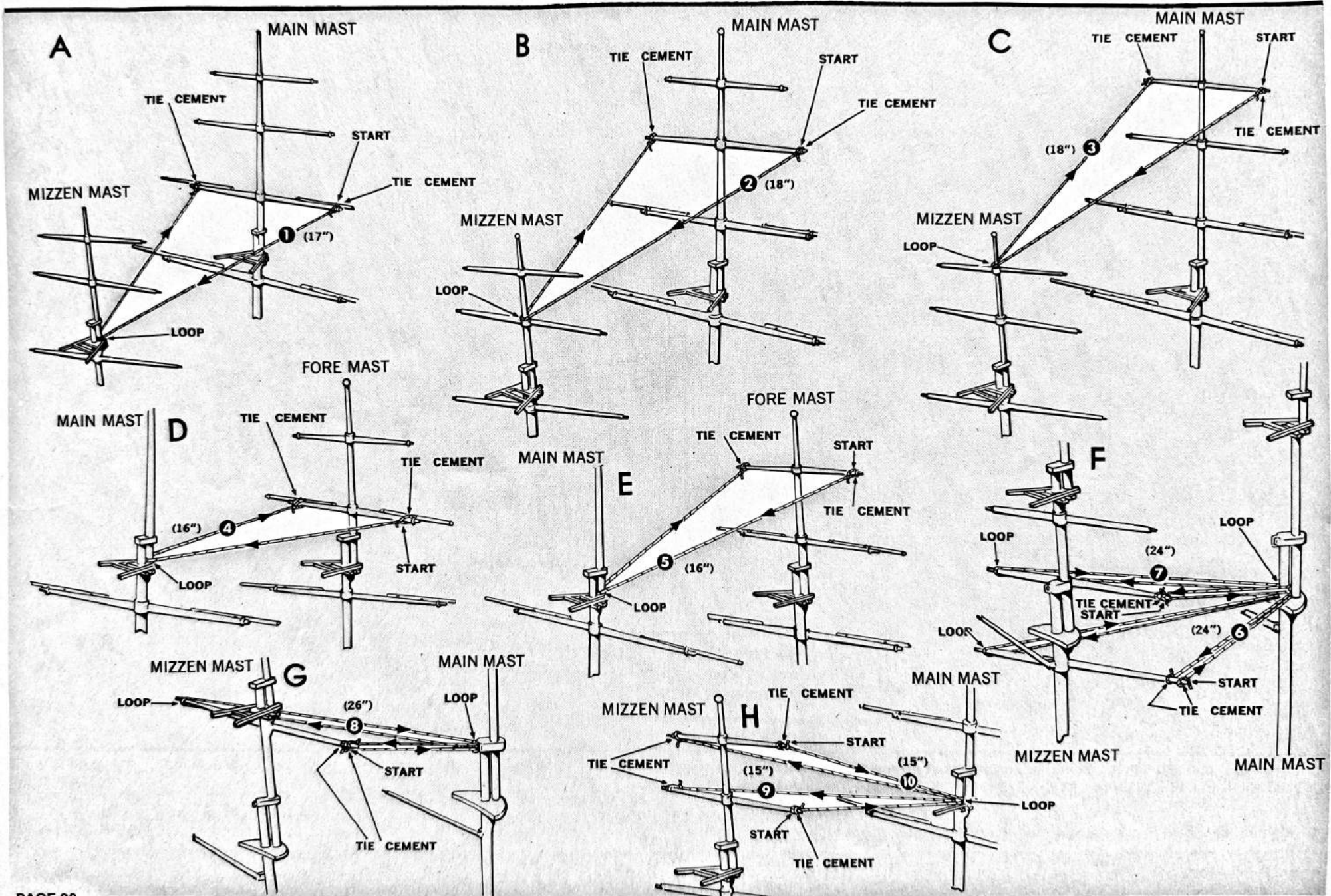
MIZZEN MAST RIGGING

4. Only FOUR LINES are used on the MIZZEN MAST RIGGING. Install those LINES in same manner as previously described by following the illustrations.



