AUSTRALIAN COLONIAL SERIES WOODEN MODEL KIT

HMS SUPPLY 1759

SCALE 1:60

Modellers Shipyard

www.modelshipyard.com.au

LENGTH: 610mm HEIGHT: 580mm

ITEM CODE: KTMS1015

BUILDING INSTRUCTIONS

1.0 Introduction

Modeller's Shipyard is proud to present another wooden model ship in our Australian colonial vessel series. We are the only manufacturer of wooden period model ships in Australia.

Our model of the HMS *Supply* was designed & built by Leon Griffiths, Master Period Ship Modeller. The kit is double planked on bulkhead construction with laser cut plywood. The kit comes complete with all timber, rigging cord and fittings. All parts and fittings are of the highest quality.

2.0 Historical Notes

The HMS *Supply* was a small armed tender that sailed with the First Fleet and played an important part in the foundation of Australia.

Built in 1759 the *Supply* was 175 tons, 70ft (21m) long and 26ft (8 m) wide. As a small Royal Navy ship based in Portsmouth she carried naval stores between the different naval yards on the Thames and Channel ports for 27 years.

When it was decided to establish a penal colony in New South Wales the Royal Navy had difficulty in finding a suitable ship to be a tender for the flag ship HMS *Sirius* for the long and hazardous journey to New South Wales. Several ships were considered but were not seen as suitable for the journey. A French store ship, the *Eclipse* had been damaged when it ran ashore; and an American ship, the *Rattlesnake* was not of suitable quality. The Navy purchased the British made *Grantham*, a packet boat, used for the quick transport of mail. When it was partly taken apart for repairs, the Navy decided it needed so much work, that it would cost too much to repair or rebuild it.

The Royal Navy then selected the *Supply* which was refitted as an armed tender. Her primary role as a ship of the First Fleet was to support the First Fleet flag ship HMS *Sirius* (1786). The First Fleet carried the convicts and soldiers to New South Wales to establish a penal colony. The ships left England in May 1787 and arrived in New South Wales in January 1788. This was the start of European settlement of Australia.

HMS *Supply* was the oldest, smallest and fastest of the eleven First Fleet ships. She was a brig rigged sloop. A sloop is a small ship with a single gun deck. A brig rig means the ship had two masts and carried square sails. She had eight small three pounder guns and carried 50 men.

Supply left Spithead on 13 May 1787, and arrived at Botany Bay on 18 January 1788 with the First Fleet under the command of Captain Arthur Phillip (who had transferred from the HMS *Sirius* at Cape Town). She was captained by Henry Lidgbird Ball and the surgeon was James Callam. *Supply* was the first ship to sail into Port Jackson after the original Botany Bay landing was found unsuitable for settlement.

After the establishment of the initial settlement at Port Jackson, *Supply* was the link between the colony and Norfolk Island, making 10 trips. Following the loss of *Sirius* in March 1790 at Norfolk Island *Supply* became the colony's only link with the outside world. On 17 April 1790 she was sent to Batavia for supplies, returning on 19 September, having chartered a Dutch vessel, the *Waaksamheid*, to follow with more stores.

HMS *Supply* left Port Jackson on 26 November 1791 and sailed via Cape Horn reaching Plymouth on 21 April 1792. She was sold at auction in July that year, renamed *Thomas and Nancy*, and carried coal in the Thames area until 1806.

3.0 General Instructions

These instructions and kit are designed to make the construction of the model as trouble free as possible. Everyone who completes their model in accordance with these instructions and using the materials supplied will have good cause for pride and satisfaction in their achievement.

1. It is **essential** that the modeller study these instructions and associated photos & drawings thoroughly before commencing construction. While reading these instructions, familiarise yourself with the contents of the kit.

2. Parts are numbered in the approximate order of assembly—note there are some minor variations in this numerical order. Parts are identified as, for example P25 — means Part No 25.

3. Few, if any, parts can be simply glued in place without some preparation. Always dry fit parts and if necessary reshape the parts before final gluing.

4. Don't hurry. Take your time. If you are uncertain of anything take the time to study the instructions, the diagrams and photos and your kit parts. Most problems will be overcome with a little time spent pondering the issue at hand.

5. Check the contents of the kit against the Parts List. Note that some parts need to be made by the modeller from the stock of timber supplied in the kit.

6. The construction of a wooden model ship can be divided into the following steps.
   - Hull Construction
   - Deck & Deck Furniture
   - Masts & Yards
   - Rigging

These written building instructions are to be followed to build your model.

For the modeller who would like additional detail on particular techniques on building this model, a DVD on "How to Build the HMS *Supply"* is available from Modeller's Shipyard. In this DVD there is 5 hours of narration and demonstration by a master modeller as the model is built. There are many techniques and tips presented on every detail of building the HMS *Supply* from opening the box to putting the finishing touches of the rigging. ***Note:*** **There are some features and fittings shown on the model being built in the DVD that may not be in the kit. Also the DVD may not necessarily follow the same building steps presented in the written instructions.**

For further details on this DVD see our website www.modelshipyard.com.au — see Training Materials on our home page or call our office.

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SHEET 1

4.0 Parts List (Modellers Shipyard reserves the right to make changes to the instructions, components &/or kit contents at any time without notice)

Part No	Description	Quantity	Material
1-15	Bulkhead Frames	15	4mm Plywood
16	Transom	1	4mm Plywood
17	Keel	1	4mm Plywood
18	Main-Aft Deck Bulkhead	1	4mm Plywood
19	Main-Fore Deck Bulkhead	1	4mm Plywood
20A-B	Bow Blocks - Outer	2	4mm Plywood
21A-B	Bow Blocks - Inner	2	4mm Plywood
22A-B	Stern Counters - Inner	2	4mm Plywood
23A-B	Stern Counters - Outer	2	4mm Plywood
24	Main Deck	1	2mm Plywood
25	Aft Deck	1	2mm Plywood
26	Fore Deck	1	2mm Plywood
27A-B	Stern Blocks	2	4mm Plywood
28	Limewood—2x5x500mm	50	Timber Stock
29	Stern Post	1	4mm Plywood
30	Keel—False	1	4mm Plywood
31	Stem Post	1	4mm Plywood
32	Copper Plates	1300	Bag
33	Teak—0.6x5x500mm	30	Timber Stock
34	Silver Ash—0.6x4x300mm	35	Timber Stock
35	Beech—2x5x500mm	2	Timber Stock
36	Beech—Flexible 2x5x250mm	1	Timber Stock
37	Limewood—1.5x5x500mm	4	Timber Stock
38	Walnut—2x3x400mm	3	Timber Stock
39	Limewood—1x2x500mm	2	Timber Stock
40	Rudder Post	1	4mm Plywood
41	Rudder Hinges	4	Parts Card 2
42	Nails—Brass	Pkt	Parts Card 2
43	Rudder Tiller	1	4mm Plywood
44A-D	Rudder Box	4	2mm Plywood
45	Hinges	14	Parts Card 2
46	Walnut –1x1x200mm	3	Timber Stock
47	Doors	2	2mm Plywood
48	Beech—Flexible—2x2x500	1	Timber Stock
49	Gun Port Lids	4	2mm Plywood
50	Cleats	14	Parts Card 2
51	Deck Cannons	4	Parts Card 2
52	Aft Deck Hatch Base	1	2mm Plywood
53	Eye Pins	Pkt	Parts Card 2
54	Rings	Pkt	Parts Card 2
55	Stanchions—Banister	4	Parts Card 3
56	Ladder Platform	1	2mm Plywood

Part No	Description	Quantity	Material
57A-G	Aft Deck Ladder	1	2mm Plywood
58	Capstan Base	1	2mm Plywood
59	Capstan	1	Parts Card 2
60	Pumps	2	Parts Card 2
61A-B	Cargo Hatch Base A & C	2	2mm Plywood
62	Cargo Hatch base B	1	2mm Plywood
63	Walnut—1x4x250mm	3	Timber Stock
64A	Belfry Stand	1	4mm Plywood
64B-C	Belfry Roof	2	2mm Plywood
65	Wire—Brass—1x30mm	1	Parts Card 3
66	Bell	1	Parts Card 3
67	Anchor Winch	1	Parts Card 2
68	Fore Deck Hatch Base	1	2mm plywood
69	Walnut—5x5x300mm	1	Timber Stock
70	Walnut 2x5x150mm	1	Timber Stock
71	Pin Rail Braces	2	2mm Plywood
72	Belaying Pins	16	Parts Card 3
73	Mast Cheeks	4	2mm Plywood
74	Limewood—5x5x100mm	1	Timber Stock
75	Beech—2x4x150mm	1	Timber Stock
76	Walnut—2x4x65mm	1	Timber Stock
77	Stanchions—Netting	8	Parts Card 3
78	Netting	1	Parts Card 3
79	Dowel—2mm— 350mm	3	Timber Stock
80A-B	Cathead Knees	2	2mm Plywood
81A-B	Hawse Plates	2	2mm Plywood
82A-B	Stem Post Decorations	2	2mm Plywood
83	Hawse Pipes	2	Parts Card 1
84	Anchors	2	Parts Card 2
85	Cord—2mm	1	Parts Card 1
86	Euphore Block.	2	2mm Plywood
87A-E	Fore Deck Ladder	1	2mm Plywood
88	Walnut—4x4x50mm	1	Timber Stock
89	Culverins	2	Parts Card 2
90	Stern Decoration	1	2mm Plywood
91	Stern Name Plate	1	2mm Plywood
92	Chain—Rudder	1	Parts Card 2
93A-B	Side Gallery Windows	2	2mm Plywood
94	Window Glazing	1	Parts Card 3
95A-B	Channels—Foremast	2	2mm Plywood
96A-B	Channels—Main Mast	2	2mm Plywood
97	Mast Top—Foremast	1	2mm Plywood

Part No	Description	Quantity	Material
98	Mast Top	1	2mm Plywood
99	Trestle Trees—Fore & Main	4	2mm Plywood
100	Cross Trees- Fore & Main	4	2mm Plywood
101	Limewood—2x2x100mm	1	Timber Stock
102	Fore & Main Top– Trestle Trees	4	2mm plywood
103	Fore & Main Top—Cross Trees	4	2mm Plywood
104	Dowel—5mmx500mm	2	Timber Stock
105	Dowel—6mmx400mm	1	Timber Stock
106	Dowel—4mmx(330+250)	2	Timber Stock
107A-B	Mast Cap—Lower Masts	2	4mm Plywood
108A-B	Mast Cap—Upper Masts	2	4mm Plywood
109	Dowel—8mm x250mm	1	Timber Stock
110	Limewood—1x4x200mm	2	Timber Stock
111	Dowel—3mm x 300mm	1	Timber Stock
112	Mast Cap—Bowsprit	1	4mm Plywood
113A-B	Bees	2	2mm Plywood
114	Mast Heel—Main	1	4mm Plywood
115	Mast Heel—Fore	1	4mm Plywood
116	Bowsprit Saddle	1	4mm Plywood
117	Footrope Stirrups	20	Parts Card 3
118	Yoke—Gaff	1	2mm Plywood
119	Yoke—Boom	1	2mm Plywood
120	Cord G—0.25mm Fawn	1	Parts Card 1
121	Cord H—0.5mm Fawn	1	Parts Card 1
122	Cord J—1mm Black	1	Parts Card 1
123	Deadeyes N—3mm	16	Parts Card 3
124	Deadeyes P—5mm	60	Parts Card 3
125	Deadeye Heart Q—7mm	14	Parts Card 3
126	Wire—Brass—0.5x1000mm	2	Parts Card 3
127	Walnut—2x2x250mm	2	Timber Stock
128	Flag—Red Ensign	1	Parts Card 3
129	Flag—Pennant	1	Parts Card 3
130	Block A—4mm 1 Hole	50	Parts Card 3
131	Block B—5mm 1 Hole	80	Parts Card 3
132	Block C—5mm 2 Hole	7	Parts Card 3
133	Block D—7mm 1 Hole	10	Parts Card 3
134	Block E—7mm 2 Hole	4	Parts Card 3
135	Block F—7mm 3 Hole	4	Parts Card 3
136	Block G—Violin	2	Parts Card 3
137/138	Cradle Parts	4	4mm Plywood
139	Cradle Name Plate	1	2mm Plywood
140	Parrel beads	Pkt	Parts Card 2

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SHEET 2

Plywood Boards

H. M. S Supply 1759

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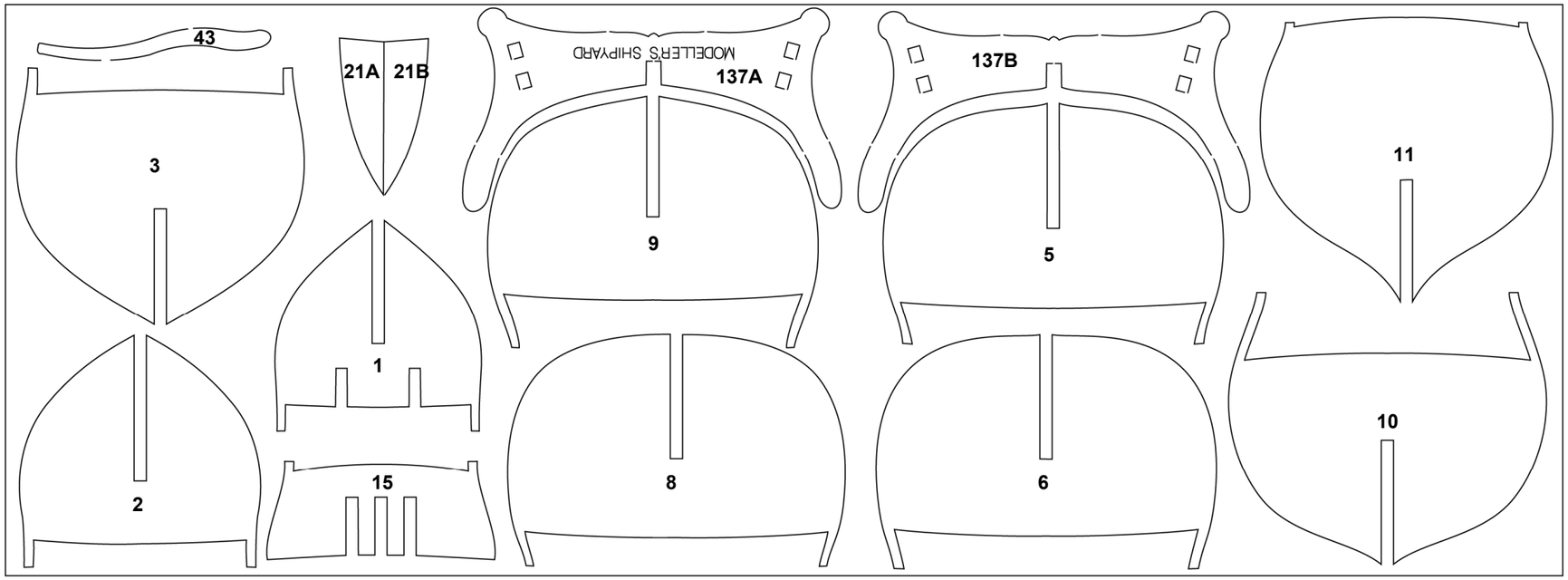
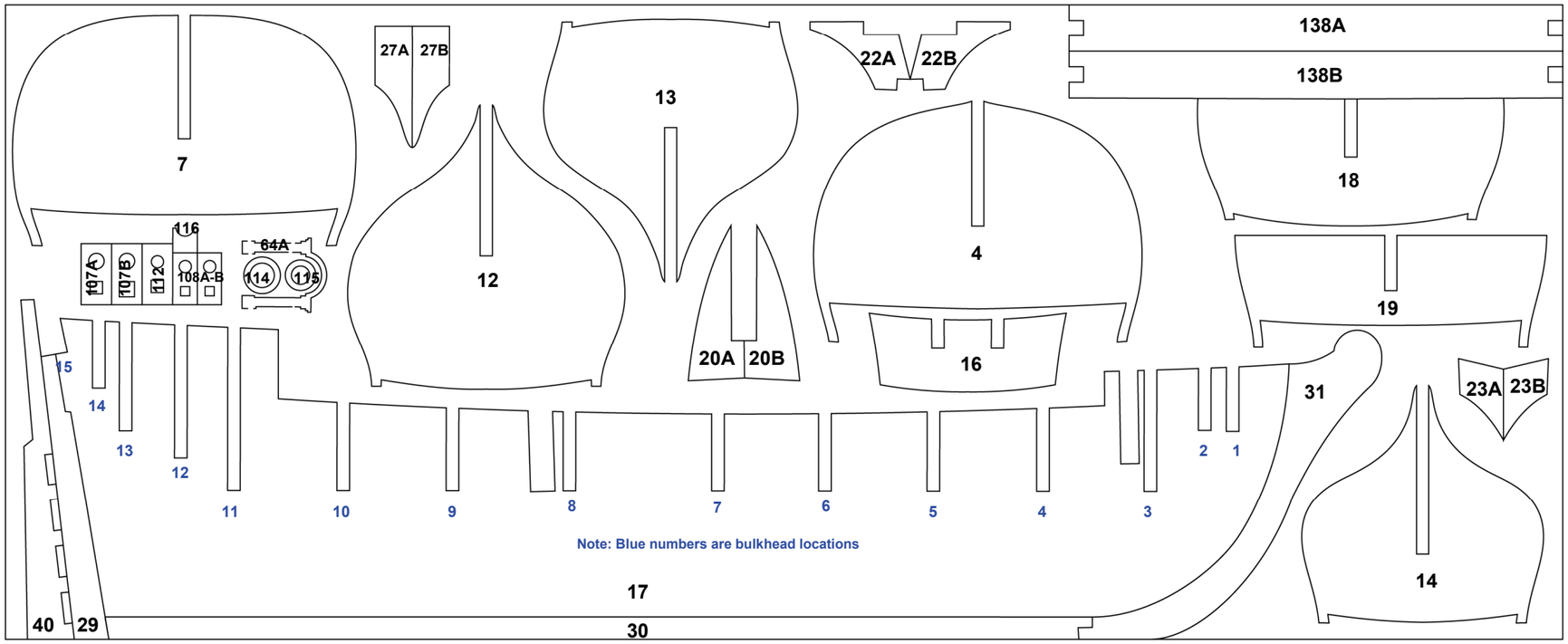
Board 1 - 4mm



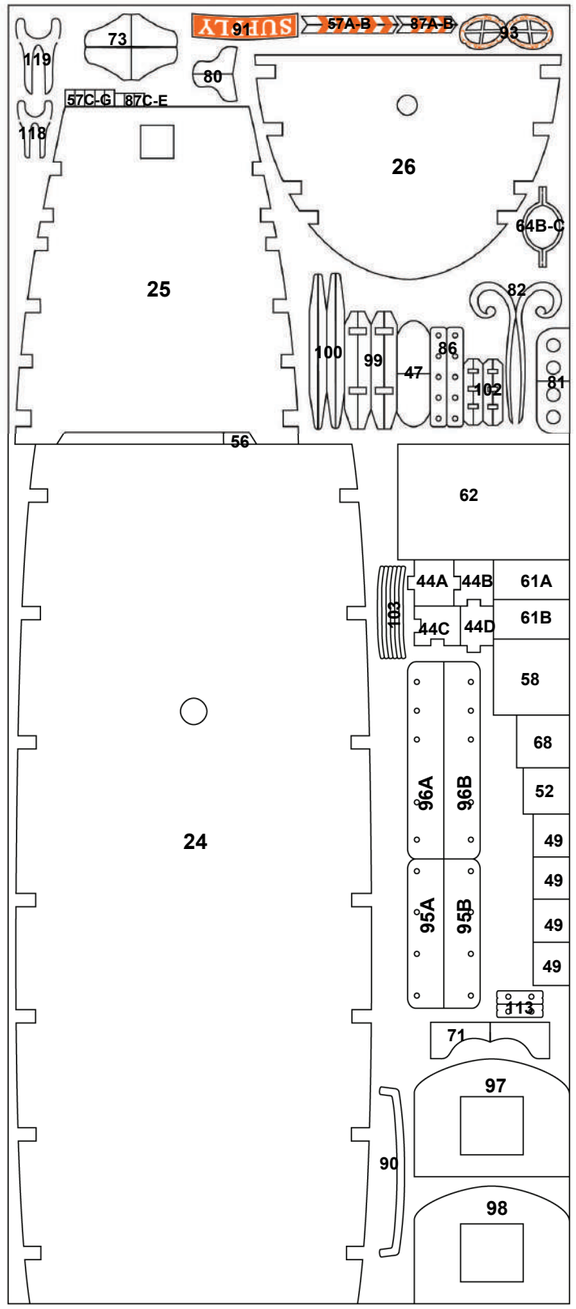


Board 2 - 4mm

Board 4 - 2mm

139

Board 3 - 2mm



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SHEET 3

5.0 Hull Construction

5.1 Assemble the Keel & Bulkhead Frames

Step 1 On the laser cut sheets in your kit use a pencil to mark the relevant numbers on each piece before removing them from the plywood sheets. Remove the keel, bulkhead frames and transom from the 4mm plywood sheet. Use a snap blade knife to carefully cut through the tabs holding the parts to the main sheet.

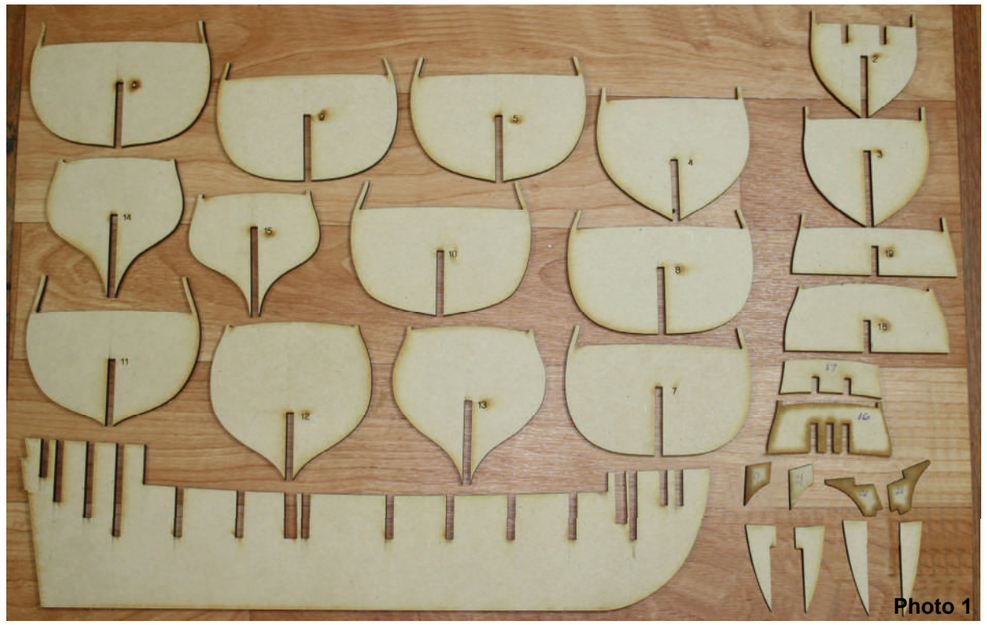


Photo 1

Step 2 Dry fit the bulkhead frames into the keel slots. Do not glue anything at this stage. Do not force the bulkhead frame into the keel slot. You may need to use a flat needle file to fractionally open the slot in the keel and/or bulkhead frame. The fit should be firm but no loose. There may be a need to adjust the slot depth in the keel and/or bulkhead frames to ensure the top edge of bulkhead frames 4 to 10 are flush with the top edge of the keel along the main deck. The same applies to bulkhead frames 1,2,3 & 19 at the fore deck and to bulkhead frames 11,12,13,14,15 & 18 at the aft deck. Do not glue anything at this stage.

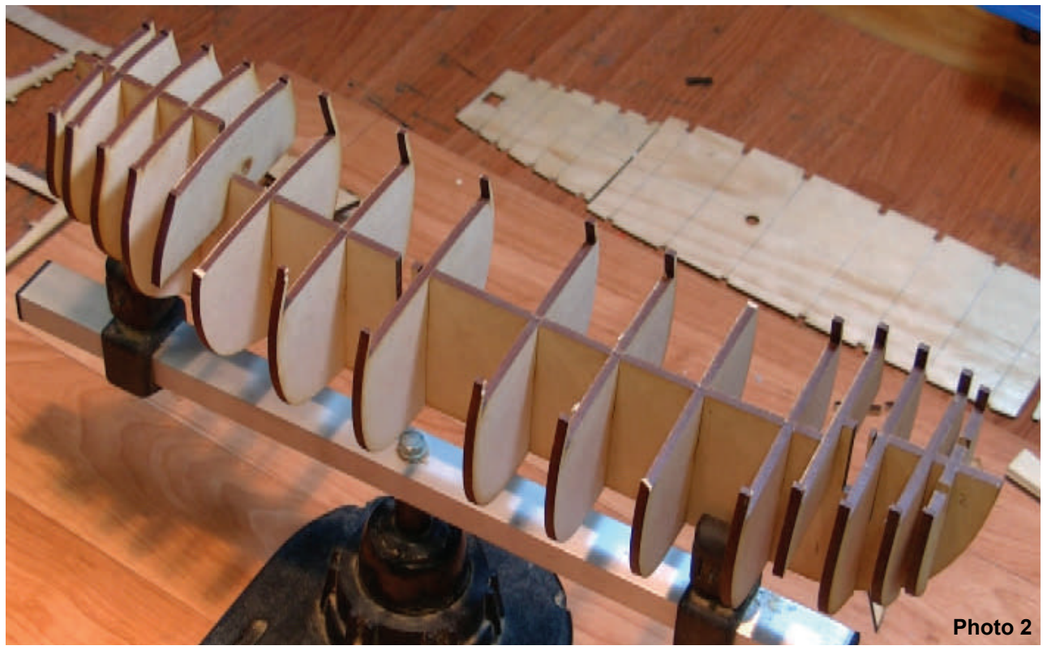


Photo 2

Step 3 You may wish to make a working base as shown Figure 1. This will help to ensure the keel does not become distorted. Cut the slots in the keel supports to correspond with the bulkhead frames.

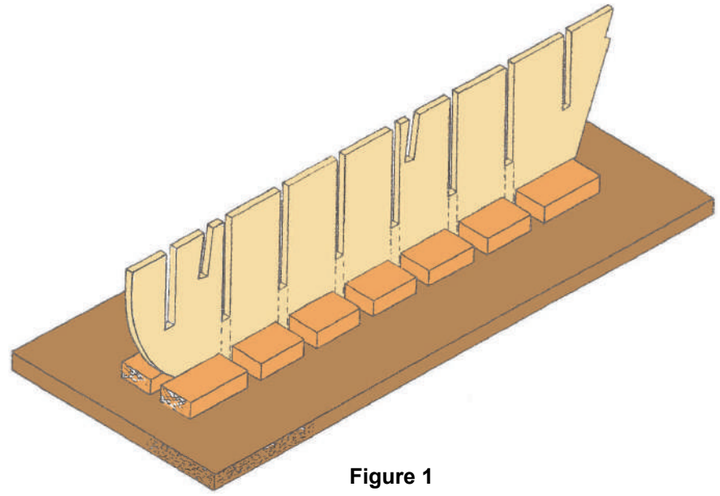


Figure 1

Step 4 Once you are satisfied with the dry fit of the frames and keel, glue bulkhead frames 1 to 14, 18 & 19 in place with PVA glue. It is important to make sure the frames are square to the keel. Using a square piece of timber place it along the keel against a frame. Adjust the frame to ensure it is square to the keel. Place a "bull dog" clip on each side of each frame to ensure it remains square while the glue sets. Place the keel and frame construction aside and allow 24 hours for the glue to set.

Photo 3

Step 5 Bow Filler Blocks

The outer bow filler blocks are P20A/B and the inner bow filler blocks are P21A/B. They provide an area for gluing the planks at the bow. Glue the bow blocks in place as shown each side of the keel. Allow 24 hours for the glue to set.

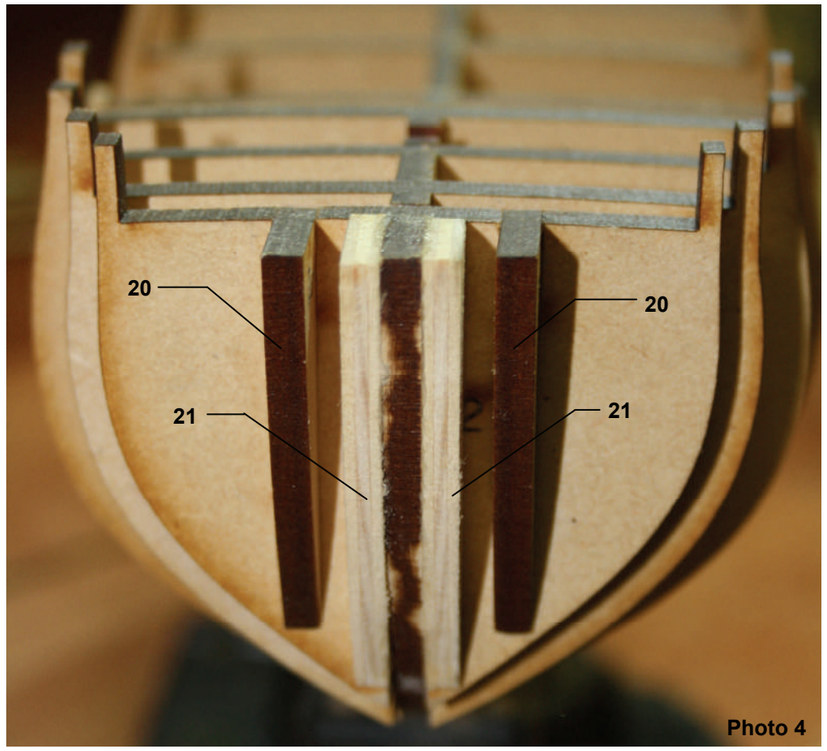


Photo 4

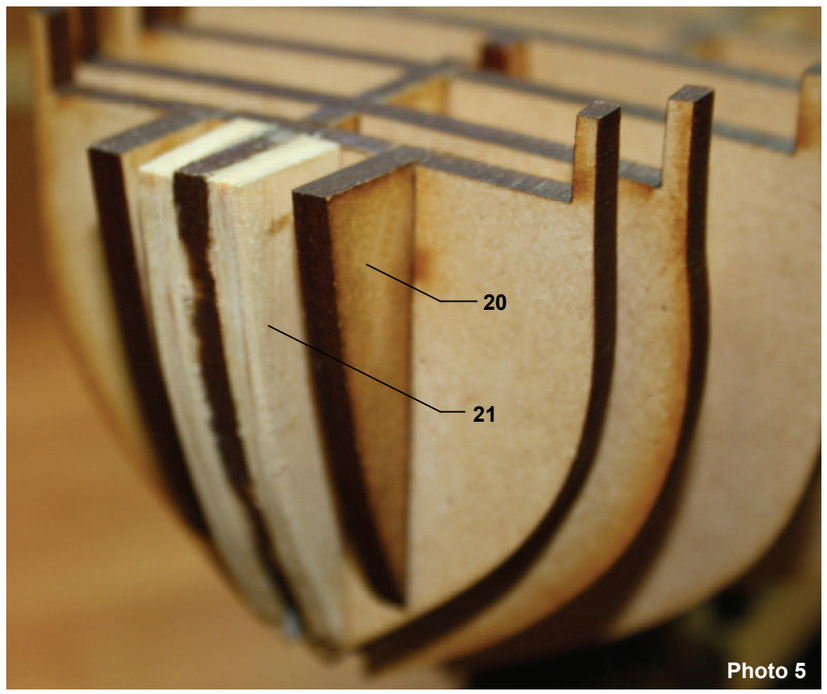
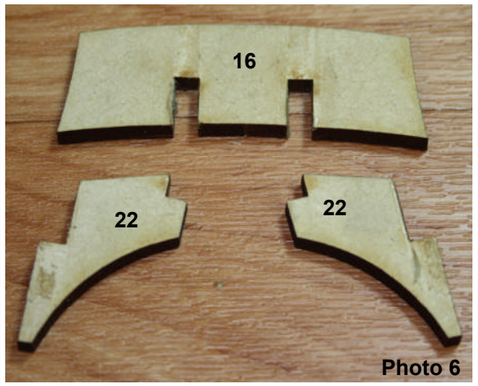


Photo 5

Step 6 Wing Transom

The wing transom is assembled from P15, P16, P22A/B and P23A/B. Identify the parts and assemble as shown **off** the model. Once the glue has set fit the assembled wing transom to the keel using a two part epoxy glue. Use clamps to hold the wing transom in place while the glue sets. Some shaping of P23A/B will be required as shown.



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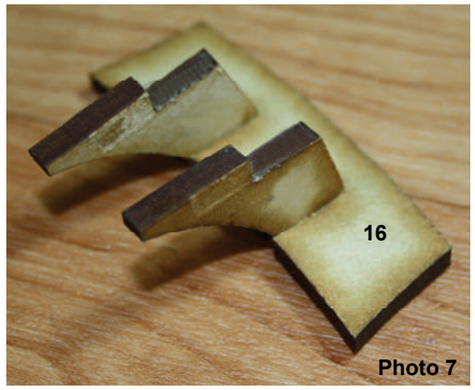


Photo 7

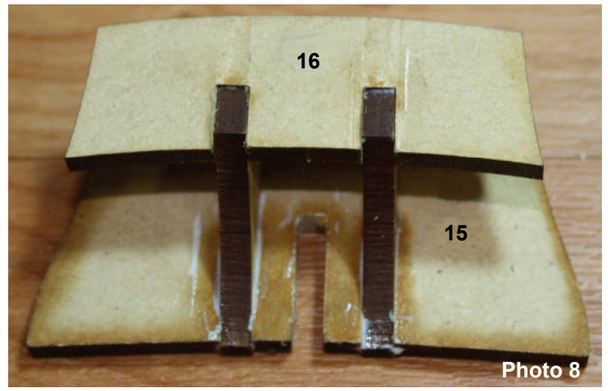
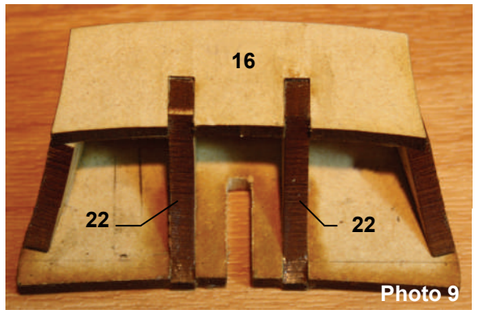


Photo 8



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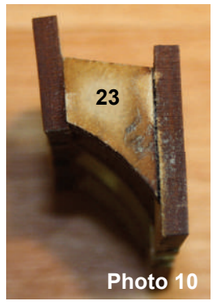

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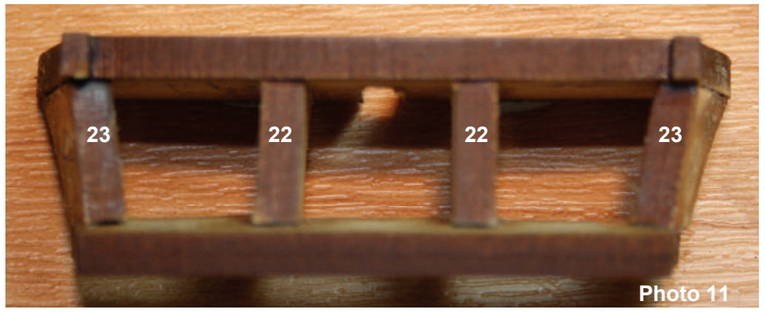

Photo 11

Photo 12

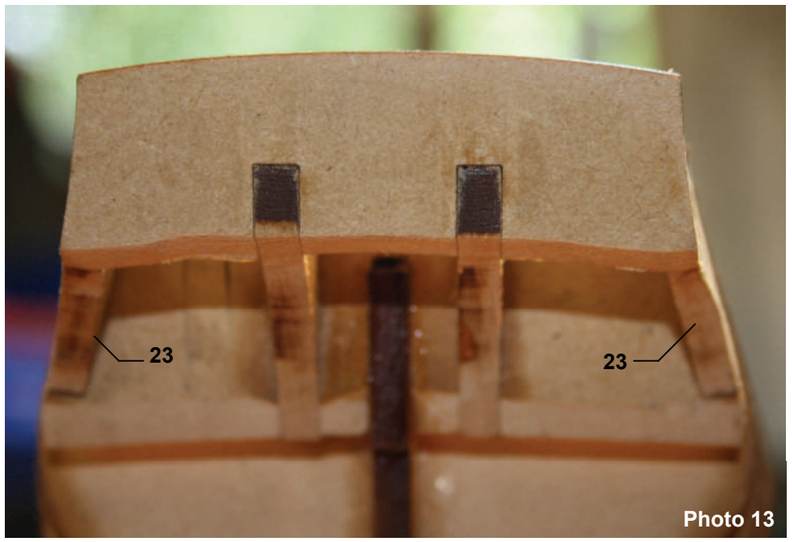

Photo 13

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SHEET 5

5.2 Fit the False Decks

The next step is to fit and fix the false decks to the hull skeleton. The false decks are main deck P24, aft deck P25 & fore deck P26 on the 2mm plywood sheet. Identify these parts. Fitting the false decks at this stage will provide added strength to the whole hull structure.

Dry fit each deck first by adjusting the depth of the deck slots to fit the bulkhead horns. Once the dry fit is satisfactory remove the false decks and apply PVA glue to the tops of the bulkheads and keel. Refit each false deck and insert map pins through the false deck into the keel & bulkheads to hold each deck in place while the glue sets. Start with the main deck followed by the fore deck and lastly fit the aft deck. Before fitting the aft deck run a flat file across the top of the frames to remove the top edge of any frame that may be sitting proud of the keel. This will ensure the deck sits flat across the frames.

Allow 24 hours to dry. Once dry remove all pins. Use a flat file to fair the edge of the decks to the bulkheads.

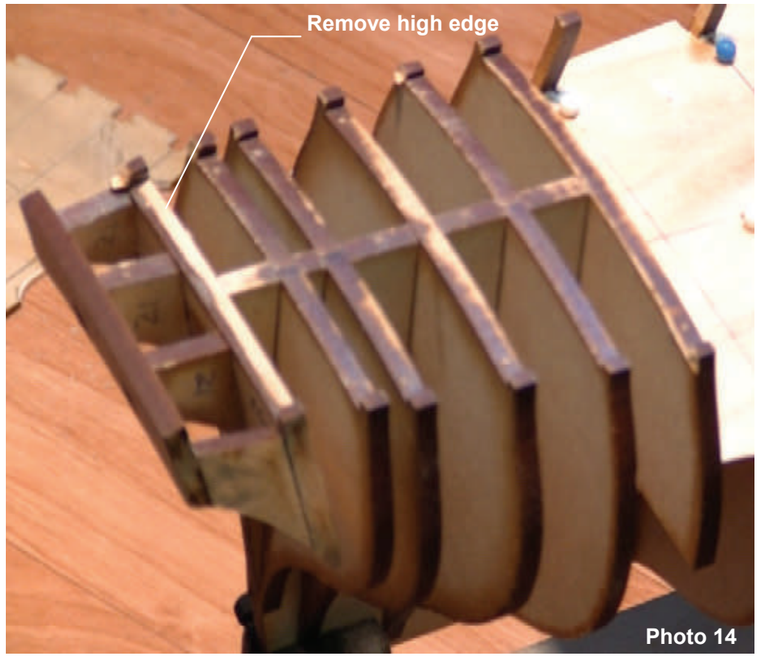

Photo 14

Photo 15

HMS SUPPLY
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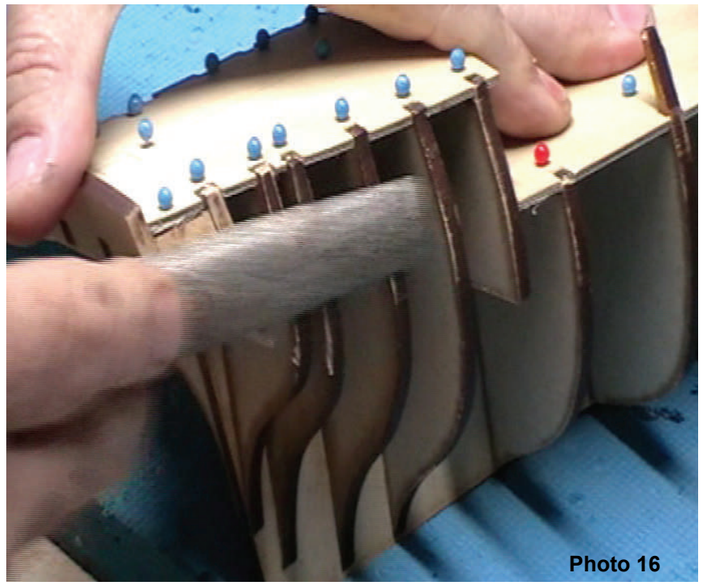
SHEET 6

5.3 Fairing the Frames

“Fairing” the frames is a very important part of the preparation for planking the hull. The principle of “fairing” the frames is to ensure the planks lay flat on the edge of each frame to ensure a good glue bond is established between each plank and the frame of the model and to ensure that when planked the hull is smooth and free of bumps or hollows. Take your time. Completing this process properly will ensure a good finish to the hull.

Lay a plank over a few frames. You will see that the plank does not sit flat across the edge of all the frames—especially at the bow and stern areas. To fair the frames use a file to move across the edges of two frames at a time. Start at the stern area at deck level and moving towards the toe of the keel. Once two frames are complete move to the next one. Always make sure you are filing across two frames. Regularly check by laying a brass batten across the frames. Move to the mid-ship frames applying the same approach. Then move to the bow applying the same approach as above—at the bow fair only the bow blocks—leave the keel untouched. Check across all frames along the complete length of each. Continue the fairing process until you can see the batten will sit flat across each frame.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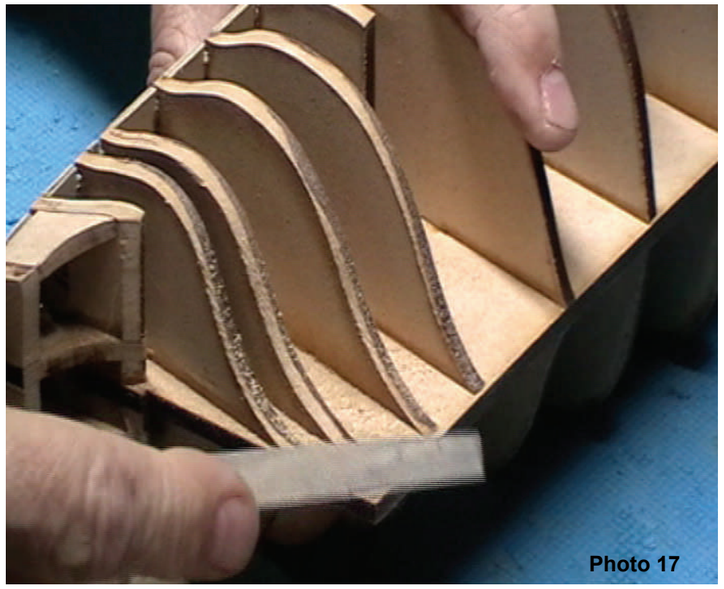
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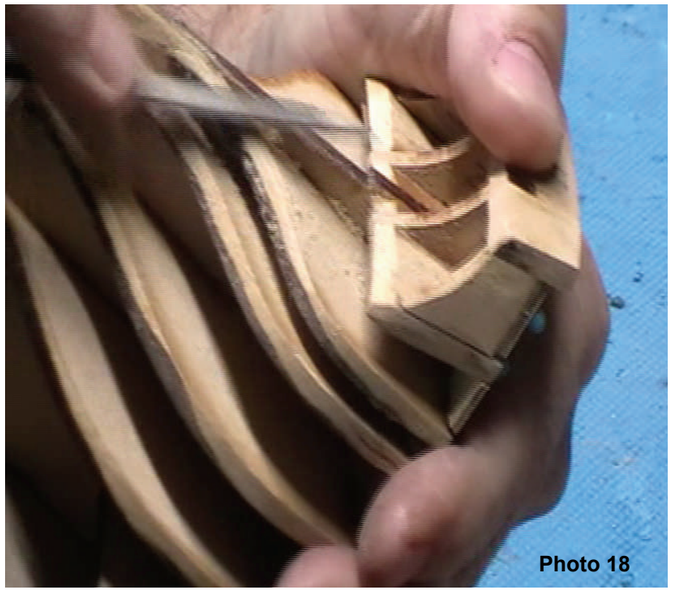
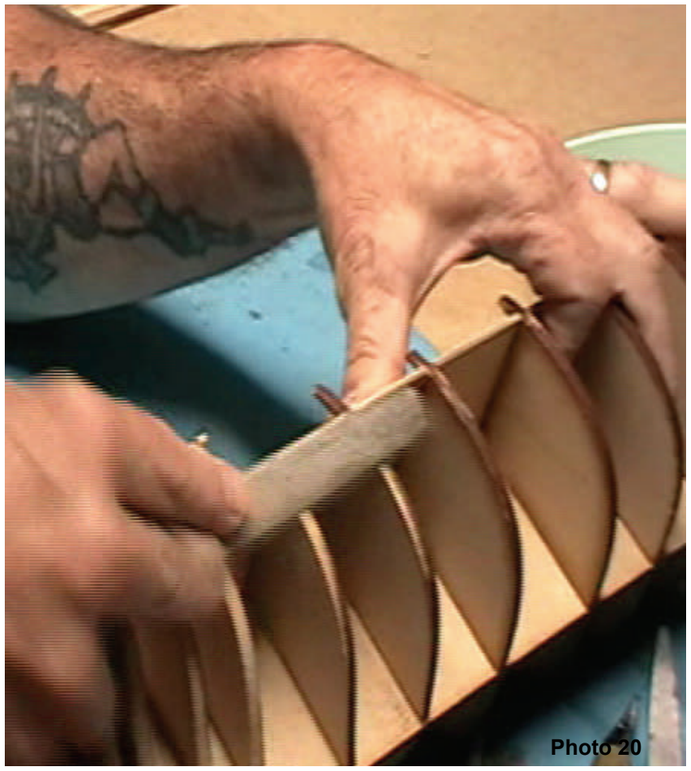


Photo 18


Photo 19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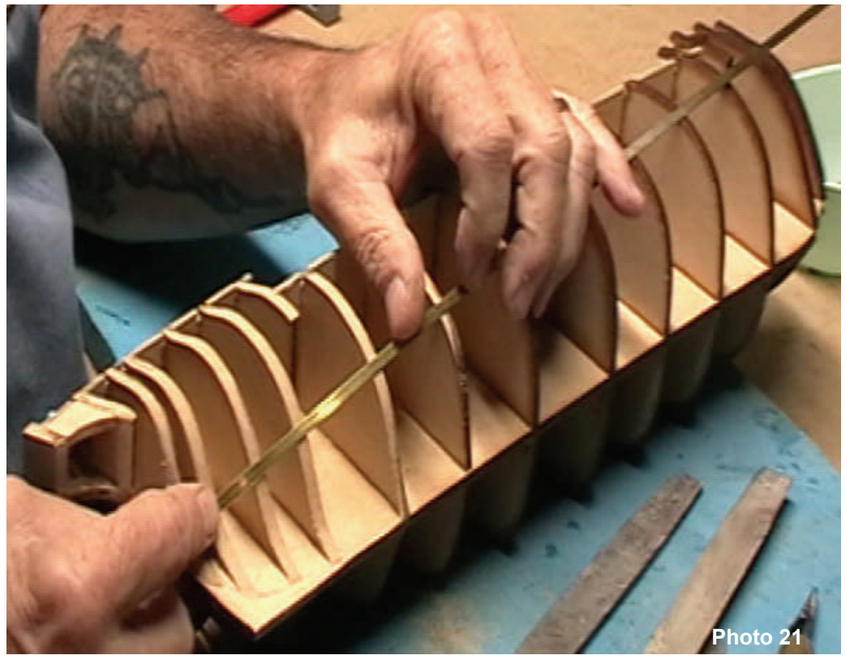
Photo 21

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SHEET 7

Continue the fairing process. Continually check with the batten by laying it over the frames to make sure it is sitting flat across the frames. At the bow only fair the filler blocks either side of the stem keel—do not touch the keel in the stem post area.


Photo 22

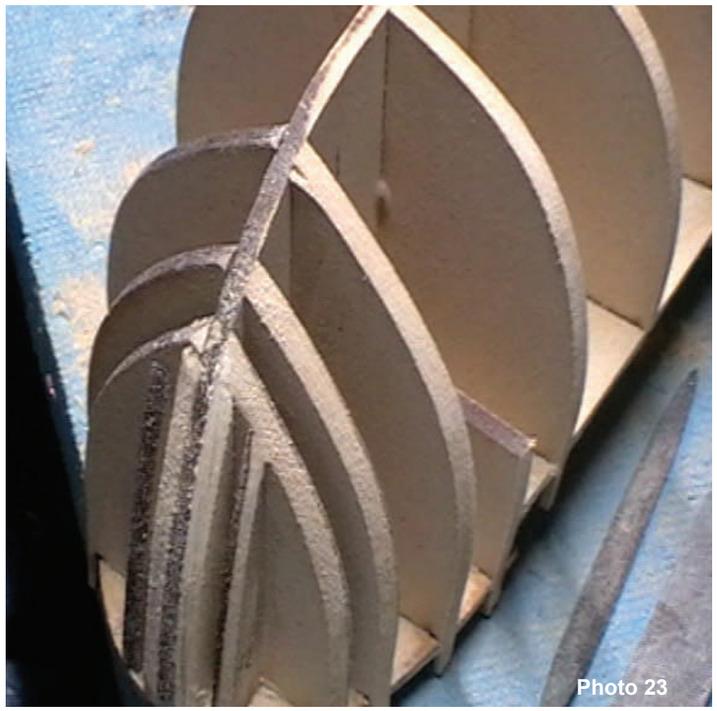
Photo 23


Photo 24


Photo 25


Photo 26

HMS SUPPLY
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SHEET 8

5.4 Deadwood Area

The area between the bottom edge of the keel and the bottom of the bulkhead frames at the stern is known as the **deadwood area**. The deadwood area will be planked with the first layer of planking plus the copper plates.

The stern post and rudder however will only be covered with the copper plates. So when the stern post and rudder are eventually fitted you need to ensure there is a consistent thickness between stern post, rudder and the stern area of the keel.

The keel, stern post & rudder are all 4mm plywood. The stern post and rudder will be covered with the 0.5mm thick copper plates P32. However the keel in the deadwood area will be planked with the first layer of planking—2mm thick (on each side) and then covered with the copper plates. Clearly, if no adjustment is made when the stern post and rudder are fitted there will be a significant discrepancy between the thickness of the stern area of the keel and the stern post and rudder.

