

AUSTRALIAN COLONIAL SERIES WOODEN MODEL KIT

COLONIAL SCHOONER PORT JACKSON 1803

SCALE 1:50



**Modellers
Shipyard**

www.modelshipyard.com.au

LENGTH: 590mm HEIGHT: 450mm

ITEM CODE: KTMS1000



BUILDING INSTRUCTIONS

Version 3.0

1.0 Introduction

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

2.0 Historical Notes

The following is a condensation of a detailed article prepared by Karl Marquardt for the internationally renowned "Nautical Research Journal".

In September 1788, only 18 months after the founding of the new colony on the shores of Port Jackson—now better known as Sydney Harbour, Governor Arthur Phillip sent a message to his superiors in England "..... *The settlement on Norfolk Island and the extent of this harbour will render two vessels of thirty or forty tons of infinite service to this settlement. I presume they might be sent out in frame, but it will be necessary to send a few shipwrights to put them together, and who, as well as a mastmaker Will be of great service*"

Almost two years later, in August 1790, and having become more than slightly impatient in the meantime, Governor Phillip followed up his first request with the following: "*I have mentioned to the Navy Board the necessity of two schooners and a barge that would draw little water, for the purpose of sending provisions etc to Rose Hill "*

It should be remembered that the trip from Australia to England and back again took at least 12 months and more often 15 to 18 months, plus of course, the time needed to gather together the materials for the vessels to be sent out "in frame". Bearing this in mind, it appears that although the wheels of the English bureaucracy ground slowly they had nevertheless been set in motion before the arrival of Phillip's despatch of August 1790. To Australia came the message "..... *You will receive by the (ship Pitt) a vessel in frame, which when set up will, I have no doubt, be found extremely useful to you*" The *Pitt* sailed from England on 17 July 1791 with the first vessel "in frame" which when constructed was named "*Francis*".

Governor Phillip's reminded letter arrived in England at a bad time. War clouds were gathering in Europe and the use of scarce shipbuilding resources for a settlement on the other side of the world rated very poorly on the list of priorities, however, after considerable delay, drafts were prepared for "*A Schooner for Port Jackson*".

The original drafts are still in the National Maritime Museum, Greenwich, England and are the raw material on which our drawings and kit of the "*Colonial Schooner Port Jackson*" are based.

A note written on the original drafts states: "*A copy of this was sent to Chatham 22 January 1803 to be forwarded by the "Calcutta" bound for Port Jackson*". On arrival at Port Phillip in the southern part of the colony, Captain Woodriff of the "*Calcutta*" wrote to the then Governor, Phillip Gidley King, confirming his arrival in the colony and advising that " I have received a quantity of colonial stores, as also stores to His Majesty's ships "*Investigator*" and "*Porpoise*" and furniture for a schooner and sailing barge to be built at Port Jackson".

Confirmation of the arrival at Sydney Town of the plans and fittings for the Schooner is contained in Governor King's dispatch of 1 March 1804: "*..... I have received the plans of two vessels, also mast and other yards which Captain Woodriff informs me, together with the copper work is designed for those vessels; one of which will be begun as soon as possible after the "Calcutta's departure as that ship has taken away every carpenter we have to repair her defects*"

There are no records available to show whether in fact the schooner was actually constructed or if so what became of her. There is however a drawing in the Mitchell Library, Sydney, NSW showing a vessel very similar to our schooner on the stocks during construction at Sydney Cove. This model is in every way an accurate representation of an early Australian colonial schooner as constructed by the infant industry that emerged during the 15 years waiting for a complete response to Governor Arthur Phillip's original request. .

In 1995 a drawing of "*Mercury*", owned by Mary Reiby an early Sydney merchant appeared on the Australian \$20 polymer bank note. The "*Mercury*" is identical to the Colonial Schooner "*Port Jackson*".

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



1. It is **essential** the modeller study these instructions and associated 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 re-shape 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 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 Colonial Schooner Port Jackson*" is available from Modeller's Shipyard. In this DVD there is 4 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 *Port Jackson* from opening the box to putting the finishing touches of the rigging. **Note:** There are some features presented in the DVD that may not be in the kit. Also the DVD may not necessarily follow the building steps presented in the written instructions.

For further details on this DVD see our website www.modelerscentral.com

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



Part No	Description	Quantity	Material
1-9	Bulkhead frames	9	4mm Plywood
10	Keel	1	4mm Plywood
11	Deck	1	2mm Plywood
12	Bow blocks	2	2mm Plywood
13	Transom	1	2mm Plywood
14	Mahogany 0.6x5x400mm	60	Timber stock
15	Limewood 2x5x400mm	60	Timber stock
16	Stern Post	1	4mm Plywood
17	Stem Post	1	4mm Plywood
18	Keel - False	1	4mm Plywood
19	Silver ash 0.6x4x400mm	30	Timber stock
20	Beech - ordinary - 2x5x330mm	1	Timber stock
21A	Beech - flexible - 2x5x500mm	1	Timber stock
21B	Beech - flexible - 2x5x150mm	1	Timber stock
22	Hawser Bolsters	2	2mm Plywood
23	Mast Heels	2	2mm Plywood
24	Head Timber A	2	2mm Plywood
25	Head Timber B	2	2mm Plywood
26	Bowsprit Stock	1	4mm Plywood
27	Cat head post	2	4mm Plywood
28	Cat head arm	2	4mm Plywood
29	Cleat A	18	4mm Plywood
30	Bitt Heads	8	2mm Plywood
31	Windlass barrel	1	Parts Card 1
32	Windlass knightheads	2	4mm Plywood
33	Windlass retainer	2	2mm Plywood
34	Belaying rail	1	2mm Plywood
35	Belaying pins	22	Parts Card 1
36	Hatch base	1	4mm Plywood
37	Hinges	4	Parts Card 2
38	Eye Pins	Pkt	Parts Card 1
39	Rings	Pkt	Parts Card 1
40	Barrel Stands & Base	3	2mm Plywood
41	Barrel	1	Parts Card 1
42	Cargo hatch base	1	4mm Plywood
43	Limewood 2x6x330mm	1	Timber Stock
44	Limewood 2x2x330mm	1	Timber Stock
45	Walnut 0.6x15x400mm	1	Timber Stock
46	Pump	1	Parts Card 1

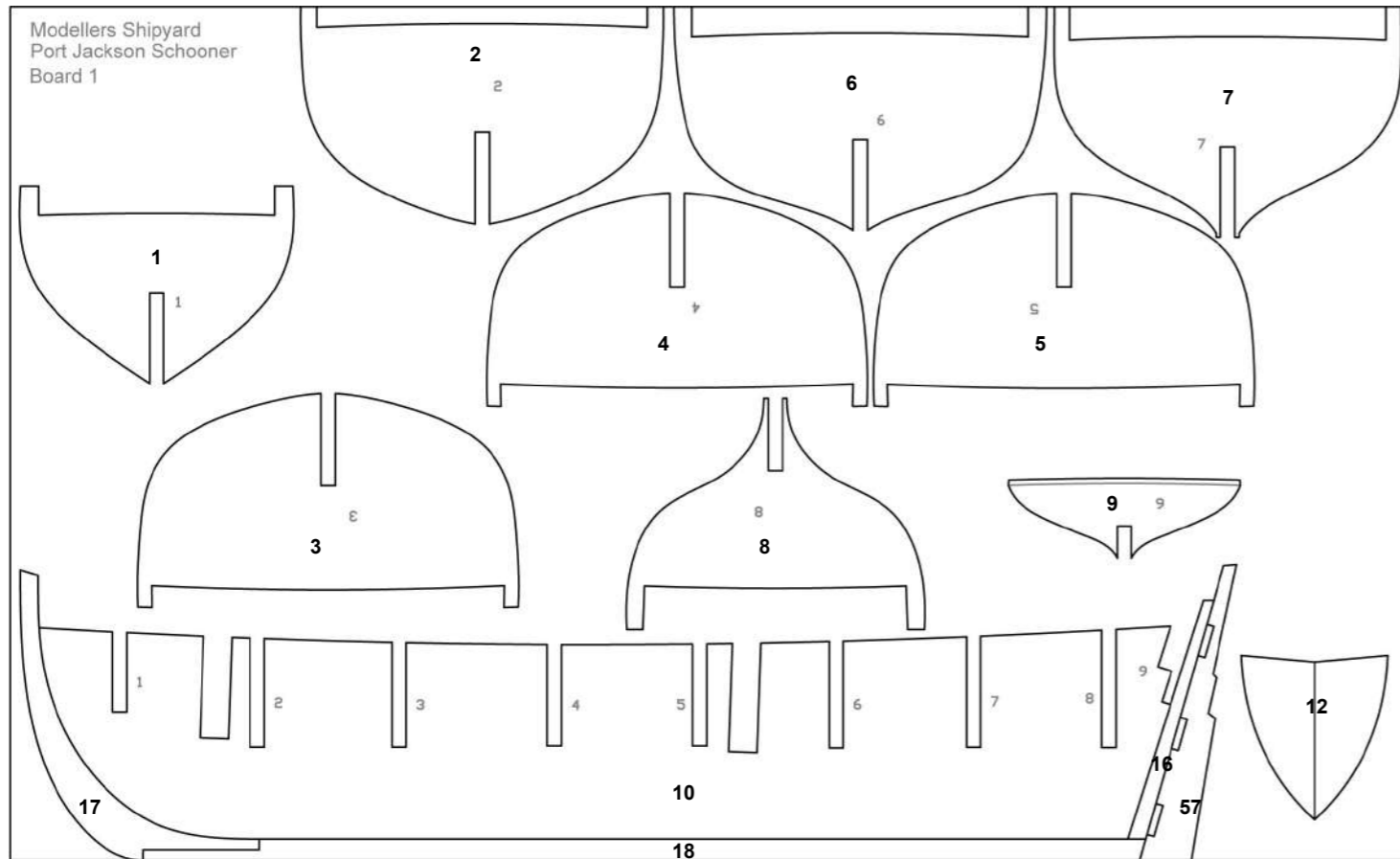
Part No	Description	Quantity	Material
47	Capstan base	1	4mm Plywood
48	Capstan	1	Parts Card 1
49A-B	Companionway Base & Key	6	4mm Plywood
50	Companionway Door Frame	1	2mm Plywood
51	Companionway Roof Frame	1	2mm Plywood
52	Nails - brass	Pkt	Parts Card 1
53	Boom supports	2	2mm Plywood
54	Rail stanchions	6	2mm Plywood
55	Beech - flexible - 2x4x330mm	1	Timber Stock
56	Wire - brass 1x130mm	1	Parts Card 1
57	Rudder	1	4mm Plywood
58	Rudder tiller	1	2mm plywood
59	Rudder hinges	3	Parts Card 2
60	Channels - foremast	2	2mm Plywood
61	Channels - main mast	2	2mm Plywood
62	Anchors	2	Parts Card 1
63	Cord L - Anchor rope -2mm	1	Parts Card 3
64	Cord G - Fawn - 0.25mm	1	Parts Card 3
65	Block B - 5mm 2 hole	15	Parts Card 2
66	Cord H - Fawn - 0.5mm	1	Parts Card 3
67	Hawse Covers	2	4mm Plywood
68	Hawse Covers - Back	2	2mm Plywood
69	Dowel 8mm x 330mm	2	Timber Stock
70	Dowel 4mm x 330mm	2	Timber Stock
71	Mast cheeks	4	2mm Plywood
72	Mast caps	2	4mm Plywood
73	Trestle-trees	4	2mm Plywood
74	Cross-trees	6	2mm Plywood
75	Bolsters	4	2mm Plywood
76	Block C - 5mm 1 hole	28	Parts Card 2
77	Cleat B	12	2mm Plywood
78	Boom rest	1	2mm Plywood
79	Boom rest supports	3	2mm Plywood
80	Block A - 4mm 1 hole	7	Parts Card 2
81	Block E - 7mm 1 hole	9	Parts Card 2
82	Dowel 3mm x 500mm	1	Timber Stock
83	Dowel 5mm x 250mm	1	Timber Stock
84	Dowel 6mm x 160mm	1	Timber Stock
85	Yoke - main mast gaff	1	2mm Plywood

Part No	Description	Quantity	Material
86	Yoke - foremast gaff	1	2mm Plywood
87	Yoke - boom	1	2mm Plywood
88	Bowsprit cap	1	4mm Plywood
89	Traveller	1	2mm Plywood
90	Copper strap 0.5x4x40mm	1	Parts Card 1
91	Wire - brass - 0.5mm x 700mm	1	Parts Card 1
92	Deadeyes - 5mm	18	Parts Card 2
93	Block F - Violin	4	Parts Card 2
94	Cord J - Fawn 0.75mm	1	Parts Card 3
95	Cord K - Black 1mm	1	Parts Card 3
96	Deadeyes 3mm	18	Parts Card 2
97	Deadeye heart	2	Parts Card 2
98	Parrel beads	Pkt	Parts Card 2
99	Flag - Red Ensign	1	Parts Card 2
100	Limewood 1x2x200mm	1	Timber Stock
101	Block D - 7mm 2 hole	2	Parts Card 2
102A-D	Cradle	4	4mm Plywood

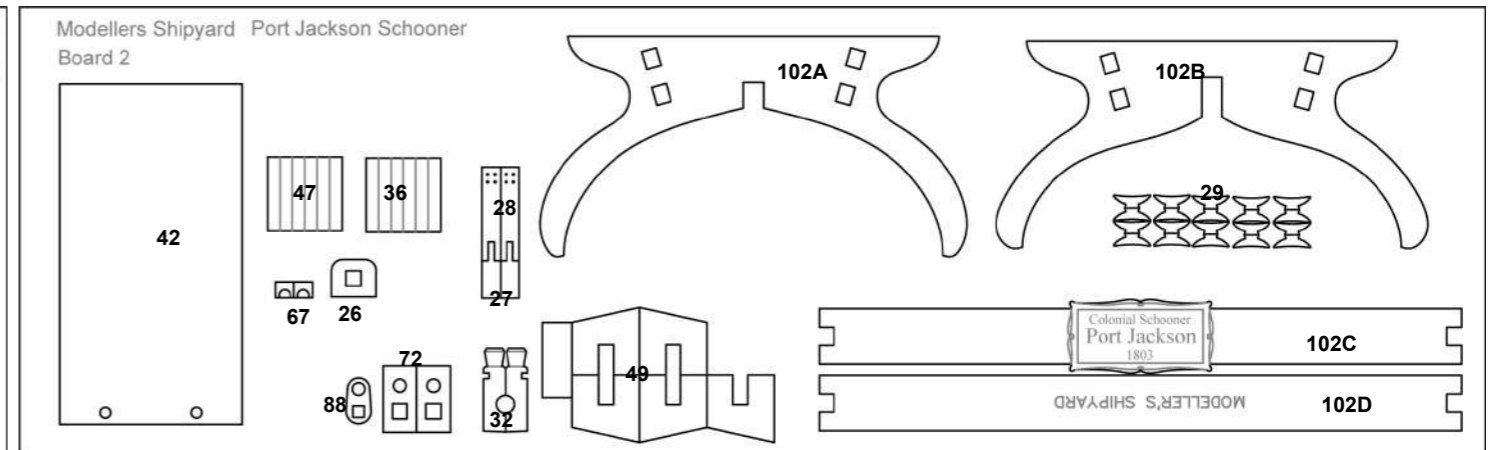
5.0 Laser Cut Boards

Identify the numbers parts on the drawings below and pencil the number on to the laser cut parts.

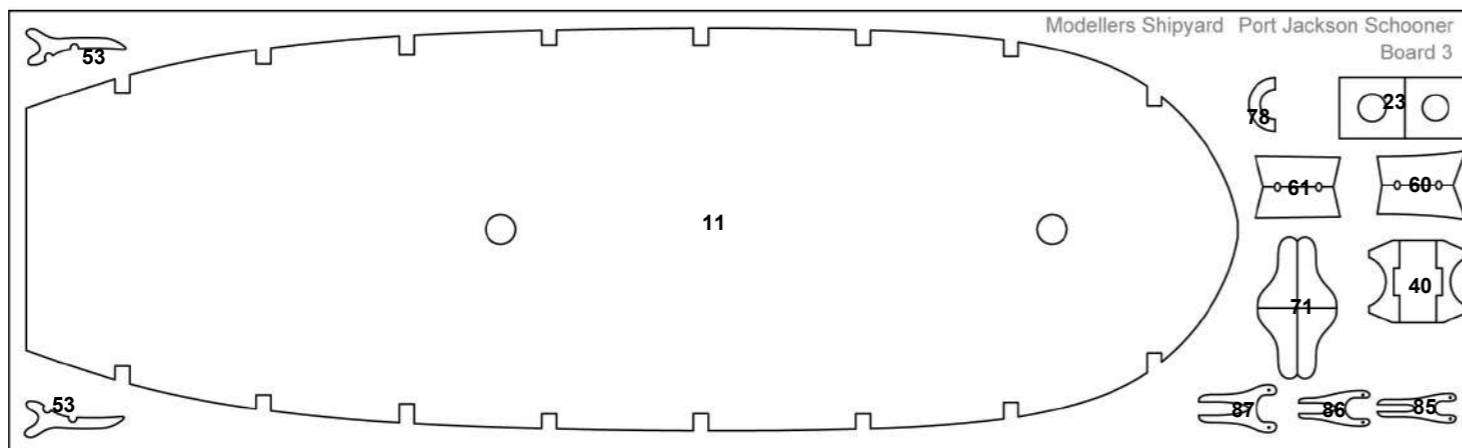
Board 1 - 4mm Plywood



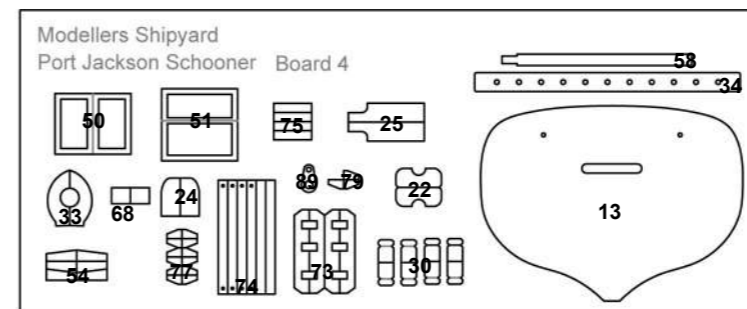
Board 2 - 4mm Plywood



Board 3 - 2mm Plywood



Board 4 - 2mm Plywood

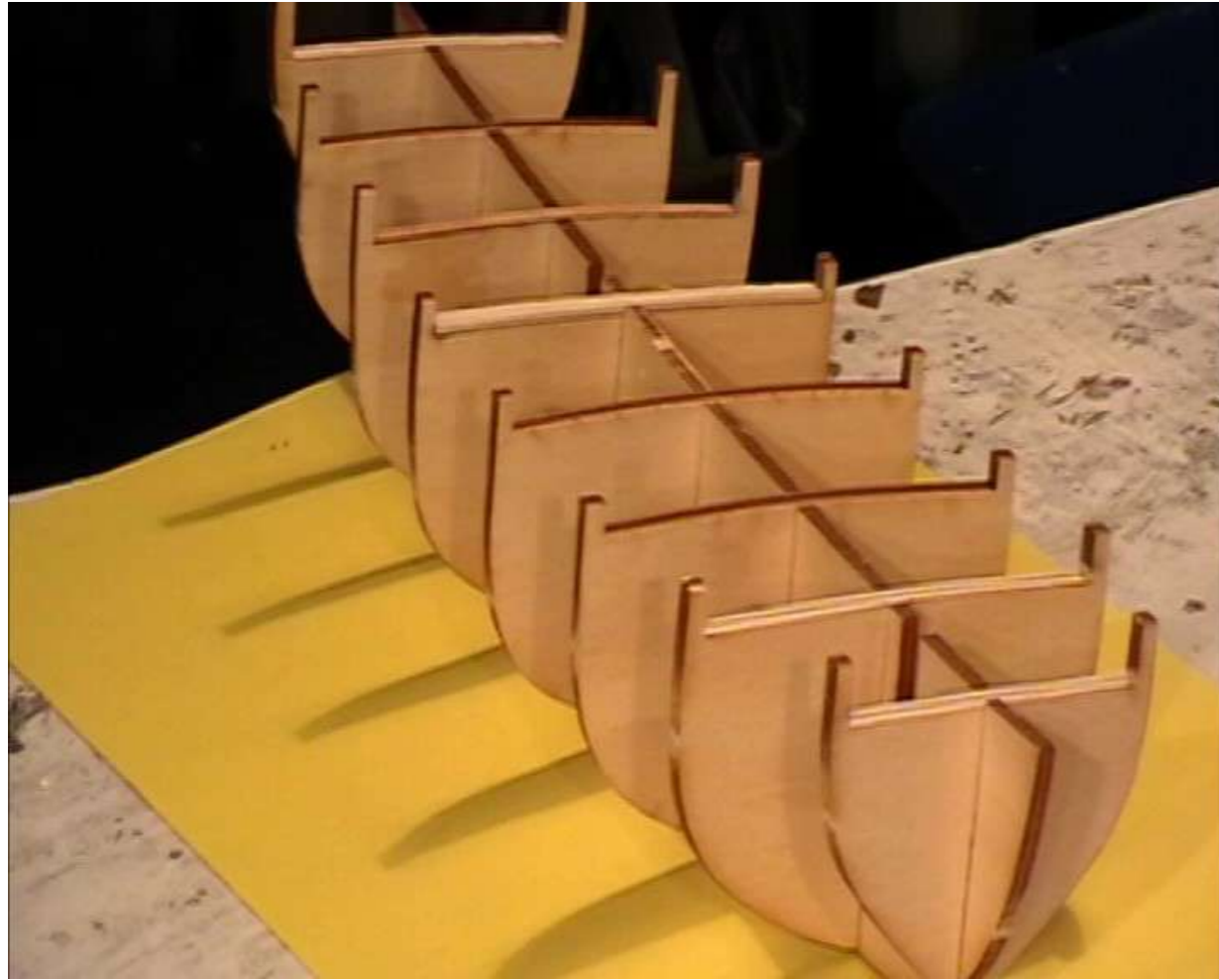


6.0 Hull Construction

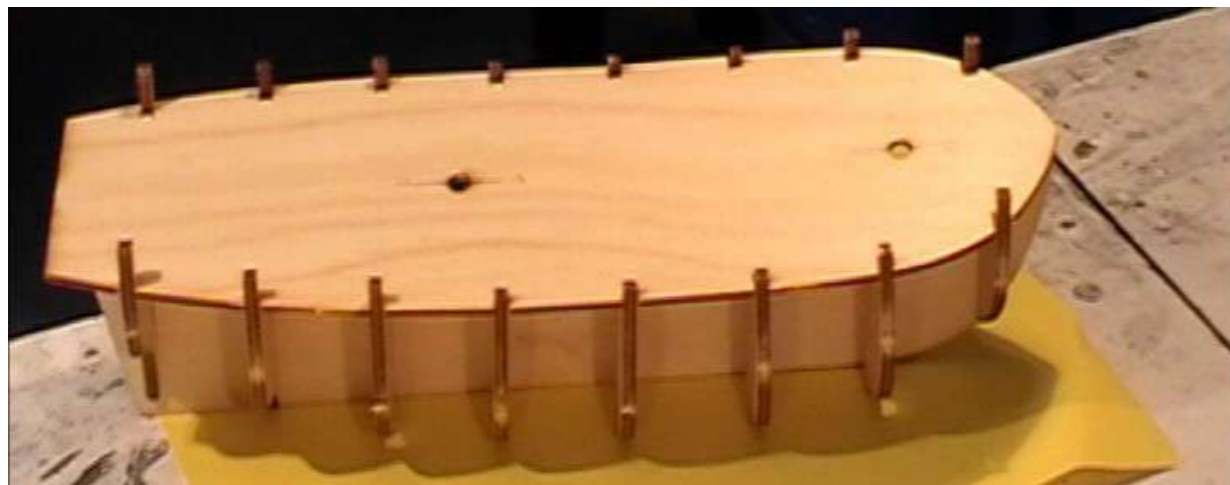
On the laser cut sheets in your kit use a pencil to mark the relevant numbers on each piece before removing them from the plywood sheet.

6.1.1 Keel and Bulkheads

Identify the keel P10 and the bulkhead frames P1 to P9. Dry fit the bulkhead frames P1 to P8 to the keel - P9 forms the base for the transom P13 and will be fitted later. Starting at the bow (front) of the keel insert part 1, 2, 3, 4 etc in the slots of the keel. Some adjustment to slot width and length may be necessary. Use a needle file to achieve this. These parts should fit firmly. Do not force the parts into place. Ensure the tops of the frames are level with the top of the keel (deck level). **Do not glue the bulkhead frames to the keel yet.**



Once satisfied with the fit of the bulkhead frames and keel identify the deck P11. Dry fit the deck as shown - use a small flat file to adjust the deck slots ensure it is a good fit. Any oversize of slots in the deck will later be covered by deck planks so do not be overly concerned with a perfect fit. Once you are satisfied with the fit of the deck remove the deck for fitting and gluing later.

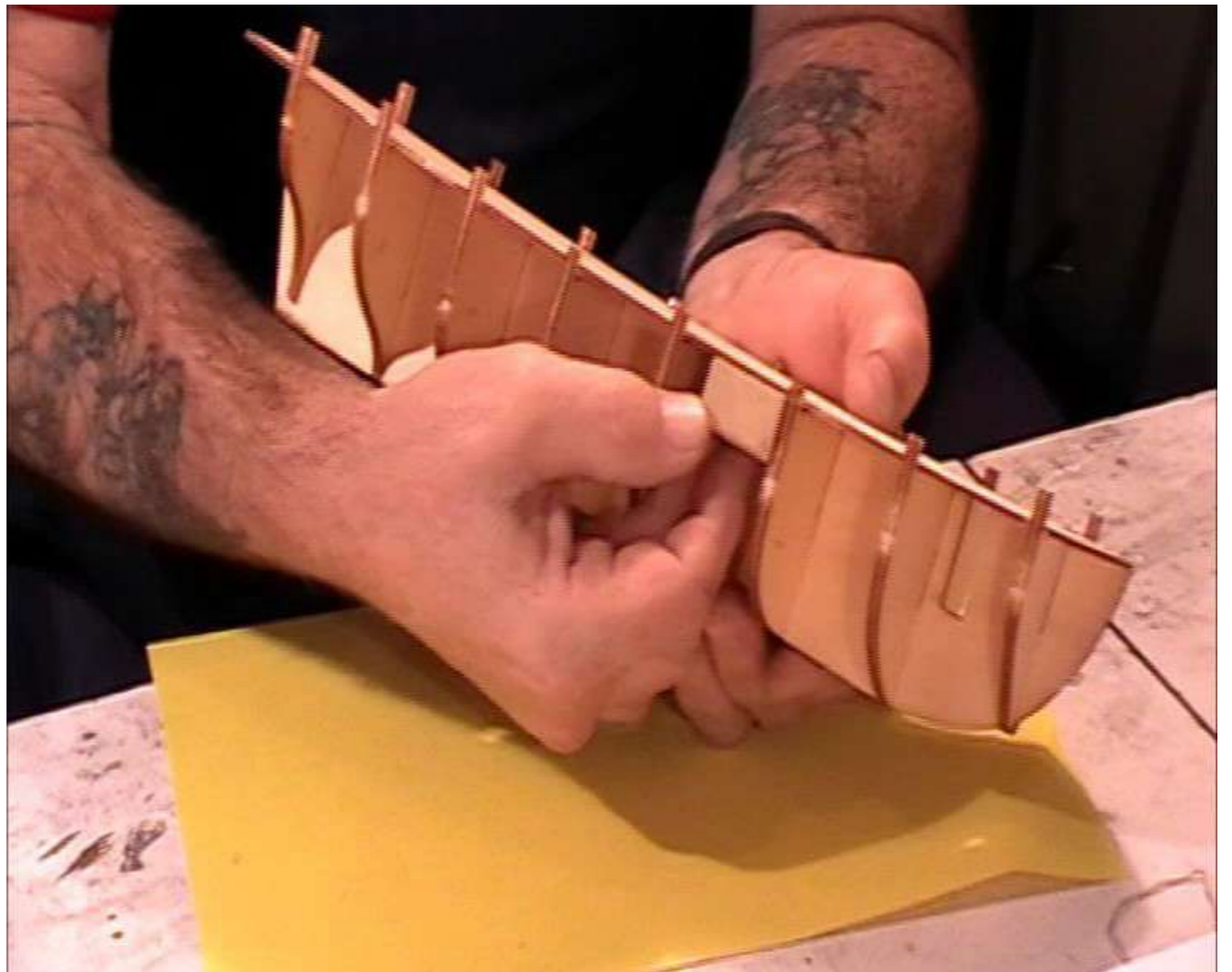


6.1.2 Square the Frames to the Keel

Once you are satisfied with the fit of the keel and frames remove the bulkhead frames from the keel. Next apply PVA wood glue to the contact points between each frame and the keel. Fit each bulkhead frame in place starting with bulkhead 1. Use a cotton bud to remove any excess glue. It is important to make sure the frames are square to the keel. Using a known square piece of timber place it along the keel against a frame. Adjust the frame to ensure it is square to the keel.

