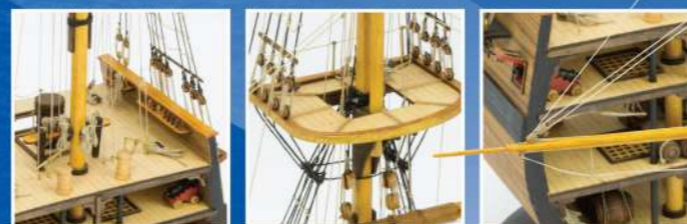


AUSTRALIAN COLONIAL SERIES
WOODEN MODEL KIT

HMS SIRIUS 1786 CROSS SECTION

SCALE 1:48



**Modellers
Shipyard**

www.modelshipyard.com.au

LENGTH: 140mm HEIGHT: 910mm WIDTH: 480mm

ITEM CODE: KTMS1006

BUILDING INSTRUCTIONS
Version 1.0



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 *Sirius* Cross Section was designed & built by Gary Renshaw. 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 *Sirius* had a relative short career, playing a minor role in Britain's withdrawal from America following the Revolutionary War and a major role in British expansion into the Pacific. Originally a Baltic trading ship named the *Berwick*, she made several voyages to North America carrying British troops before being recommissioned as the 20 - gun HMS *Sirius*, to escort the First Fleet to Australia in 1787-88. The role accomplished the *Sirius* assumed the mantle of protector and provider to the infant colony until her loss on 19 March 1790, at Norfolk Island.

The *Berwick* was built in 1780-1781, at London's Rotherhithe, then a shipbuilding village on the Thames. Originally built for the Baltic trade, the *Berwick* was purchased by the Royal Navy prior to completion and fitted out as an armed storeship. After purchase by the Royal Navy the *Berwick* was taken to Deptford on 1 December for work to commence on her refit. In the month of January 1782 her hull was coppered plated. The armed storeship *Berwick* sailed on 25 April 1782. These few years were a time of stress for the British government, facing defeat against her American colonies.

The *Berwick* was initially stationed at the Nore, off Sheerness at the mouth of the Thames. In 1782-1783 she twice visited Halifax harbour, Nova Scotia and New York before returning to Deptford for a refit on 25 October 1783. After her refit the *Berwick* sailed again on the 7 May 1784, firstly being sent to America and then onto the West Indies. The *Berwick* returned to Deptford on 5 February 1785, where she lay idle, effectively out of commission for much of the next twenty months.

On the 23 August 1786 orders arrived from the Admiralty to the Navy Board to prepare the *Berwick* to be employed on 'foreign service'. Work began on the 6th September, commencing a comprehensive refitting of the *Berwick*. On the 12 October 1786 Admiral Howe wrote to the Navy Board requesting His Majesty's storeship the *Berwick*, be registered on the list of the Royal Navy as a 6th Rate by the name of the *Sirius*.

The *Sirius*, captained by John Hunter, led the First Fleet on their journey departing Great Britain on 13 May 1787. The First Fleet was made up of eleven vessels, two navy ships HMS *Sirius* and HMS *Supply* and nine privately owned, contracted transports, all under the command of Captain Arthur Phillip.

The First Fleet reached Tenerife in the Canary Islands on the 3 June, before moving onto a month long stopover in Rio de Janeiro, Brazil at the end of August. They arrived at the Cape of Good Hope, South Africa on October 13. They departed for the final leg of their journey on November 11 with the entire First Fleet reaching Botany Bay between 18-20 January 1788 and Port Jackson on January 26. It took 184 days to complete the voyage at sea having travelled 15,063 miles.

With most of the settlements concentration on the establishment of the colony the HMS *Sirius* remained idle until September when Phillip made the decision to send her to Cape Town, South Africa for much needed supplies. Captain John Hunter set off east with the wind towards Cape Horn, seeking to travel through the dangerous passage of ice and storms through the roaring forties. They arrived safely at Cape Town leaving port for the return voyage in February 1789. It was towards the end of the return voyage the HMS *Sirius* was almost lost off the east coast of Tasmania, facing terrific storms which battered the vessels, it was so violent the figurehead was lost, with further damaged sustained. The *Sirius* limped into Port Jackson on 9 May 1789, with vital supplies for the colony.

After some much needed repairs the *Sirius* was once again prepared for sea. In February 1790 the shortage of supplies in the settlement had reached a critical stage. In an attempt to relieve pressure on the Port Jackson settlement, Governor Phillip determined on decisive action. He would send both the *Sirius* and the *Supply* to Norfolk Island to transport a number of convicts and marines to the Island. The *Sirius* would later proceed to China to buy supplies.

After a stormy passage the *Sirius* made Norfolk Island the morning of 13 March, moving around to Cascade Bay on the North east side of the Island where marines and convicts were landed. With the onset of bad weather the *Sirius* and *Supply* were driven out of sight of the Island. On the 19 March the gale moderated and the *Sirius* moved close to Sydney Bay on the other side of the island and the main landing place.

There the *Supply* was found already at anchor. Unfortunately the *Sirius* ran aground on the reef, with waves pushing her further onto the reef. There was little chance to refloat her. The hull of the *Sirius* withstood the powerful surf for a full two years before breaking up completely.

Sources:

1. "The Sirius: Past & Present" by Henderson, G & Stanbury, M: 1988. Published by Collins Australia
2. "A Voyage to New South Wales: The Journal of Lieutenant William Bradley of HMS Sirius 1786-1792" 1969. Published by Ure Smith Pty Ltd
3. "The Nagal Journal: A Diary of the Life of Jacob Nagle, Sailor, from the year 1775 to 1841" Edited by John C. Dann 1988. Published by Weidenfeld & Nicolson, New York.
4. "The First Fleet: The Convict Voyage that founded Australia 1787-88" , Jonathan King 1982, Macmillan Company of Australia.

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 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 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 *Sirius* Cross Section" is available from Modeller's Shipyard. In this DVD there is 3 1/2 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 *Sirius* Cross Section from opening the box to putting the finishing touches of the rigging.

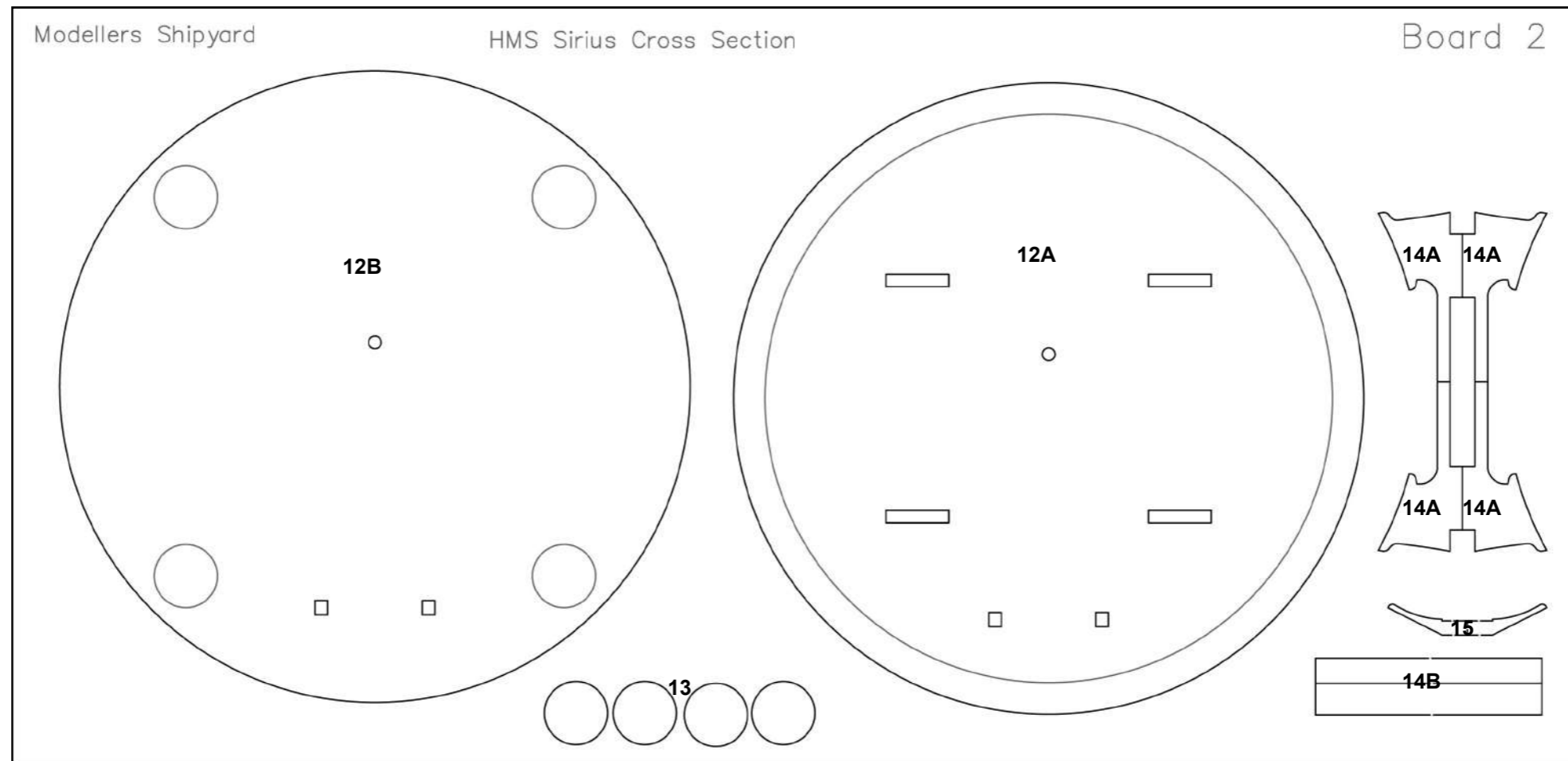
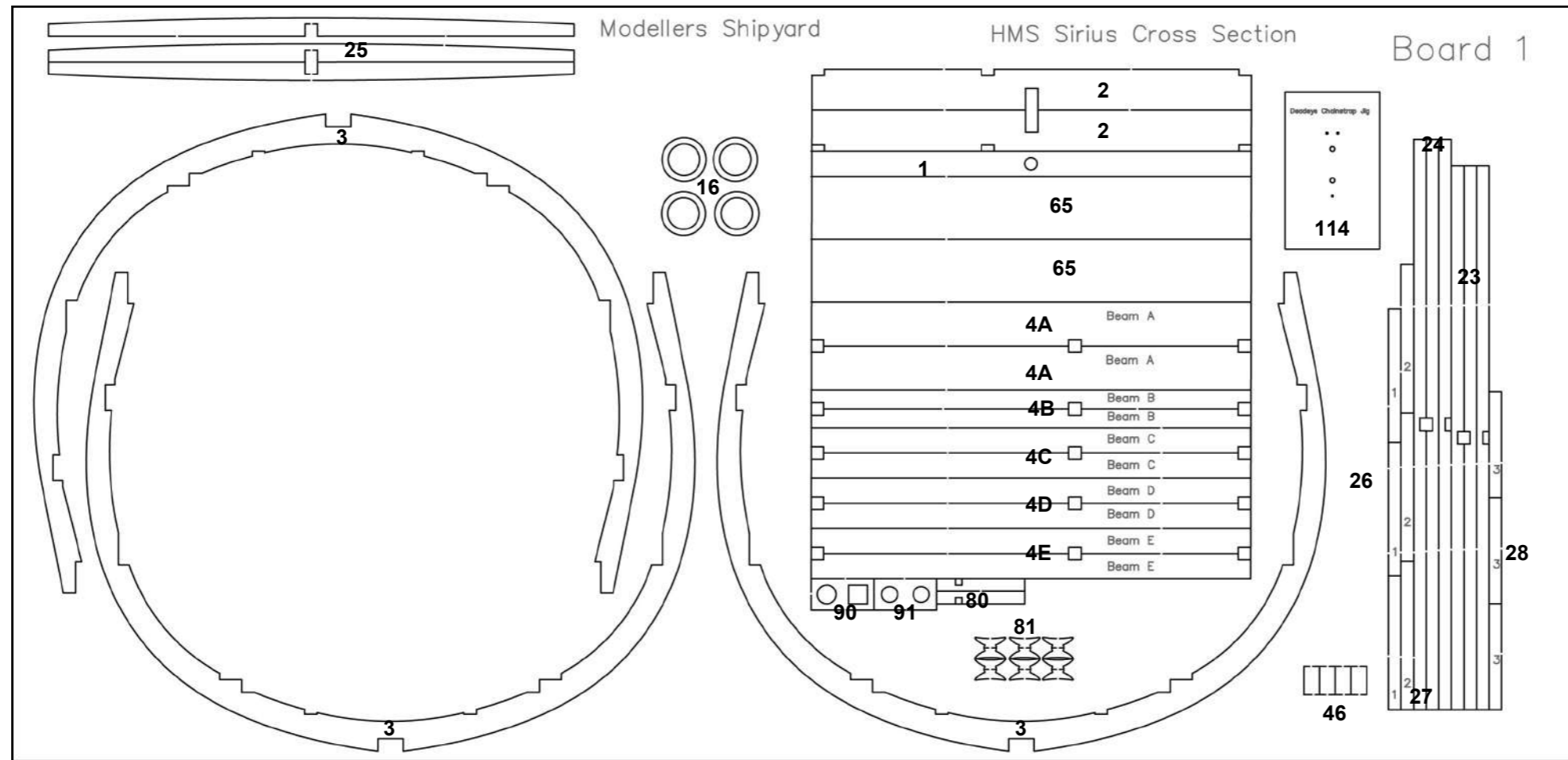
For further details on this DVD see our website www.modelerscentral.com — see DVD Practicums on our home page.

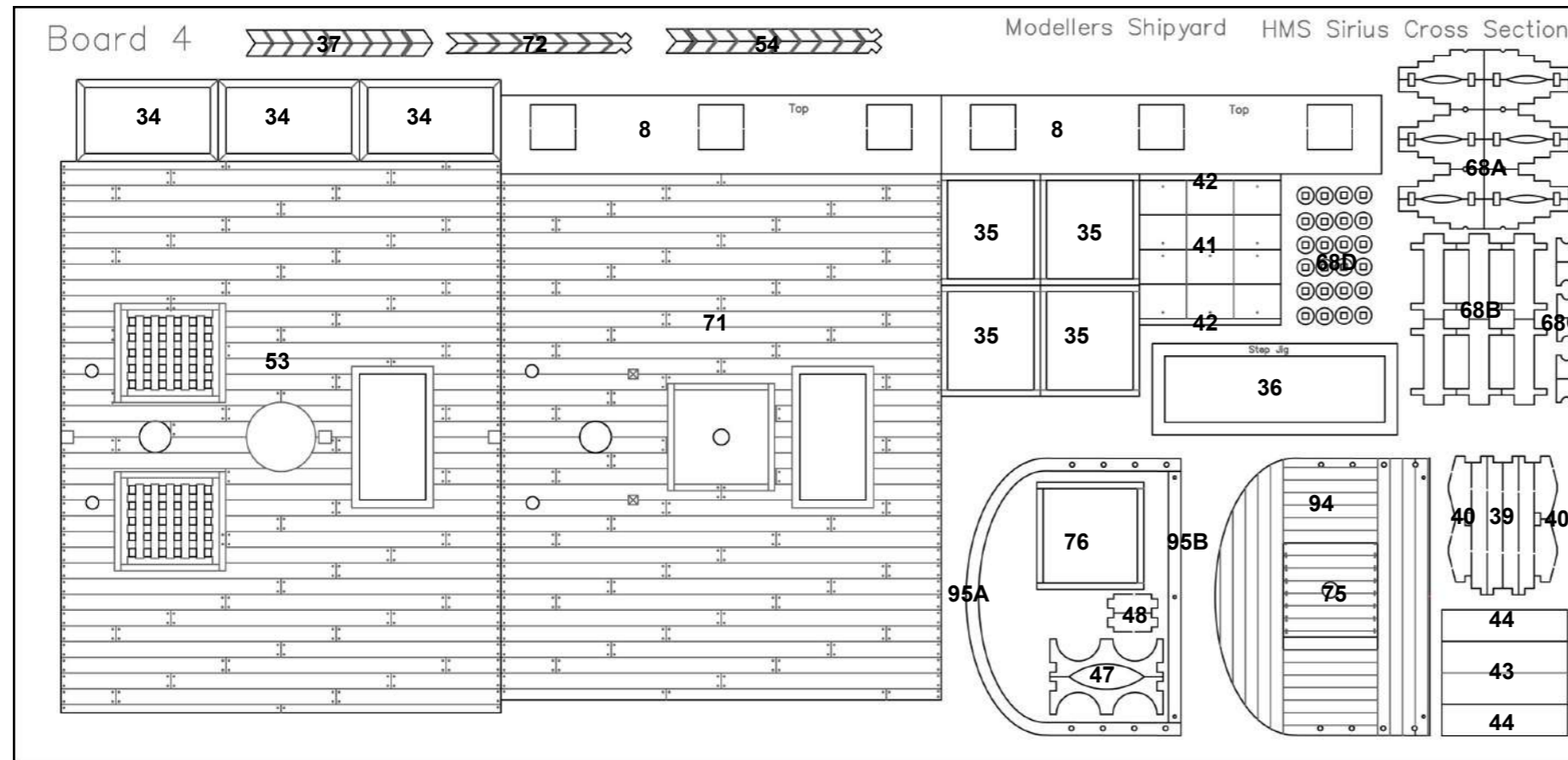
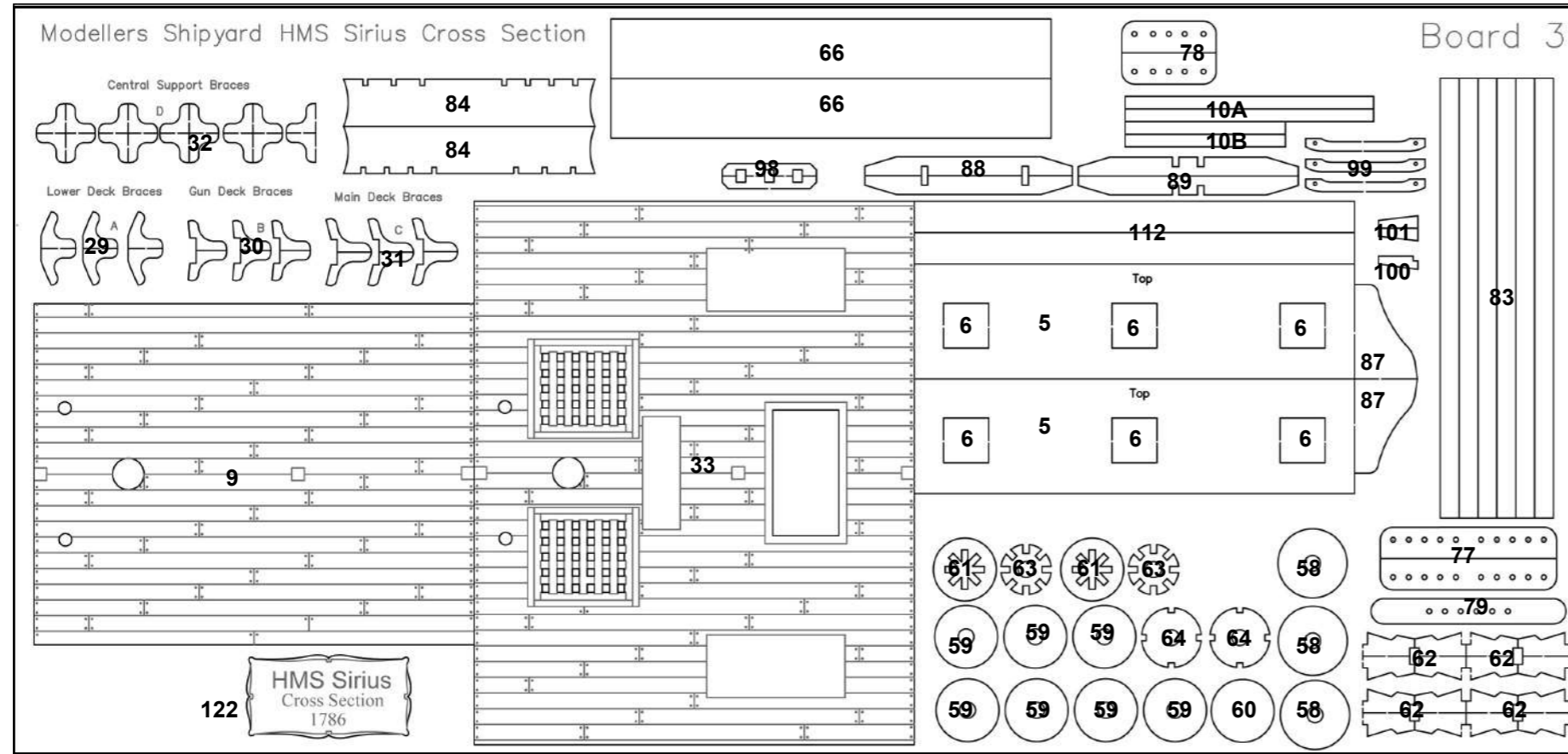