To ensure there is consistency of thickness between the stern post, rudder and the hull in the deadwood area there is the need to ensure that when the first layer of planking is fixed in place the total thickness does not exceed the thickness of the stern post/rudder post.

To achieve this you will need to take two steps.
Step 1. Before fitting the first layer of planking reduce the thickness of the keel in the deadwood area by approximately 1mm on each side— i.e. reduce the keel thickness by about half in the deadwood area.
Step 2. Once the **first layer of planking** has been fitted then reduce the thickness of this planking by approximately 1mm on each side as well—fractionally adjusting to meet required thickness.

This will then reduce the total thickness of the keel and first layer of planking in the area to be 4mm thick thus meeting the requirement for consistency of thickness. This will ensure that when the copper plates are fitted there will be the same thickness between the keel, stern post and rudder.

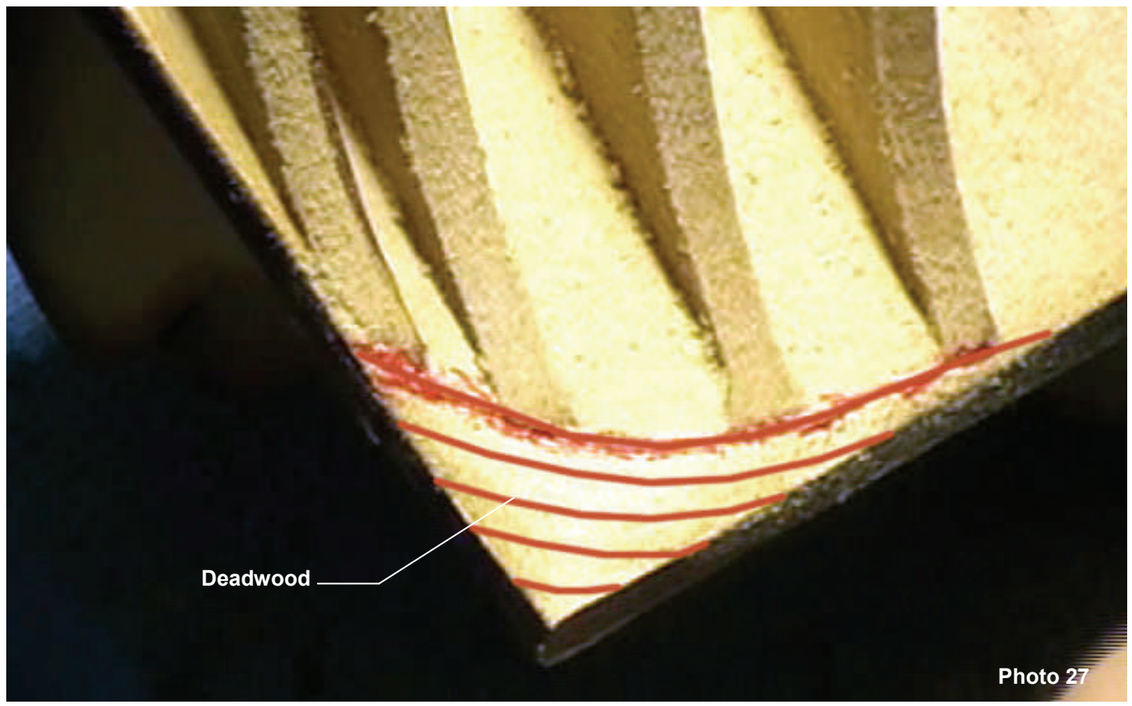

Photo 27

6.0 Hull Planking Introduction

Hull planking is not technically difficult but does require some thought and study so that the principles are understood. It also requires some patience. Once mastered the process is straight forward.

A few points to remember are:

- Use a mini plane to taper the planks.
- Always taper the **lower** edge of the plank.
- Prepare two planks together—one for each side of the hull. It is most important to fit and glue the planks in pairs — one on each side of the hull. This will minimise the chance of the keel being distorted or bent.

6.1 Hull Planking—First Principles

Spend a few moments with a dressmakers tape measure and measure from the top of the each bulkhead frame around the outside of the frame to the toe of the bulkhead frame where it meets the keel. You will notice that the measurements around the bulkhead frames in the middle or “mid-ship” of the model are greater than the measurement around the bulkhead frames at the bow (front) of the hull. We always assume that the “mid-ship” frames are the largest distance and it is at this part of the model the planks are at their full width. The mid-ship frames on the *Supply* are frames 6 & 7. From your measurements it will be clear that if you are to fit each plank along the full length of the hull you will need to taper the planks that fit across the bulkhead frames at the bow of the hull.

6.2 Mid-Ship Bulkhead Frames

It is assumed that the planks laid across the mid-ship bulkhead frames are at their maximum width. If our planks are 5mm wide we need to determine how many of these planks will fit into the area between the top of these bulkhead frames and the keel. As an example let’s say the measurement from the top of the mid-ship bulkhead frames 6 & 7 to the keel is 120mm. We need to determine how many plank will fit into this area across the mid-ship frames. We do this by dividing 120mm by 5mm that is 120/5 = 24. This means that 24 planks will be needed to fit into the area. These planks laid across the mid-ship frames will **not** be tapered or reduced in width across these bulkhead frames.

6.3 Fore Bulkhead Frames

Now let’s say the measurement from the top of the bulkhead frame 1 to the keel is 80mm. As 24 planks will have to fit into this area also then the plank width at bulkhead frame 1 will need to be reduced. To determine the width of the plank at frame 1 you divide 80mm by 24 planks that is 80/24 = 3.33mm. So the plank wide at bulkhead frame 1 needs to be 3.33mm to ensure that 24 planks will fit into this area. The same approach can be applied to determine the plank width at bulkhead frame 2 etc.

6.4 Stern Bulkhead Frames

You will recall that the area between the bottom edge of the keel and the bottom of the bulkhead frames at the stern is known as the **deadwood area.** When making your measurements of these stern bulkhead frames include the “deadwood” in your measurement.

Across these bulkhead frames you will find the measurement from the top of the bulkhead frame to the bottom of the keel will be **greater** than it is at the “mid-ships” bulkhead frames. Where this occurs you will be inserting short triangular planks known as “stealers” or “wedges” to cover the extra distance. The use of stealers or wedges will be dealt with later.


Photo 28

7.0 Hull Planking—First Layer

The first layer of planking timber is limewood P28. It is a white/cream coloured timber 2x5x500mm. Identify these planks before proceeding further.

7.1 Fitting the First Plank

The first plank is placed along **the line and level with the top edge of the main deck**. There is no need to taper this first plank. Using one of the identified planks spring it gently around the curve of the bow. Note where it starts to bend—mark this point as A with a pencil on the plank. Use a hand held plank bender to create a curve in the plank starting at Point A. Trial fit the plank around the bow. Continue to adjust the curve until satisfied with the fit. Apply PVA glue to the bulkhead frames then fit this first plank along the line and level with the top of the main deck starting at the bow and work towards the stern—allow the plank to follow its natural run towards the stern. Use planking screws or map pins to hold the plank in place while the glue sets. Repeat this process for the other side of the hull. Make sure the two planks fitted are a mirror image of each other. Cut off any excess plank length at the stern.

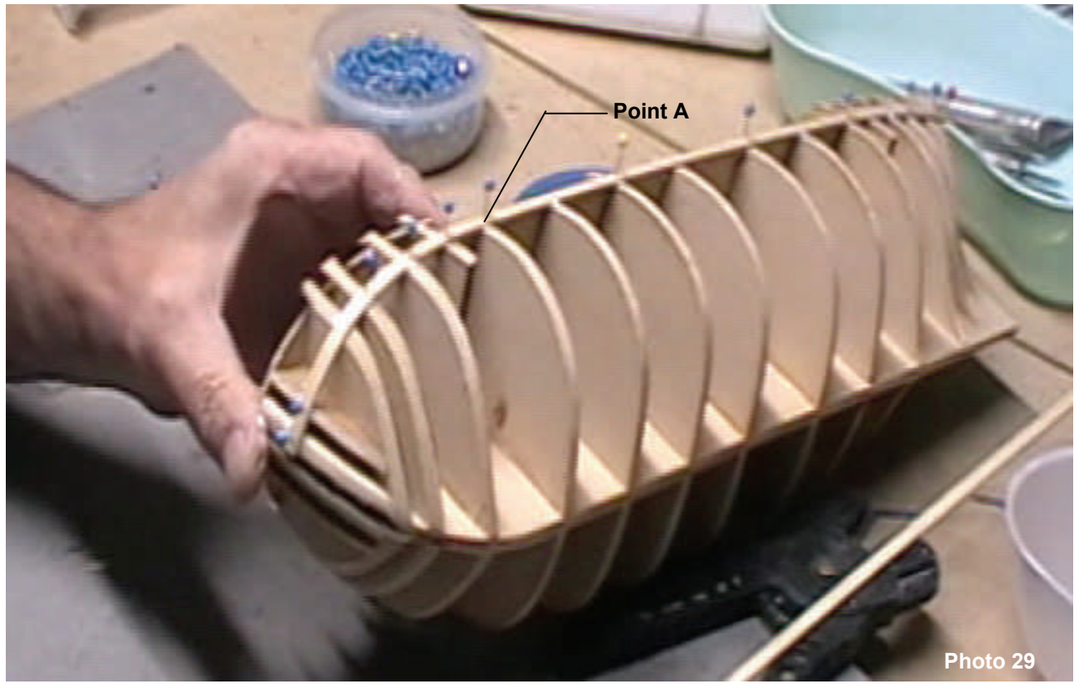

Photo 29

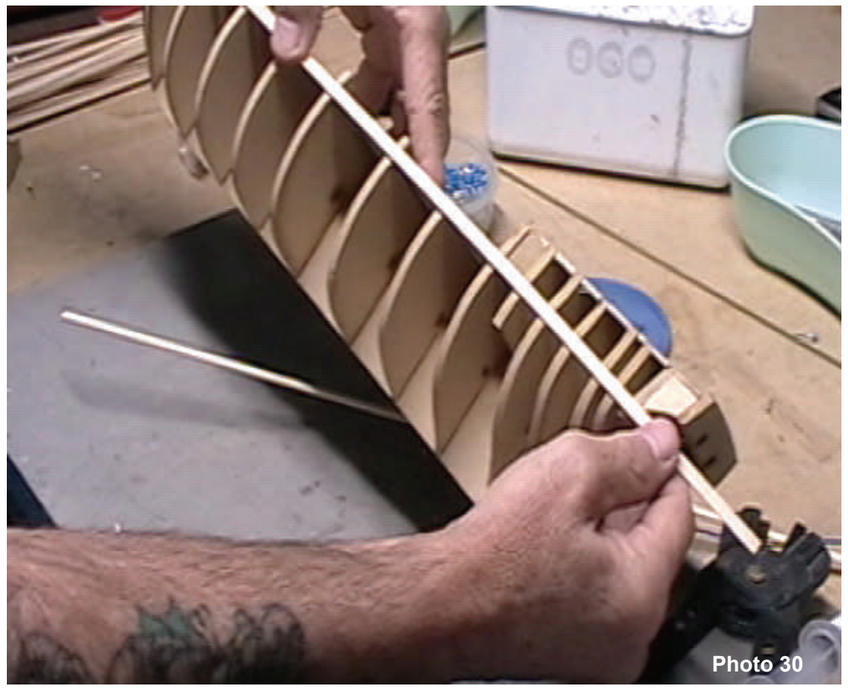
Photo 30

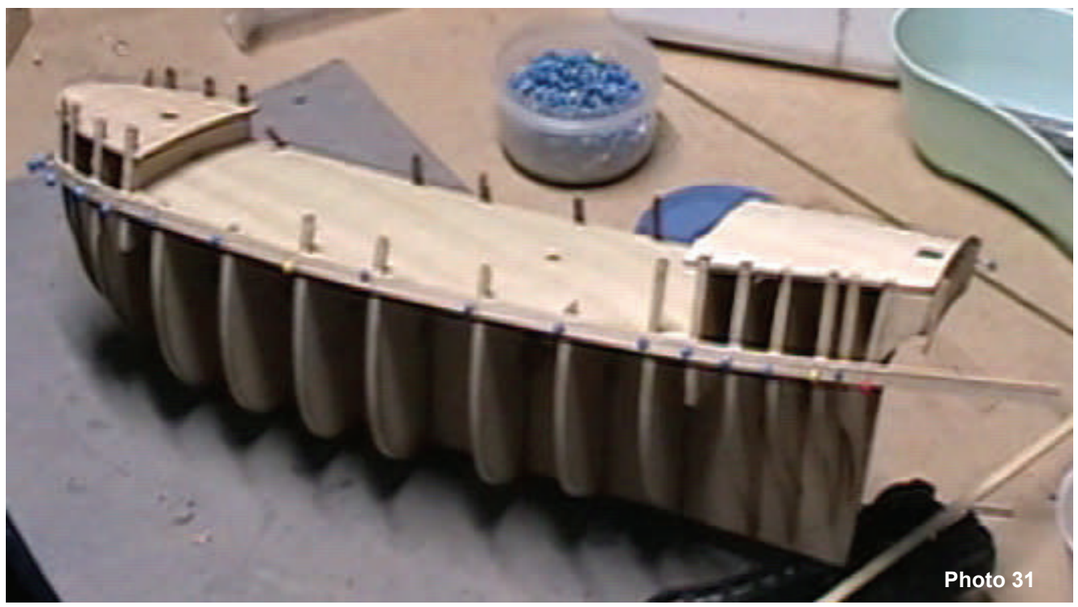
Photo 31


Photo 32

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7.2 Next Planks

The next two planks will be fitted **above** the first plank. Before progressing, place some masking or sticky tape over the frame horns that project above the main deck and fore deck as we do not what the planks to be glued to these frame horns. Fit a plank to both sides of the hull above the first plank. Follow the same approach as for fitting the first plank by identifying Point A and using a hand held plank bender to shape the plank and then fix into place. Do not taper this plank. Apply PVA glue along the top edge of the first plank and pin the plank in place. Repeat for the other side of the hull. Fit and fix another plank above this second plank following the same approach as described.

At the stern area cut and fit 3 lengths of planking to run from the stern to the frame horn of bulkhead frame 9 above the previously placed planks. These planks are not tapered. Repeat for the other side of the hull. Glue and pin in place. At the fore deck cut and shape planks to fit around the bow and to cover the frame horns—remember to first cover the frame horns with masking or sticky tape. Glue and pin the planks in place. Do not be concerned that the planks may be above the frame horns—this will be adjusted later.

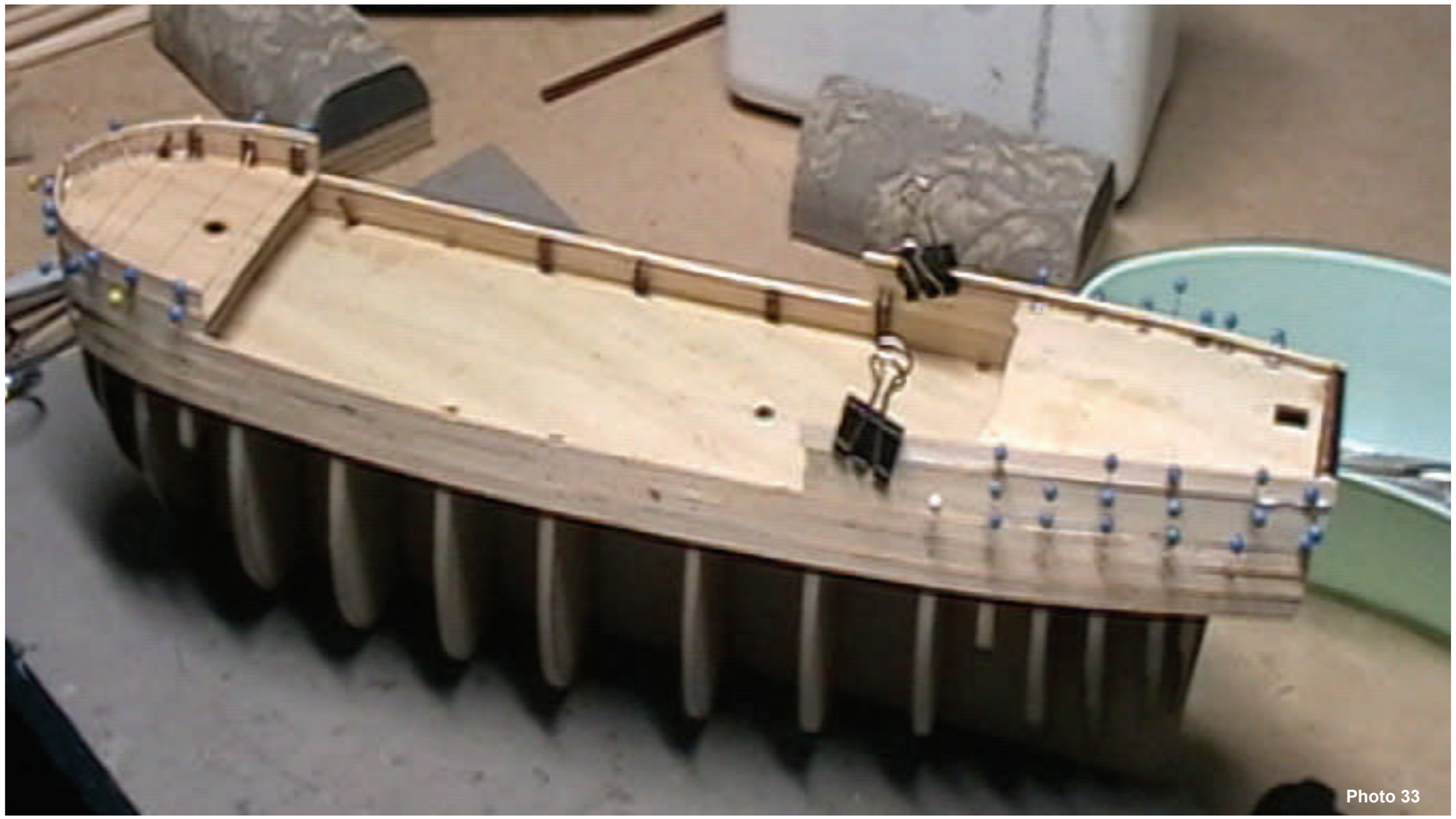

Photo 33

Photo 34

Photo 35

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7.3 Completing the first layer of planking

Establish a table as shown below representing the number of bulkhead frames—numbered from the bow. To determine the plank width at each bulkhead frame use a dressmakers tape measure to measure the distance between Plank 1 and the keel at each bulkhead frame. Record these measurements in your table.

The mid-ship frames are 6 & 7. The distance from the bottom of the first plank fitted—Plank 1—and the keel at the mid-ship bulkhead frames is 98mm. The plank width is 5mm. Therefore there will need to be 98/5 = 19.6 planks - we will round this to 20 planks to be fitted to cover the hull on each side.

Using the measurements you have made and recorded in the table, divide the measurements for frames 1 to 14 by the number of planks to determine the plank width at each bulkhead frame. Record in Table 1.

Bulkhead Frame	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Measurement mm						98	98							
Plank Width mm						5	5							

Table 1

Photo 36

From your measurements you will find that the plank width at bulkhead frame 1 will be tapered to approximately 2.7mm . The tapering of these planks will need to start between bulkhead frames 4 & 5—mark this point on your plank. Also from your measurements you will find the plank width at bulkhead frame 14 will be tapered to approximately 3.8mm. The tapering of these planks will need to start between bulkhead frames 9 & 10—mark this point on your plank. Clearly mark each of these points on your planks—always prepare and fit two planks together.

Taper the two planks together. To taper the planks place them in a vice with the amount to be taken off sitting proud of the vice jaws and position the marked starting point for tapering sitting flush with the jaws—Photo 37

Use a mini plane and/or file to remove the unwanted timber. Use this approach for all the planks to be prepared.

Photo 37

Make a number of planks in pairs remembering to identify the planks as previously presented. Fit each plank under the previously placed plank. Place PVA glue on the lower edge of the previously placed plank and on the bulkhead frames. Pin the plank in position, remove any excess glue with a damp cloth and use bulldog clips to hold the planks together. Repeat for the other side of the hull.

Continue with the hull planking below the previously placed planks following the steps described above. Take particular note and care with bending the planks onto the transom—Photo 40. Use bull dog clips to hold the planks together while the glue sets—Photo 41. When fixing the planks to the hull apply glue to the bulkhead frames as well as along the length of the previously placed plank. This will add strength to the whole finished hull.

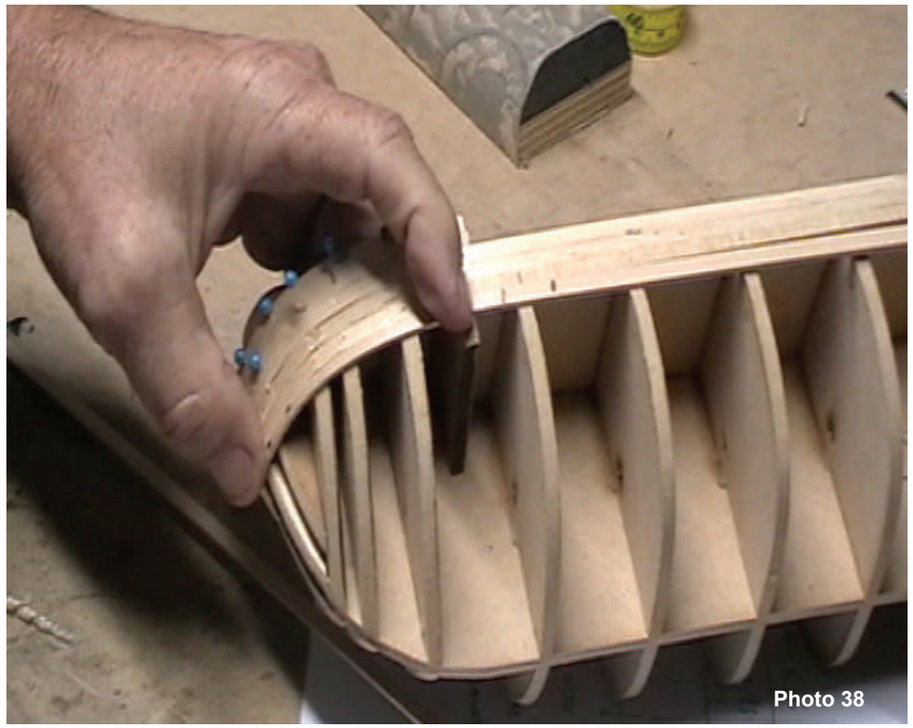

Photo 38

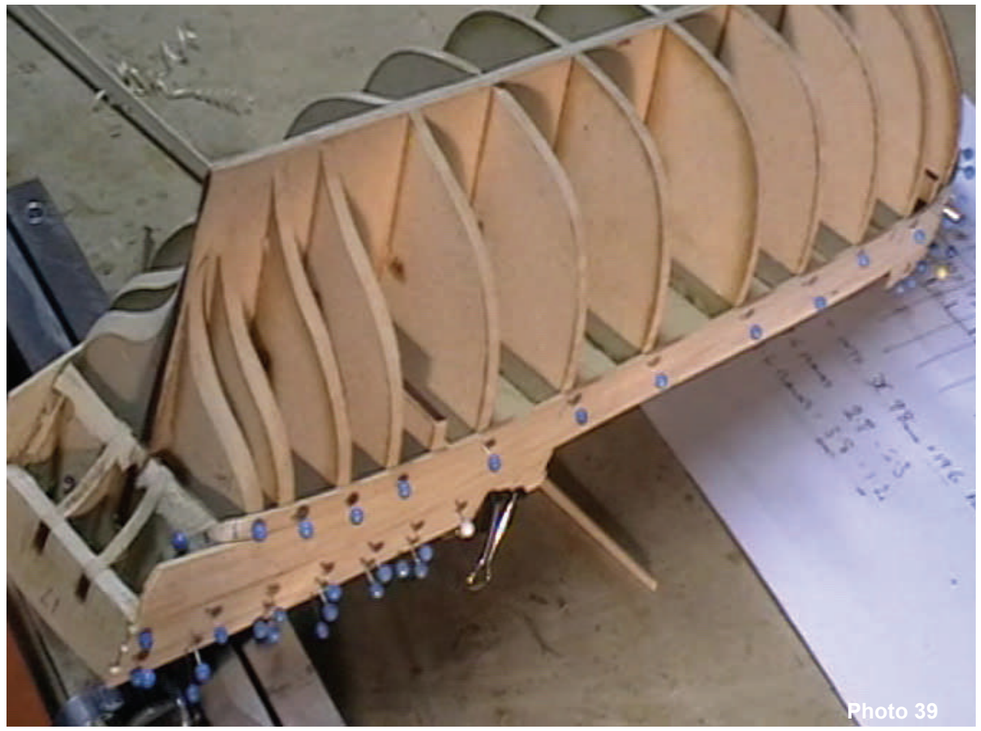

Photo 39

Photo 40

Photo 41

Counter Area: After you have fixed a total of 6 planks down from the deck level on each side of the hull it is time to tidy up the counters in transom area. Use a sharp blade to remove the over hang of the first few planks fitted. As planks will be fitted later laterally across the counters to cover this area make sure to leave the side planks approximately 2mm proud of the external counter so any end grain will be concealed—Photos 42, 43 & 44. Next trim off the excess plank where they come over the base of wing transom—Photo 44.

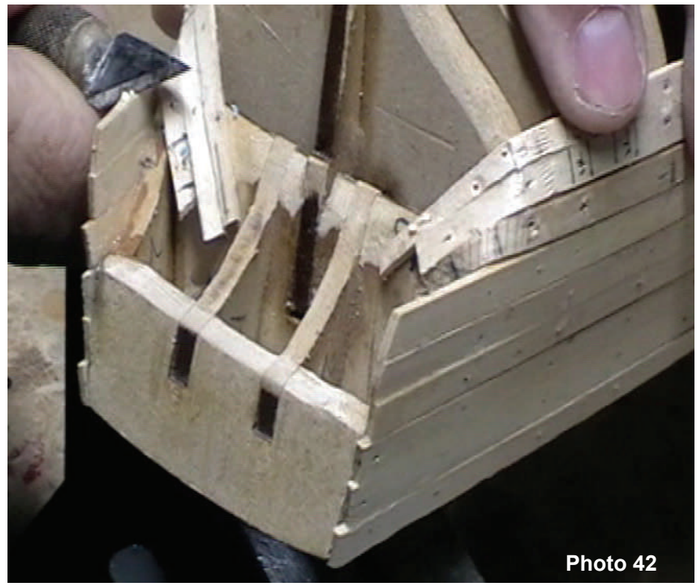
Photo 42

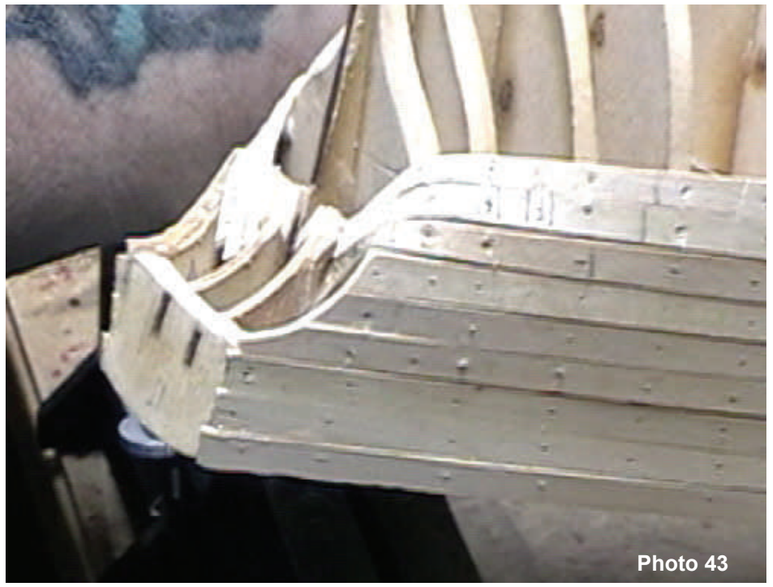
Photo 43

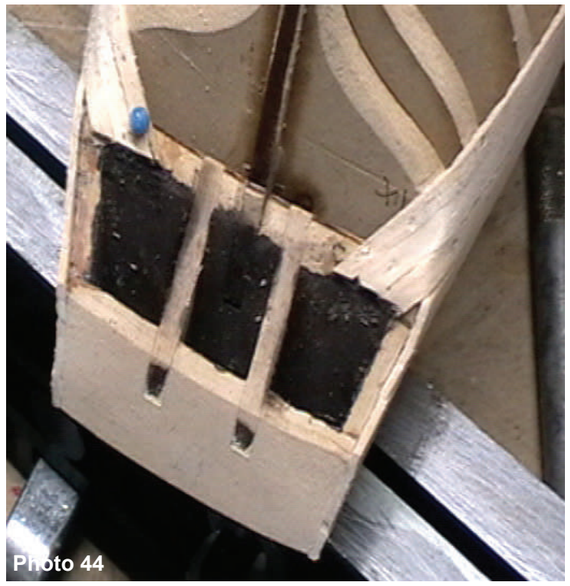
Photo 44

Stern Blocks After fitting two more planks on each side of the hull we need to fit, shape and fix the stern blocks P27A/B. The stern blocks provide a solid base on which the next few planks are attached. Shape the stern blocks with a file so each fits against bulkhead frame 14. Make sure to shape and taper each block to ensure that where it fits against the stern of the keel there is a recess of approximately 2mm so the planks fit flush with the keel. Once satisfied with the fit glue the blocks in place and allow 24 hours to dry. Lastly, fair-in the stern blocks with bulkhead frame 14.

Photo 45


Photo 46

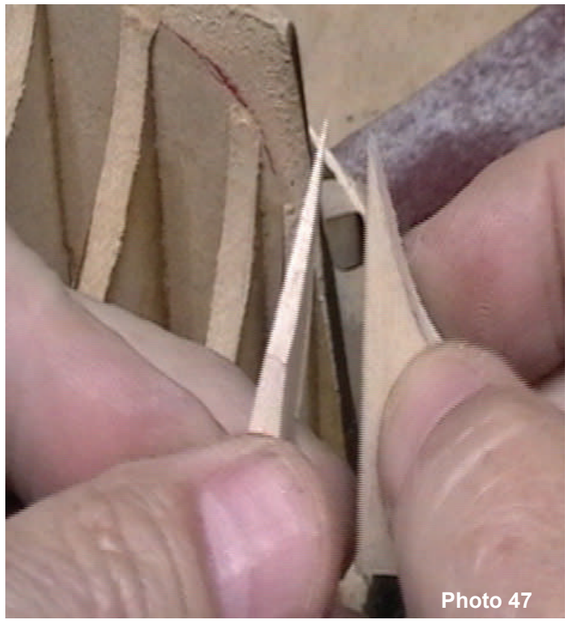
Photo 47


Photo 48

7.4 Planking Directional Change

The next point is most important. After fitting about 8 planks down from the deck level you will arrive at a point where the plank does not want to lay flat across the bulkhead frames. Forcing the plank into position will cause it to twist and a gap will appear between the plank and the bow block.

7.4.1 Directional Change

At this point you will have to **change the direction of the plank** to ensure the plank lays flat on the bulkhead frames. Follow the steps below to achieve this change in plank direction to make a new straight edge.

1. Lay a brass strap or similar flexible straight edge along the length of the hull against the previously placed plank. At the bow you will see the strap wants to take a different direction—allow the strap to follow its natural course and lay over the previously placed plank—Photo 49. Use bull dog clips to hold the strap in position. Then lay the strap down over the previously placed planks and use a pencil to mark the line of strap overlap at the bow.
2. Use a sharp blade to fractionally remove the marked area of the **previously** placed plank—Photo 50
3. Repeat this process for the other side of the hull making sure both sides are a mirror image of each other

This process is called **Directional Change.** You will need to do this again as your progress with the hull planking.

Photo 49

Photo 50

Continue with your planking by fitting and gluing in position the next plank along its new direction on both sides of the hull. Be aware you will need to make further directional changes as you progress down the hull.

At the stern make sure the planks are glued to the stern block and are in and up against the stern part of the keel. Some sanding later may be needed to achieve a final flush finish.

Photo 51

Photo 52

After fitting about 12 planks you may find there is a need to make a further directional change again. Follow the same process as previously described to achieve the new straight edge.


Photo 53

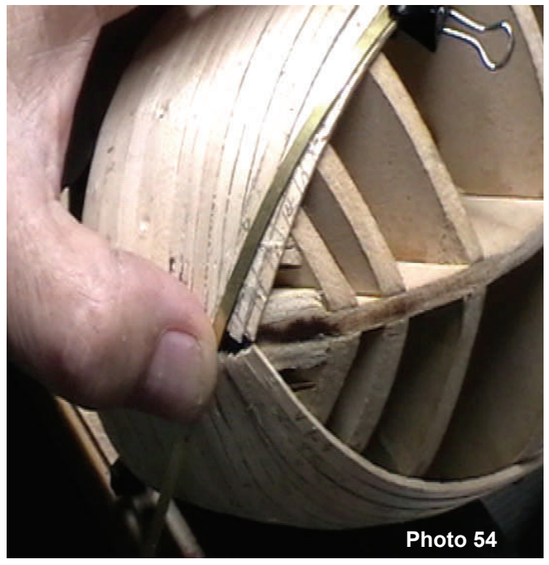
Photo 54


Photo 55

Continue with your planking by fitting and gluing in position the next plank along its new direction on both sides of the hull. Be aware you will need to make further directional changes as you progress down the hull.

7.5 Garboard Plank

The next step is fit & fix the garboard plank. This plank is fitted adjacent to the keel—Photo 56. Do not taper this plank. Place a plank along the keel and notice at the bow you will have to trim and shape the edge of the plank where it fits against the keel.—Photo 58. Glue the garboard plank in position of each side of the hull.


Photo 56


Photo 57


Photo 58

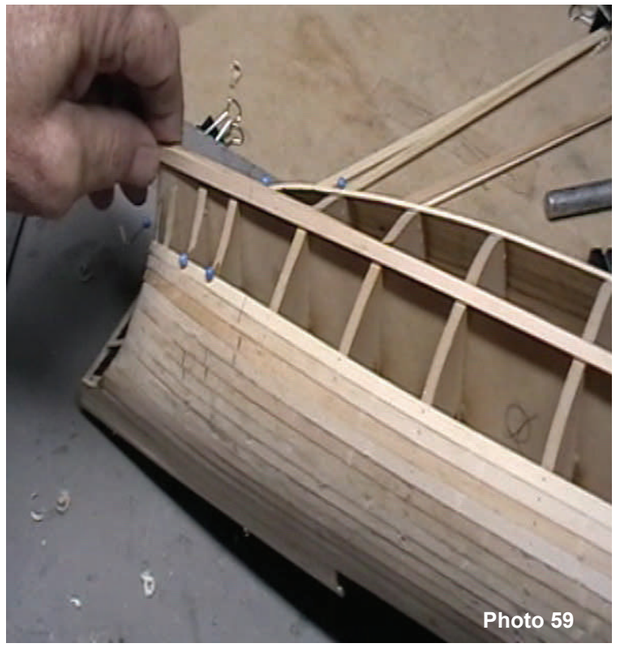
Photo 59

7.6 Hull Planking Continued

Fit another plank adjacent to the garboard plank. Do not taper this plank. Allow the plank to follow its natural curve across the stern area—you will notice a gap will appear—Photo 60. A stealer or wedge will be fitted later to fill this gap. At the bow you will have to trim and shape the edge of the plank where it fits against the garboard plank. Glue and pin this plank in place. Repeat for the other side of the hull.

Photo 60

Photo 61

After fitting this second plank take measurements again at each bulkhead frame of the gap remaining and record in the table below.

Note the plank width at the mid-ship bulkhead frames will be 5mm. Determine the number of planks required to be fitted in the remaining gap - don't worry if there is a fractional plank width - this will be catered for later.

Once the number of planks is determined divide the measured gap distance at each frame by the number of planks required to fit into the gap remaining. This will give you the plank width at each frame. Record in Table 2. Taper the planks as required and use a plank bender to shape the planks if needed.

When fitting & fixing these planks allow them to follow their natural course across the bulkhead frames. Do not force them. A gap will be formed in the "deadwood" area at the stern. This is where a "stealer" or "wedge" will be fitted later to fill the gap. Continue with your planking, tapering each plank as determined until the gap remaining is approximately one plank width wide.

Bulkhead Frame	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Measurement mm														
Plank Width mm						5	5							

Table 2

Use a razor saw to cut away any excess planking from the keel. Use a pointed blade knife to remove the excess. This will allow for the stem post and keel to be fitted later. Check the gap width and use to file to fractionally fit the stem post and keel in position.


Photo 62


Photo 63


Photo 64


Photo 65

7.7 Counter Planks

Cut and shape a length of planking P28 to fit across the counters. Fit & fix one length in place. Identify the stern post P29. Place it in position and mark with a pencil on the first counter plank where the stern post will need to be fitted later. The marked area will be removed later. Fit and fix the second counter plank.

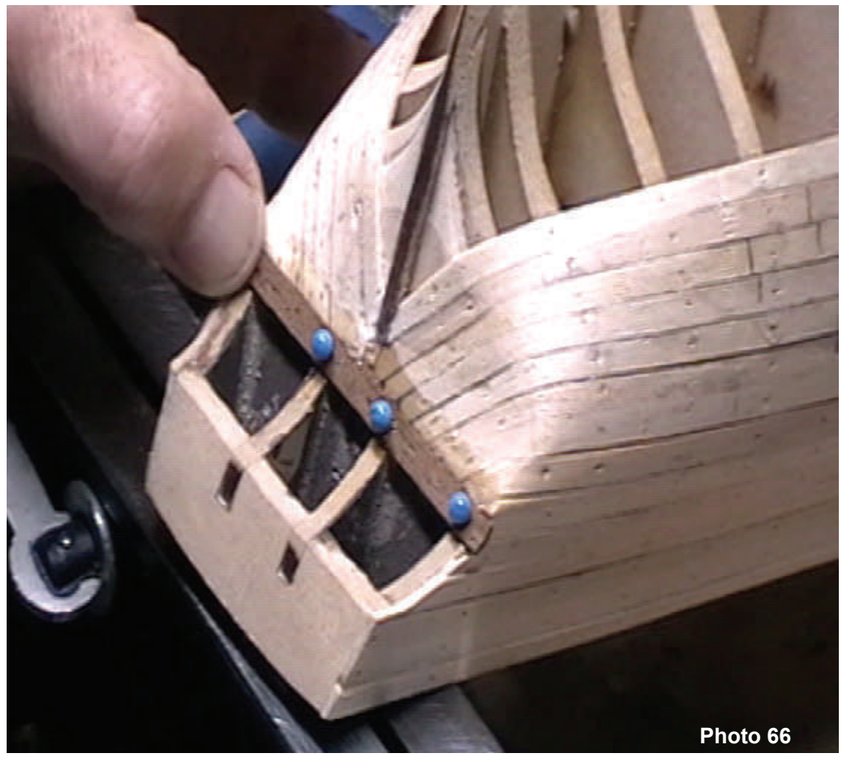
Photo 66

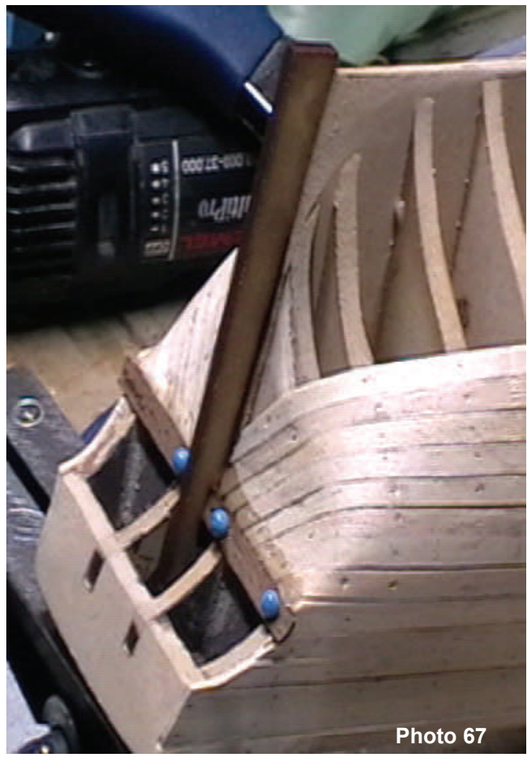
Photo 67


Photo 68

7.8 Hull Planking Continued

Continue with your planking, tapering each plank as previously determined. Re-check your measurements as you progress and make any adjustments as required. Trim-off any excess overhang of planking and file flush with the keel stern. To close the hull up we will spile a plank into the last remaining gap. To achieve this take one of the tapered and shaped planks and lay it over the small gap remaining. Temporarily pin this plank in place. Then use a pencil to mark the overlap of this plank onto the previously fitted plank. Remove the temporary plank and use a pointed knife or razor blade to **slowly & carefully** cut through the plank along the pencil line. Remove the unwanted plank material. Now fit the new plank into the gap — some fractional fitting of this plank may be required. Once you are happy with the fit glue and pin the plank in place. Repeat for the other side of the hull.

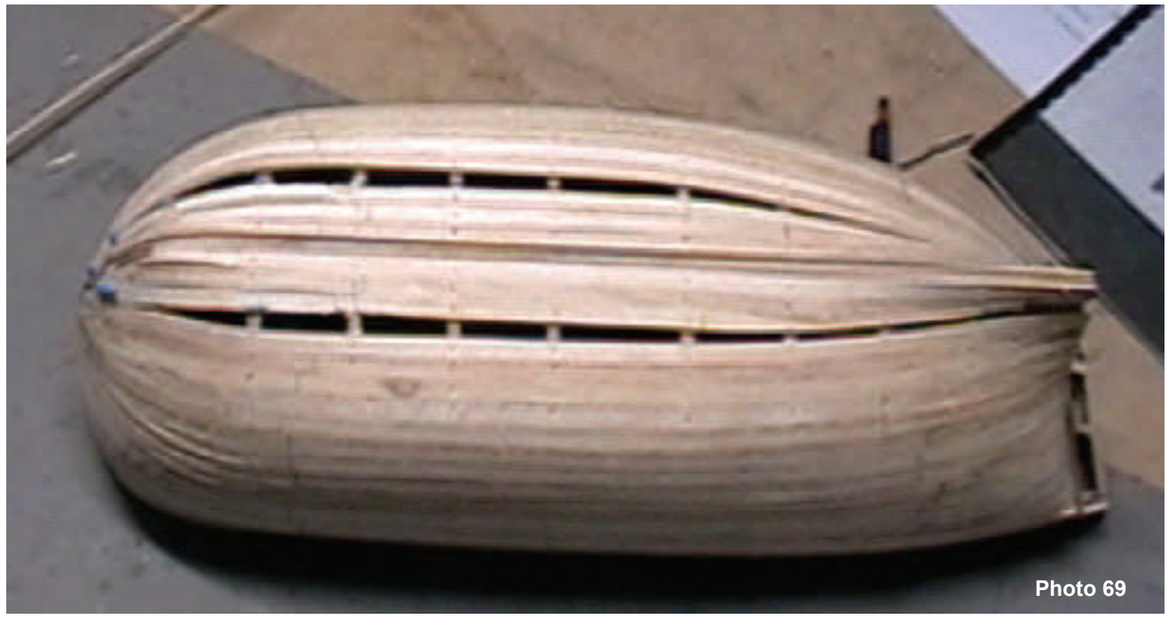

Photo 69

Photo 71

Shape and fit the “stealers” into the remaining gaps in the deadwood area.

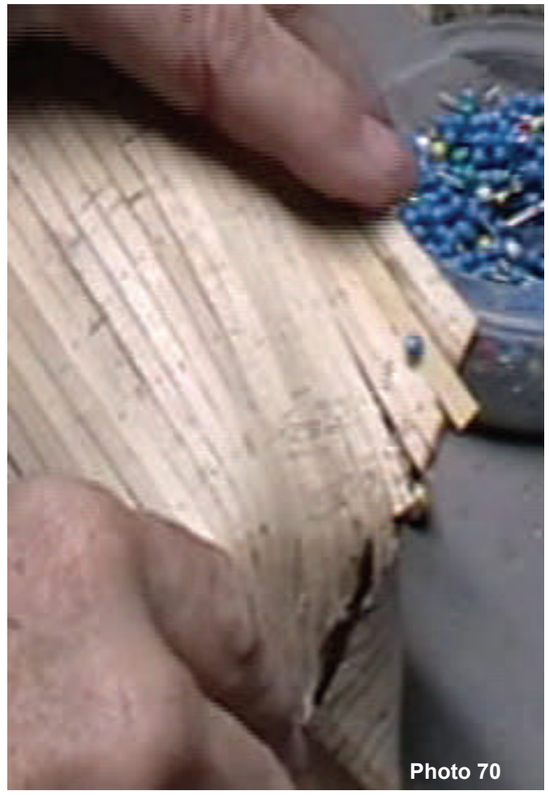

Photo 70

7.9 Finishing the Hull

The next step is to sand the hull with fine grade sandpaper. Then you need to fit the stern post P29, false keel P30 and stem post P31. Identify these parts. Fit and fix in place with PVA glue. For the stern post cut the slot for the stern post in the previously marked counter planks. Some adjustment of the stern post and the rear part of the keel may be needed to ensure the post fits flush to the keel. Once satisfied fix in place. Next use planks P28 to close up the rest of the counter - Photo 76.


Photo 72


Photo 73


Photo 74


Photo 75

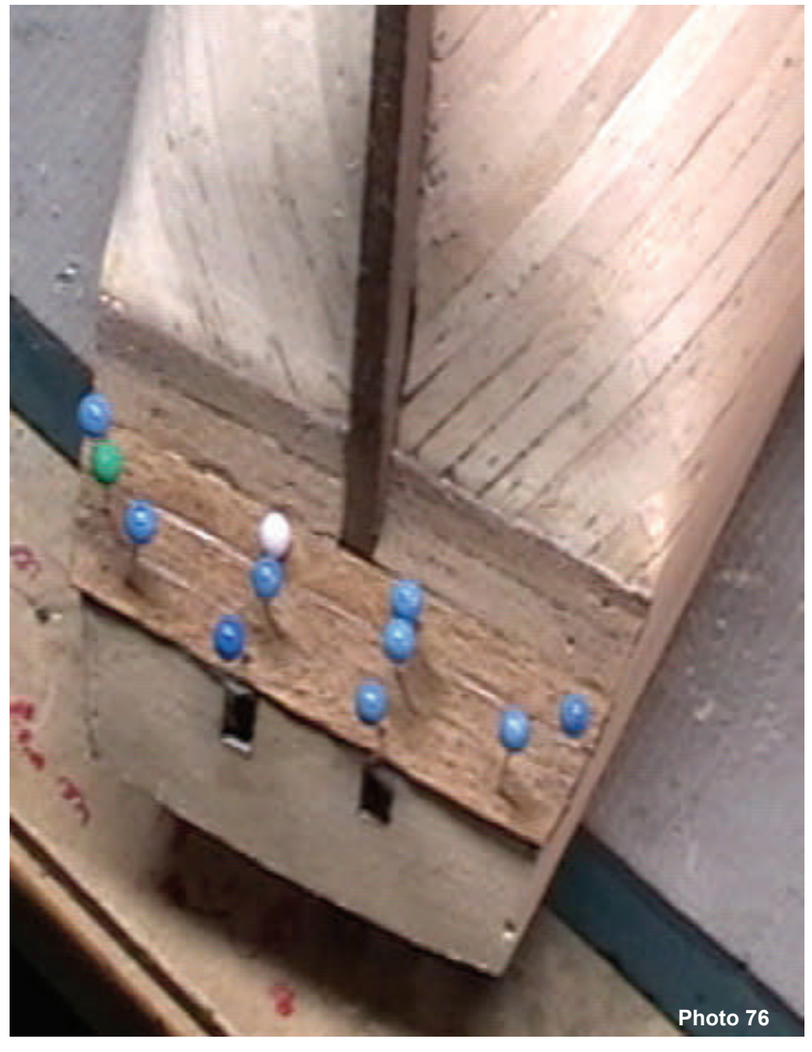
Photo 76

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8.0 Copper Plating

Copper plating the hull of a model ship enhances its appearance and authenticity. Copper plating is not technically difficult however it is tedious and time consuming and requires patience and concentration. Taking your time will result in a better job. The copper plates are P32.

A few points to remember are:

- Keep your hands and job clean.
- Use a super glue gel to fix the copper plates in place.
- Use a super glue remover to clean off any excess or unwanted glue.
- Use tweezers and/or a sharp pointed tool to maneuver each plate into the exact location.
- The indents on each plate represent the nail heads to hold the copper plates in place. These indents will be facing up.
- Use a bricklaying pattern when placing the plates in place.
- Use a small file to shape individual plates where necessary.
- Keep all off cuts of copper plates.

8.1 Laying the Copper Plates

a) Starting

Start to place the plates at the keel as shown. Before gluing them in position you will need to use a plane and file to reduce the keel height along its length to be the same height as the copper plate. Once satisfied run a bead of glue where the plates are to be placed and position them one at a time. Use a cotton bud to clean-up any excess glue. Continue this process. As you start to run a second layer of plates make sure to off-set the next line of plates by half a plate to create a bricklaying pattern.