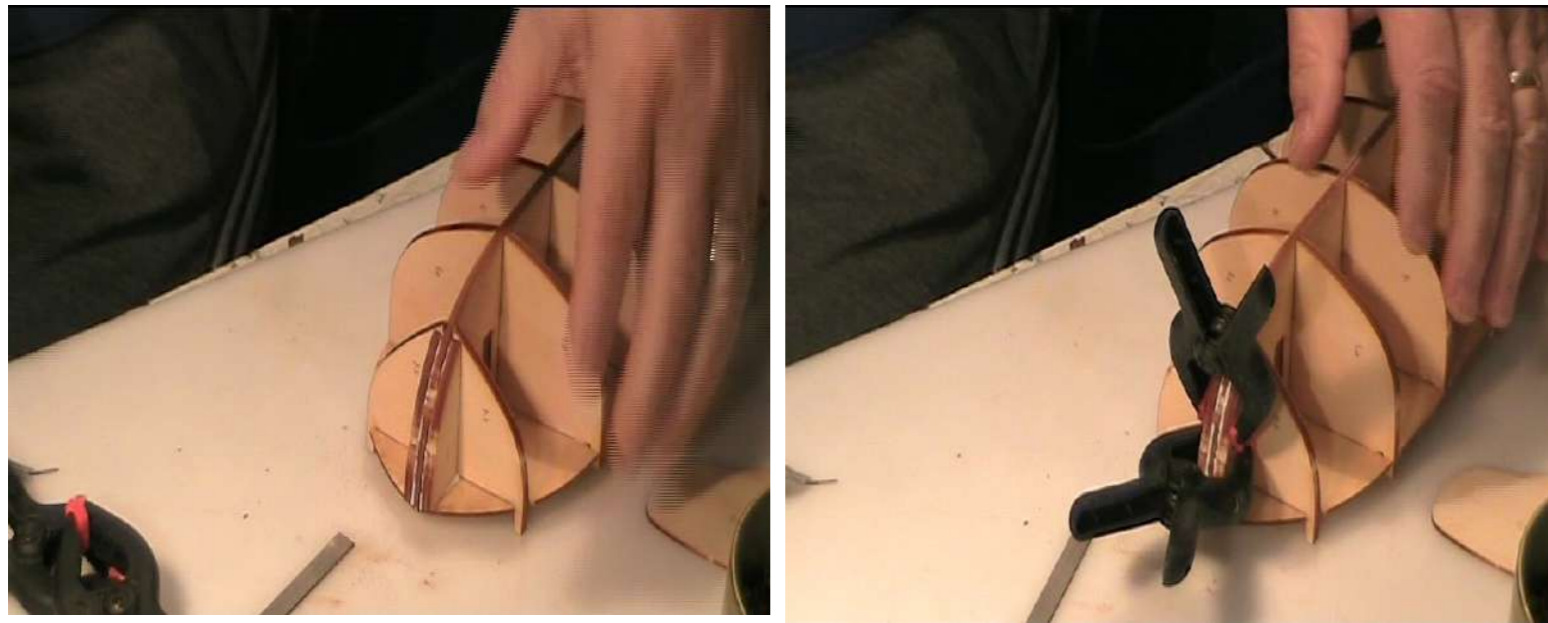
Before the glue is dry re-insert the deck P11 **without gluing**. This will help hold all the frames square until they are dry.

Place the keel and frame construction aside and allow 24 hours for the glue to set.

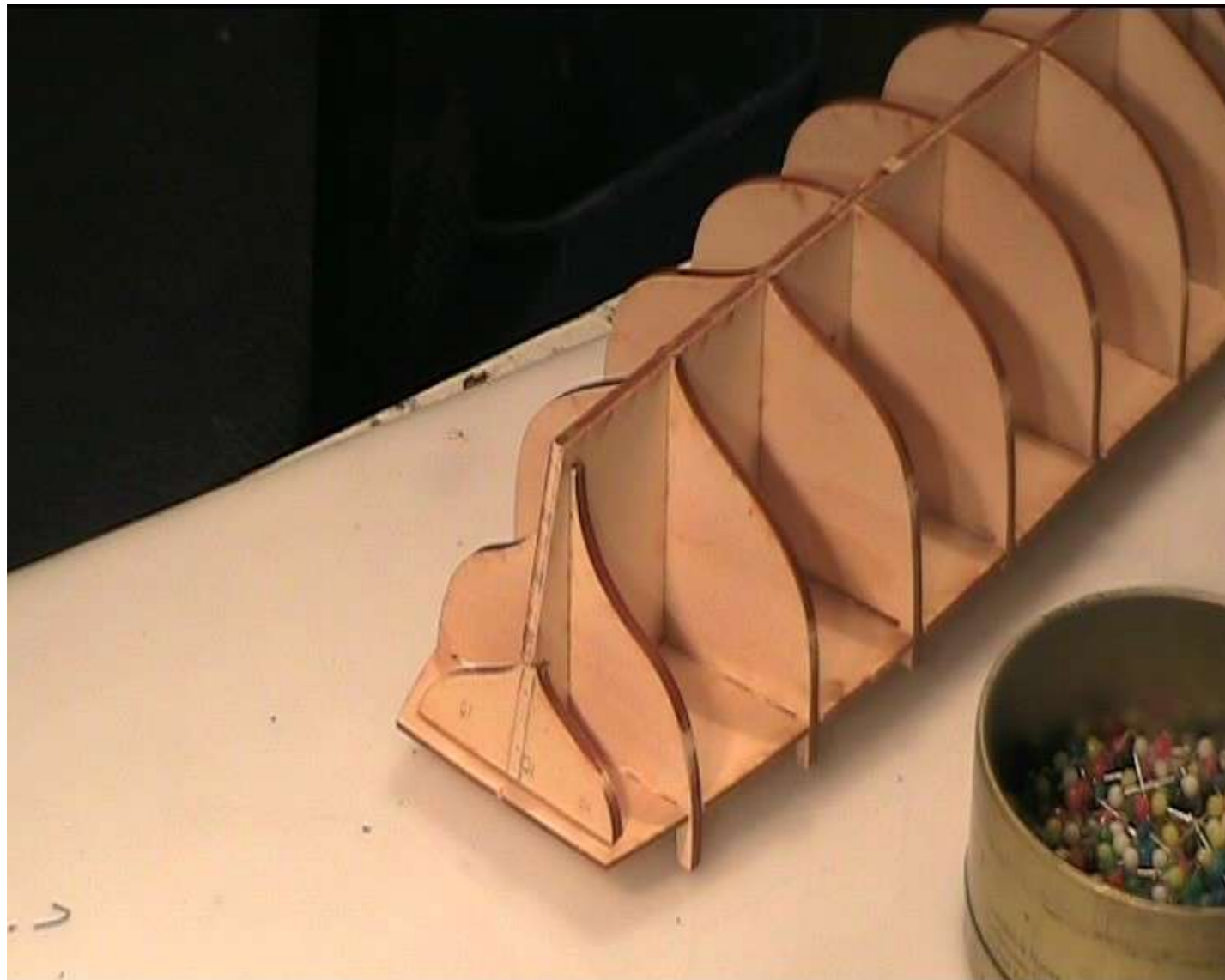


6.1.3 Fit the Bow Blocks

The bow blocks are P12. They provide an area for gluing the planks at the bow. Glue a bow block to each side of the keel as shown. Allow 24 hours for the glue to dry.



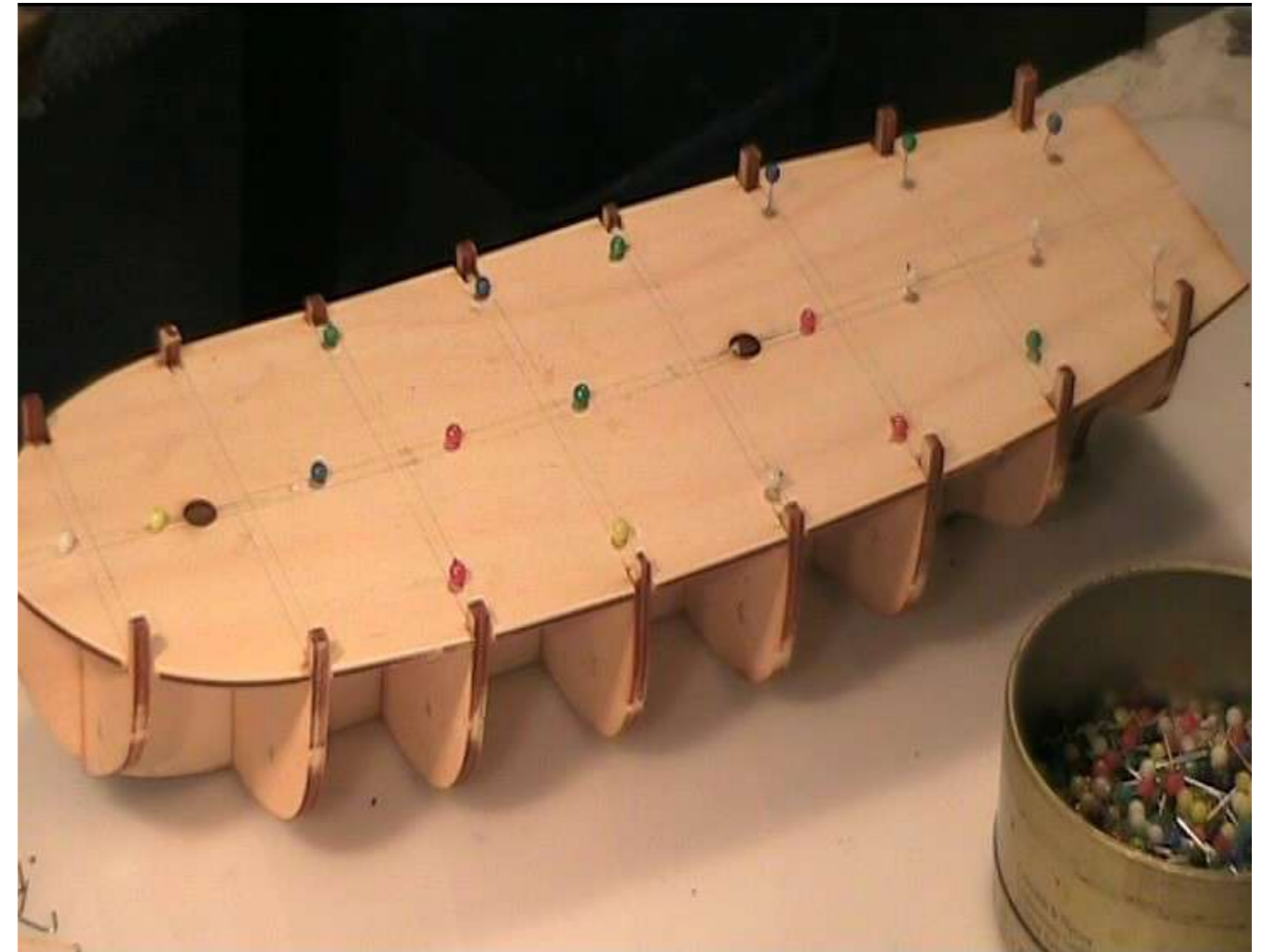
Next fit and glue in place P9. Some adjustment of the top edge may be necessary to allow the part to fit flush with the deck.



6.1.4 Fit False Deck

Remove the deck P11 from the glued hull and apply glue to the top edge of the keel and frames. Replace the deck and pin carefully along the centreline and into the tops of the frames commencing with the central frame P5 and working in both directions. Make sure that the deck assumes the correct curvature in both directions ie sheer and camber.

There may be surplus deck projecting beyond frame 9. Cut it off level with the back of the frame as shown.

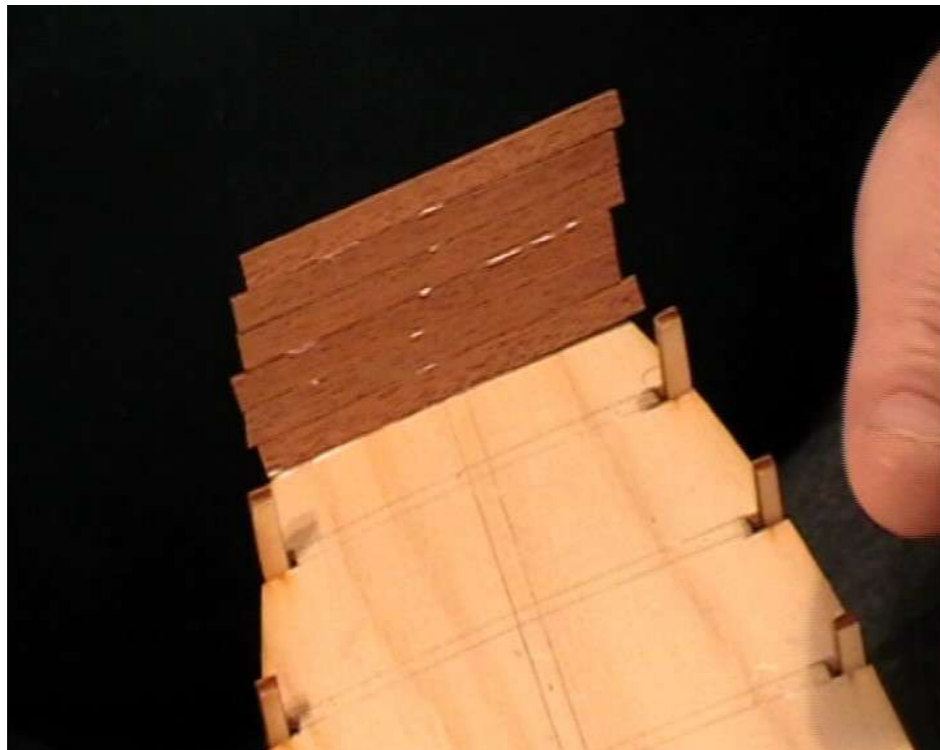


6.1.5 Transom

Identify the transom P13. Fit and glue it in place against P9 as shown.



The next step is to plank the inboard side of the transom using 0.6x5mm mahogany planks P14 as shown. The outside planking of the transom is completed at a later stage.

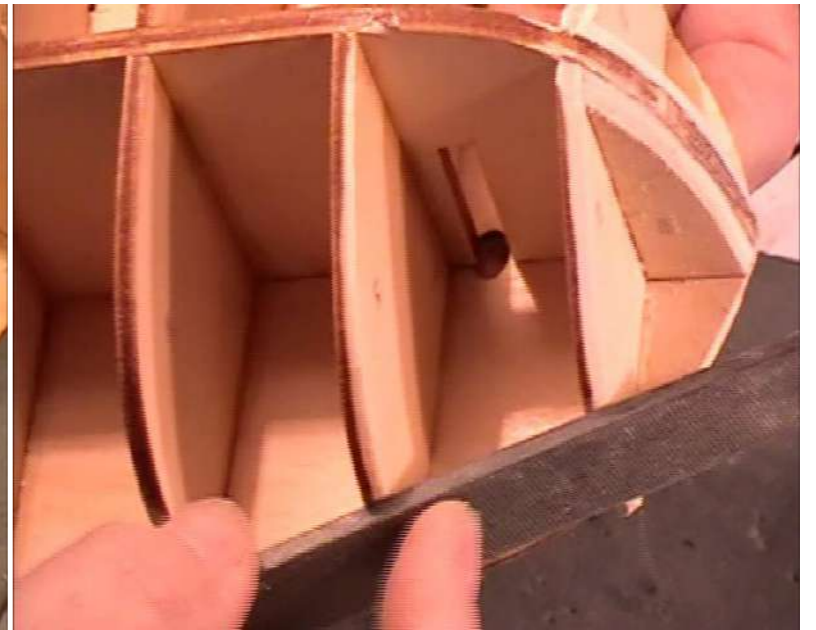
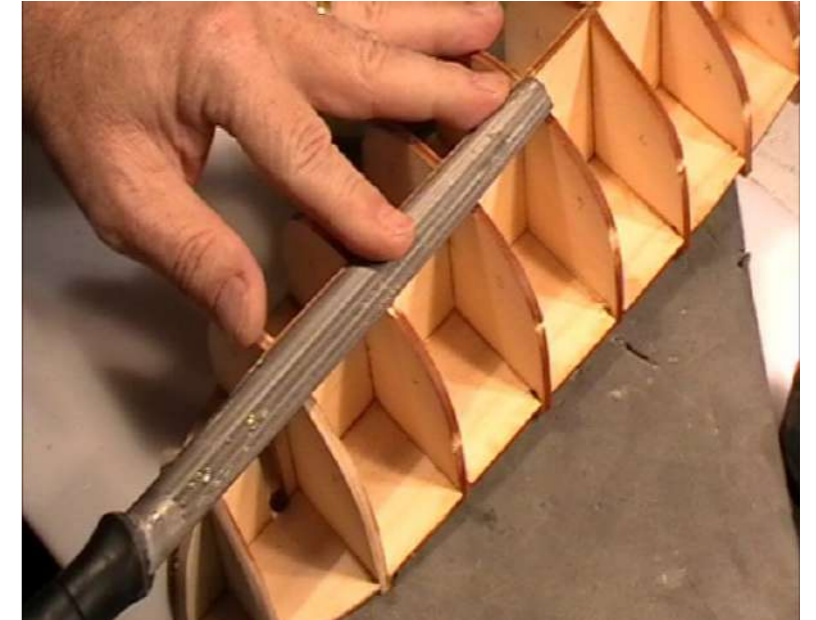


6.1.6 Fairing the Frames

“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 frames. Use a file to move across the edges of two frames at a time. Once two frames are complete move to the next one. Always make sure you are filing across two frames. Regularly check by laying a plank across the frames. Move to the bow applying the same approach as above. Move to the stern and transom applying the same approach as above. Move to the top of the frames and repeat the process. Check across all frames along the complete length of each. Move the plank across all frames to ensure a good fit.



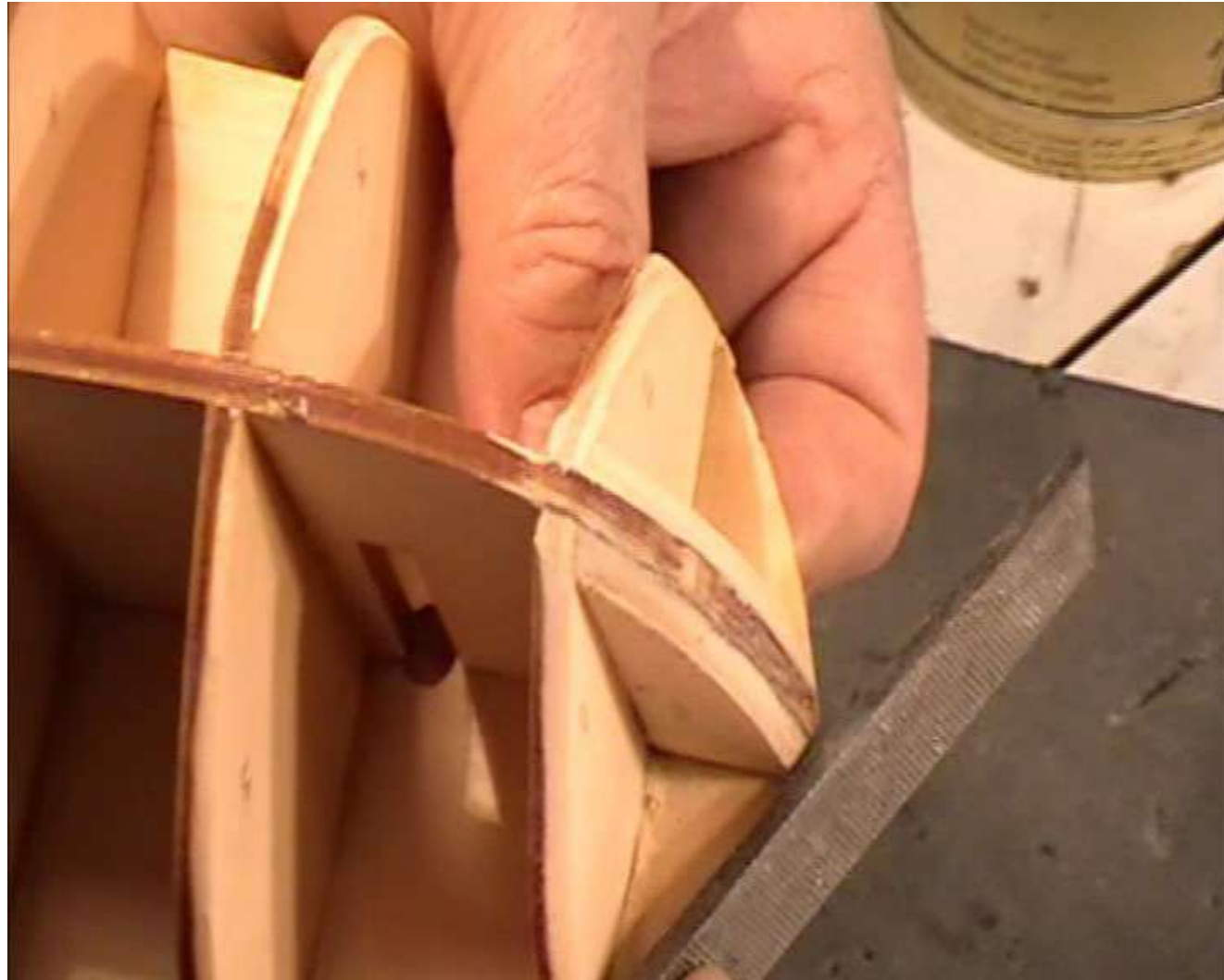
Fairing the Frames continued

Take your time and resist the temptation to start planking before the frames are satisfactorily "faired".

Using a rasp file or sandpaper and a block, or a combination of all of these, to bevel the edges of the frames.

At the bow fair the bow blocks as shown - make sure to leave the keel in this area untouched as a flat surface. You will need to glue the stem post P17 in position later.

Remove any excess deck protruding beyond the frames. Also trim any excess planking from the transom P13.



6.1.7 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 two layers of planking consistent with the rest of the hull.

The stern post and rudder however will only be planked with the second layer of planking. 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 planked with 0.6x5mm mahogany P14. However the keel will be planked with the first layer of planking—2mm thick (on each side) and then planked with the second layer of planking. 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 this 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 second layer of planking is fitted there will be the same thickness between the keel, stern post and rudder.

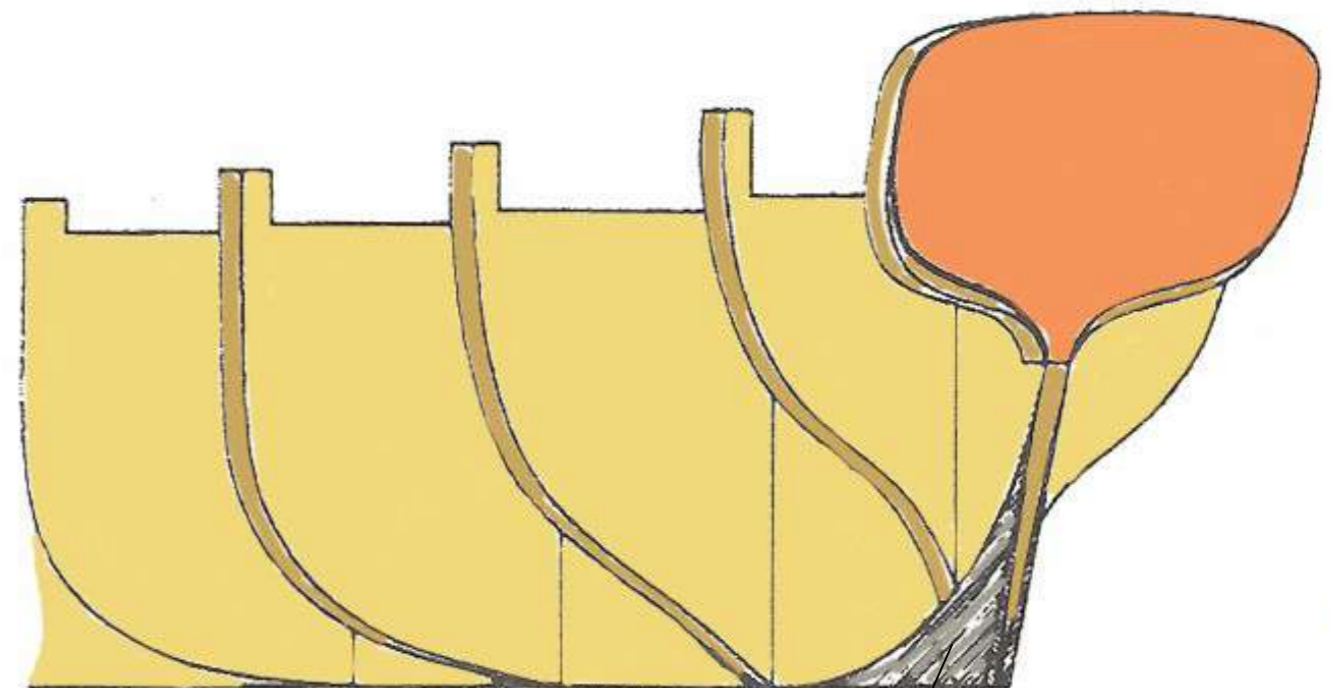


Figure 1

Deadwood Area

6.2 Hull Planking—First Layer

This model is “double planked” - the first layer is limewood 2x5x400mm P15. Identify this timber. The advantages of double planking are twofold:

- You have the opportunity to practice your hull planking technique on the first layer knowing any mistakes will be covered later.
- Any “hills” can be sanded and “hollows” can be filled with a wood filler before the second layer is applied.

Hull planking can be a daunting task. It 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 as this will minimise the chance of the keel being distorted or bent.
- It should be noted that the hull planking of a model starts at or near the deck level.

If you spend a few minutes with a dressmakers tape measure you will see why it is necessary to taper the planks to a narrower width at either one or both ends of the plank. When you measure the distance from the top of the frames to the bottom of the keel, around the outside of one of the midship frames and then compare that measurement with the distance from the top of the frames to the bottom of the keel on a forward frame such as say 1 or 2, there will be an obvious difference.

In purely theoretical terms, if the measurement at frame No 1 is (say) 80mm and at frame No 4 it is (say) 120mm then each plank needs to be narrowed down to 2/3 (80/120) of its full width at frame No 2. By doing this all planks will arrive at the keel together.

We always assume that the “midship” frames are the largest distance and it is at this part of the model the planks are at their full width. The midship frames on the Port Jackson are frames 4 & 5. From your measurements it will be clear that the planks will need to be tapered at the bow across frames 1, 2 & 3.

When making your measurements of the rear frames 7 & 8, include the “deadwood” which is the distance from the bottom of the frame where it fits into the keel to the bottom of the keel. Across these frames you will find the measurement from the first plank to the bottom of the keel will be greater across say frames 7 & 8 than it is at “midships”. Where this occurs we will be inserting short triangular planks known as “stealers” or “wedges” to cover the extra distance This will be shown later.

To bend the planks it is recommended a hand held plank bender is used. The tool is something like a pair of pliers. To use the tool:

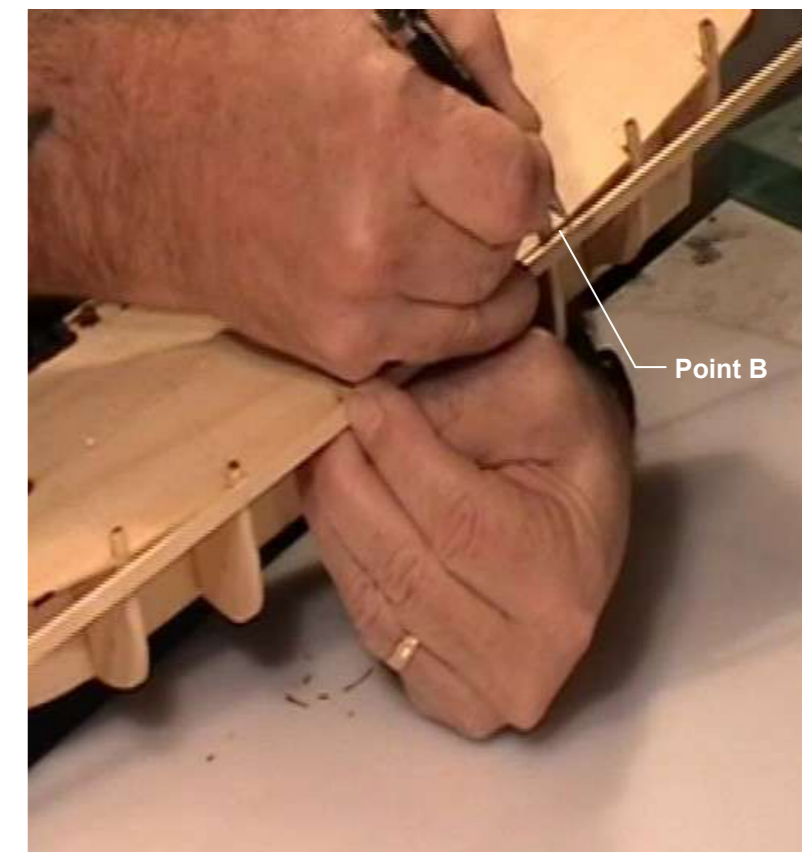
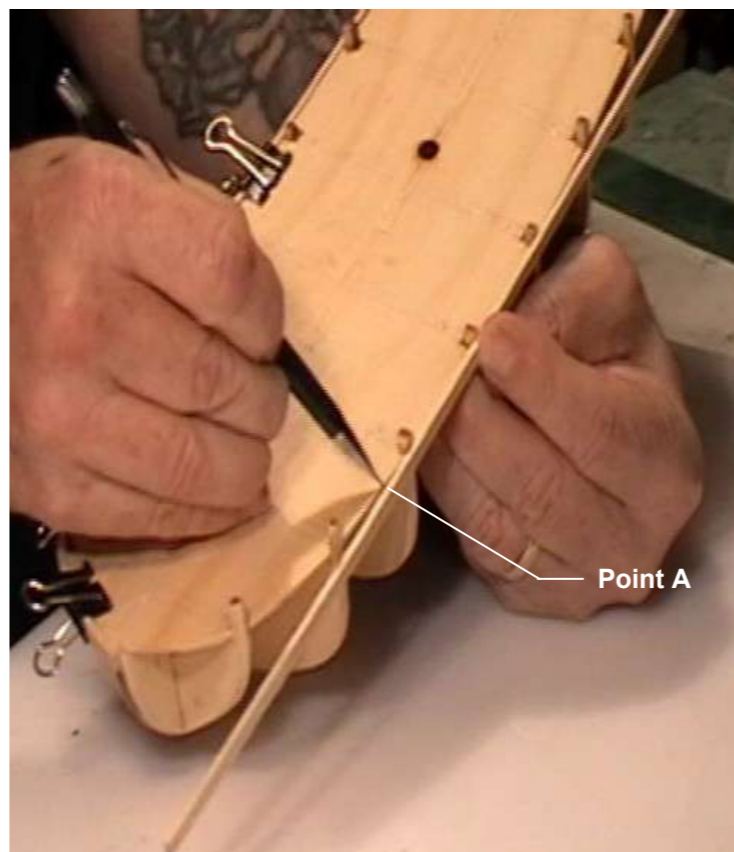
- The blade does not need to be sharp
- Squeeze the wood gently with the tool and at the same time twist your wrist slightly
- Repeat the above step after moving the tool about 5-10mm along the plank—then keep repeating.
- Practice on a piece of scrap planking to find the best combination of pressure and twist.