HMS SIRIUS
1786
Cross Section
SHEET 1

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	Location	Part No	Description	Quantity	Location	Part No	Description	Quantity	Location
1	Keel Base	1	Board 1	42	Locker Ridge Top	2	Board 4	83	Wales	6	Board 3
2	Keel	2	Board 1	43	Table Top	1	Board 4	84	Channel	2	Board 3
3	Hull Frames	3	Board 1	44	Benches	2	Board 4	85	Dowel 10mm x 500mm	1	Timber Stock
4A-E	Hull Beams	10	Board 1	45	Table Legs	4	Parts Card 3	86	Dowel 6mm x 330mm	2	Timber Stock
5	Freeboard - outboard	2	Board 3	46	Bench Legs	4	Board 1	87	Mast Cheeks	2	Board 3
6	Gun Port Lids	6	Board 3	47	Barrel Holder Front/Rear	2	Board 4	88	Trestle Trees - lower mast	2	Board 3
7	Limewood 2x5x500mm	40	Timber Stock	48	Barrel Holder Side	2	Board 4	89	Cross Trees - lower mast	2	Board 3
8	Freeboard - inboard	2	Board 4	49	Barrels - 15mm dia	2	Parts Card 2	90	Mast Cap - Lower Mast	1	Board 1
9	Deck - Orlop	1	Board 3	50	Stanchions - Brass	21	Parts Card 2	91	Mast Cap - Topmast	1	Board 1
10A-B	Inter-Frame Fillers	4	Board 3	51	Barrels - 12mm dia	3	Parts Card 2	92	Limewood 2x4x 330mm	1	Timber Stock
11	Ballast	Bag	Parts Card 2	52	Calico 80 x 70mm	1	Parts Card 2	93	Cord - Black 1mm	1	Parts Card 1
12A-B	Display Board	2	Board 2	53	Deck - Gun	1	Board 4	94	Mast Top	1	Board 4
13	Display Board Feet	4	Board 2	54	Gun Deck Ladder Runners	2	Board 4	95A-B	Top Rim	1	Board 4
14A-B	Cradle	4	Board 2	55	Gun Port Hull Filler	1	Board 5	96	Walnut 1x1x200mm	1	Timber Stock
15	Name Plate Supports	2	Board 2	56	Gun Port Frames	12	Board 5	97	Silver Ash 0.6x4x400mm	1	Timber Stock
16	Mast Heels	4	Board 1	57	Dowel 5mm x 300mm	1	Timber Stock	98	Trestle Trees - topmast	2	Board 3
17	Cord - Grey 1.25mm	1	Parts Card 1	58	Disc A	3	Board 3	99	Cross Tress - topmast	2	Board 3
18	Cord - Grey 0.25mm	1	Parts Card 1	59	Disc B	7	Board 3	100	Mast Cleat	1	Board 3
19	Barrels - 20mm dia	5	Parts Card 2	60	Disc C	1	Board 3	101	Shroud Cleat	2	Board 3
20	Eye Pins 3x12mm	Pkt	Parts Card 2	61	Whelps Base	2	Board 3	102	Dowel 8mm x 400mm	1	Timber Stock
21	Cord - Grey 0.75mm	1	Parts Card 1	62	Whelps	16	Board 3	103	Dowel 3mm x 200mm	2	Timber Stock
22	Cord - Grey 2mm	1	Parts Card 1	63	Whelps Top	2	Board 3	104	Dowel 2mm x 330mm	1	Timber Stock
23	Lower Deck Cross Beams	3	Board 1	64	Slotted Bar Disc	2	Board 3	105	Walnut 0.5x3x330mm	4	Timber Stock
24	Gun Deck Cross Beams	3	Board 1	65	Bulwark	2	Board 1	106	Block 5mm 1 hole	35	Parts Card 3
25	Main Deck Cross Beams	3	Board 1	66	Bulwark - inner	2	Board 3	107	Block 7mm 1 hole	2	Parts Card 3
26	Lower Deck Supports - 1	3	Board 1	67	Teak 0.6x5x500mm	50	Timber Stock	108	Block 7mm 2 hole	1	Parts Card 3
27	Gun Deck Supports - 2	3	Board 1	68A-D	Cannon Carriages	6	Board 4	109	Block 7mm 3 hole	4	Parts Card 3
28	Main Deck Supports - 3	3	Board 1	69	Cannon Barrel	6	Parts Card 3	110	Eye Pin 3x20mm	10	Parts Card 2
29	Lower Deck Support Braces - A	6	Board 3	70	Brass Wire - 0.75mm	2.5m	Parts Card 2	111	Cord - Grey 0.5mm	1	Parts Card 1
30	Gun Deck Support Braces - B	6	Board 3	71	Deck - Main	1	Board 4	112	Cap Rails	2	Board 3
31	Main Deck Support Braces - C	6	Board 3	72	Main Deck Ladder Runners	2	Board 4	113	Cord - Black 0.75mm	1	Parts Card 1
32	Central Support Braces - D	18	Board 3	73	Dowel 4mm x 500mm	1	Timber Stock	114	Chain Strap Assembly Jig	1	Board 1
33	Deck - Lower	1	Board 3	74	Pump	2	Parts Card 3	115	Nails - Brass	Pkt	Parts Card 3
34	Hatchway Coamings	3	Board 4	75	Capstan Base	1	Board 4	116	Deadeye - 7mm	28	Parts Card 3
35	Grating Coamings	4	Board 4	76	Capstan Base Coaming	1	Board 4	117	Deadeye - 5mm	16	Parts Card 3
36	Ladder Jig	1	Board 4	77	Belaying Pin Rails A	2	Board 3	118	Limewood 1x2x200mm	3	Timber Stock
37	Lower Deck Ladder Runners	2	Board 4	78	Belaying Pin Rails B	2	Board 3	119	Belaying Pins	36	Parts Card 3
38	Ladder Steps	24	Board 5	79	Main Mast Pin Rail	1	Board 3	120	Parrels	Pkt	Parts Card 3
39	Locker Sides	4	Board 4	80	Main Mast Pin Rail Posts	2	Board 1	121	Pennant Flag	1	Parts Card 3
40	Locker Ends	4	Board 4	81	Cleats	12	Board 1	122	Name Plate	1	Board 3
41	Locker Lids	4	Board 4	82	Gun Port Hinges	12	Parts Card 2				





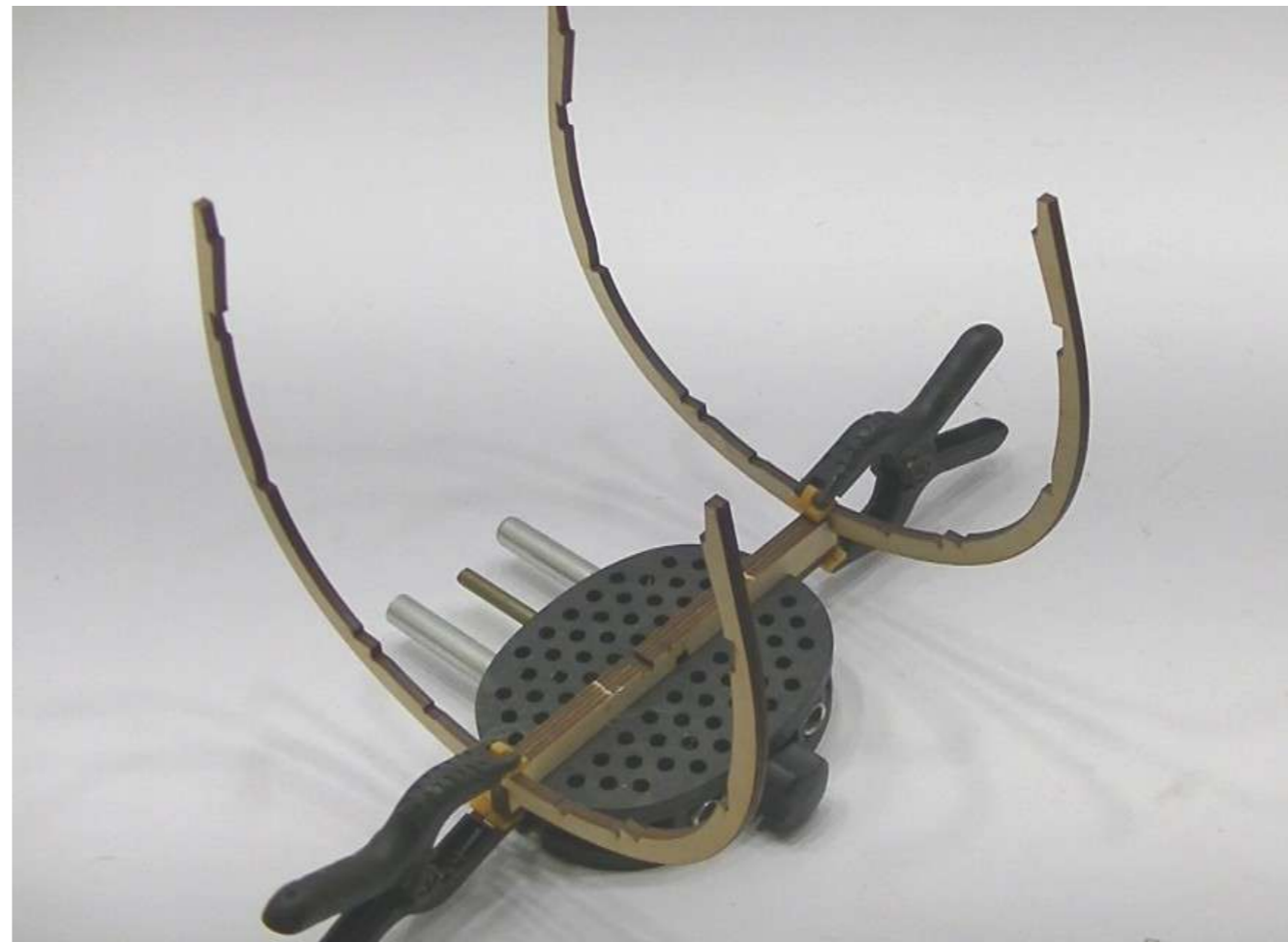
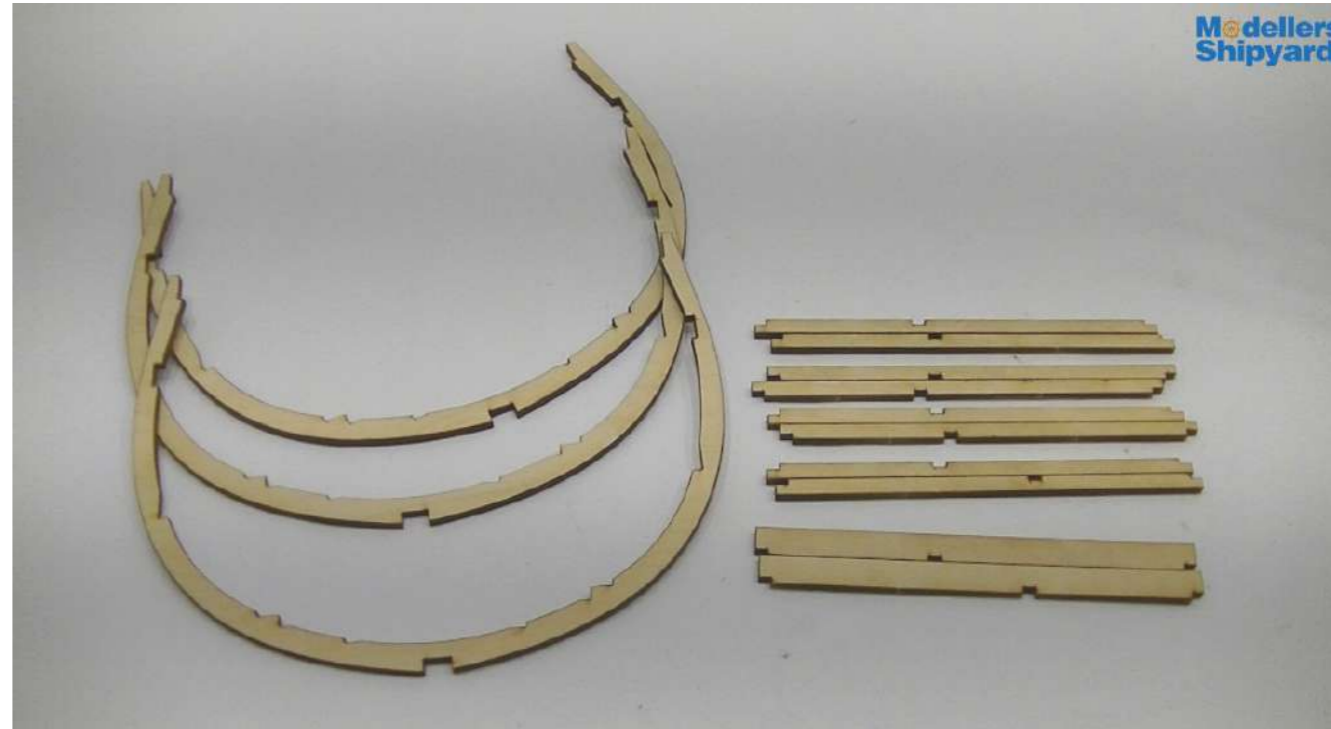
5.0 Hull Construction

5.1 Assemble the Keel & Hull Frames

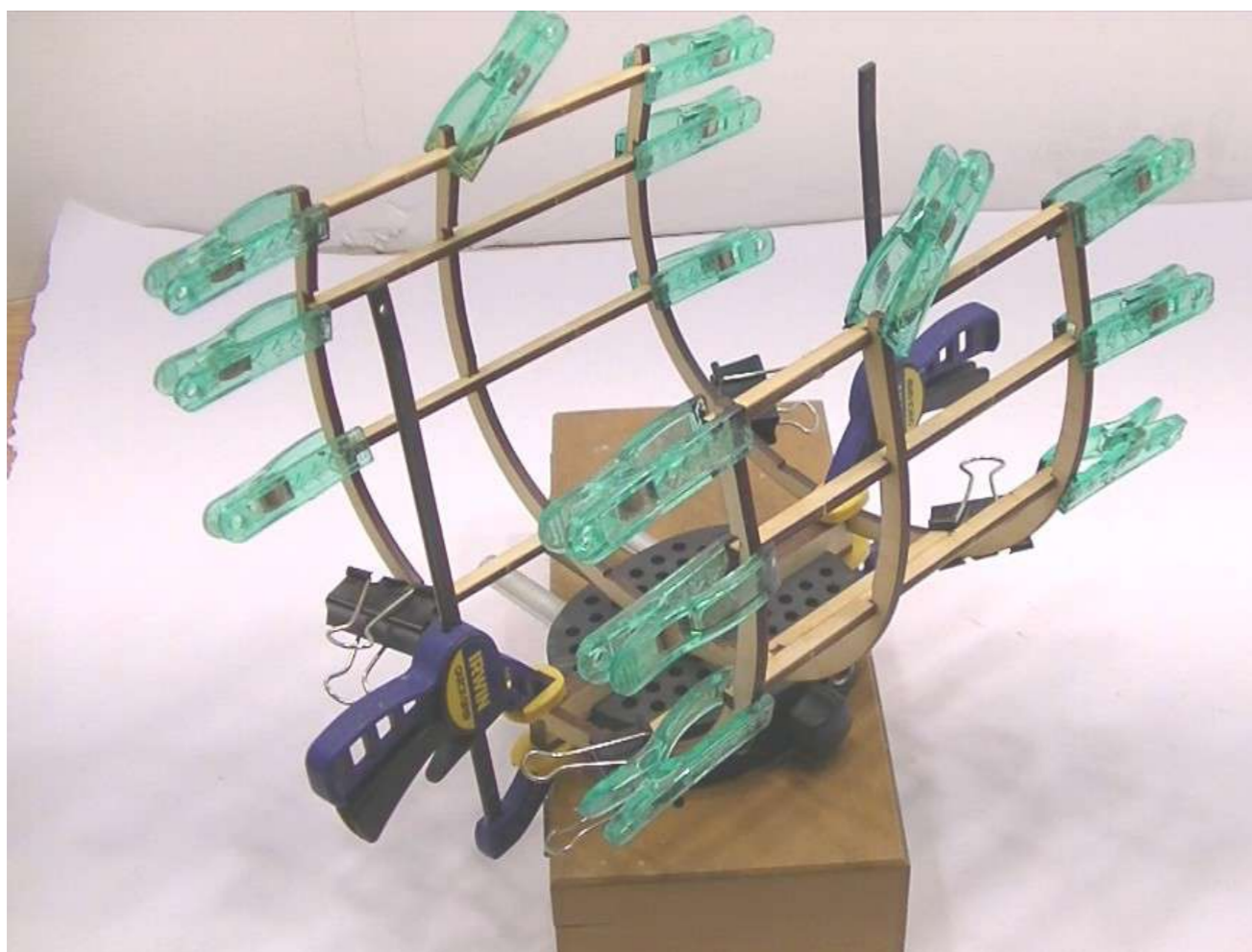
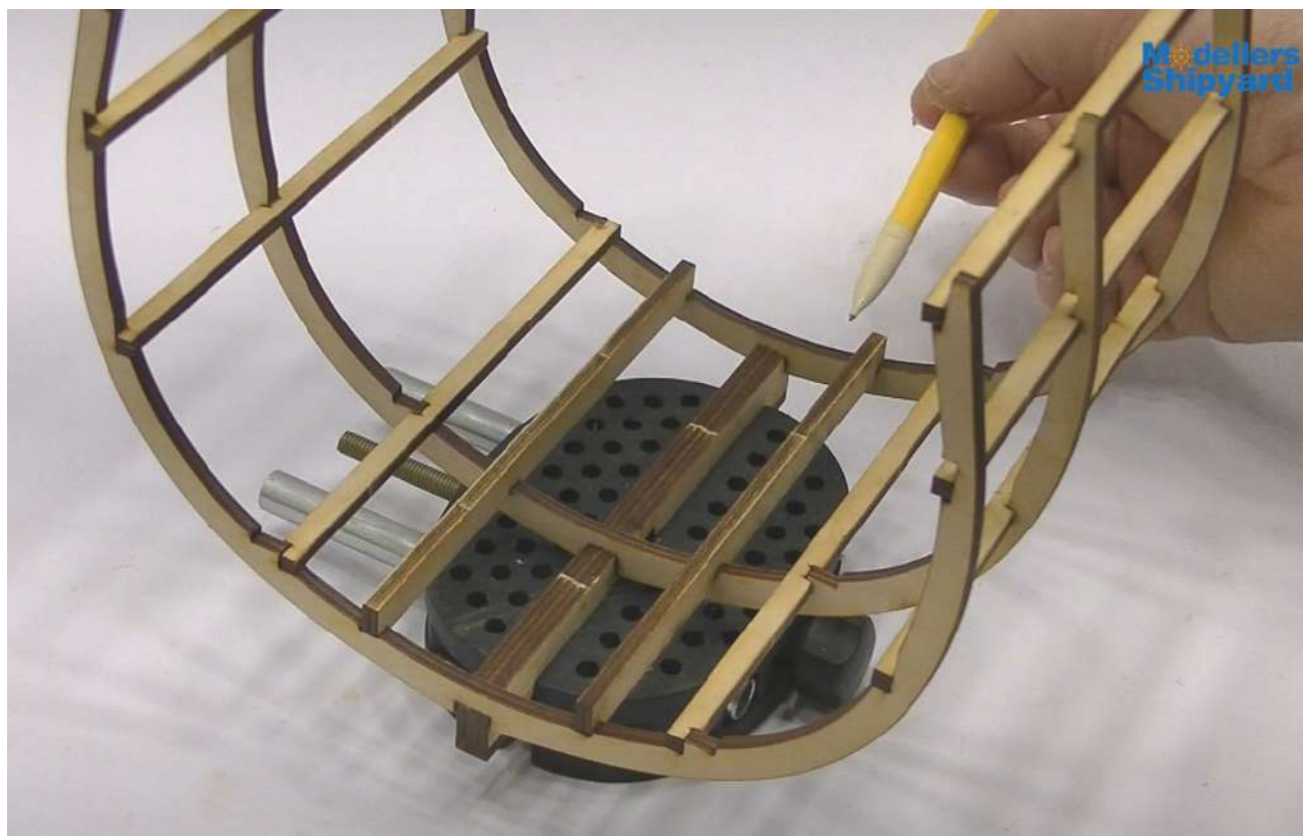
5.1.1 Identify the keel base P1 and the keel P2 - glue the two keel pieces P2 together then glue the keel base P1 in place making sure to align the hole in the keel base with the slots in the keel.