Photo 77

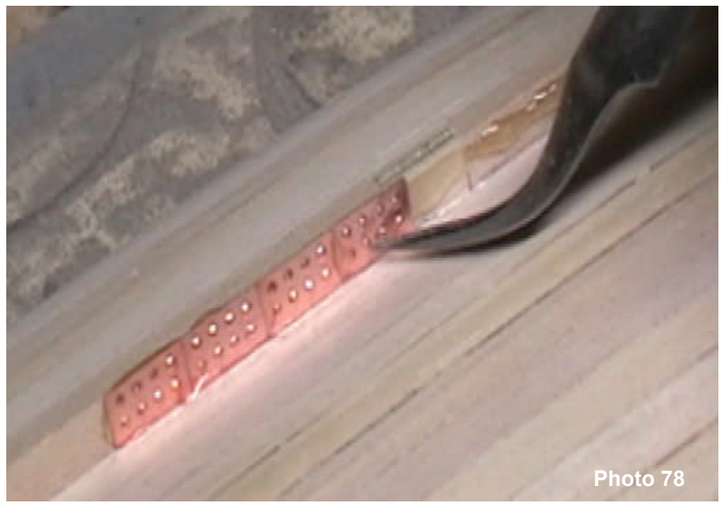
Photo 78

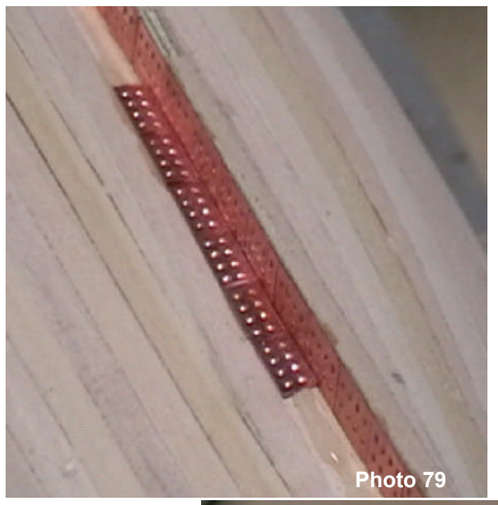
Photo 79

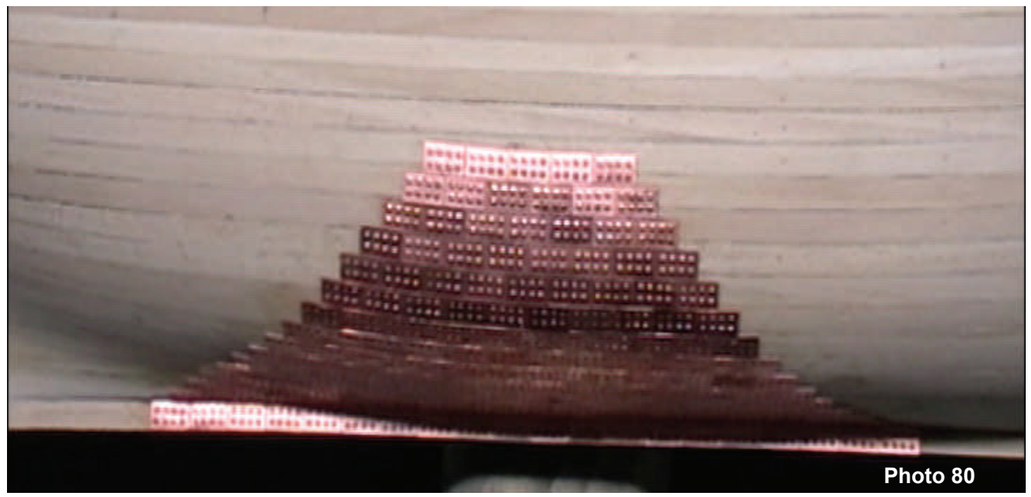
Photo 80


Photo 81

b) Progressing

Progress along the keel both fore & aft. At the stern in the deadwood area there will be a need to insert copper plate stealers. To determine the line to run the plates along use a straight edge and lay it flat along the line of the plates. Using the straight edge mark with a pencil the extension of the line. Run the plates along these lines. Use stealers to fill-in the gaps. Also plate the underside of the keel.

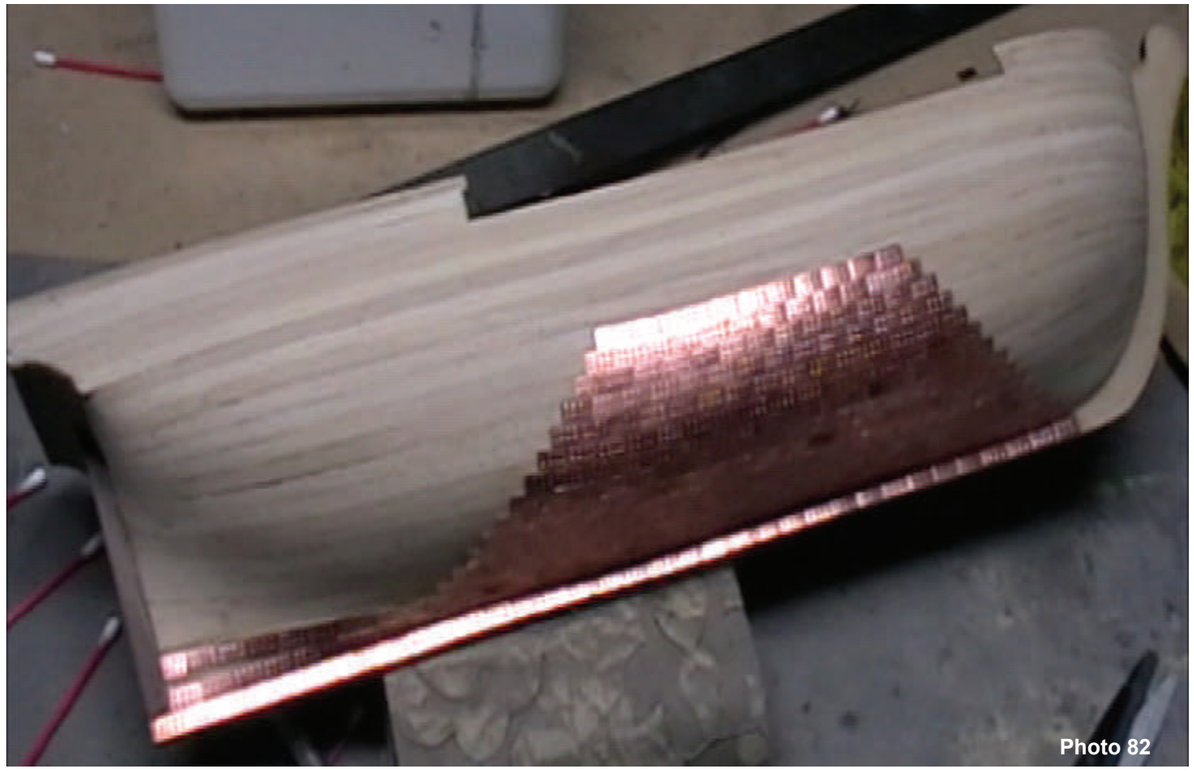

Photo 82

c) Coppering Line

The coppering line is a line drawn around the hull. The copper plates will come from the keel up to this line. Note the copper line would be approximately the width of a copper plate above the water line. You will not be marking the water line.

The first step is to build a frame on a base board to hold the hull secure. Use a spirit level to ensure the hull is level. At mid-ships measure 43mm down from the top plank. Using a waterline marker or similar tool with a pencil or pen to mark a line around the hull at this level. This will be the copper line.

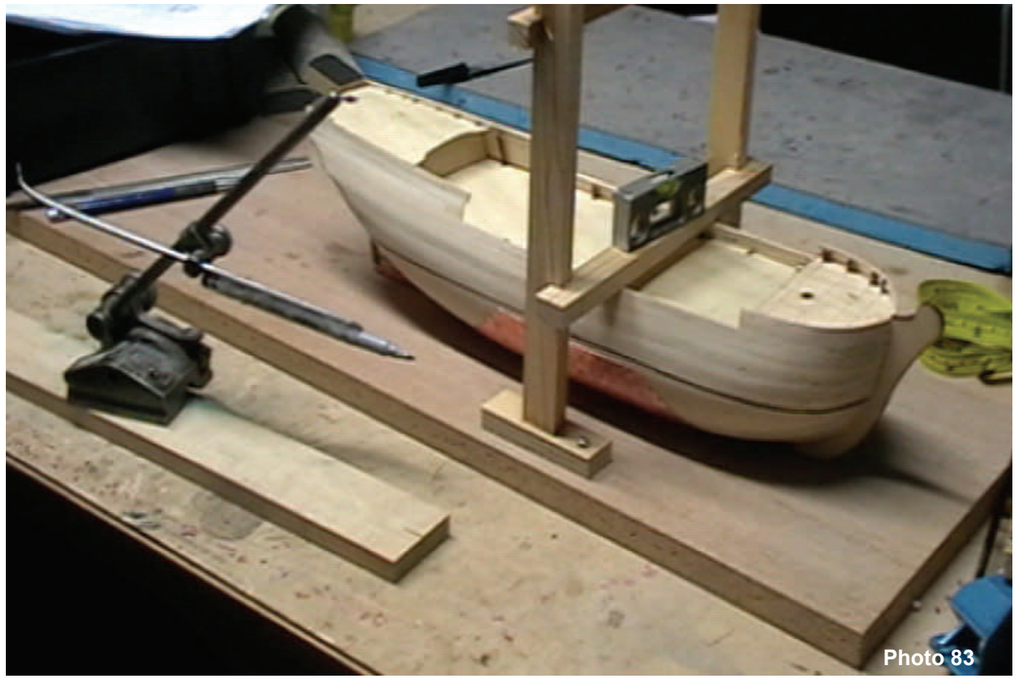

Photo 83

d) Bow area

As you progress around the bow area you will need to maintain a straight line for the run of the plates. Use the method described above. You will also need to shape small pieces of plate to be fitted into corners as shown.

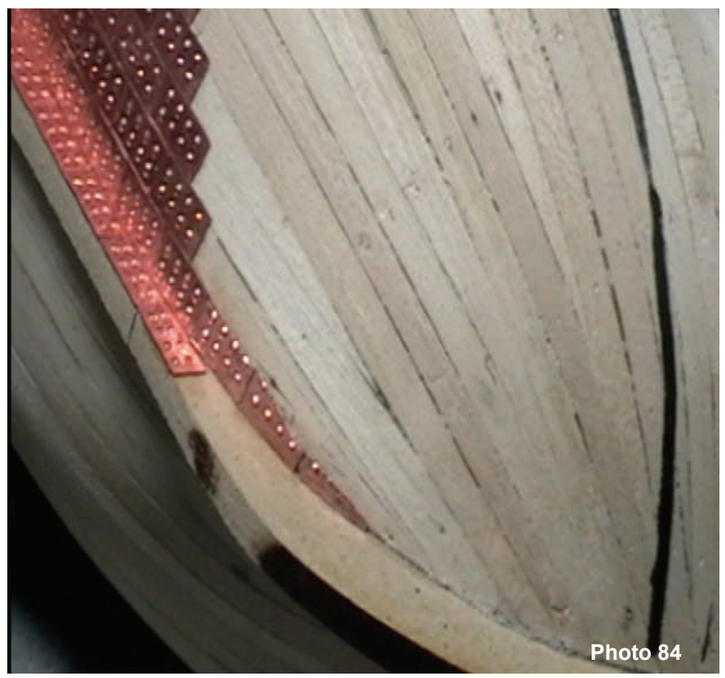

Photo 84

Photo 85

e) Progressing

Continue with fitting the copper plates. At the bow fractionally fit small lengths of plates to fill in any gaps. Plate the stem post. At the bow follow the approach described to follow straight lines. Use small lengths of copper plates as stealers to close any gaps. Also sue small pieces of plate to filling the gaps up to the copper line. Plate the stern post.

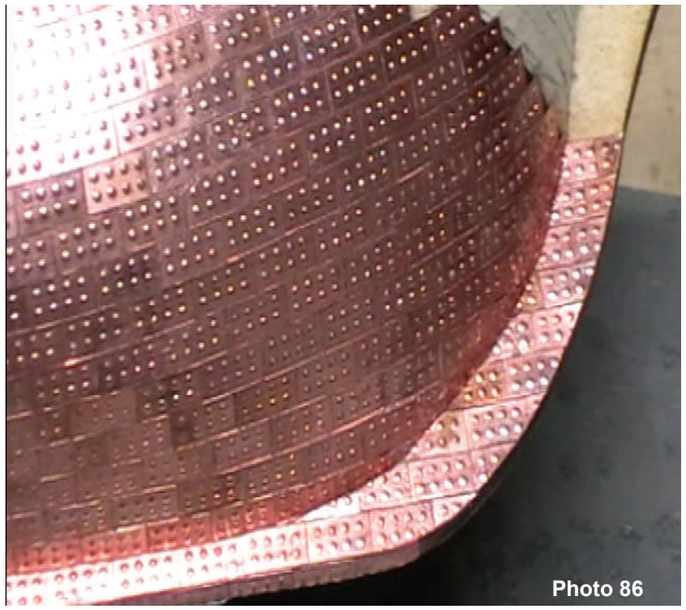
Photo 86

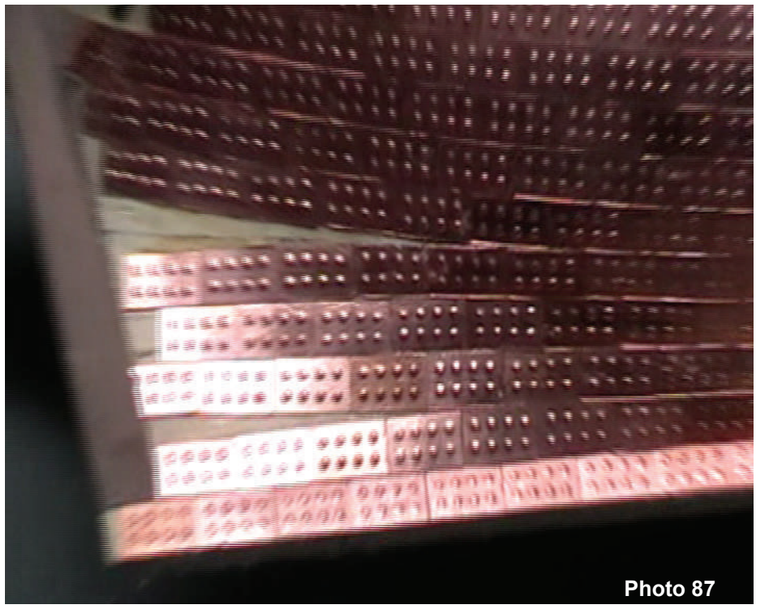
Photo 87


Photo 88

e) Trimming the Plates

At mid-ship measure down 38mm from the top plank. Make this measurement at three points along the hull in the area of the main deck. Align a batten along these three points allowing it to run fore and aft following its own line. Pin the batten in place. Using a razor saw and exercising great care slowly cut through the copper plates along the line of the batten. Be sure not to cut through the plates totally. Use a pointed blade knife to gently cut through the copper plates and remove using a chisel blade knife— Photo 91. Use a super glue de-bonder to remove any glue and sand clean and smooth. At the stern you may wish to take the plates off and cut them to shape and then re-fit them in place.

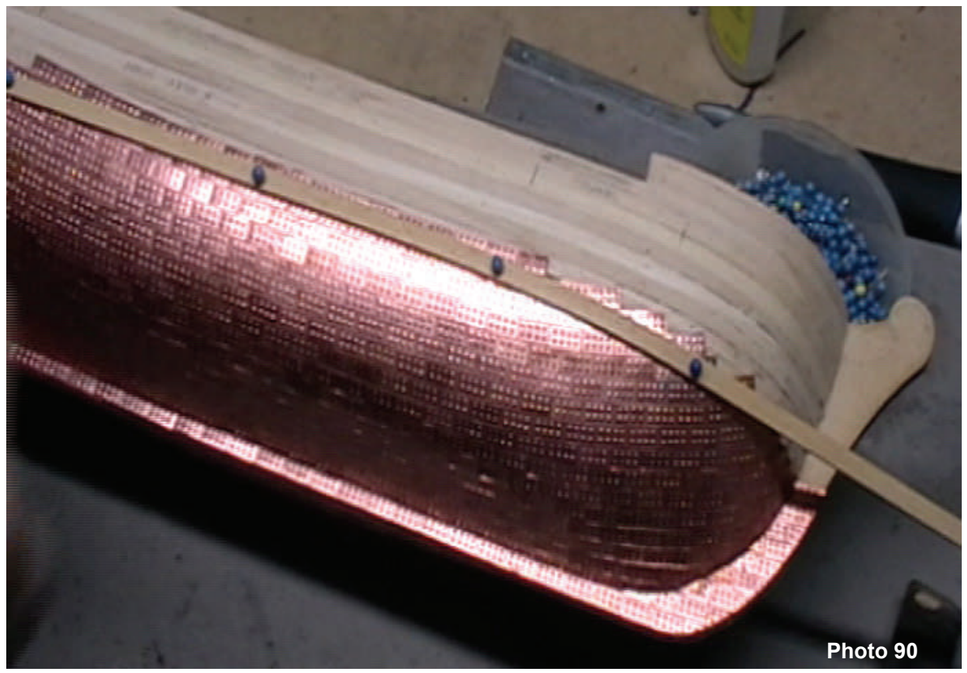
Photo 90

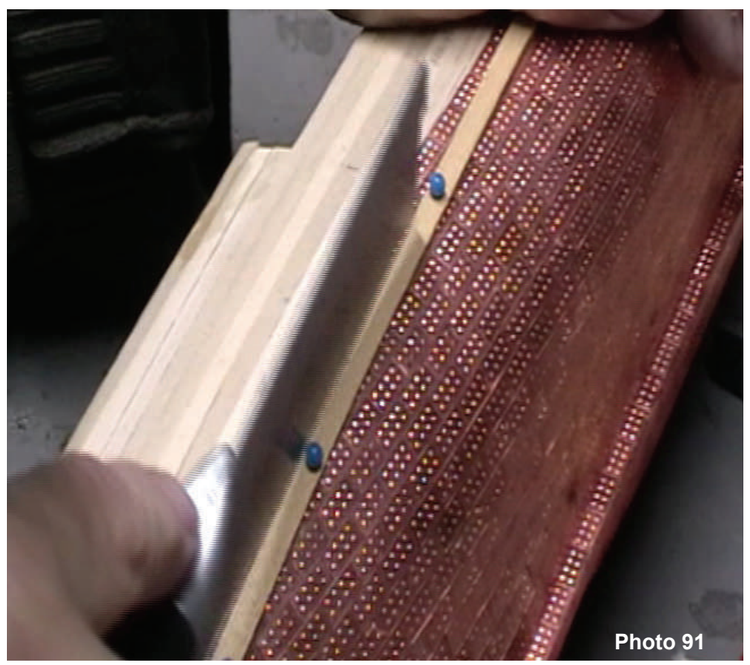
Photo 91


Photo 92

8.2 Finishing the Copper Plates

The last step is to run a line of plates along the length of the hull to cap-off the existing copper plates. Identify the 0.6x5mm teak planks P33. Fit a length of this planking 2mm above the line of the existing copper plates along the length of the hull. Fix this plank in position using contact glue. We will be running another line of copper plates to cover this lower part of this plank. Use sandpaper to reduce the thickness of the lower edge of this plank so that when the new line of copper plates are fixed in place the transition will not be noticeable.

Run a line of copper plates above the existing line of plates partially covering the fitted teak plank—Photo 94. At the stern area fractionally fit teak planking as shown Photo 96. Fit a small copper segment to merge the new copper line in with the existing plates—Photo 97. Repeat for the other side of the hull.

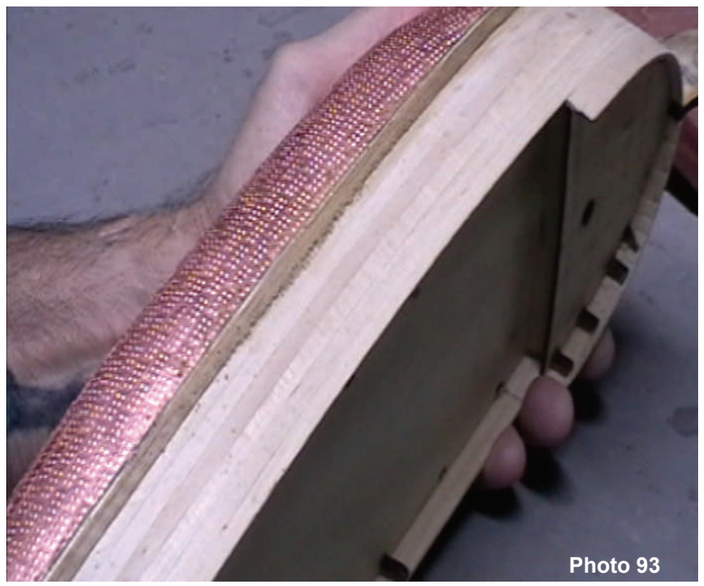
Photo 93

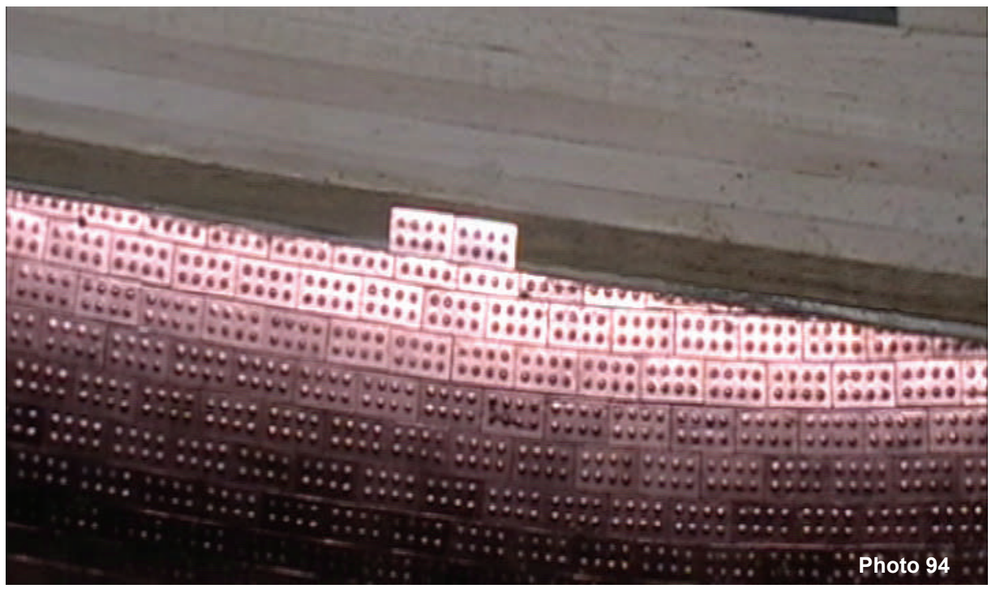
Photo 94

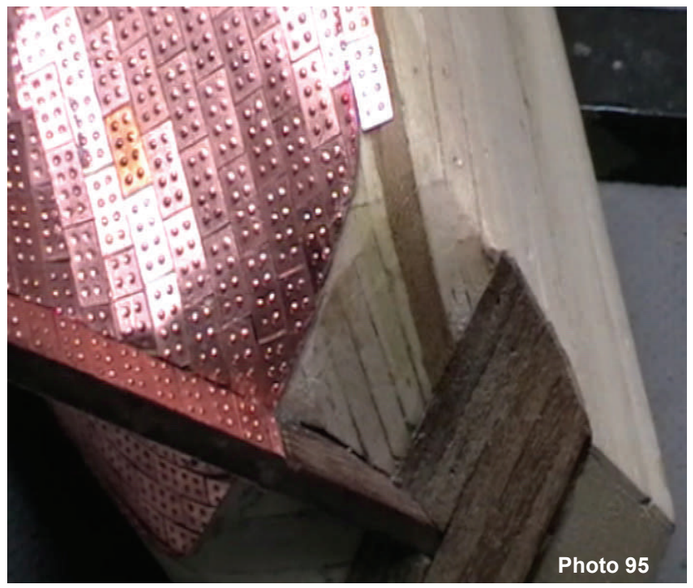
Photo 95

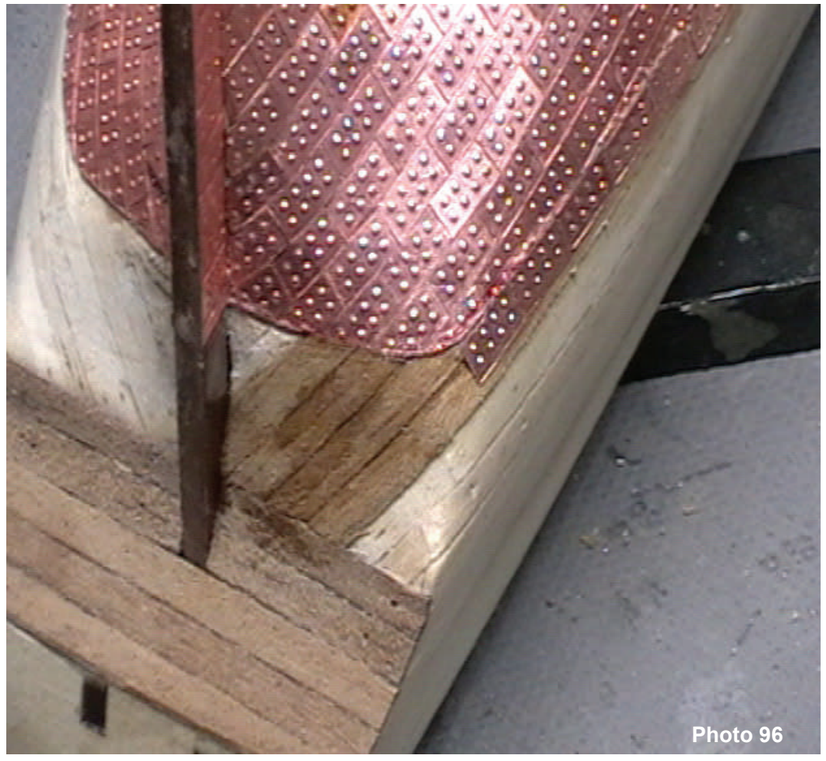
Photo 96

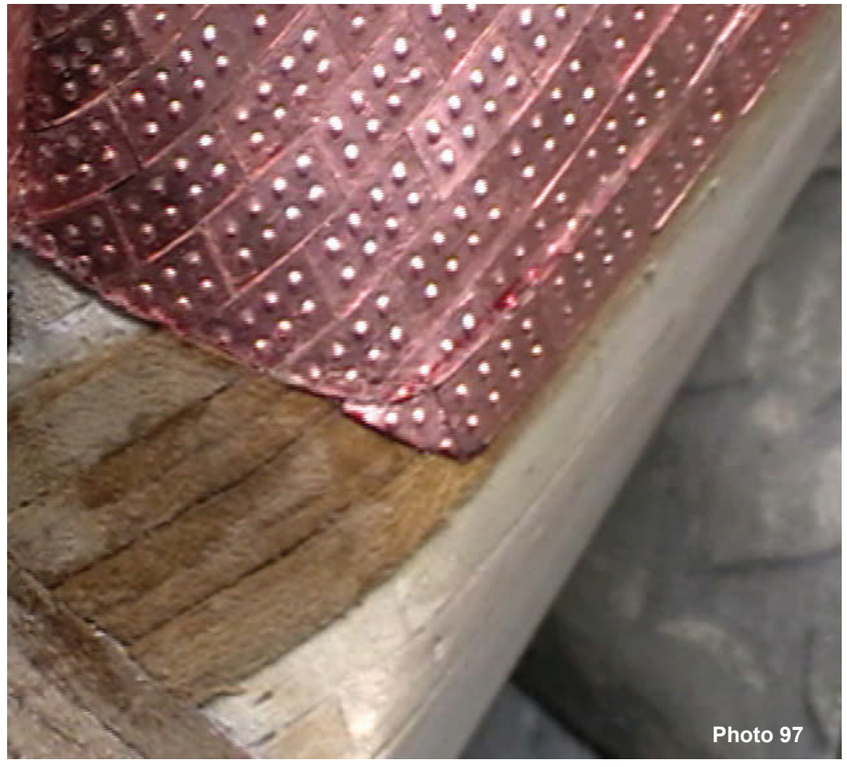
Photo 97


Photo 98

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8.3 Cleaning the Copper Plates

Cleaning the copper plates is a four stage process. Firstly use small amounts of a super glue de-bonder and a fine grade steel wool to remove any excess super glue. Apply light pressure with the steel wool. Secondly use some soapy water and a soft sponge to wipe down the hull. Use a clean soft cloth to then wipe down and dry the hull. This will remove any dried de-bonder. If it is desired to maintain the copper a bright colour polish the plates with beeswax and a clean soft cloth. Lastly apply two or three coats of clear satin polyurethane finish.

Chemicals can be used to put a patina on the copper, which is a matter of choice. If the copper is left alone it will develop its own colours over time, varying with the climate. If using a chemical to achieve a patina ensure you follow the safety instructions for its use and application.

Photo 99

9.0 Finishing the Hull

9.1 Second Layer of Planking

It is now time to fit the second layer of planking above the copper line to complete the hull. Using the teak planks P33 previously identified fit and fix them in place as shown below. You will need to taper the planks at the bow and stern. You will also need to apply a directional change at the bow.

As you progress up the hull you will find the last few planks to be fitted will not need tapering. Repeat for the other side of the hull. Once complete give a light sanding. Lastly apply two or three coats of clear satin polyurethane finish.

Now identify the cradle parts P137A-B and P138A-B. Assemble the cradle and use the cradle to support the model as you progress.

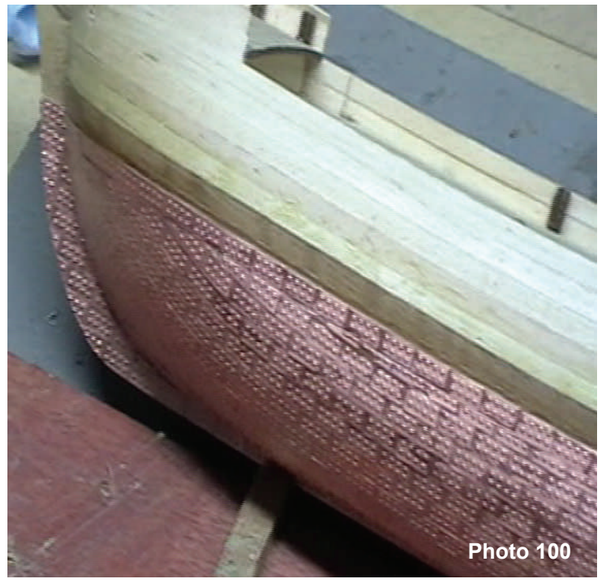
Photo 100

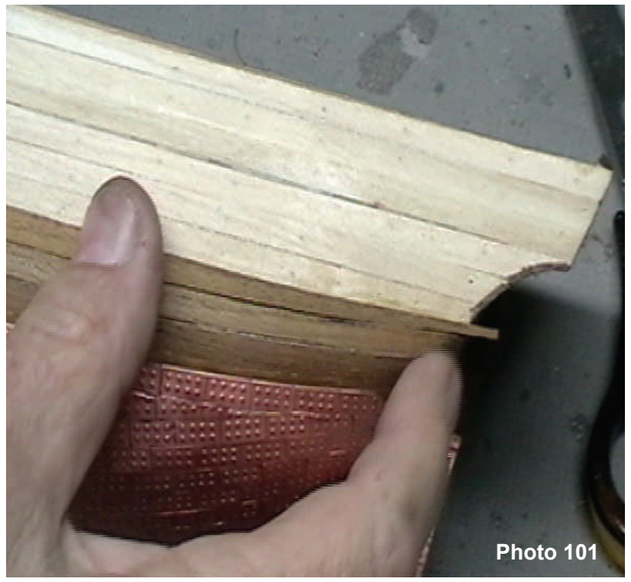
Photo 101


Photo 102

9.2 Transom & Counter Planking

Using the teak planks P33 plank the outside of the transom and the counter planks as shown Photo 103. Use a contact adhesive to fix the planks in place. Paint the top edge of the transom matt black.

Photo 103

9.3 Bulwark Planking

Plank the inside of the bulwark. To do this you will first need to remove the bulkhead horns. Use a razor saw blade to carefully cut through each horn. Once all horns have been removed use a sanding block to sand the false deck surface smooth. Also sand the inside of the bulwark to remove and glue residue. You may also need to use some wood filler to fill any undercut on the bulwark. Sand again after any filler used is dry.

Using the teak planks P33 plank the inside of the bulwark on the three deck levels and across the inside of the transom. Use a contact adhesive to fix the planks in place.

Photo 104

9.4 Deck Planking

Mark with a pencil a line down the centre of each false deck. Identify the silver ash timber strips P34. This timber will be used to cover the false deck to simulate deck planking. Using the silver ash timber strips cut enough into 100mm length pieces to cover each deck. Use the jig Figure 2 to achieve this. bundle approximately 10 lengths at a time of these pieces together using “dog clips”. Run a dark soft pencil along the edge and end of the bundled planks. This will simulate tar caulking between the deck planks. Repeat this until all the deck planks are finished. Apply a thin film of PVA glue on some planks. Always be sure to remove any excess glue with a damp cloth. Lay these planks end-to-end along the right hand side of the centre line marked on the false deck for the full length of the deck. Note where the holes are for the masts and rudder post.

For the next line of planks on the right hand side off-set them by half the length of the plank. Repeat this process until the right hand side of the deck is covered. Repeat the process again for the left hand side of the deck but off-set the planks by half the length of the plank. Allow 24 hours for the glue to dry. Use a sharp blade knife to trim any excess planking. At the mast holes and the rudder post hole drill through the deck planks. Scrape and finish the deck with a sharp straight edge piece of glass. Spray the completed deck with a clear satin or matt finish to seal the surface. Set aside to dry.

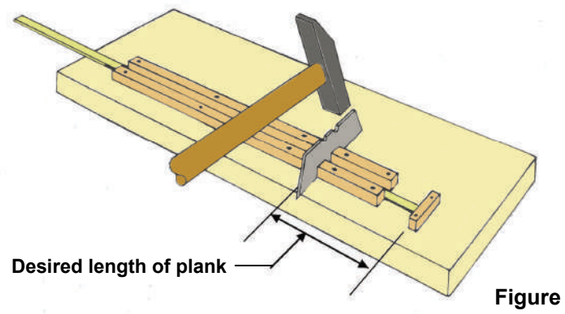

Figure 2

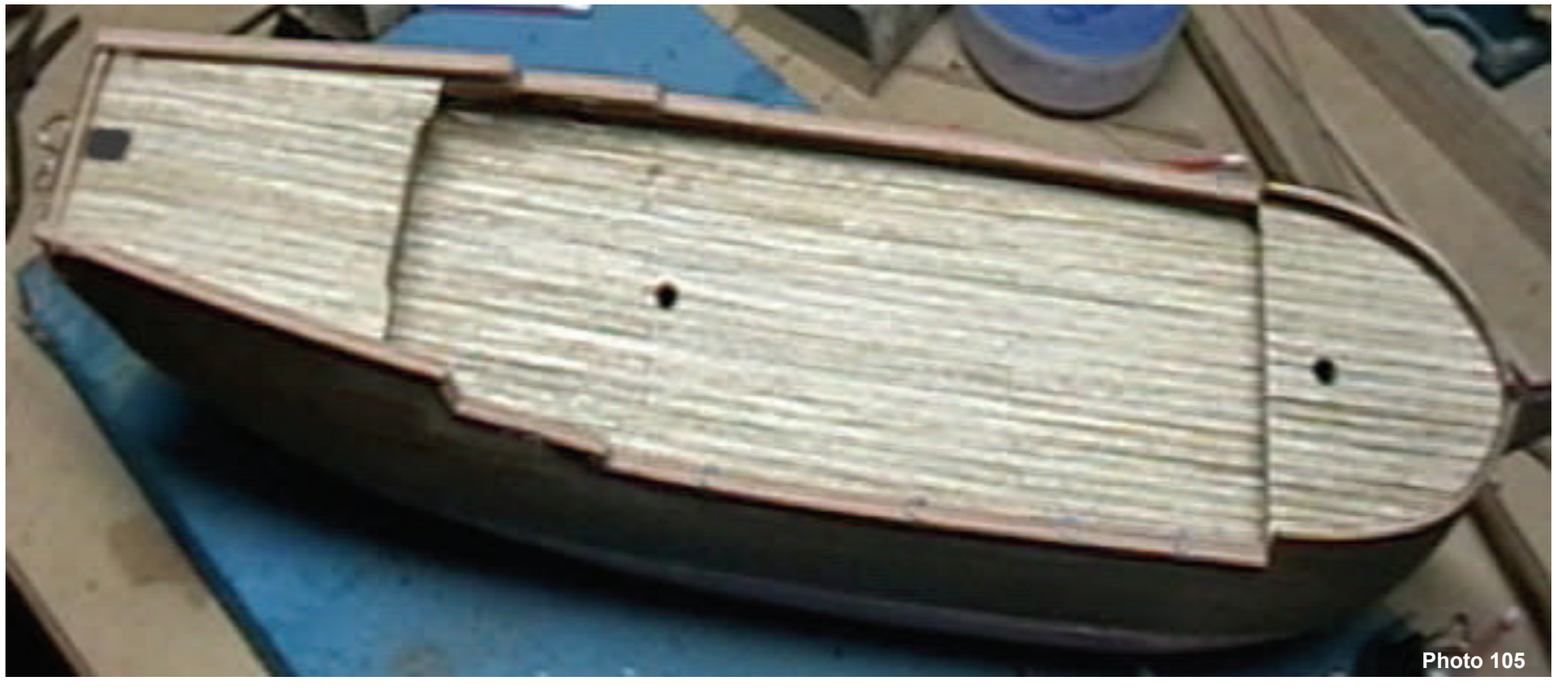

Photo 105

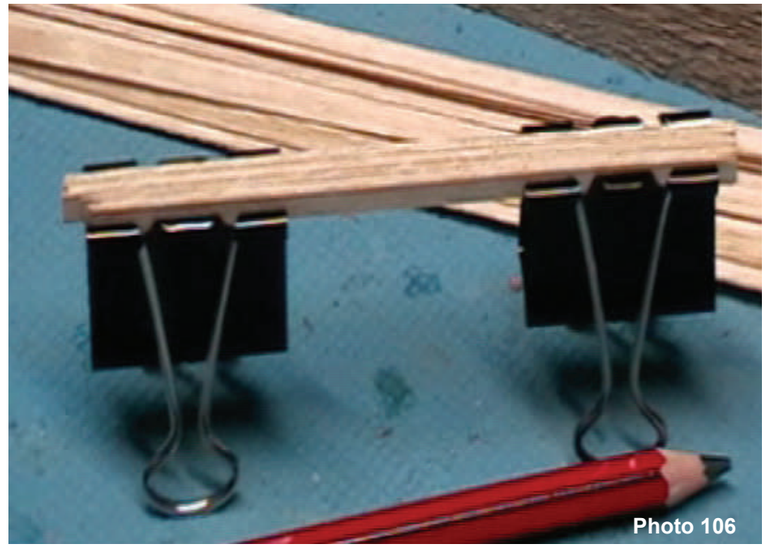

Photo 106

9.6 Cap Rails

Shape and centrally fit the cap rails across the top edge of the bulwarks. Use 2x5mm beech P35 for the cap rails for the main deck and aft deck. Use 2x5mm flexible beech P36 for the fore deck cap rail. Fit the main deck cap rails first, followed by the next upper level at the aft and then the aft deck cap rail. Lastly shape the flexible beech to fit around the bow bulwark. **Do not** fit a cap rail across the transom. Use super glue to fix the cap rails in place. Pin each in place while the glue sets. If desired apply a golden oak stain or shellac to finish the cap rails.

9.7 Wales

The wales are made from 1.5x5 limewood P37. In the mid-ship area at Points A,B & C—Figure 4 measure down 10mm from the underside of the cap rail—mark these points with a pencil. Use a hand held plank bender to shape one length of limewood P37 to fit around the bow. Once satisfied with the bend align this plank with the three marked points at A, B & C. Place the plank in place. Allow the plank to follow its natural curvature fore and aft of these points. Once satisfied temporarily pin the plank in place. Shape a second plank of limewood P37 and fit and pin in place immediately below the first plank. Mark the outline of the wales on the hull with a pencil—this will be used later to glue the wale in place. Repeat for the other side of the hull. Remove the wales and paint matt or satin black. Give at least three coats. Leave for 24 hours to dry completely. Use a contact glue to fix the wales in place using the guide lines previously marked. Pin in place while the glue sets. Once the glue has set remove the pins.

Photo 107

Photo 108

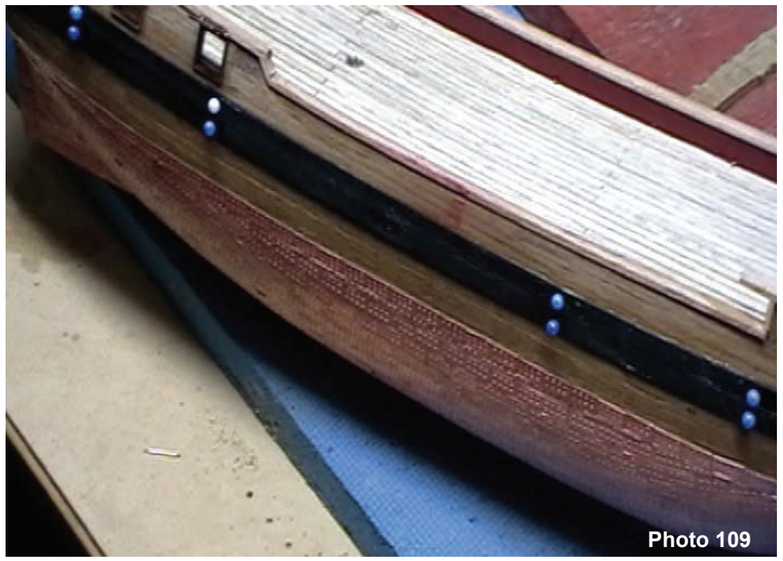

Photo 109

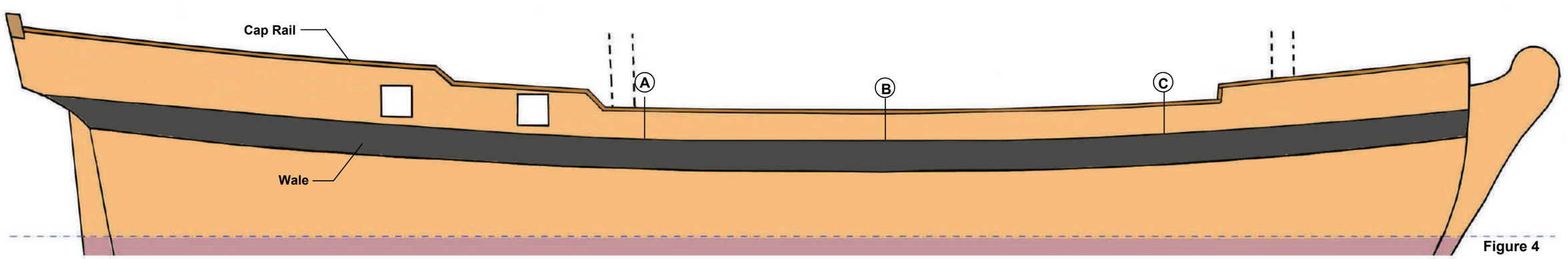

Figure 4

Not to Scale

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SHEET 28

9.8 Painting the Bulwark

9.8.1 Inside of Bulwark

Paint the inside of the bulwark and the inside edges of the gun ports a deep red. Use masking tape to protect the deck. Give at least three coats. Allow 24 hours to dry completely.

9.8.2 Outside of Bulwark

Pain the outside of the bulwark yellow ochre. Use masking tape to protect the wale. Give at least three coats. Allow 24 hours to dry completely.

9.9 Bulwark Frames

To simulate the frames of the hull use 2x3mm walnut P38. Cut lengths to fit between the deck and the underside of the cap rails. Fit at 20mm centres along the inside of the bulwark as shown.

Photo 110

9.10 Bulwark Strips

Identify the 1x2mm limewood P39. Cut lengths to fit along the bulwark as shown as extensions of the cap rail. Cut and shape and then paint black as shown. Fix in place on both sides of the hull once the paint is dry.

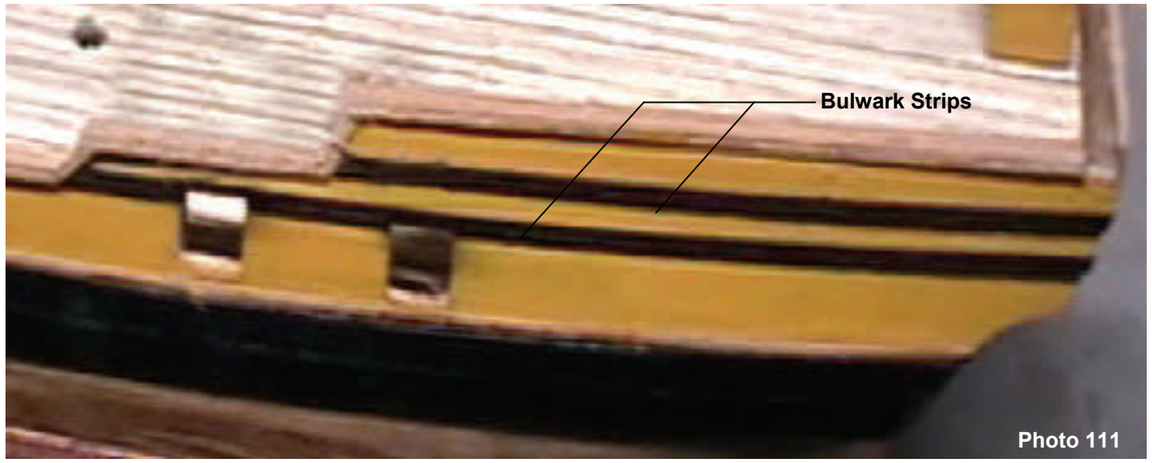

Photo 111

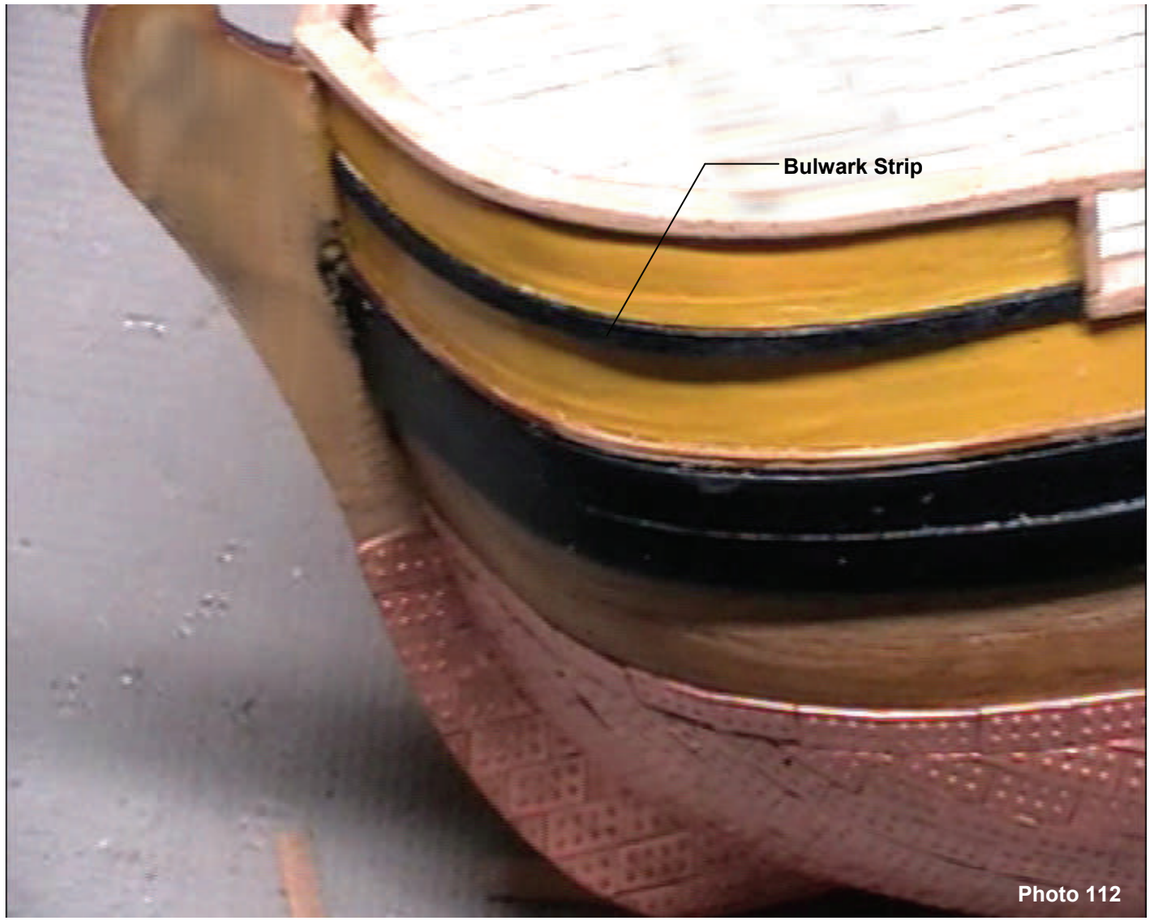

Photo 112

9.11 Rudder

9.11.1 Identify the rudder post P40. Fit against the stem post. Mark where the rudder post is required to enter the tuck. Use a drill and small round file to open and shape this hole to accept the rudder post. Fractionally fit as required. Allow a small area around the rudder post to allow it to move marginally from side to side.

9.11.2 Align the bottom of the rudder post to the bottom of the keel and with the rudder post temporarily held in place mark the copper line from the hull onto the rudder post. Fit & fix copper plates to the rudder post below the copper line as shown. Use teak planks P33 to cover the rudder post above the copper line.

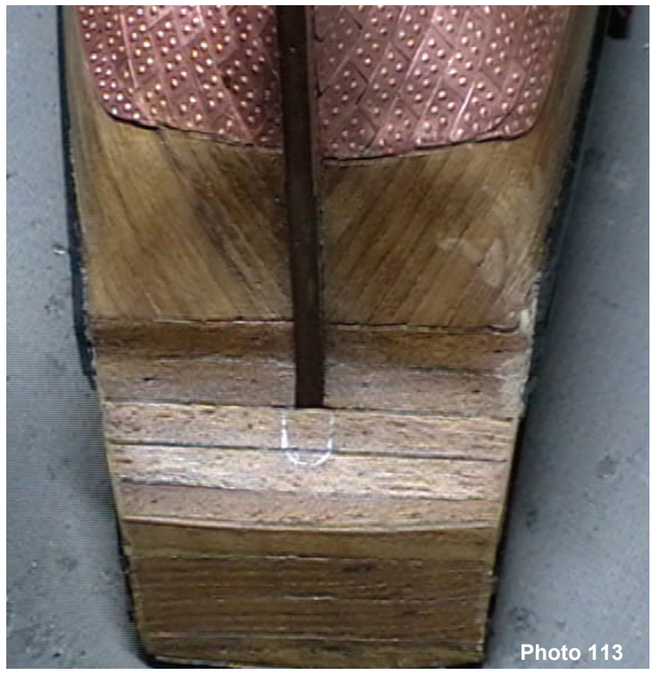

Photo 113

Photo 114

Photo 115

9.11.3 identify the rudder hinges P41. Fit the rudder hinges as shown to the rudder post. Use nails P42 to fix the hinges to the rudder post.

Use scrap timber as spacers and a clip to hold the rudder post in place. Use nails P42 to fix the rudder hinges to the hull - you will need to drill pilot holes first.