Use either map pins to hold the planks in position while the glue sets or planking screws available from Modellers Shipyard.

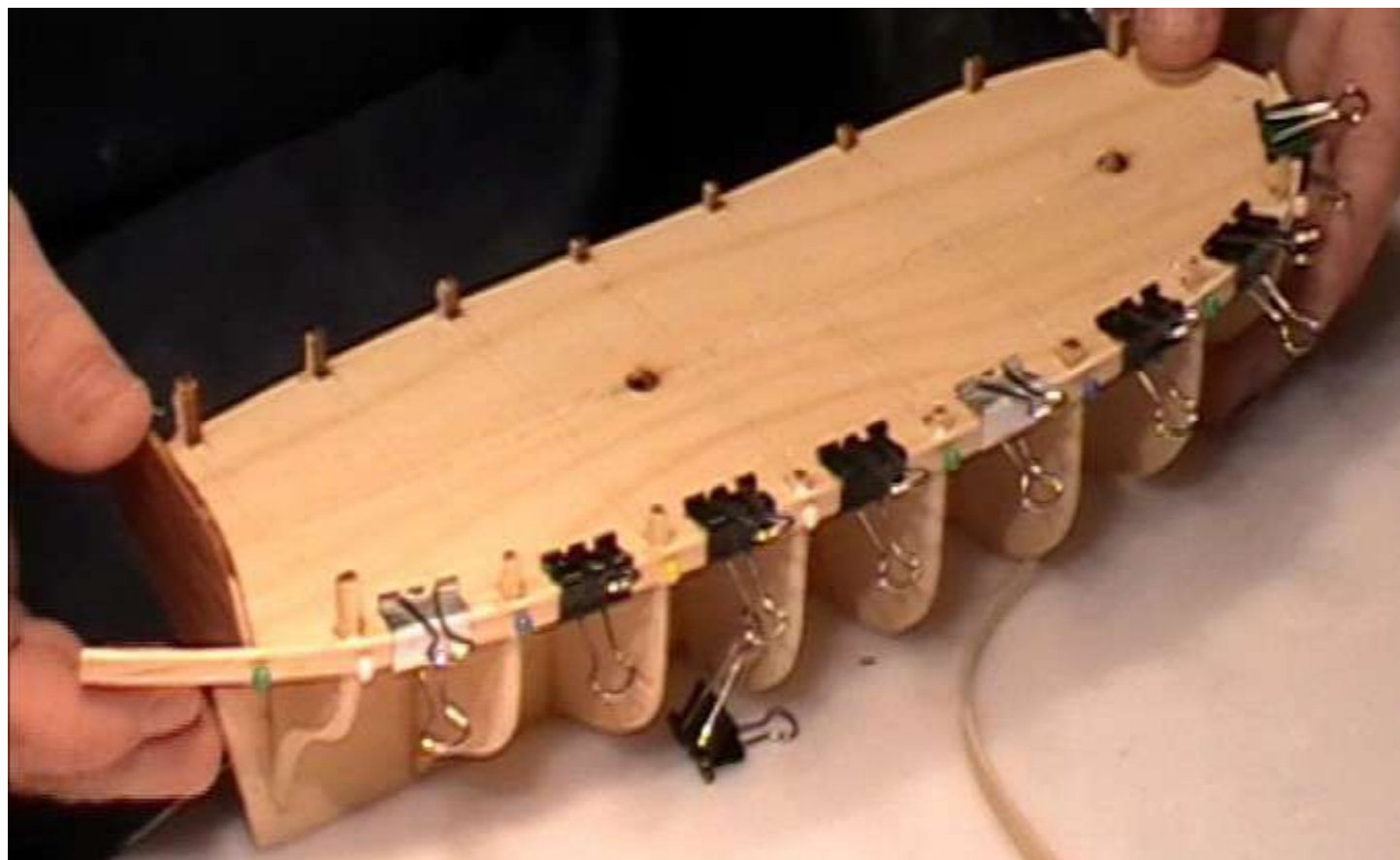
6.2.1 Starting the First Layer of Planking

The first pair of planks start at the bow and **follows the line of the deck** with the top edge of each plank level with the top of the deck. These two planks are not tapered. Using one of the 2x5mm limewood planks lay it across the bulkhead frames level with the deck line and gently spring it at the curve of the bow. Note where it starts to bend. With a pencil mark this as Point A on the plank as shown.

Using this same plank spring it gently around the curve of the stern. Note where it starts to bend. With a pencil mark this as Point B on the plank. Using a hand held plank bender gently crimp the plank from Point A towards the front of the plank and from Point B towards the rear. Trial fit this plank to the hull along the line of the deck. Fractionally adjust the plank curve until you are satisfied.



Fit this first plank along the line of the deck starting at the bow and work towards the stern. Apply PVA glue to bulkhead frames where this plank will fit then use planking screws or pins to hold the plank in place while the glue sets. Repeat this process for the other side of the hull. The surplus length of plank can be cut off later. No tapering is required to this pair of planks.



6.2.2 Completing the first layer of planking

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

The distance from the bottom of Plank 1 to the keel at the mid-ship bulkhead frames (4 & 5) is 82mm. The plank width is 5mm. Therefore there will need to be $82/5 = 16.4$ planks to be fitted to cover each side of the hull. We will approximate this figure to 16 planks as there will always be a small amount to creep in plank width as you progress down the hull.

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

Bulkhead Frame	1	2	3	4	5	6	7	8	9
Measurement mm				82	82				
Plank Width mm				5	5				

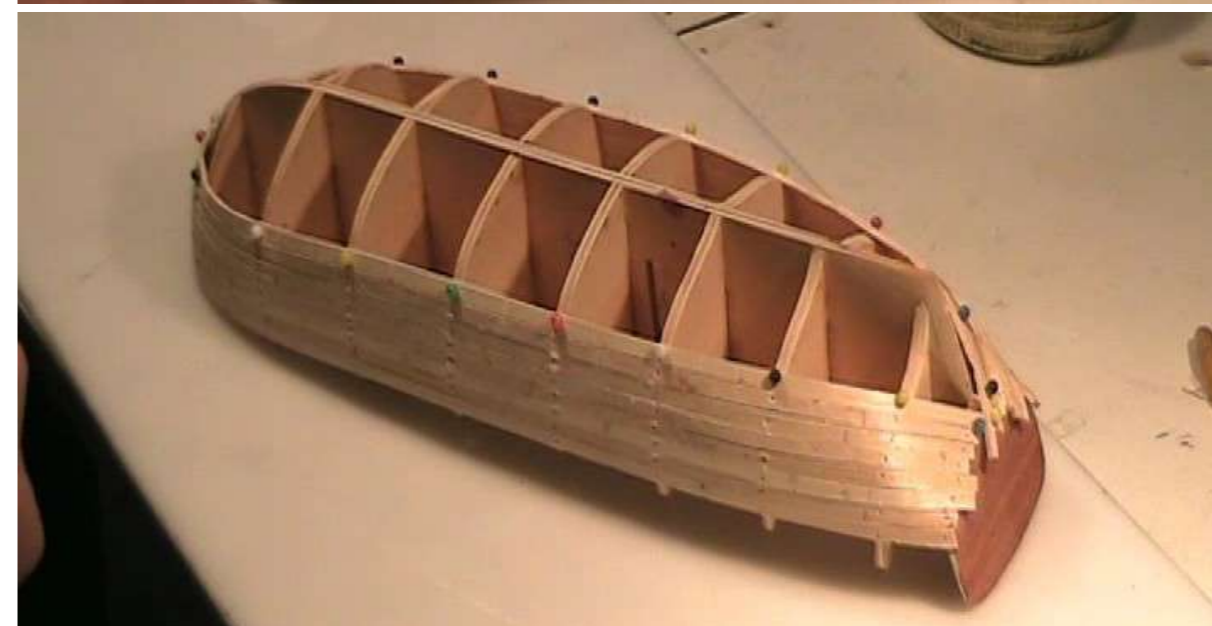
Table 1

From your measurements you will find that approximately 1.6mm will need to be tapered off the bow end of the planks and approximately 0.7mm at the stern. You will find the planks will need to be tapered from bulkhead frame 3 at the bow end.

At the stern the planks will need to be tapered from bulkhead frame 6. Clearly mark each of these points on your planks—always prepare 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 point sitting flush with the jaws as shown. Use a mini plane and/or file to remove the unwanted timber. Use this approach for all the planks to be prepared.

Taper, fit & glue the planks to the hull in pairs. Fit each plank under the previously placed plank. Glue and pin in position as shown. Continue this process fitting 10 planks on each side of the hull then stop.

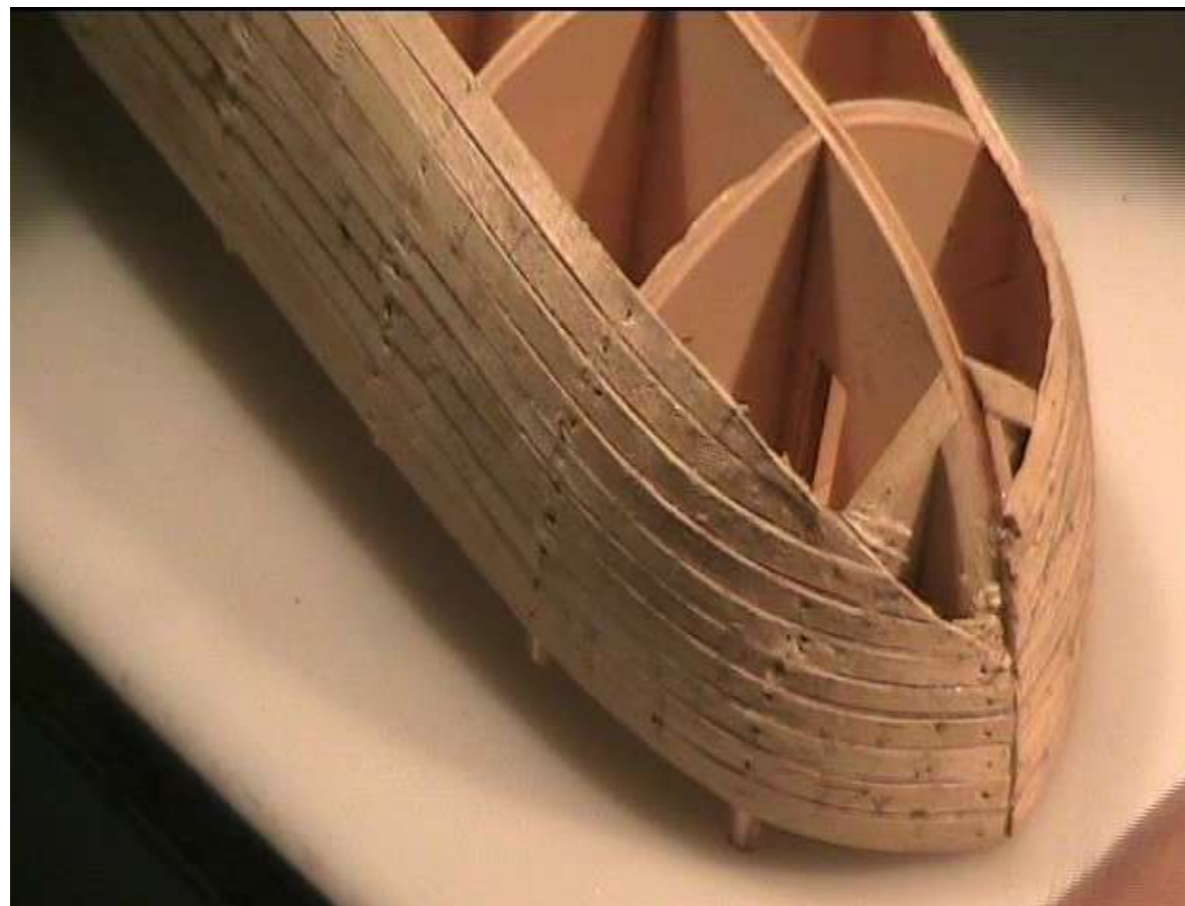
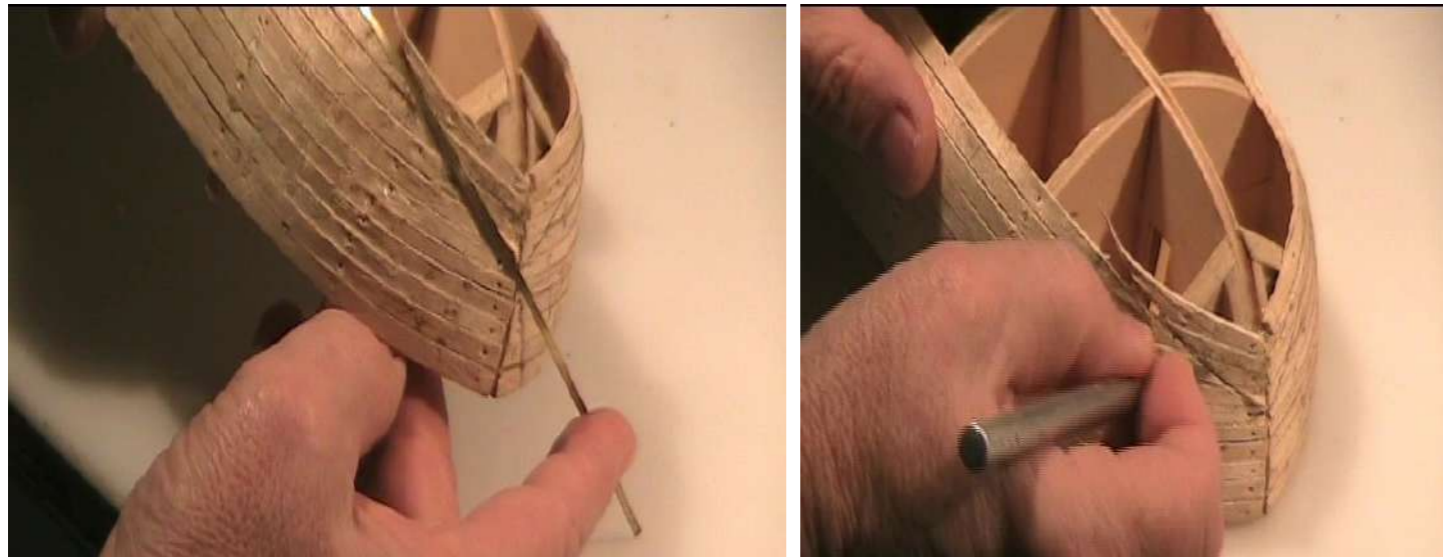


The next point is most important:

As you progress with you planking down the hull you will arrive at a point where the plank does not want to lay flat across the bulkhead frames at the bow. Forcing the plank into position will cause it to twist and a gap will appear between the plank and the bow block.

At this point you will have to **change the direction of the plank** to ensure it sits flat across the bulkhead frame. Follow the steps below to achieve this change in plank direction.

1. Lay a plank/brass strap along the length of the hull against the previously placed plank. At the bow you will see the plank wants to take a different direction—allow the plank/strap to follow its natural course and lay over the previously placed plank. Hold the plank/strap in position and use a pencil to mark the line of plank/strap overlap.
2. Use a sharp blade to fractionally remove the marked area of the **previously** placed plank as shown.
3. Fit and glue in position the new plank along its new direction as shown.



You will also need to follow this process at the stern as shown



Repeat the process of measuring from the underside of the last plank fitted to the keel and record in Table 2 below. Perform your calculations based on the planks being 5mm wide across the mid-ship bulkhead frames.

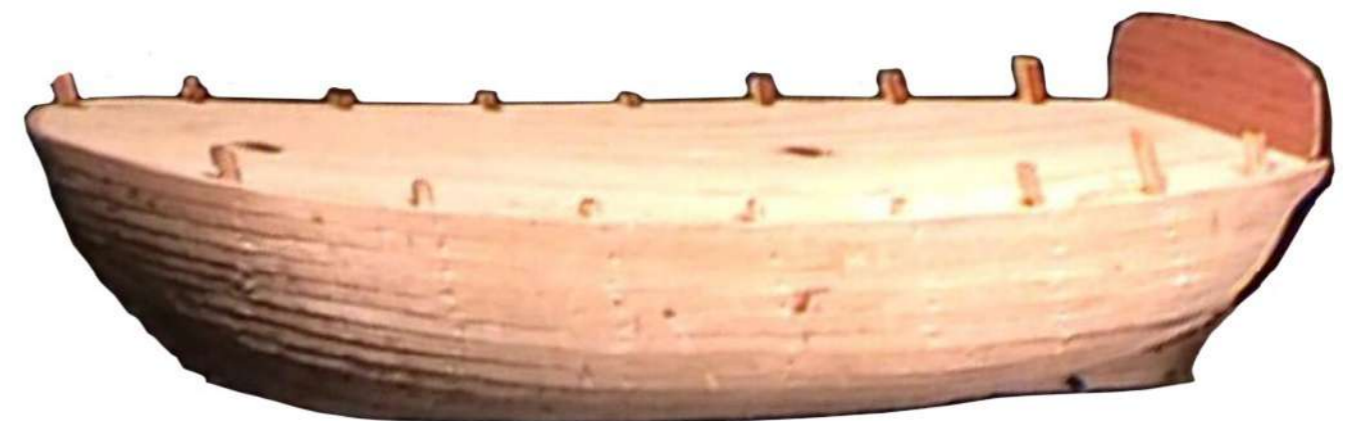
Bulkhead Frame	1	2	3	4	5	6	7	8	9
Measurement mm									
Plank Width mm				5	5				

Table 2

Continue planking the hull allowing the planks to follow their natural course. Do not force them into a position. 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. Fix and glue each plank in place.

Continue planking until the hull is completely closed on both sides.

Shape and fit the “stealers” into the remaining gaps at the stern. Trim-off any excess overhang of planking. Sand the finished hull using a medium and fine grade sandpaper. Apply wood filler if needed.



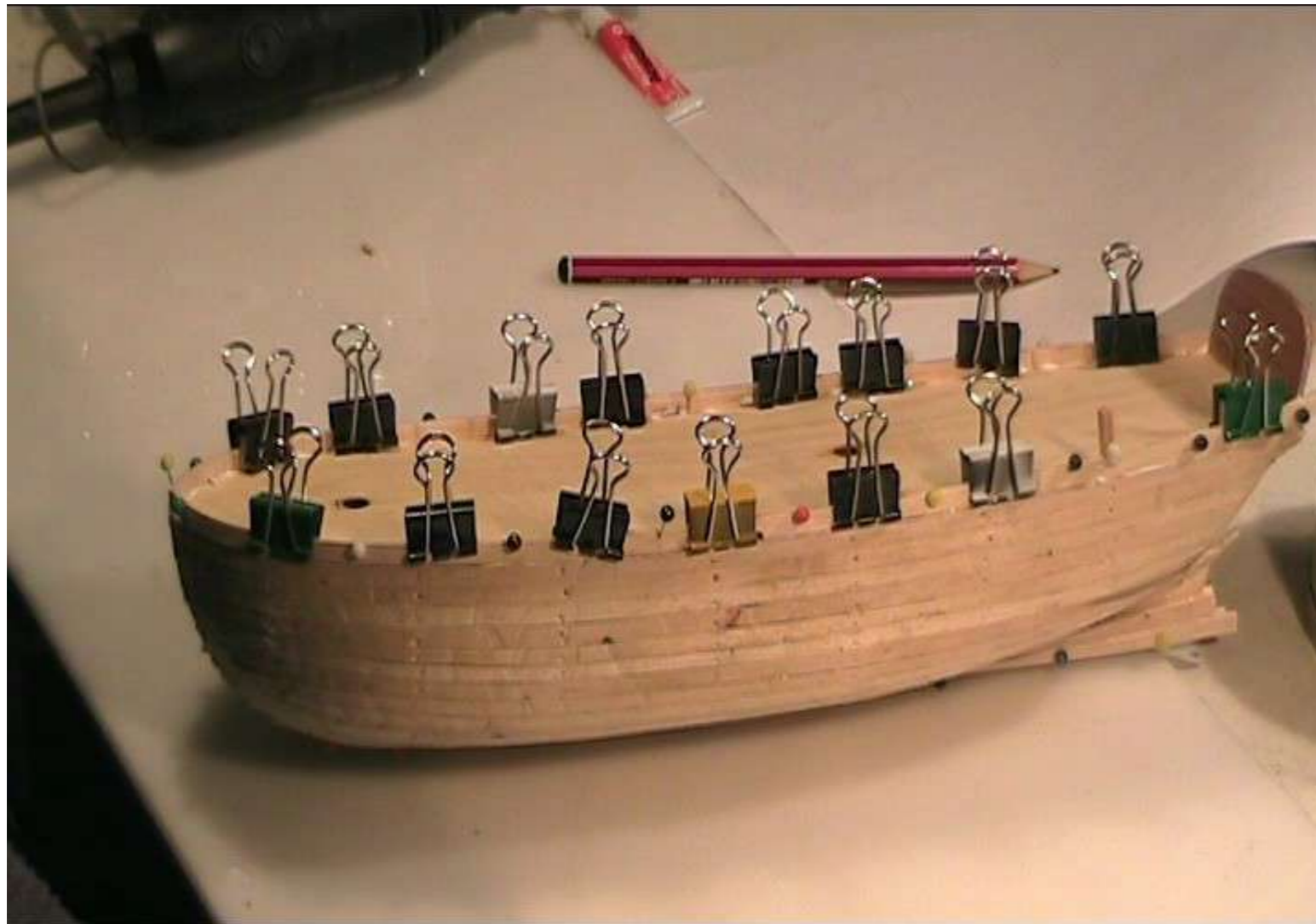
6.2.3 Bulwark

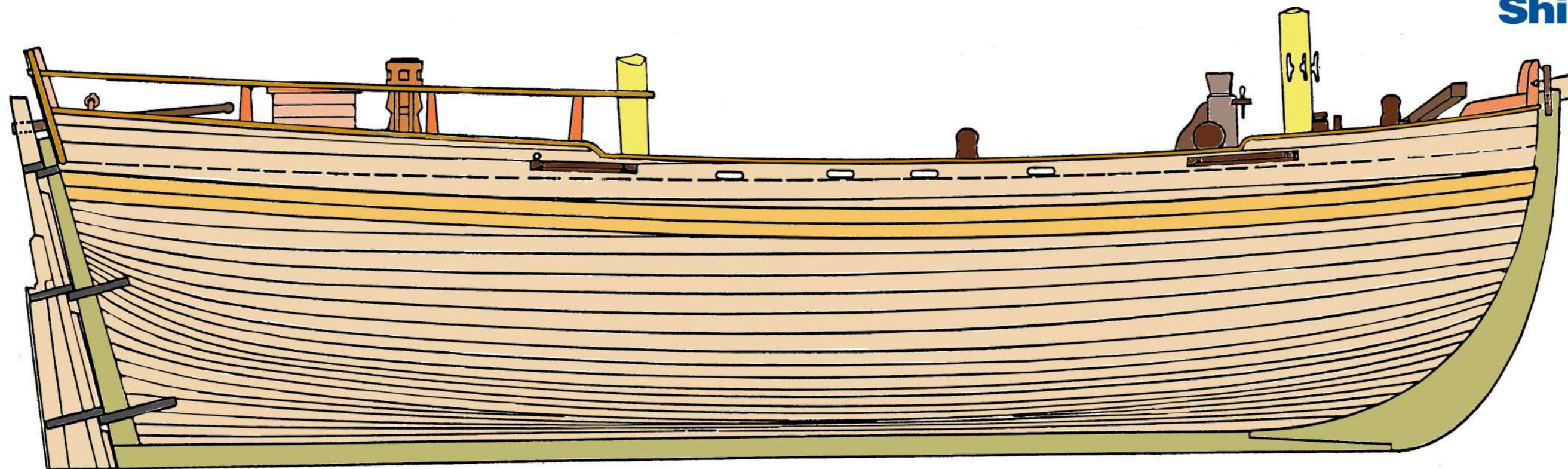
The next step is to create the bulwark. This is achieved by planking the section above the deck using the 2x5x400mm limewood planks P15. You will fit and glue in place two of these planks on each side of the hull. Do not taper these planks. Before progressing view the hull side elevation on Sheet 12 where you will see 4 wash holes at mid-ship deck level to allow water to wash off the deck. You will need to cut and shape these holes in the first of the bulwark planks before fixing it in place. To identify the location of these wash holes first take a plank and shape and fit it around the hull above the plank at deck level. Second, referring to Sheet 12 project the location of the wash holes from the side elevation drawings down to the plan drawing. Lastly, lay the shaped plank around the edge of the plan drawing and use a pencil to mark where the wash holes are located. Cut the wash holes out of the two planks that will fit along the deck level.



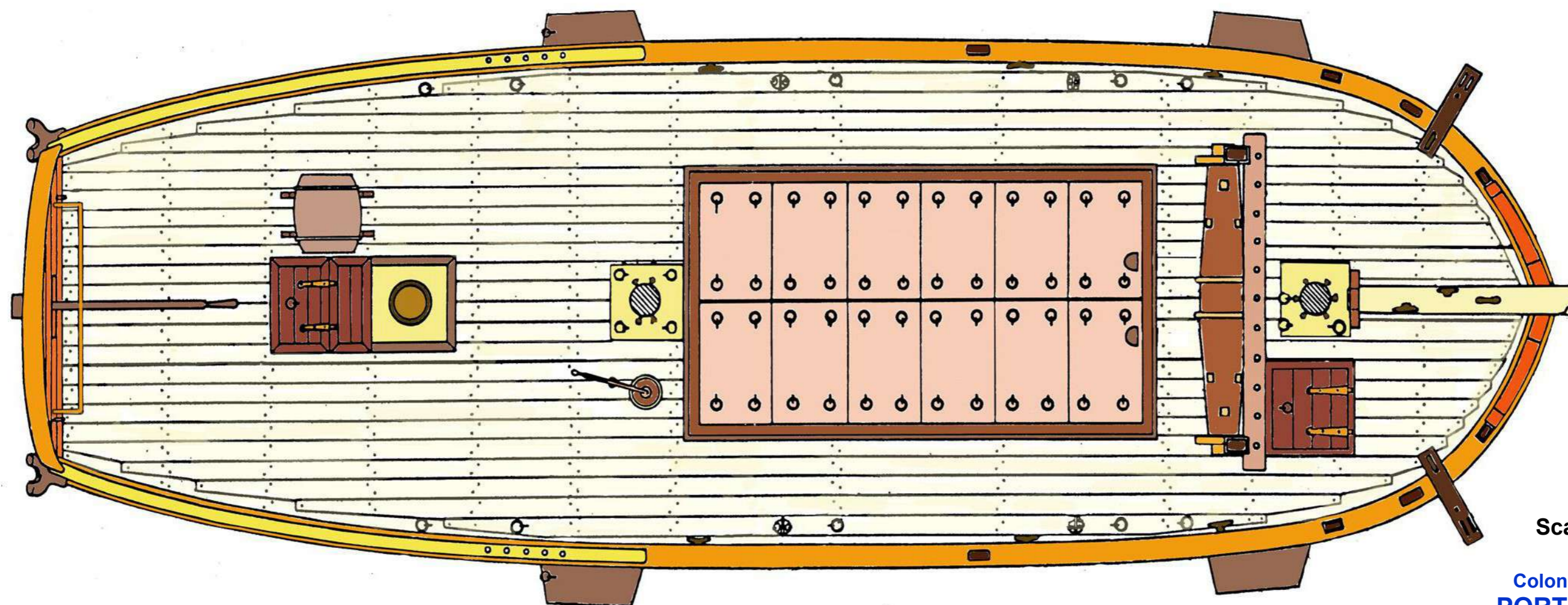
Before fixing the bulwark planks place a strip of masking tape or stick tape over the bulkhead horns above the deck to make sure the planks are not glued to them as these horns are removed later. Now fit and glue in place two planks on each side of the hull—run a bead of glue on the side edge of each plank fixing it to the plank below. Pin and clamp to hold in place as shown. Any plank width extending above the tops of the bulkhead frame horns will be removed later. Sand the finished hull using a medium and fine grade sandpaper. Apply wood filler if needed to fill in any hollows.

Plank the outside of the transom with 0.6x5x400mm mahogany P14. Trim off any excess planking.