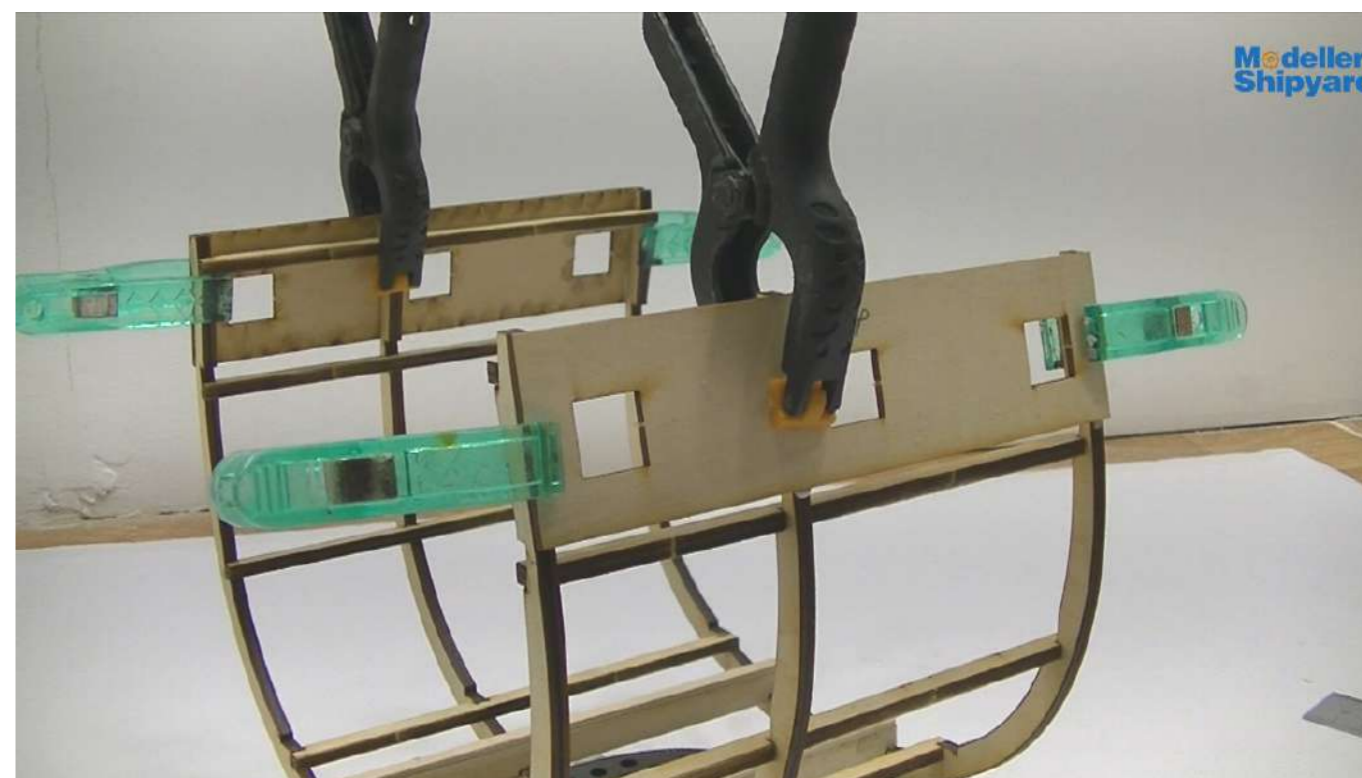
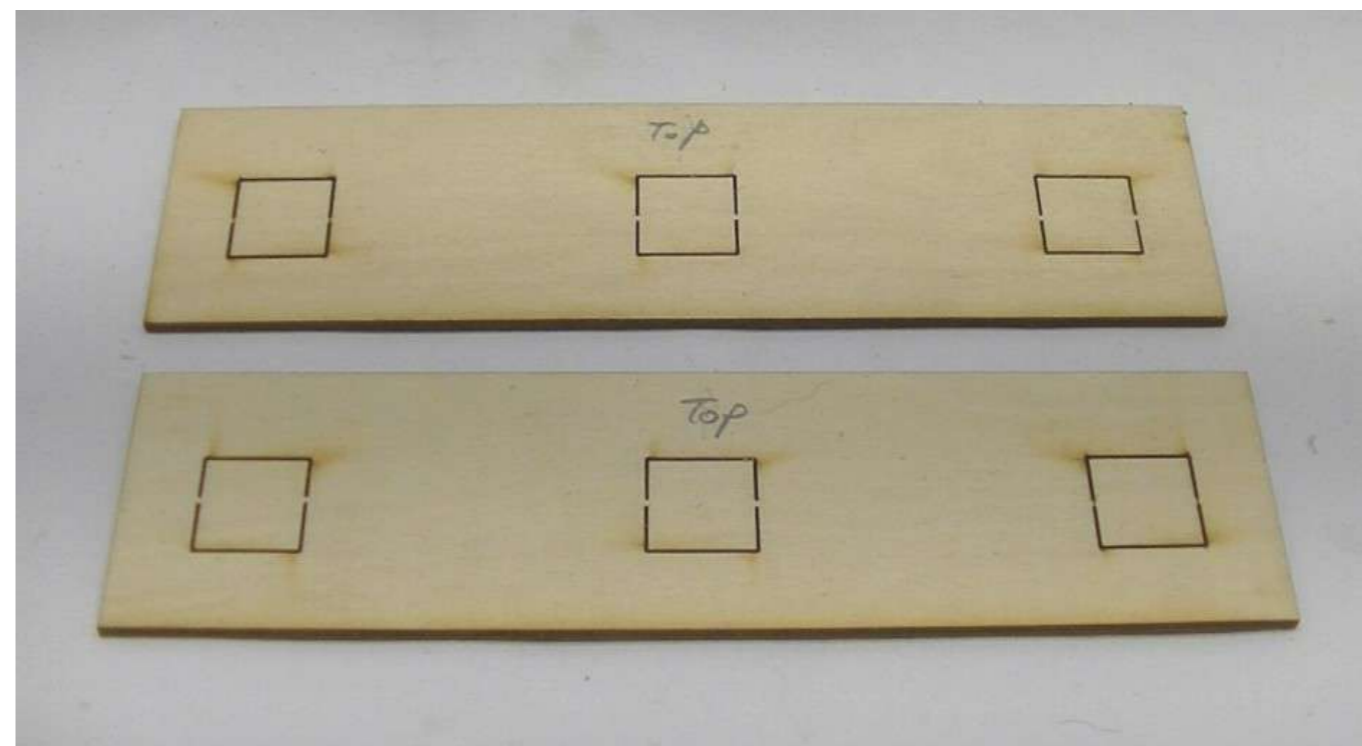
5.1.2 Identify the hull frames P3 and the hull beams P4A-E. Place assembled keel into a clamp and trial fit two frames as shown - once satisfied glue and clamp the frames as shown.



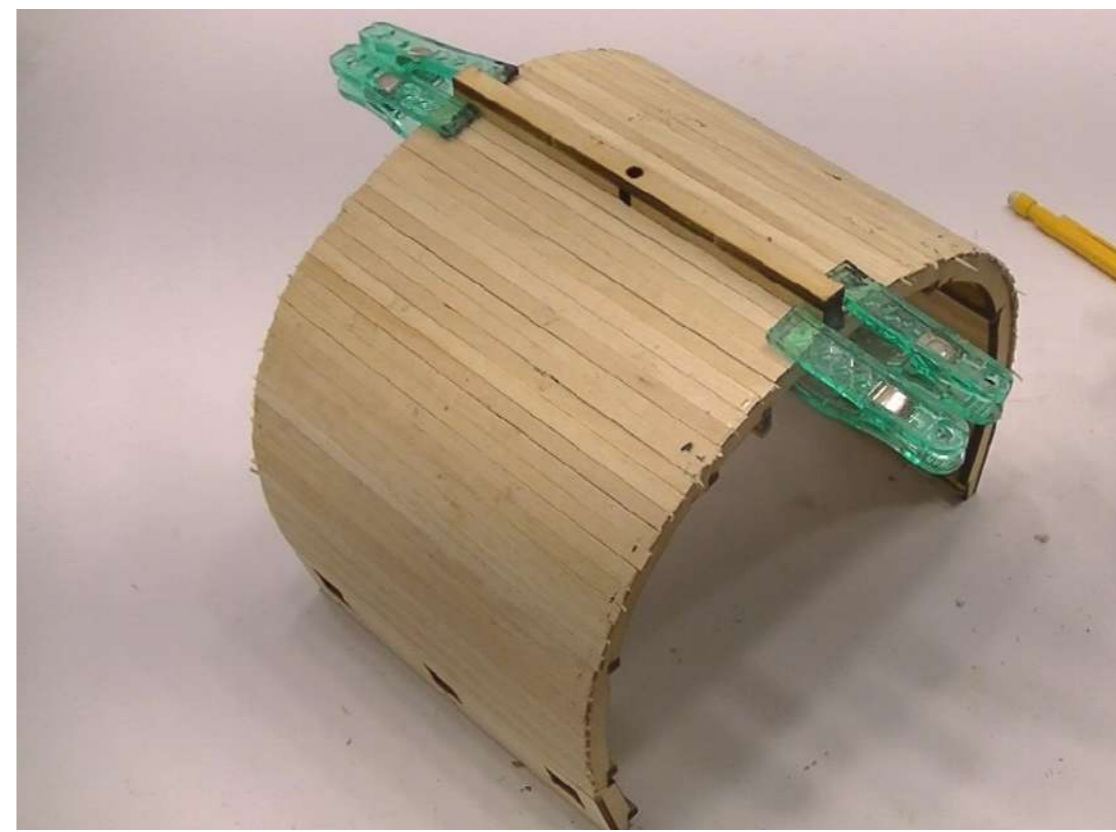
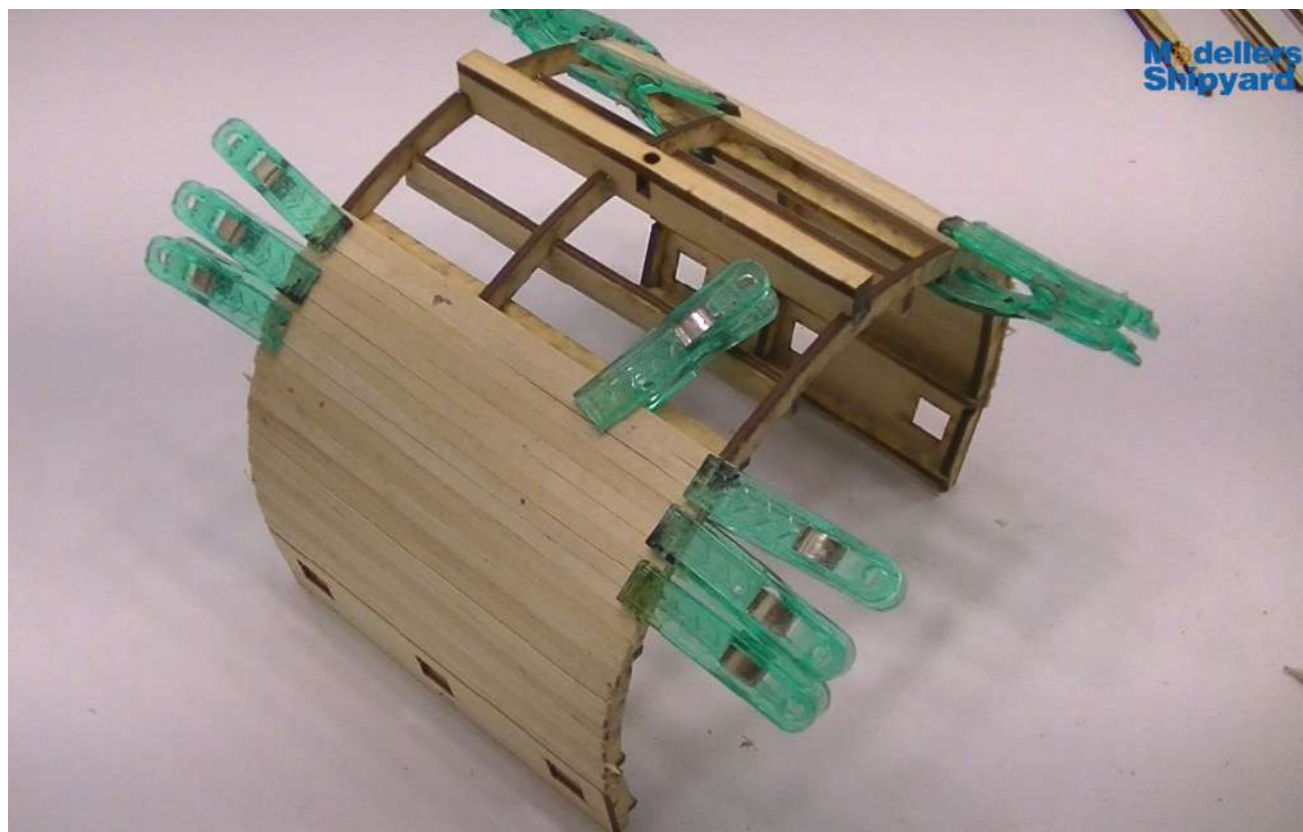
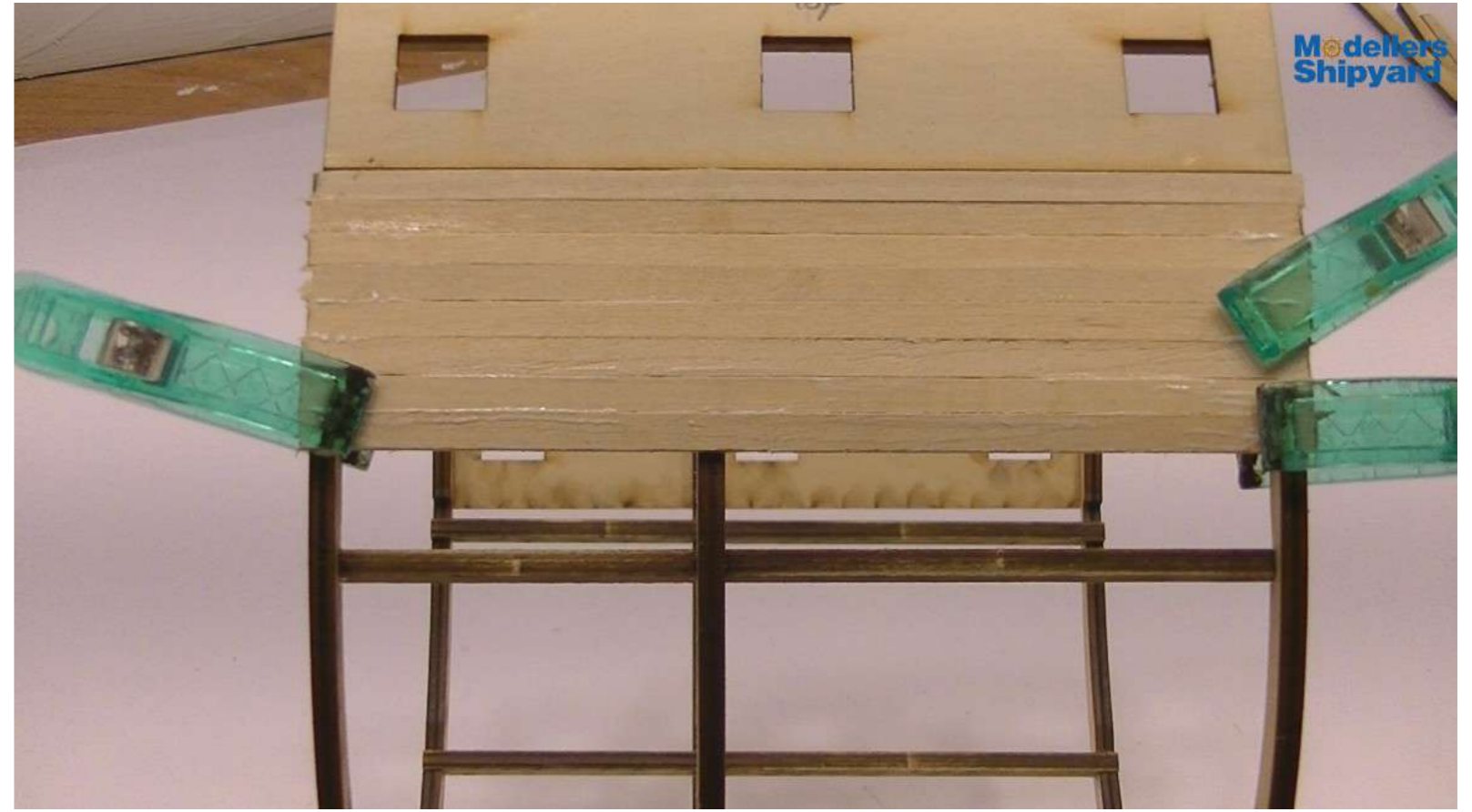
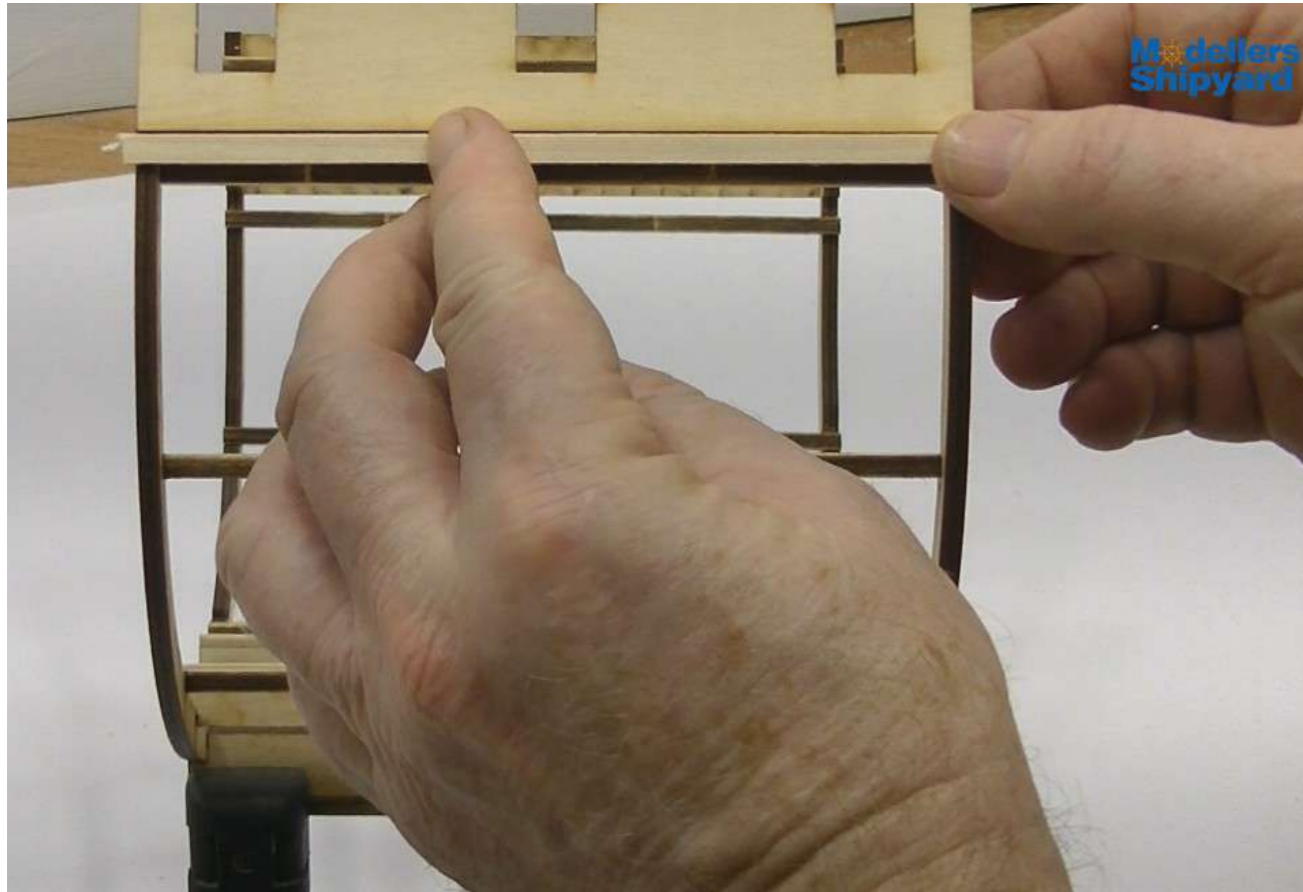
5.1.3 Identify the orlop beams 4A - glue in place as shown. Then glue beams 4B through to 4E up each side of the hull as shown - clamp each beam in position and set aside for glue to fully set.