Photo 116

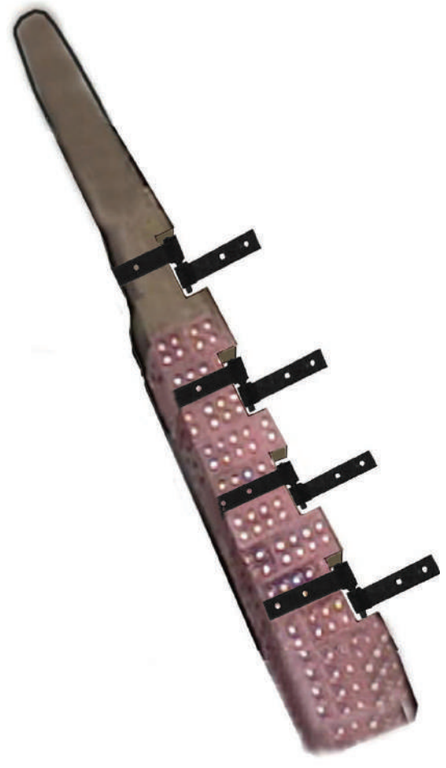

Photo 117

Photo 118

10.1 Rudder Tiller & Rudder Box

Identify the rudder tiller P43. Cut a slot into the top of the rudder post. Shape the end of the tiller to fit into the slot. Glue in position. Identify the rudder box parts P44A-D. Assemble the box parts as shown. Paint the inside of the box red and the outside ochre yellow. Identify the hinges P45. Use a length of 1x1mm walnut P46 as the hinge axle and fix the hinges and axle as shown. Fix the rudder box to the deck above rudder post as shown.

Photo 119

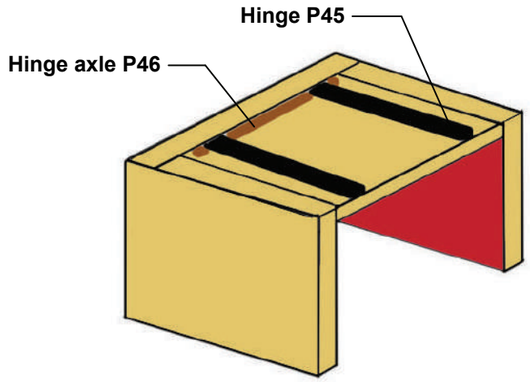

Figure 6

Photo 120

10.2 Main Deck & Aft Deck Bulkhead

Plank the bulkhead between the main & aft decks with the teak planks P33. Identify the doors P47 from the plywood sheet. Paint the doors black. Fit & fix the doors as shown. Use nails P42 as the door knobs.

Fit & fix 2x2mm flexible beech P48 as the trim across the edge of aft deck.

Also fit & fix a length of 2x2mm flexible beech P48 as a trim across the edge of the fore deck.

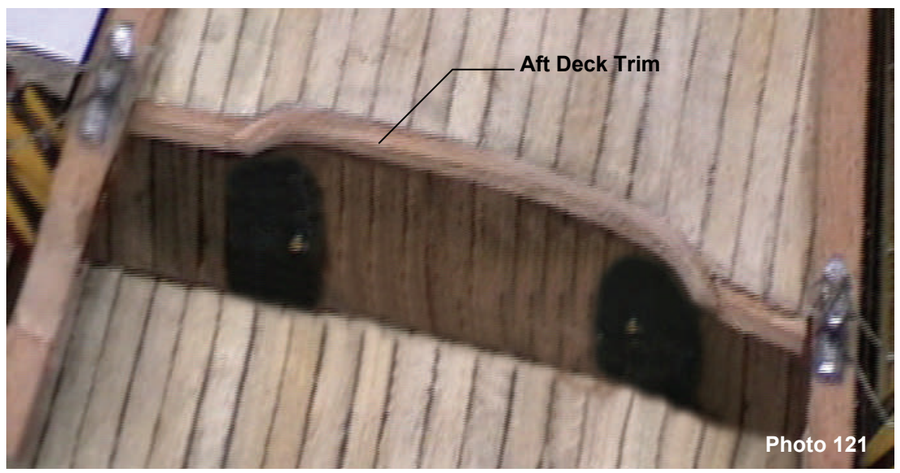

Photo 121

10.3 Gun Port Lids

Identify the gun port lids P49 on the plywood sheet. Trial fit the lids to gun ports and adjust either to fit the lids. Paint the inside and sides of the lids a deep red and the outside yellow ochre. Identify the hinges P45 and paint black. Fix the hinges to the gun port lids.

Insert a map pin into the top edge of the gun port lid. Cut off the head of the pin leaving approximately 5mm of the pin remaining. Temporarily fit the gun port lid in place and mark where the pin will fit to hold the gun port lid open. Drill a 0.6mm hole to take the pin. Fix the gun port lid in place. Identify the metal cleats P50. Fix the cleats to the cap rail as shown. Attach lengths of cord G to the ends of the gun port hinges and tie back to the relevant cleat as shown.

Photo 123

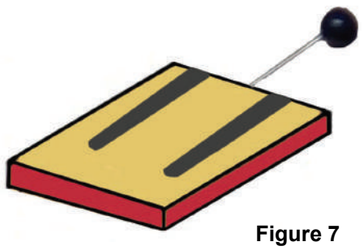

Figure 7

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

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10.4 Deck Cannons

Identify the deck cannons P51. Assemble the four cannons and fix in place on the deck as shown Sheet 31.

Photo 124

Photo 125

10.5 Aft Deck Hatchway

Identify the aft deck hatch base P52 on the plywood sheet. Assemble the base using the timbers identified. Fit an eye pin P53 and a ring P54 as shown. Fit a length of 1x1mm walnut P46 as the hinge axle. Fit the hinges P45 as shown. Fix the hatchway to the aft deck as shown Sheet 31.

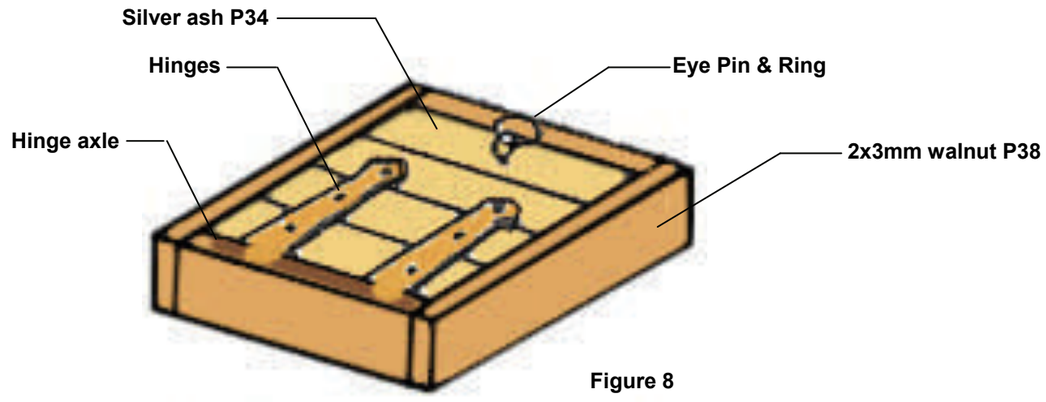


Figure 8

10.6 Stanchions & Banister Rail

Identify the wooden stanchions P55. Identify the 2x3mm walnut P38 as the banister rail. Cut a 52mm length of this timber. Use a file to round the top edges. Use a hand held plank bender to achieve a slight curve in the rail to accommodate the deck curvature. Fit & fix the stanchions and rail in place as shown.

10.7 Platform & Ladder

To ensure the ladder reaches beyond the location of the deck cannon fit the ladder platform P56 from the aft deck. Identify the ladder P57A-I. Assemble the ladder. Stain the platform and ladder walnut or teak. Fix the platform and ladder in place as shown.

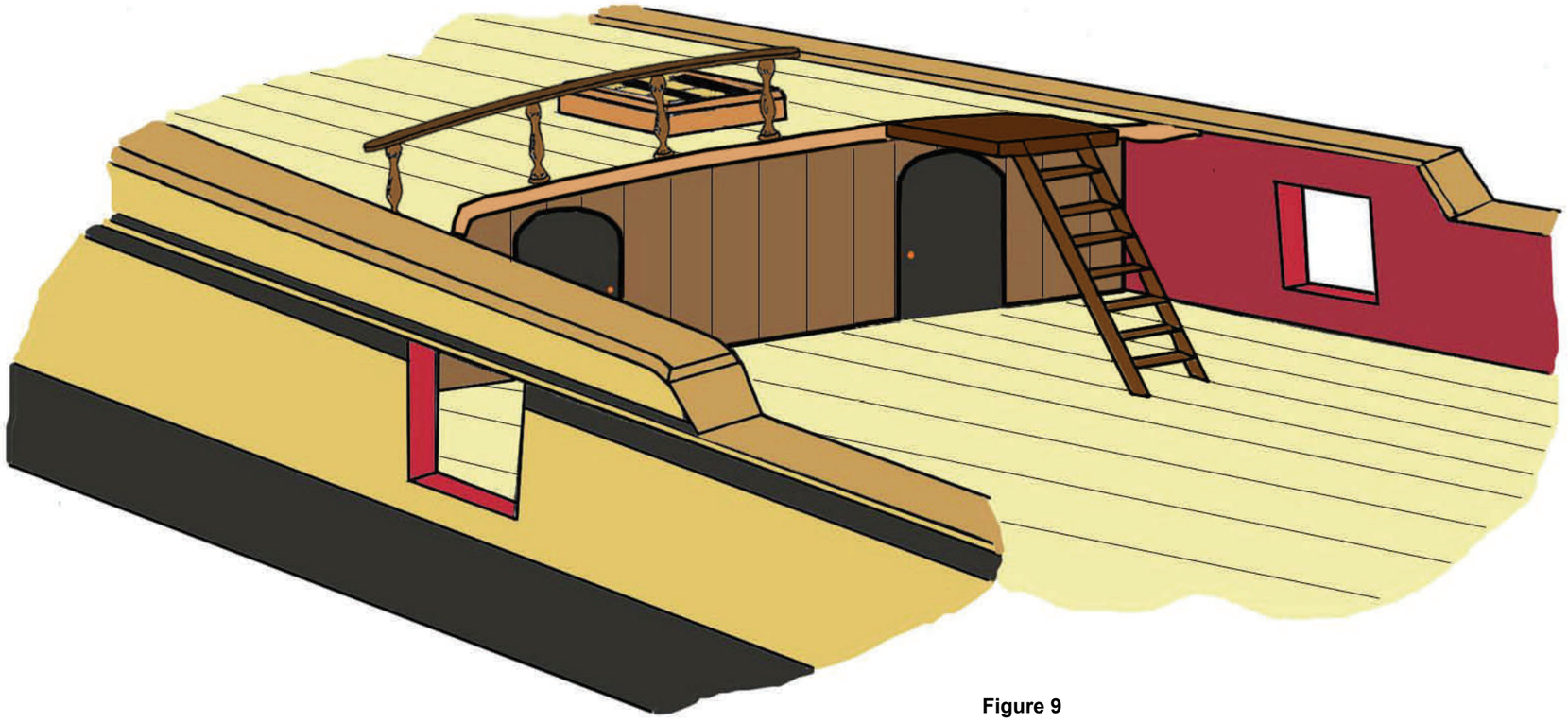


Figure 9

10.8 Capstan Base & Capstan

The capstan is mounted on a base. Identify the base P58 from the plywood sheet. Assemble the base using the timbers identified. Identify the capstan P59. Assemble and fix to the base. Fix the base and capstan to the deck as shown Sheet 31.

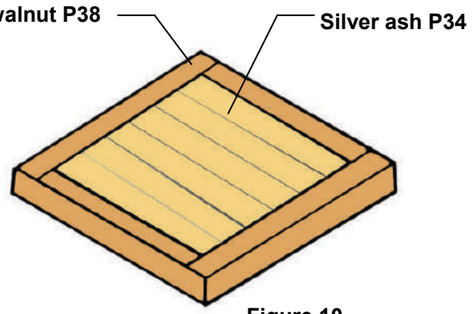


Figure 10

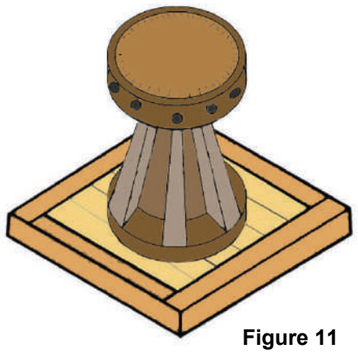


Figure 11

10.9 Pumps

Identify the pumps P60. Assemble the pumps as shown and fix to the deck as shown Sheet 31.

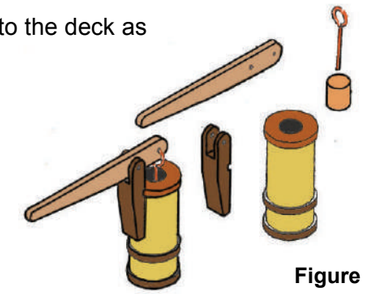


Figure 12

10.10 Main Deck Cargo Hatches

There are three cargo hatches on the main deck— A, B & C. Identify the cargo hatch bases P61A, P61B & P62 on the plywood sheet. Assemble the base using the timbers identified. Fit eye pins P53 and rings P54 as shown. Fix the hatches to the main deck as shown Sheet 31.

Cargo Hatches A & C

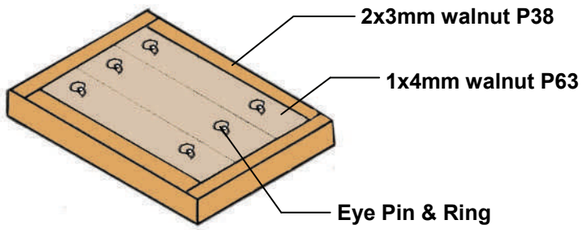


Figure 13

Cargo Hatch B

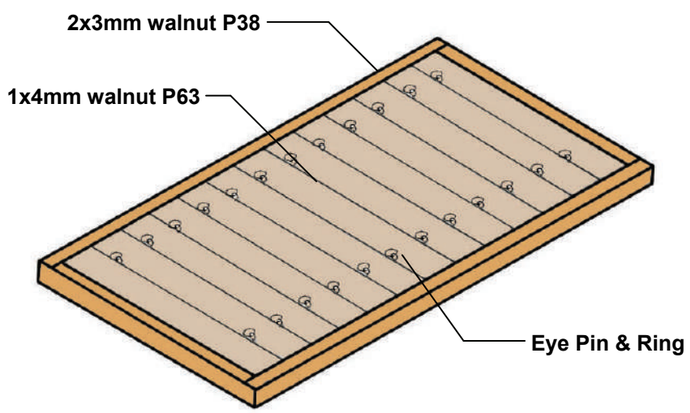


Figure 14

10.11 Belfry

The belfry is assembled from parts P64A-C. Identify these parts on the plywood sheets. Assemble & paint the belfry roof matt black and stain the stands walnut or teak. The bell rod is 1mm brass wire P65. Cut a length as required. Drill a 1mm hole into the two uprights and fit rod. Attach the bell P66 to the rod. Fix the assembled belfry to the deck as shown Sheet 31.

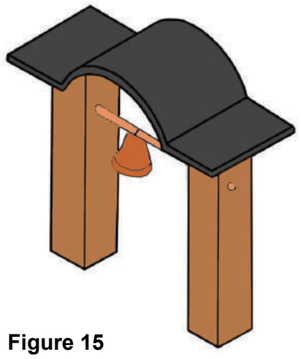


Figure 15

10.12 Anchor Winch

Identify the anchor winch P67. Assemble and fix to the deck as shown Sheet 31.

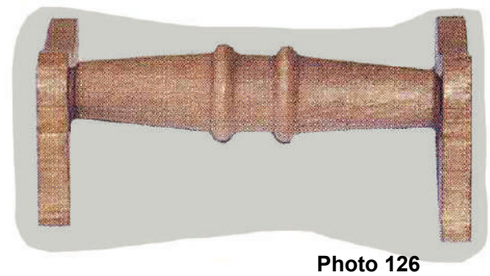


Photo 126

10.13 Fore Deck Hatch

Identify the fore deck hatch base P68 on the plywood sheet. Assemble the base using the timbers identified. Fit an eye pin P53 and a ring P54 as shown. Fit a length of 1x1mm walnut P46 as the hinge axle. Fit the hinges P45 as shown. Fix the hatchway to the fore deck as shown Sheet 31.

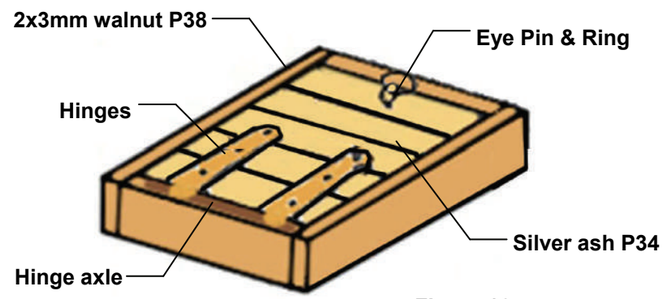


Figure 16

HMS SUPPLY
1759
SHEET 34

10.14 Pin Rails

10.14.1 Main Mast Pin Rail

Cut two 20mm lengths of 5x5mm walnut P69.Shape as shown. Cut a 2mm wide slot 2mm deep in each walnut length 4mm from the top of each to accommodate the pin rail rack. Cut a 40mm length of 2x5mm walnut P70. Drill 1.2mm holes as shown to accommodate the belaying pins. Assemble the pin rail as shown. Fix to the deck as shown Sheet 31 and fix the pin rail braces P71 as shown. Fix the belaying pins P72

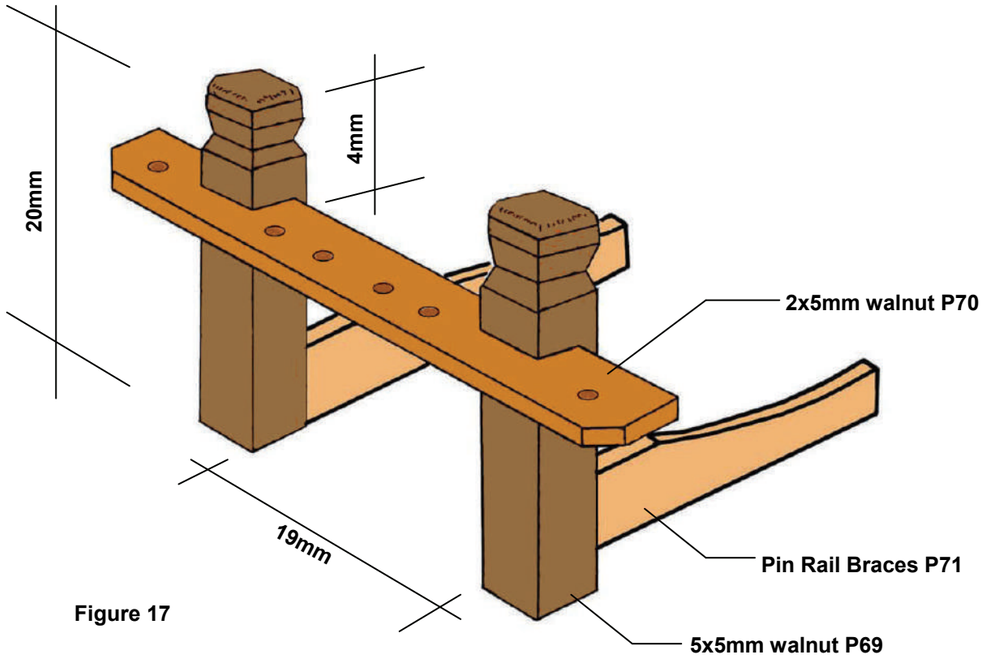


Figure 17

10.14.3 Bowsprit Pin Rail

Cut two 10mm lengths of 5x5mm walnut P69.Shape as shown. Cut a 2mm wide slot 2mm deep in each 5x5mm walnut length 3mm from the top of each to accommodate the pin rail rack. Cut a 18mm length of 2x5mm walnut P70. Drill 1.2mm holes as shown to accommodate the belaying pins. Assemble the pin rail as shown. Fix to the deck as shown Sheet 31. Fix the belaying pins P72

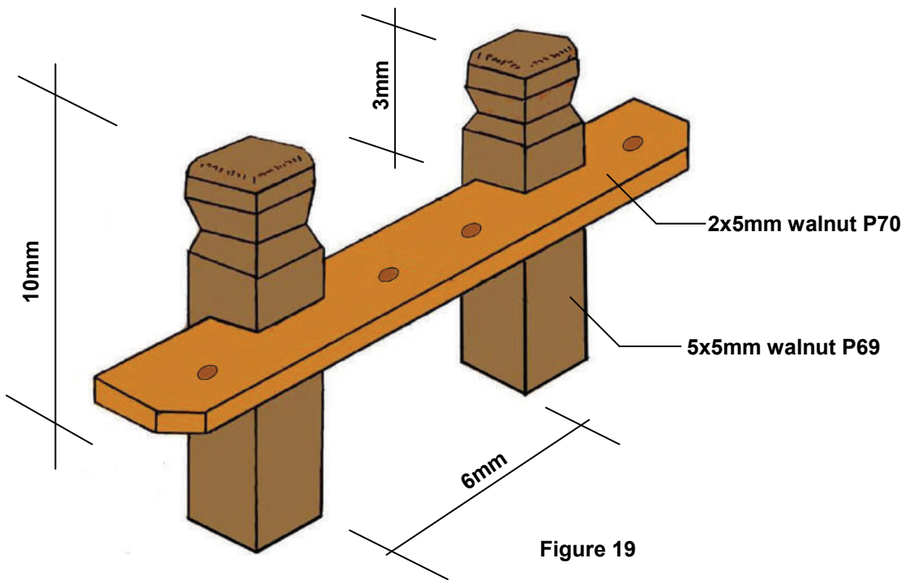


Figure 19

10.14.2 Foremast Pin Rails

There are two foremast pin rails. Cut four 26mm lengths of 5x5mm walnut P69. Shape as shown. Cut a 2mm wide slot 2mm deep in each 5x5mm walnut length 6mm from the top of each to accommodate the pin rail rack. Cut two 32mm lengths of 2x5mm walnut P70.Drill 1.2mm holes as shown to accommodate the belaying pins. Assemble the pin rails as shown. Fix to the deck as shown Sheet 31. Fix the belaying pins P72.

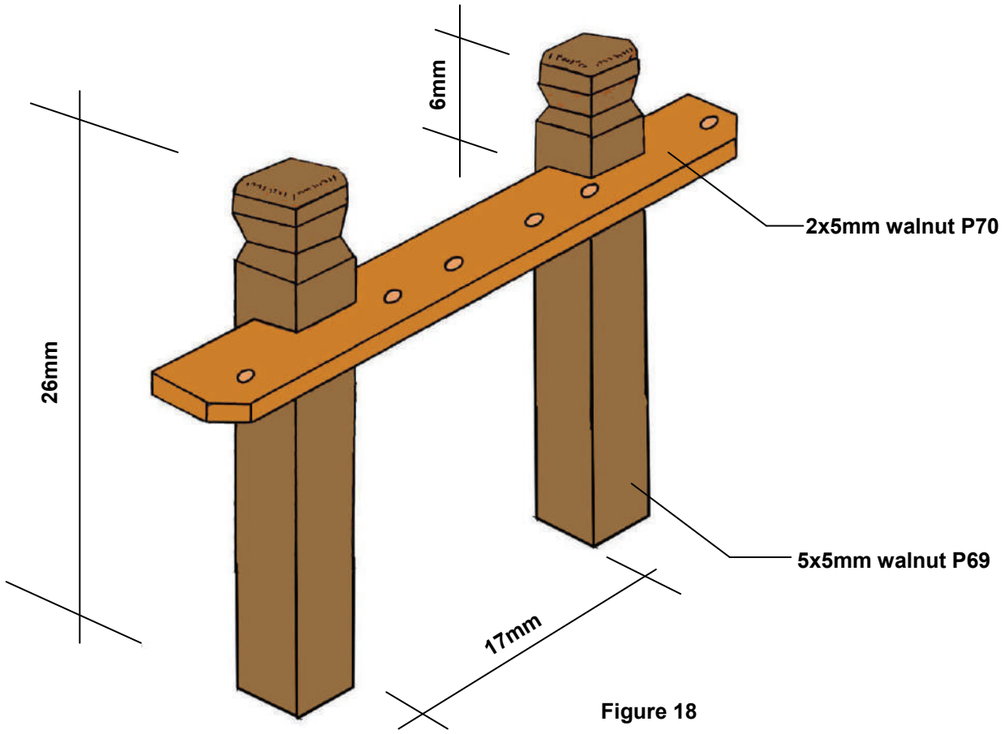


Figure 18

10.15 Chimney

Using 6mm dowel P105 cut two lengths as shown. Fit & fix together and paint matt black. Fix the chimney to the deck as shown Sheet 31.

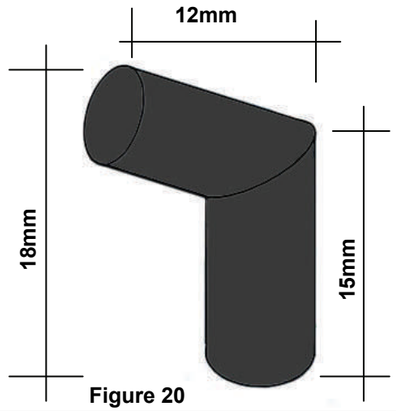


Figure 20

10.16 Bittheads

Cut 10 x 9mm lengths of 5x5mm limewood P74. Shape as shown. Fix to the fore deck cap rail as shown Sheet 31.

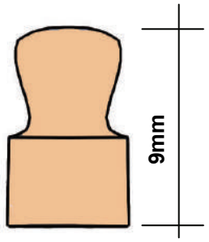
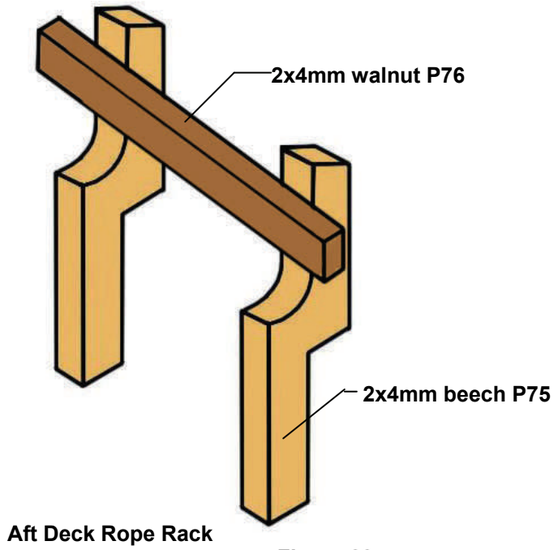


Figure 21

HMS SUPPLY
1759
SHEET 35

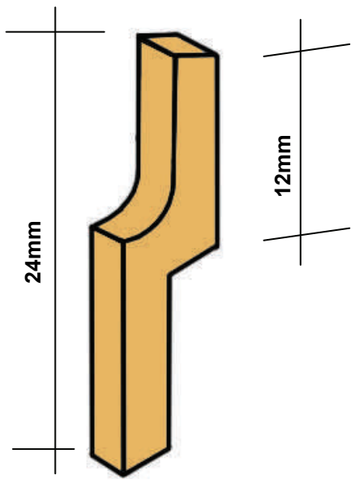
10.17 Aft Deck Rope Racks & Stanchions

Identify the 2x4mm beech P75. Cut 6 x 24mm lengths. Shape as shown. Cut two 30mm lengths of 2x4mm walnut P76. Assemble two aft deck rope racks as shown. Fix the rope racks and stanchions to aft deck cap rail as shown Sheet 31 and Photo 128.



Aft Deck Rope Rack

Figure 22



Stanchion

Figure 23

10.18 Aft Deck Netting

Identify the 8 netting stanchions P77. Cut two 50mm lengths of 1x4mm walnut P63 as the base. Fix four stanchions along each length of the base. Fix a length of cord G through the stanchion holes. Identify the netting P78 and cut two 25x50mm lengths to fit within the stanchions as shown. Apply a dab of glue to the netting at the base of each stanchion to fix in place. Fix the base to the aft deck cap rail as shown Photo 128.

Photo 128

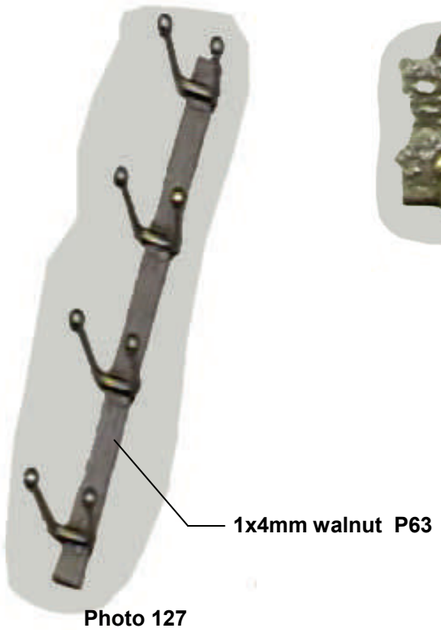


Photo 127

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

10.19 Brace Spreaders

Cut out a 3mm section of the cap rail immediately in front of the transom. Cut two 20mm lengths of 2mm dowel P79. Glue and nail each in place in the gap created as shown Sheet 31 and Photo 129.

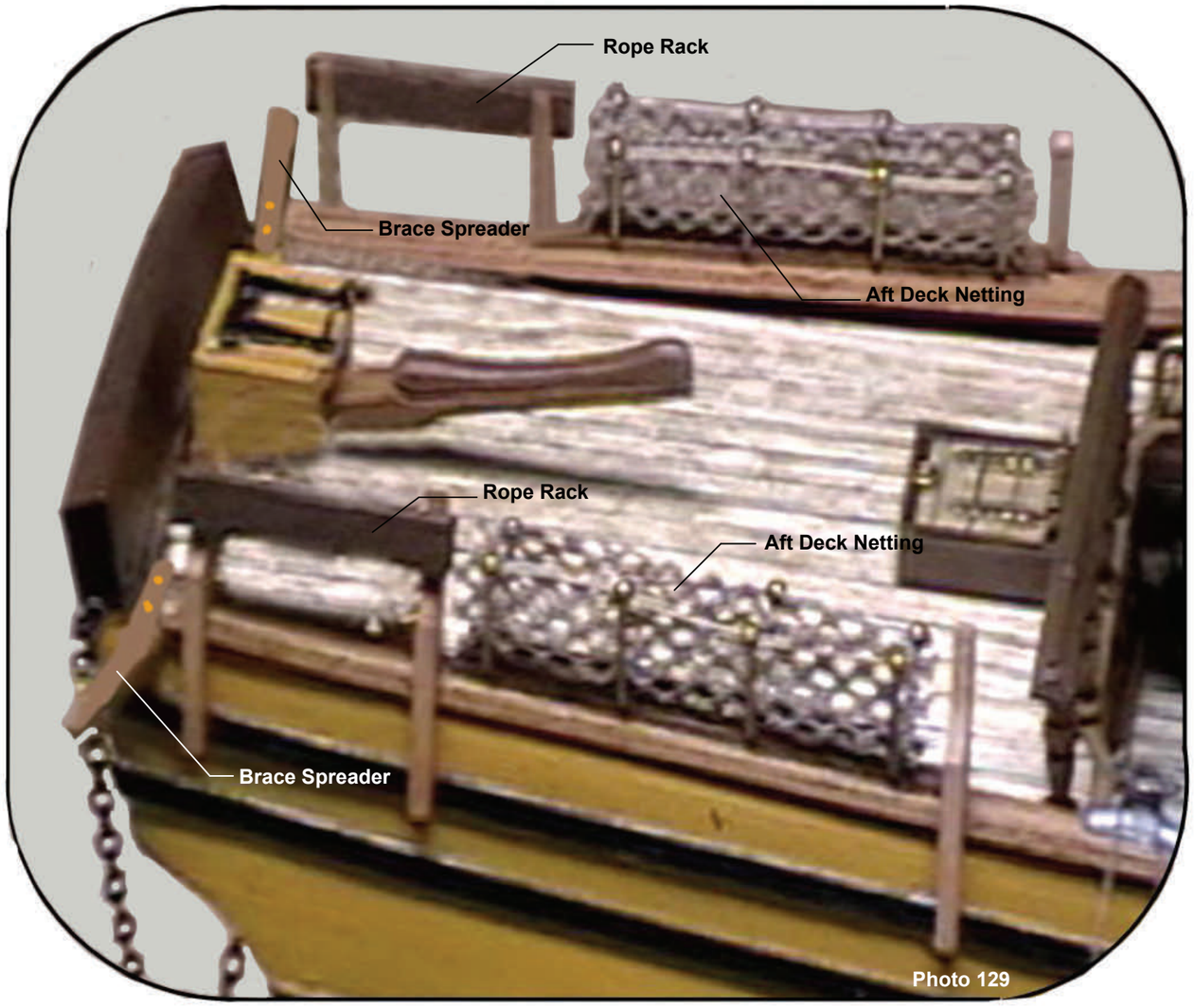


Photo 129

HMS SUPPLY
1759
SHEET 36

10.20 Catheads & Knees

Cut two 45mm lengths of 5x5mm walnut P69. Drill four 0.7mm holes in one end of each length as shown Figure 22. Cut two 3mm lengths of 5x5mm walnut P69 as the cathead supports—shape these to the profile shown so as to fit at the base of the cathead onto the deck—assemble the cathead and base support. Identify from Sheet 31 the location of the catheads on the deck —cut a 5mm gap into the cap rail at this location. Fit & fix the catheads to the deck as shown. Identify the cathead knees P80A/B on the 2mm plywood sheet. Stain a walnut or teak colour. Fix each under the cat head as shown Photo 131. Fix an eye pin P53 to the stem post side of the cathead. Fix a cleat P50 to the rear end of the cathead as shown.

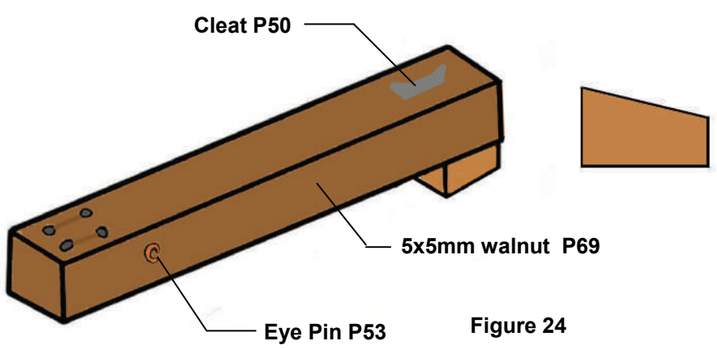


Figure 24

Photo 130

Photo 131

Photo 132

10.21 Hawse Plates

Identify the port & starboard hawse plates P81A/B on the plywood sheet. Use the plate as a guide to mark the bulwark strip to be removed and to locate the holes as shown. Dry fit the plates in place - use a round file to shape the inside of each plate to give enough curvature to ensure the plate sits flat on the bulwark. Use a small pilot drill and then a 3mm drill to carefully drill the hawse holes through the bulwark. Once satisfied paint the plates matt black and, when dry fix each to the outside bulwark as shown.

Photo 133

Photo 134

10.22 Stem Post & Decoration

Paint the stem post matt black above the copper plating line. Identify the stem post decoration P82A/B on the plywood sheet. Paint gold and when dry fix to the stem post as shown.

Shape the gammoning slot by cutting a 3x6mm hole through the top of the stem post as shown.

Photo 135

HMS SUPPLY
1759
SHEET 37

10.23 Anchor Winch & Anchors

Drill two 4mm holes in the deck for the hawse pipes P83 as shown Sheet 31. Paint the hawse pipes matt black if desired. Fix the hawse pipes. Identify the anchors P84. Assemble the anchors. Using 2mm cord P85 cut two lengths 250mm long. Taking one end of this cord, thread it through the large brass ring on the end of the anchor shaft, wrap approximately 15mm back on itself and secure with cord H. Feed the other end of the 2mm cord through the hole in the bulwark and wrap around the winch—note the direction shown. Thread the remaining 2mm cord into the hawse pipe into the deck cavity.

10.24 Anchor Crane

Shape an eye pin P53 as a hook. Drill a hole in the base of a 5mm 2 hole block P86. Fit an eye pin P53 to the side of the cathead. Use cord H to reeve the block to the cathead as shown starting at the eye pin and terminating at the cleat P50 on the cathead base. Attach each anchor to the hook as shown. Repeat the process for the second anchor.

Photo 136

Photo 137

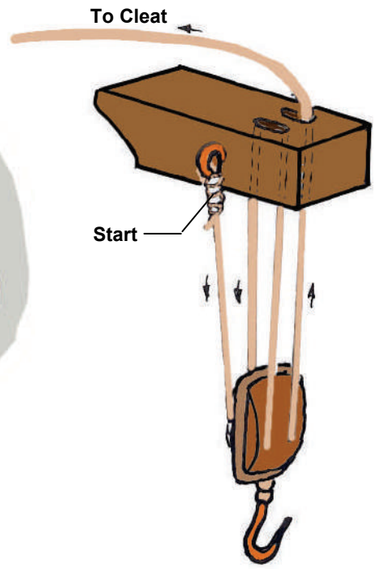


Figure 25

Photo 138

Photo 139

10.25 Fore Deck Ladder

Identify the fore deck ladder parts P87A-E. Assemble and fit & fix in position as shown Sheet 31.

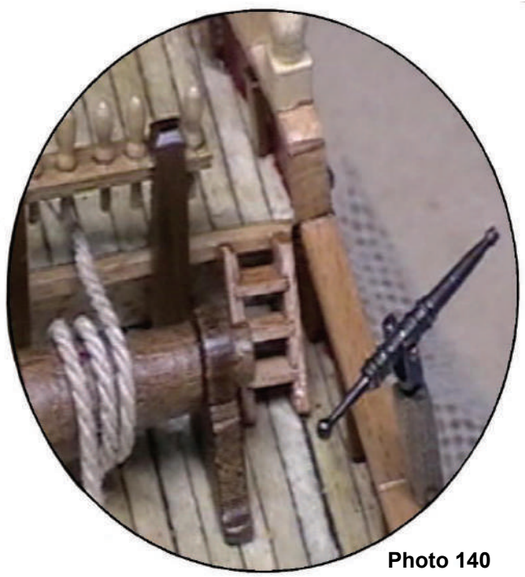


Photo 140

10.26 Culverin Mounts & Culverins

Identify the 4x4mm walnut P88. Cut two 22mm lengths. Shape as shown. Cut a 2mm rebate to fit against the cap rail. Drill a 1mm hole in the centre of the mount top to accommodate the culverin P89. Fix the culverins in place. Fix the culverin mounts to the cap rail as shown Sheet 31.

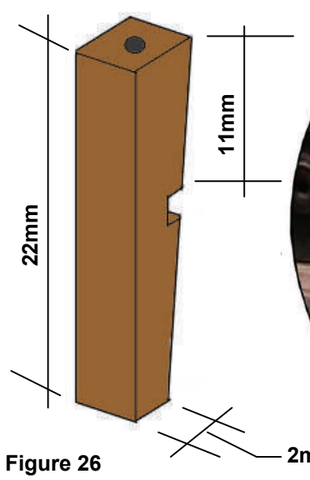


Figure 26

Photo 141

10.27 Stern Decoration, Name Plate & Rudder Chain

Identify the stern decoration P90 on the plywood sheet. Paint gold and fix in position as shown. Identify the name plate P91. Paint the lettering gold and fix in position on the transom. Fit an eye pins P53 as shown to the transom and rudder. Attach the rudder chain P92 to the eye pins as shown.

Photo 142

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

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SHEET 38

10.28 Side Gallery Windows
Identify the side gallery windows P93A/B. Remove the required length of bulwark strip. Identify the window glass P94 and fit & fix behind the window. Fix the side gallery windows to the hull.

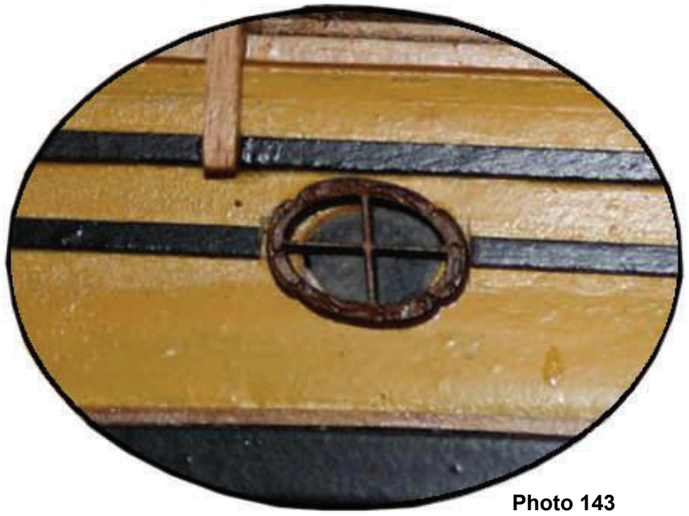


Photo 143

Photo 144

10.29 Channels
The channel is a wooden platform projecting from the hull over which the deadeye straps sit. The channels allow the lower deadeyes to secure the shrouds to the hull. The channels are P95A/B & 96A/B. Identify these parts from the 2mm plywood sheet. Paint the channels black. Fit the channels to the hull according to the deck plan presented on Sheet 31—the deadeye straps will be fitted later. Align the first or front deadeye channel location with the relevant mast as shown.

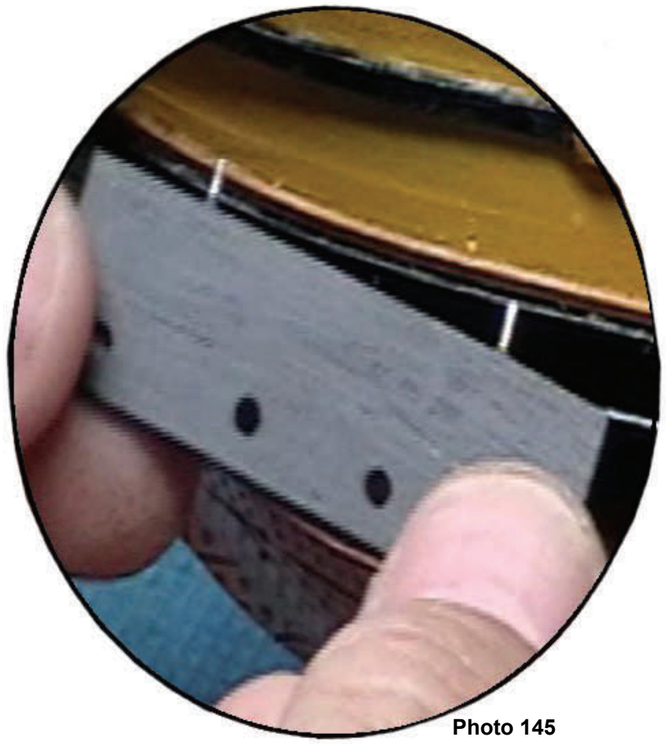


Photo 145

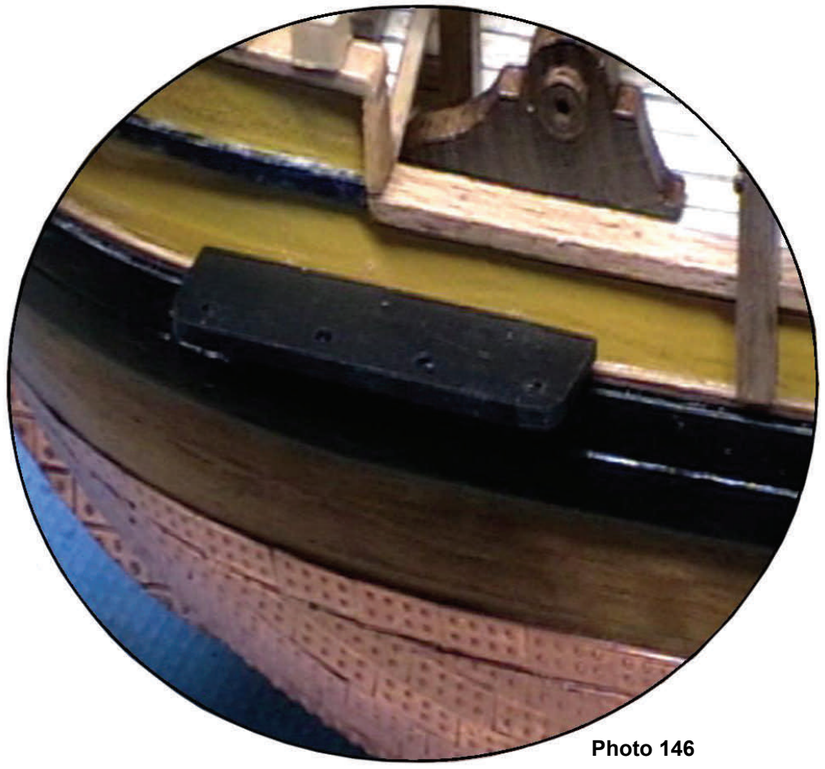


Photo 146

11.0 Masts, Yards and Bowsprit

The next step is to shape and assemble the masts, yards, bowsprit, gaff & boom. Referring to Sheets 41, 42 & 43 locate and identify the various sizes of dowels, blocks and fittings to be used for this stage. The masts, yards, bowsprit, gaff and boom will need to be shaped and tapered. This can be achieved using a mini plane, a file and sandpaper and using the technique presented in Figure 27.

Once they have all been shaped and tapered apply the finish as presented. Alternatively apply a clear matt or satin polyurethane spray finish. Fit any eye pins, blocks and stirrups as shown on Sheets 41, 42 & 43. **Do not fit the masts or yards to the model yet.**

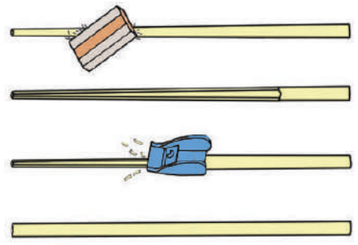


Figure 27

11.1 Mast Tops, Trestle Trees & Cross Trees

Before progressing the mast tops and cross trees & trestle trees need to be assembled.

11.1.1 Fore & Main Mast Tops

Identify the mast tops P97 & P98 from the 2mm plywood sheet. Fit the identified timbers to fully assemble the mast tops. Paint identified timbers matt black. Once completed put aside for fitting to the masts later.

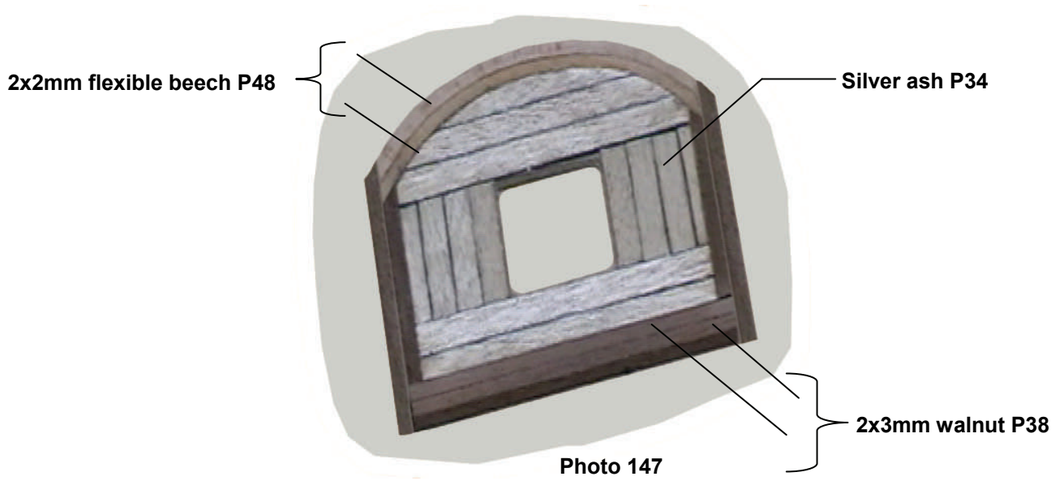


Photo 147

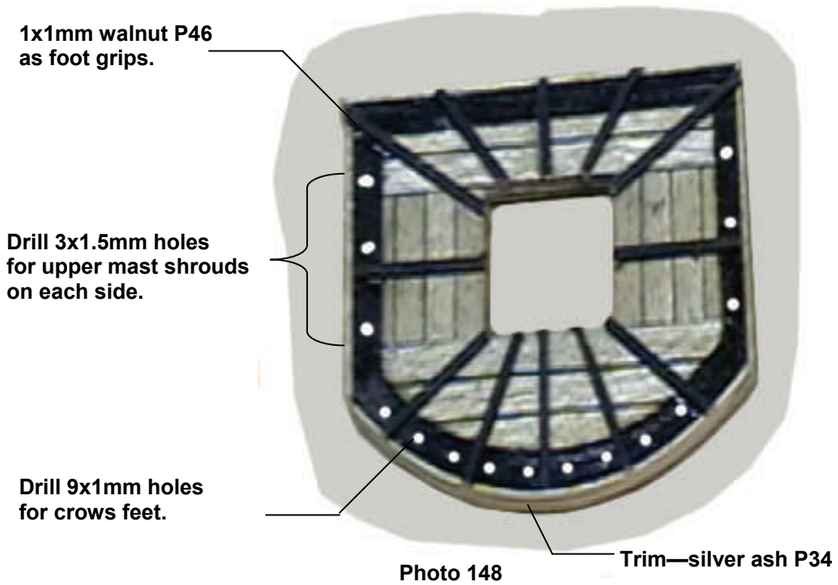


Photo 148

11.1.2 Fore & Main Trestle & Cross Trees

Identify the fore & main mast trestle and cross trees P99A/B & P100A/B from the 2mm plywood sheet. Assemble as shown. Once completed put aside for fitting to the masts later.

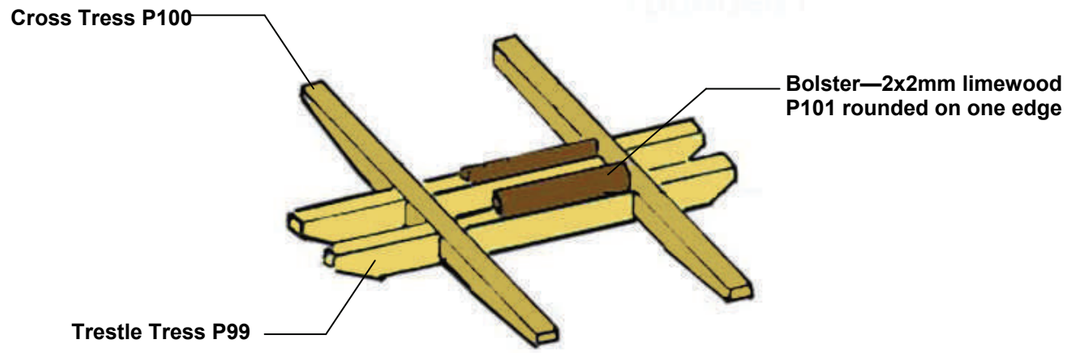


Figure 28

11.1.3 Fore & Main Topmast Trestle & Cross Trees

Identify the fore & main mast trestle and cross trees P102A/B & P103A/B from the 2mm laser cut plywood sheet. Assemble as shown. Paint matt black. Once completed put aside for fitting to the masts later.