SIDE ELEVATION



PLAN

Scale 1:1

Figure 2

Colonial Schooner
PORT JACKSON
1803
SHEET 12

Refer to the side elevation of the hull on Sheet 12. Carefully pencil the height of the bulwarks (which largely coincide with the height of the frames) and remove the surplus planking. When satisfied remove the bulkhead frame horns using a razor saw blade and a knife blade to cut through the horns. Take care not to cut through the bulwark planks previously fitted.

Once removed use sand paper to sand the horns flush with the deck and sand the inside of the bulwark to remove any glue residue as shown.



6.2.4 Second Layer of Hull Planking

Completing the second layer of hull planking is largely a repetition of the process for completing the first layer but with the added advantage of having a more solid foundation on which to work. The second layer of hull planking is the 0.6x5x400mm mahogany strips P14. Identify these planks before proceeding. To glue the planks in place use a non-drip contact type adhesive. This type of glue will help stop any tendency for the edges of the thin second layer of planking to buckle and at the same time generally speeds up the planking process.

Start the second layer of hull planking as previously presented for the first layer commencing at the same position and tapering and inserting "stealers or wedges" where necessary. Once the second layer of planking is complete the slot for the tiller. The wash holes should be carefully extended through the second layer of planking.

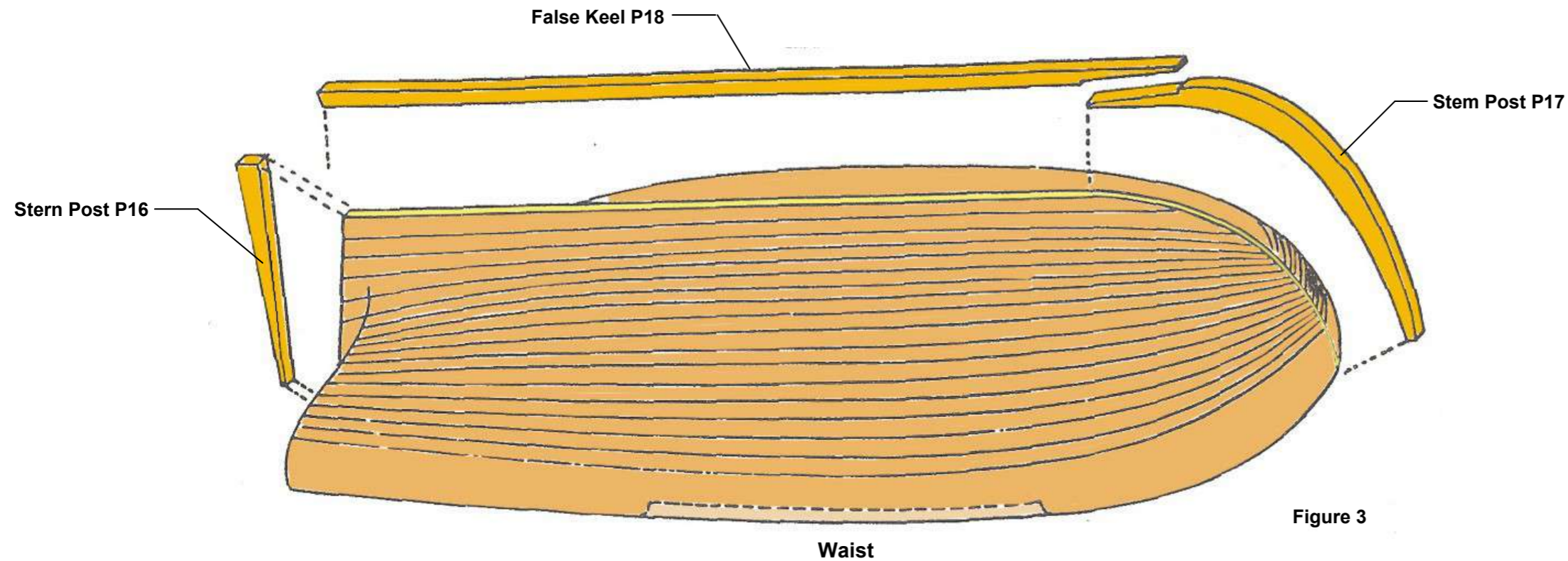
Assemble the cradle P102A-D and use it as a stand while completing the model.



6.2.5 Fitting Stem Post, Stern Post & False Keel

Identify the stem post P16, stem post P17 and false keel P18. Fit the stem post, stern post keel and false keel in that order. The stem post may require some fractional adjustment to ensure a neat fit - you may need to reshape the front of the hull slightly as well.

These 3 parts can be finished with a mahogany wood stain to blend with the hull planking. Alternatively you may wish to finish with shellac to give a golden finish making the parts more pronounced.



6.2.6 Inner Bulwark & Transom

Plank the inner bulwark and transom with 0.6x5x400mm mahogany strips P14. The inner planking to the bulwarks commences at deck level and initially extends above the outer layer of planking. It is cut back to the level of the outer layer when the glue is thoroughly dry. Carefully extend the wash holes through the inner layer. Use a fine grade sandpaper to finish. For the inner transom mark the location of the two holes - these holes are for the location of the boom sheet traveller fitted later.

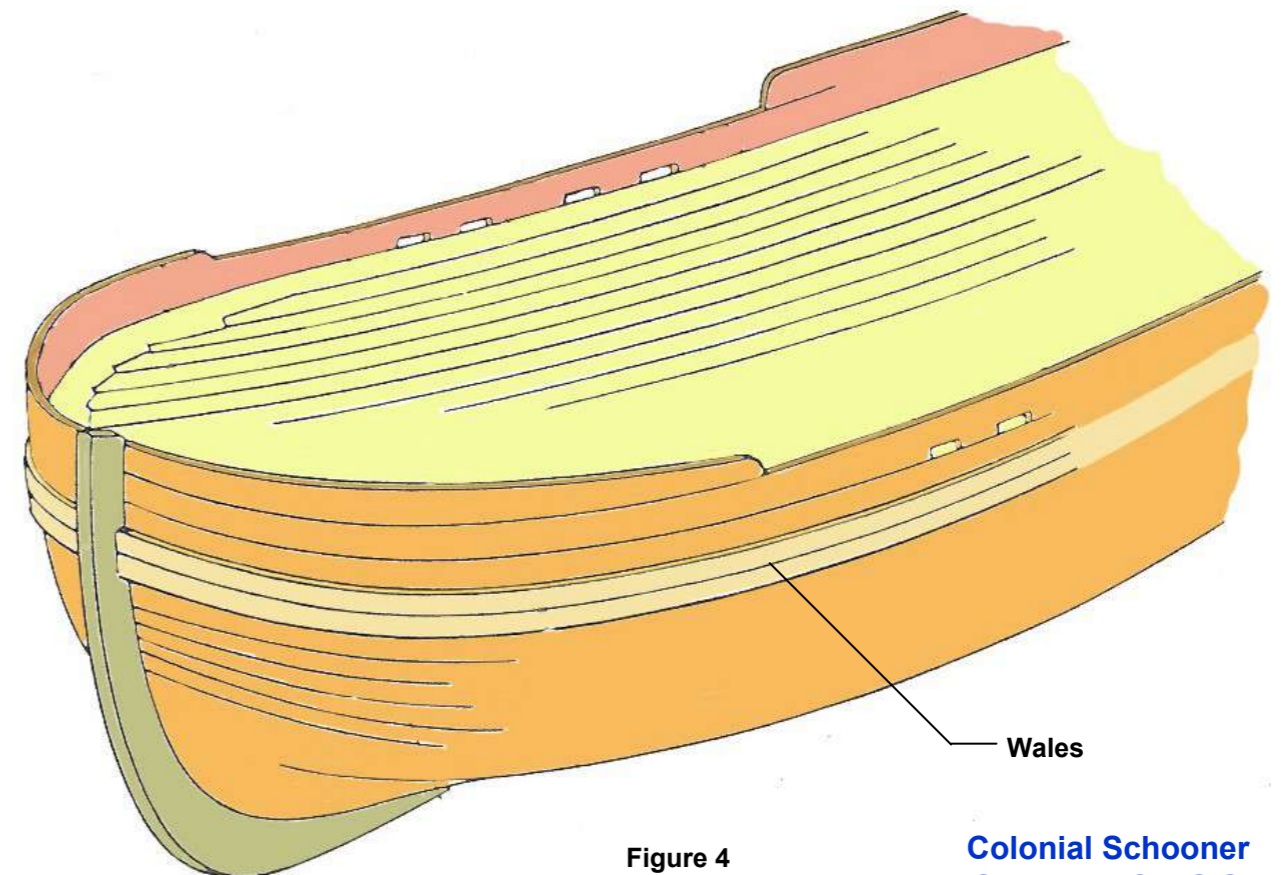
6.2.7 Waist of Ship

The next step is to remove the waist of the ship. Refer to Sheet 12 to mark on the bulwark the outline of the waist. Remove the unwanted bulwark timber.

6.2.8 Wales

The wales are made from the 2x5x400mm limewood strips P15. Identify these timbers. The wales fit around the hull as shown Figure 4. Refer to Sheet 12 for the placement of the wales—mark with a pencil on the hull. Fit the two pairs of wales as shown Figure 4

Before progressing apply a sealing coat of clear matt or satin polyurethane varnish, sand lightly and repeat. This will protect the hull from minor accidents.



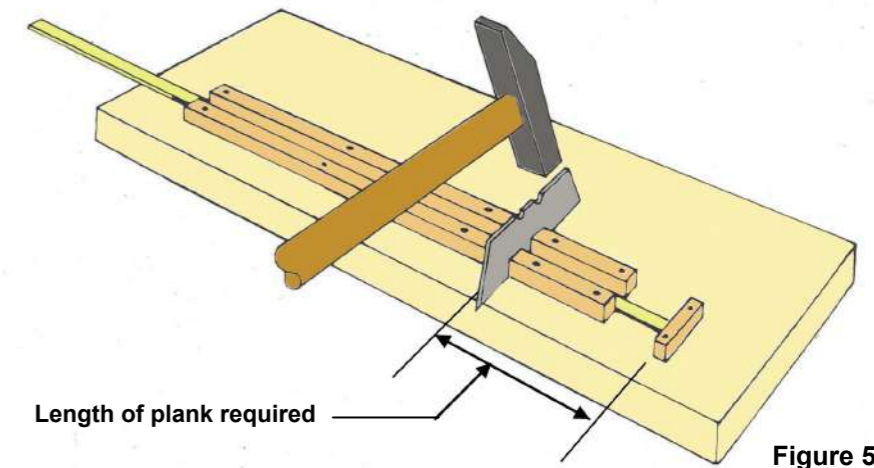
6.3 Deck Planking

The deck planking is 0.6x4x400mm silver ash P19 - white/cream coloured timber. This timber will be used to cover the deck to simulate deck planking. To plank the deck first draw a line down the centre of the plywood deck from fore to aft. On a real ship tar was placed between the deck planks. Also on a real ship the deck planks would not have run the full length of the deck as one continuous length—there would have been butt joints in the deck planking To achieve these effects on the model cut the silver ash timber into 100mm length pieces - enough to cover the deck. Use the jig Figure 5 to achieve this.

To simulate the tar caulking between the deck planks 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. Repeat this until all the deck planks are finished.

Apply a thin film of PVA glue on one face of a few 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.

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. Put the deck aside for 24 hours to allow the glue to set. Trim of any excess planking. At the mast holes and the rudder hole drill through the deck planks. Finish the deck with a fine grade sandpaper. Spray the completed deck with a clear satin or matt finish to seal the surface. Set aside the completed deck to dry.



6.4 Finishing the Hull

6.4.1 Cap Rails

Fit the cap rails in place - note the cap rails are made from both **ordinary** beech and **flexible** beech. Flexible beech is very flexible. Identify the relevant beech and label each clearly.

Waist Cap Rail - identify the 2x5mm ordinary beech P20 - cut two 150mm lengths to fit into the waist of the model. Fix these two lengths to the waist of the model as shown Figure 6

Bulwark Cap Rail - identify the 2x5mm flexible beech P21A - cut two 120mm lengths and shape to fit over the bulwark at the stern area - use flat nose pliers to shape the end. Fix these two lengths in place as shown Figure 6.

Bow Cap Rail - using the 2x5mm flexible beech P21A - cut and shape two 130mm lengths to fit around the bow - use flat nose pliers to shape the end. Fix these two lengths in place as shown Figure 6.

Transom Cap Rail - Using the 2x5mm flexible beech P21B cut and shape a 100mm length to fit across the top of the transom. Fix this length in place as shown Figure 6.

Apply a shellac finish to these cap rails.

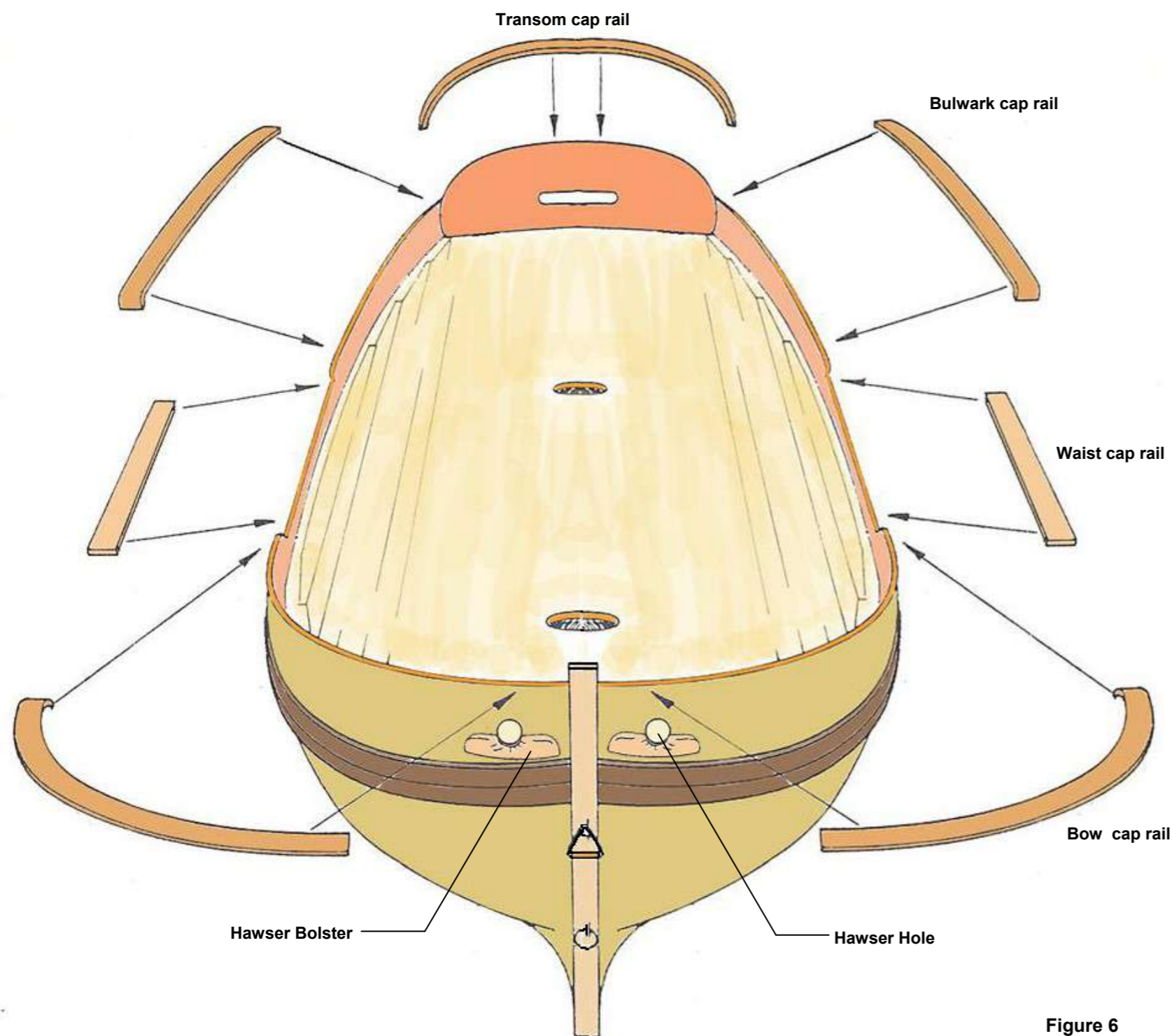


Figure 6

6.4.2 Hawse Holes & Bolsters

Drill the hawse holes for the anchor rope using a 3mm drill. Identify the hawse bolsters P22 . Use a small file to slightly round the edges as shown. Also use a round file to shape the rear face so as to take the curve of the bow. Apply a shellac finish to each bolster. Once dry fix each bolster in place immediately beneath the hawse holes.

6.4.3 Mast Heels

Identify the mast heels P23. Apply a shellac finish to each mast heel. Glue in place on the deck over each mast hole - see Sheet 12.

6.5 Deck Fittings & Furniture

Make the following parts using the identified timbers and fittings supplied and following the relevant figures. Fit the parts to the model as shown on Sheet 12.

6.5.1 Head Timber A

Identify head pieces A P24 - stain with shellac. Identify the 6mm dowel P84 - temporarily place a length at the centre of the bow protruding beyond the bow. Fit and fix each head piece A in place on the bow capping either side of the dowel as shown Figure 7

6.5.2 Head Timber B

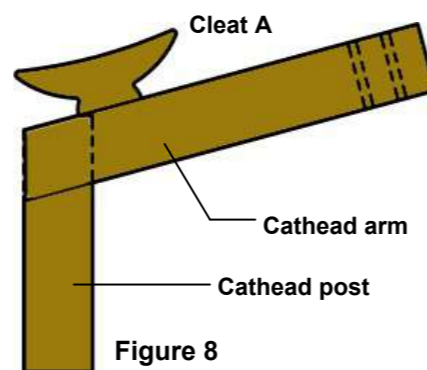
Identify head pieces B P25 - stain with shellac. Fit and fix each head piece B in place on the bow capping either side head pieces A as shown Figure 7

6.5.3 Bowsprit Stock

Identify the bowsprit stock P26 - stain with shellac. Fit and fix in place as shown Figure 7

6.5.4 Catheads

Identify the cathead posts P27 and cathead arms P28. Refer to Sheet 12 for the location of the cat heads on the deck. Trial fit a cat head in place - with the post vertical against the bulwark set the angle of the arm to fit over the capping. Once satisfied with the fit glue the two parts together and shape to remove any protruding excess at the joint. Fix a cleat A P29 to each cat head arm as shown Figure 8. Finish the assembled catheads with walnut stain. Once dry fix each assembled cathead in place.



6.5.5 Bitt Heads

Identify the bitt heads P30 - fit pins to the centre of each bitt head base. Apply walnut stain - fix 6 of the bitt heads to the bow cap rail as shown Figure 7 - repeat for the other side of the hull. Fix the remaining 2 bitt heads to the centre of the waist cap rail.

6.5.6 Windlass

Identify the windlass barrel P31. Identify the windlass knightheads P32. Identify the windlass retainers P33. Finish the knightheads and retainers with shellac. Identify the belaying rail P34 - finish with walnut stain. Assemble the windlass as shown Figure 9. Identify the belaying pins P35 - glue 11 belaying pins in place along the belaying rail.

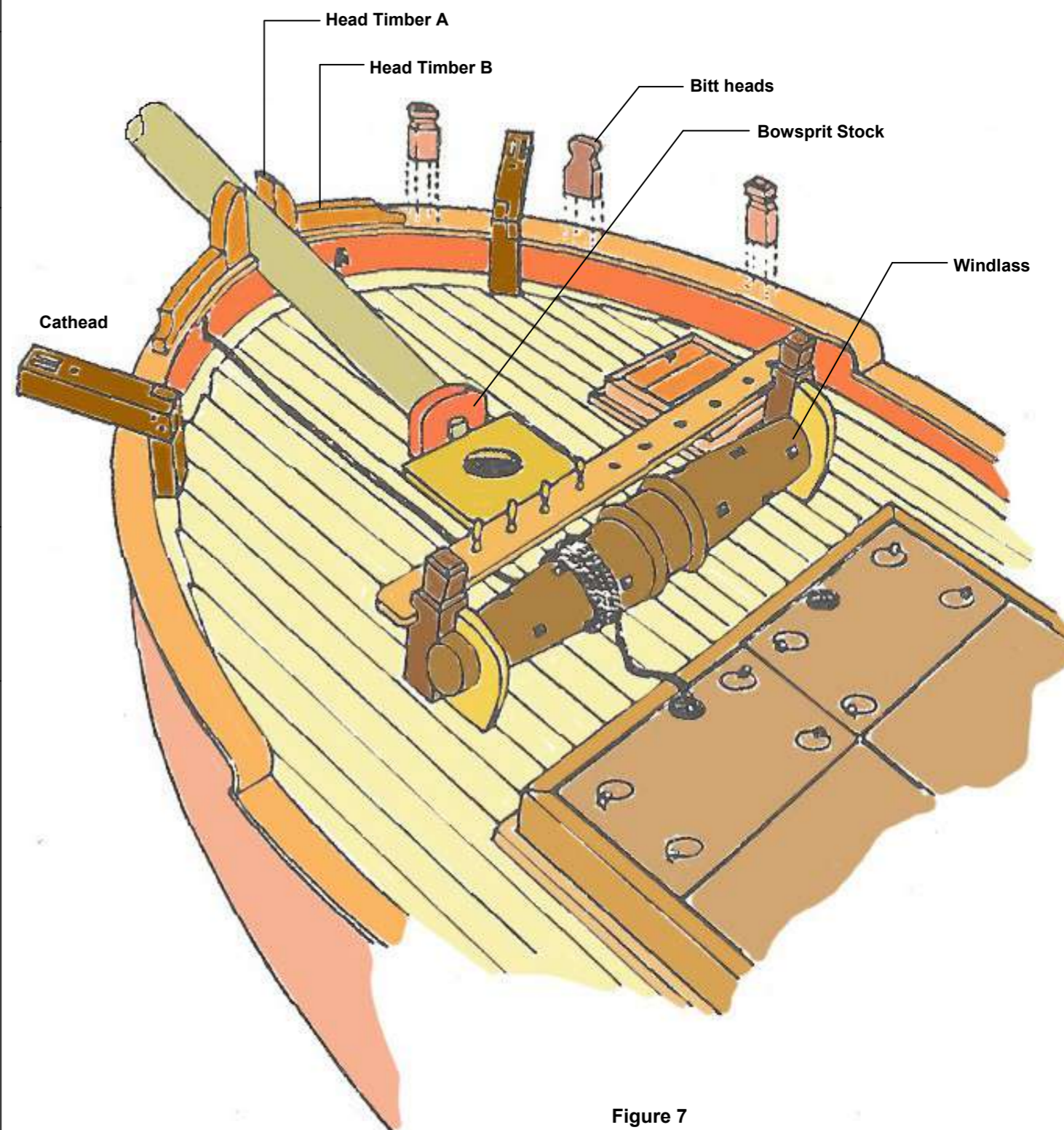
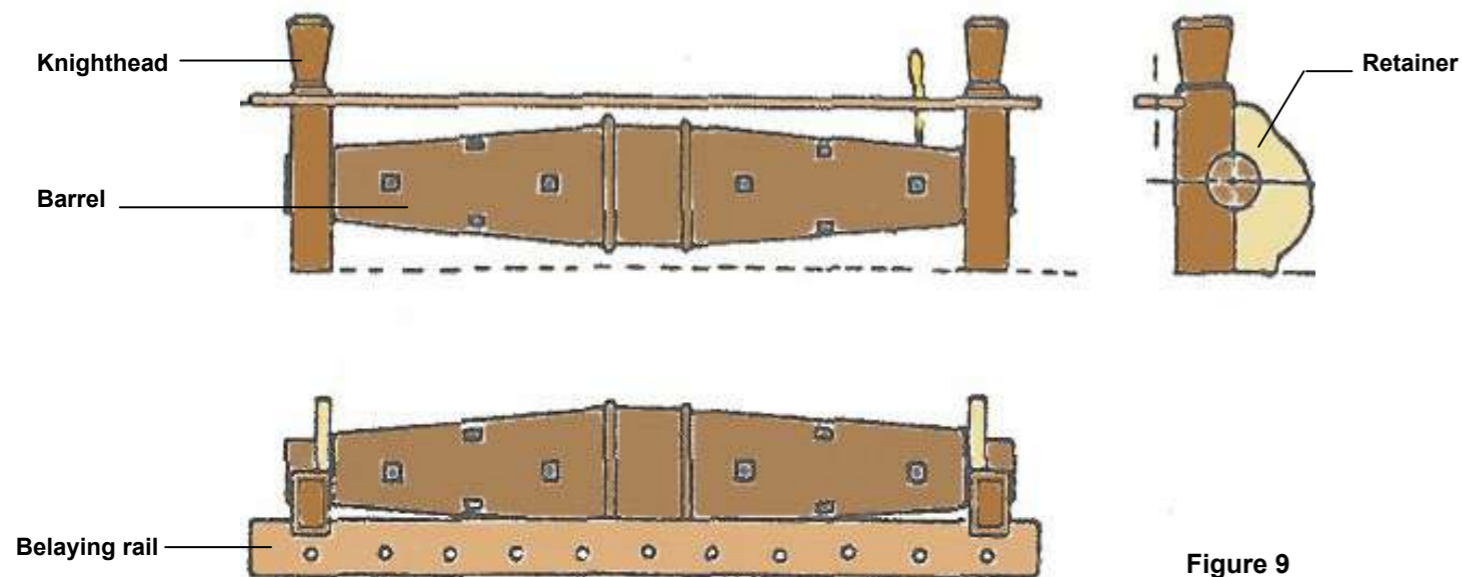


Figure 7

Figure 9

6.5.7 Hatch

Identify the hatch base P367 - finish hatch cover with shellac. Identify 2x5mm limewood P15 and cut lengths to fit around the base - finish with walnut stain. Identify and fit the hinges P37. Fit an eye pin P38 and a ring P39 as shown Figure 10. Fix to deck as shown Sheet 12.

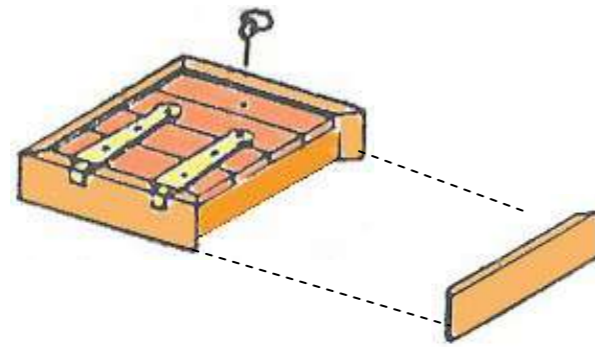


Figure 10

6.5.8 Barrel & Base

Identify the barrel stands P40 - finish with shellac. Identify the barrel P41. Fix barrel to the stands - Figure 11 and fix to deck as shown Sheet 12.

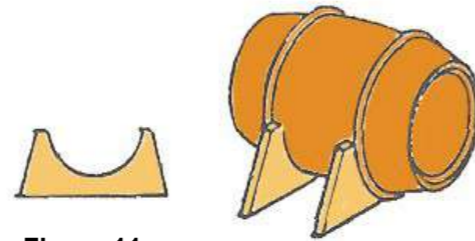


Figure 11

6.5.9 Cargo Hatch

Identify the cargo hatch base P42. Identify the 2x6mm limewood P43 - cut lengths to fit around the base - finish with shellac. Identify the 2x2mm limewood P44 - cut to fit as trim around the outer base - finish with walnut stain. Identify the 0.6x15x400mm walnut - cut lengths to fit as the hatch covers - mark the location of the pre-cut holes are located. Fit eye pins P38 and rings P39 as shown Figure 12. Fix assembled cargo hatch to the deck - see Sheet 12 - note the pre-cut holes are located toward to bow.

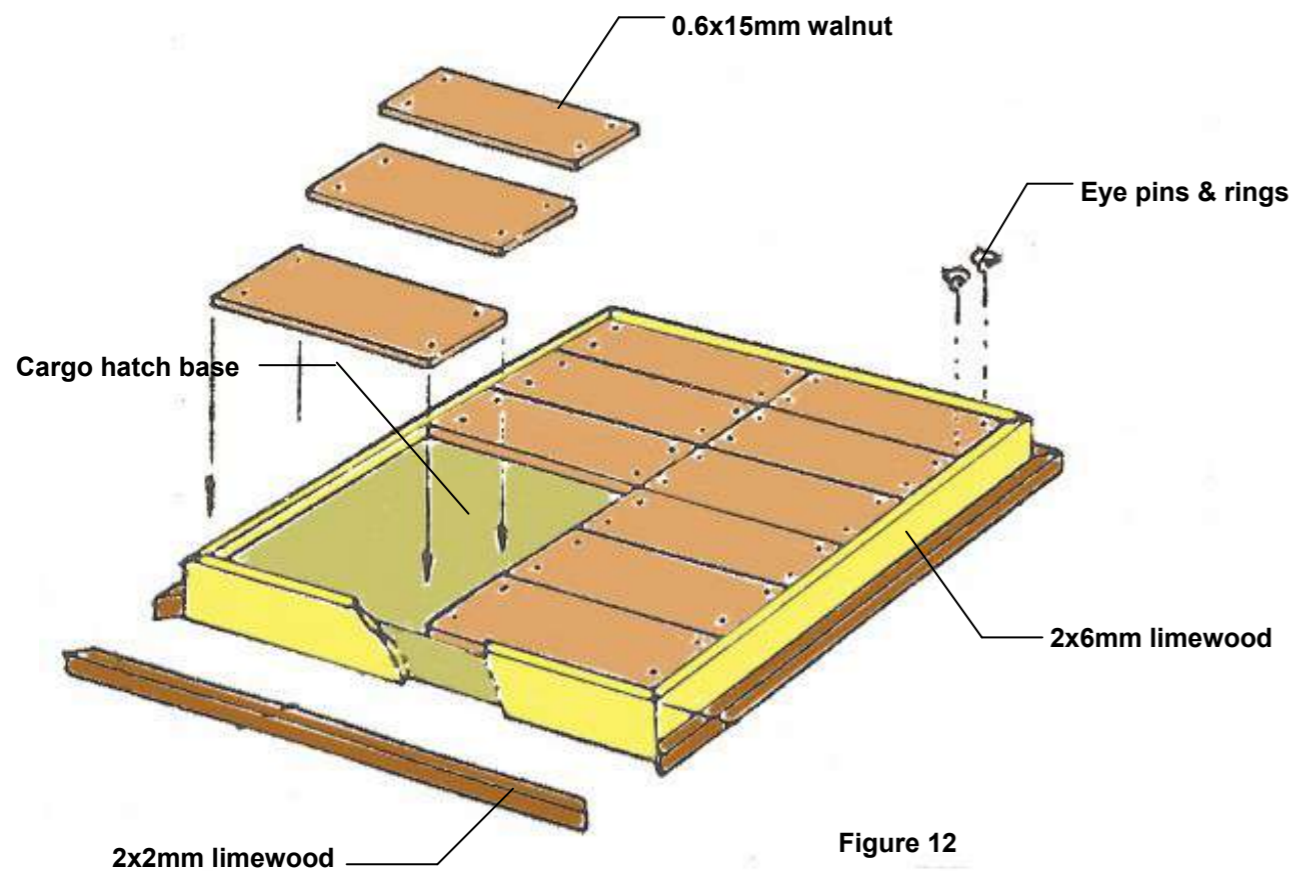


Figure 12

6.5.10 Pump

Identify the pump P46 and assemble as shown Figure 13. Fix in place as shown Sheet 12.