5.1.4 Identify the freeboards - outboard P5 - remove the gun port lids P6 and set aside safely for use later in the build. Glue and clamp the freeboard in place aligning the top edge with the top of the frames as shown.

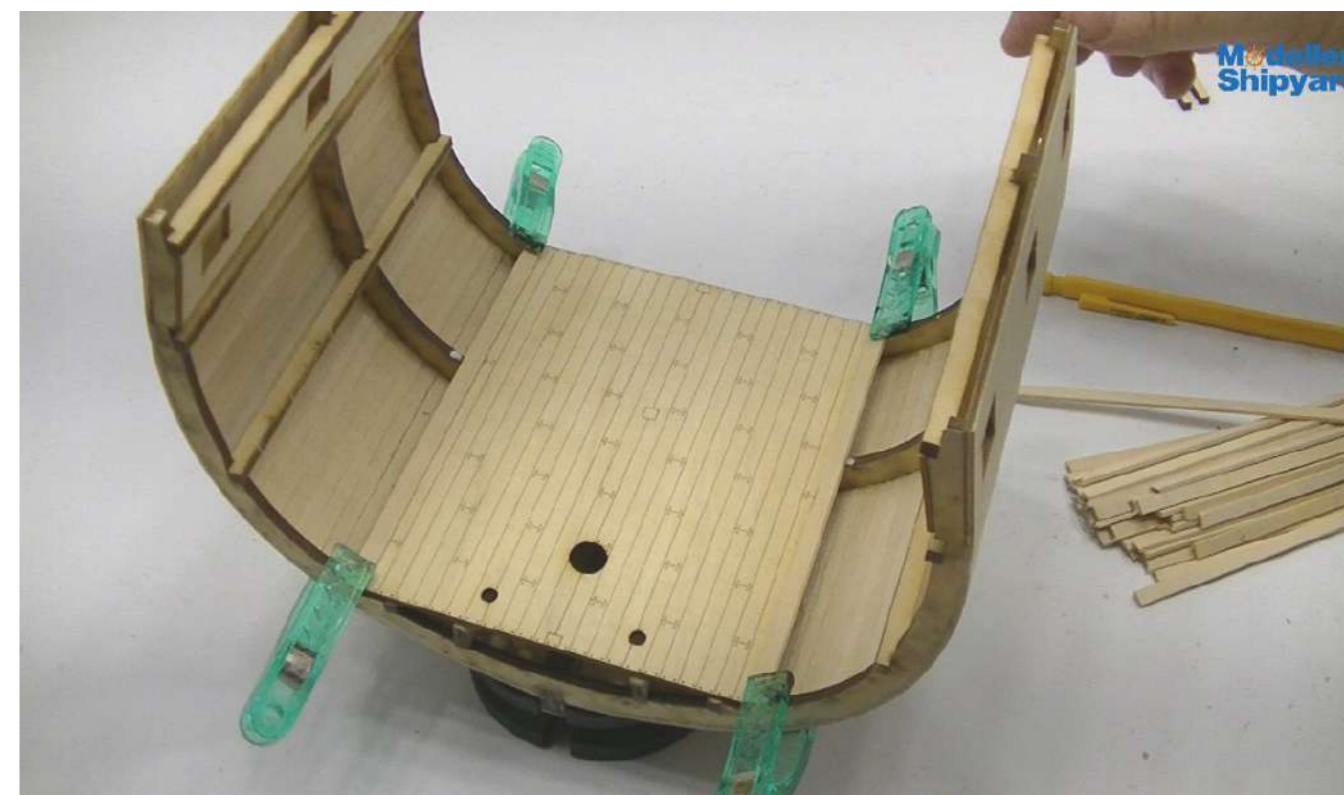
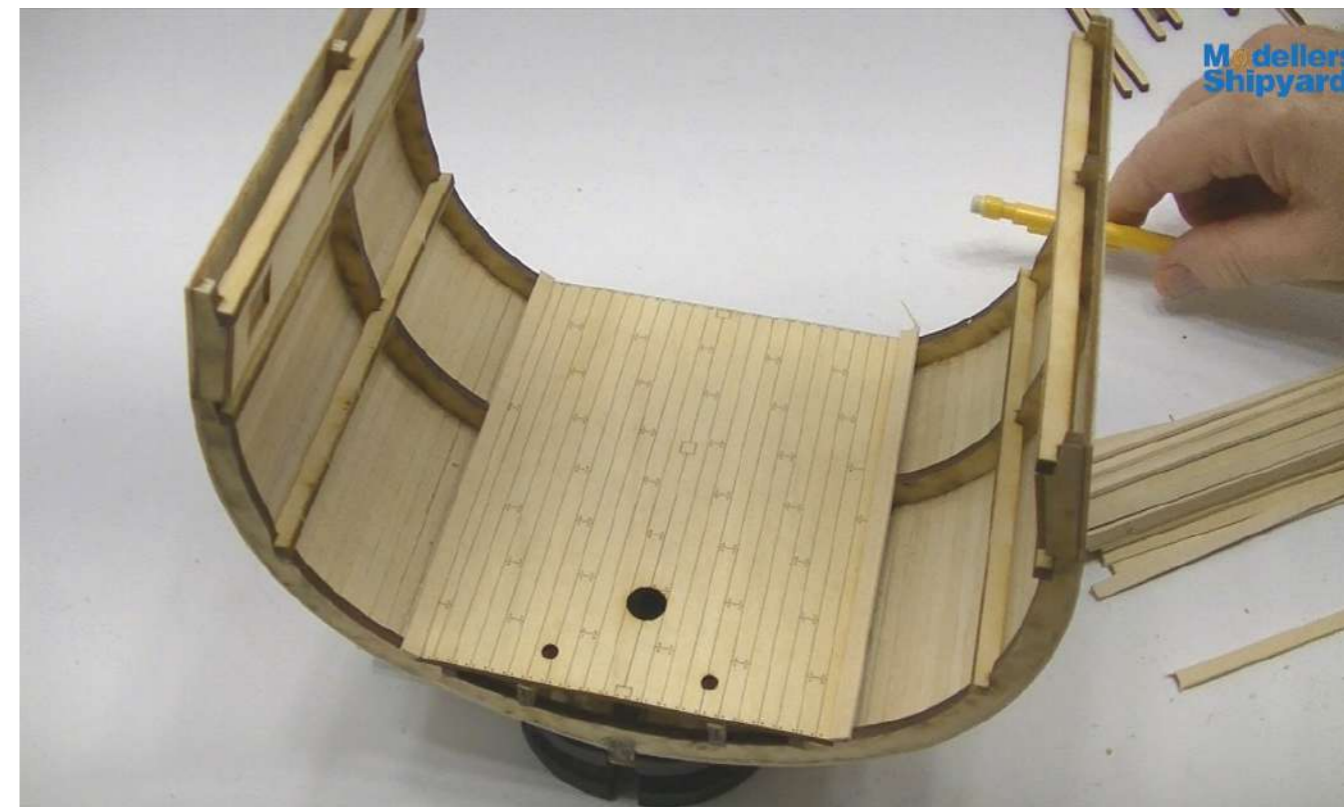


5.1.5 Identify the 2x5x500mm limewood P7 as the first layer of planking. Cut lengths to approximately 150mm. Glue each plank in place starting immediately below the freeboard as shown. Apply glue to the underside of the previously laid plank as well as to the frames - this will strengthen the hull construction. Planking both sides of the hull until the outer hull is closed as shown. Some fractional fitting may be required when fitting the last plank against the keel.

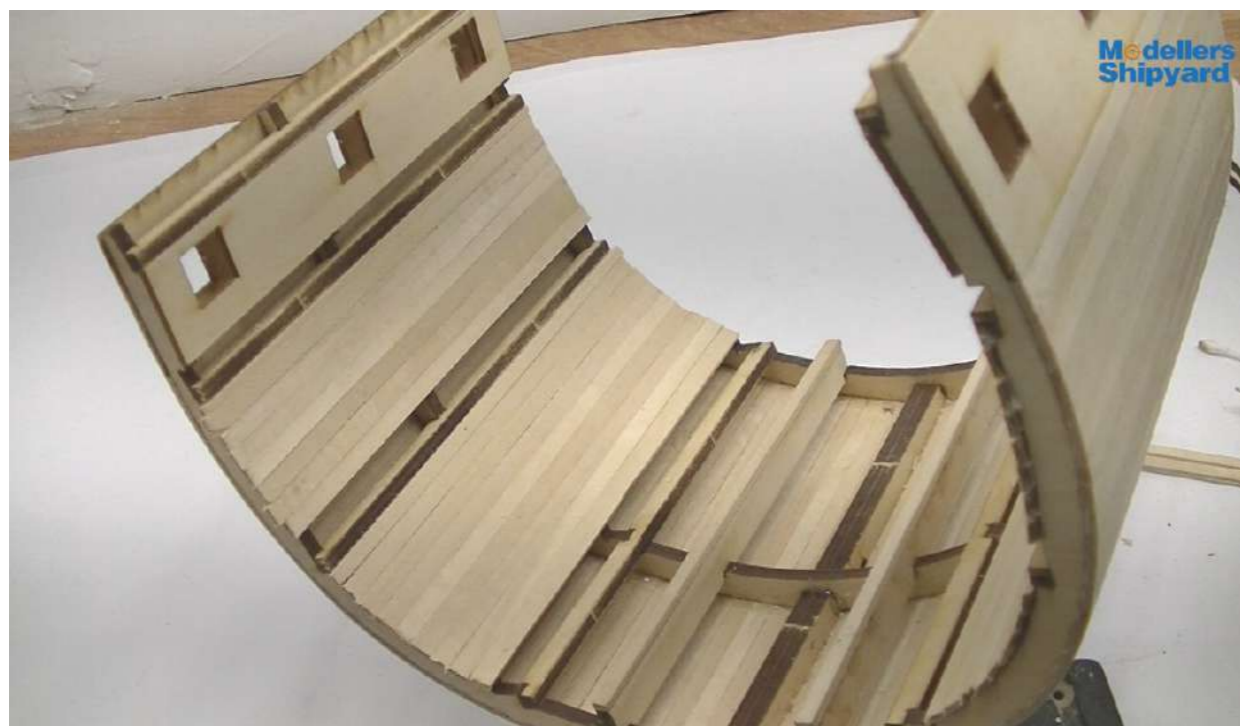


5.1.6 Use a grinding tool and sanding block to remove any plank overhang. Identify the freeboards-inboard P8. Trial fit immediately below Beams E at the top of the frames - once satisfied glue and clamp in place as shown.

5.1.7 Identify the orlop deck P9 - temporarily fit in place. Identify the limewood planking 2x5mm - glue and clamp a length either side of the deck as shown - make sure not to glue the deck in place yet.



5.1.8 Remove the orlop deck and using the 2x5mm limewood planking P7 continue to glue the planks in place to cover the inside of the hull as shown - make sure not to cover the spaces for the other decks to be fitted. Stain the inner hull planking walnut as shown.