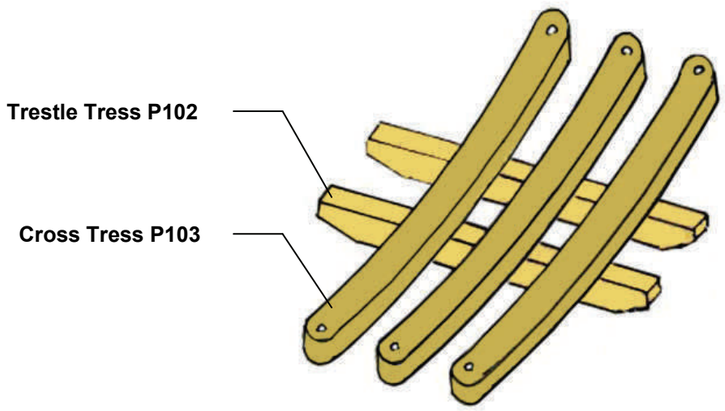


Figure 29

11.2 Masts

11.2.1 Foremast

Identify the various dowels. Cut each to length and shape according to the figures. Assemble the foremast as shown. Fit the assembled mast top in place. Fit the trestle & cross trees. Fit any blocks as shown. To attach blocks in place fix eye pins P53 in place and attach block to eye pin using cord G.

NOT TO SCALE

3mm sqr 4mm dia

Fore Topmast L142mm, 5mm dia dowel P104

4mm

Fore Topgallant Mast L160mm, 4mm dia dowel P106

3mm dia

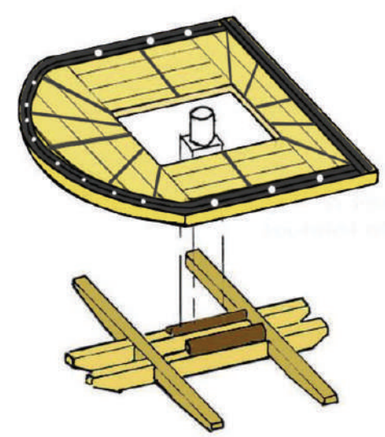
4mm sqr 5mm dia

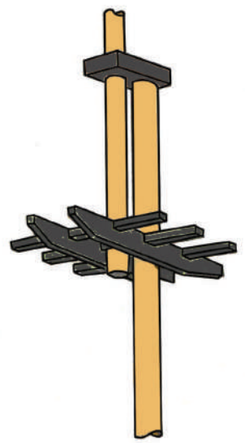
Foremast L200mm, 6mm dia dowel P105

45mm

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J





Foremast Assembled

55mm

30mm

110mm

31mm

Truck—shape P88—Paint gold

Mast Cheek P73

Fore & Main Trestle & Cross Trees

Fore & Main Topmast Trestle & Cross Trees

Side Elevation

Eye Pin P53

Eye Pin P53

20mm

Mast Cap P108

Mast Cap P107A

Drill 1mm hole

Front Elevation

Figure 30

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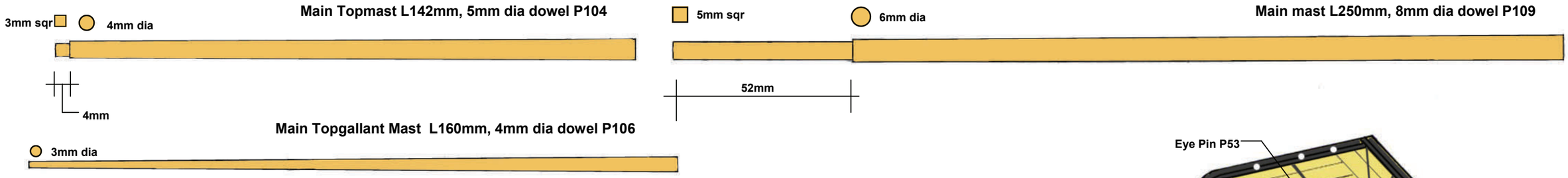
11.2.2 Main Mast

Identify the various dowels. Cut each to length and shape according to the figures. Assemble the main mast as shown. Fit the mast strengtheners P110. Fit the assembled mast top in place. Fit the trestle & cross trees. Fit any blocks as shown. To attach blocks in place fix eye pins P53 in place and attach block to eye pin using cord G.

NOT TO SCALE



BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

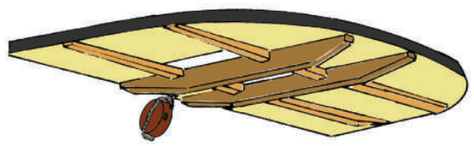


Figure 31B

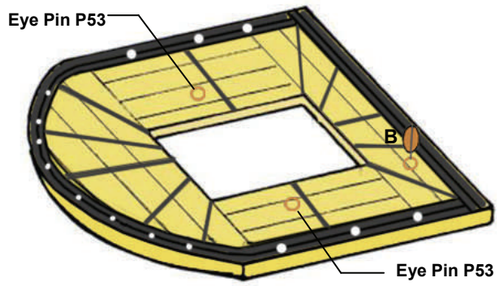
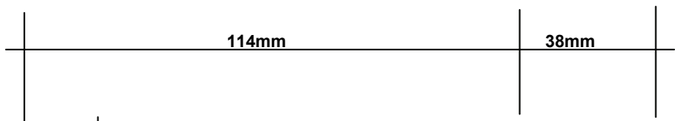


Figure 31A



Main Mast Assembled

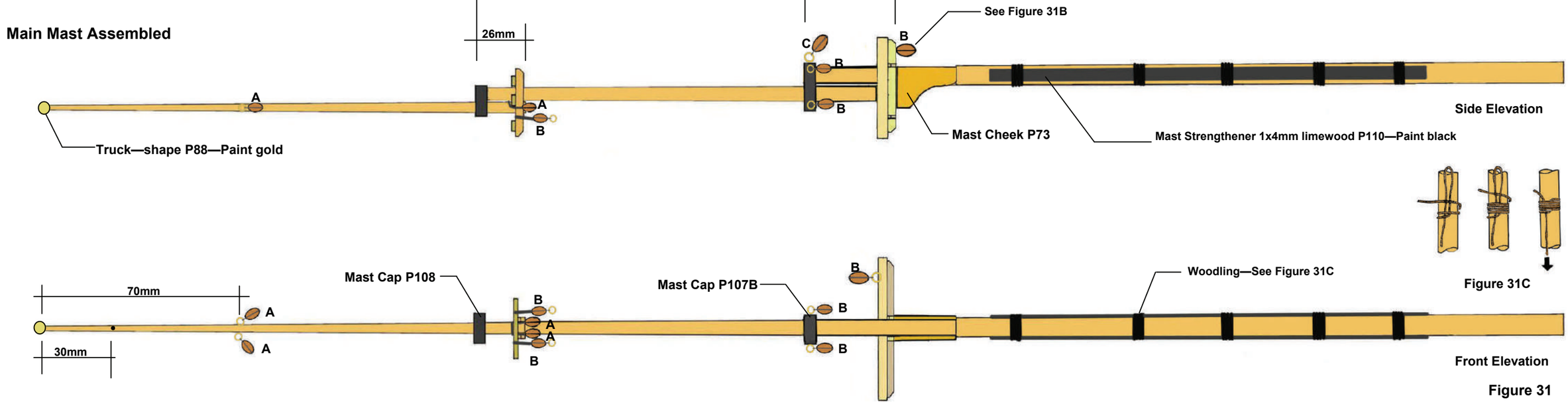


Figure 31C

Figure 31

HMS SUPPLY
1759
SHEET 42

11.2.3 Bowsprit, Jib-Boom, Martingale & Spritsail yard

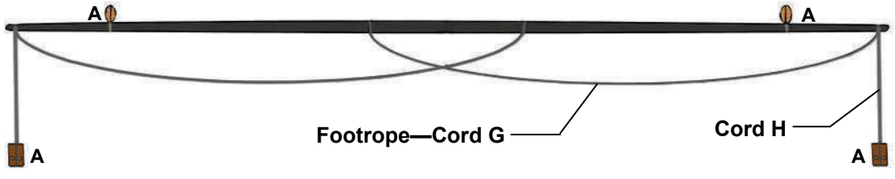
Identify the various dowels. Cut each to length and shape according to the figures. Assemble the bowsprit, jib-boom and martingale as shown. Identify the bees P113A/B on the 2mm plywood sheet and fit to assembled bowsprit. The spritsail yard will be fitted later.

Bowsprit L155mm, 6mm dia dowel P105

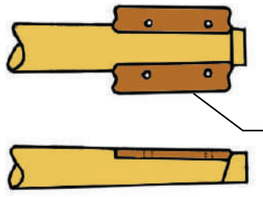
Jibboom L110mm, 4mm dowel P106

Martingale L 40mm, 2mm dia P79

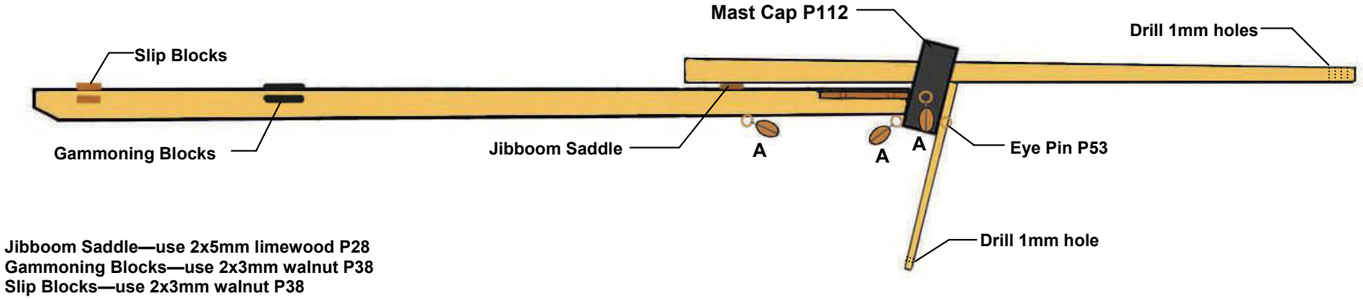
Spritsail Yard L144mm, 3mm dia dowel tapered to 2mm at each end P111



NOT TO SCALE



Bowsprit Assembled



Jibboom Saddle—use 2x5mm limewood P28
Gammoning Blocks—use 2x3mm walnut P38
Slip Blocks—use 2x3mm walnut P38

Figure 32

11.2.4 Fit Bowsprit & Masts

Identify the mast heels P114 & P115 from the 4mm plywood sheet. Fit and fix the mast heels in place. Fit & fix the bowsprit in place—first fit the bowsprit saddle P116 in place on the deck. Use a small round file to adjust the saddle to achieve the required bowsprit angle and a good seat for the bowsprit—trial fit with the bowsprit. Use cord J as the gammoning—fit as shown. Fit & fix the fore & main masts in position.

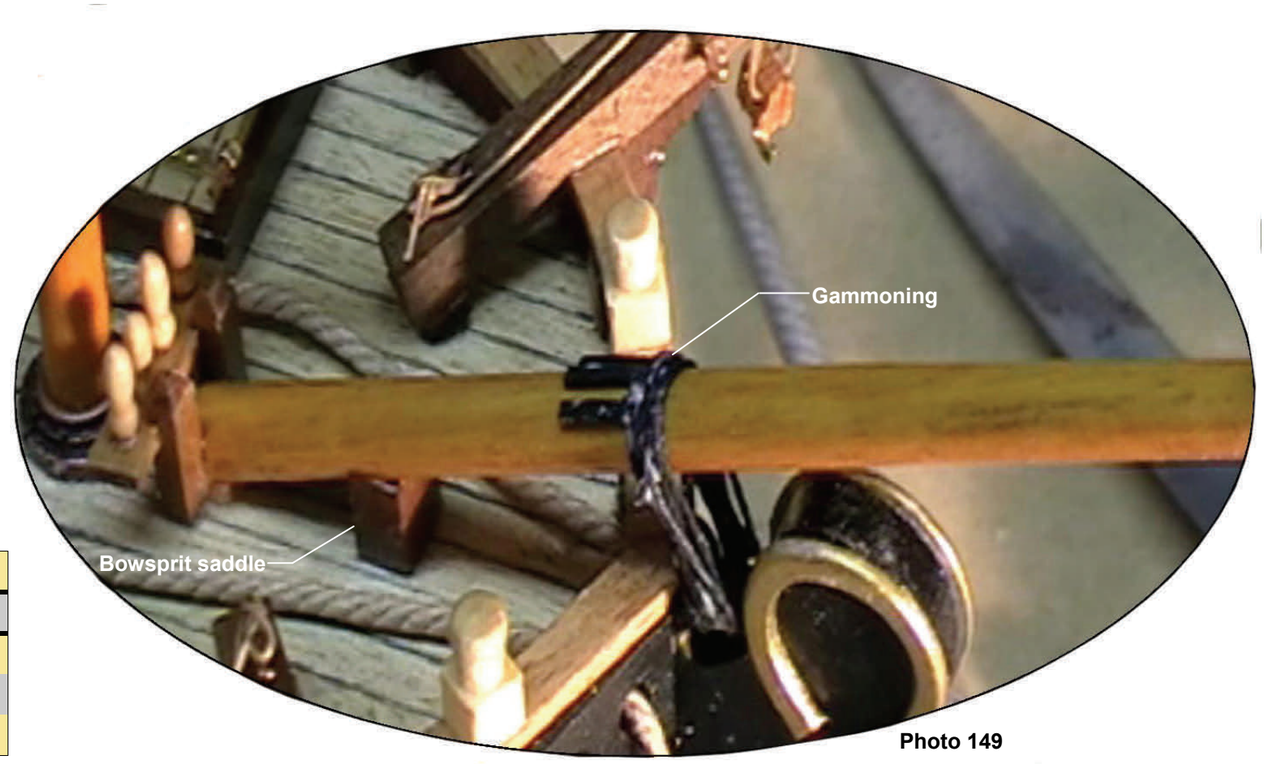


Photo 149

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

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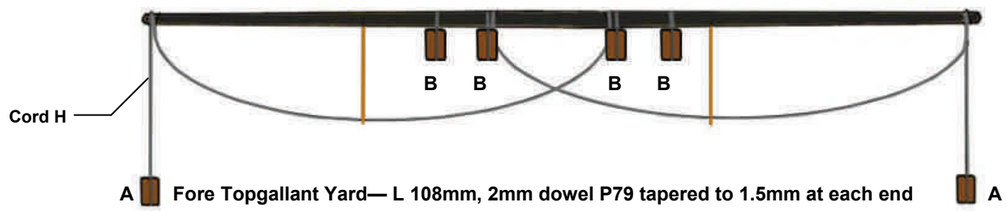
12.0 Yards

The next step is to shape and assemble the foremast yards, main mast yards, the gaff, boom and stunsail booms. The yards will need to be shaped and tapered. Taper dowels as previously described. Once all yards have been shaped and tapered paint the yards matt black or apply a walnut or teak stain if desired. Finish by spraying with a clear matt or satin polyurethane finish. Once all yards are finished put them safely aside to fitted to the model later. **Do not fit any yards to the model yet.**

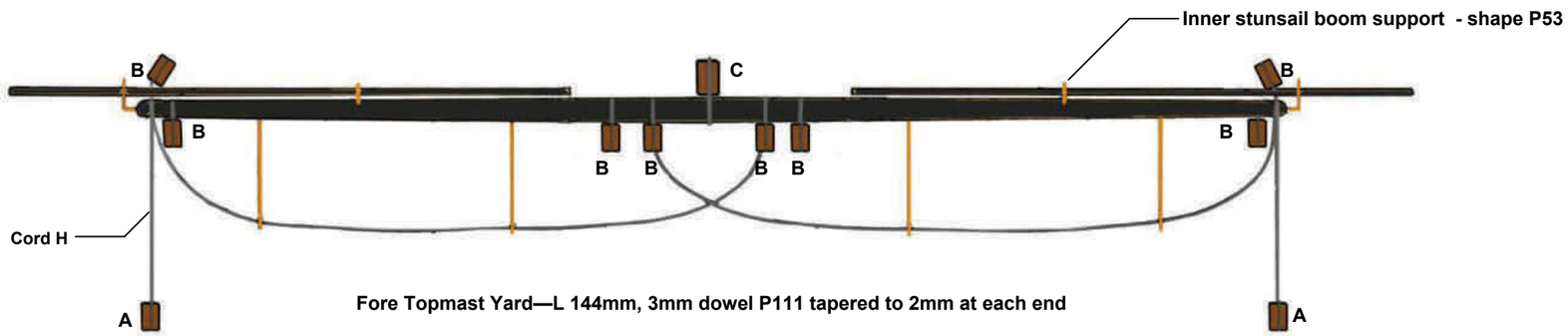
12.1 Foremast Yards

Identify the various dowels. Cut each to length and shape according to the dimensions given. Fit blocks and fittings as shown.

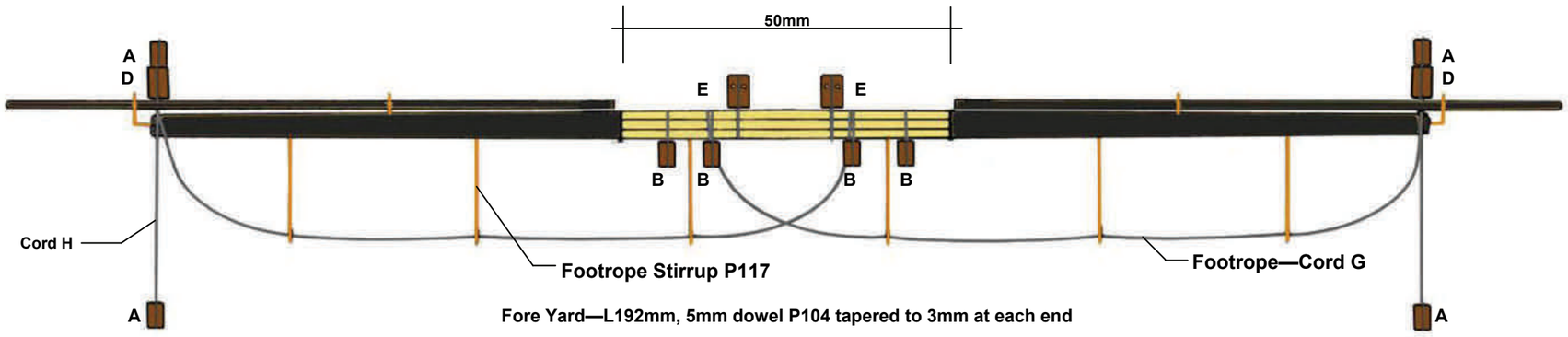
NOT TO SCALE



Fore Topgallant Yard— L 108mm, 2mm dowel P79 tapered to 1.5mm at each end



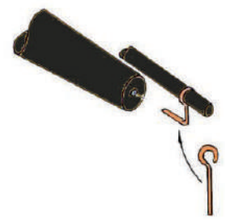
Fore Topmast Yard—L 144mm, 3mm dowel P111 tapered to 2mm at each end



Fore Yard—L192mm, 5mm dowel P104 tapered to 3mm at each end

Use P34 to make octagonal section around yard

Figure 33A



Outer stunsail boom support— drill hole in end of yard and shape P53 to fit.

Figure 33B

Figure 33C

Figure 33

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

12.2 Stunsail Booms

Identify the various dowels. Cut each to length and shape according to the dimensions given. Attach the relevant stunsail boom to the yards as shown above.

Main & Fore Yard stunsail booms — L 96mm, 2mm dowel P79 tapered to 1.5mm

Main Top Yard & Fore Top Yard stunsail booms — L 90mm, 2mm dowel P79 tapered to 1.5mm

Figure 34

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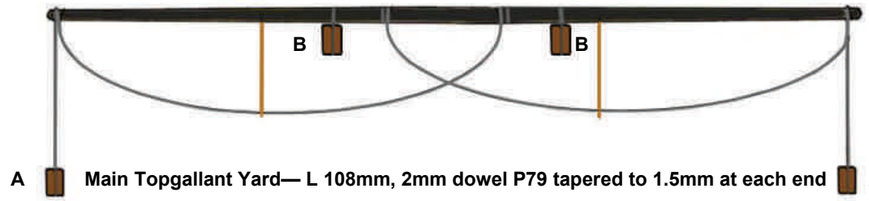
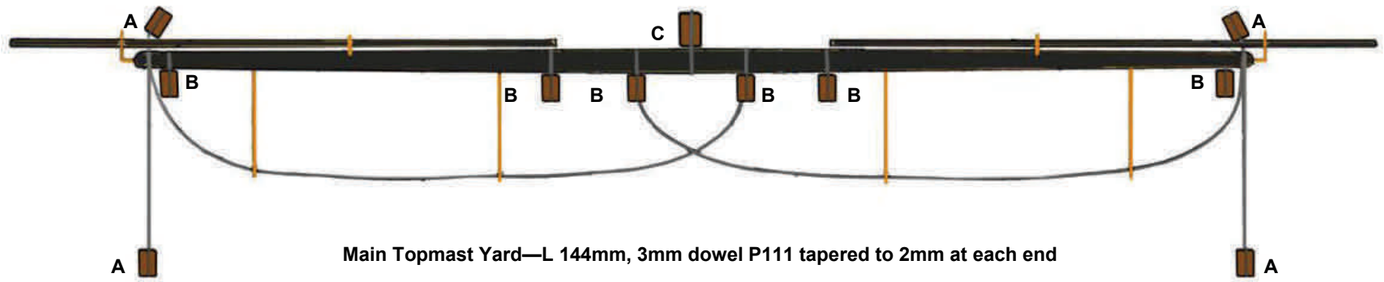
12.2 Main Mast Yards

Identify the various dowels. Cut each to length and shape according to the dimensions given. Fit blocks and fittings as shown.

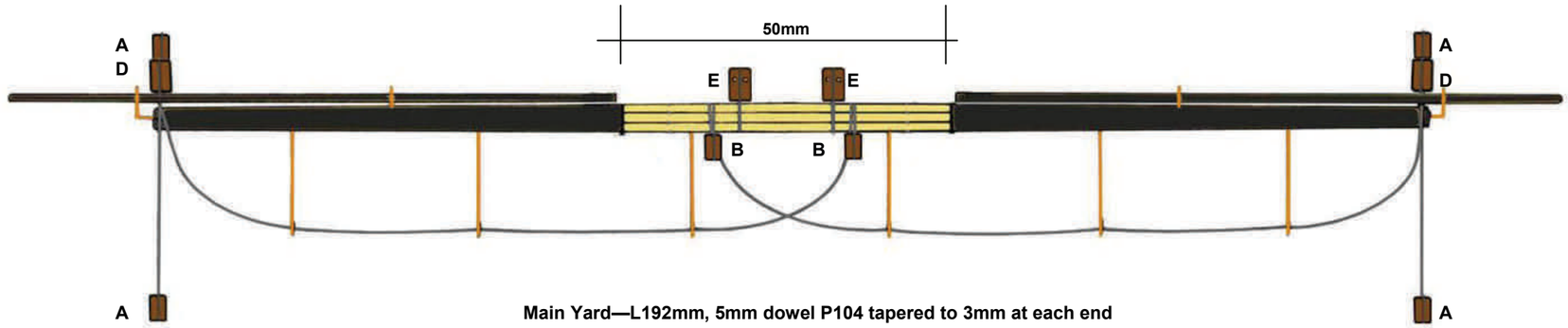
NOT TO SCALE



Main Topgallant Yard— L 108mm, 2mm dowel P79 tapered to 1.5mm at each end



Main Topmast Yard—L 144mm, 3mm dowel P111 tapered to 2mm at each end



Main Yard—L192mm, 5mm dowel P104 tapered to 3mm at each end

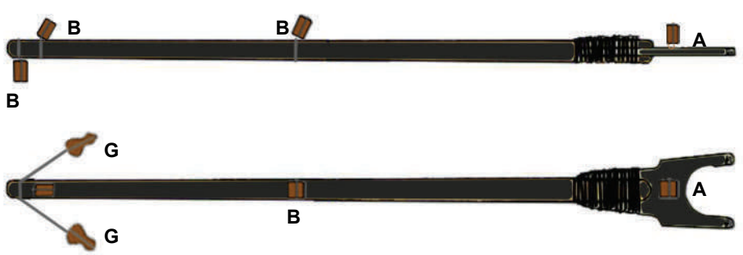
Figure 35

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

12.4 Gaff

Identify the dowel for the gaff. Cut to length and shape according to dimensions given. Fit the gaff yoke P118 as shown. Fit any blocks as shown.



Gaff — L 120mm, 4mm dowel P106 tapered to 3mm

Figure 36

12.5 Boom

Identify the dowel for the boom. Cut to length and shape according to dimensions shown. Fit the boom yoke P119 as shown. Fit any blocks as shown.

Boom— L 200mm, 5mm dowel P104 tapered to 4mm

Figure 37

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SHEET 45

13.0 Rigging

13.1 Types of Rigging

The rigging of a ship can be divided into two main parts:
1. “Standing” rigging, which is used to support the masts and bowsprit.
2. “Running” rigging, which is used to manipulate yards and sails through pulley blocks.

On an “actual” ship any rigging that did not pass through a pulley block was coated with tar to help prevent it rotting. To simulate this the cord supplied in the kit for the standing rigging is black of two sizes 1mm & 1.5mm. The running rigging is fawn and of two sizes, 0.25mm and 0.5mm.

13.2 Preparation for Rigging

If needed drill out the holes in the blocks and deadeyes to facilitate the threading of the rigging cord when the time comes. For the most inaccessible blocks, insert a short piece of thin rigging cord through the hole and glue it to itself forming a loop. Later, when you wish to insert the permanent running rigging you cut the loop, glue the new cord to one end and pull it through the hole using the other end of the pilot cord.

There are a few points to remember when rigging.
- Never cross rigging lines with each other.
- Never run rigging lines on the forward side of the yards.
- Never bend rigging lines around obstacles.
- Never run rigging lines through ratlines.
- Never make knots in rigging lines.

13.3 Typical Rigging Applications

The following figures represent a range of rigging applications you may encounter as you rig a model.

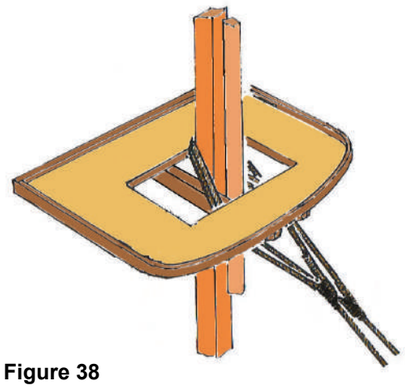

Figure 38

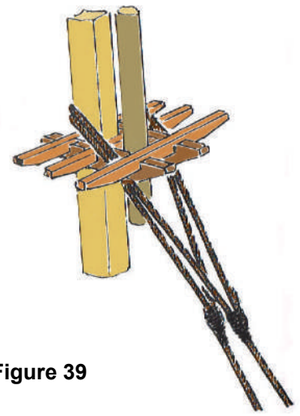

Figure 39

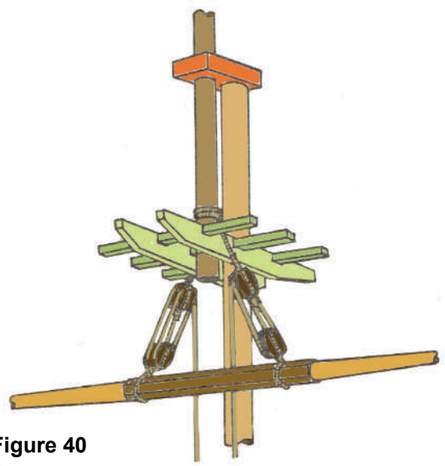

Figure 40

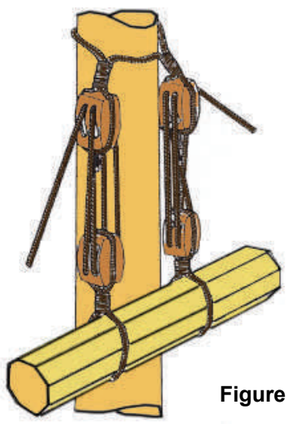

Figure 41

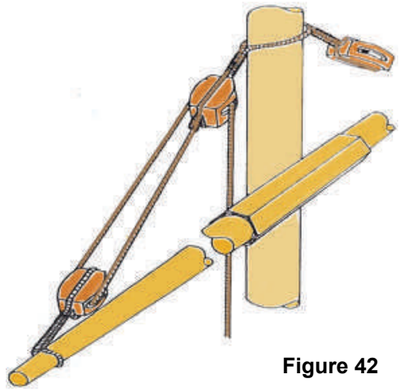

Figure 42

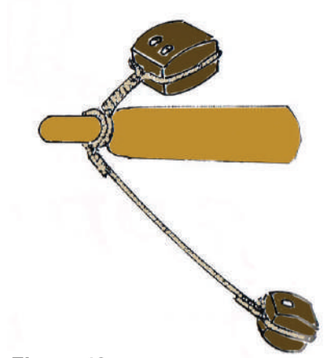

Figure 43

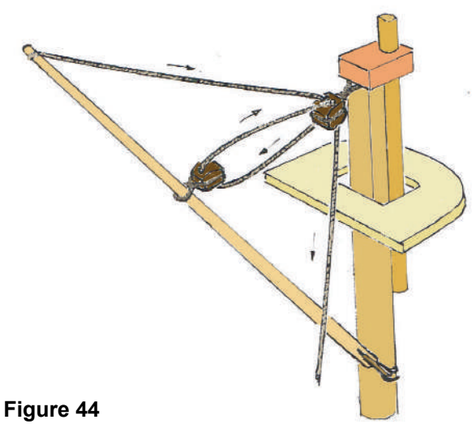

Figure 44

Figure 45

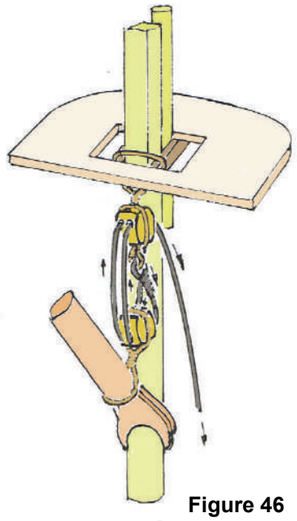

Figure 46

Reeving Blocks

Figure 47

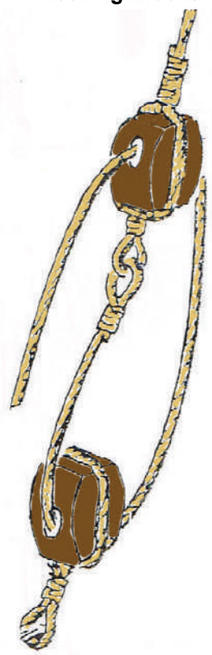

Figure 48

Figure 49

Figure 50

Figure 51

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SHEET 46

13.4 Belaying Plan

Fit cleat P50 at points: 7A, 8A, 35, 36, 46, 88, 93 & 94.

Fit eye pins P53 to points: 1, 2, 3, 4, 5, 6, 7, 8, 19, 20, 21, 30, 31, 32, 33, 34, 37, 38, 39, 40, 41,42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 59, 60, 61, 62, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 78, 79, 81, 82, 83, 84, 85, 86 & 87.

Tie off block B to the eye pin at the following points: 7, 8, 19, 20, 21, 30, 33, 34, 37, 38, 43, 45, 47, 50, 60 & 61.

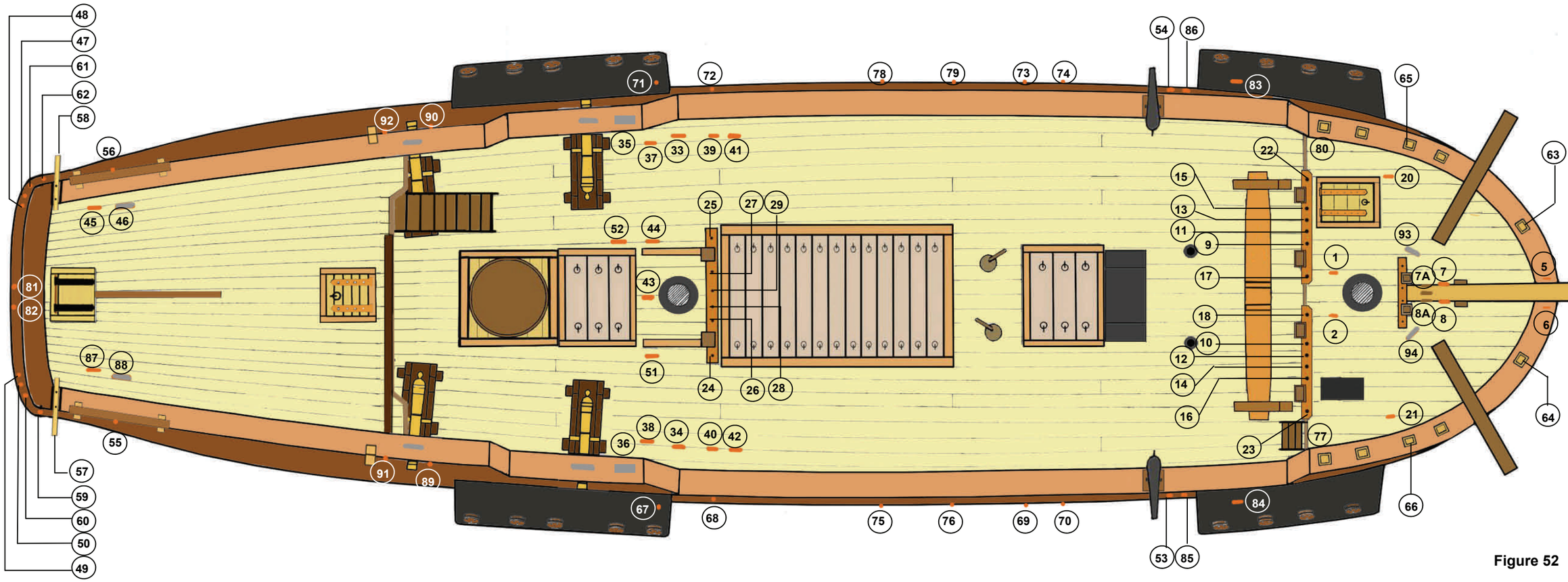
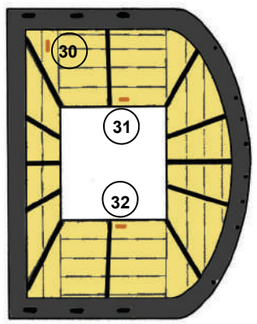
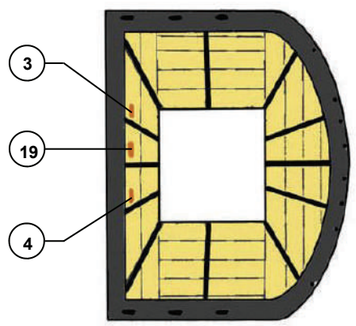


Figure 52

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		



Main Mast Top



Fore Mast Top

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SHEET 47

14.0 Standing Rigging

The standing rigging includes the rigging of the forestays, backstays, bowsprit stays and shrouds and is completed before the running rigging. Completing the standing rigging is fairly straightforward and should present few difficulties. The “golden rule” for rigging is to work from the centre and lower parts of the model and work up and out trying to avoid difficult and confined spaces.

It is recommended to complete the standing rigging in the following sequence:

1. Forestays
2. Backstays
3. Bowsprit shrouds & stays
4. Fore & Main Mast Shrouds.

The instructions follow this sequence.

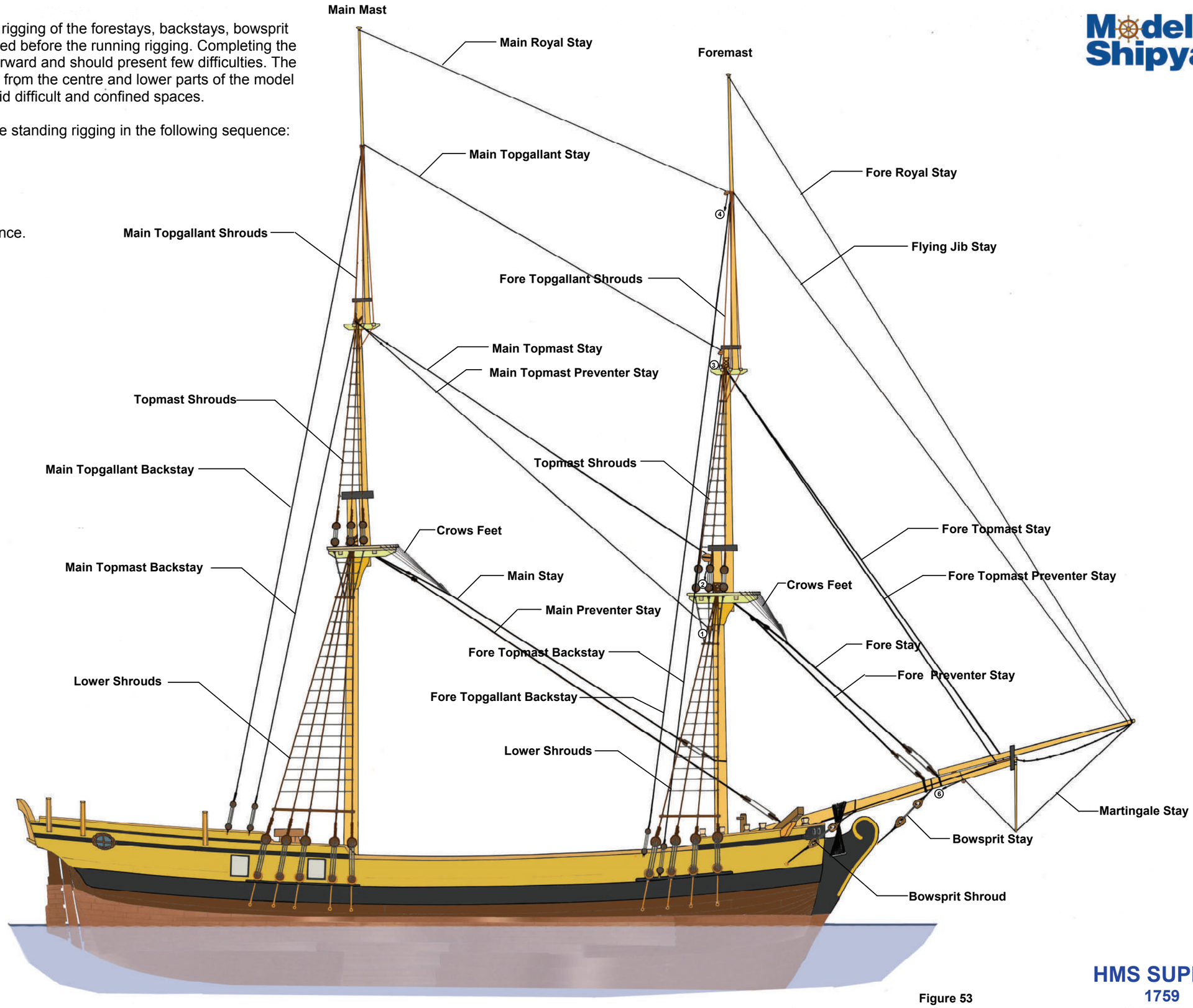

Figure 53

HMS SUPPLY
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SHEET 48

14.1 Forestays

All the forestays are shown on Sheet 48. Fit the forestays in the order presented below. Refer also to the Belaying Plan Sheet 47 for belaying points.

14.1.1 Main Preventer Stay

Use cord J to rig the preventer main stay between the mainmast head and the slip blocks at the base of the bowsprit as shown. Terminate upper and lower sections with a deadeye heart Q. Reeve together with cord H as shown.

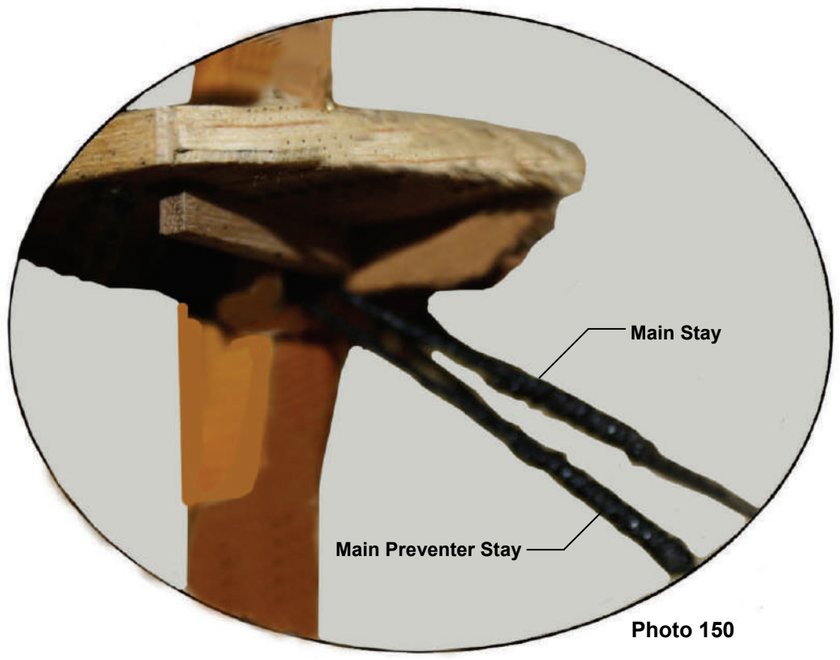

Photo 150

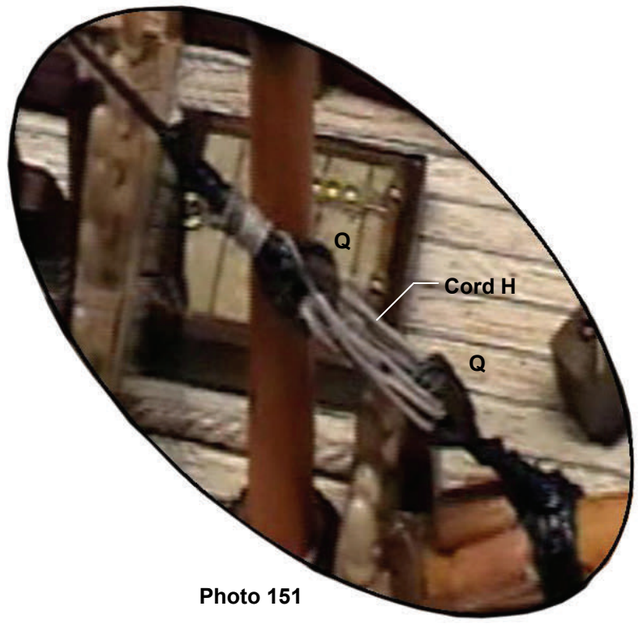

Photo 151

14.1.2 Main Stay

Use cord J to rig the main stay between the mainmast head and the foremast as shown. Terminate upper and lower sections with deadeye heart Q. Reeve together with cord H as shown.

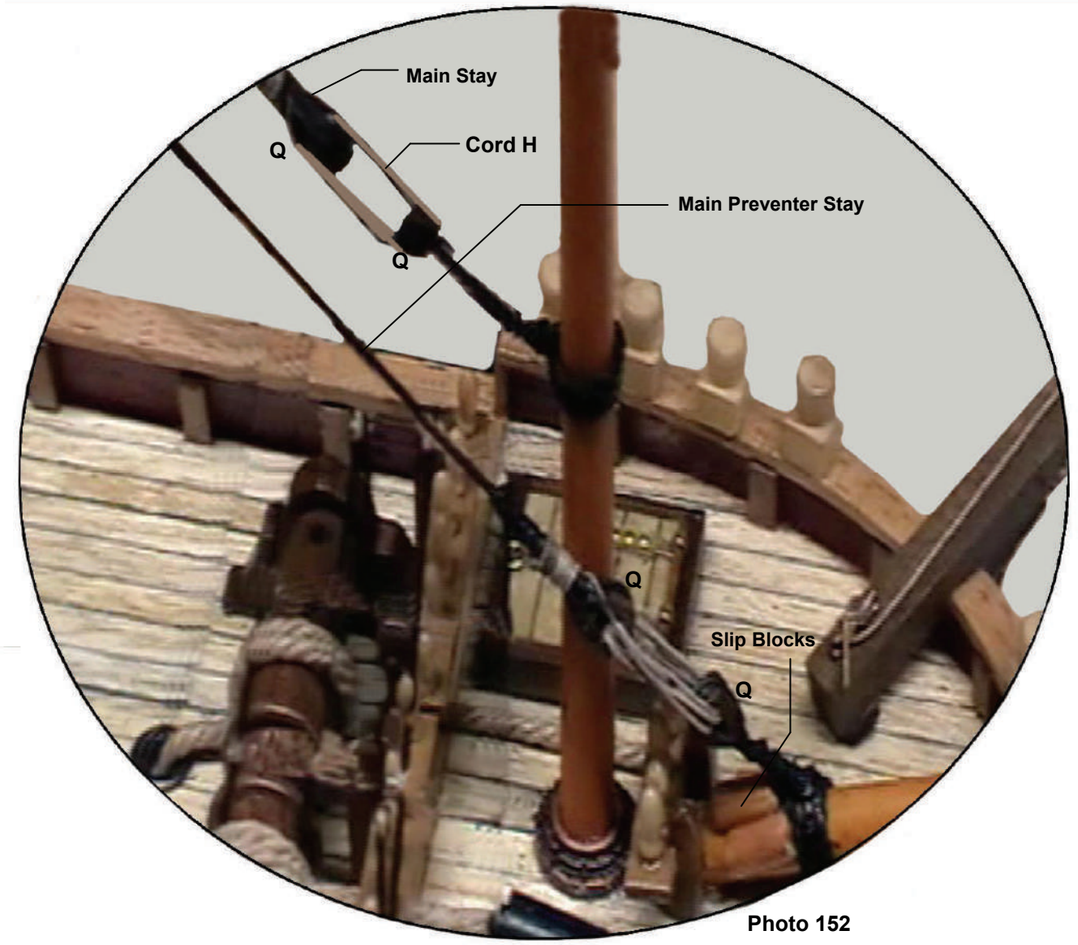

Photo 152

DEADEYE KEY		CORD KEY		
Size		Size	Fawn	Black
3mm	N	0.25mm	G	—
5mm	P	0.50mm	H	—
7mm heart	Q	1.0mm	—	J

14.1.3 Main Topmast Preventer Stay

Use cord J to rig the stay between the mainmast and the foremast as shown. Tie the stay around the masthead as shown. Rig to the block previously fitted on the foremast and terminate as shown.

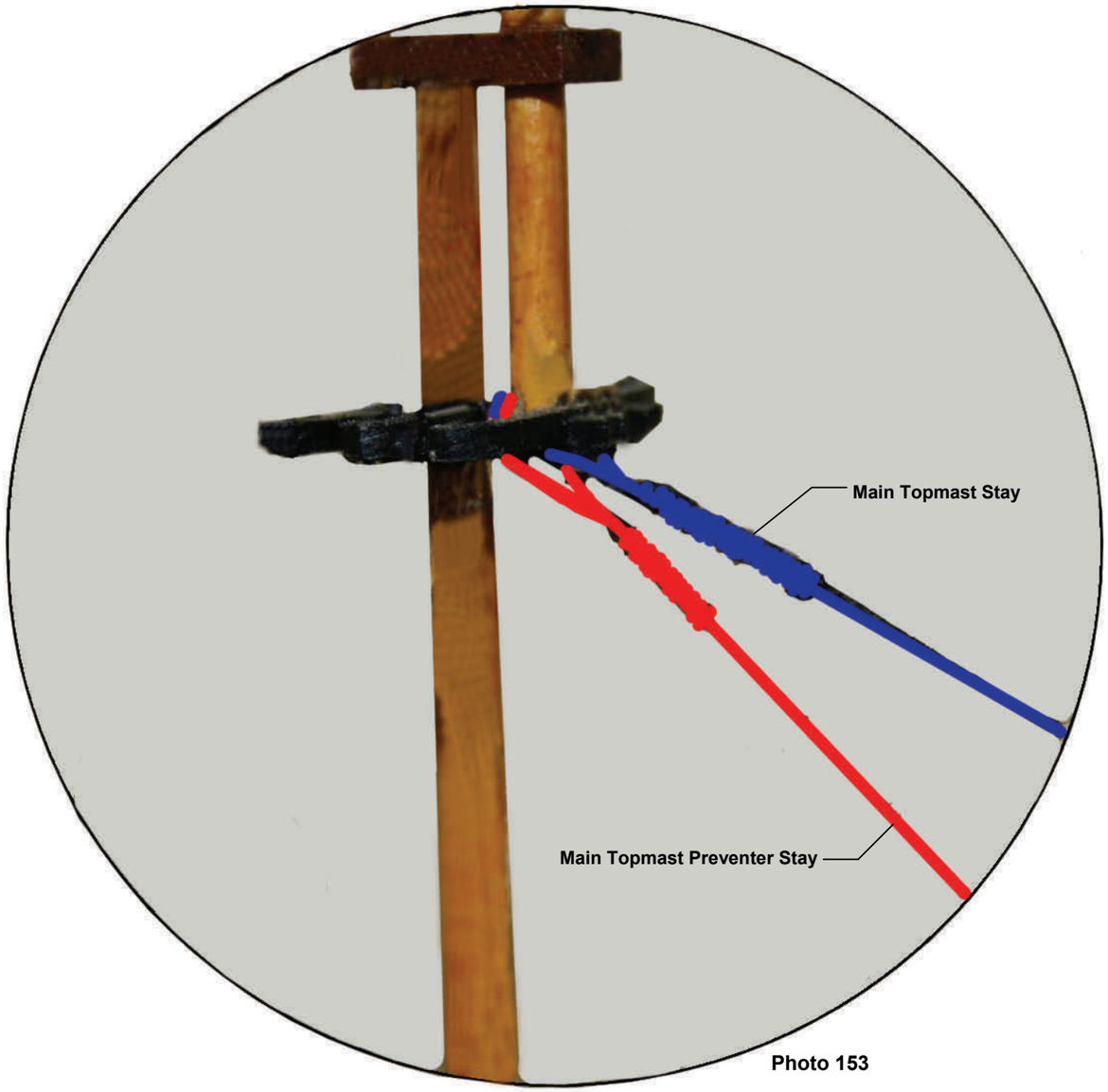

Photo 153

14.1.4 Main Topmast Stay

Use cord J to rig the main topmast stay between the mainmast and the foremast as shown. Tie the stay around the masthead as shown. Rig to the block previously fitted on the foremast and terminate as shown.