Figure 13

6.5.11 Capstan

Identify the capstan base P47 - finish with shellac. Identify 2x5mm limewood P15 - cut lengths to fit around the base - finish with walnut stain. Identify the capstan P48 and fix to the base as shown Figure 14. Fix assembled base with capstan to the deck as shown Sheet 12.

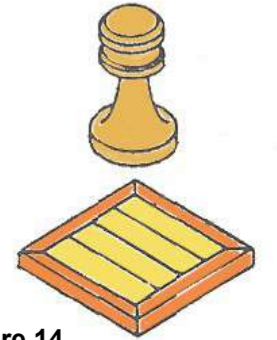


Figure 14

6.5.12 Companionway

Identify the companionway base P49A-B - glue parts together as shown Figure 15. Assemble the companionway as shown Figure 16. Identify the door frame P50 - apply walnut stain - then glue in place with the top edge aligned with the top of the larger face of the assembled base. Identify the roof frame P51 - apply walnut stain - then glue in place on the top of the base. Cut lengths of 0.6x5mm mahogany P14 to cover the two sides and smaller face of the base as shown. Using the same timber cut lengths to fit within the roof and door frames as shown. Fix two nails P52 as the door knobs. Fit two hinges P37 to the top as shown - paint black. Fit an eye pin P38 & a ring P39 as shown. Use 1x2mm limewood P100 as the coaming - fix lengths to fit around the base as shown - apply walnut stain - then fix in place. Fix the assembled companionway to the deck as shown Sheet 12.

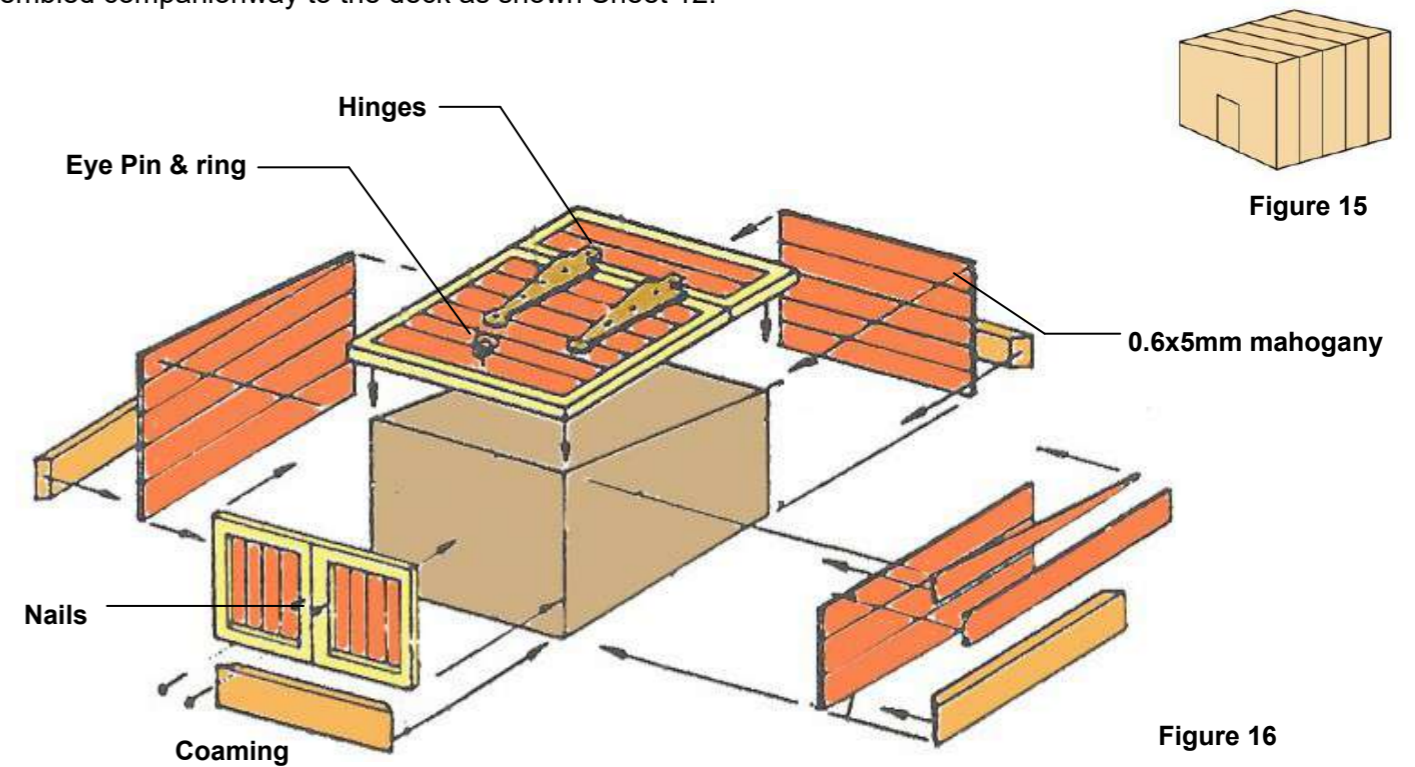


Figure 16

6.5.13 Boom Supports

Identify the boom supports P53. Trial fit as shown Figure 17 - shape the notches to suit the hull placement. Once satisfied fix in position.

6.5.14 Rail Stanchions

Identify the rail stanchions P54 - finish with shellac. Fix in position on the bulwark cap rail as shown Figure 17 and Sheet 12.

6.5.15 Quarter Rails

Identify the 2x4mm **flexible** beech P55 - cut two lengths at 150mm - paint rails black and fix as shown Figure 17 and Sheet 12.

6.5.16 Boom Sheet Traveller

Identify the 1mm brass wire P56 - cut shape to dimensions as shown - Figure 18. Fix in place into the two pre-cut holes in the transom.

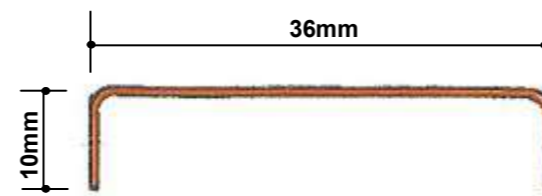
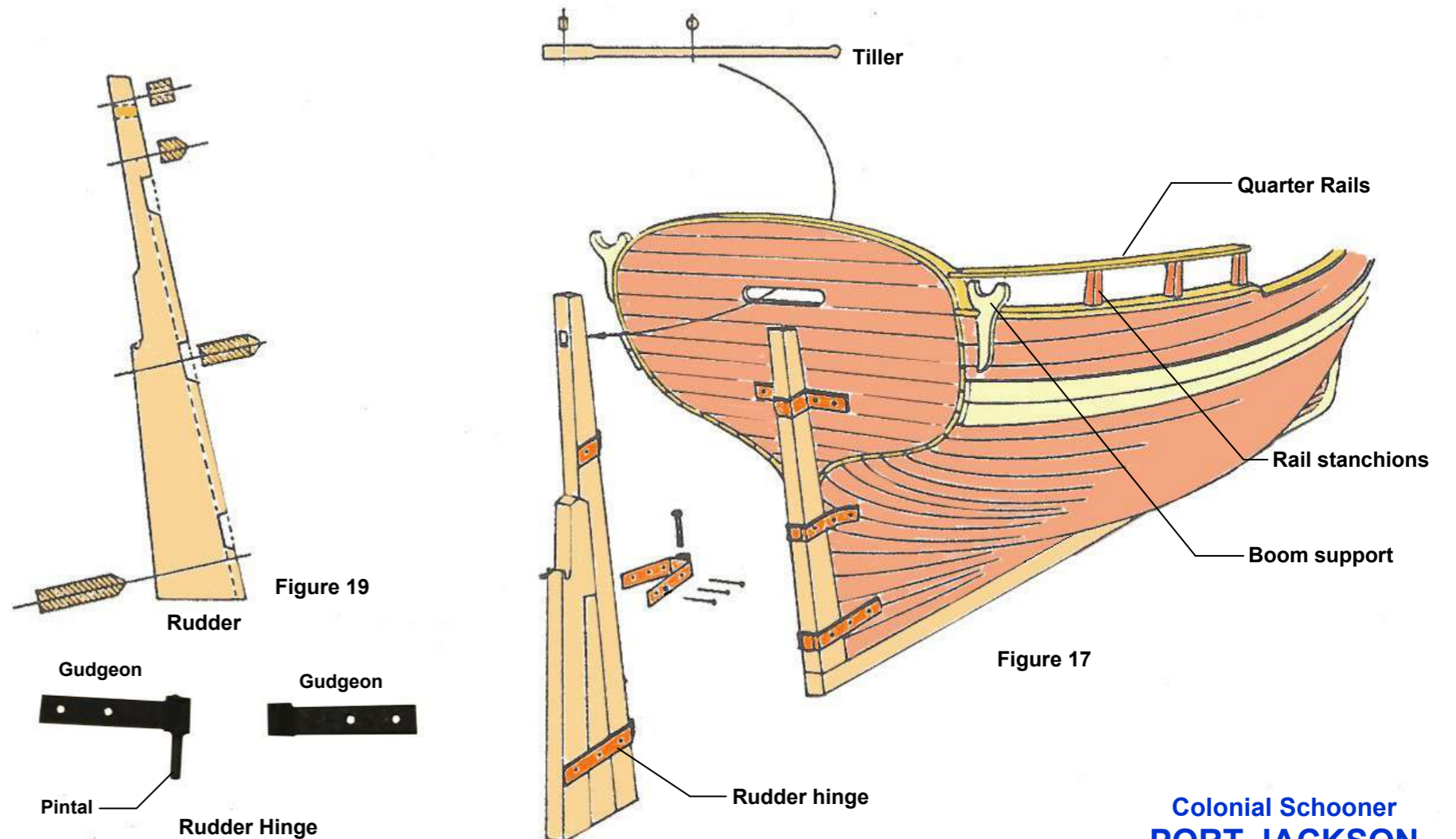


Figure 18



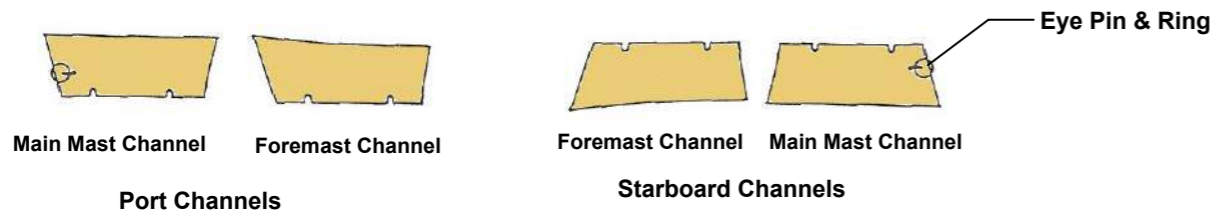
6.5.17 Rudder and Tiller

Identify the rudder P57 - shape as shown Figure 19. Scribe lines into the rudder with a semi-sharp tool to simulate the rudder made from individual timber pieces. Trial fit the rudder in place marking on the rudder the location of where the tiller will be fitted. Also mark on the hull the location of the rudder hinges. Remove the rudder. Identify the rudder tiller P58 - shape the tiller as shown Figure 17. At the marked tiller location on the rudder drill and file a square hole for the tiller - trial fit the tiller - fractionally adjust the tiller end and hole until satisfied. Set the rudder and tiller aside for fixing in place later. Identify the rudder hinges P59 - the rudder hinge is in two parts - gudgeon and pintal as shown. Fit the gudgeon **without** the pintal to the hull at the marked locations - shape and fit as shown - fix to hull with brass nails P52. Fix the hinges with the pintal to the rudder - adjust the arm lengths as required - fix to rudder with brass nails P52. Attach by lifting the rudder allowing pintals to fit into gudgeons on the hull. Next fix the tiller to the rudder as shown.



8.5.18 Channels

Identify the foremast channels P60 & the main mast channels are P61. Paint the channels black if desired. Fix an eye pin P38 with a ring P39 to the main mast channels as shown. Mark the location of each on the hull as shown Sheet 12. Next cut the heads of map pins and drill 2 holes into the inside edge of each channel and glue the pins in place as shown. Place a channel in place and mark where the pins will be located - drill holes at these places - trial fit in place - when satisfied apply super glue to the pins and inside edge of channel and push into place as shown. Repeat for the other channels.



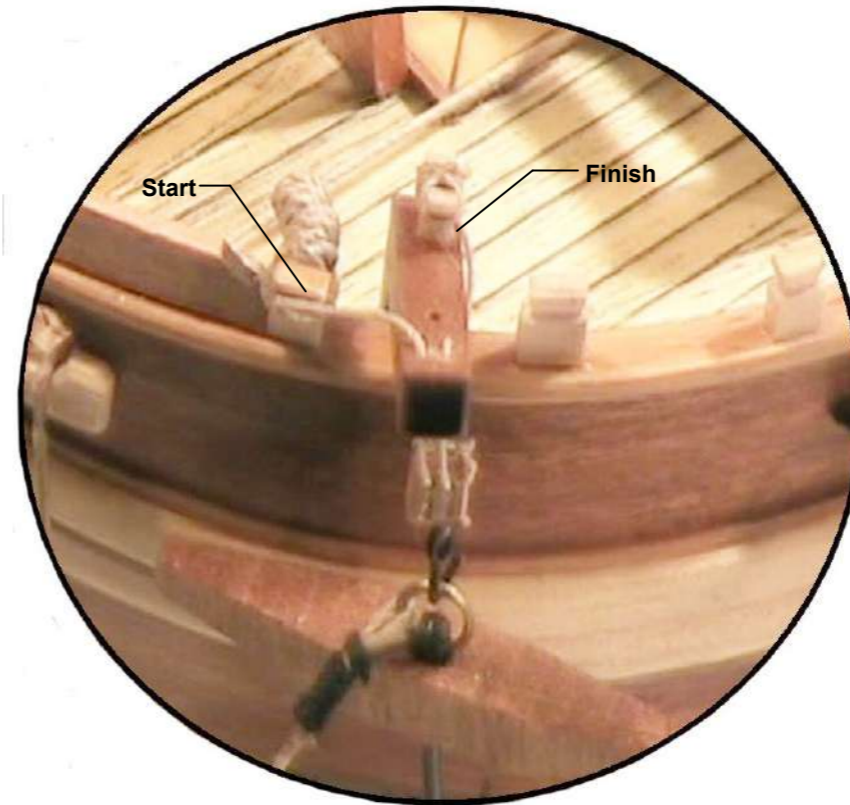
BLOCK KEY			CORD KEY		
Size	2 Hole	1 Hole	Size	Fawn	Black
4mm	—	A	0.25mm	G	—
5mm	B	C	0.5mm	H	—
7mm	D	E	0.75mm	J	—
Violin	F	—	1.0mm	—	K
			2.0mm	L	

8.5.19 Anchors

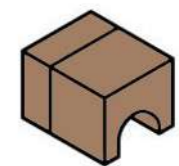
Identify the anchors P62 and assemble as shown. Identify the anchor rope P63 - cut the length in half and attach one end of the rope to the anchor ring and seize with cord G P64. Leave the rest of the anchor rope hanging loose at this point.

8.5.20 Anchor Cranes

Identify two block B P65 - drill a hole into one end and fix an eye pin P39 in place - slightly open the eye pin to make a hook as shown. To rig the anchor crane use cord H P66 - start at the bitt head as shown and rig through the block and finish at the cleat on the cathead as shown. Attach anchor ring to hook as shown.



Identify the Hawse covers P67 & 68 - glue together as shown - file the edges round and then stain walnut. Feed the anchor rope through the holes in bulwark and wind around windlass in the directions shown. Feed the rope into the pre-cut holes in the cargo hatch cover and then fix the hawse covers in place as shown.



Hawse Covers

7.0 Masts, Yards, Gaffs & Boom

7.1 Main Mast

The next step is to shape and assemble the main mast. Refer to the Figures below - identify the 8mm dowel P69 & the 4mm dowel P70 - cut and shape to the dimensions as shown - stain the lower and upper masts dowels with shellac. Identify the mast cheeks P71 - stain with shellac and fix to each side of the mast at the distance shown from the top of the lower main mast. Identify the mast cap P72 - stain with walnut - trial fit in place. Identify the trestle-trees P73. Identify the cross-trees P74. Assemble the trestle & cross trees as shown Figure 21 - resting the trestle-trees on the mast cheeks as shown - glue in place. Stain with shellac.

Trial fit the top mast in place to the dimension shown. Once satisfied with the fit glue the mast cap and top mast in place. Identify the bolsters P75 - shape each as shown Figure 20 - stain with walnut and glue in place as shown. Next mark the location where blocks will be fitted - drill 0.6mm holes and fix an eye pin P38 into each hole. Identify blocks B P65 & blocks C P76 - use cord G P64 to attach blocks to the relevant eye pin as shown. Identify cleat B P77 - stain walnut and fix in place as shown. Identify the boom rest P78. Identify the boom rest supports P79 - stain these parts with walnut - fix the boom rest and supports in place as shown. Identify cleat A P29 - stain walnut and fix 4 to mast as shown. **Do not fit the mast to the model yet.**

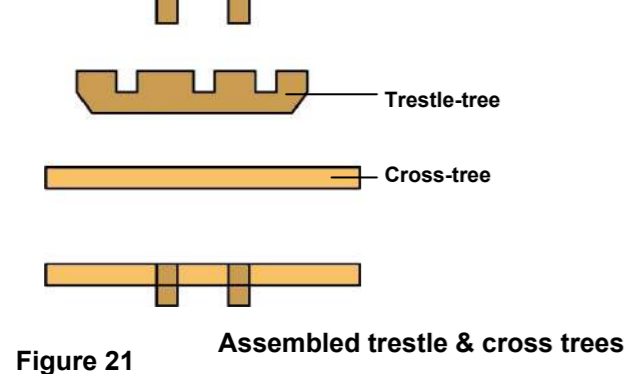
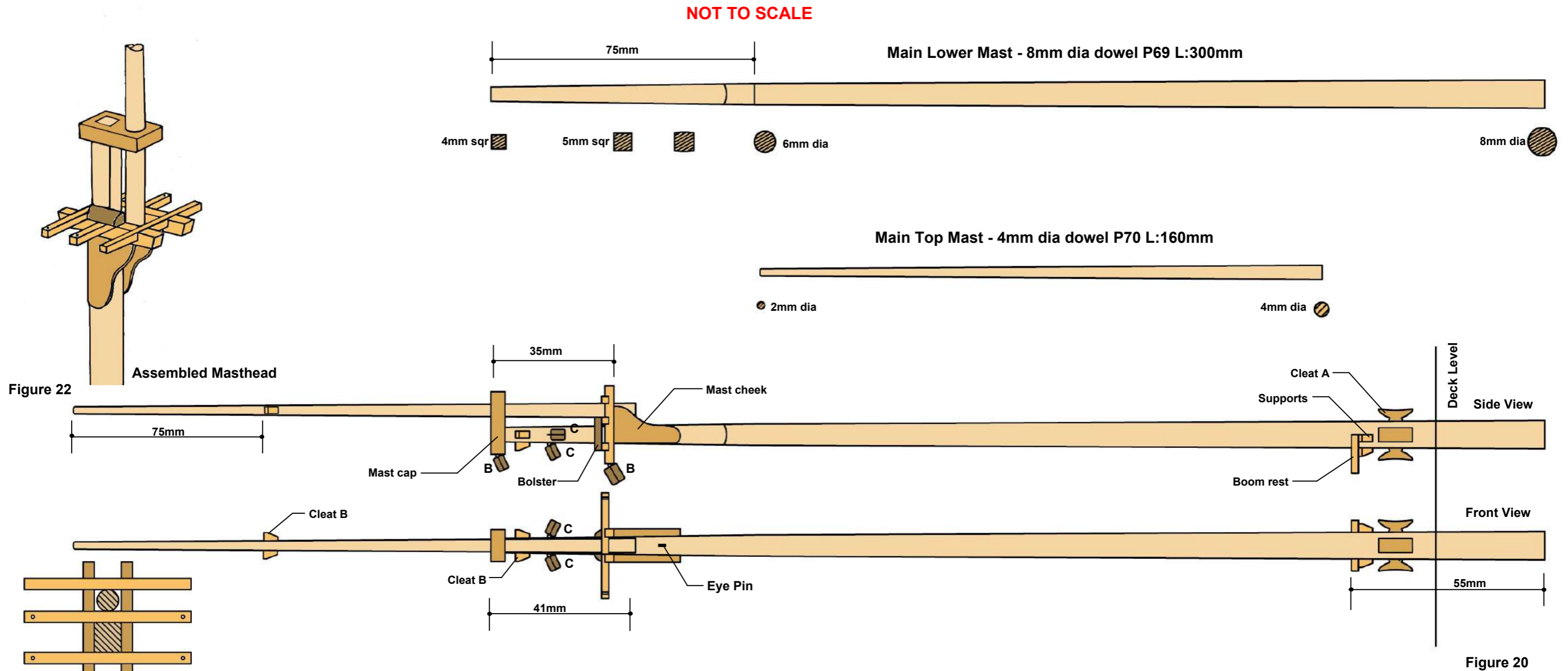


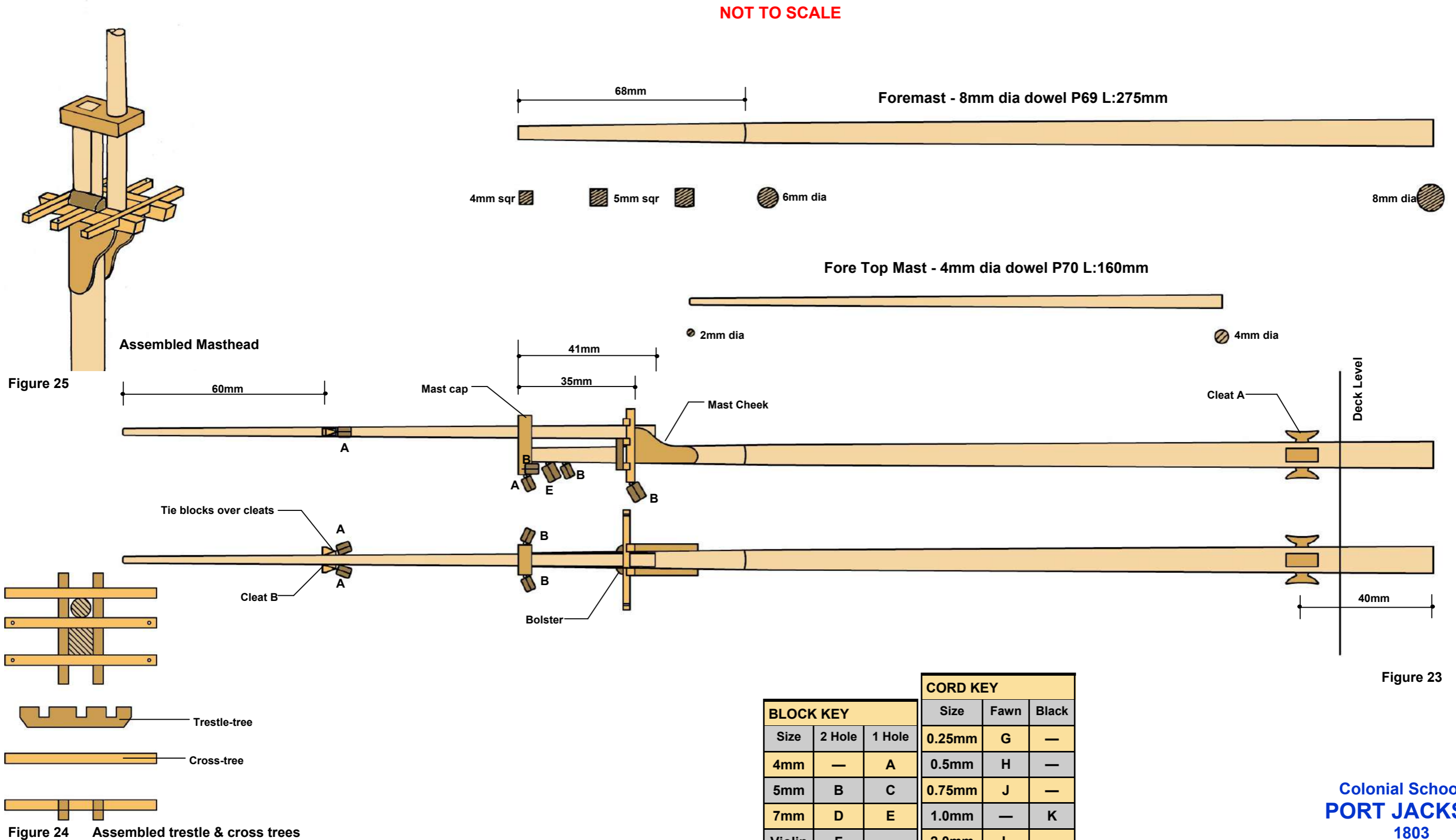
Figure 21

BLOCK KEY			CORD KEY		
Size	2 Hole	1 Hole	Size	Fawn	Black
0.25mm	—	—	0.25mm	G	—
4mm	—	A	0.5mm	H	—
5mm	B	C	0.75mm	J	—
7mm	D	E	1.0mm	—	K
Violin	F	—	2.0mm	L	—

7.2 Foremast

The next step is to shape and assemble the foremast. Refer to the Figures below - identify the 8mm dowel P69 & the 4mm dowel P70 the relevant dowels - cut and shape to the dimensions as shown - stain the lower and upper masts dowels with shellac. Identify the mast cheeks P71 - stain with shellac and fix to each side of the mast at the distance shown from the top of the lower main mast. Identify the mast cap P72 - stain with walnut - trial fit in place. Identify the trestle-trees P73. Identify the cross-trees P74. Assemble the trestle & cross trees as shown Figure 24 - resting the trestle-trees on the mast cheeks as shown - glue in place. Stain with shellac.