5.1.9 Identify the inter-frame fillers 10A-B. Glue each in place at the top of the frames as shown.

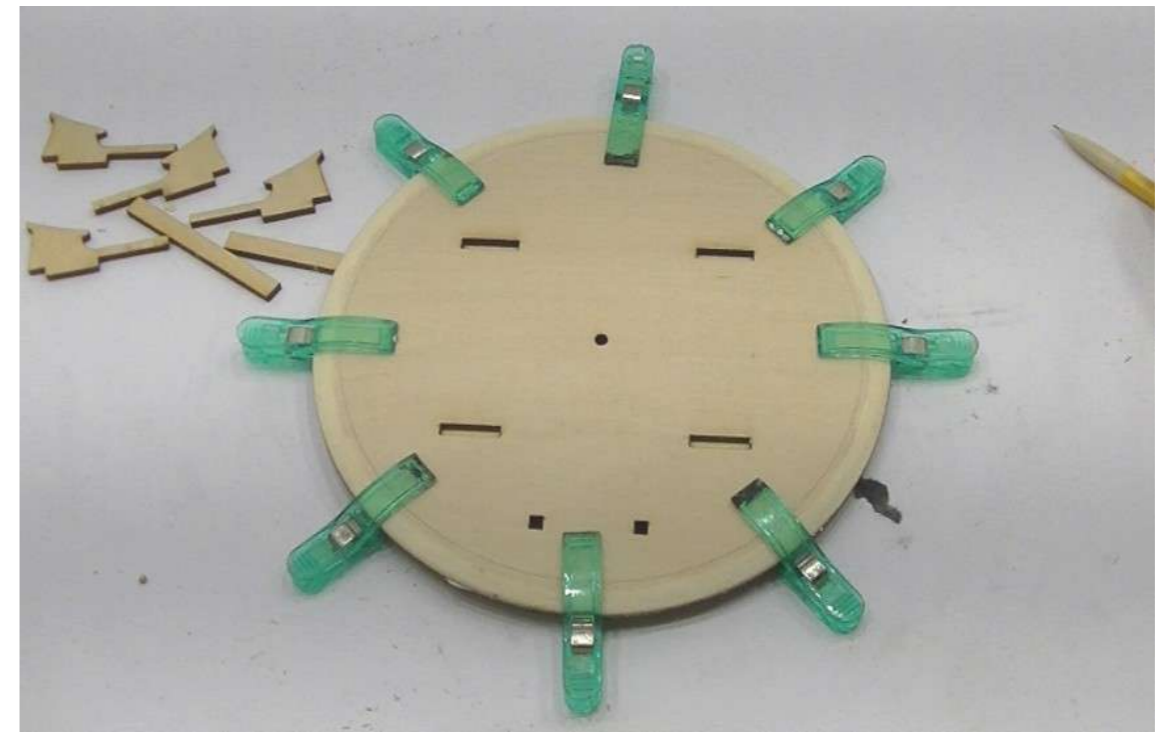
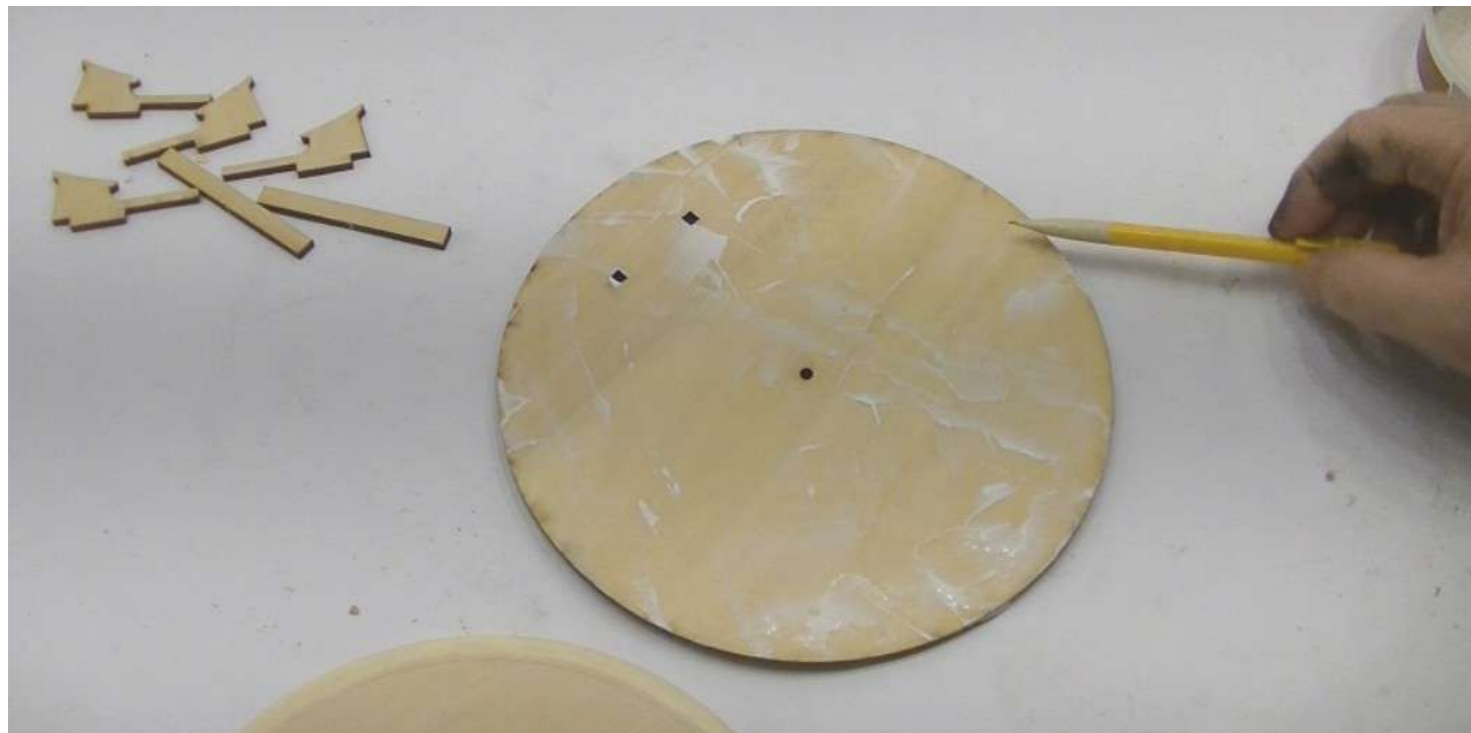
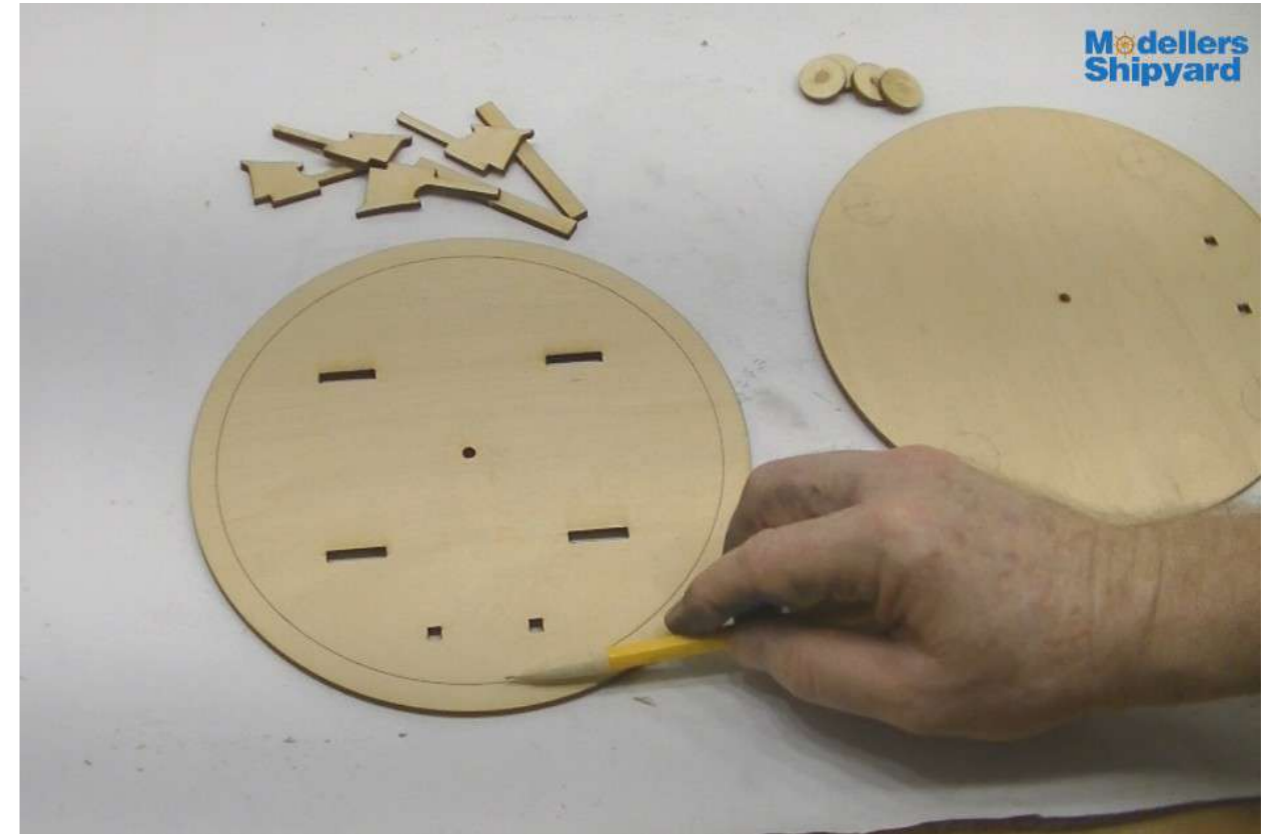
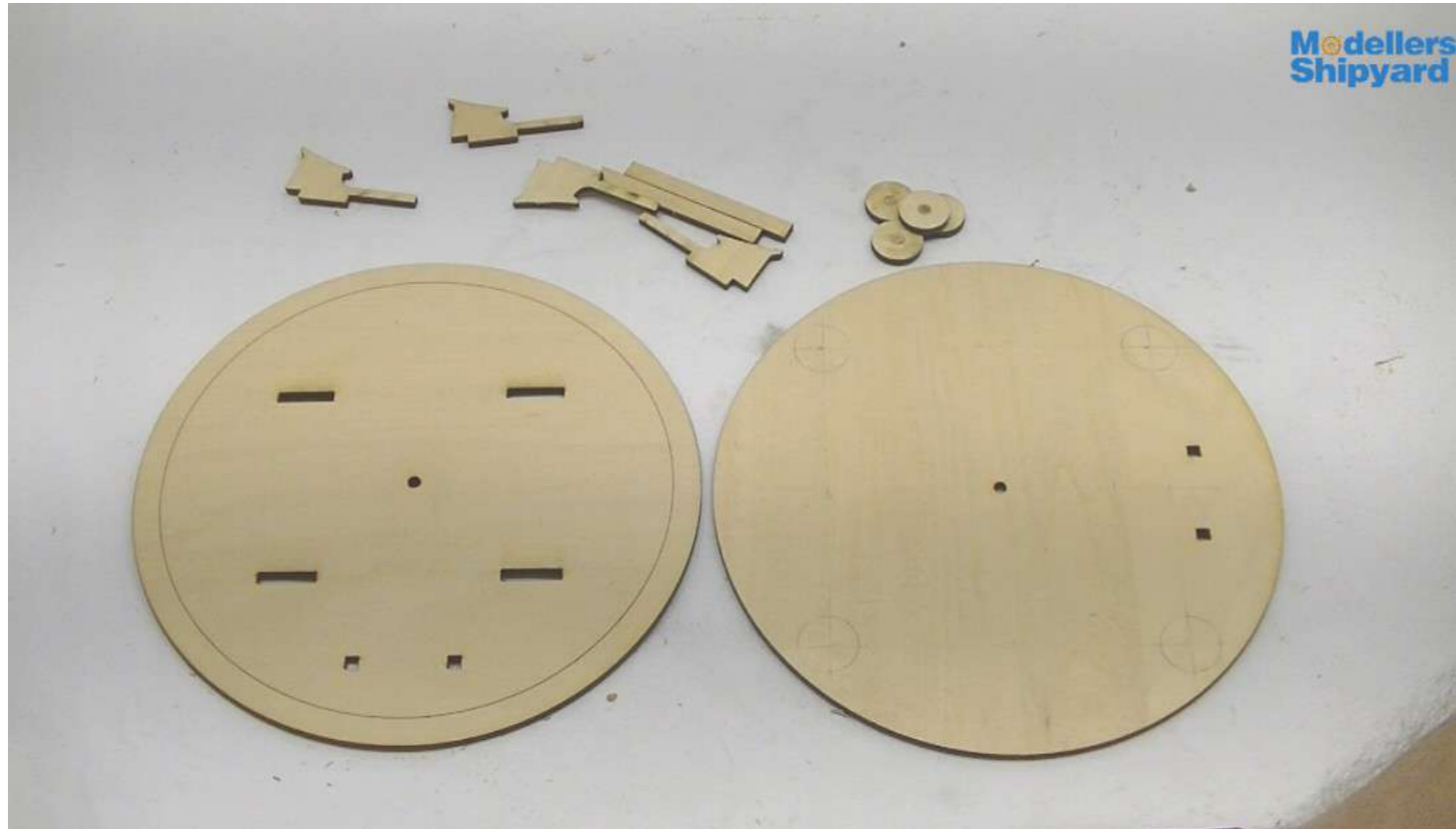


5.1.10 Identify the ballast rocks P11 - spread the ballast into the area below the orlop deck - pour white PVA glue area as shown. Make sure to remove any rocks from the area where the mast will meet the keel - as shown. Set aside for glue to dry. Slide the orlop deck in place - once satisfied glue and clamp the deck in place.

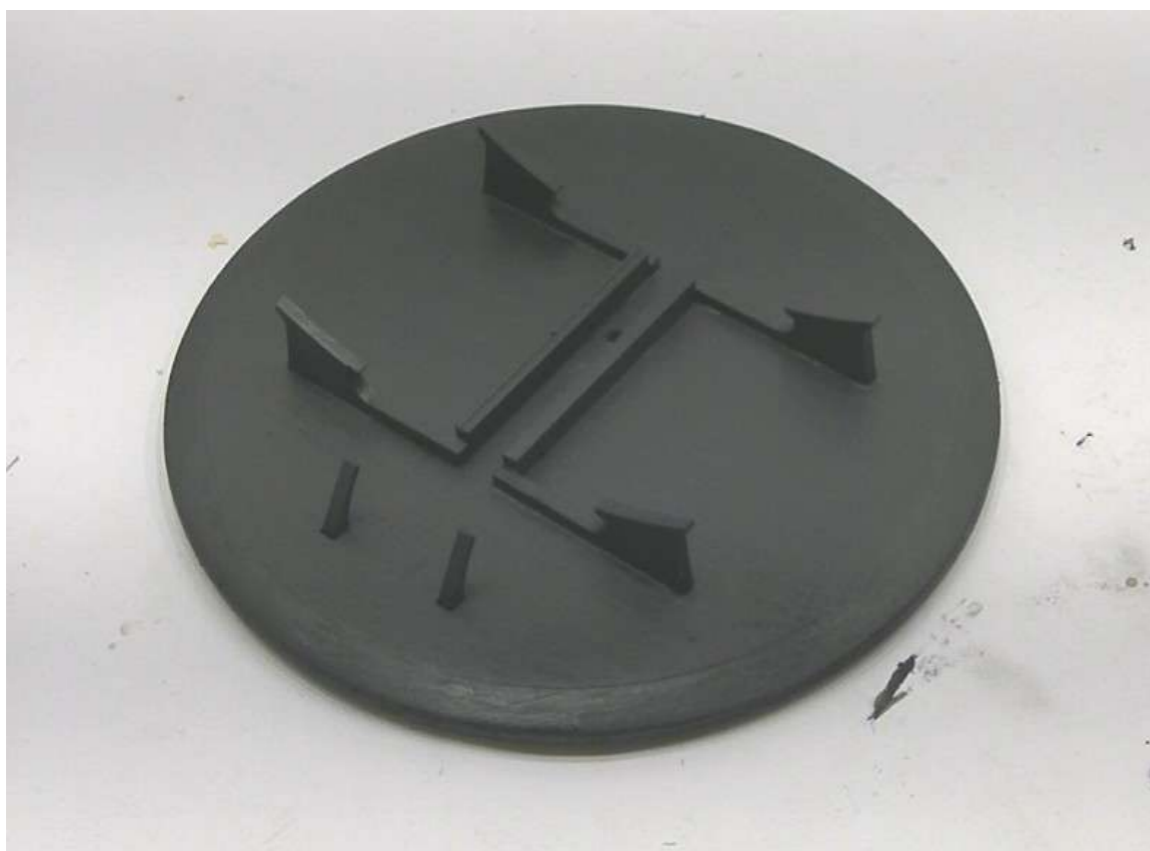
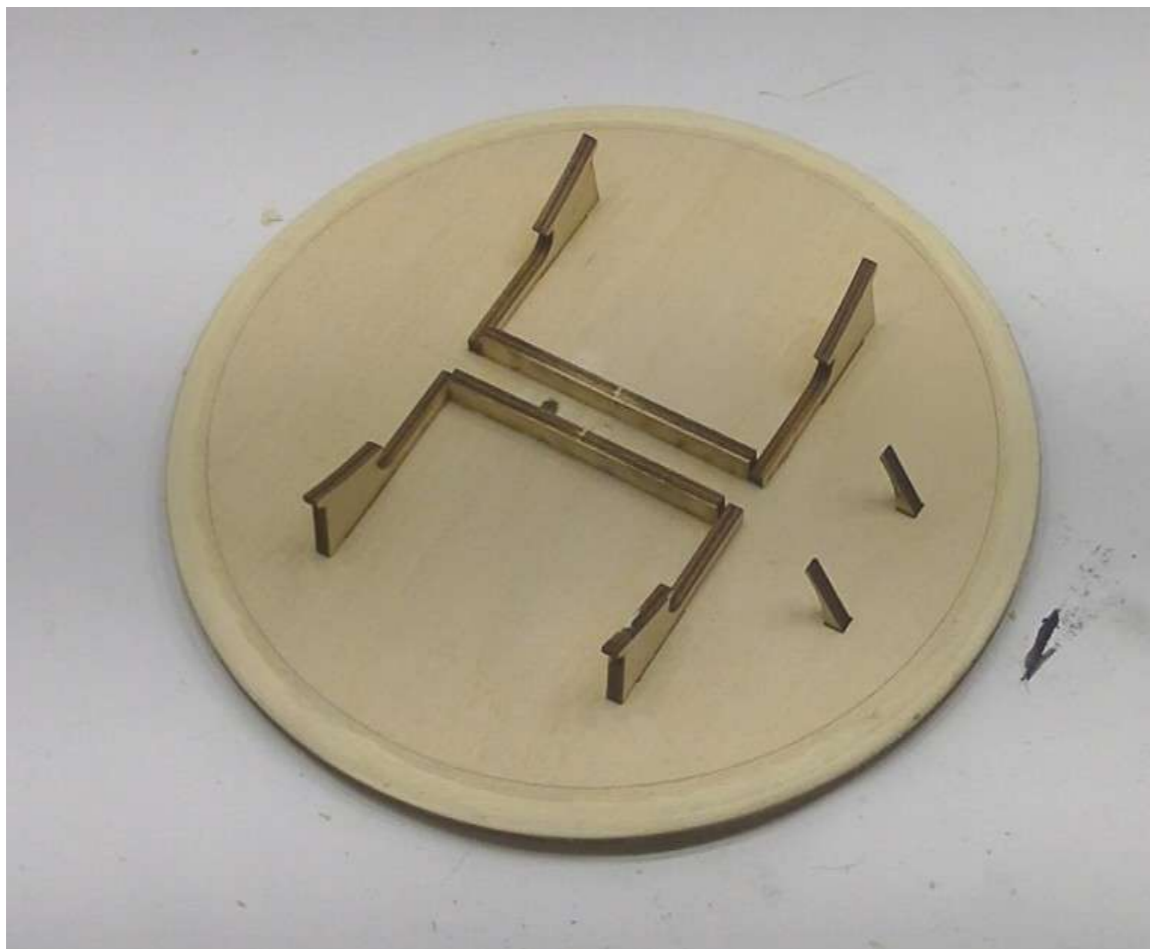


6.0 Display Board

6.1 Identify the display board parts P12A-B. Notice on the top board 12A there is a score line around the perimeter - to create a bevel on the edge of this board use a grinding tool and sanding block to shape from the score line to the opposite side of the board. Identify the feet P13 for the display board - glue these in place on the score marks on the underside of the bottom board 12B. Once satisfied apply glue to one board and clamp the bottom board 12B in place as shown making sure to align the central hole and the square holes between the two boards.



6.2 Identify the cradle parts 14A-B. Glue in place as shown. Identify the name plate supports P15 - glue in place as shown. Once glue has set spray paint the assembled display board with a matt black paint.

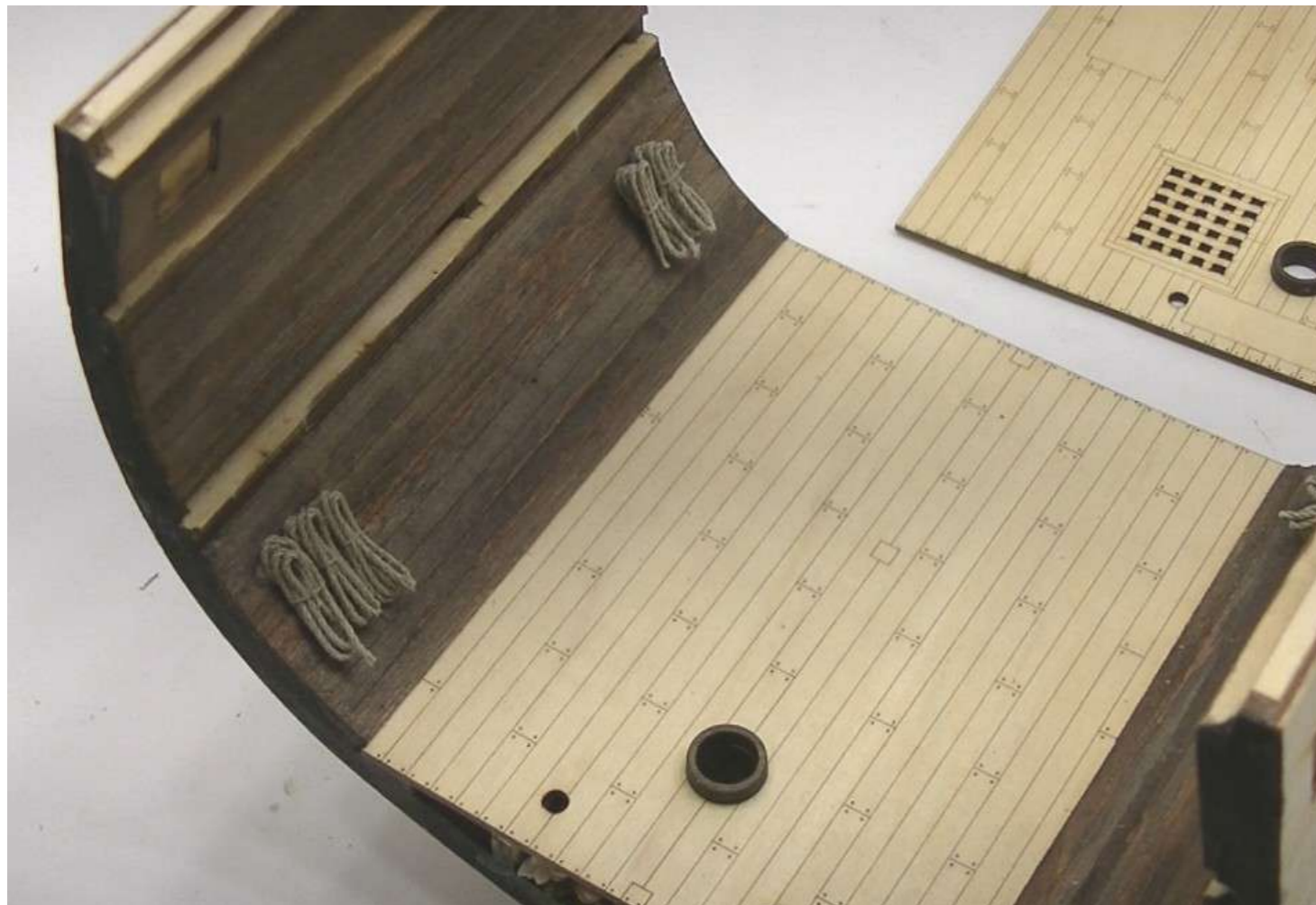
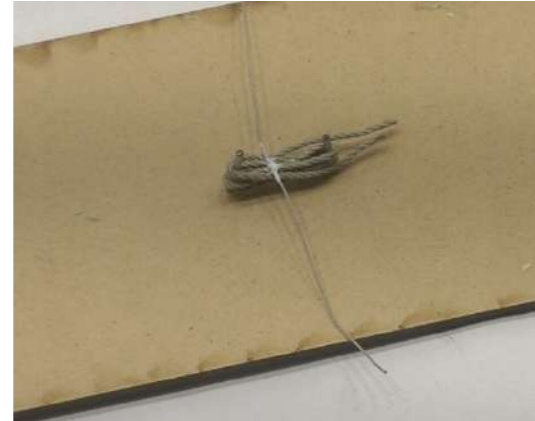


7.0 Decks & Deck Fittings

7.1 Identify the mast heels P16 - stain walnut. Glue one in place on the orlop deck as shown.



7.2 To make rope coils use a length of board, two 1mm diameter nails with their heads removed and drill two 1mm holes 20mm apart - fit the nails into these holes. Identify the 1.25mm fawn cord P17 - cut a 250mm length of this cord . Identify the 0.25mm fawn cord P18 - cut 80mm length of this cord. Wind the 1.25mm cord around the nails as shown and clamping as shown. Fit the 0.25mm cord under the larger cord and tie-off with a double knot - apply a dab of PVA glue to the knot and set aside to dry. Repeat for another 9 rope coils. Use a glue gun to glue the rope coils to the inside of both sides of the hull.