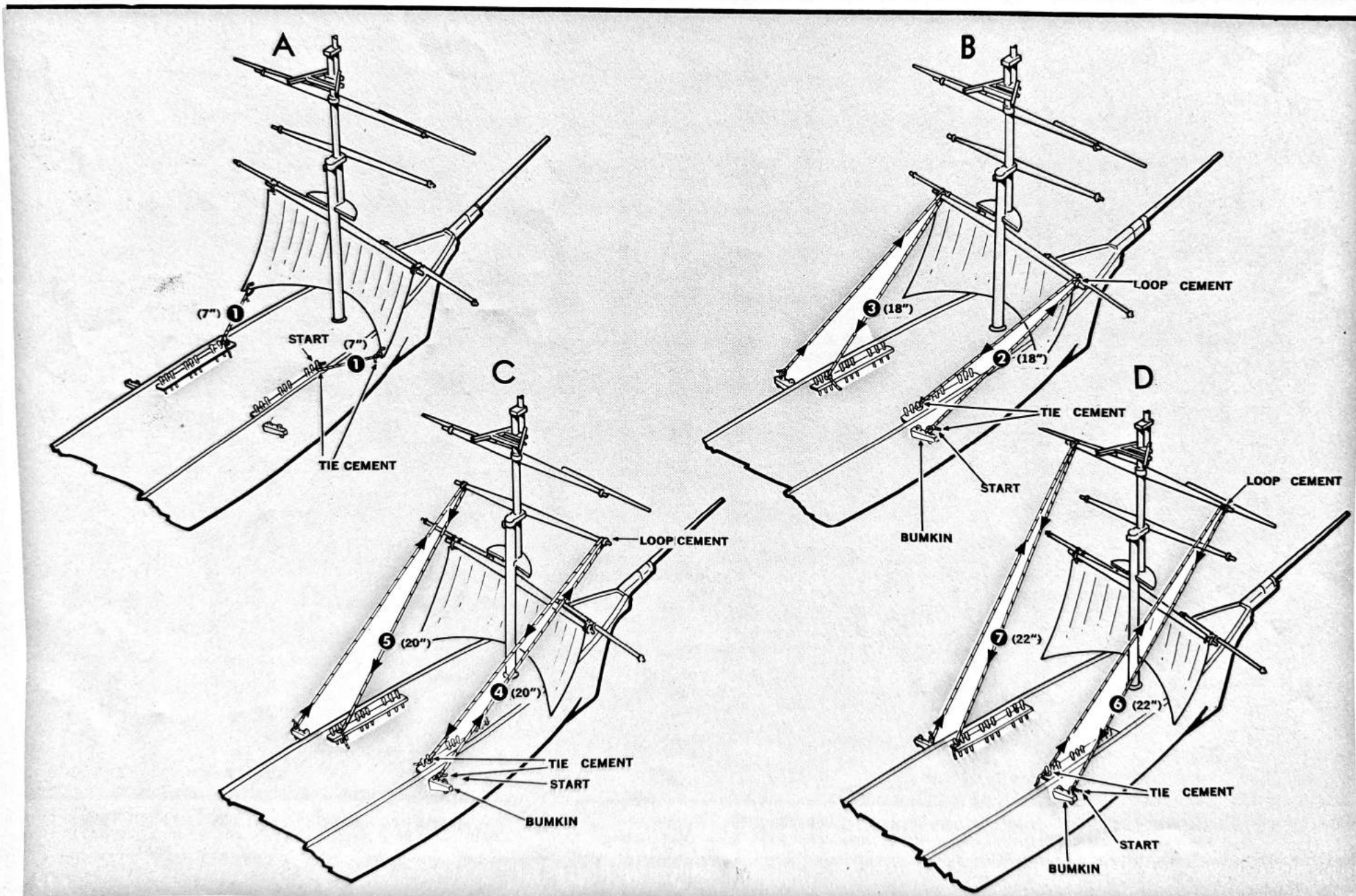
RUNNING RIGGING UPPER YARDS

Each drawing shows the installation of individual LINES. Cut TAN THREAD to indicated length and proceed from Drawing A to B to C, etc. Start, wrap and tie off as shown. Touch each tie, wrap or knot with cement. When set, cut off excess thread.



RUNNING RIGGING FOREMAST LOWER YARDS

1. Cut TAN THREAD to indicated length, tie to LOWER SAIL and PIN RAILS as shown in **A**.
2. Install a TAN LINE from PIN RAIL to LOWER YARD and back to FORWARD BUMKIN as shown in **B**.
3. Install a TAN THREAD from PIN RAIL to YARD and back to BUMKIN as shown in **C**.
4. Install a TAN THREAD from PIN RAIL to YARD and back to BUMKIN as shown in **D**.



FINAL RUNNING RIGGING

1. Cut and install LINES from SAILS to PIN RAILS as shown in A.
2. Cut and install TAN LINES from YARD to PIN RAILS as shown in B.

3. Cut and install TAN LINES from YARD to PIN RAILS as shown in C.
4. Cut and install TAN LINES from YARD to PIN RAILS and BUMKINS as shown in D.