Trial fit the fore topmast in place to the dimension shown. Once satisfied with the fit glue the mast cap and topmast in place. Identify the bolsters P75 - shape each as shown Figure 23 - stain with walnut and glue in place as shown. Next mark the location where blocks will be fitted - drill 0.6mm holes and fix an eye pin P38 into each hole - except where shown. Identify blocks A P80, blocks B P65 & block E P81 - use cord G P64 to attach blocks to the relevant eye pin as shown. Identify cleat A P29 - stain walnut and fix 4 to mast as shown. Identify cleat B P77 - stain walnut and fix to mast as shown. **Do not fit the mast to the model yet.**



7.3 Yards, Gaffs and Boom

The next step is to shape and assemble the yards, gaffs and boom. Refer to the Figures below - identify the relevant dowels - cut and shape to the dimensions as shown - stain with shellac. Identify the blocks shown and attach with cord G. Identify the relevant yokes - P85, P86 & P87 - shape end of boom and gaffs to fit the yoke. Identify cleat B P77 and fix in place as shown. Identify cleat A P29 and fix as shown. Fix eye pins P38 as shown. **Do not fit to the model yet.**

NOT TO SCALE

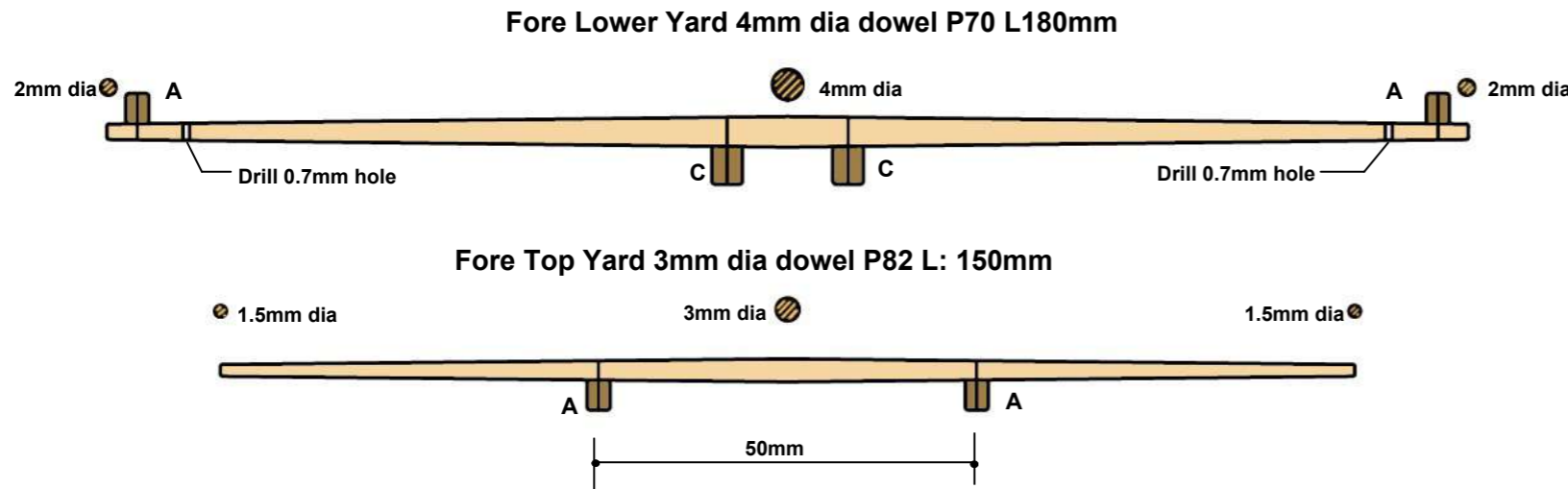


Figure 26

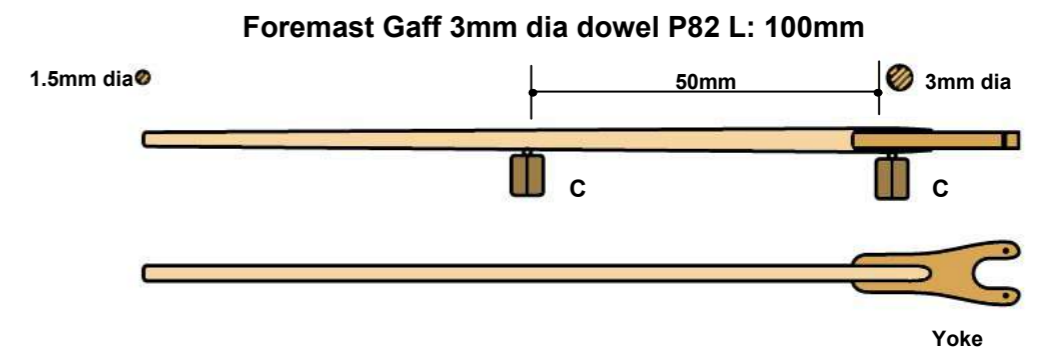


Figure 27

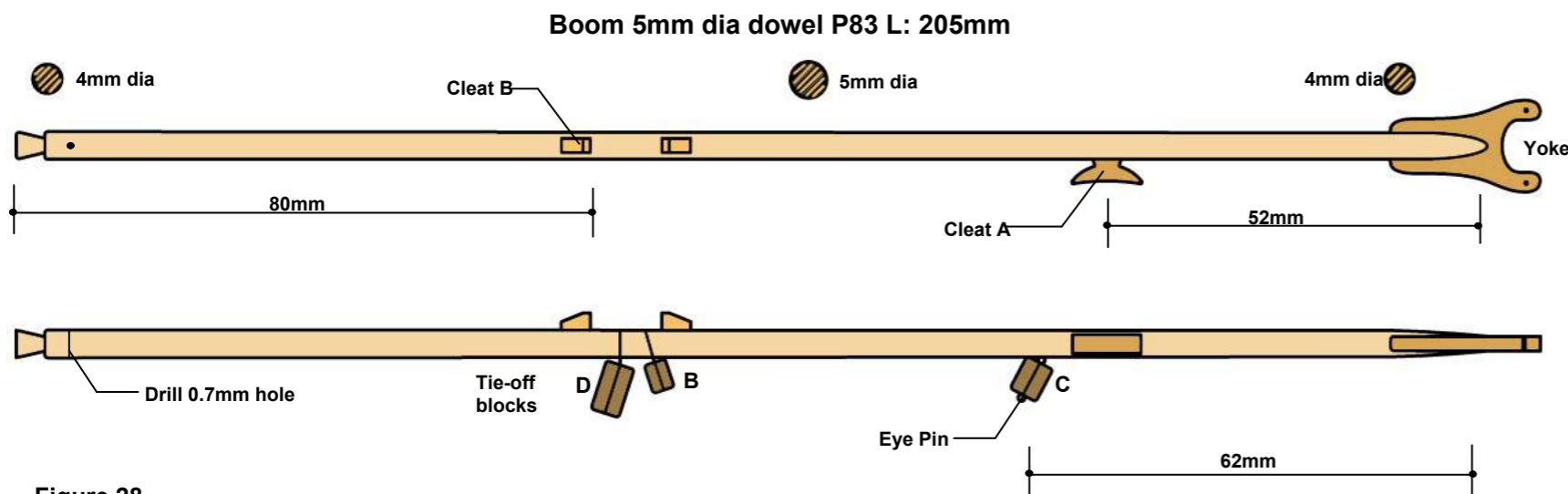


Figure 28

BLOCK KEY			CORD KEY		
			Size	Fawn	Black
Size	2 Hole	1 Hole	0.25mm	G	—
4mm	—	A	0.5mm	H	—
5mm	B	C	0.75mm	J	—
7mm	D	E	1.0mm	—	K
Violin	F	—	2.0mm	L	—

7.4 Bowsprit and Jib Boom

The next step is to shape and assemble the bowsprit and jib boom. Refer to the Figures below - identify the relevant dowels - cut and shape to the dimensions as shown - stain with shellac. Identify the bowsprit cap P88 - fix to forward end of bowsprit. Trial fit the jib boom in place - note the jib boom is off-set to the port side by approximately 5 degrees - once satisfied glue jib boom in place. Use cord K to lash the jib boom to the bowsprit as shown. Identify cleat B P77 and fix as shown. Identify cleat A P29 and fix as shown. Identify the traveller P89 - stain walnut and fix to the jib boom as shown. Fix eye pins as shown. **Do not fit to the model yet.**

NOT TO SCALE

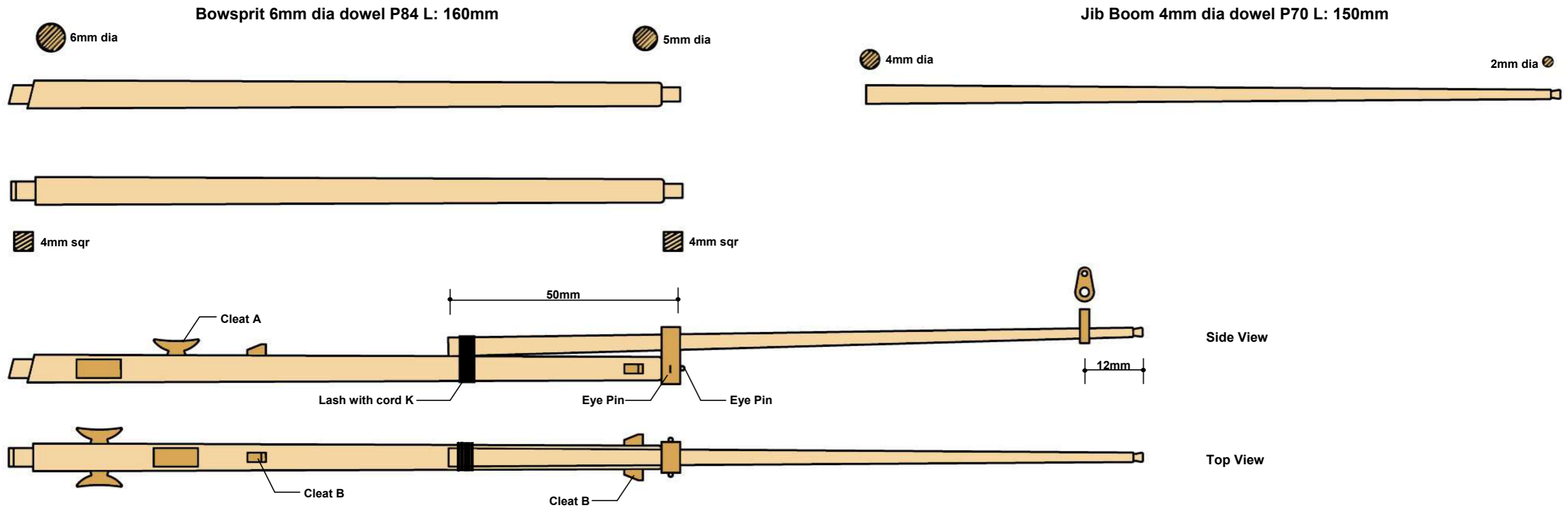


Figure 29

BLOCK KEY			CORD KEY		
Size	2 Hole	1 Hole	Size	Fawn	Black
4mm	—	A	0.25mm	G	—
5mm	B	C	0.5mm	H	—
7mm	D	E	1.0mm	—	K
Violin	F	—	2.0mm	L	—

7.5 Masts & Bowsprit

Trial fit each mast in place - fractionally adjust the base of the mast as required to make sure each mast is fully inserted into the keel slot - once satisfied glue each mast in place. Trial fit the bowsprit in place - some fractional adjustment of the hole in the bowsprit stock may be necessary - once satisfied glue bowsprit in place. Identify the copper strap P90 - shape and fix in place over bowsprit to stem post as shown - fix with nails P52. Fit an eye pin P38 as shown.

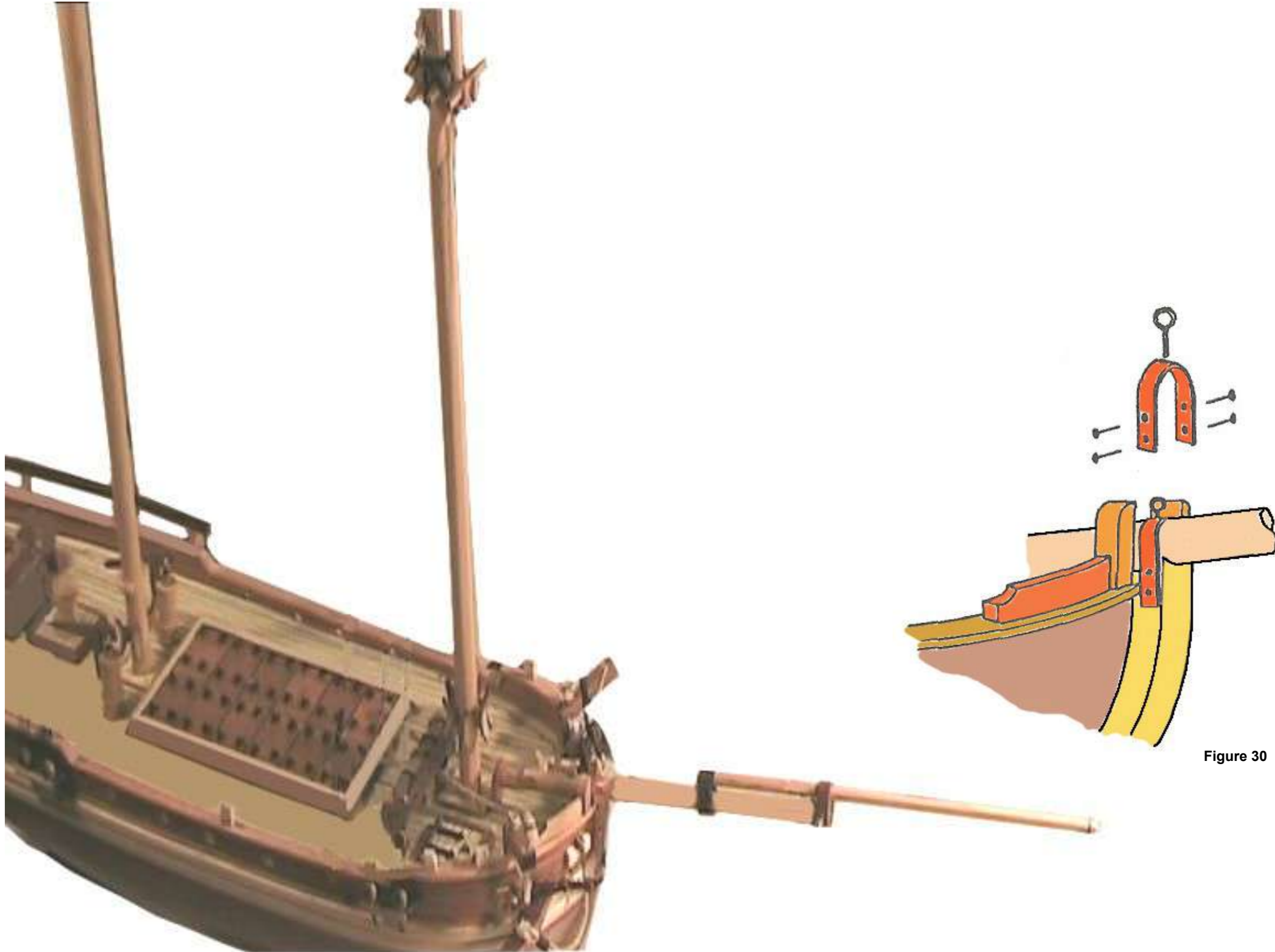


Figure 30

7.6 Deadeye Straps

Identify the 0.5mm brass wire P91 - cut 8 x 60mm lengths. Identify the 5mm deadeyes P92. Fold the length of brass wire in half with a deadeye in the fold as shown. Align the deadeye so the single hole is at the bottom as shown. Use long nose pliers to twist the wire at the deadeye as shown - straighten the remaining length of wire. Repeat for the remaining 7 deadeye straps. Paint the straps black if you wish.

7.7 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. To achieve this follow the steps below:

1. Temporarily fit the deadeye straps in place on the channel.
2. Temporarily attach a lengths of rigging cord from the mast head down to below the channel as shown - use sticky tape to hold the cords in place.
3. Align each strap with the cord - use a pencil to lightly mark the extension angle onto the top wale as shown.
4. At these points on the wale drill a hole large enough to accept the deadeye strap.
5. Remove the sticky tape and cords
6. Fit the deadeye strap in place by bending the strap so as it will fit into the hole - trial fit and once satisfied glue in place.
7. Apply a dab of glue where the deadeye strap fits on the channel - identify the 1x2mm limewood P100 - cut lengths to fit across the face of the channel over the deadeye straps as shown - glue each in place.

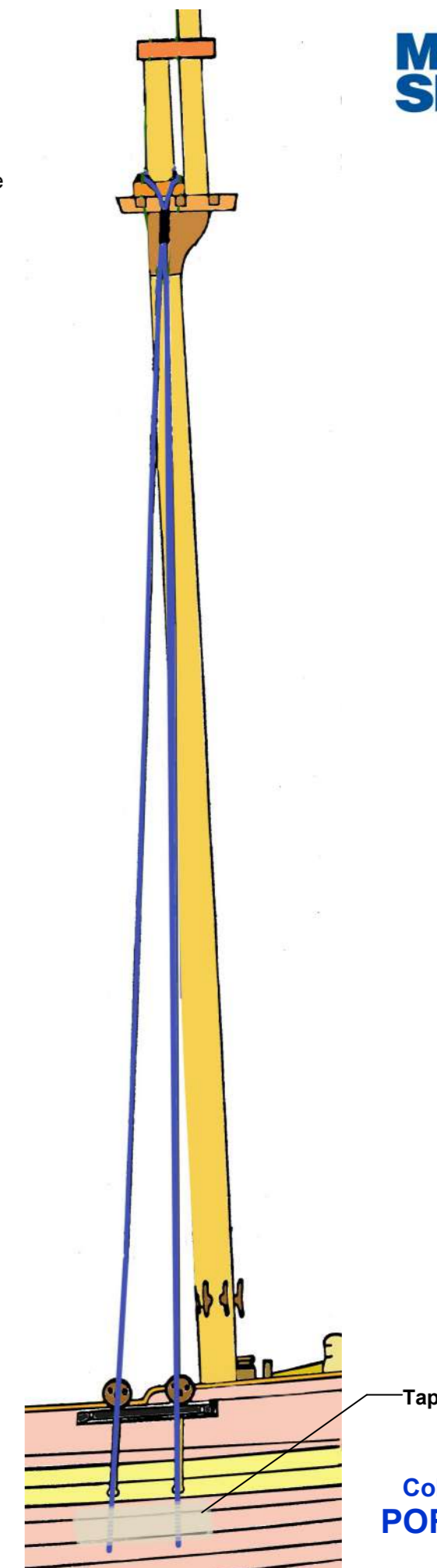


Figure 31

8.0 Rigging

8.1 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 1mm cord. The running rigging is fawn and of three sizes, 0.25mm, 0.5mm and 0.75mm

8.2 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.
- Work from the centre of the model out and try to avoid difficult and confined spaces.

8.3 Standing Rigging

The standing rigging includes the rigging of the shrouds, gammoning, backstays & forestays and is completed before the running rigging. The standing rigging should be taut but not over tensioned so as to cause bending of any mast.

8.4 Shrouds

8.4.1 Shrouds - Lower Main & Foremast

The lower shrouds are fitted from the mast head to the shrouds are made up in pairs with a deadeye attached to the end of a single cord. On the port side fit the shrouds by cutting a length of cord K long enough to go from the channel to the mast cap twice with approximately 30mm overhang. Using an alligator clip glue one end of the rigging cord around a 5mm deadeye P92. 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 - see Figure 33. 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 cord G, seize the two shrouds together around the mast at the mast head - Figures 34 & 37. Once the first pair of shrouds has been completed, the exercise is repeated on the starboard side. At the upper deadeye bind the double thickness of cord immediately above the upper deadeye with cord G. Seize the end of this cord with a dab of super glue.

8.4.2 Shrouds - Upper Main & Foremast

The upper shrouds are in pairs and are fitted around the cleats B on the top masts - they pass through the holes in the ends of the centre and aft cross trees and are tied off on the lower shrouds as shown Figure 35.

8.4.3 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 H and reeve as shown Figure 32.

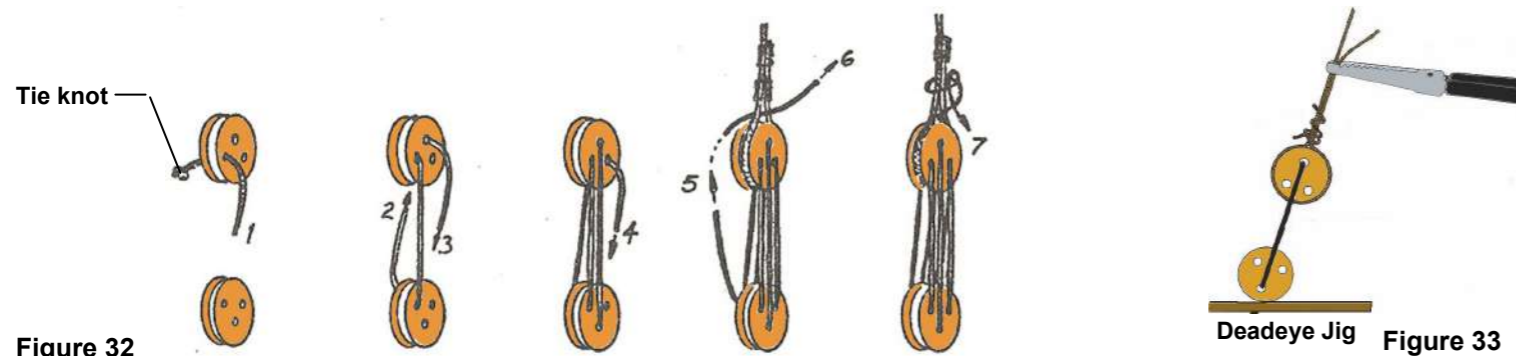
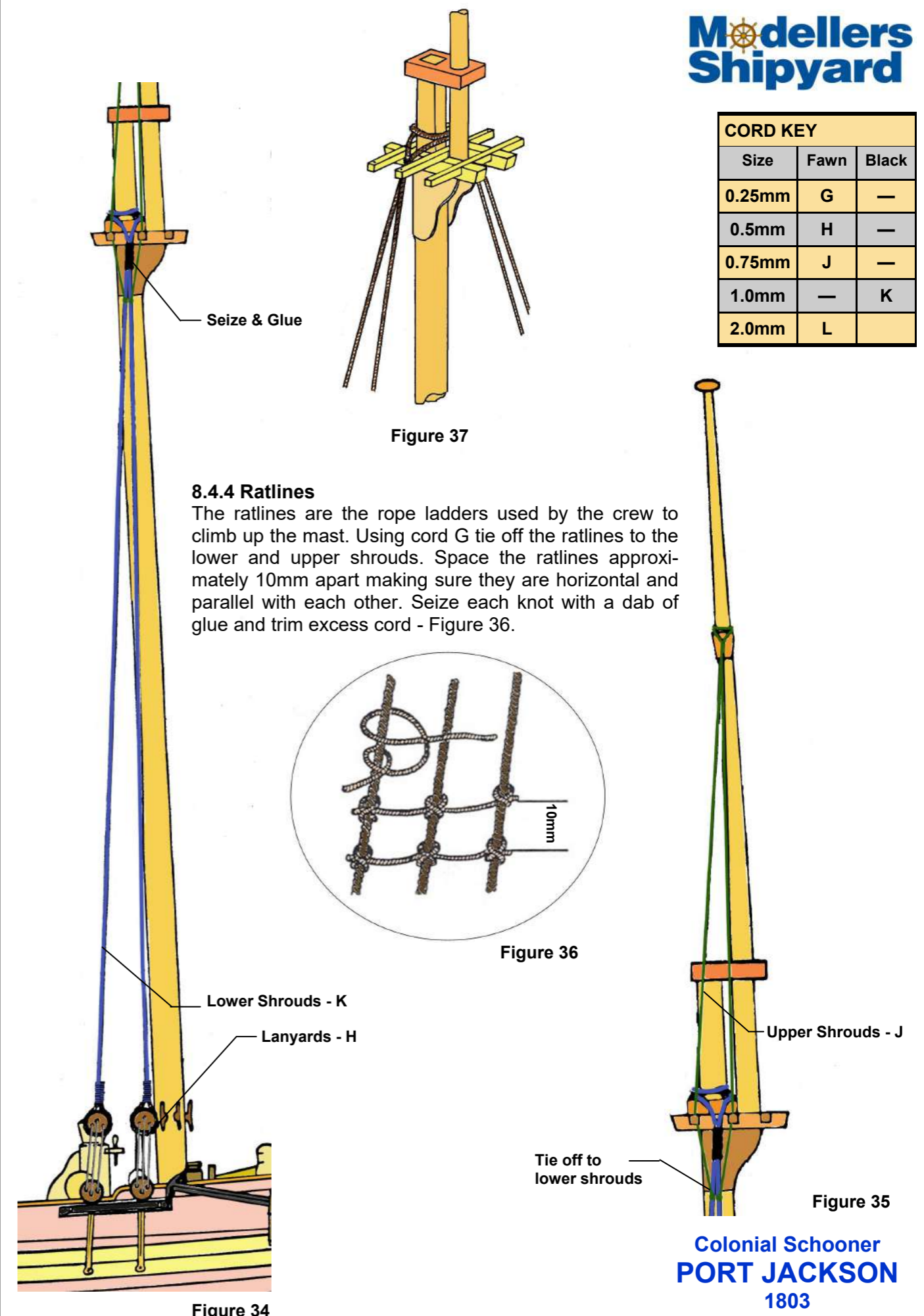


Figure 32

Deadeye Jig Figure 33



8.4.4 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 lower and upper shrouds. Space the ratlines approximately 10mm apart making sure they are horizontal and parallel with each other. Seize each knot with a dab of glue and trim excess cord - Figure 36.

Figure 36

Lower Shrouds - K

Lanyards - H

Upper Shrouds - J

Tie off to lower shrouds

Figure 35

Figure 34

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.5mm	H	—
0.75mm	J	—
1.0mm	—	K
2.0mm	L	—

8.5 Belaying Plan

The belaying plan shows where the rigging starts and finishes. This plan will be used in each of the following sheets. The numbers presented on the following drawings correspond to the belaying points shown Figure 38. Fix cleat A at points 12B, 16A, 25 & 26. Fix eye pins P29 with a ring P30 attached to the following points: 1, 2, 3, 4, 7, 8, 12, 12A, 13, 16. Fix eye pins P29 to the following points: 9 & 14. At the following points attach block C: 6, 8, 13 and 16. Drill 5 x 0.8mm holes into the quarter rails as shown. Glue belaying pins P35 in place on each rail.

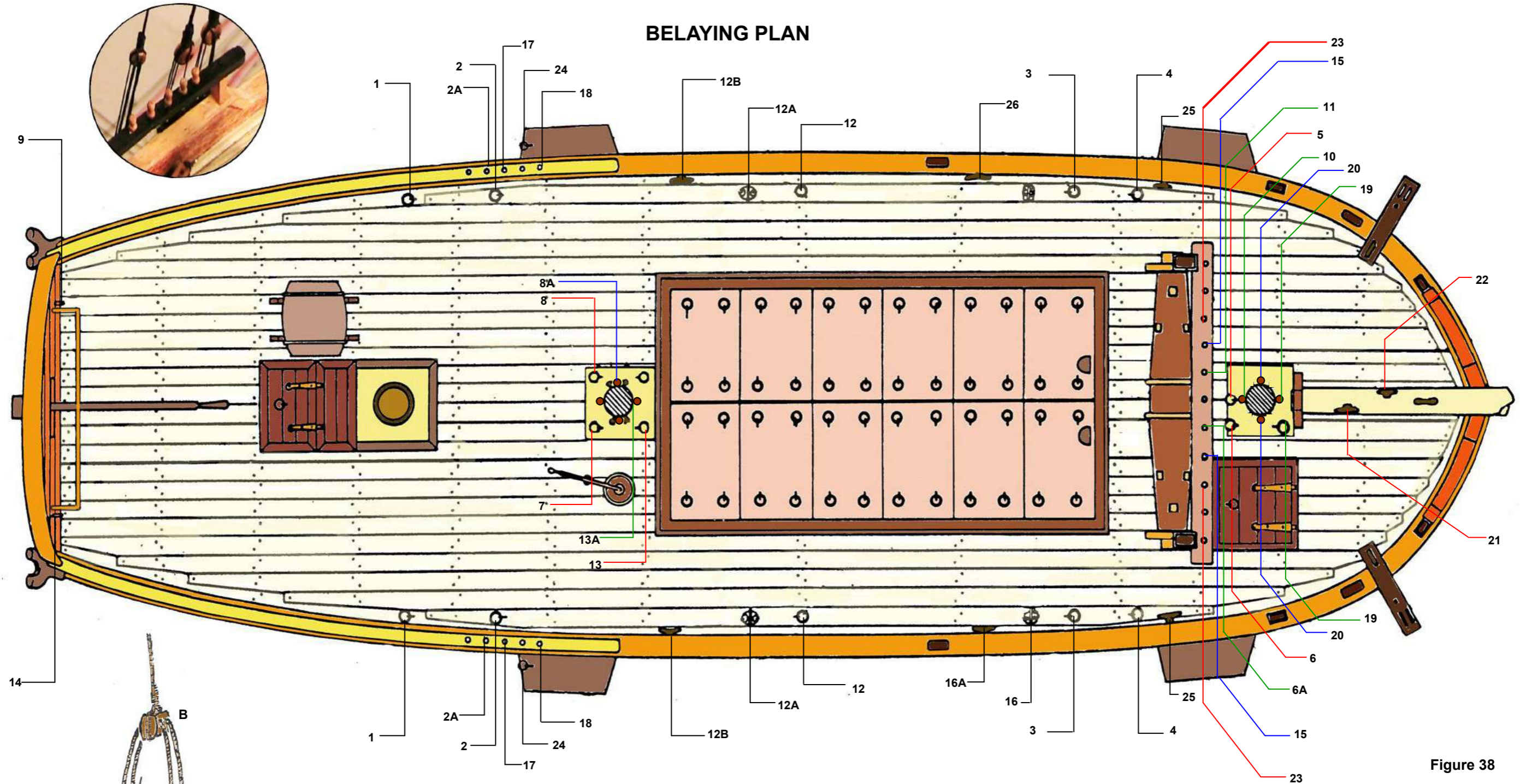
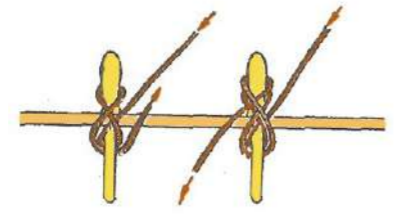


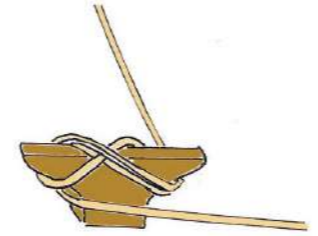
Figure 38



Reeve 2 hole block to 1 Hole block



Tie-off Belaying Pins



Tie-off Cleat

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

8.6 Tackles

Rig the foremast and main mast tackles with the blocks E P81 & blocks F P93 and cord K P95, cord J P94 and cord H P66 as shown. Fix an eye pin P38 to the blocks as shown. Main mast terminate tackle at 2 and tie-off at 2A. Foremast tackle terminate at 3 and tie-off at 4. Repeat for other side of hull.