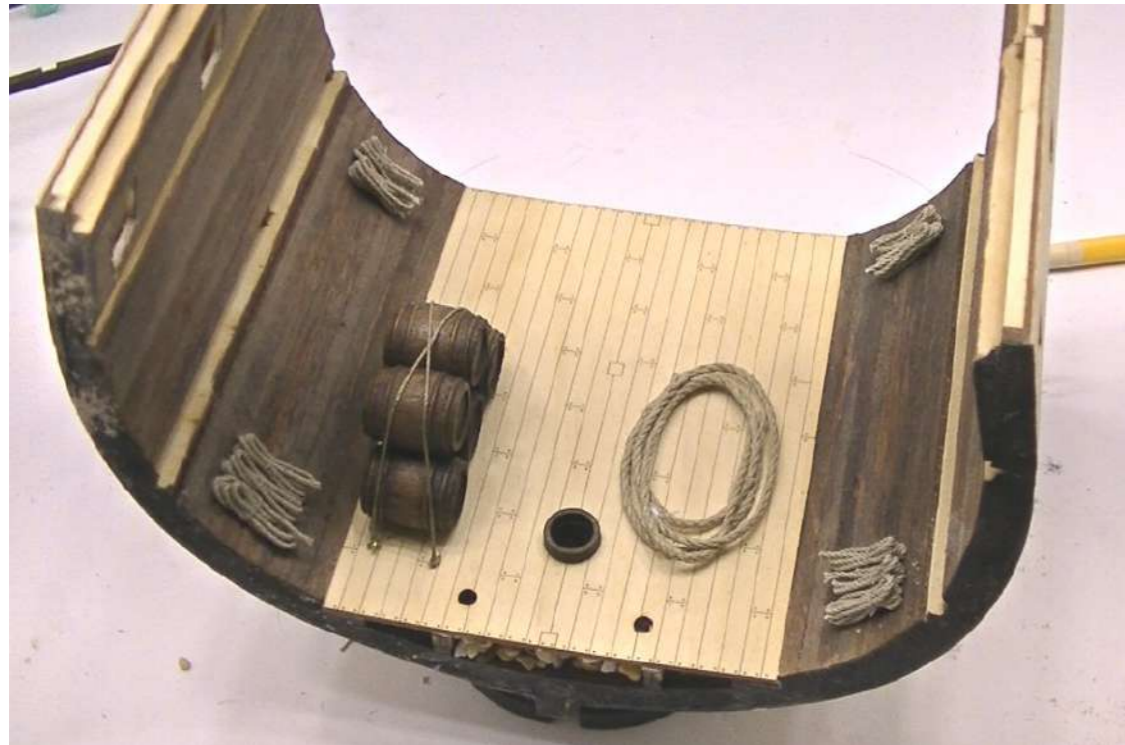
7.3 Identify the 20mm dia barrels P19 - stain walnut. Glue three barrels in place as shown. Drill 0.7mm holes and glue eye pins P20 in place as shown. Glue in place another two barrels as shown. Identify the 0.75mm P21 grey cord and tie-off to the eye pins across barrels as shown.



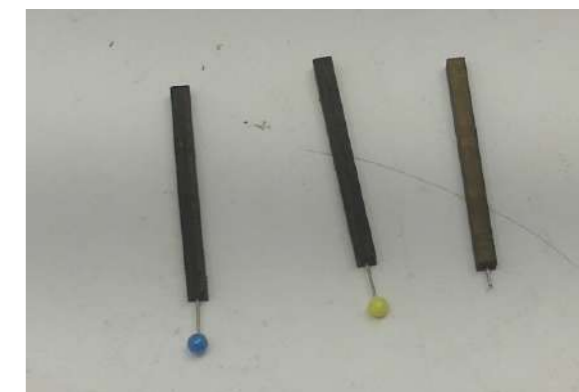
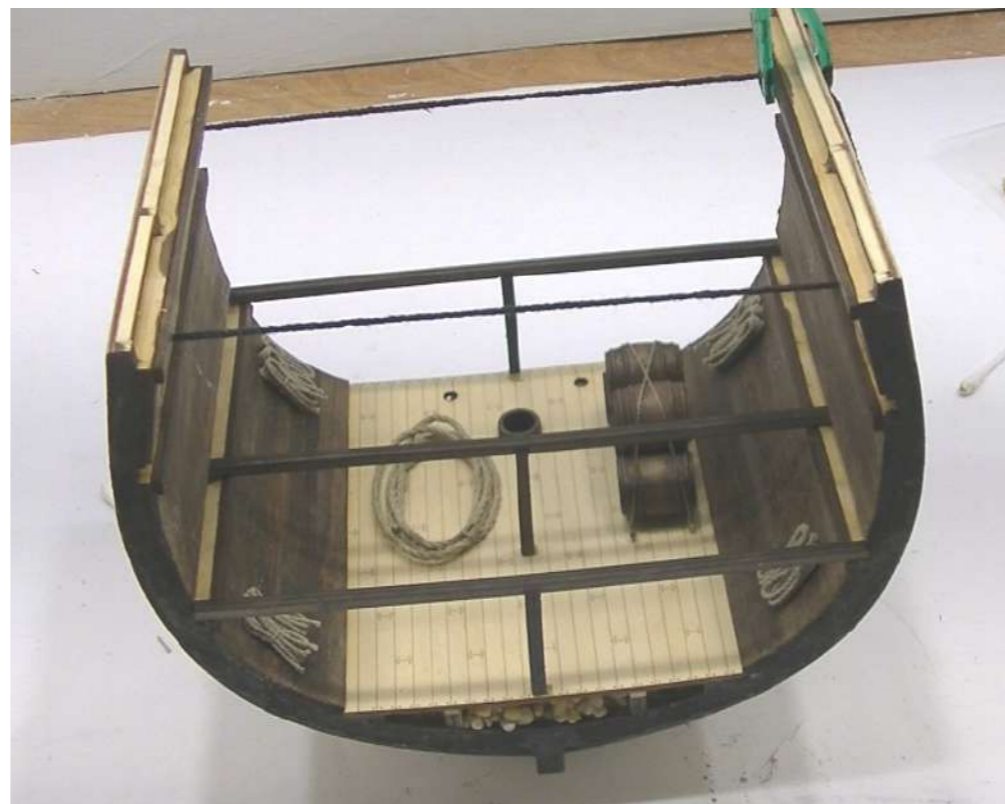
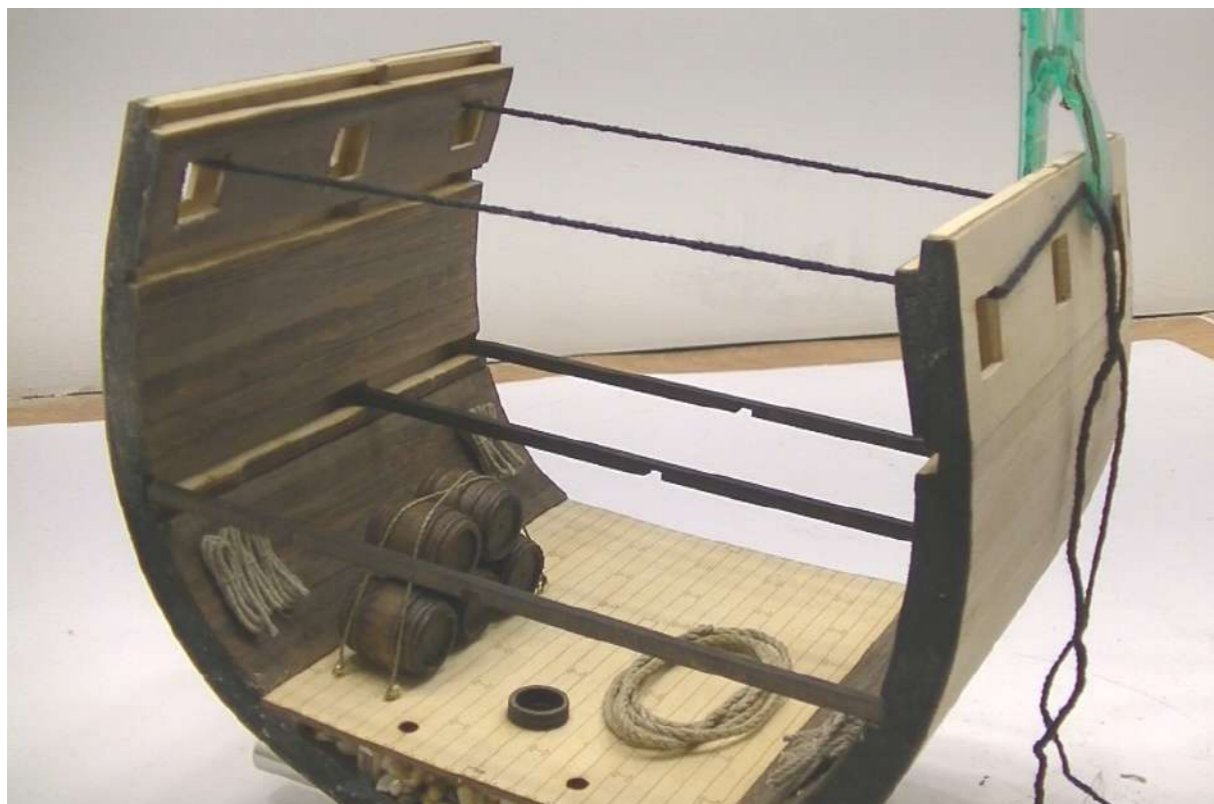
7.4 Identify the 2mm grey cord P22. Shape as shown and clamp in position. Apply glue at a few points around the cord - allow glue to set. Then glue the cord in place on the deck as shown.



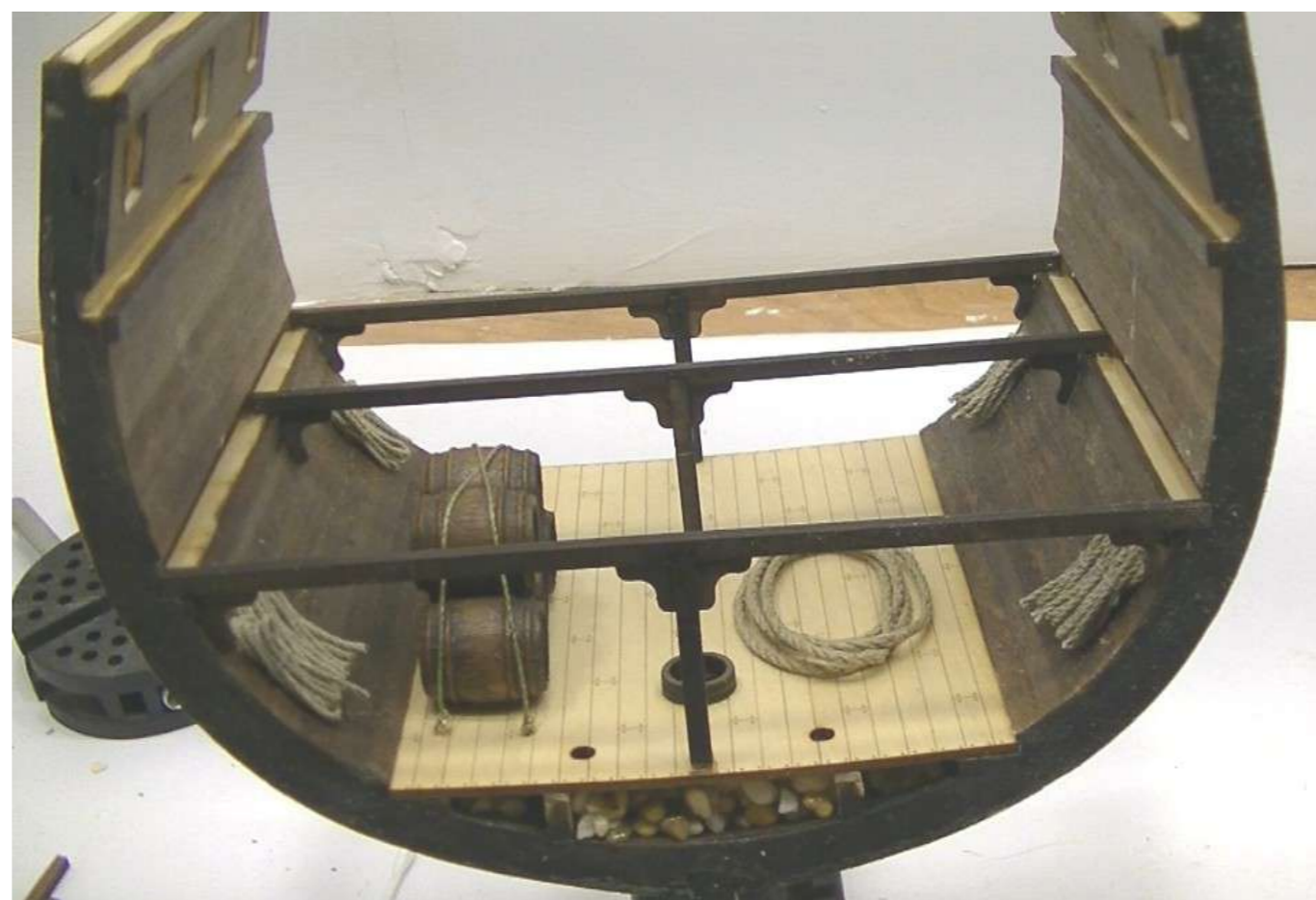
7.5 Identify lower deck cross beams P23, gun deck cross beams P24 and main deck cross beams P25. Identify the lower deck supports P26, gun deck supports P27 and main deck supports P28. Stain all beams and supports walnut. Trial fit the lower deck beams in place as shown.



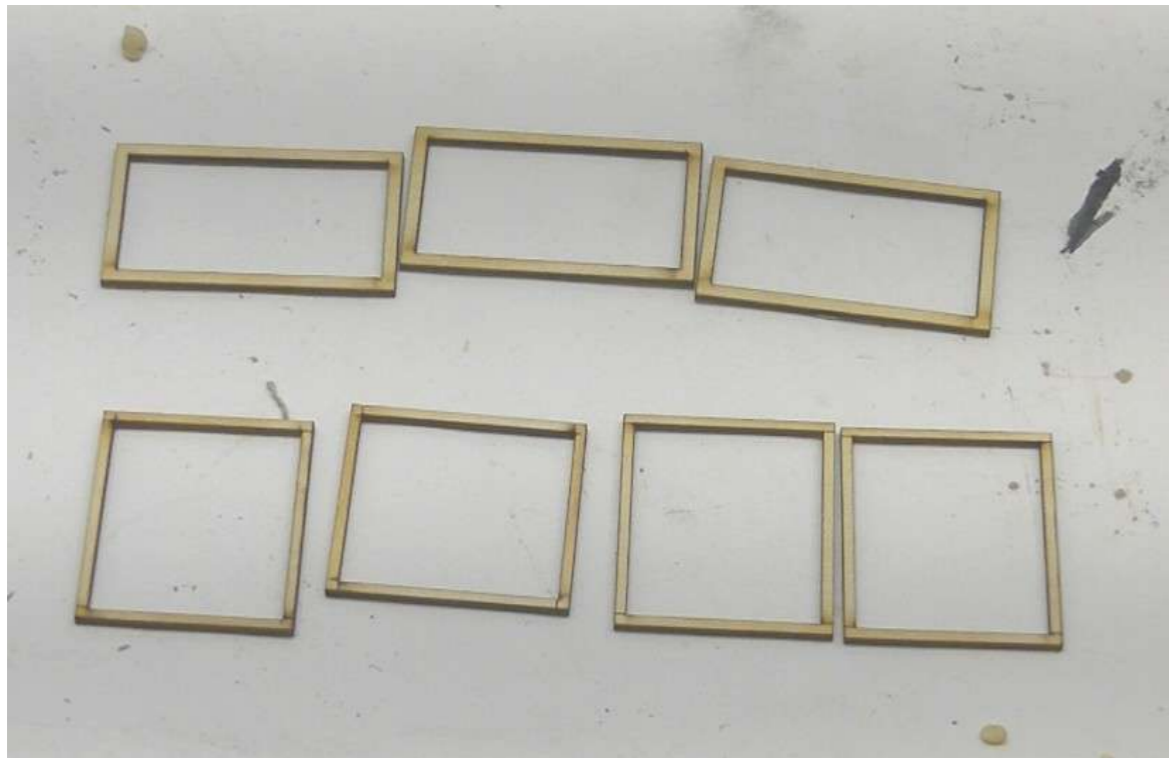
7.6 Glue in place the lower deck cross beams - make sure to align the inner beam with the hull frame. As there is some spring in the hull use some string to pull the hull in so the beams fit firmly. Drill 0.7mm hole into base of the lower deck supports and glue pins in place as shown. Cut the heads off each pin. Drill a 0.7mm hole into the orlop deck at the scribed locations. Apply glue to the top and bottom of the support post and fit each in place as shown. Allow the glue to dry.