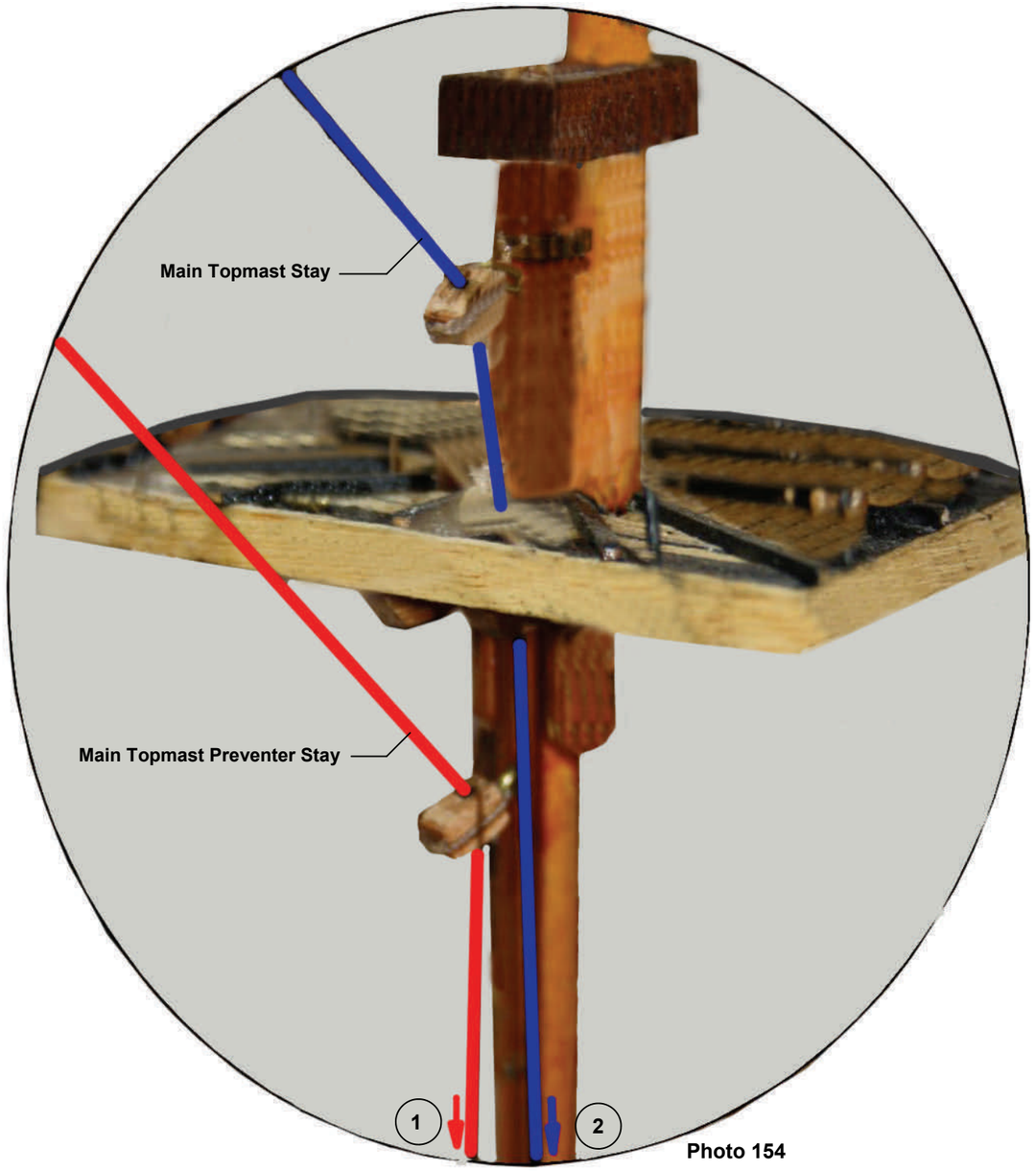

Photo 154

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

14.1.5 Main Topgallant Stay

Rig the stay between the mainmast and the foremast as shown. Tie the stay around the masthead as shown. Rig to the block previously fitted on the foremast and terminate as shown.

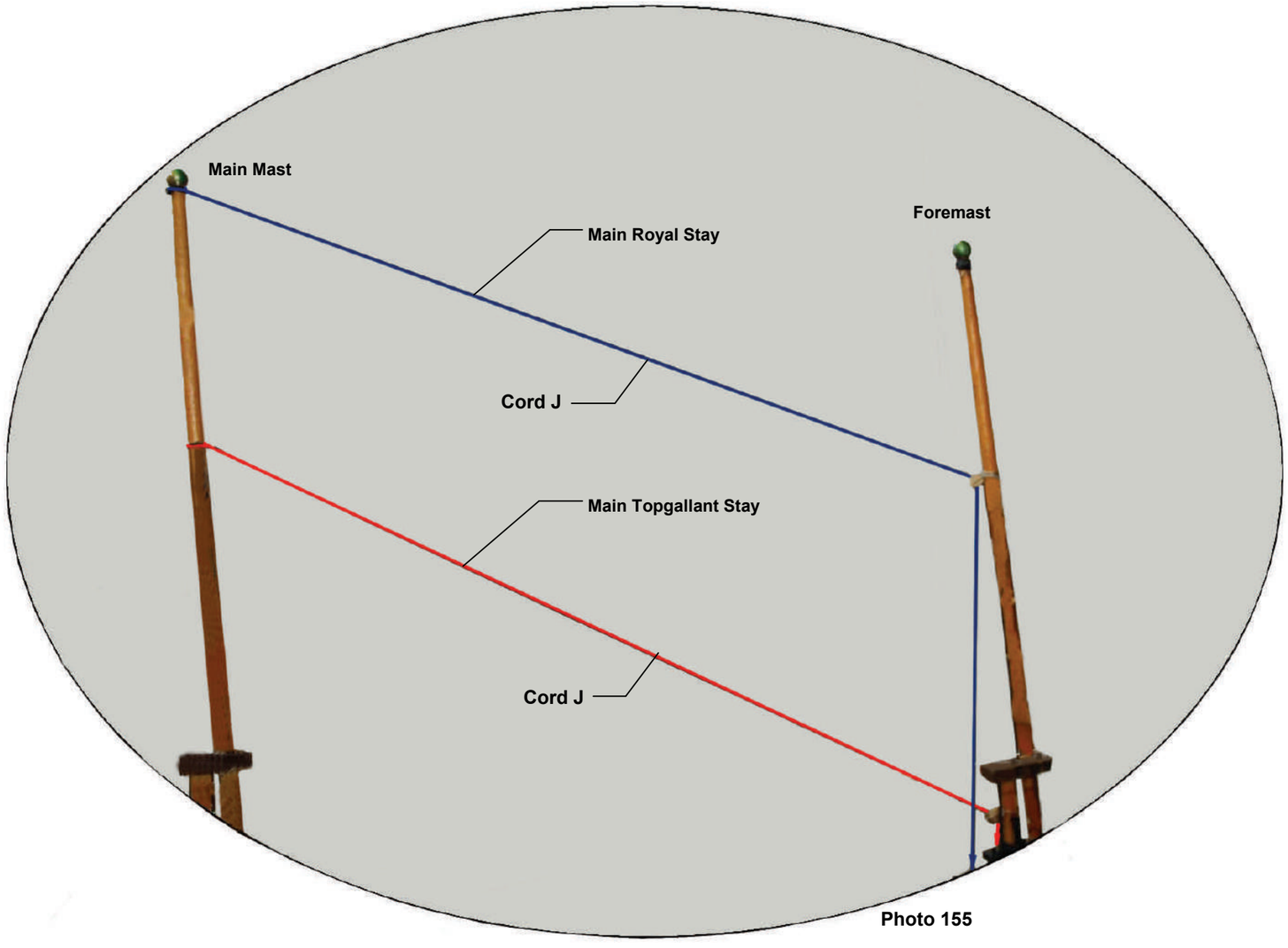

Photo 155

14.1.6 Main Royal Stay

Rig the stay between the mainmast and the foremast as shown. Tie the stay around the masthead as shown. Rig to the block previously fitted on the foremast and terminate as shown.

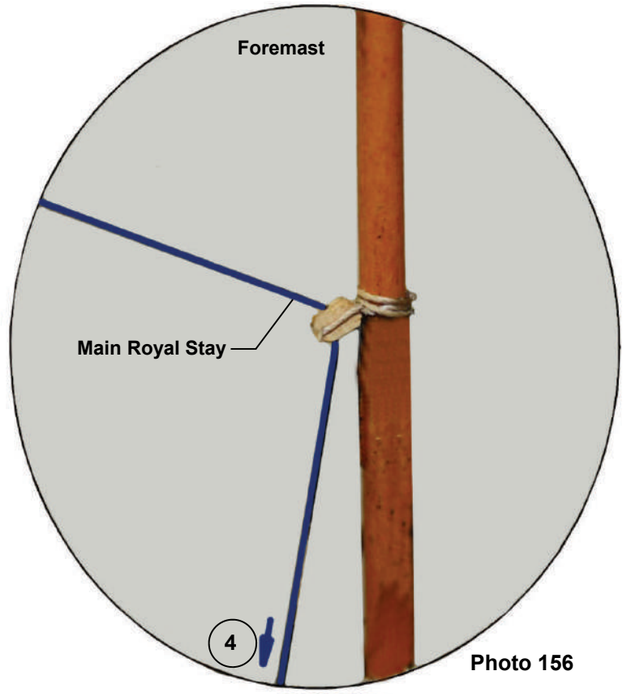

Photo 156

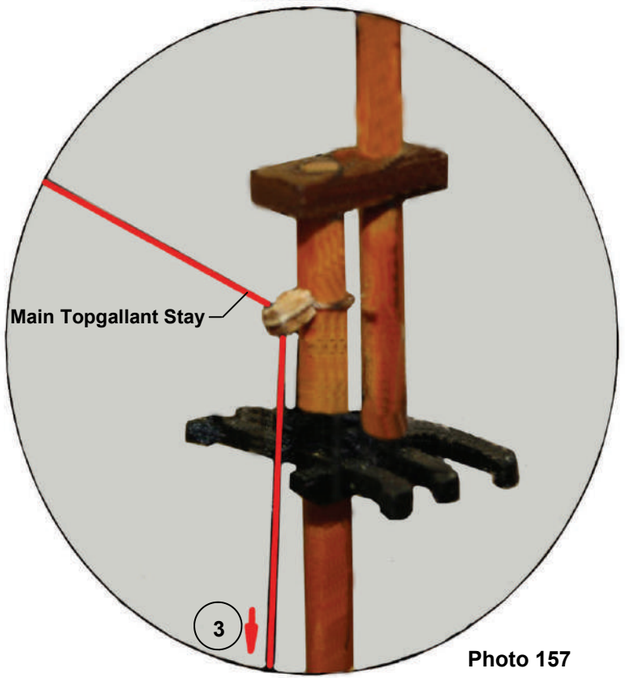

Photo 157

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

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14.1.7 Fore Preventer Stay

Fit a deadeye heart Q to the bowsprit as shown Photo 158. Rig the fore preventer stay between the foremast head and the bowsprit as shown. Terminate with a deadeye heart Q. Reeve together with cord H as shown.

14.1.8 Fore Stay

Fit a deadeye heart Q to the bowsprit as shown Photo 158. Rig the fore stay between the foremast head and the bowsprit as shown. Terminate with a deadeye heart Q. Reeve together with cord H as shown.

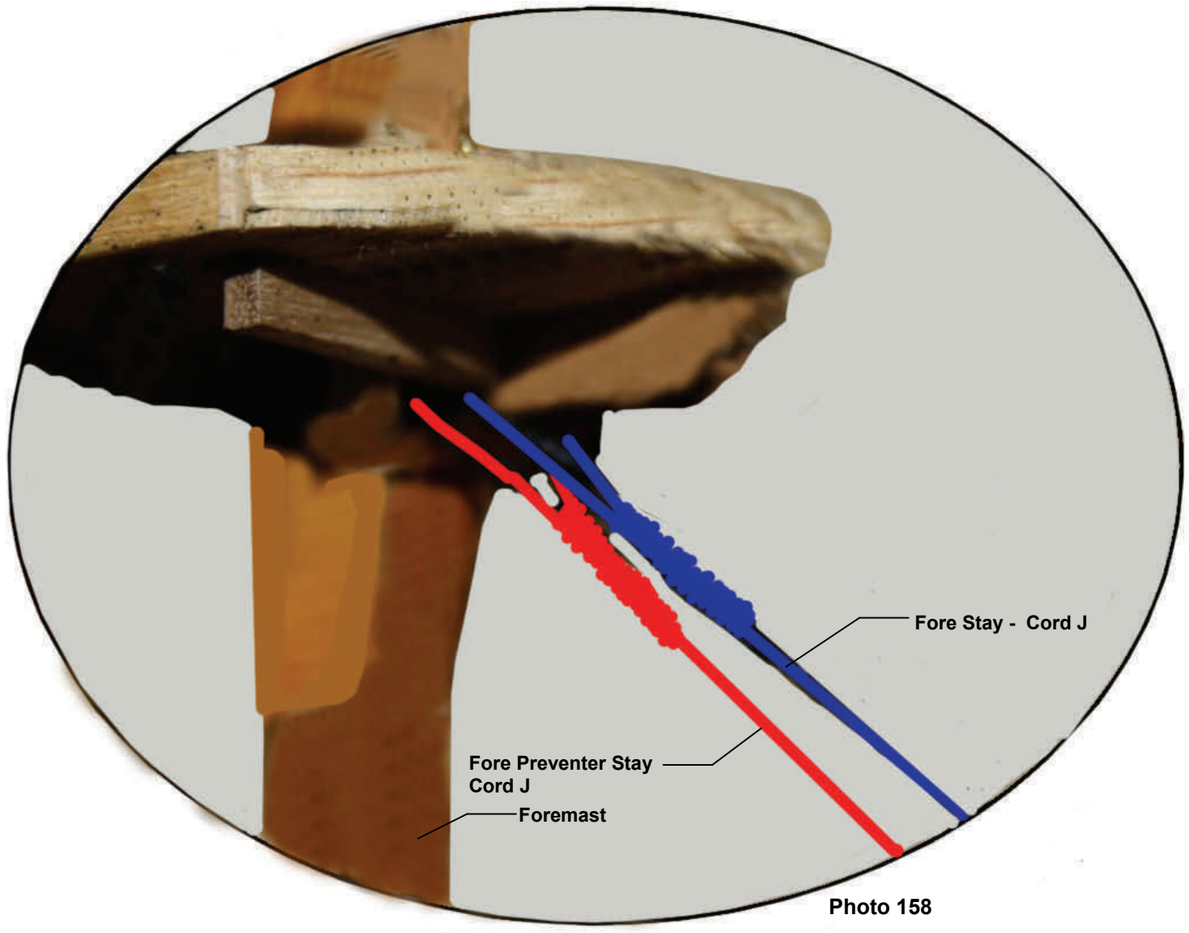

Photo 158

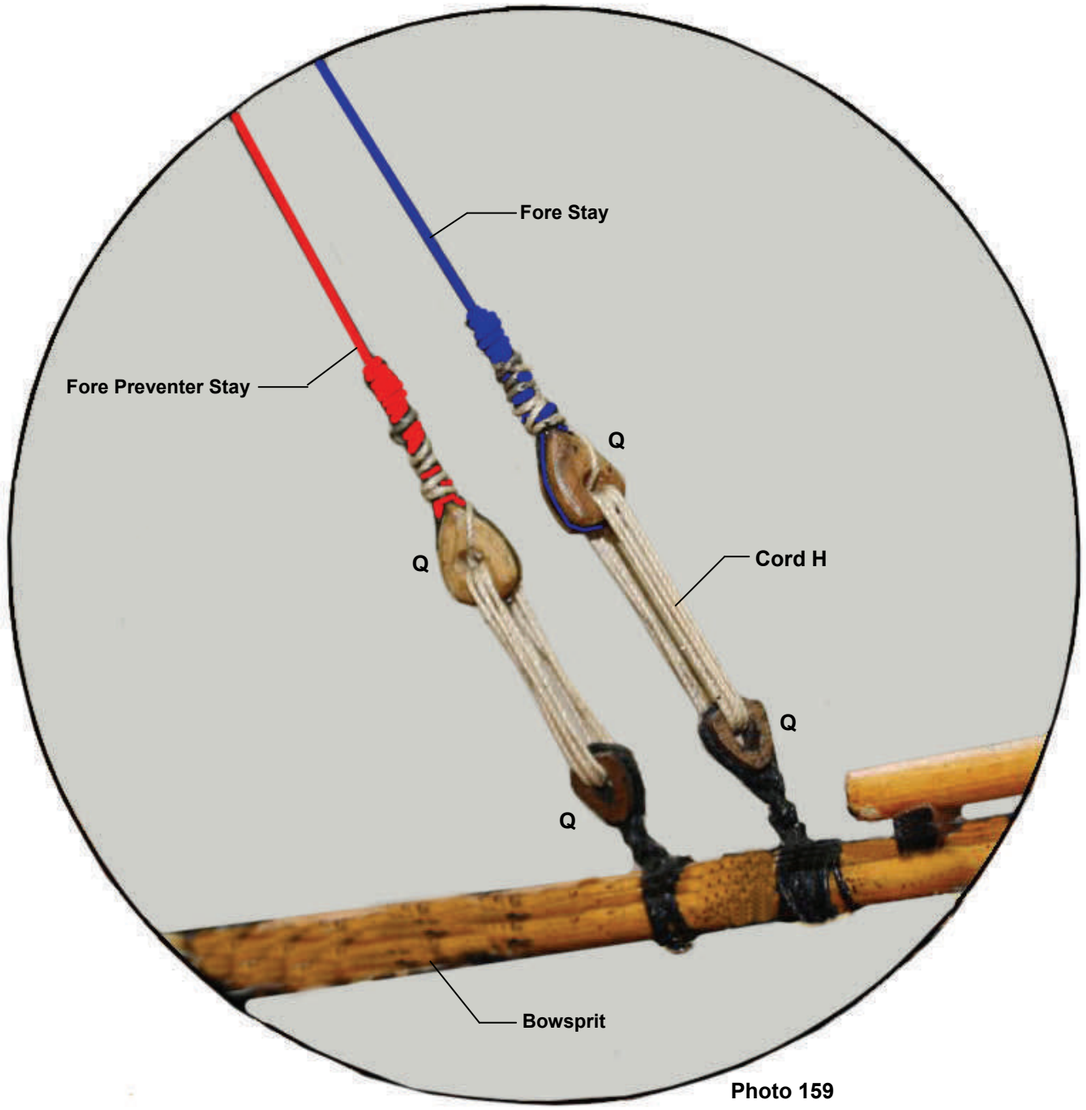

Photo 159

DEADEYE KEY	
Size	
3mm	N
5mm	P
7mm heart	Q

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

14.1.9 Fore Topmast Preventer Stay

Rig the fore topmast preventer stay between the foremast topmast head, passing through the starboard side hole on the bee and terminating as shown.

14.1.10 Fore Topmast Stay

Rig the fore topmast stay between the foremast topmast head, passing through the port side hole on the bee and terminating as shown.

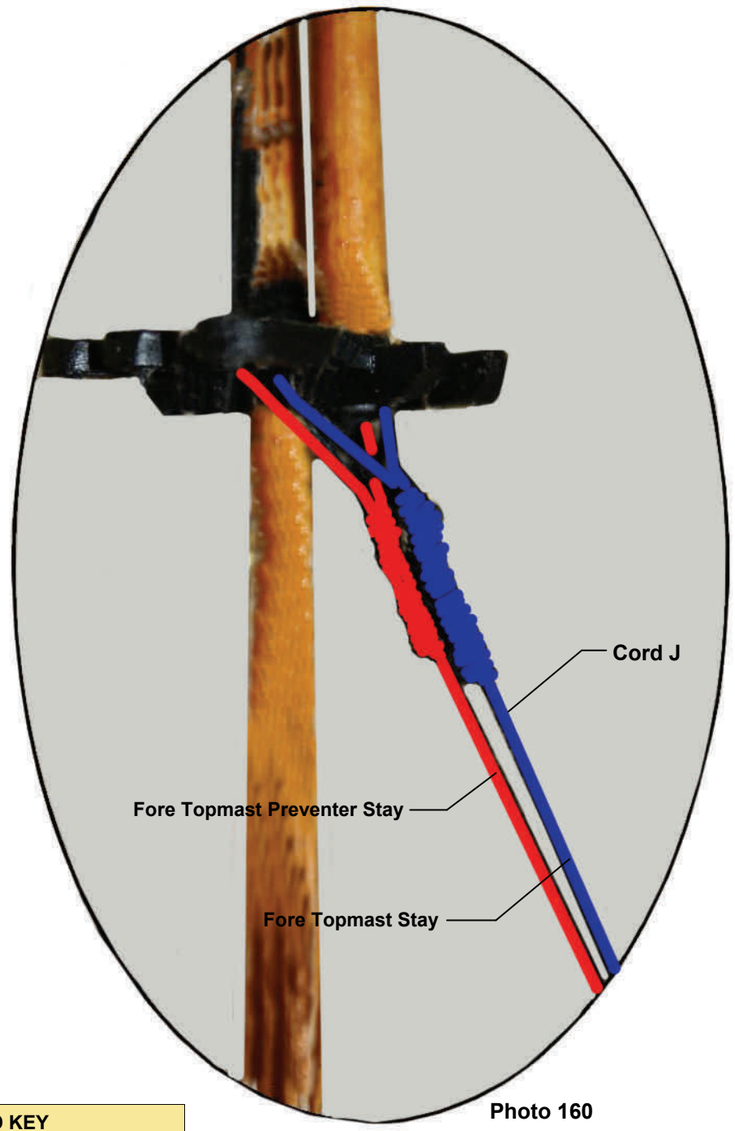

Photo 160

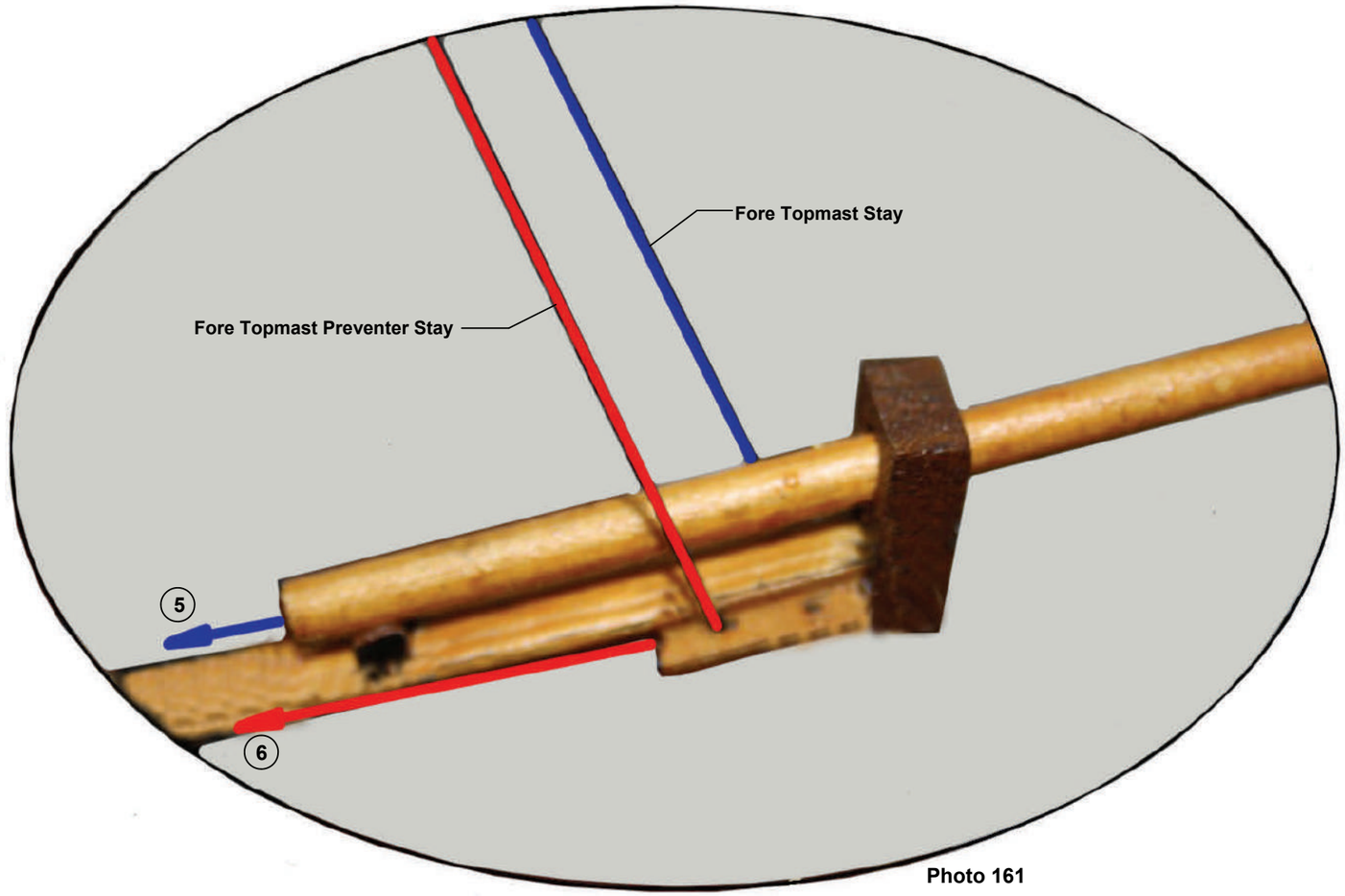

Photo 161

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

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SHEET 53

14.1.11 Flying Jib Stay

Rig the flying jib stay as shown Photos 162 & 163. Fit an eye pin P53 to the bowsprit with block B attached. Fit a block C to end of stay and reeve the blocks together as shown. Terminate at cleats as shown Photo 164.

14.1.12 Fore Royal Stay

Rig the fore royal stay as shown Photos 162 & 163. Fit an eye pin P53 to the bowsprit with block B attached. Fit a block C to end of stay and reeve the blocks together as shown. Terminate at cleats as shown Photo 164.

14.1.13 Martingale Stay

Rig the martingale stay as shown Photos 163 . Terminate as shown Photo 164.

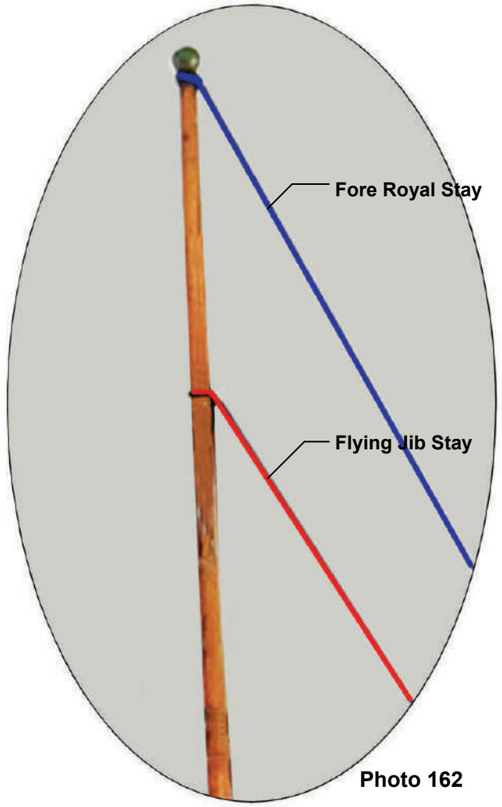

Photo 162

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

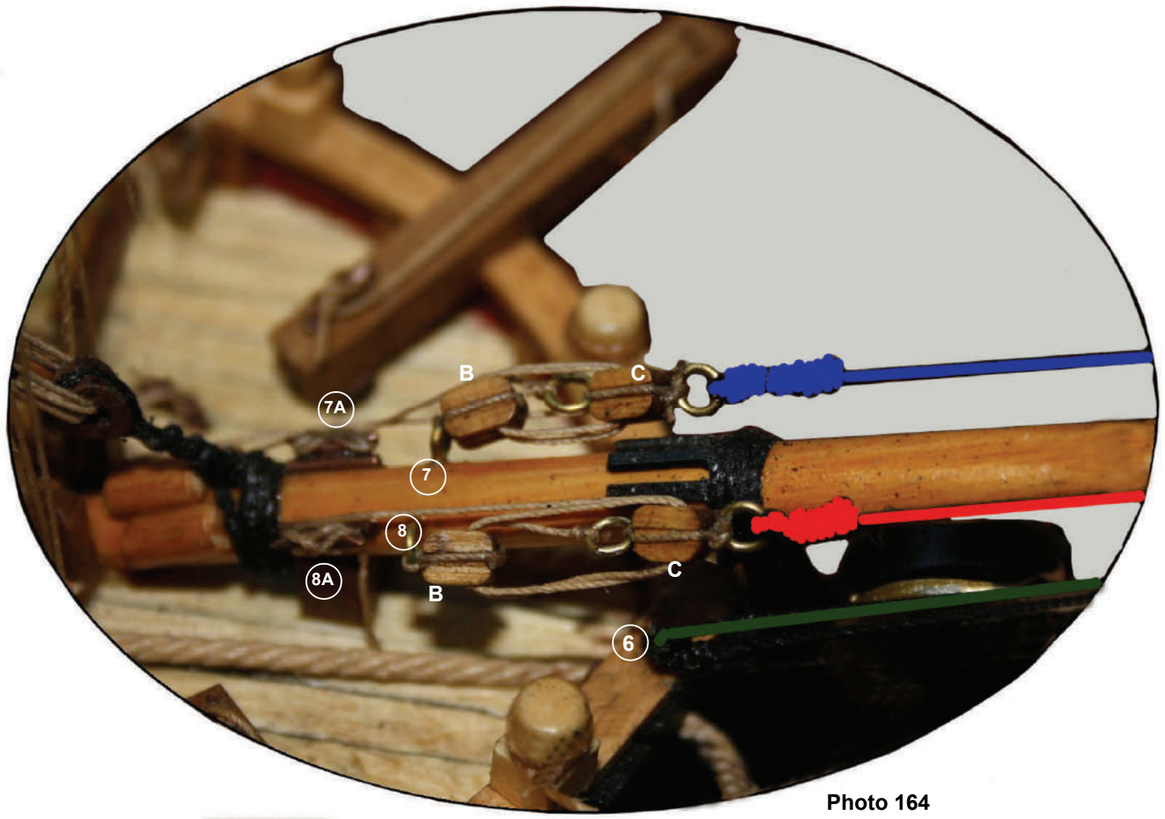

Photo 164

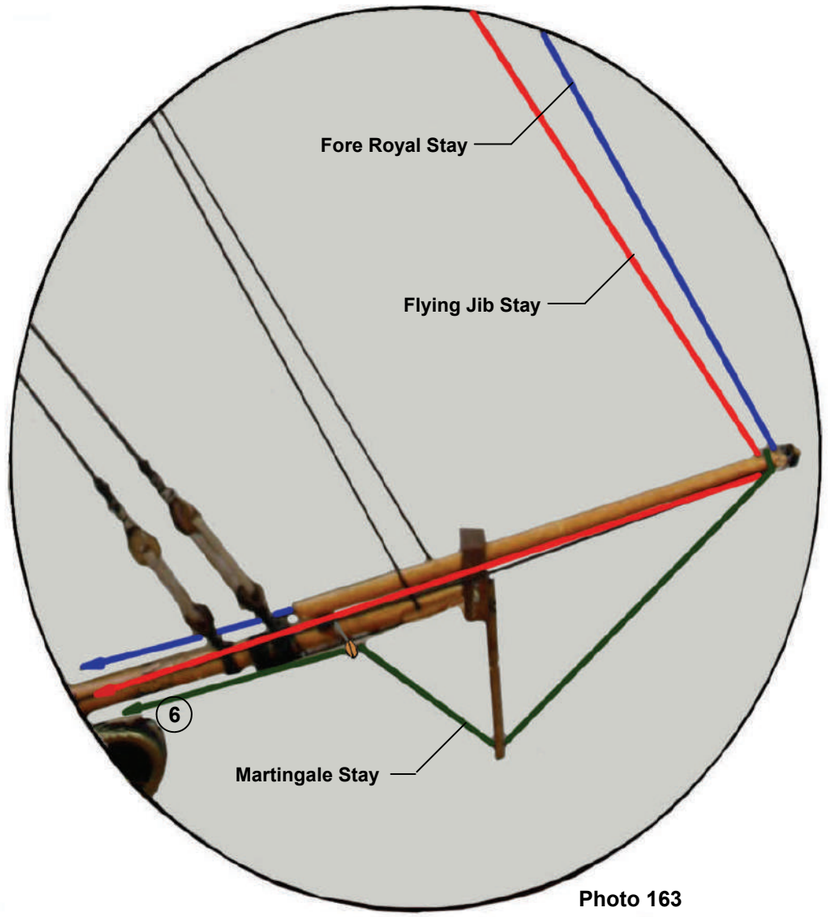

Photo 163

HMS SUPPLY
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14.1.14 Fore Topmast Backstay

Fit an eye pin P53 to the foremast channel belaying points 83 & 84. Attach deadeye N to these points. Run cord J from mast top as shown and attach deadeye N to the end. Reeve the two deadeyes together.

14.1.15 Fore Topgallant Backstay

Fit an eye pin P53 to the bulwark belaying points 85 & 86. Attach deadeye N to these points. Run cord J from the topgallant mast as shown and attach deadeye N to the end. Reeve the two deadeyes together.

14.1.16 Main Topmast Backstay

Fit an eye pin P53 to the bulwark belaying points 89 & 90. Attach deadeye N to these points. Run cord J from mast top as shown and attach deadeye N to the end. Reeve the two deadeyes together.

14.1.17 Main Topgallant Backstay

Fit an eye pin P53 to the bulwark belaying points 91 & 92. Attach deadeye N to these points. Run cord J from mast top as shown and attach deadeye N to the end. Reeve the two deadeyes together.

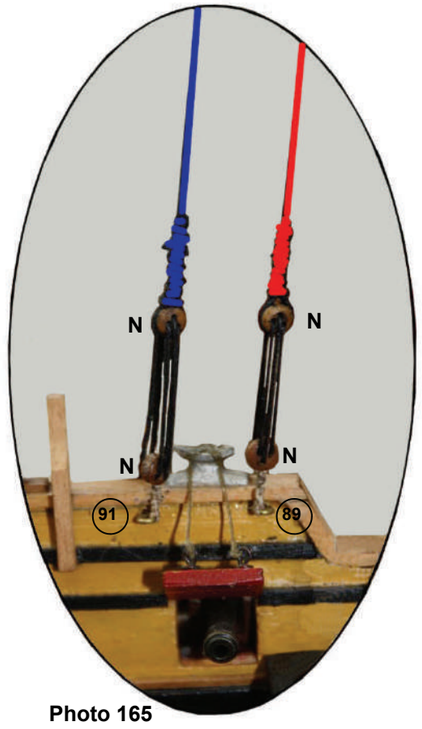

Photo 165

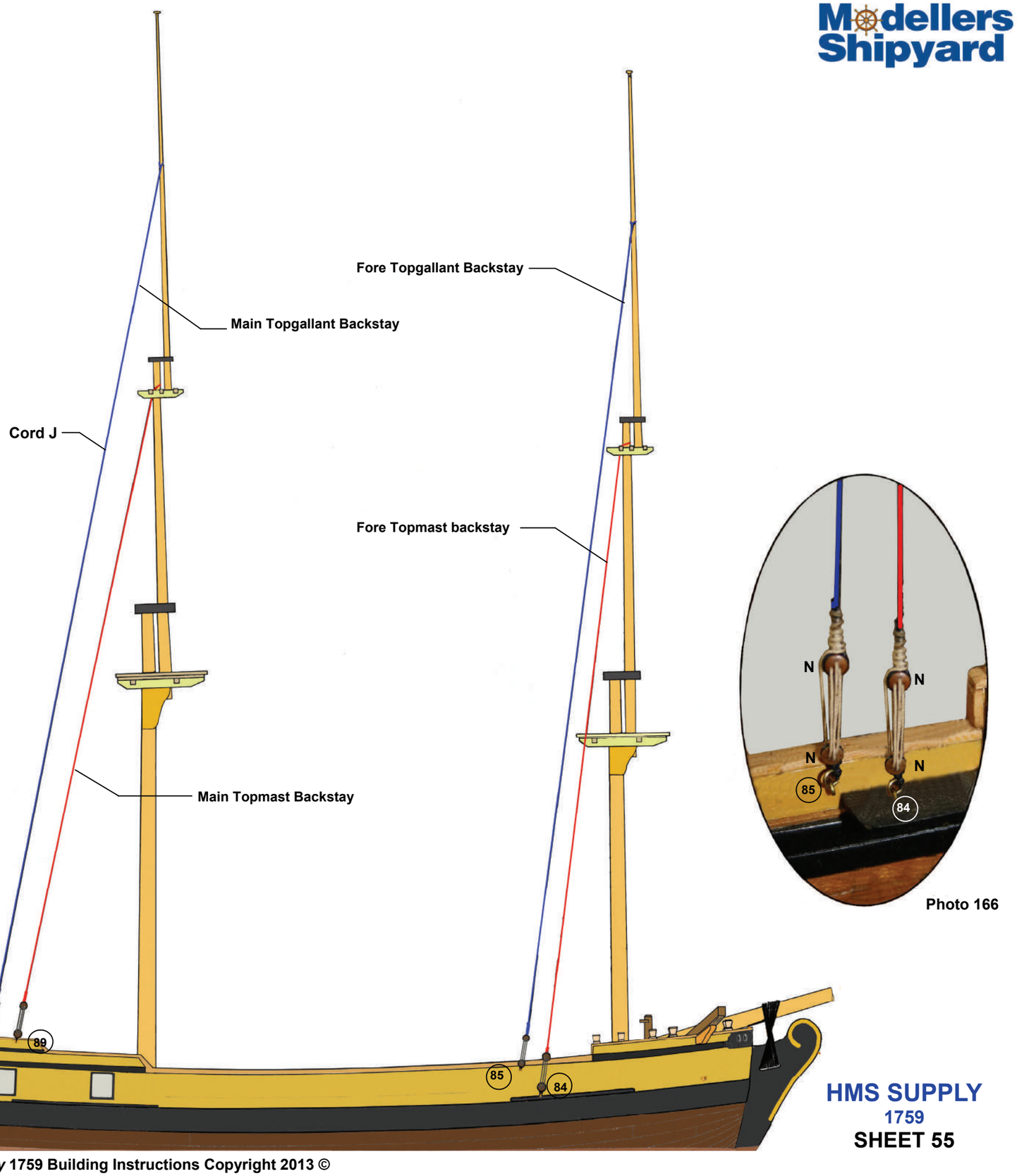

Photo 166

DEADEYE KEY	
Size	
3mm	N
5mm	P
7mm heart	Q

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

Figure 54

HMS SUPPLY
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14.1.18 Bobstay

Fit eye pins P53 as shown. Attach deadeye hearts Q to stem post & bowsprit. Use cord H to reeve the hearts together.

14.1.19 Bowsprit Shrouds

Fit eye pins and rings as shown. Attach a deadeye heart Q to a length of cord J and attach to the ring. Attach a deadeye heart Q to bowsprit. Reeve the deadeye hearts together as shown with cord H. Repeat for the port side.

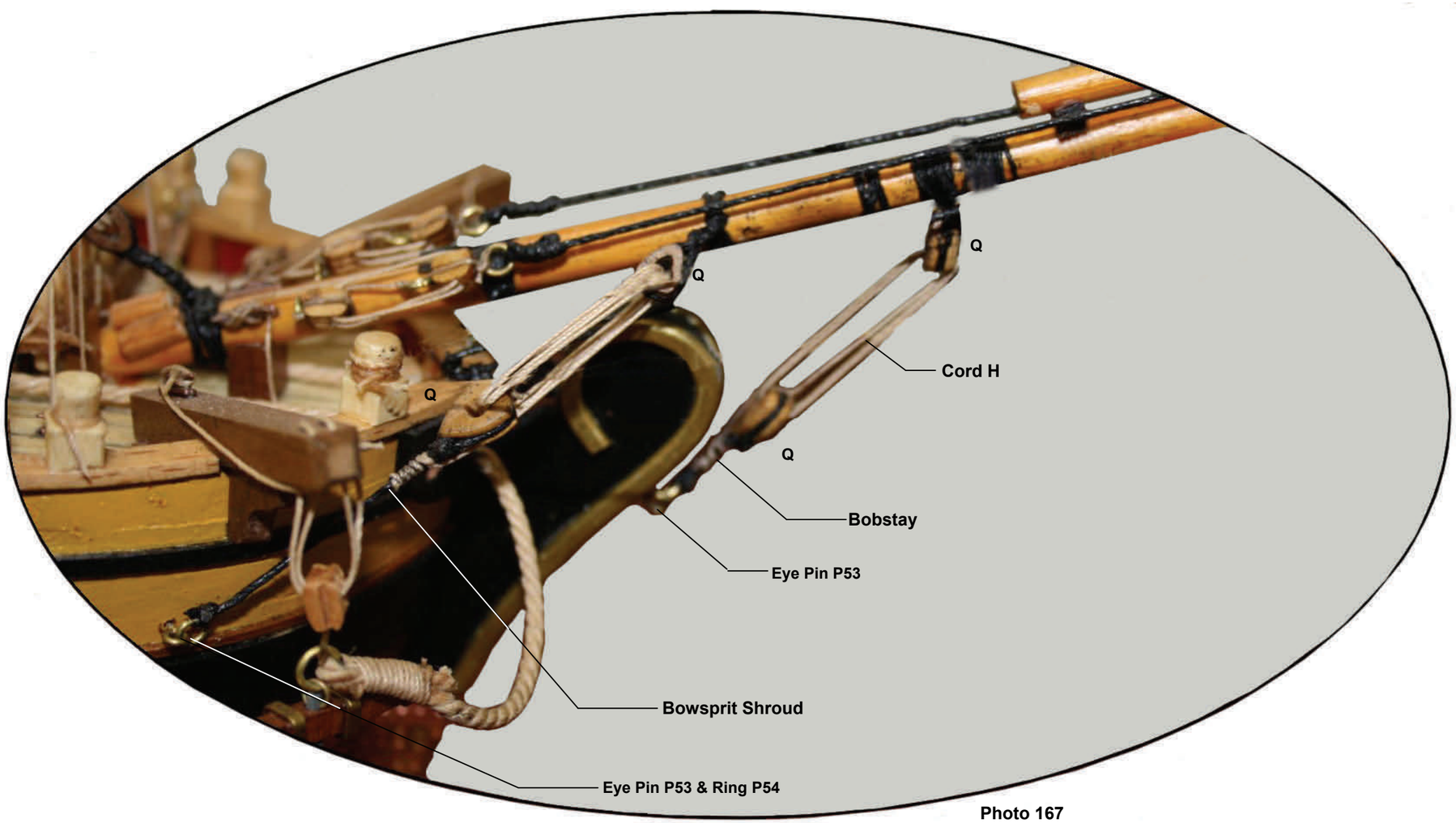

Photo 167

DEADEYE KEY	
Size	
3mm	N
5mm	P
7mm heart	Q

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

HMS SUPPLY
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SHEET 56

14.1.20 Shrouds

The next step is to fit the main mast and foremast shrouds. On each mast the shrouds consist of the lower mast, top mast and topgallant shrouds. Before progressing some preparation for fitting the lower mast shrouds is required.

14.1.21 Preparation for Lower Mast Shrouds

14.1.22 Deadeye Straps

The deadeye straps are fixed to the hull over the channel and hold the lower deadeyes of the shrouds. Identify the 5mm deadeyes P124. To make the deadeye straps cut a 80mm length of 0.5mm brass wire P126 and with long nose pliers twist the wire around the deadeye—Photo 167. Make 18 deadeye straps. Do not fit the straps to the channel yet.

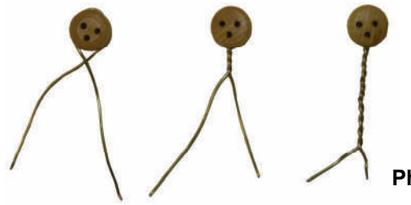


Photo 168

14.1.23 Shroud Extension Angle

The deadeye straps need to be fitted to the side of the hull as an extension of the angle of the shrouds. Before fixing the deadeye straps to the side of the hull we need to determine the extension angle for each shroud. To achieve this follow the steps below:

1. Temporarily attach a length of rigging cord from the mast head down to below the channel. Tape the cord to the hull below the channel—Figure 56.
2. Each deadeye strap is fixed to the hull 6mm below the wale. For each deadeye strap mark on the hull the fixing hole at the relevant angle. Do this for each shroud.
3. Drill a 0.8mm hole at each point to accept the strap. Pass the deadeye strap through the hole in the channel. Align the strap length to the hole and bend at a right angle. Fix the deadeye strap into the hole. Finish by pushing a nail P126 into each hole and fix with a dab of super glue. Use this approach to fit & fix all deadeye straps in place to both sides of the hull.

Figure 55

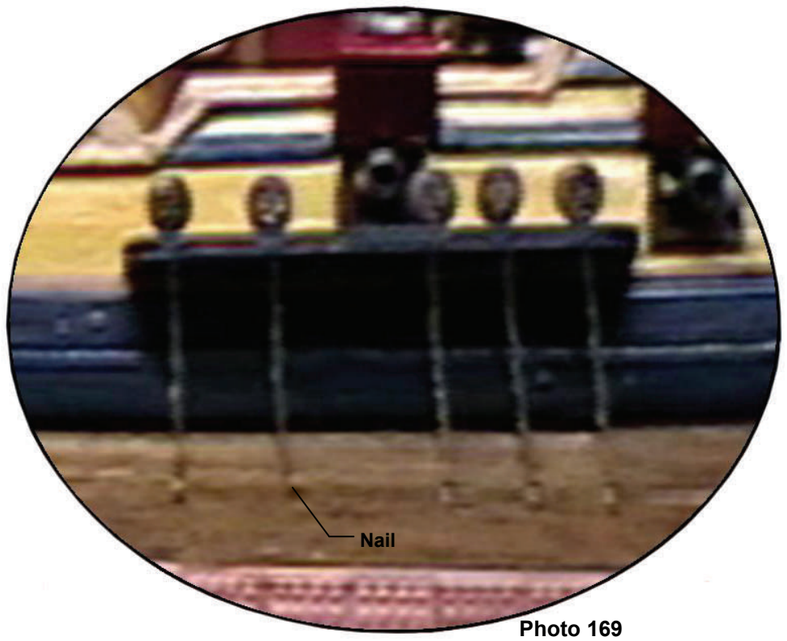


Photo 169

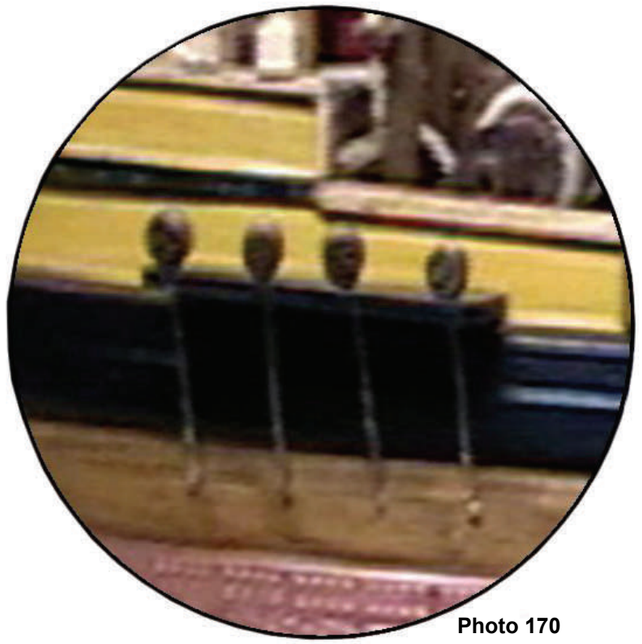


Photo 170

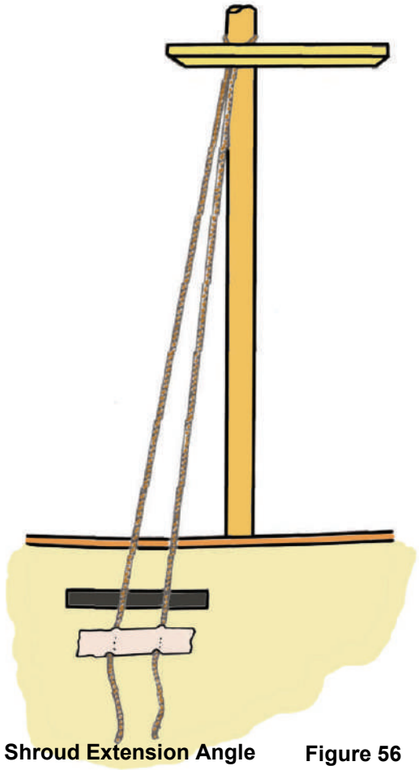


Figure 56

DEADEYE KEY	
Size	
3mm	N
5mm	P
7mm heart	Q

14.1.24 Lower Shrouds

The shrouds are made up in pairs with a deadeye attached to the end of a single cord. On the port side fit the first pair of shrouds by cutting a piece of cord J long enough to go from the channel to the mast top twice with approximately 40mm overhang.

Using an alligator clip glue one end of the rigging cord around a deadeye. Make sure the centre hole of the upper deadeye is the highest of the three. This deadeye should then be temporarily connected to the front portside lower deadeye using the deadeye wire jig—Figure 59. This wire jig will provide the correct spacing between the upper and the lower deadeye and ensure the deadeyes are in straight rows parallel with the channels and with each other.

The loose end of the cord then goes up and around the mast and down to the position of the lower deadeye immediately **behind** the first. Using super glue, alligator clip and another wire jig, the upper deadeye is attached to the shroud. Using a short length of cord J, seize the two shrouds together around the mast at the mast top - Figure 57. Once the first pair of shrouds has been completed, the exercise is repeated on the starboard side, then back to the portside and so on. At the upper deadeye bind the double thickness of cord immediately above the upper deadeye with cord J. Seize the end of this cord with a dab of glue. For the fifth shroud on the main mast wrap around the mast and seize & glue to its self at the mast head—Figure 58.