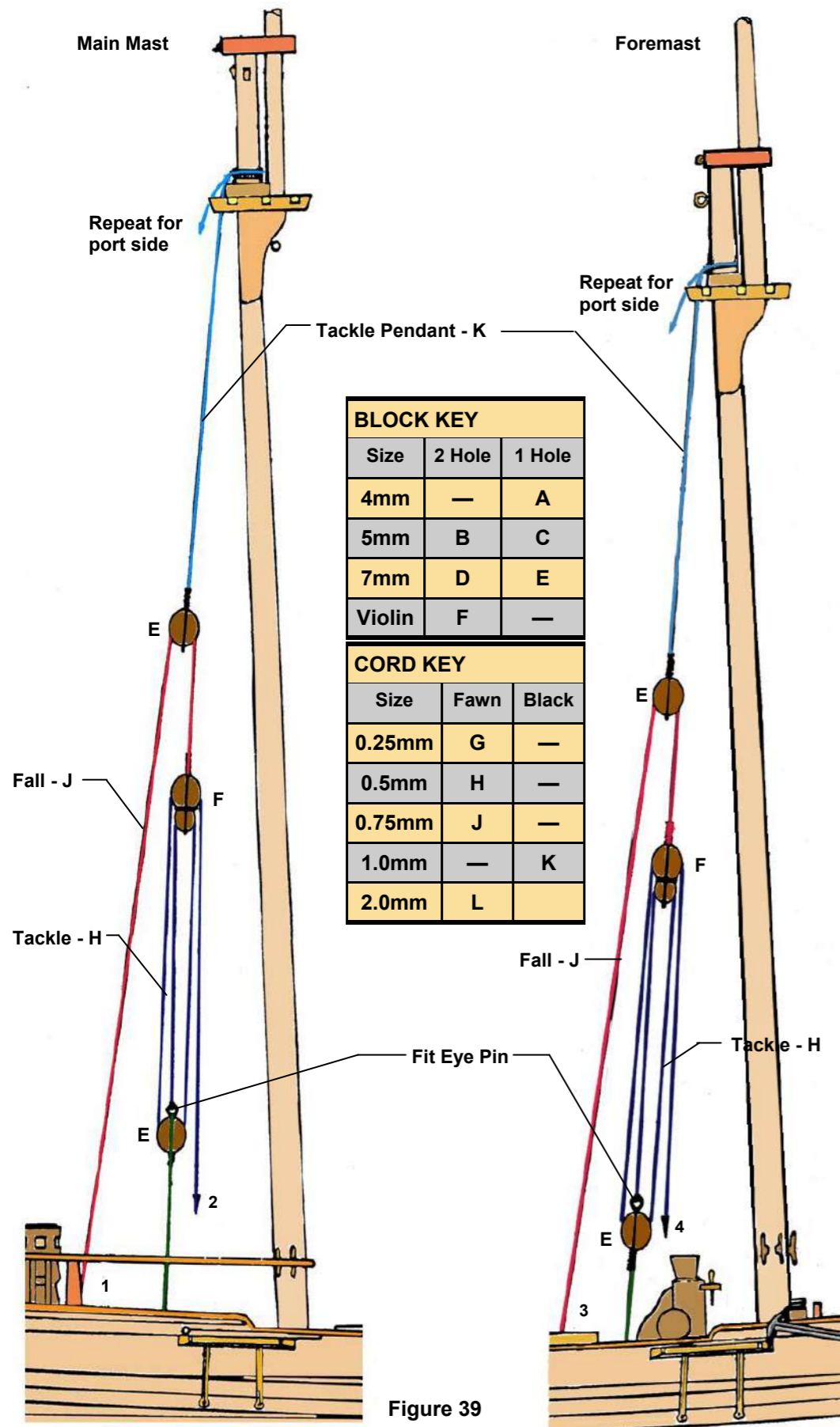
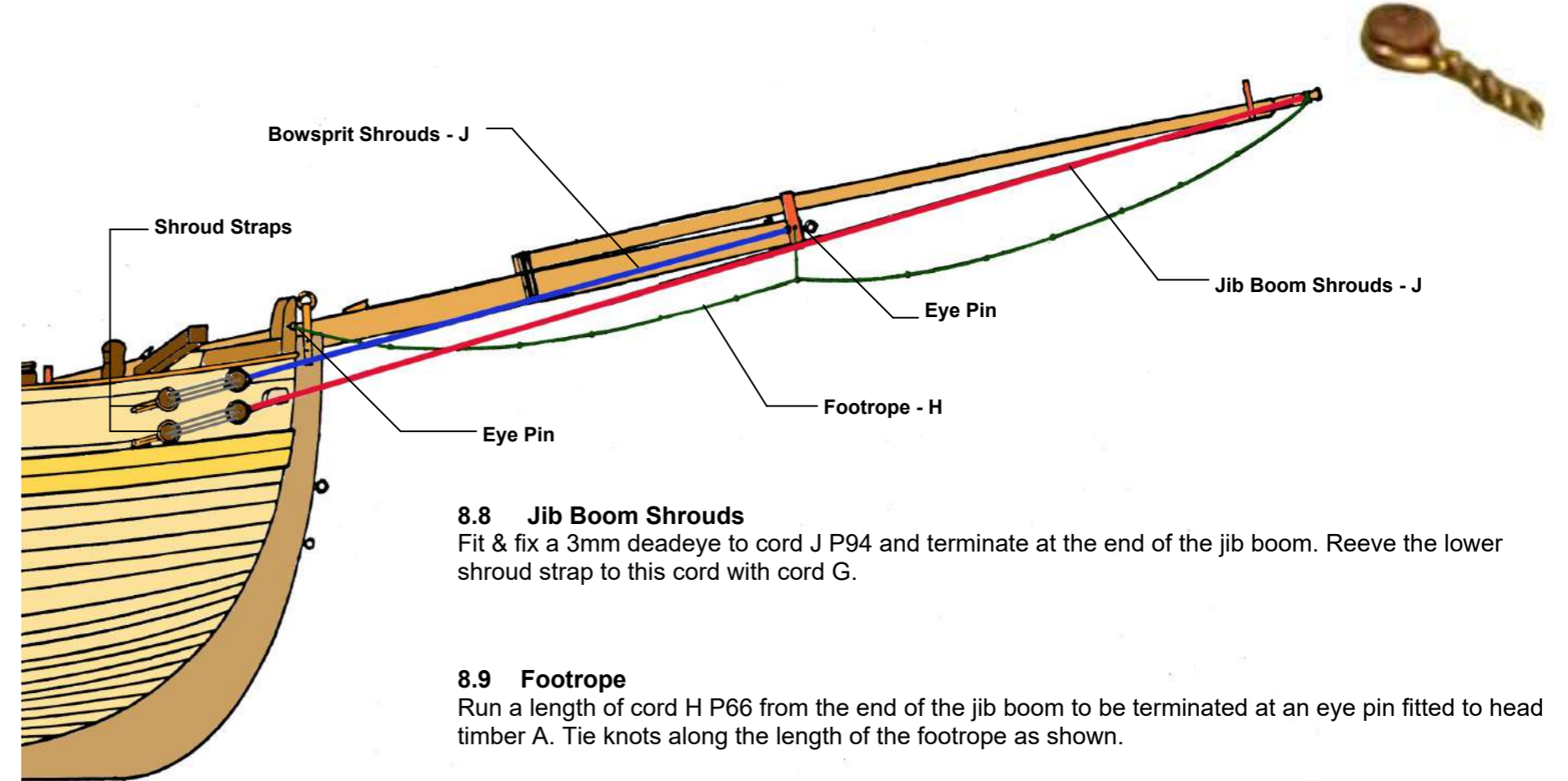


Figure 39

8.7 Bowsprit Shrouds

Use 0.5mm brass wire P91 to make 4 shroud straps using 3mm deadeyes P96 as shown. Drill holes into the bulwark and fit & fix the shroud straps to the hull as shown. Fit & fix a 3mm deadeye to cord J P94 and terminate at the previously fitted eye pin on each side of the bowsprit cap. Reeve the upper shroud strap to this cord G.



8.8 Jib Boom Shrouds

Fit & fix a 3mm deadeye to cord J P94 and terminate at the end of the jib boom. Reeve the lower shroud strap to this cord with cord G.

8.9 Footrope

Run a length of cord H P66 from the end of the jib boom to be terminated at an eye pin fitted to head timber A. Tie knots along the length of the footrope as shown.

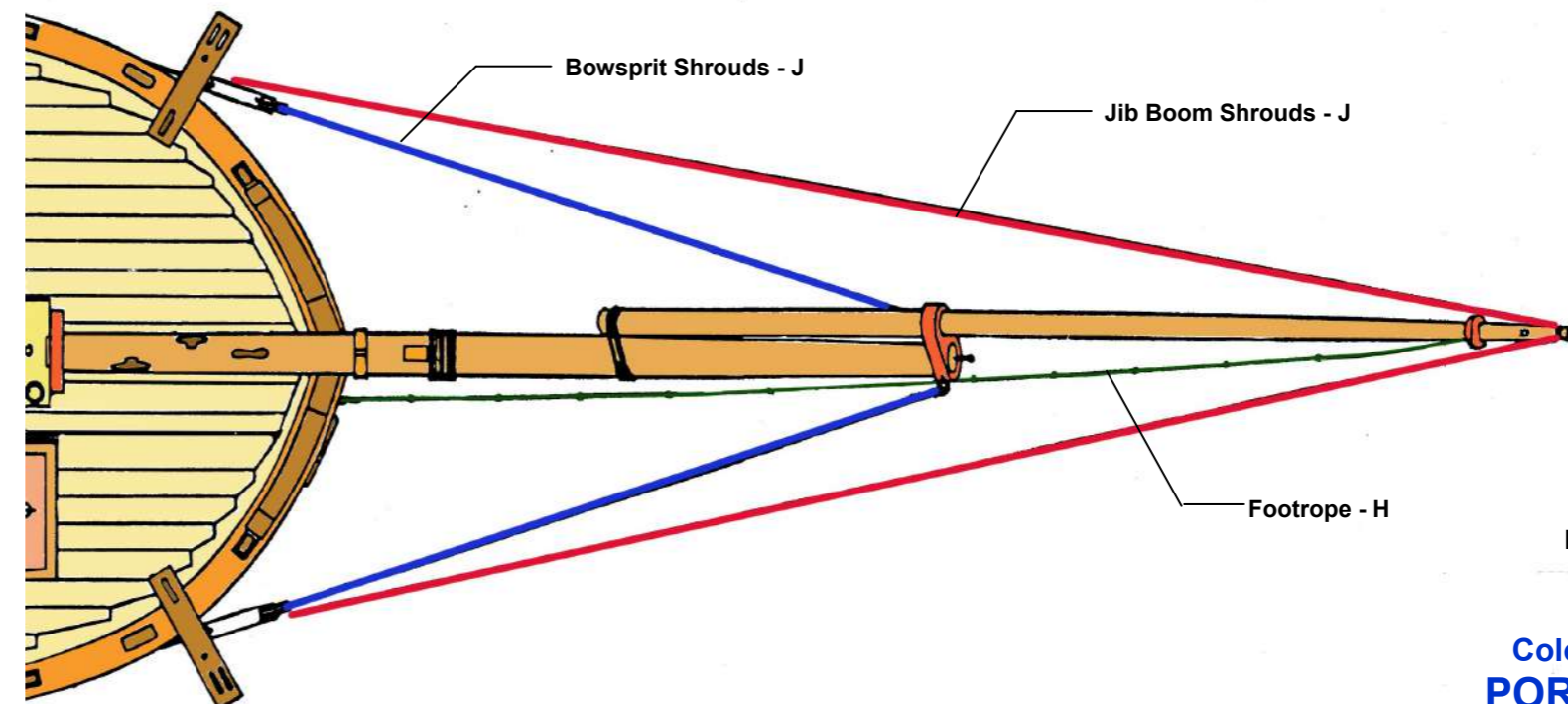


Figure 40

8.10 Gammoning

Use a length of 1mm brass wire P56 to make a 10mm triangular gammoning ring as shown. Fix eye pins P38 to the stem post as shown - attach the gammoning ring to the top eye pin. Using cord J start by fitting the line to the gammoning ring in the starboard corner; then lead upward diagonally on the port side of the bowsprit; over against the cleat and down to the port side of the ring, then up in the opposite direction and back to the starboard side of the ring. Continue for eight turns over the bowsprit. The end of the line should be seized around the centre crossed part.

8.11 Bobstay

Using cord J tie a 3mm deadeye P96 to the bowsprit as shown. Cut a length of cord and fit another 3mm deadeye to one end. Tie the other end off at the eye pin P29 fitted to the stem post. Reeve the two deadeyes together with cord G.

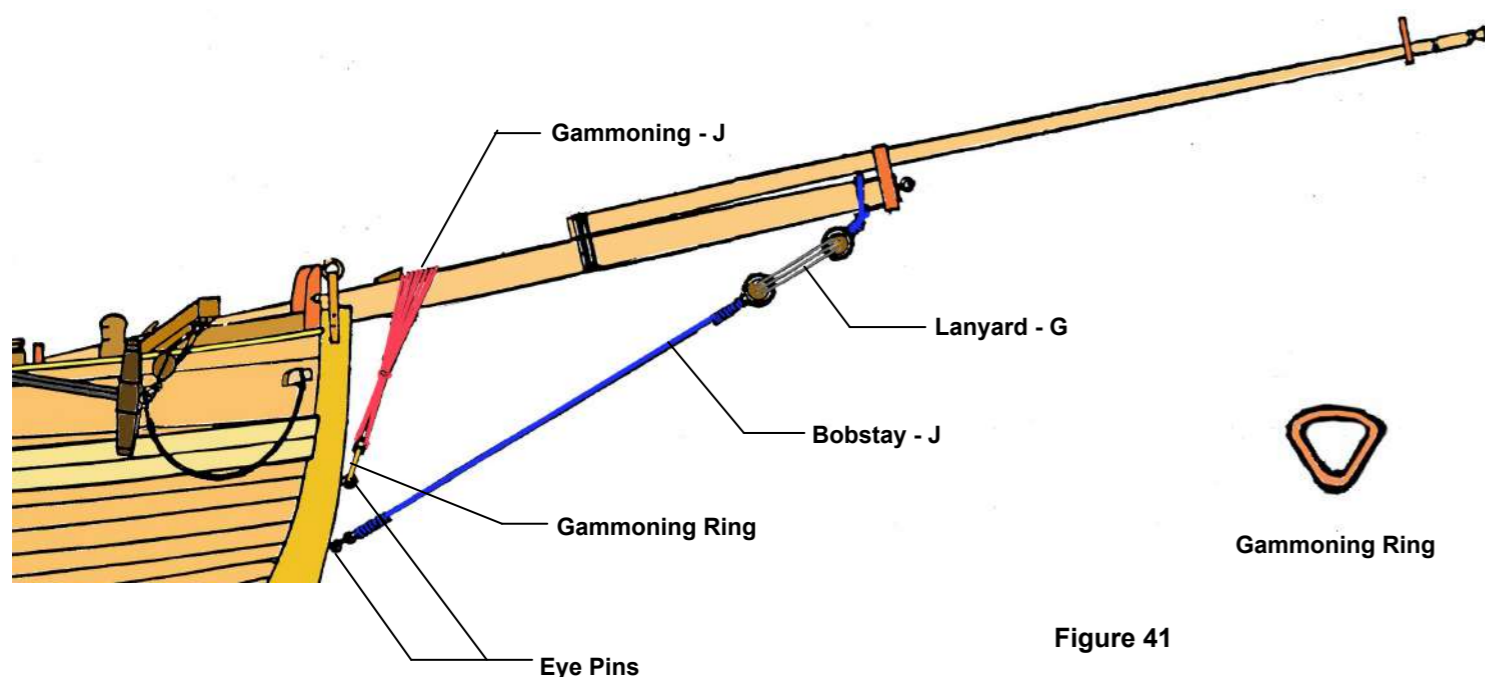


Figure 41

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.5mm	H	—
0.75mm	J	—
1.0mm	—	K
2.0mm	L	—

8.12 Stays - Foremast

The foremast forestays are shown below. Install the inner forestay, outer forestay and fore topmast stay as shown. Fit a deadeye heart P98 to one end of the inner forestay and another to the eye pin on the top of the stem post. Reeve the deadeye hearts together using cord G. Run the outer forestay and terminate at a 5mm deadeye P92. Fit another 5mm deadeye to the bowsprit as shown and reeve the two deadeyes using cord G.

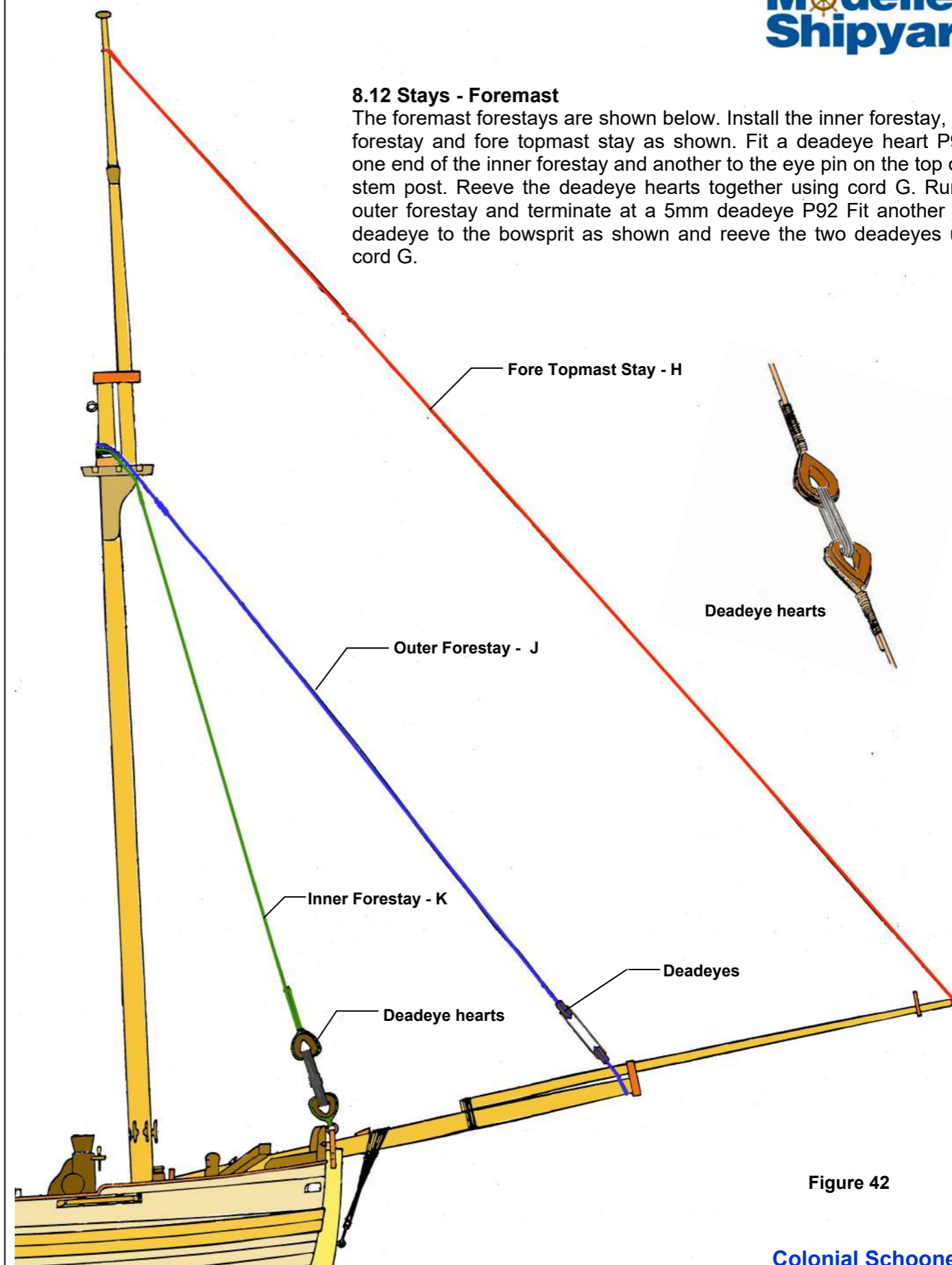


Figure 42

8.14 Mainstay

Install the mainstay and fit a block B to one end as shown. Reeve block B to previously fitted block C - terminate at Point 6 and tie-off at 6A.

8.13 Main Topmast Stay

Fit the main topmast stay and terminate at 5.

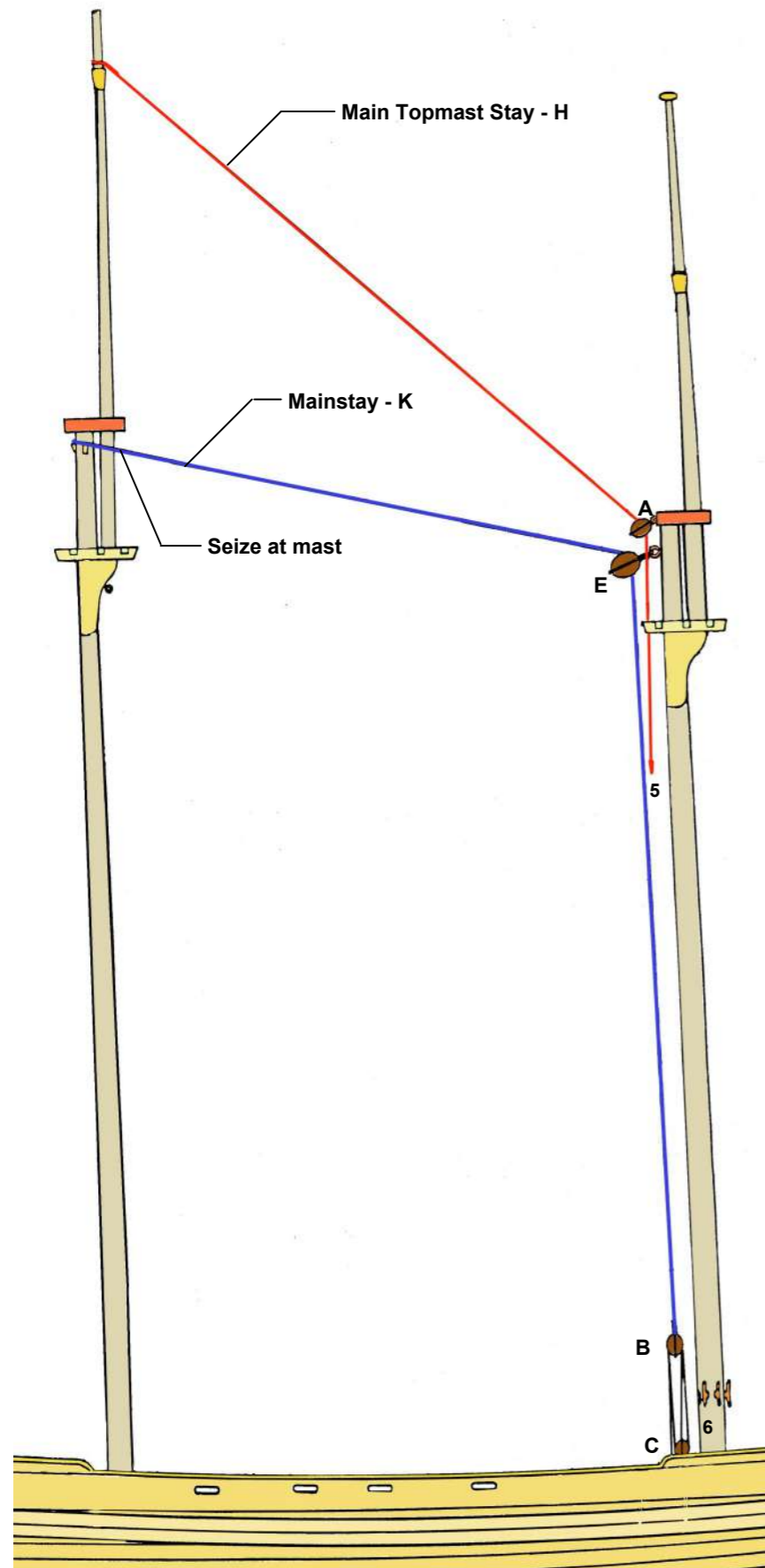


Figure 43

8.15 Backstay Straps

Use 0.5mm brass wire P91 to make 4 deadeye straps using 3mm deadeyes P96 as shown. Drill holes into the bulwark and fit & fix the shroud straps to the hull as shown.

8.16 Main Topmast Backstay

Fit the Main Topmast Backstay - attach 3mm deadeye to end and reeve the deadeyes with cord G. Repeat for port side.

8.17 Fore Topmast Backstay

Fit the Fore Topmast Backstay - attach 3mm deadeye to end and reeve the deadeyes with cord G. Repeat for port side.

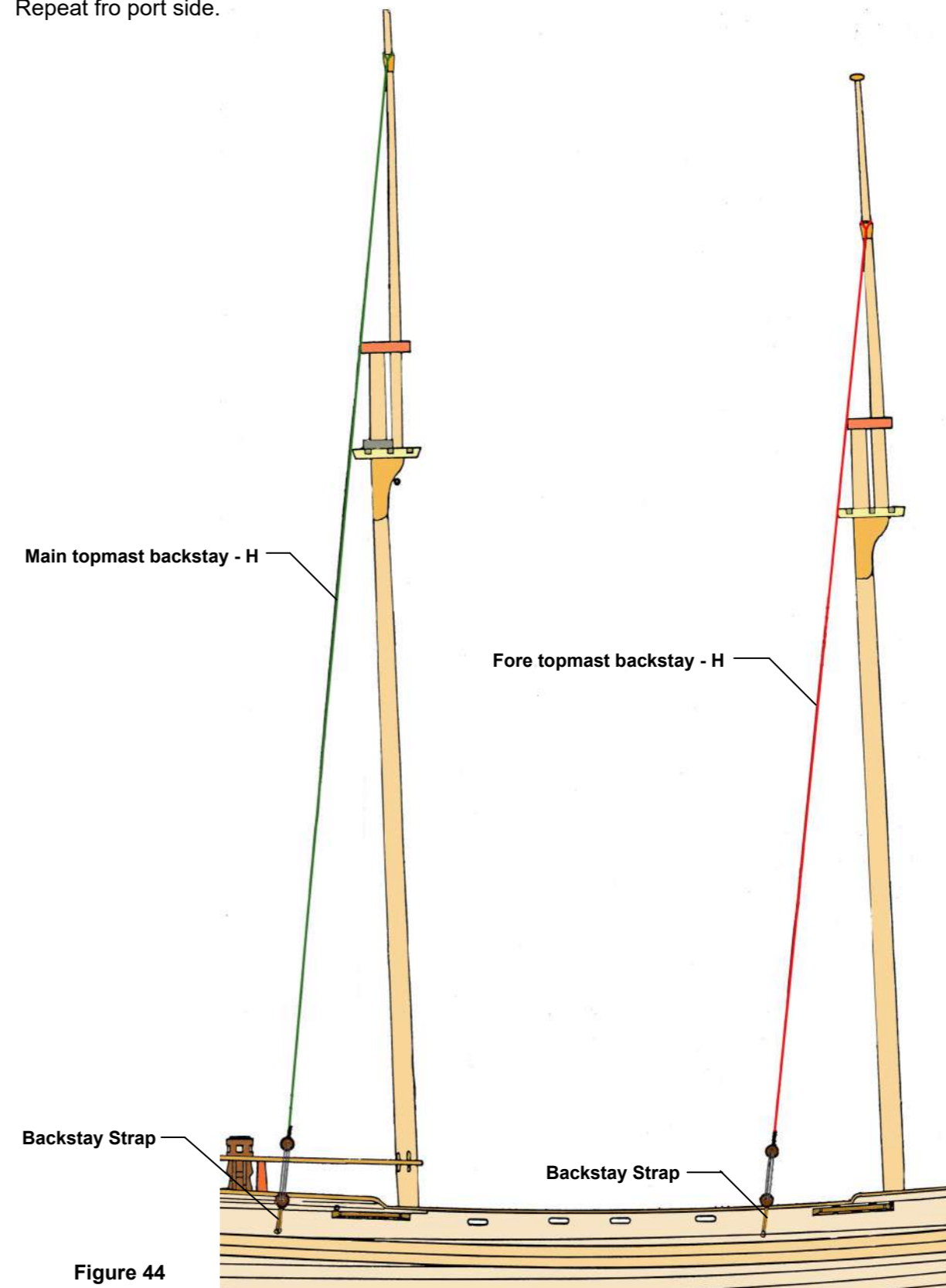


Figure 44



Backstay Strap

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.5mm	H	—
0.75mm	J	—
1.0mm	—	K
2.0mm	L	—

8.5 Running Rigging

The running rigging is not tensioned but left slightly loose except for the bowsprit guys. While completing the running rigging make sure to follow the rigging points previously presented. Fit each rigging line in sequence and as shown using the cord indicated. All rigging points are shown Sheet 28.

8.5.1 Main Gaff Throat Halliard

Identify the main mast gaff previously made. Using cord G fit parrel beads P98 as shown Figure 45. Attach the gaff to the mast and tie off the cord. Rig the throat halliard as shown Figure 46. Terminate at 7.

8.5.2 Main Peak Halliard

Rig the main peak halliard as shown. Extend to the tackle. Reeve the B block & the previously fitted C block together and terminate at 8 and tie off at 8A

8.5.3 Flag Line

Rig the flag line as shown. Start/finish at 9.

8.5.4 Fore Gaff Throat Halliard

Identify the foremast gaff previously made. Using cord G fit parrel beads as shown Figure 45. Attach the gaff to the mast and tie off the cord. Rig the throat halliard as shown. Terminate at 10.

8.5.5 Fore Peak Halliard

Rig the main peak halliard as shown and terminate and tie off at 11.

8.5.6 Pendants

For the pendants fit block C to the cord ends and rig as shown.