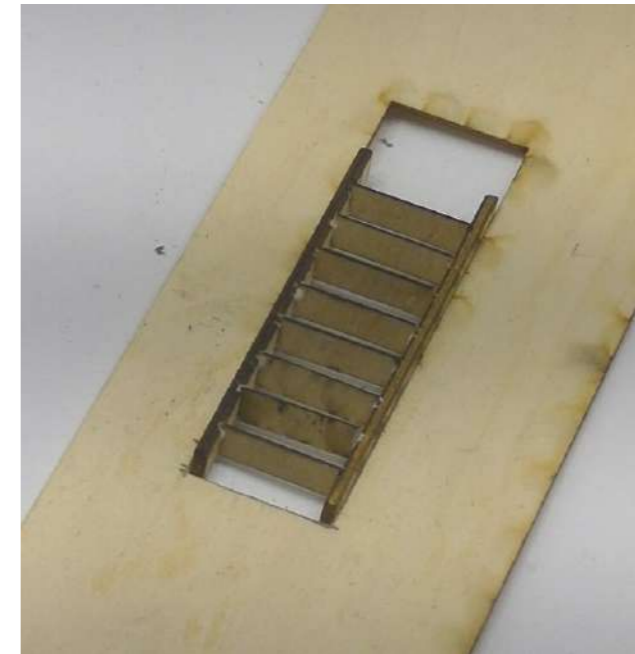
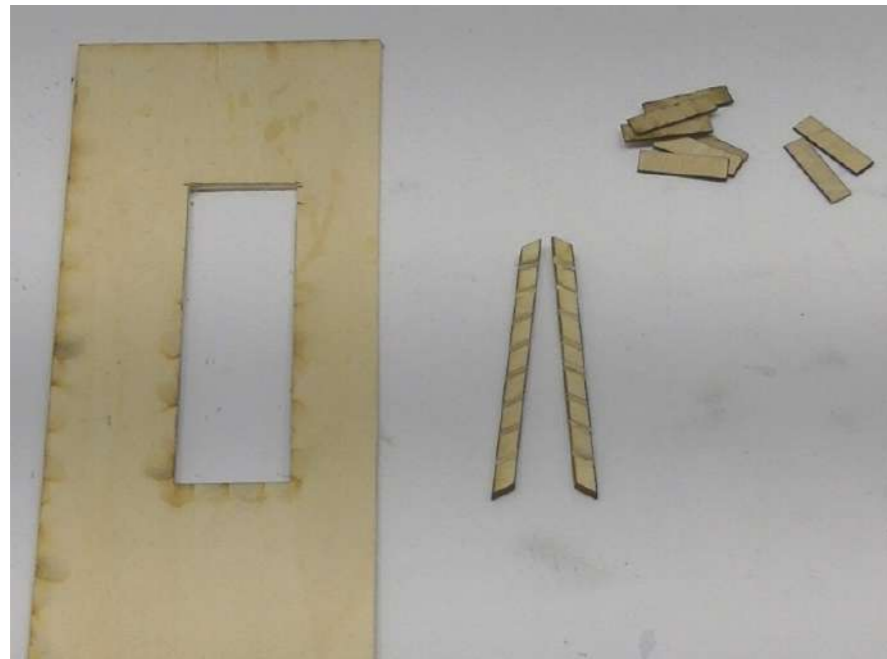
7.7 Identify the lower deck support braces P29 and the central support braces P32. Trial fit the braces in place - fractionally adjust as required. Once satisfied glue each in place starting with the inner braces.



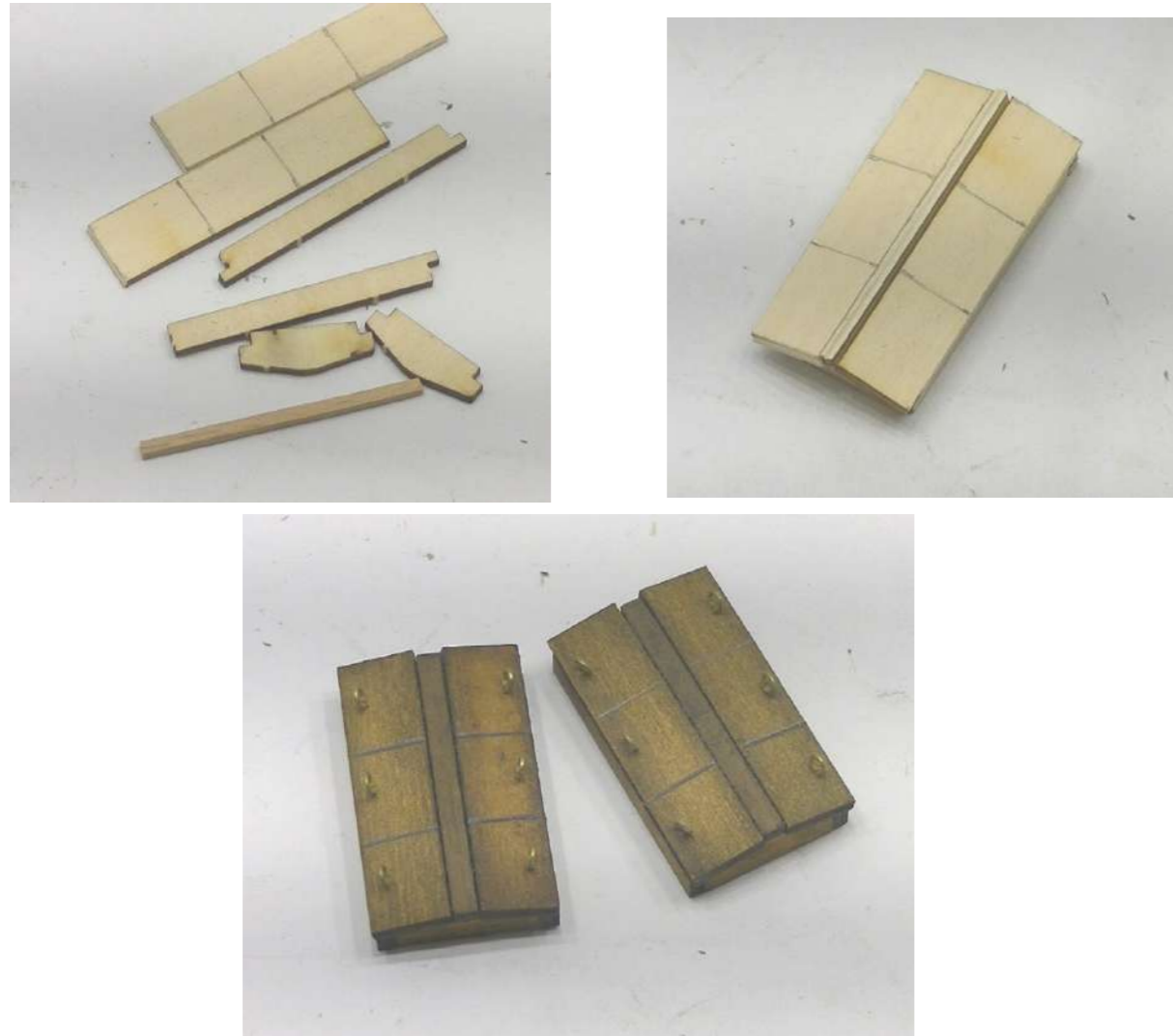
7.8 Identify the lower deck P33. Identify the hatchway coamings P34 and grating coamings P35. Stain each coaming walnut as shown. Glue in place the hatchway coaming and the grating coaming on the deck as shown. Also glue in place the mast heel P16. Trial fit the lower deck in place - make sure the deck slides into place without being forced - some fractional adjustment of the deck width may be necessary. Once satisfied glue and clamp the deck in place.



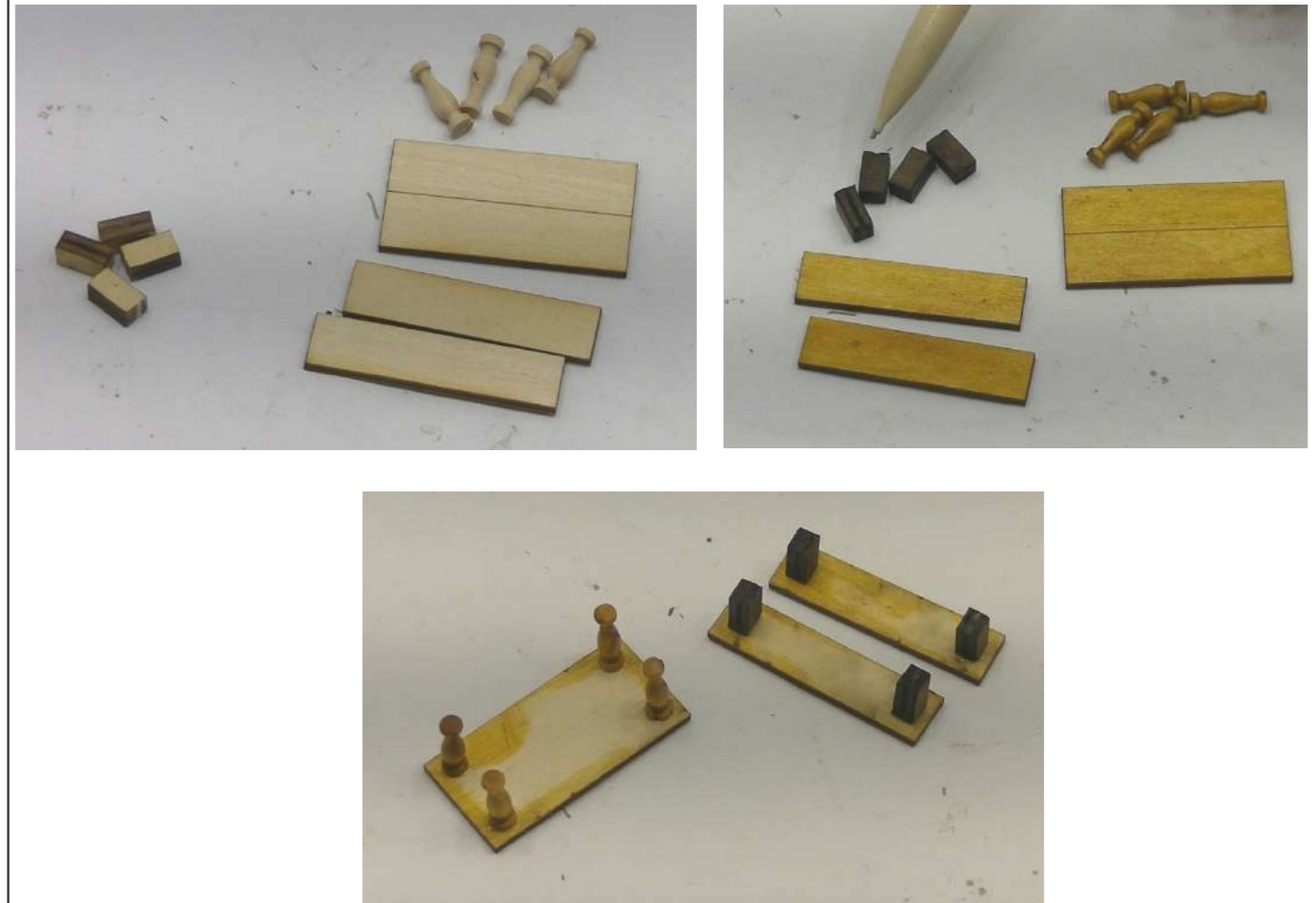
7.9 Identify the ladder jig P36. Identify the ladder runners P37 and the ladder steps P38. Use a triangular needle file to carefully expand the step grooves in the runners. Place a runner either side of the jig as shown and trial fit a step at the top and bottom as shown - you may need to fractionally adjust the step width. Once satisfied glue the top and bottom step in place. Once dry glue the remaining steps in place as shown. Once glue has set remove assembled steps from jig and stain walnut. Once dry glue the ladder in hatchway between the orlop and lower decks as shown.



7.10 Identify the locker sides P39, locker ends P40, lockers lids P41 and locker ridge top P42. Glue together as shown Fix eye pins P20 as shown. Stain assembled lockers walnut.



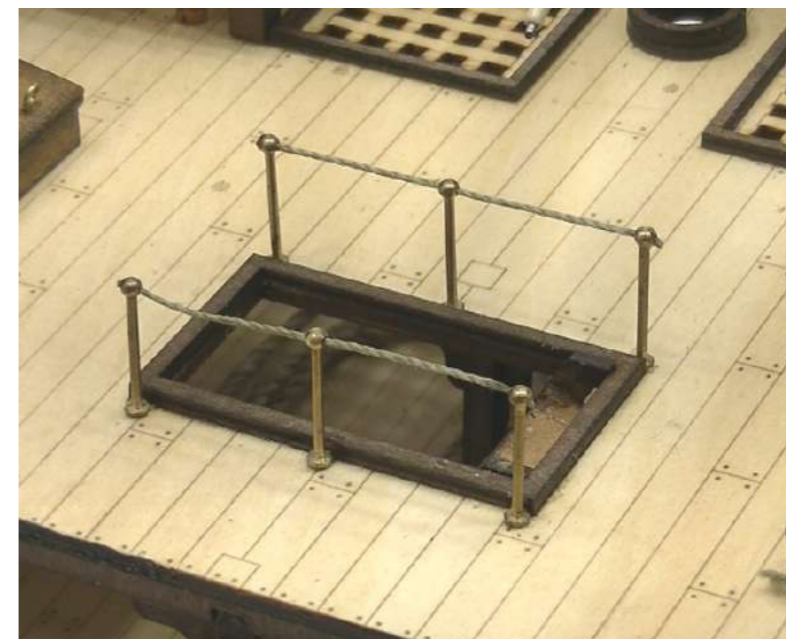
7.11 Identify the table top P43, benches P44, table legs P45 and bench legs P46. Stain table top, table legs and benches with shellac. Stain the bench legs with walnut. Glue table legs and bench legs in place as shown.



7.12 Identify the barrel holder front/rear P47 and the sides P48. Glue the parts together and stain walnut. Identify the barrels 15mm dia P49 - stain walnut and glue in place as shown.



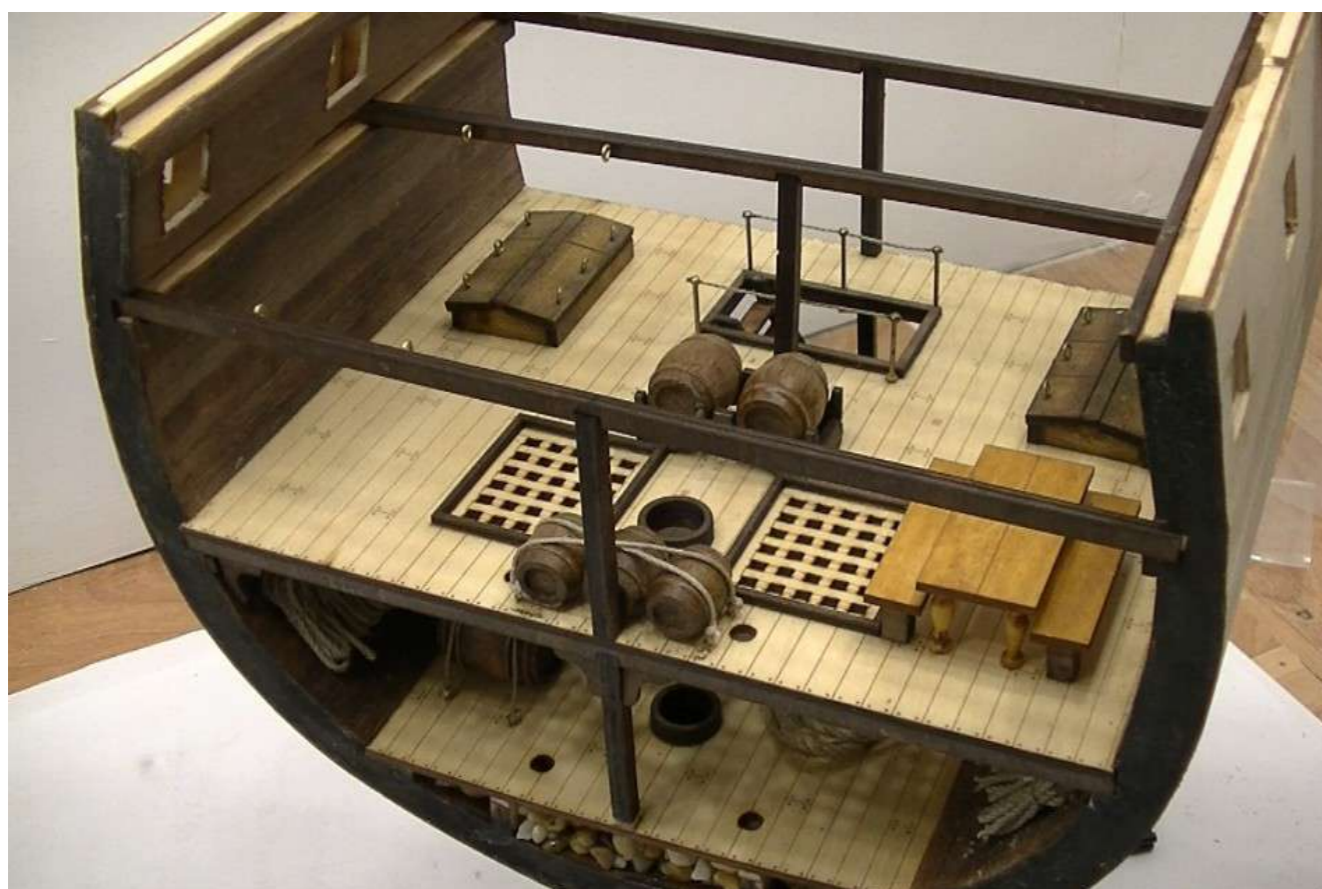
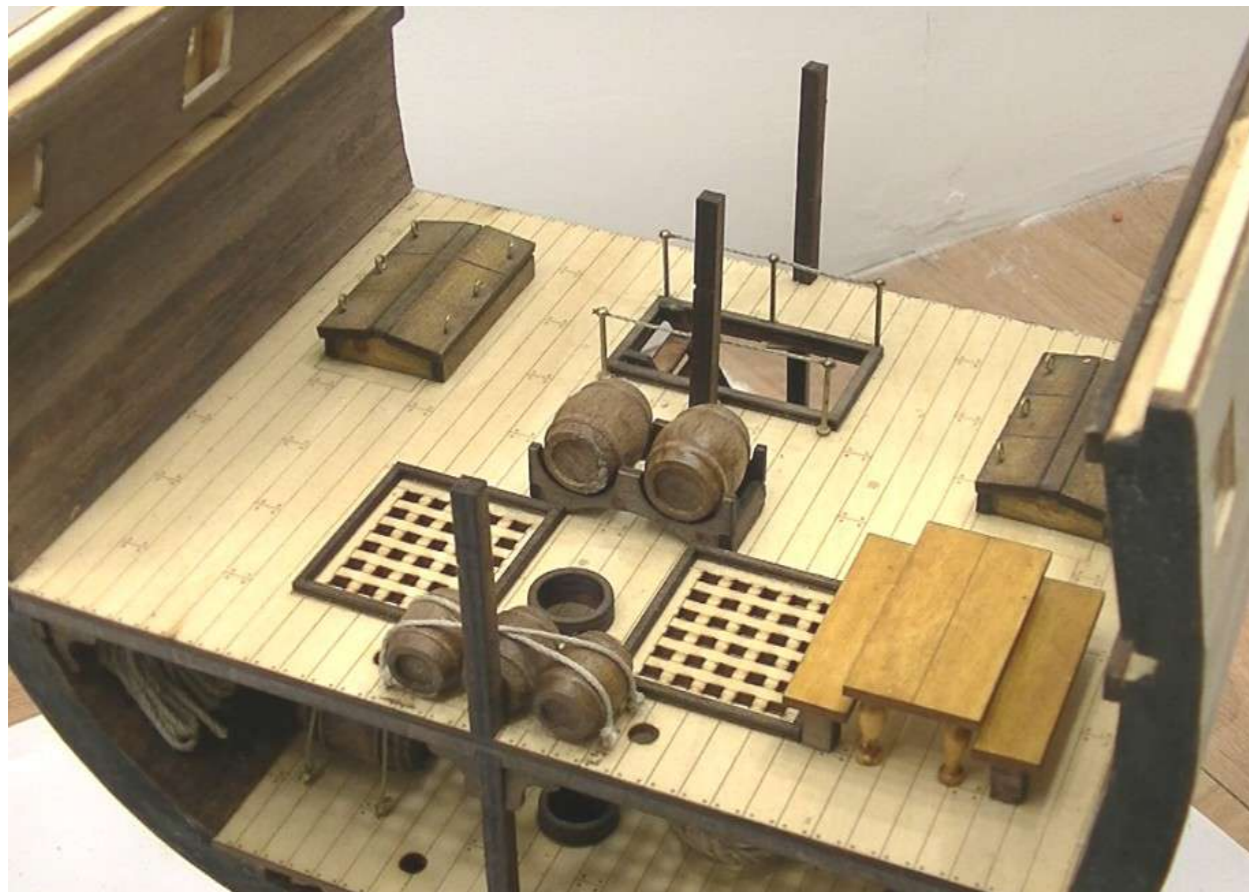
7.13 Identify the stanchions P50 - drill holes as shown and glue the stanchions in place. Fit cord 0.75mm grey as shown. Apply a dab of glue at each end of cord.