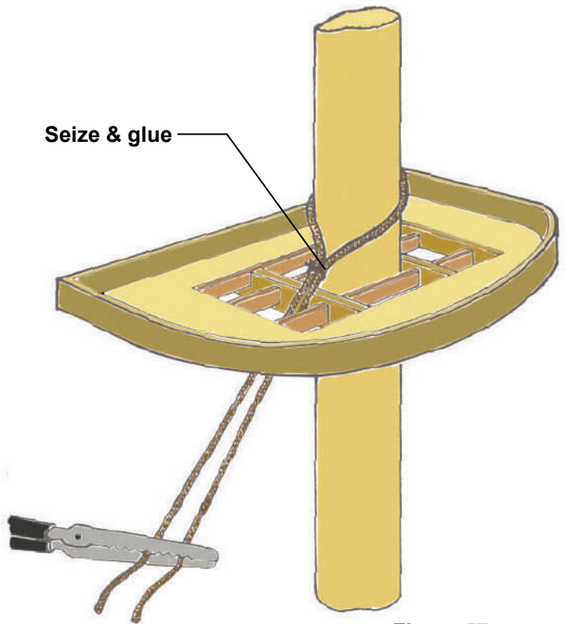


Figure 57

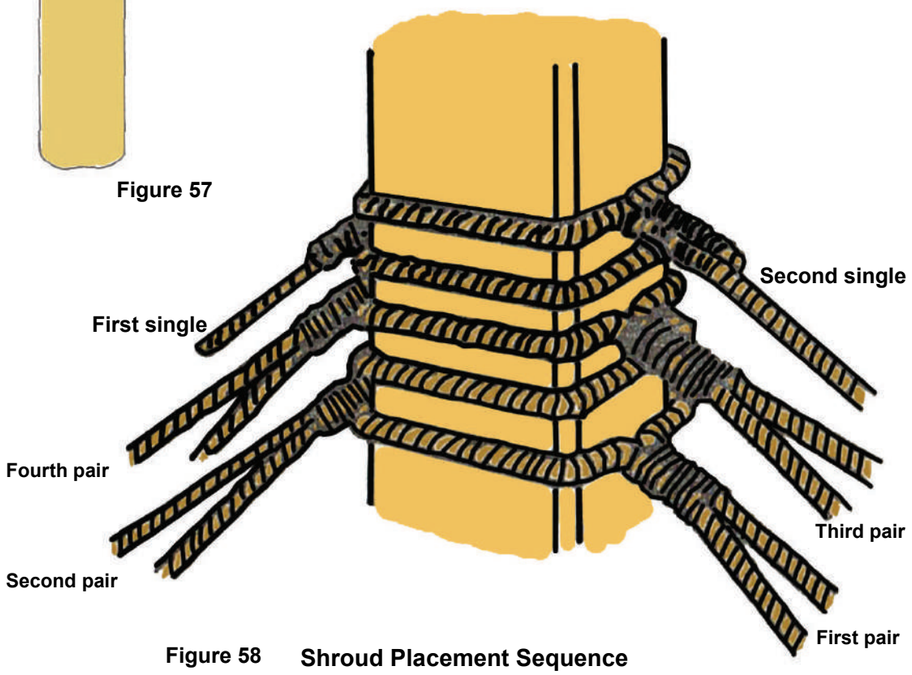


Figure 58 Shroud Placement Sequence

Deadeye Wire Jig is a piece of pliable steel wire bent at right angles at each end — long enough to fit into and hold the upper and lower deadeyes.

The distance between the two bends should be approximately three to four times the diameter of the deadeyes.

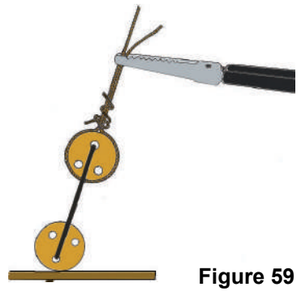
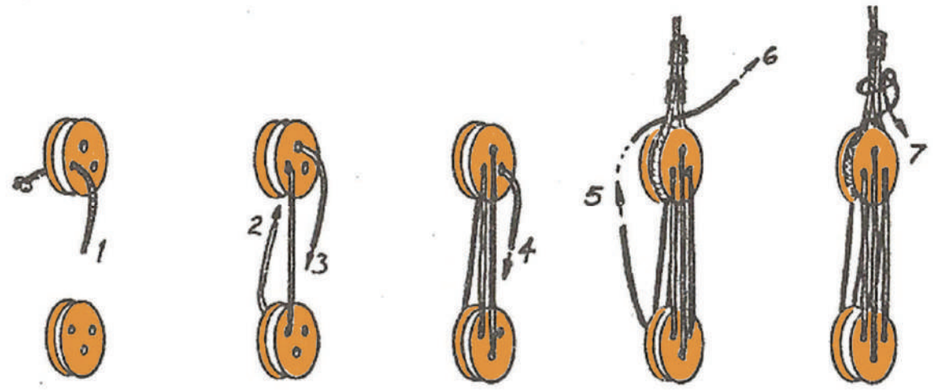


Figure 59

14.1.25 Lanyards

The lanyards are the cords that tie (reeve) the upper and lower deadeyes together and are used to tension the shrouds. For the lanyards use cord G and reeve as shown Figure 60.



Reeving Deadeyes

Figure 60

14.1.26 Ratlines

The ratlines are the rope ladders used by the crew to climb up the mast. Using cord G tie off the ratlines to the shrouds. Space the ratlines approximately 5mm apart making sure they are horizontal and parallel with each other. Seize each knot with a dab of glue and trim excess cord—Figure 61.

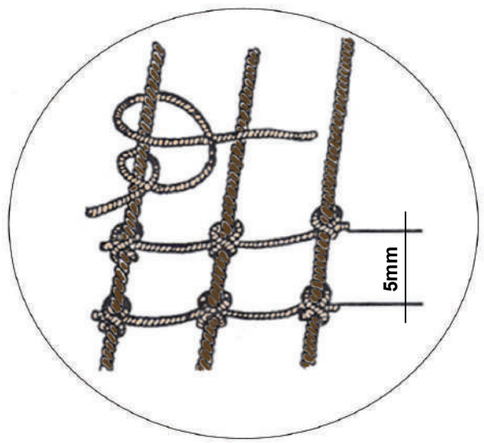


Figure 61

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

HMS SUPPLY
1759
SHEET 58

14.1.27 Foremast—Lower Shrouds

Following the approach previously presented to complete the shrouds for the lower fore and main masts. Note the shroud placement sequence. Make the lanyard strips from 2x2mm walnut P127. Fit the lanyard strips as shown. Lastly, fit the ratlines.

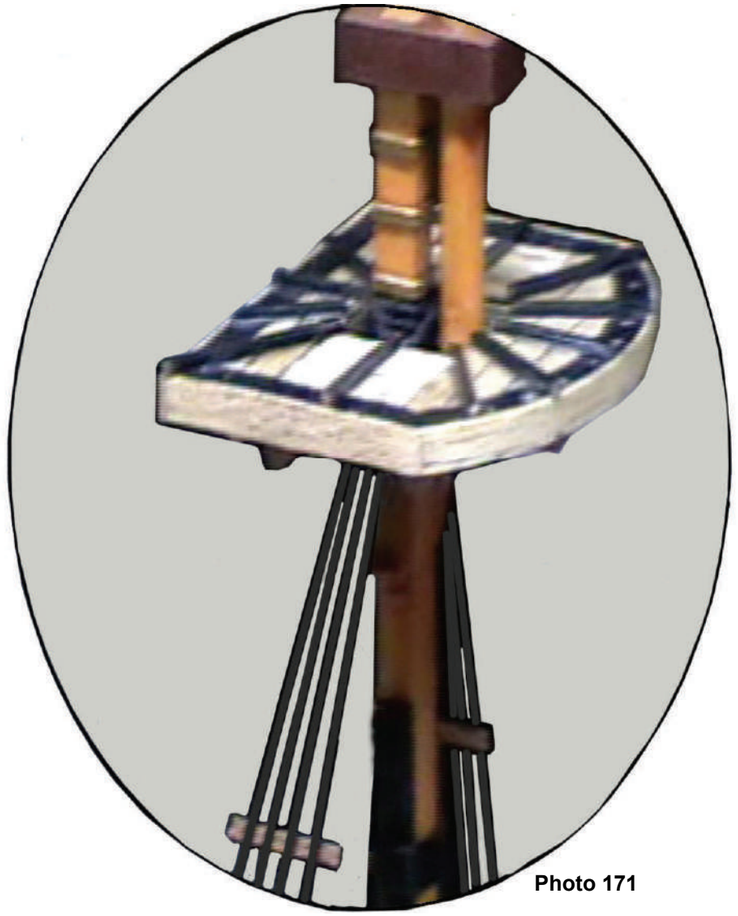


Photo 171

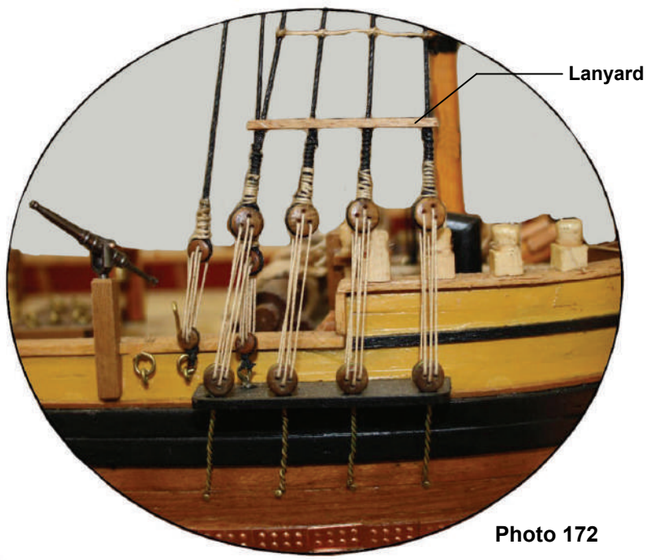


Photo 172

14.1.28 Main Mast—Lower Shrouds

Following the approach previously presented to complete the shrouds for the lower fore and main masts. Note the shroud placement sequence. Make the lanyard strips from 2x2mm walnut P127. Fit the lanyard strips as shown. Lastly, fit the ratlines.

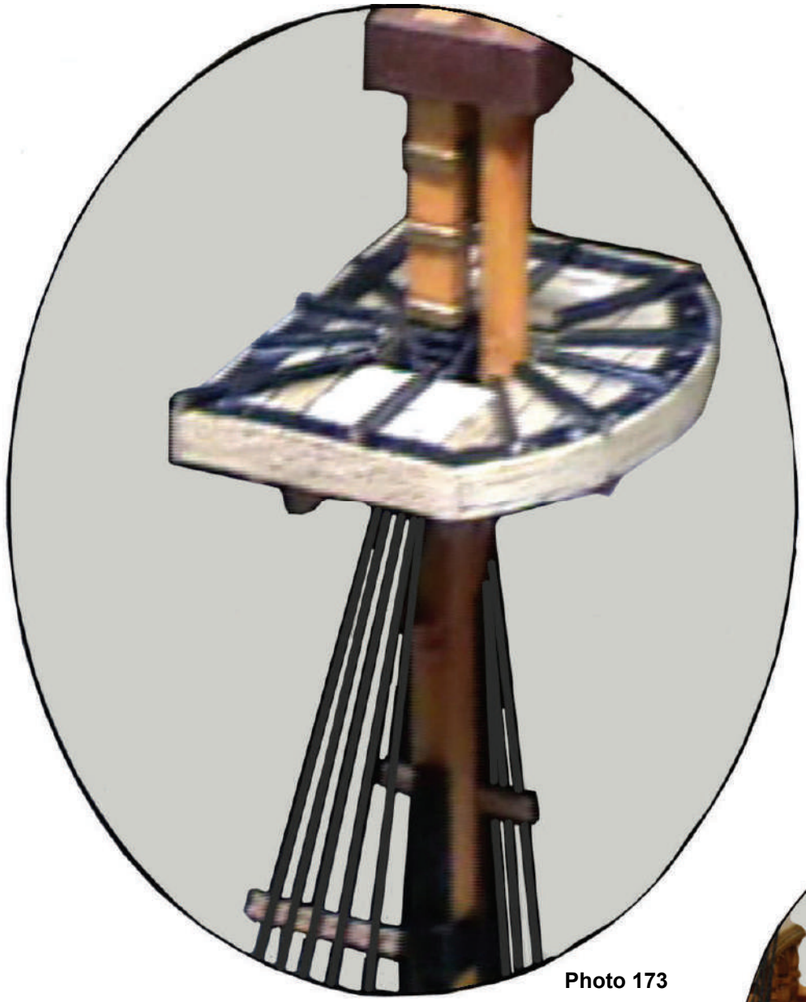


Photo 173

Photo 174

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

DEADEYE KEY	
Size	
3mm	N
5mm	P
7mm heart	Q

HMS SUPPLY
1759
SHEET 59

14.1.29 Fore & Main Masts - Top Mast Shrouds

For the top mast shrouds the first step is to make the futtock shrouds. These take the lower deadeyes for the topmast shrouds. To make the futtock shroud cut a 60mm length of cord J. Fix a 5mm deadeye P124 to one end of this cord—Photo 175. Make 12 futtock shrouds. Fit each futtock shroud into place in the pre-drilled holes in the mast tops - Photo 176. Tie off the futtock shrouds to the lower mast shrouds and fit a sheerpole using 2x2mm walnut P127 across the joints - Photo 176. The next step is to fit the top mast shrouds using cord J. Follow the shroud placement sequence—for the odd shroud tie off to its self - Photo 177. Lastly, fit the lanyard strip using 2x2mm walnut P 127 and the ratlines.

14.1.30 Fore & Main Masts - Topgallant Shrouds

For the fore and main mast top gallant shrouds cut 12 lengths of cord J. Attach the top gallant futtock shrouds to the topmast shrouds—Photo 178. Fix a sheerpole using P127 across the joints. Lastly, fit the ratlines.

Photo 175

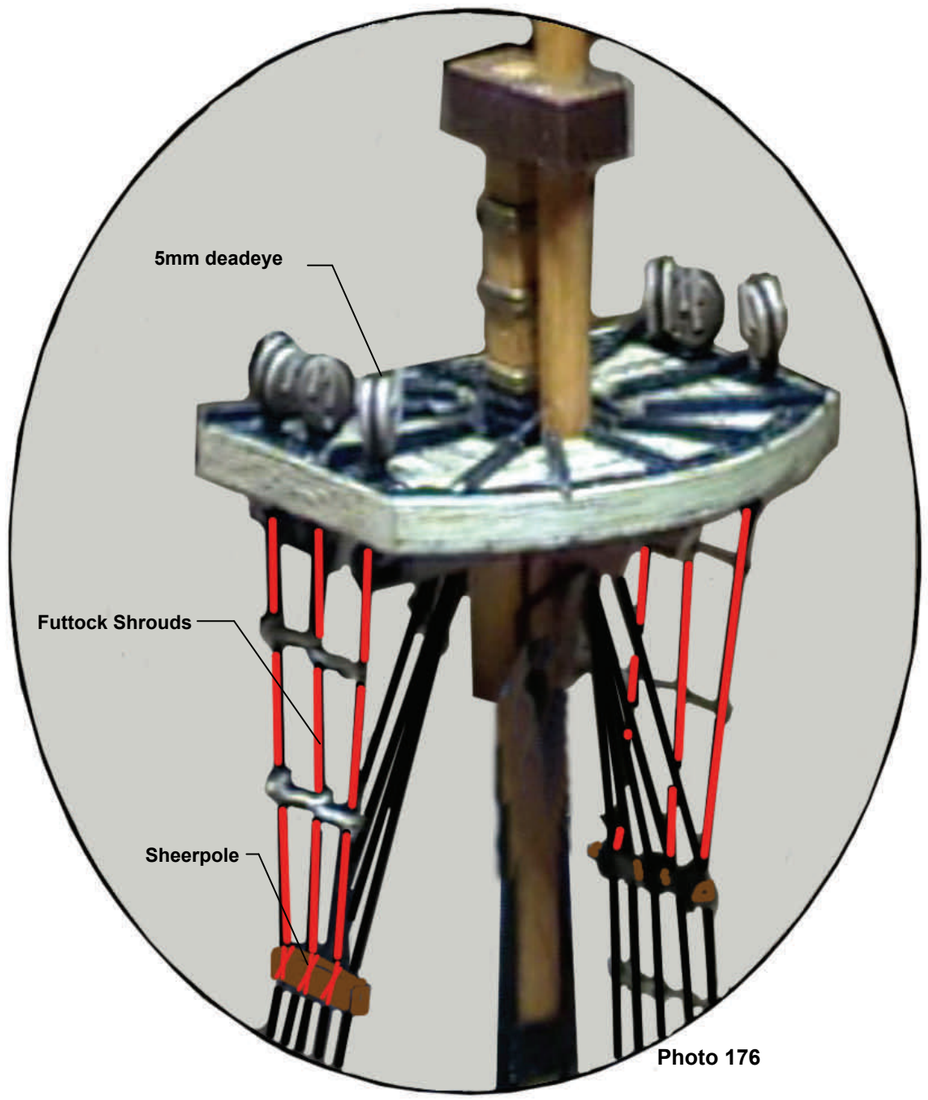


Photo 176

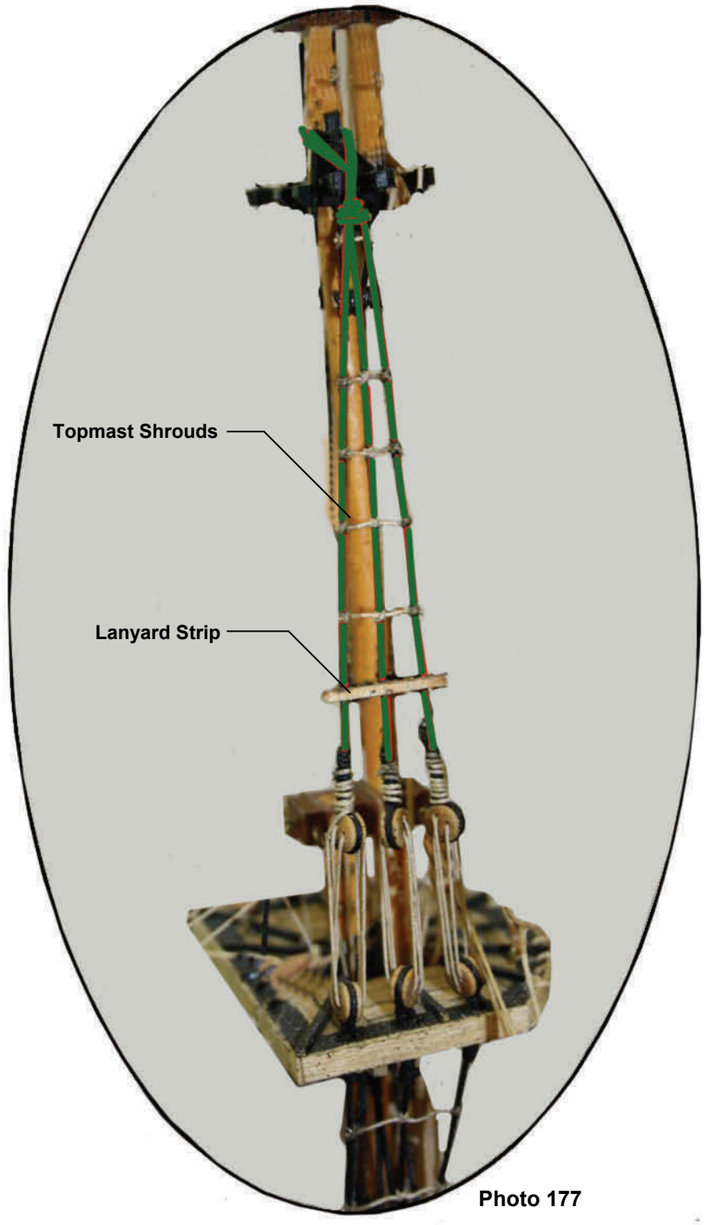


Photo 177

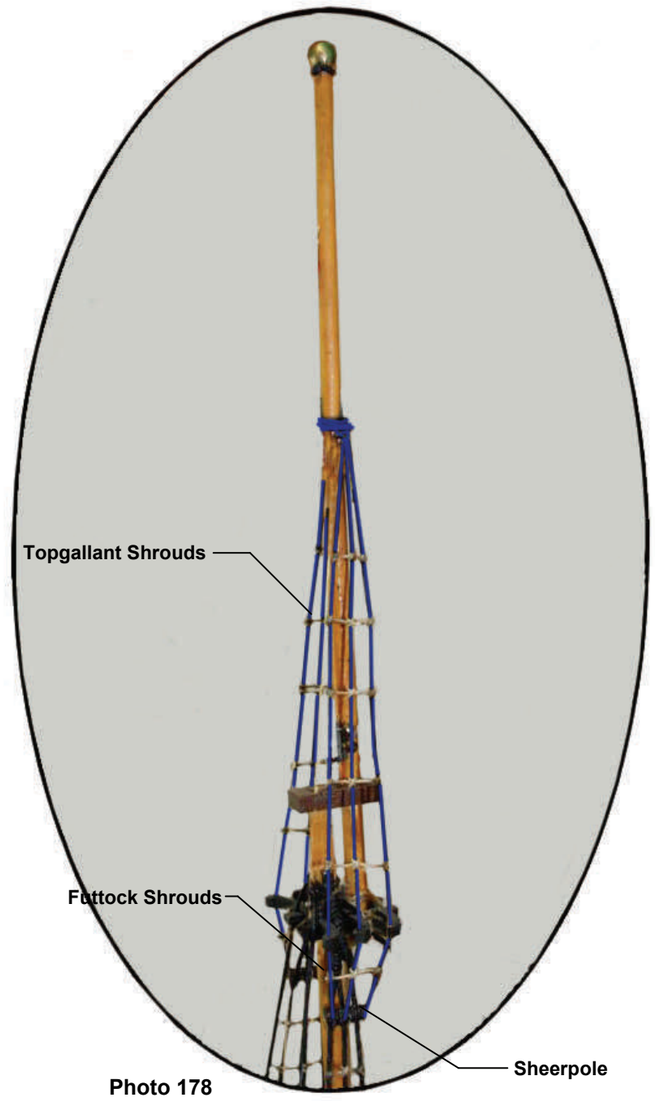


Photo 178

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

HMS SUPPLY
1759
SHEET 60

15.0 Running Rigging

The next step is to complete the running rigging. The running rigging includes rigging for the yard lifts, braces, pendants, halliards, and guys. If the model is fitted with sails there will be other running rigging associated with the sails not covered in these instructions. Completing the running rigging can be complicated and time consuming. However, following the “golden rule” for rigging of working from the centre and lower parts of the model and working up and out trying to avoid difficult and confined spaces, will assist in the process. Also taking your time with this building step will produce a superior looking model. The running rigging is fawn and of two sizes, 0.25mm—cord G and 0.5mm—cord H.

15.1 Typical Rigging Applications

The following figures represent a range of rigging applications you may encounter as you rig the model.

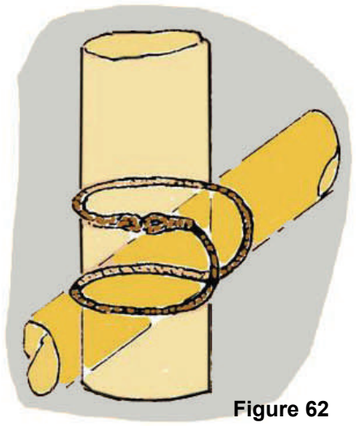


Figure 62

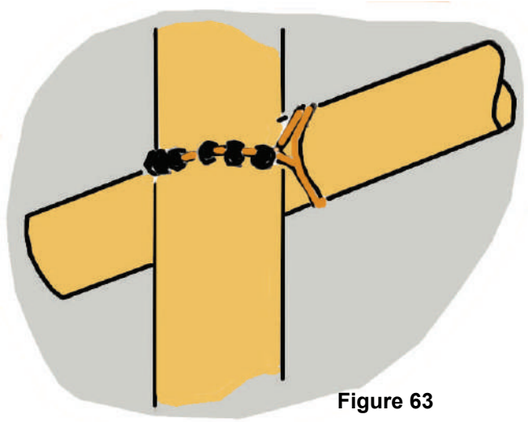


Figure 63

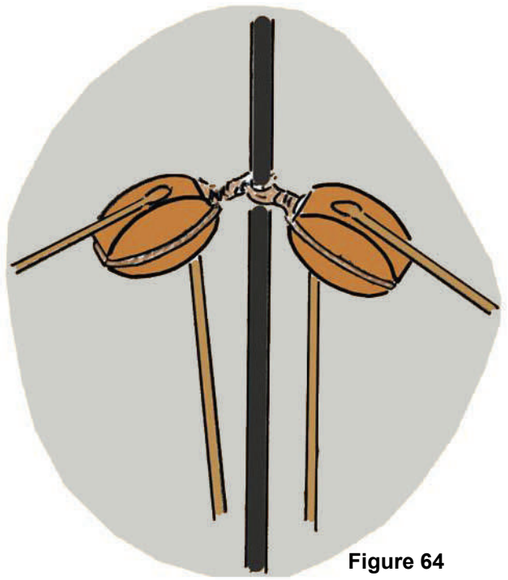


Figure 64

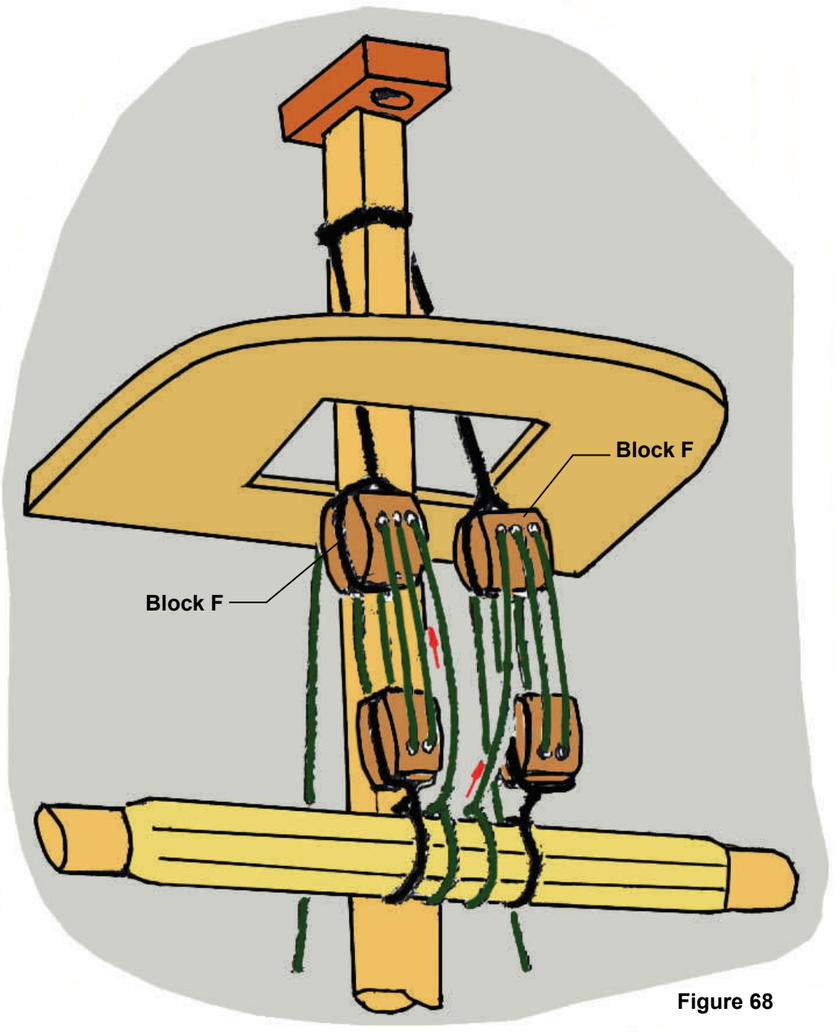


Figure 68

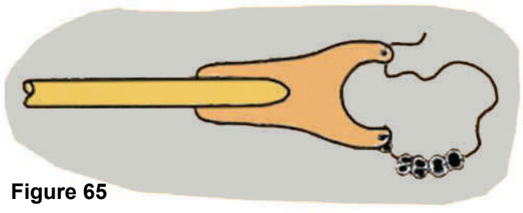


Figure 65

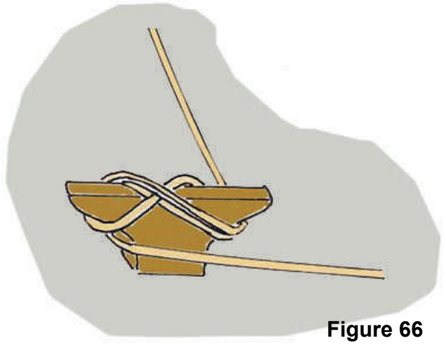


Figure 66

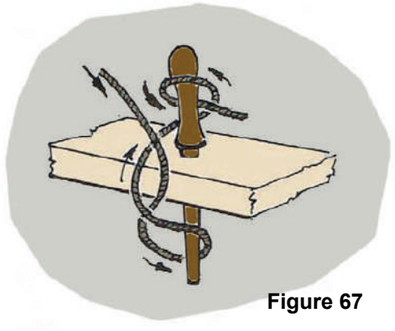


Figure 67

15.2 Yards, Gaff & Boom

To fit & rig the yards, gaff & boom refer to Sheets 62—68 and the Belaying Plan Sheet 47.The following sequence is recommended.

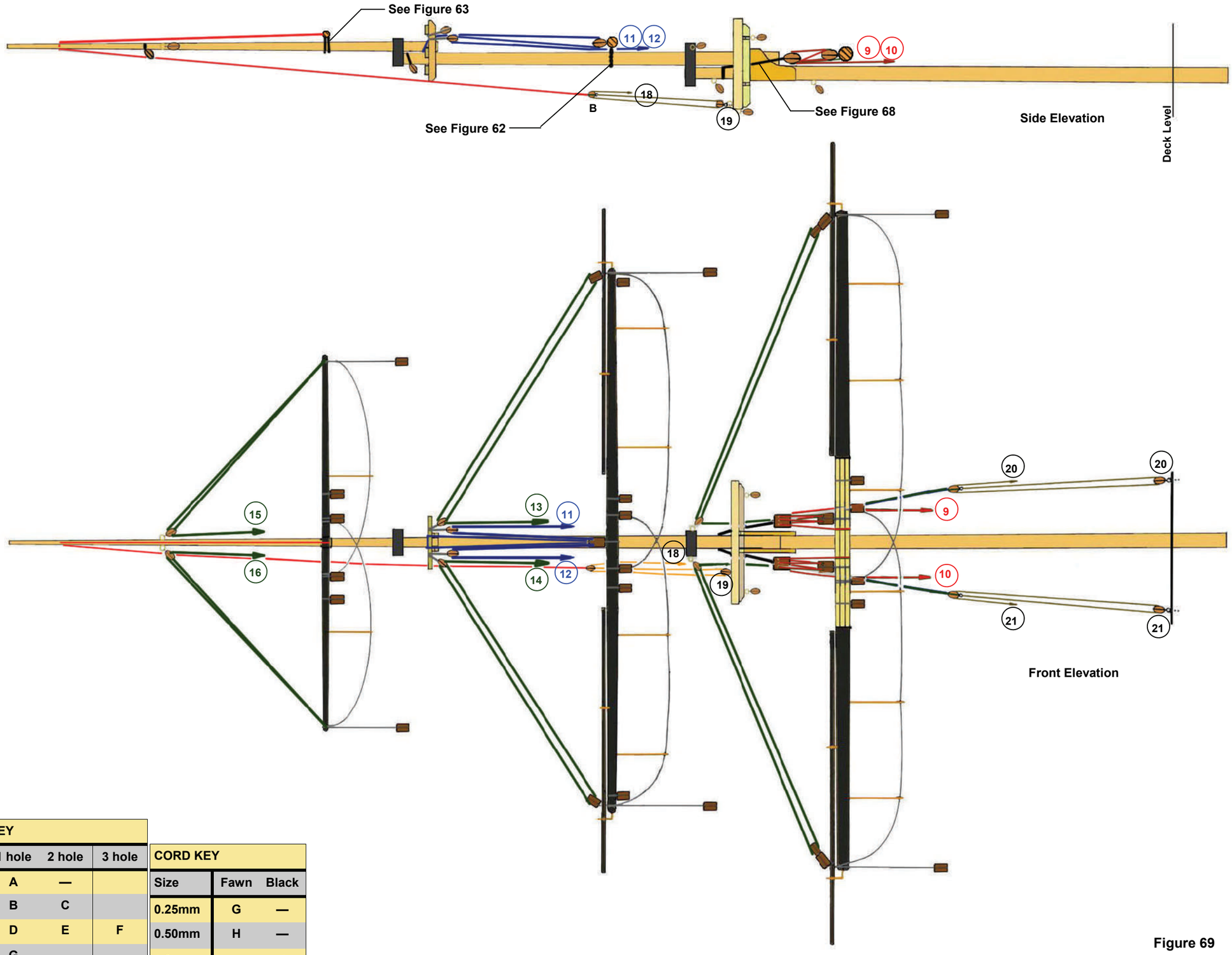
1. Attach the foremast yards to the mast—fore yard, fore top yard and fore topgallant yard.
2. Attach the main mast yards to the masts - main yard, main top yard and main topgallant yard
3. Attach the boom. Tie off with parrel beads P140 - Fig. 65
4. Attach the gaff. Tie off with parrel beads P140 - Fig. 65

Once each yard is attached to its respective mast:

1. **Rig the lifts for each yard as shown.**
2. **Rig the clue lines & sheets as shown.**

15.2.1 Lifts - Foremast

Rig with cord H and terminate as shown.



BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

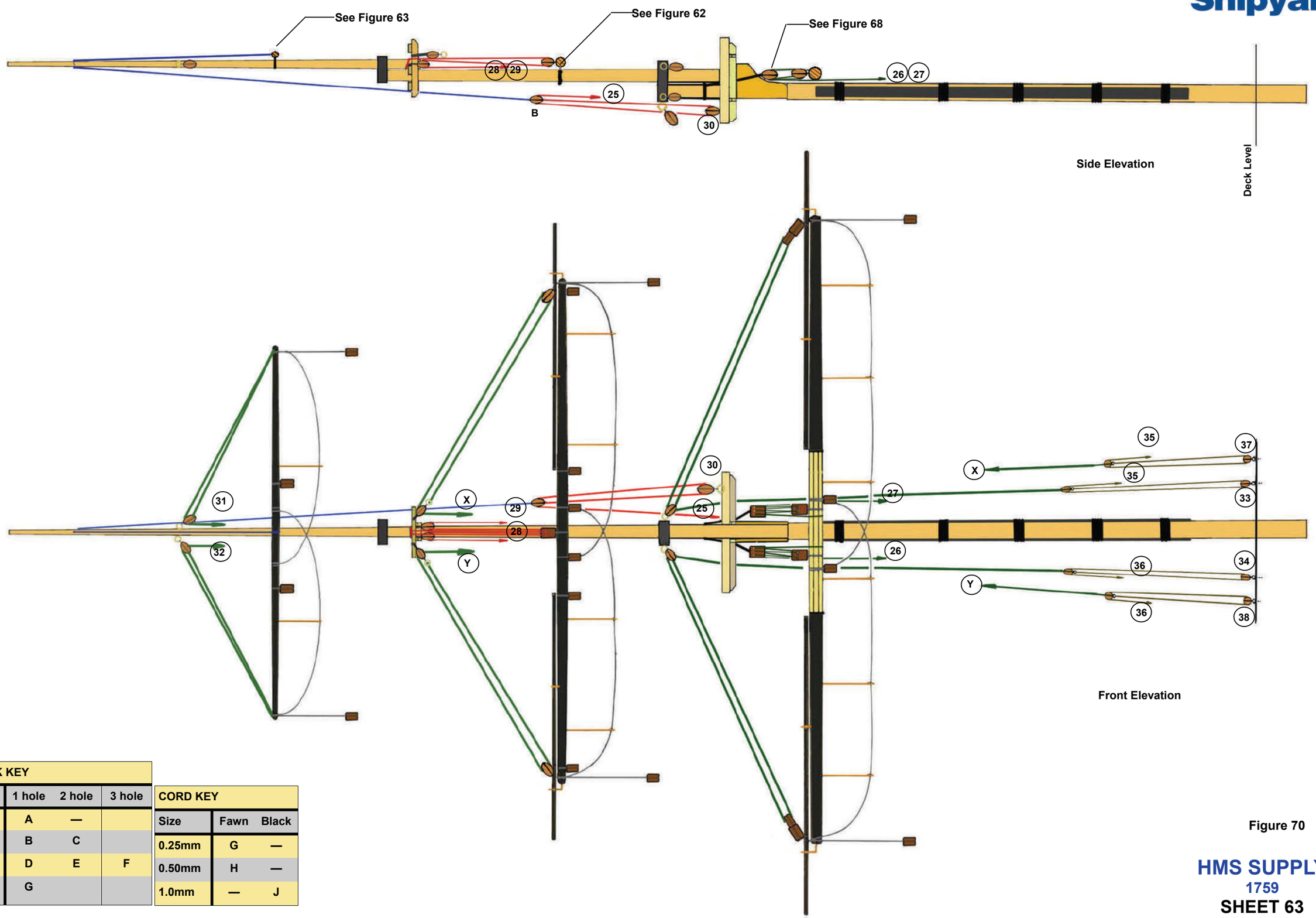
CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

Figure 69

HMS SUPPLY
1759
SHEET 62

15.2.2 Lifts - Main Mast

Rig with cord H and terminate as shown.



BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

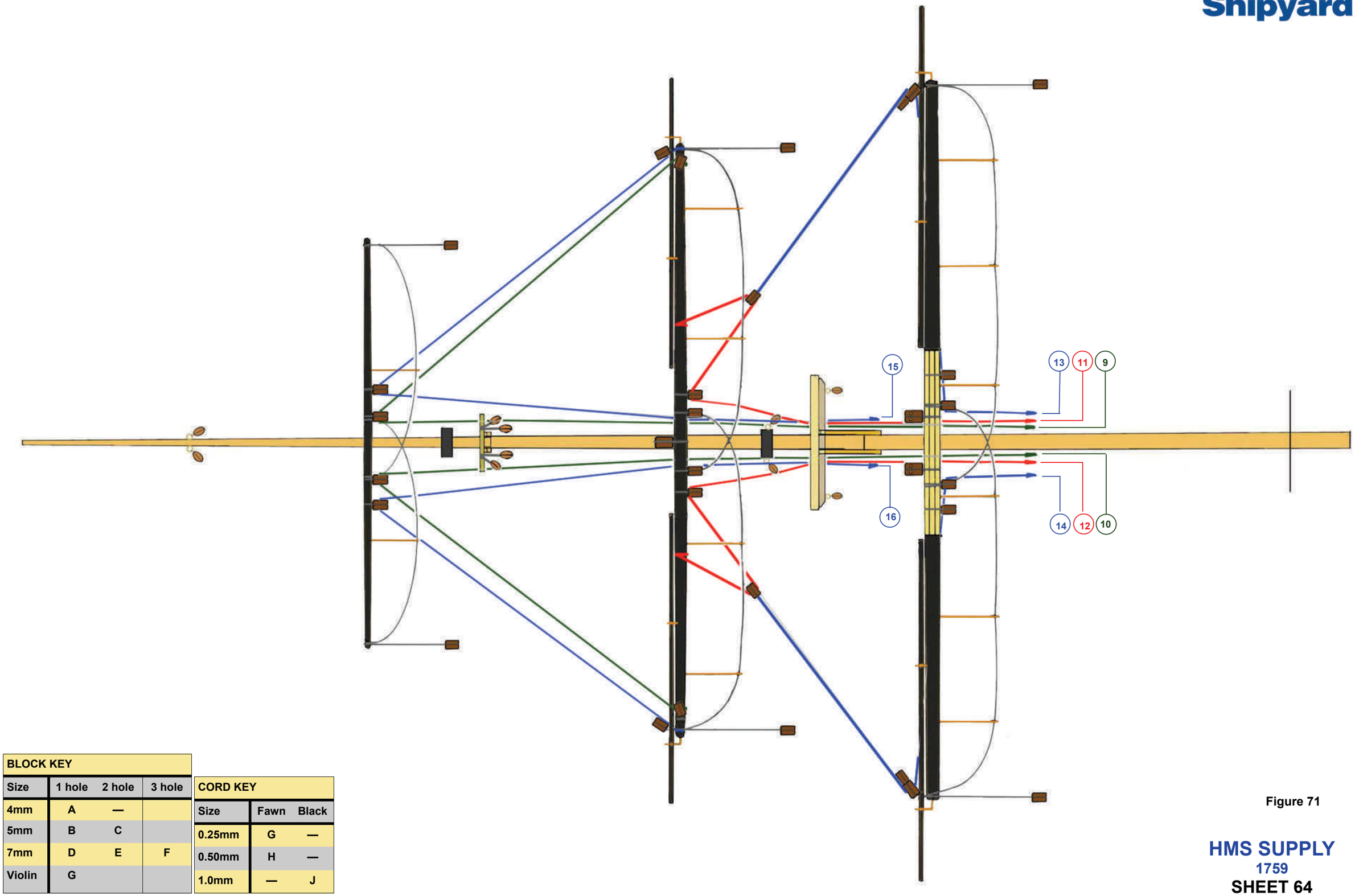
CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

Figure 70

HMS SUPPLY
1759
SHEET 63

15.2.3 Cluelines & Sheets - Foremast

Rig with cord H and terminate as shown.



BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

Figure 71

HMS SUPPLY
1759
SHEET 64

15.2.4 Cluelines & Sheets - Main Mast

Rig using cord H & terminate as shown.

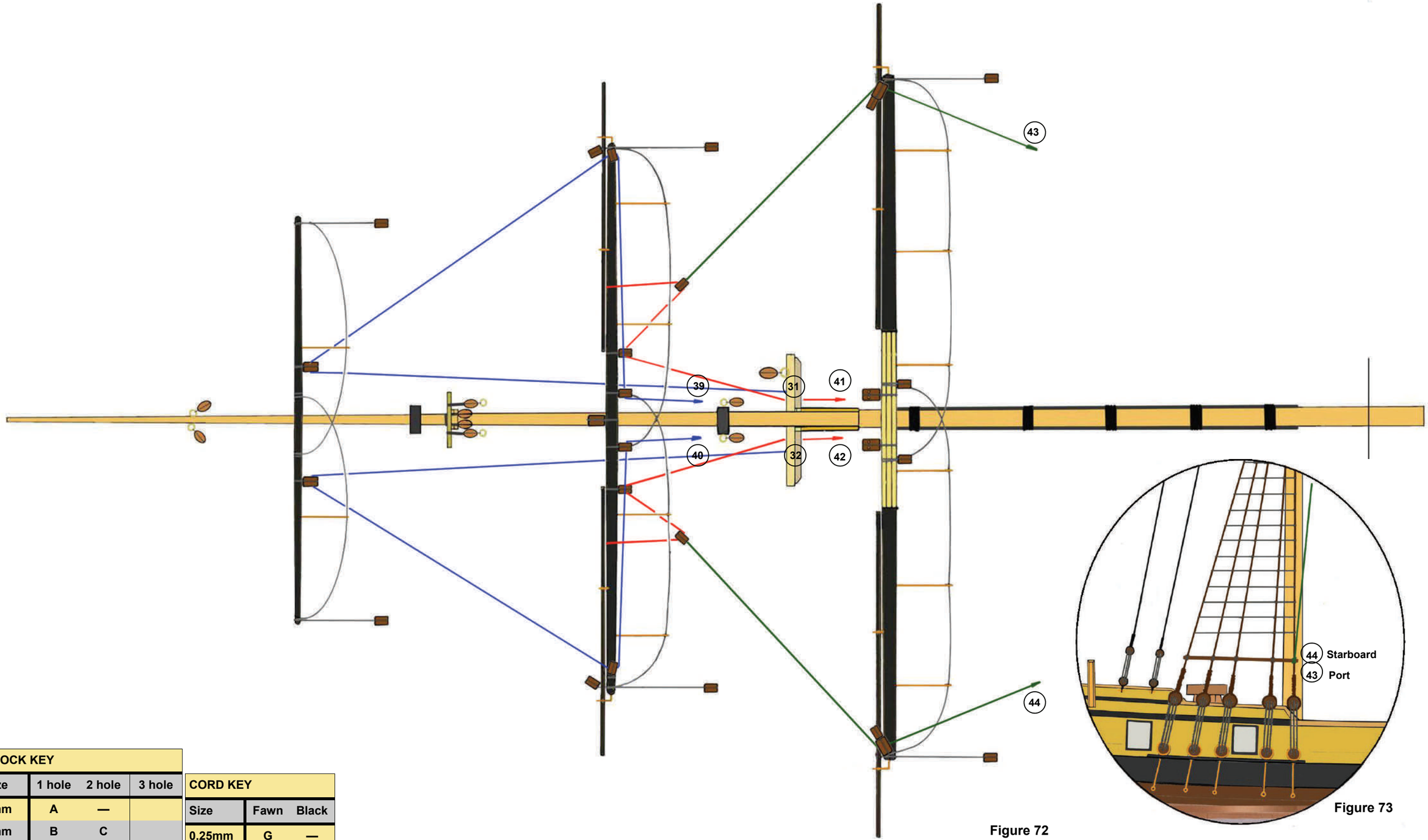


Figure 72

Figure 73

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

HMS SUPPLY
1759
SHEET 65

15.2.5 Boom, Boom Topping Lift & Boom Throat

Attach the boom to the main mast as shown. You may need to cut through the mast strengthener. Rig the boom topping lift and terminate as shown. Reeve the boom throat and terminate as shown.

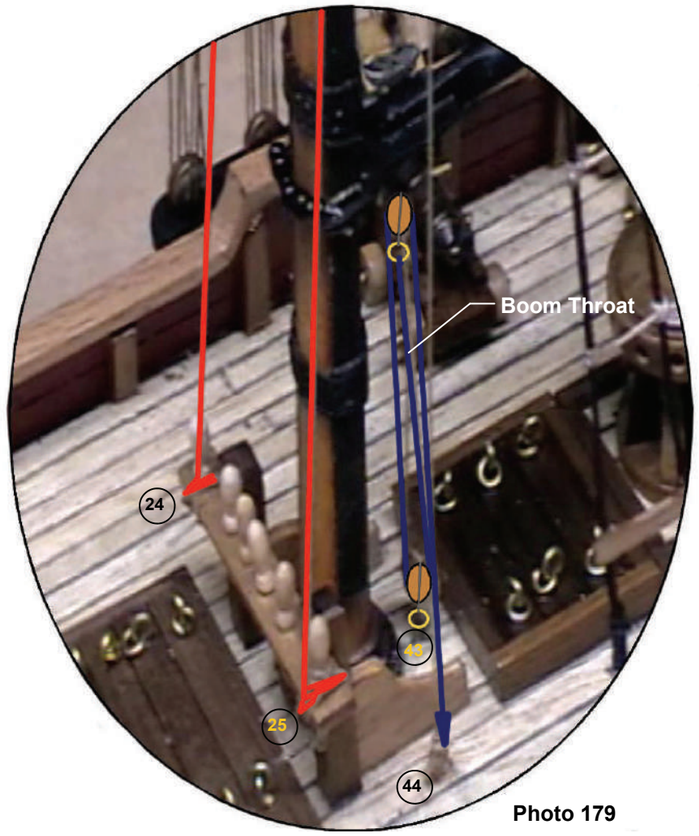


Photo 179

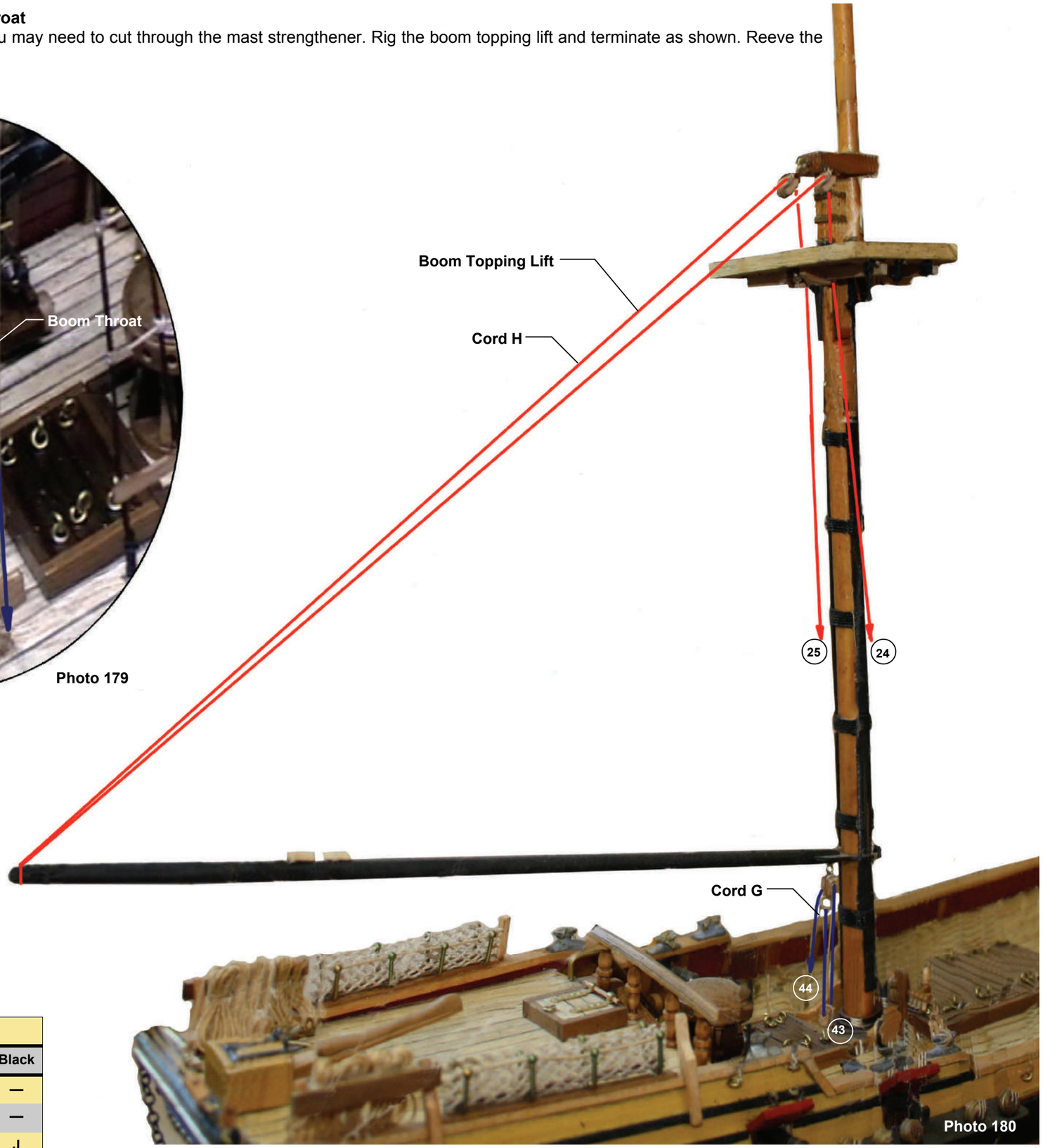


Photo 180

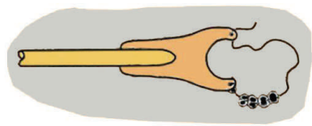


Figure 74

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

15.2.6 Mainsheet
Fix an eye pin P53 with block B attached as shown. Rig the mainsheet and terminate as shown.

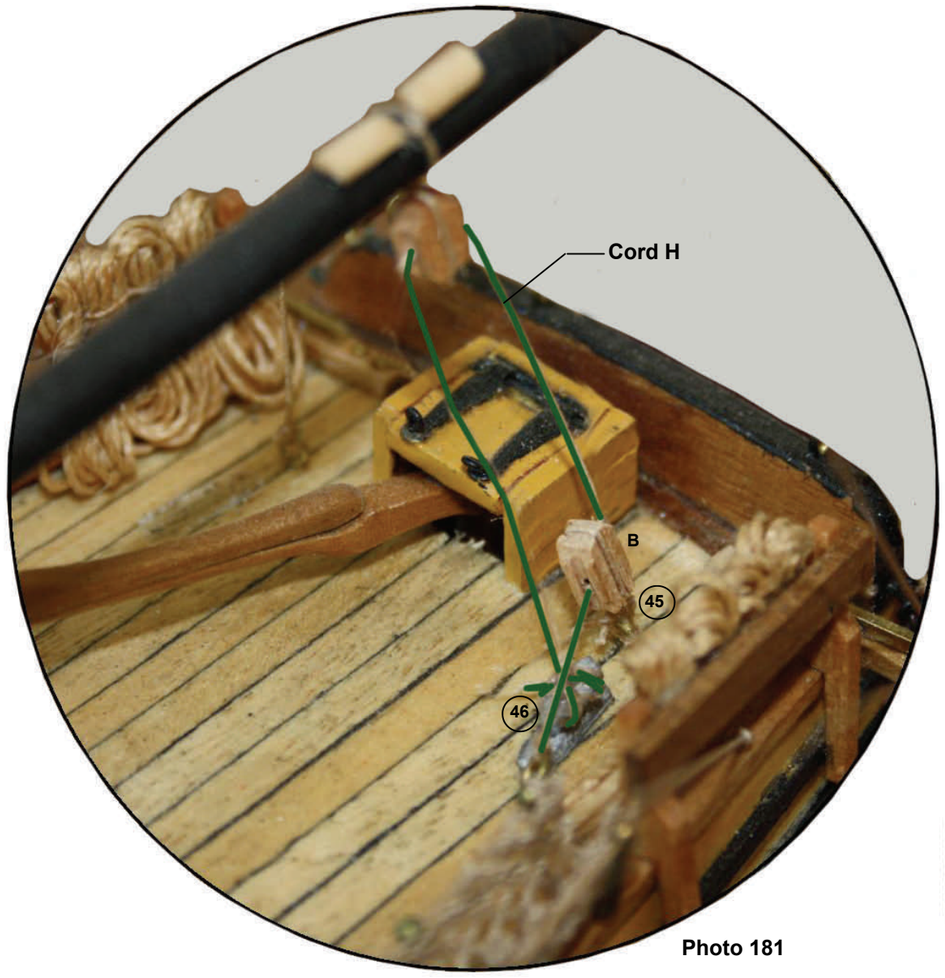


Photo 181

15.2.7 Boom Pendants
Fix eye pins P53 at belaying points 47,48, 49 & 50 as shown. Attach block B to points 47 & 50. Reeve the boom pendants and terminate as shown.