8.5.7 Vangs

Rig the vangs as shown. Start at 12, terminate at 12 A and tie-off at 12B

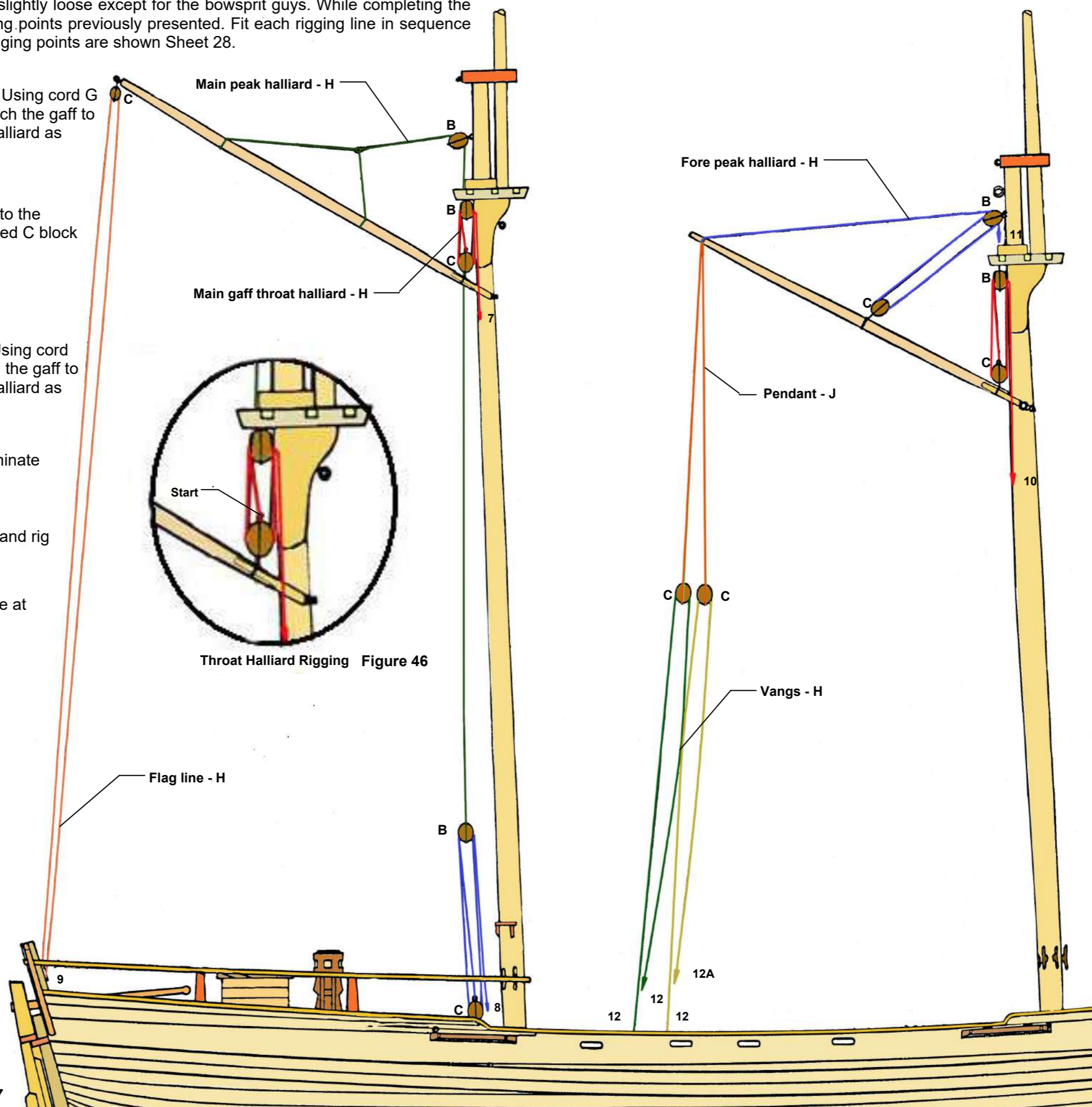


Figure 47

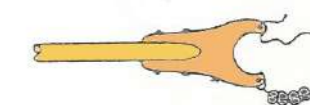


Figure 45

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

CORD KEY		
Size	Fawn	Black
0.25mm	G	—
0.5mm	H	—
0.75mm	J	—
1.0mm	—	K
2.0mm	L	—

8.5.8 Boom

Identify the boom previously made. Using cord G fit parrel beads as shown Figure 50. Attach the boom to the mast and tie off the cord.

8.5.9 Topping Lift

Rig topping lift as shown starting at the mast cap block B with a knot in one hole. Rig as shown fitting a block B to the end as shown. Reeve to the previously fitted block C at 13 - terminate at 13 and tie-off at 13A

8.5.10 Boom Sheets

Fit block D to the Boom Sheet Traveller. Reeve the two blocks D P101 together. Tie off at 14.

8.5.11 Main Sail Sheet & Tackle

Rig as shown fitting a block B at the end. Reeve the blocks B & C and terminate at cleat A as shown.

8.5.12 Guy Pendant Tackle

Reeve blocks together and terminate at 2. The guy pendant is show rigged to the starboard side. It can be rigged to the port side if desired.

8.5.13 Foot Rope

Use cord H to run the foot rope - tie knots in its length as shown.

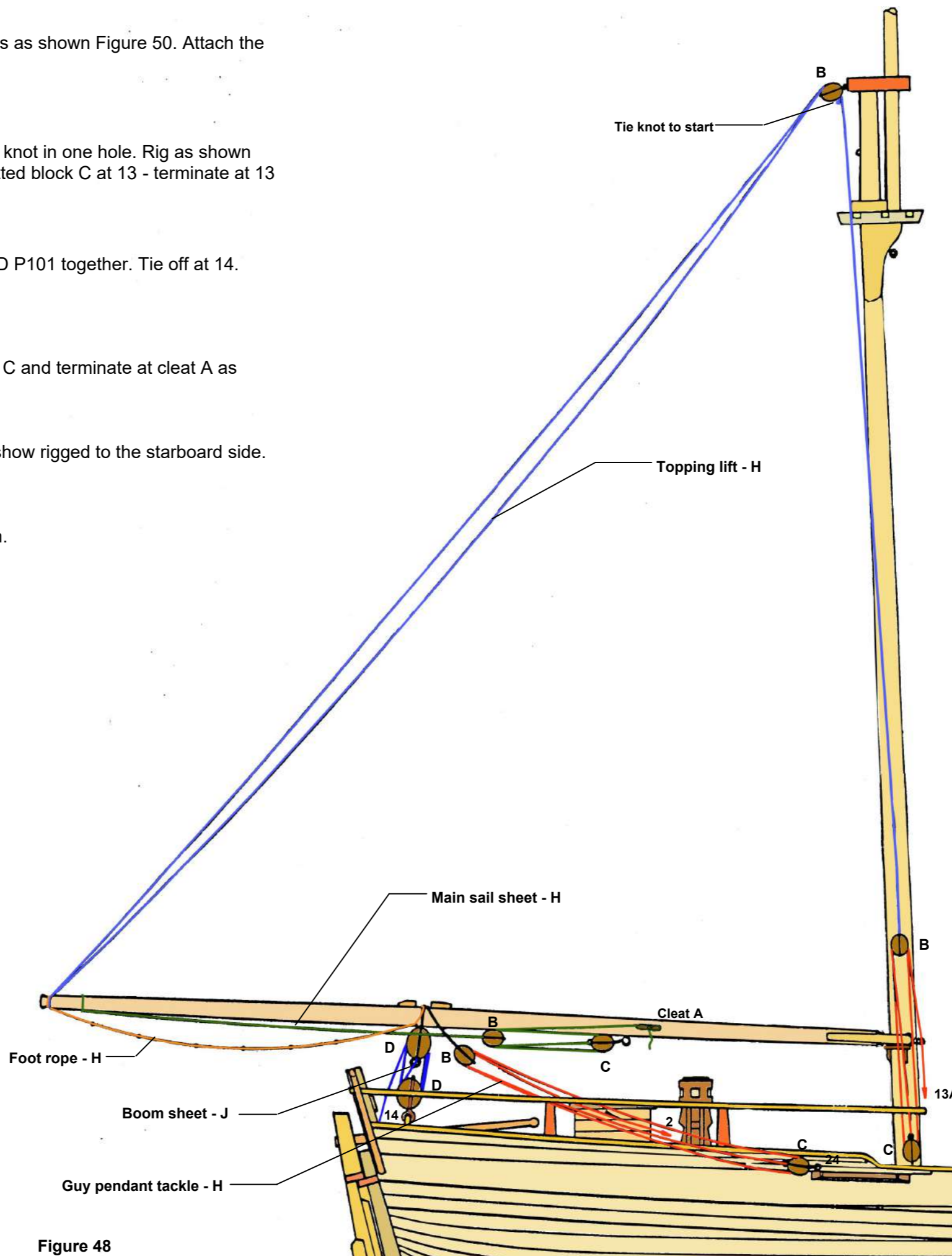


Figure 48

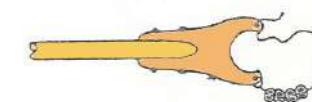


Figure 49

CORD KEY			BLOCK KEY		
Size	Fawn	Black	Size	2 Hole	1 Hole
0.25mm	G	—	4mm	—	A
0.5mm	H	—	5mm	B	C
0.75mm	J	—	7mm	D	E
1.0mm	—	K	Violin	F	—
2.0mm	L	—			

8.5.14 Fore Lower Yard

Identify the fore lower yard previously made. Make the sling using cord H as shown Figure 50 and attach one end to the yard and the other is slung over the mast cap as shown. Attach the yard to the mast with the truss using cord H - Figure 51.

8.5.15 Lifts - Lower Fore Yard

Rig as shown. Start at block B on side of mast cap with a knot in one hole - rig as shown and terminate at 23. Repeat for port side.

8.5.16 Fore Top Yard

Identify the fore top yard previously made. Attach to the mast with the truss - Figure 51

8.5.17 Lifts - Fore Top Yard

Rig as shown - start at yard end and terminate at 15. Repeat for port side.

8.5.18 Halliard - Fore Top Yard

Drill hole in top mast as shown. Tie cord to fore top yard up through this hole and down as shown - attach block C to cord end as shown. Reeve this block to previously fitted block on deck at point 16 - terminate at 16 and tie off at 16A.



Figure 50

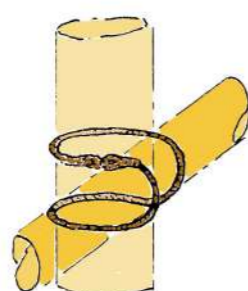


Figure 51

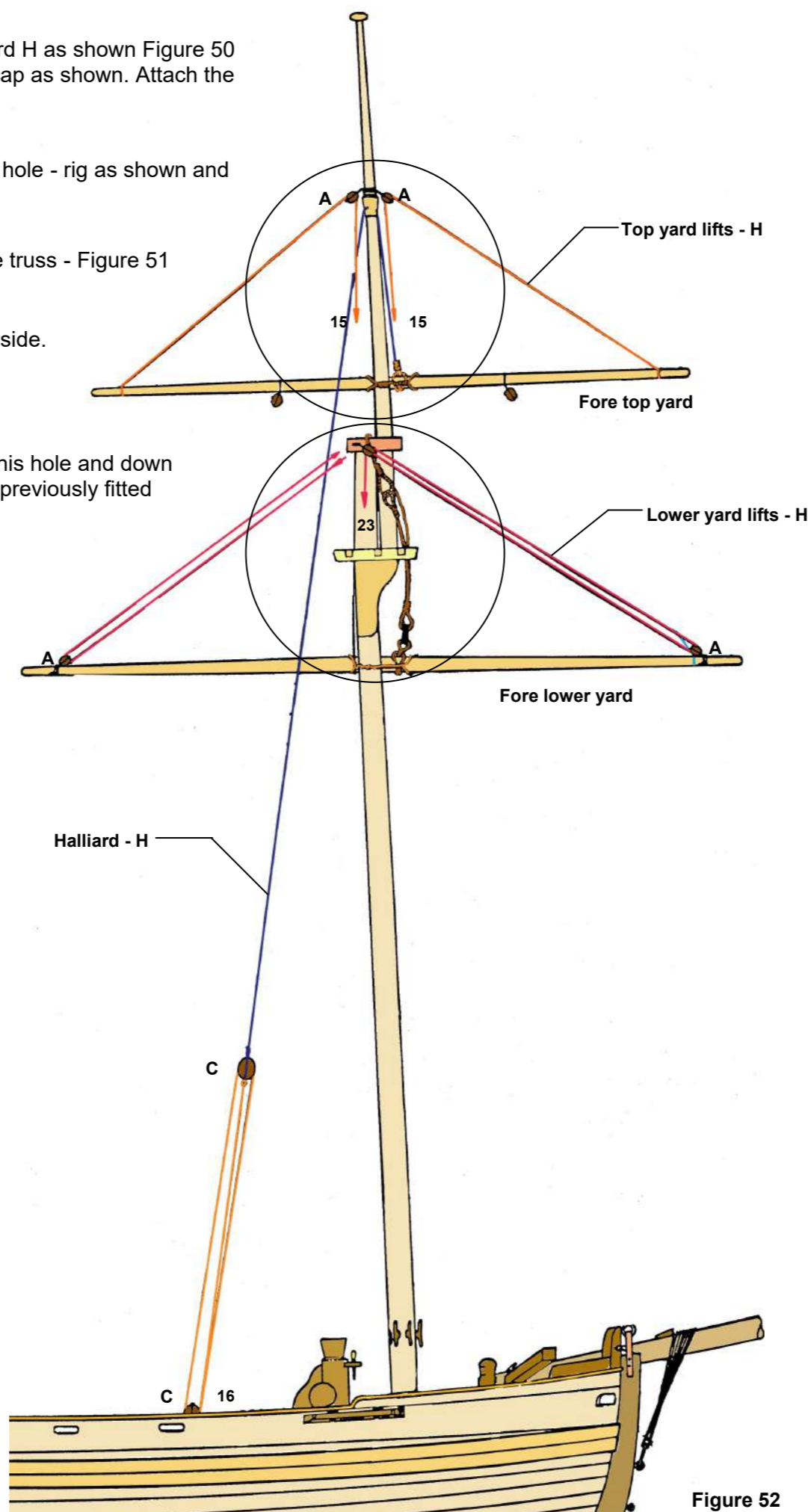
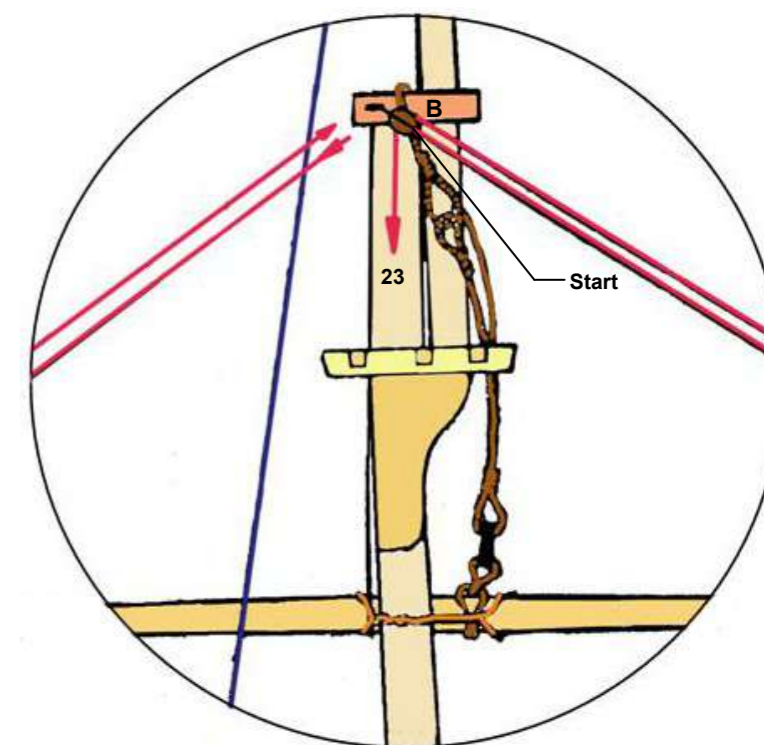
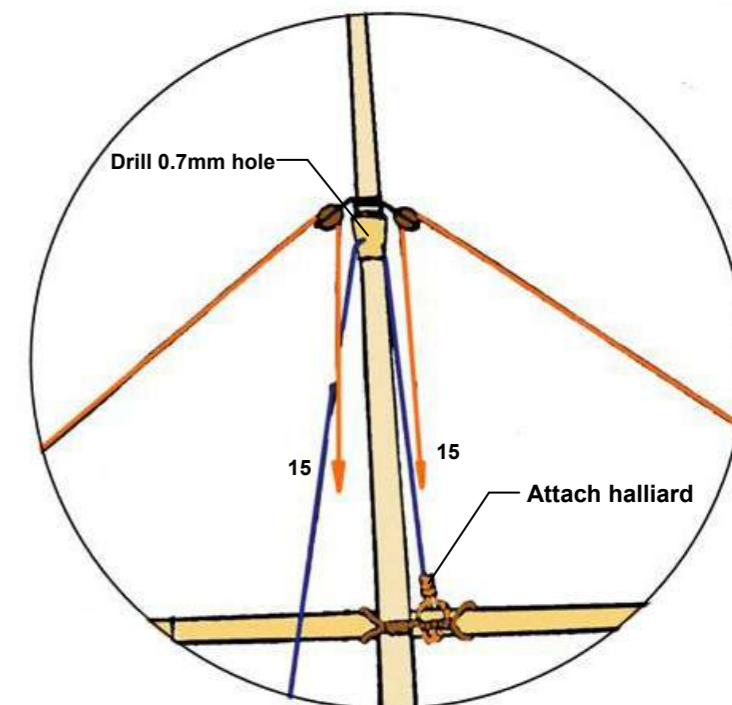


Figure 52



CORD KEY			BLOCK KEY		
Size	Fawn	Black	Size	2 Hole	1 Hole
0.25mm	G	—	4mm	—	A
0.5mm	H	—	5mm	B	C
0.75mm	J	—	7mm	D	E
1.0mm	—	K	Violin	F	—
2.0mm	L	—			

8.5.19 Sheets

Rig cord from end of fore lower yard as shown and terminate at 19 on port and starboard sides.

8.5.20 Brace Pendants

Cut two 75mm lengths of cord H and fit a block B to one end of each. Tie the other end of the pendant to the end of the fore lower yard as shown.

8.5.21 Brace Falls

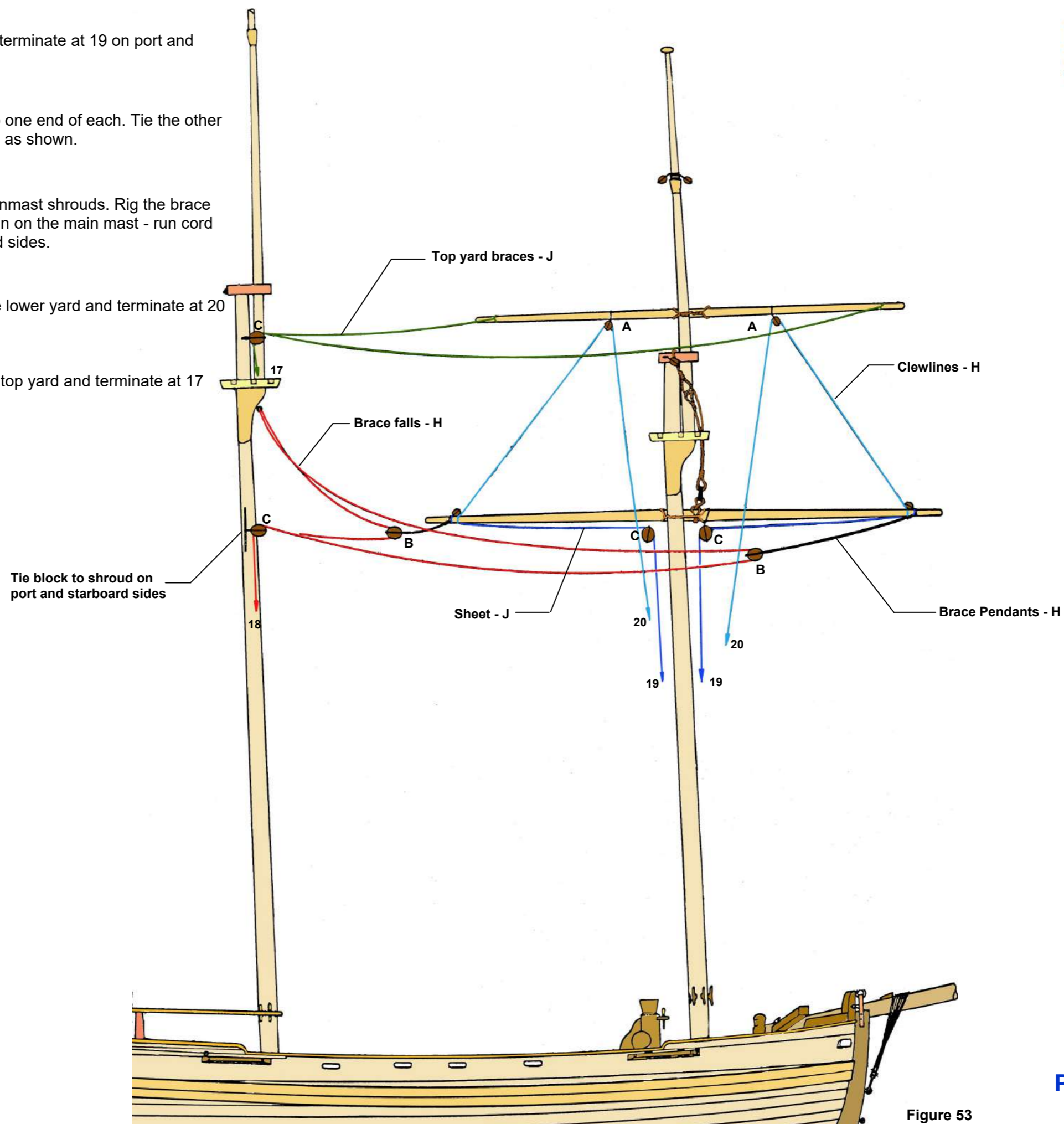
Attach a block C on the fore port and starboard mainmast shrouds. Rig the brace falls as shown starting at the previously fitted eye pin on the main mast - run cord as shown and terminate at 18 on port and starboard sides.

8.5.22 Clew lines

Rig the clew lines as shown starting at the end of the lower yard and terminate at 20 on the port and starboard sides

8.5.23 Top Yard Braces

Rig the braces as shown starting at the ends of the top yard and terminate at 17 on the port and starboard sides.



CORD KEY			BLOCK KEY		
Size	Fawn	Black	Size	2 Hole	1 Hole
0.25mm	G	—	4mm	—	A
0.5mm	H	—	5mm	B	C
0.75mm	J	—	7mm	D	E
1.0mm	—	K	Violin	F	—
2.0mm	L	—			

Figure 53

8.5.24 Traveller Out haul/In Haul & Tackle

Drill 0.7mm hole in end of jib boom. Tie a block C to a short length of cord H and tie-off to the eye pin to the end of the bowsprit as shown. Fit another block C to the end of a length of cord H run cord as shown - terminate at 22. Reeve the two blocks together with cord H - terminate at 21.

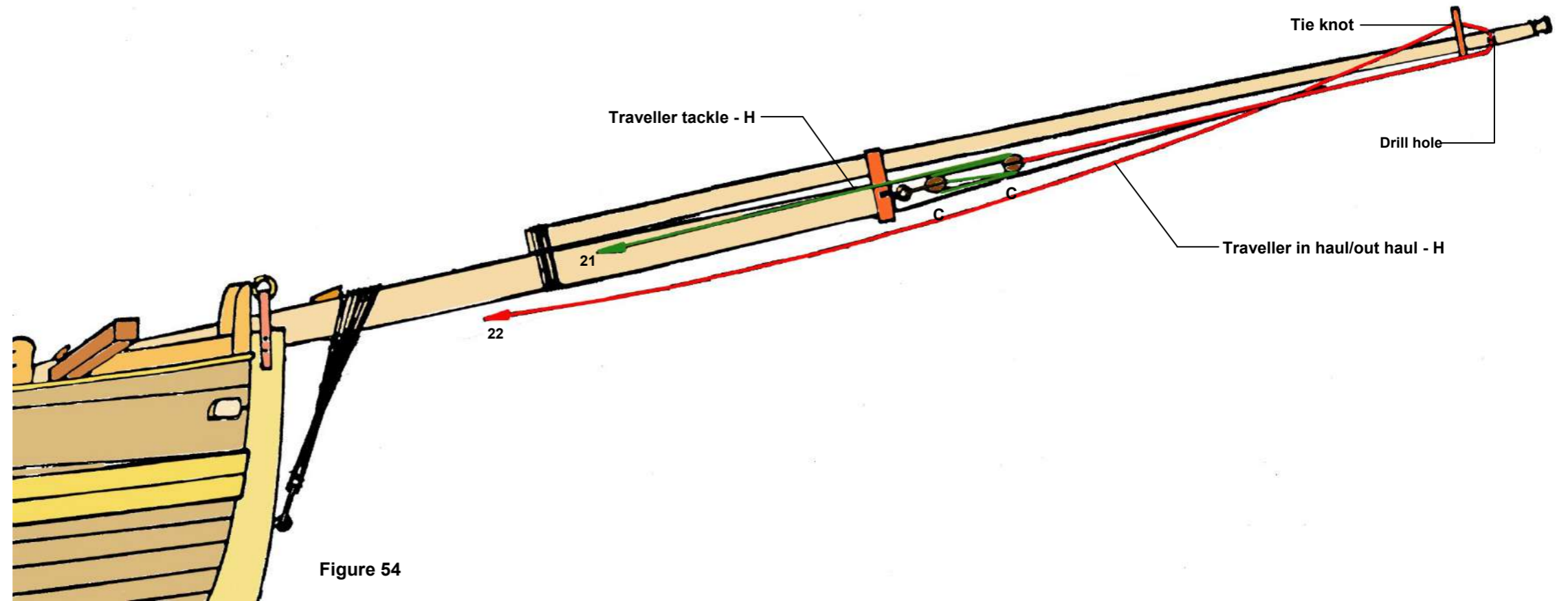


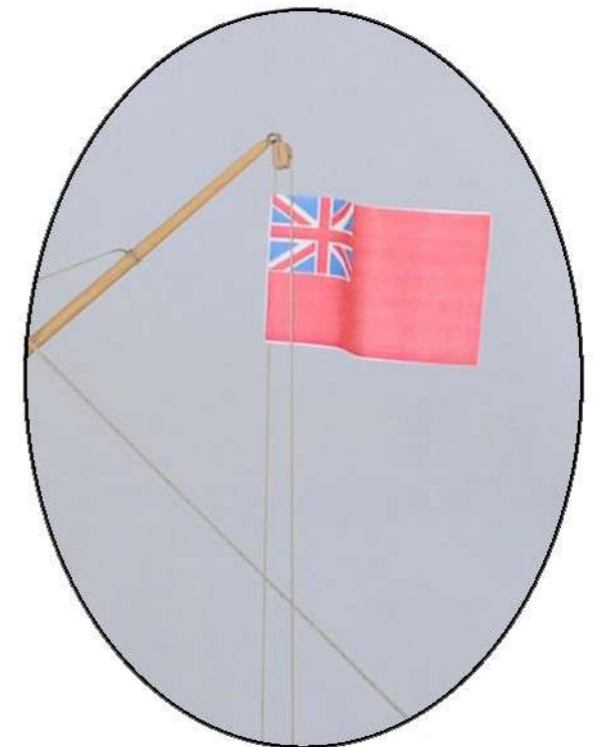
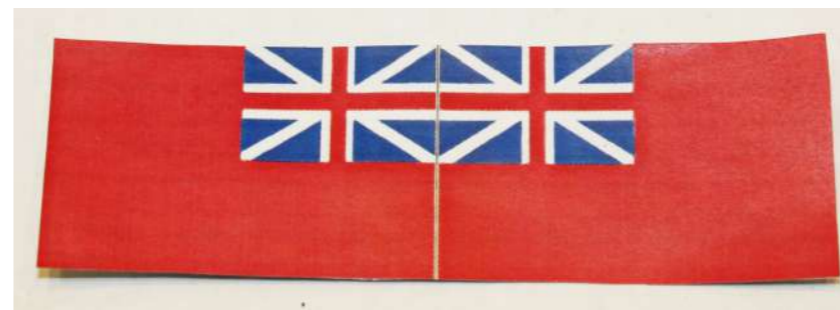
Figure 54

CORD KEY			BLOCK KEY		
Size	Fawn	Black	Size	2 Hole	1 Hole
0.25mm	G	—	4mm	—	A
0.5mm	H	—	5mm	B	C
0.75mm	J	—	7mm	D	E
1.0mm	—	K	Violin	F	—
2.0mm	L	—			

8.5.25 Flag

Identify the flag P99. To create the effect of wind blowing the flags follow the steps below.

1. Select a paper based glue and aluminium foil.
2. Trim any excess paper around the flag. Apply the glue to the reverse side. Cut a piece of foil slightly larger than the shape and size of the flag.
3. Lay the flag face up onto the foil - centrally locating the flag on the foil. Press firmly down on the flag to remove any air bubbles.
4. Apply glue to the foil surface and fold around the flag line - allow time for glue to dry.
5. Once glue has dried shape the flag to give the effect of blowing in the wind as shown.



9.0 Finishing Touches

Look carefully over all the drawings & photos and check to ensure that you have not forgotten anything.

You can make a few rope coils with cord H to place around the deck. Some small rope coils placed over the belaying pins will add a professional touch to your model.

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