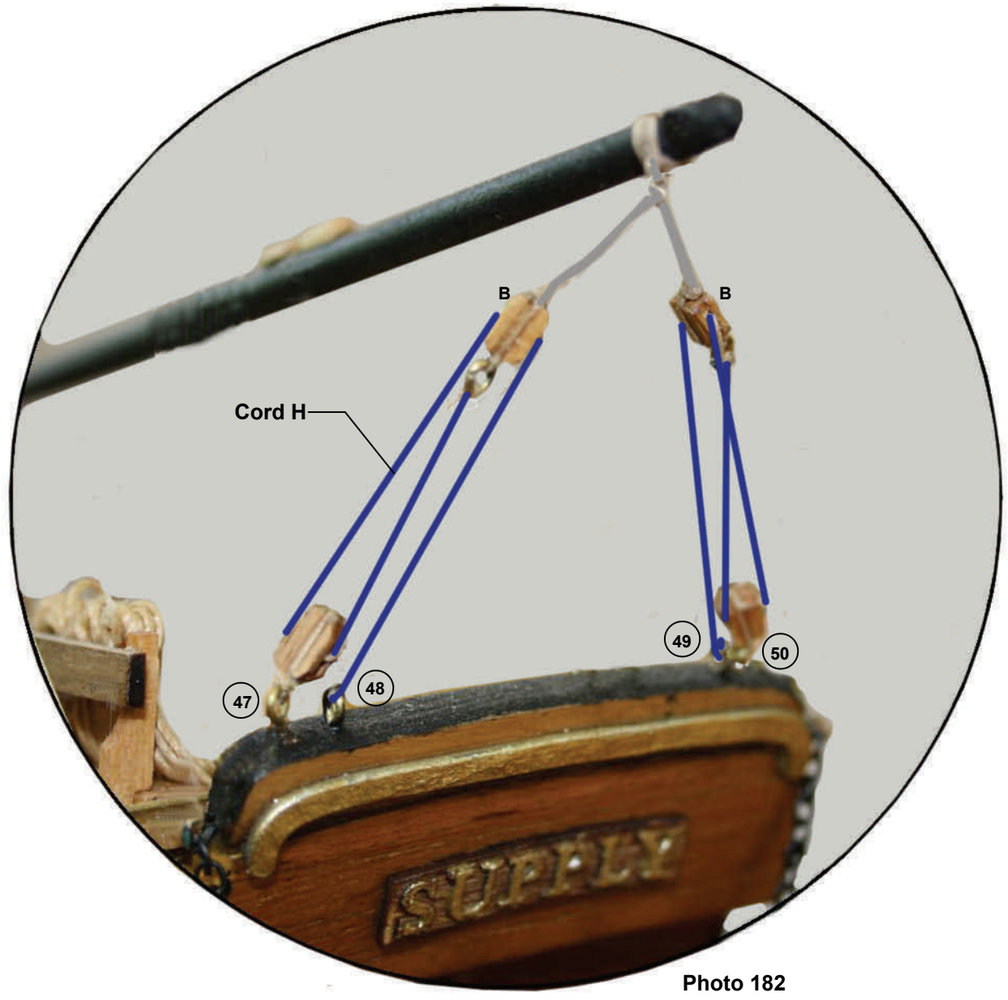


Photo 182

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

15.2.8 Throat Halliard & Peak Halliard

Fit the gaff to the main mast. You may need to cut through the mast strengthener. To rig the throat halliard reeve the two blocks together at the yoke and underside of the mast top and terminate as shown - Photo 183.

Rig the peak halliard and terminate as shown - Photo 183.

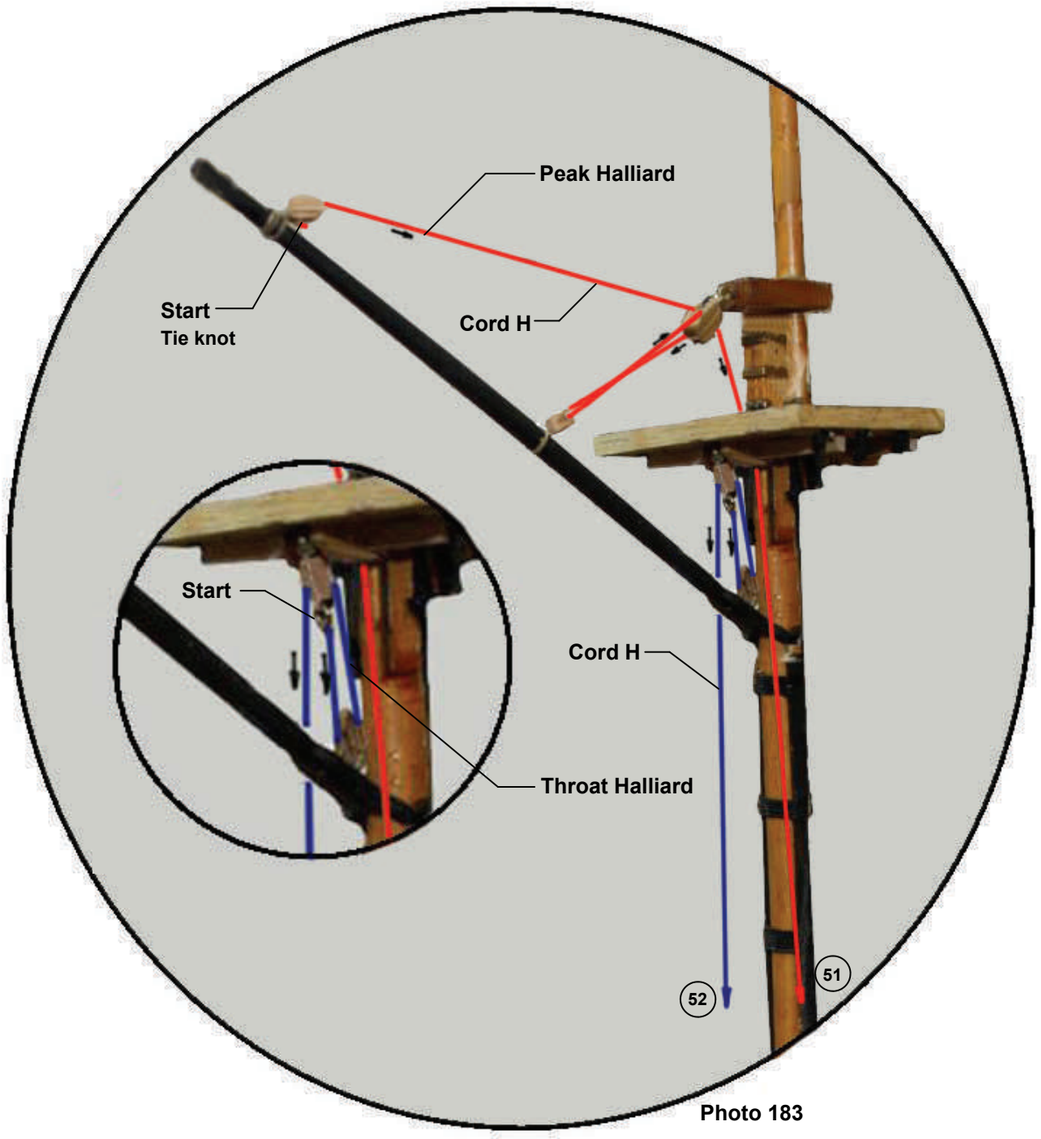


Photo 183

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

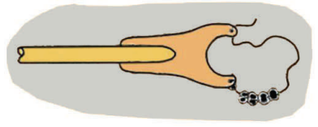


Figure 75

15.2.9 Crows Feet

Identify the euphore blocks on the 2mm plywood. Fit block A P130 to one end. Attach a second block A P130 to the stay. Start to reeve these two blocks—do not tighten yet. Rig the crows feet for the main & fore masts as shown. Start to reeve these two blocks—do not tighten yet.

Rig the crows feet for the main masts as shown. Start as indicated and progress as shown Photo 184. At the mast top feed the cord down from the top and then up from the underside to again come down to the euphore block. Finish at the mast top centre hole. Tighten the reeve between the blocks and tie off at lower block. Repeat for the foremast.

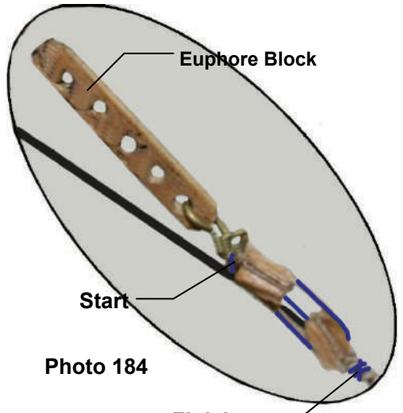


Photo 184

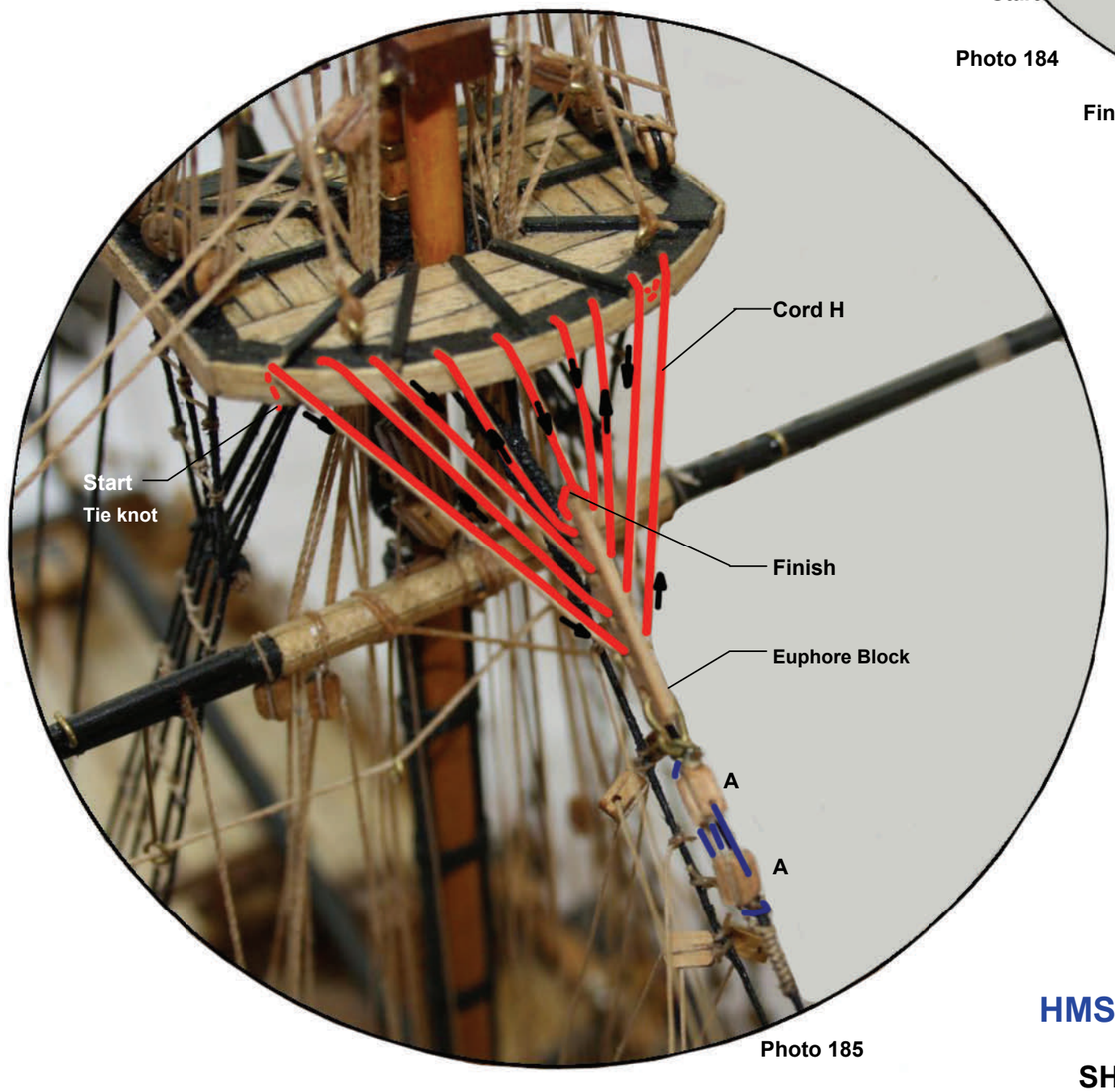


Photo 185

HMS SUPPLY
1759
SHEET 68

15.2.10 Yard Braces—Foremast

Rig the foremast yard braces with cord H as shown. Refer also to the Belaying Plan Sheet 47.

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

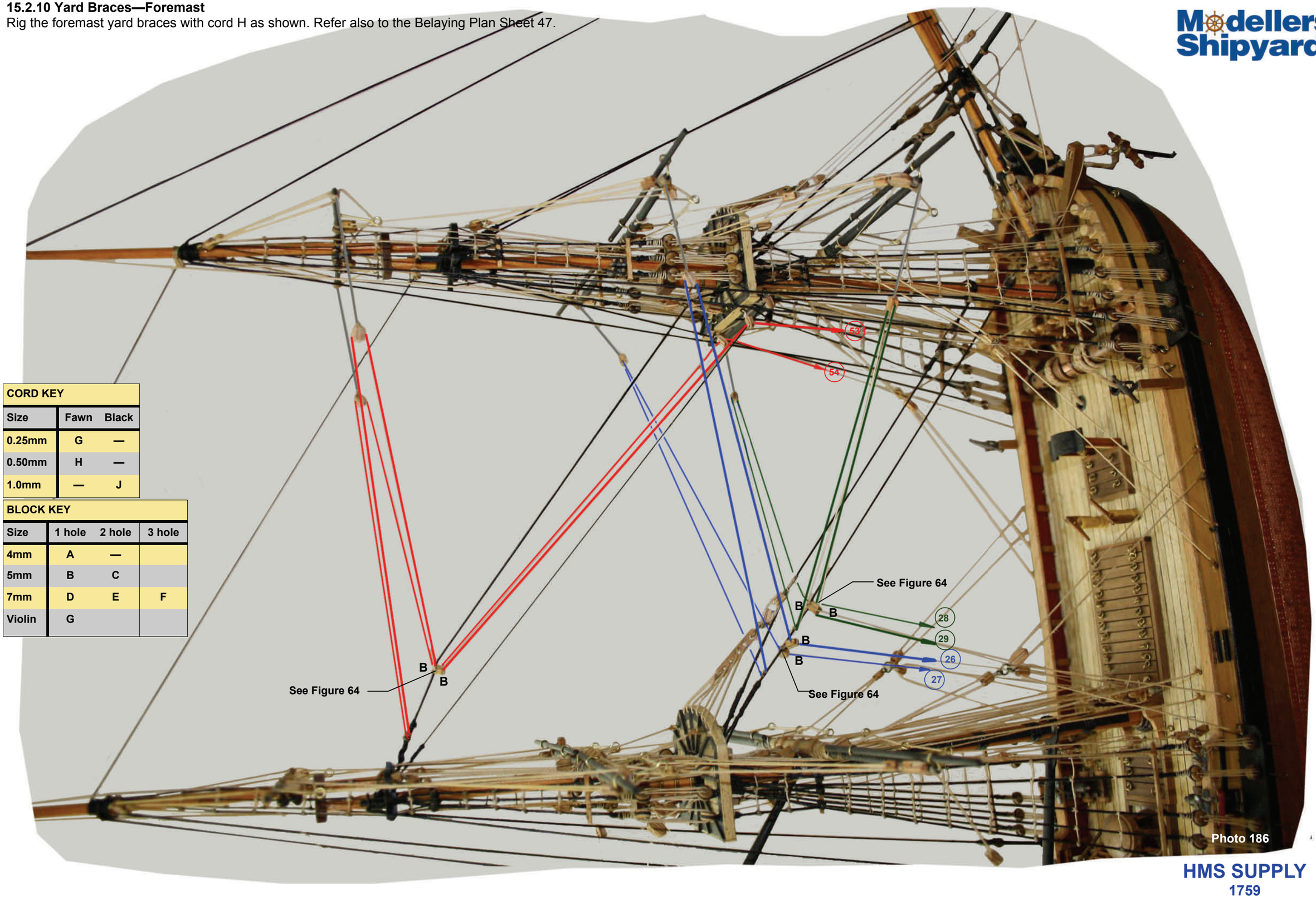


Photo 186

HMS SUPPLY
1759
SHEET 69

15.2.11 Yard Braces—Main Mast

Rig the main mast yard braces with cord H as shown. Refer also to the Belaying Plan Sheet 47.

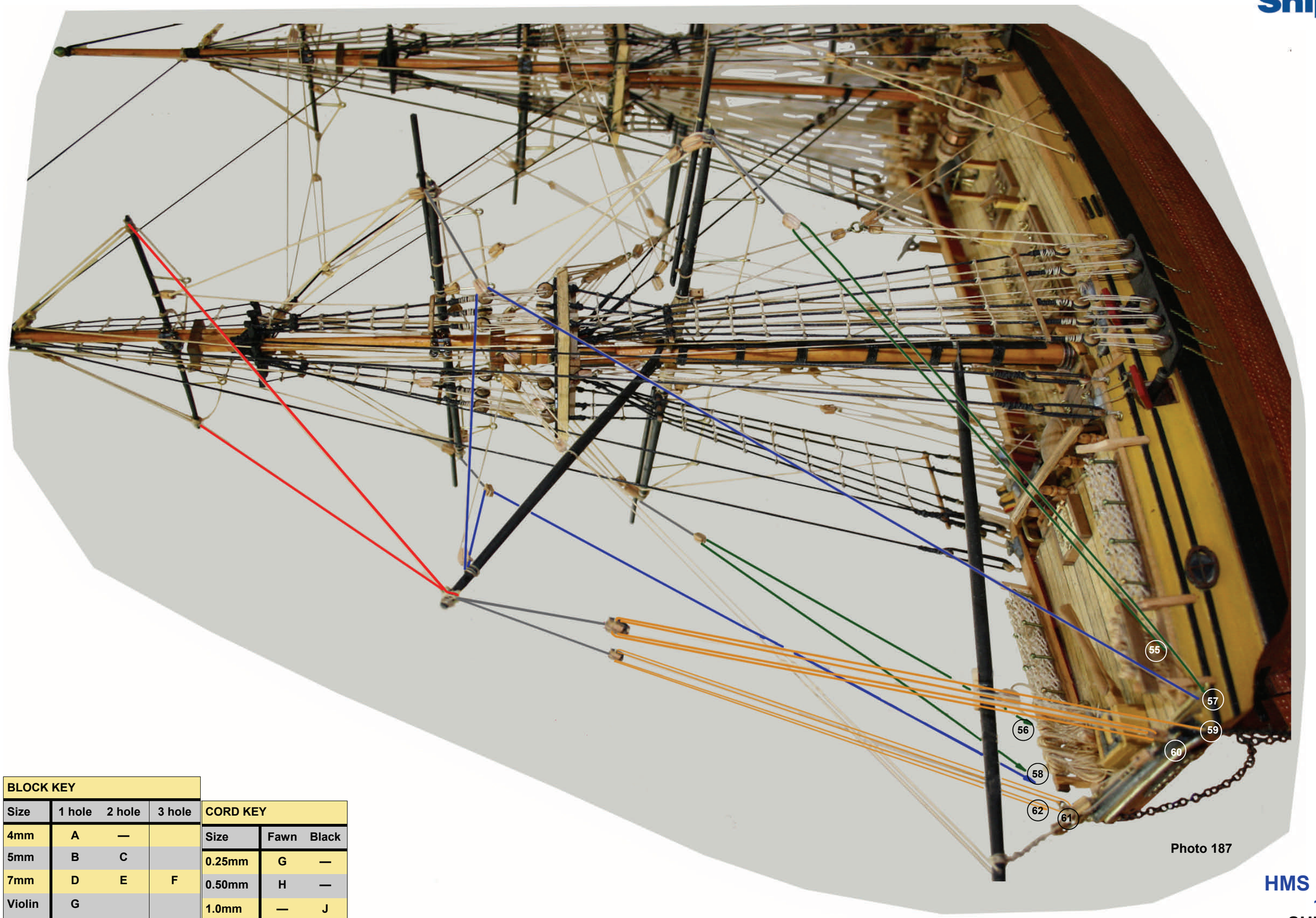


Photo 187

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

HMS SUPPLY
1759
SHEET 70

15.2.12 Spritsail Yard & Bowsprit Guys

Lash the spritsail yard to the bowsprit with cord J. Rig the bowsprit guys as shown. Run the footrope as shown.

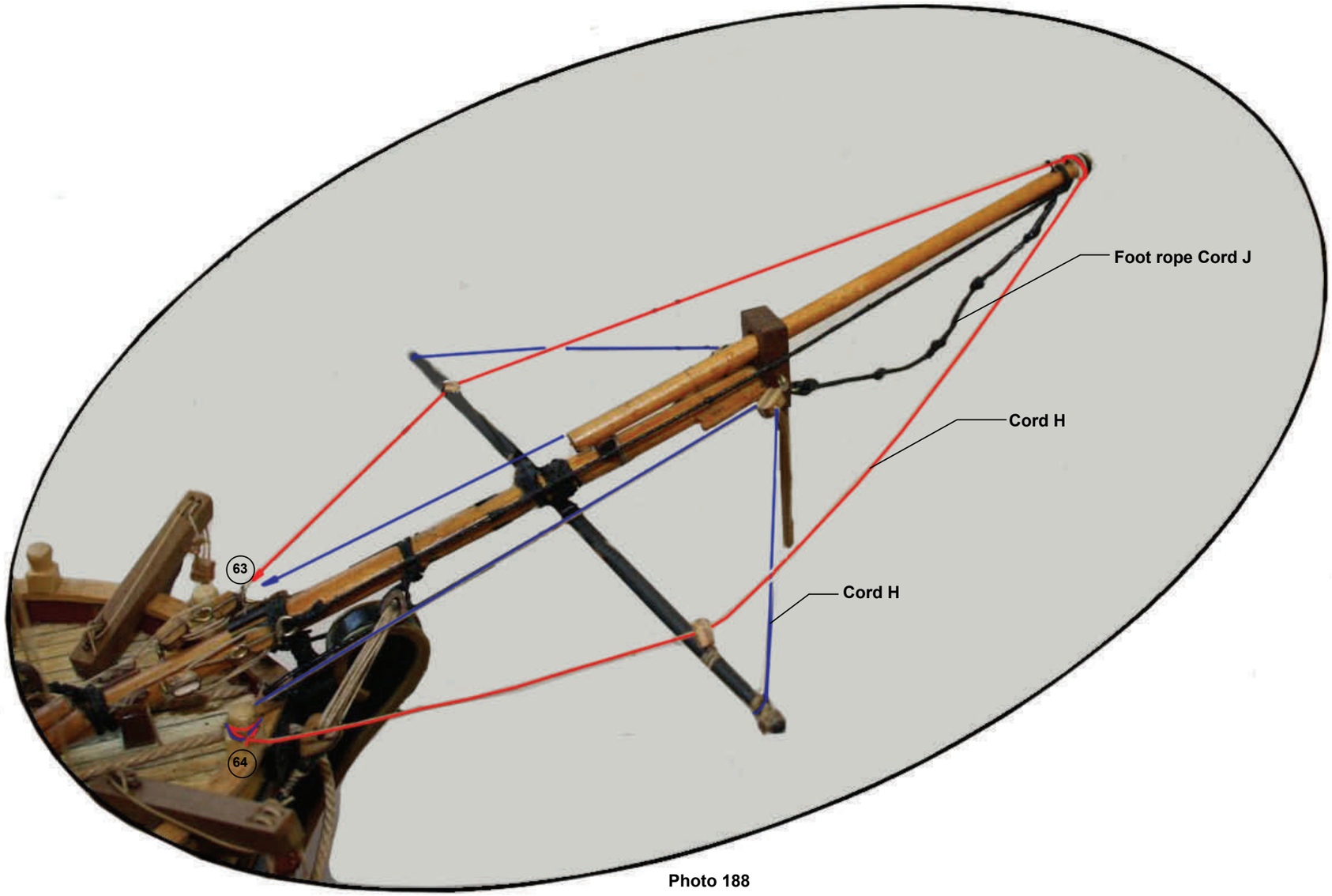


Photo 188

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

15.2.13 Yard Braces - Spritsail Yard
Rig and terminate the spritsail yard braces as shown.

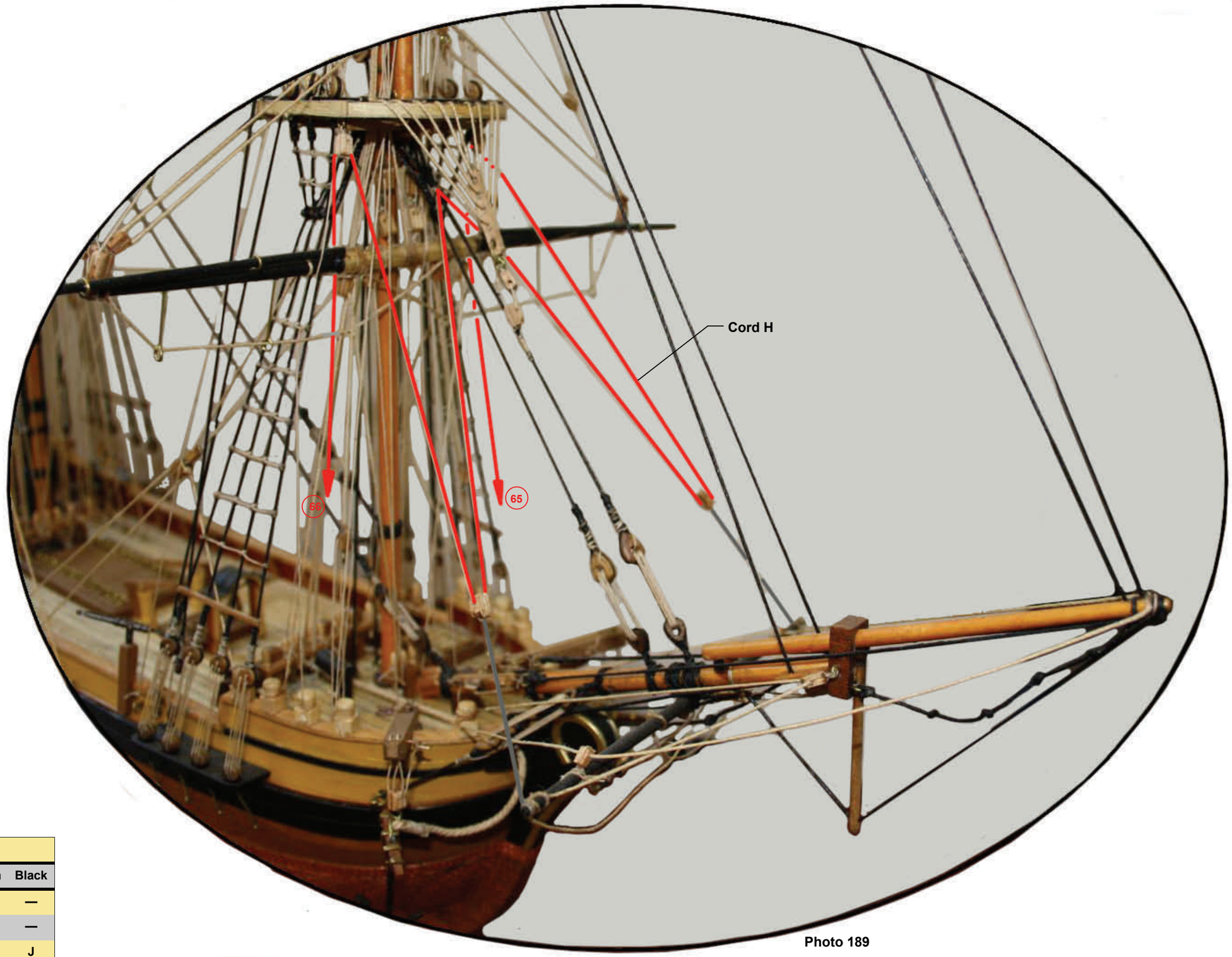


Photo 189

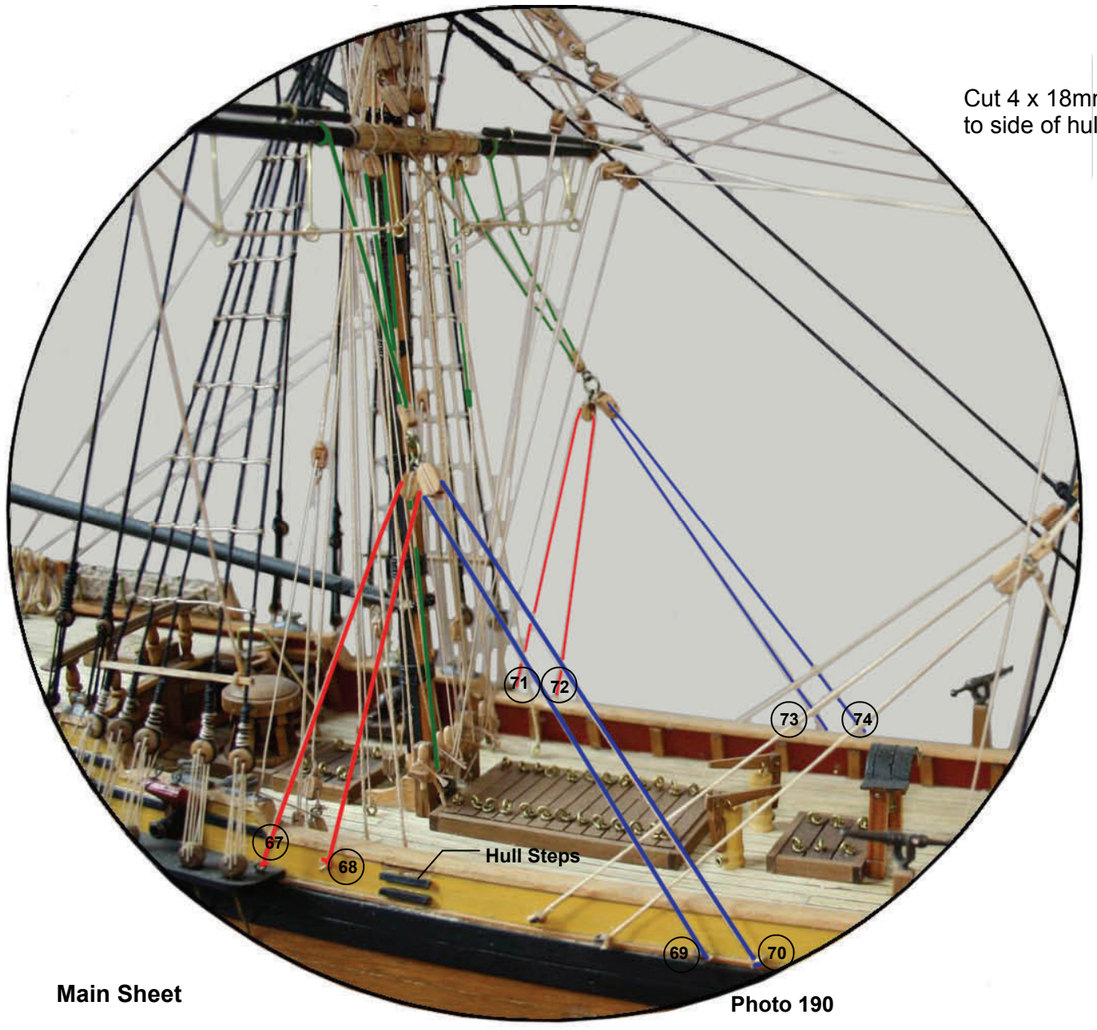
CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

15.2.14 Clueline & Tack - Main Sheet & Fore Sheet

Main Sheet: Prepare a three block clove as shown Photo 191. Rig with cord H & terminate as shown Photo 190

Fore Sheet: Prepare two blocks as shown Photo 193. Rig with cord H & terminate as shown Photo 192.

Cut 4 x 18mm lengths of 2x2mm walnut P127 and fit to side of hull for the hull steps —Photo 190.



Main Sheet

Photo 190

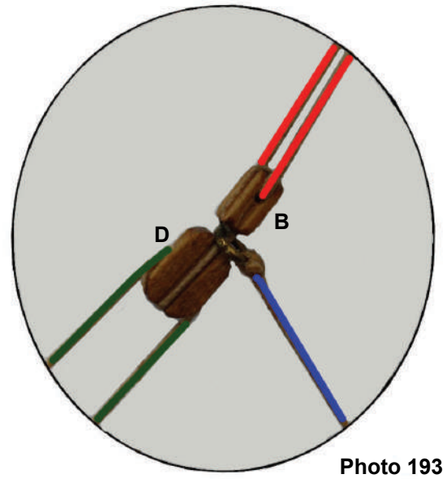
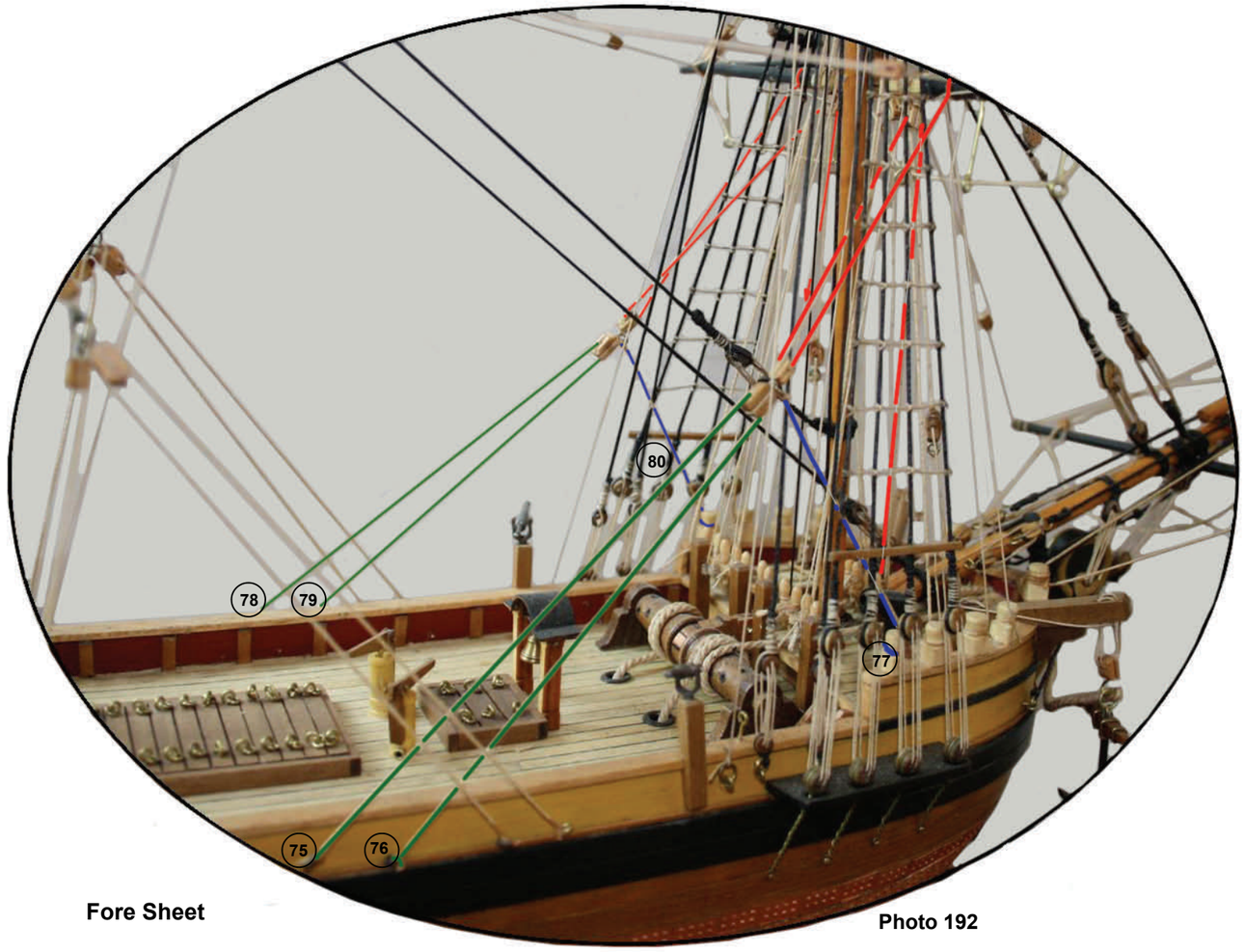


Photo 193



Fore Sheet

Photo 192

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

BLOCK KEY			
Size	1 hole	2 hole	3 hole
4mm	A	—	
5mm	B	C	
7mm	D	E	F
Violin	G		

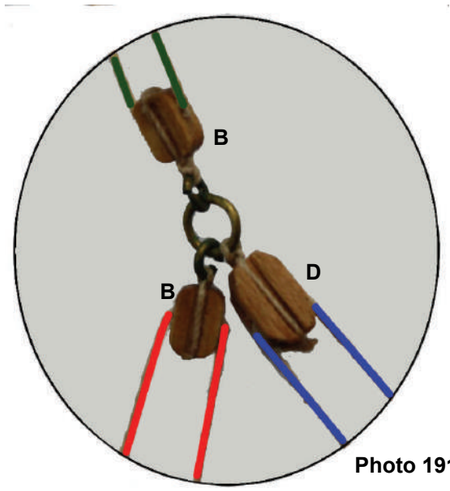


Photo 191

HMS SUPPLY
1759
SHEET 73

15.2.15 Flags

Run a flag hoist from the gaff as shown. Attach the Red Ensign P128 flag to the hoist. Attach the pennant P129 to the main topmast yard lift as shown.

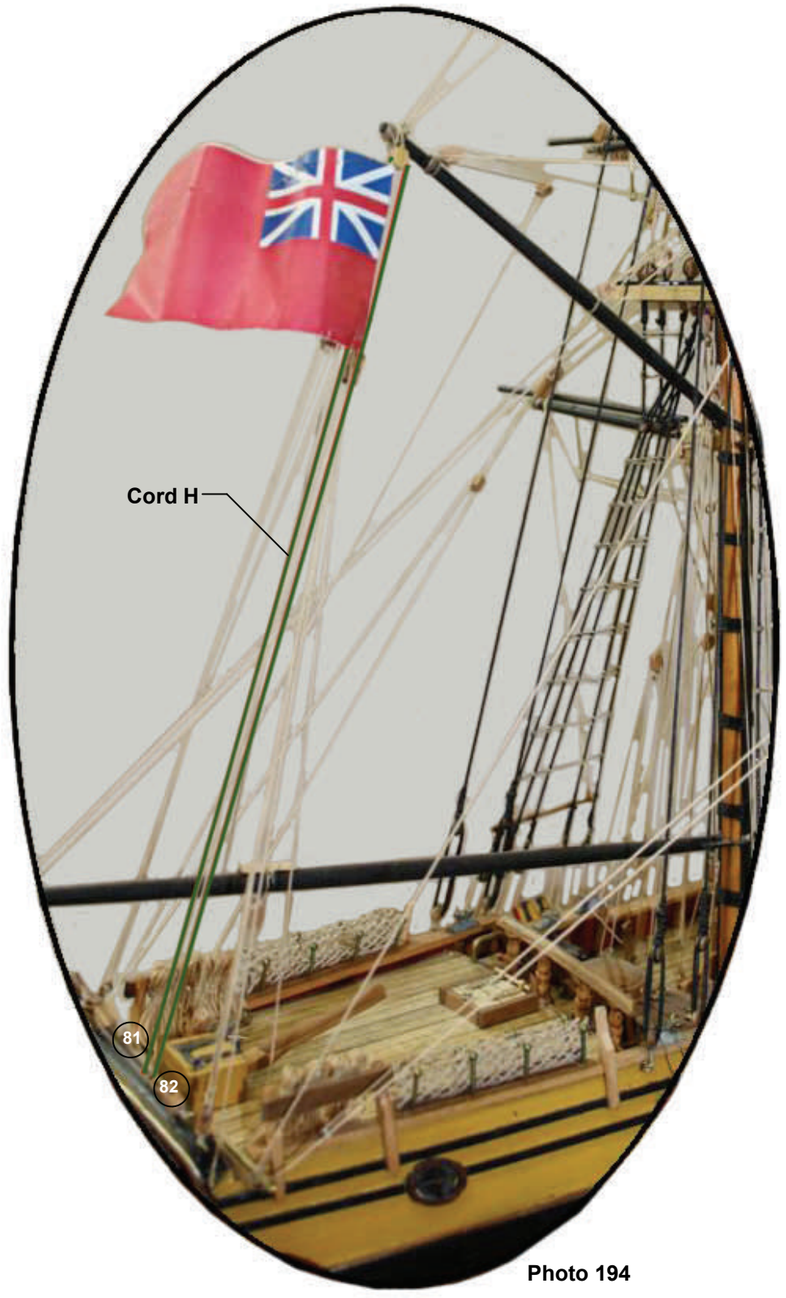


Photo 194

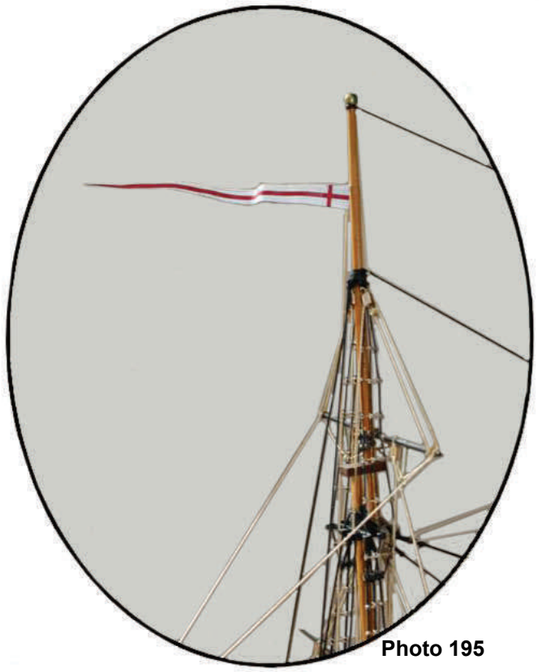


Photo 195

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.50mm	H	—
1.0mm	—	J

15.2.16 Finishing Touches

Make rope coils with cord H to be placed on the various belaying points on the deck. Fit the name plate P139 to a cradle bar.

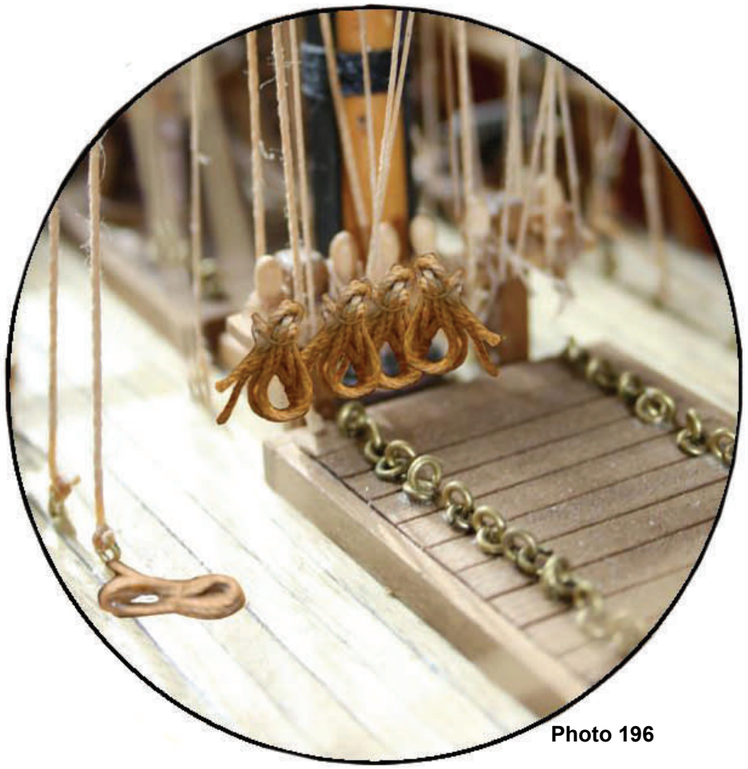


Photo 196

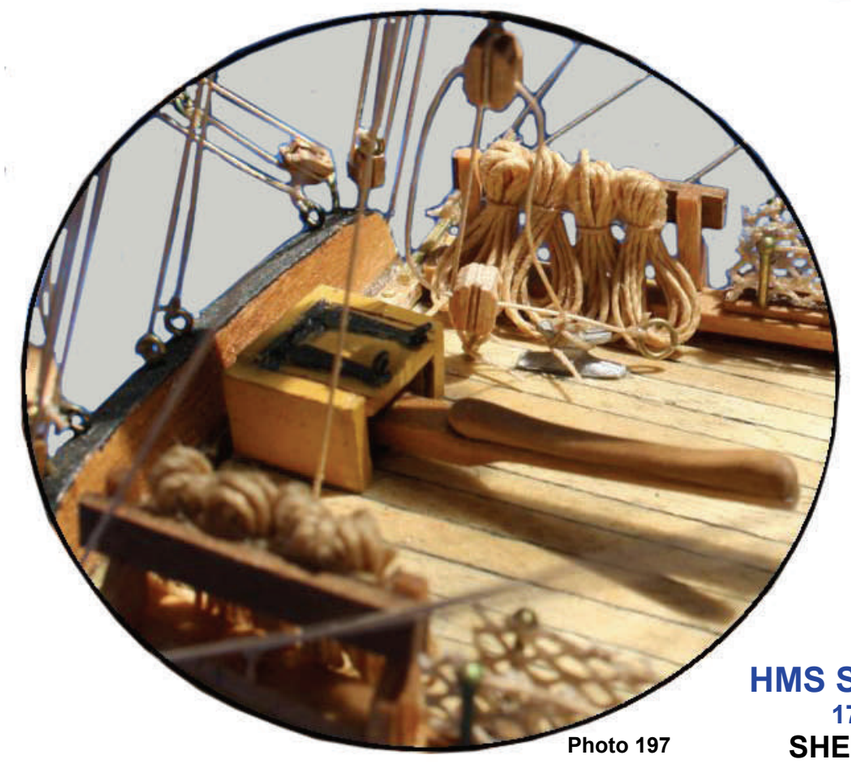


Photo 197

15.2.17 Completed Model
Look carefully over the instructions, photos & drawings and check to ensure that you have not forgotten anything.

Take great pride in your achievement of building a work of art to be handed-on to future generations.

You might consider a display case which will protect your model from dust and accidental damage.

Photo 198