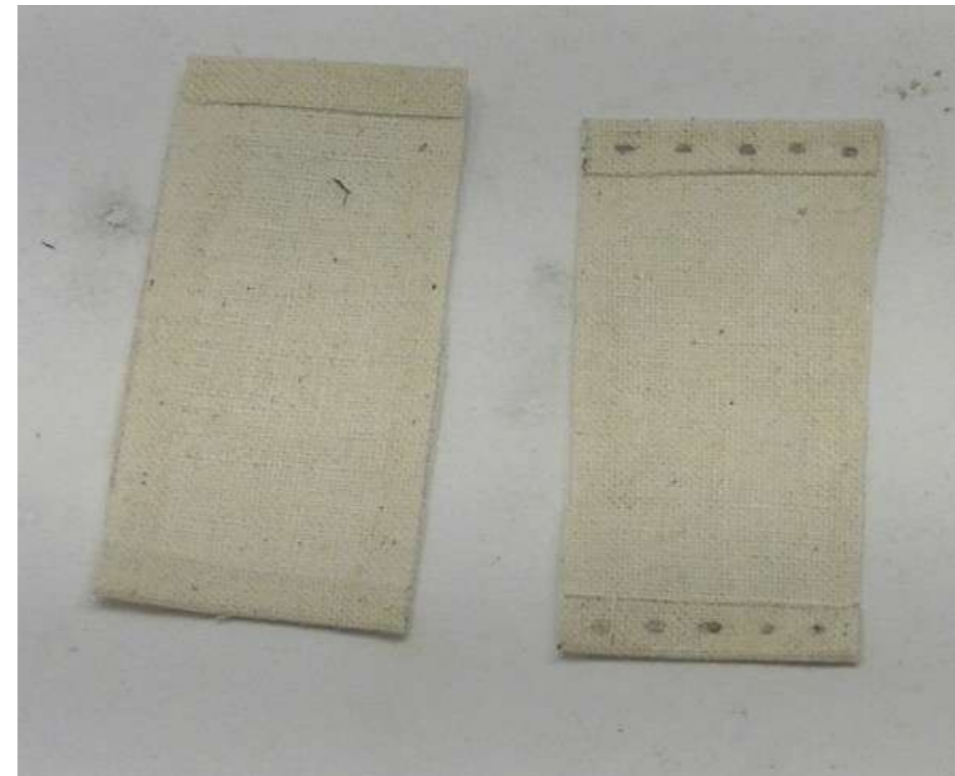
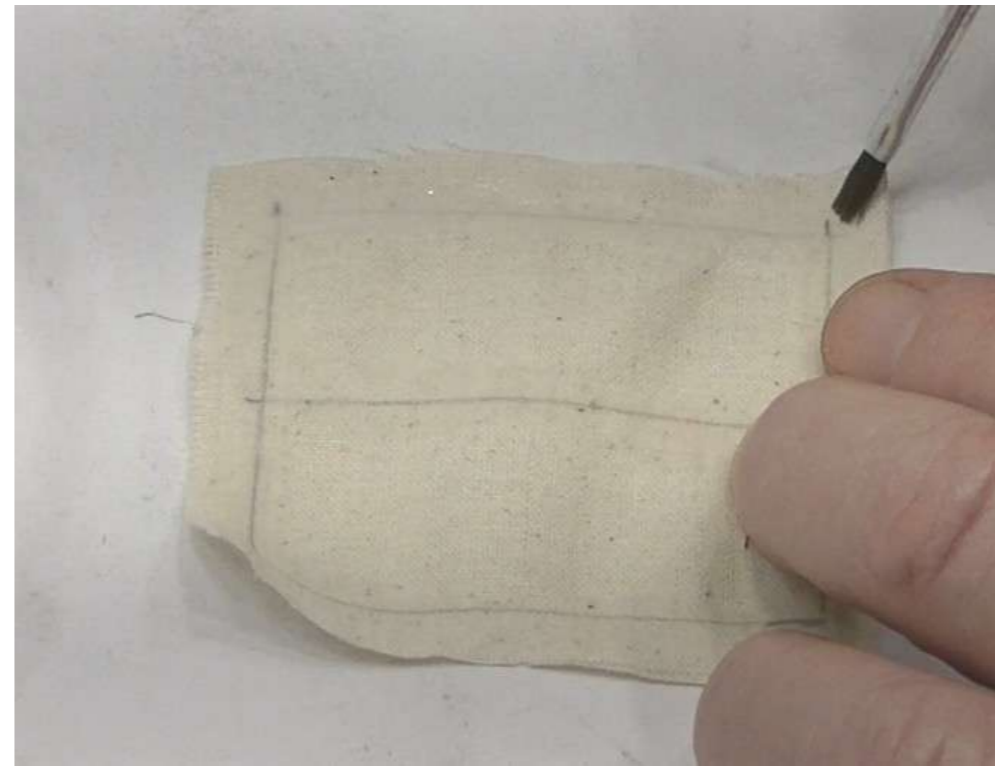
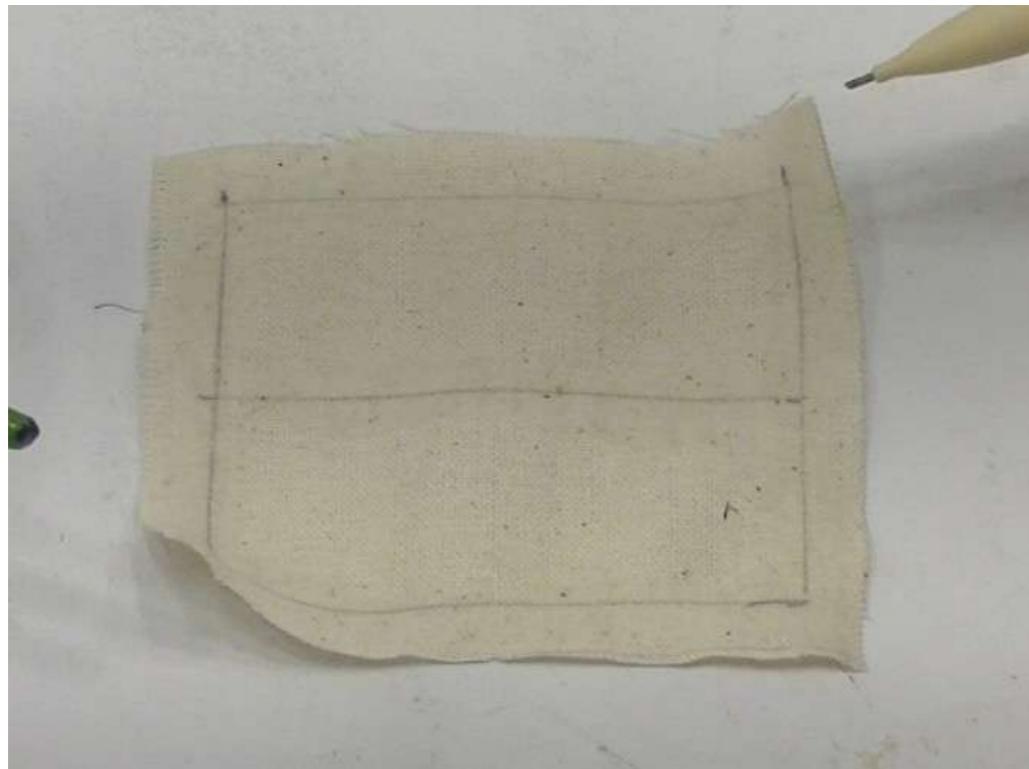
7.14 Glue the lockers in place as shown. Glue the assembled barrel holder in place. Identify the barrels 12mm dia P51 - stain walnut and glue in place and fix eye pins in place either ends of the barrels and use cord 0.75mm grey to tie barrels in place as shown. Glue the table and benches in place as shown.



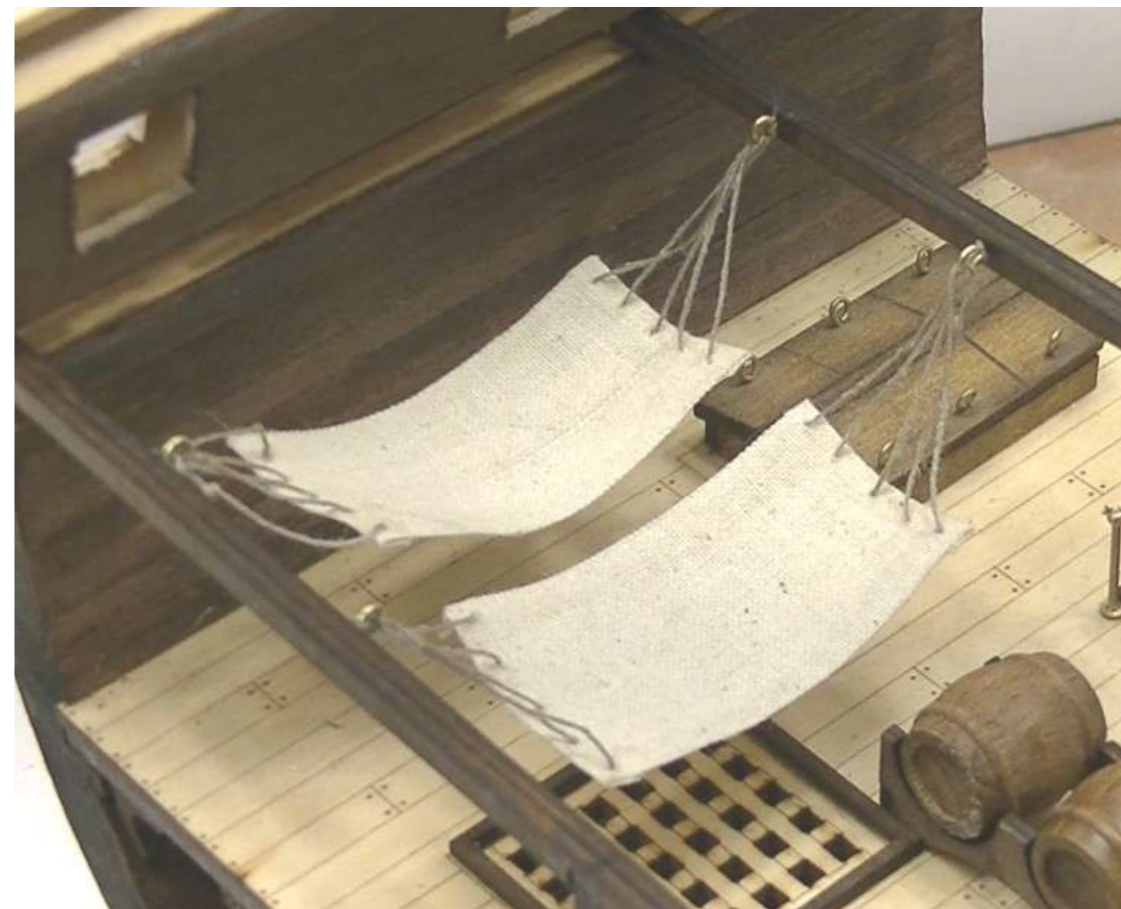
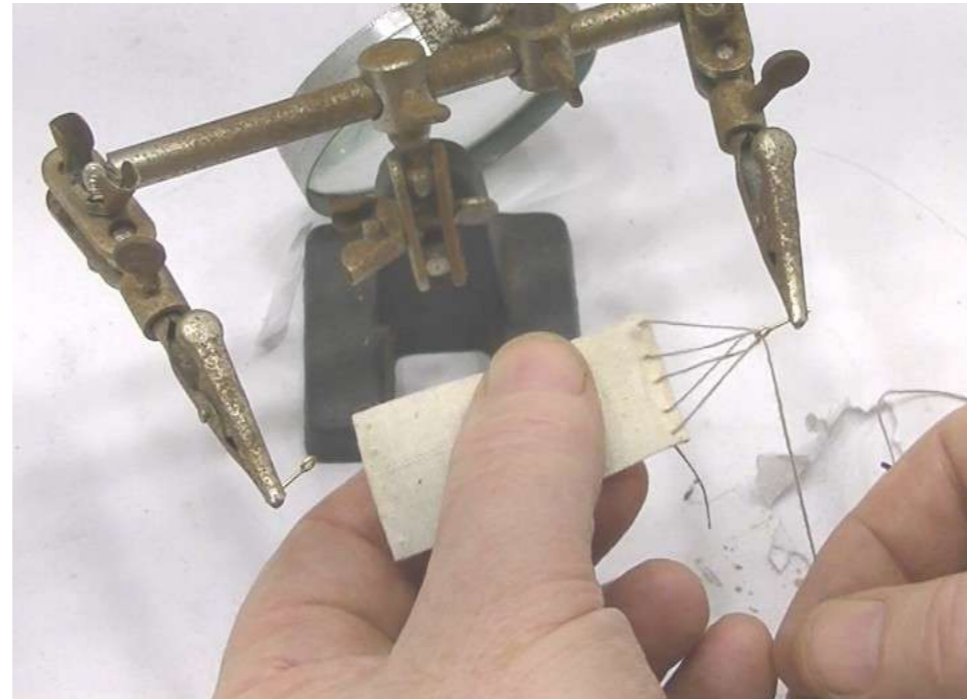
7.15 Identify the gun deck supports P27 - fix pins to the base of each as previously presented. Drill a 0.7mm hole into the lower deck at the scribed locations. Apply glue to the bottom of the support posts and fit each in place as shown. Allow the glue to dry. Identify the gun deck cross beams P24. Set one aside and place the remaining two beams aligned as shown. To prepare for the placement of hammocks measure from the left end of each of these two beams 25mm and 55mm and place a pencil mark at these two locations on both beams. Drill a 0.7mm hole at these locations on both beams and then glue eye pins P20 into these hole - use flat pliers to slightly open the eye of each pin so cord can be fitted over the pin later. Next glue the cross beams in place applying glue to the top of the supports and the ends of the cross beams - making sure that the two beams with the eye pins as placed as shown. Allow time for the glue to set.



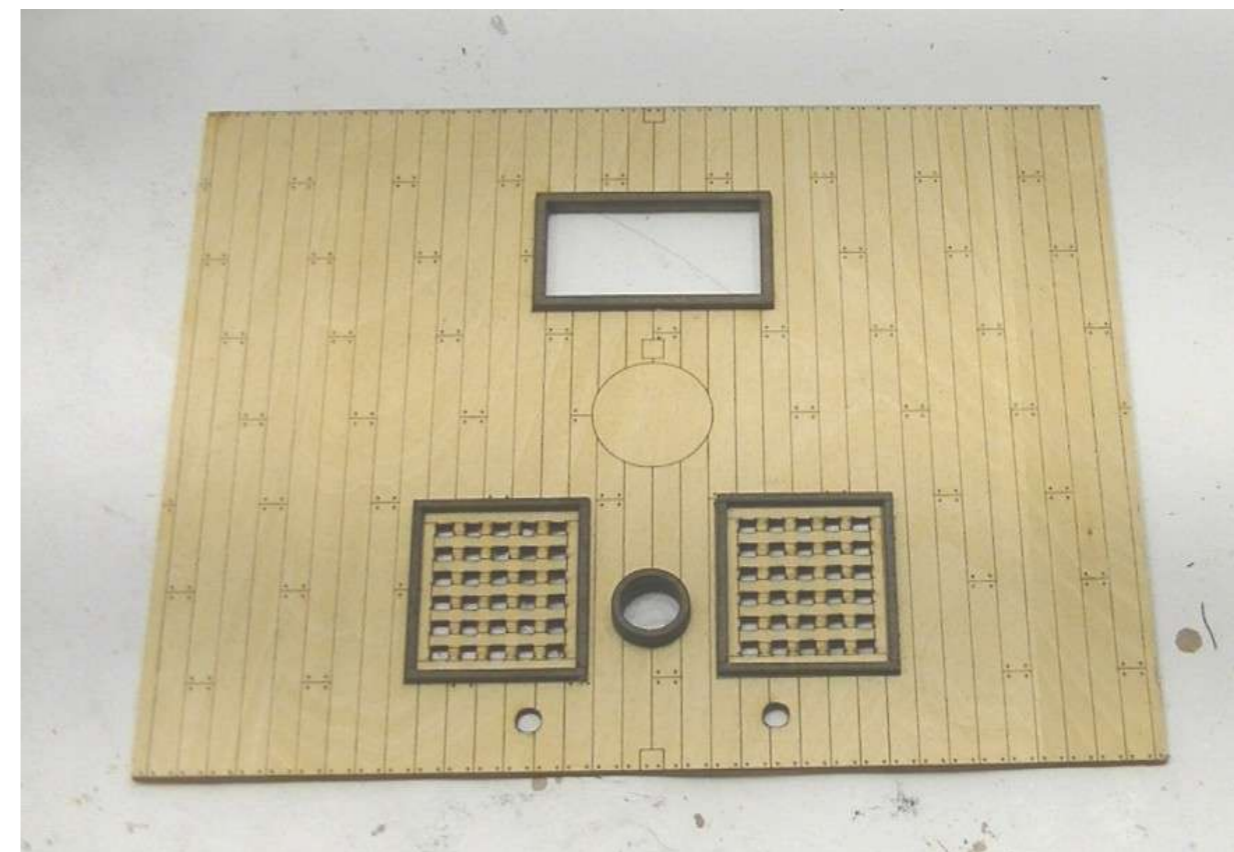
7.16 Identify the calico cloth P52. Draw two rectangles 60x25mm as shown. Apply diluted PVA glue along the pencil lines and allow to dry - this will ensure that when dry you will be able to use scissors to cut along the pencil lines without the edges fraying. On each of the calico pieces fold the ends over by 4mm and apply PVA glue and press firmly down as shown. Next use a pencil to mark five points along the folded edge on each hammock as shown. Drill 1mm holes at each of these points..



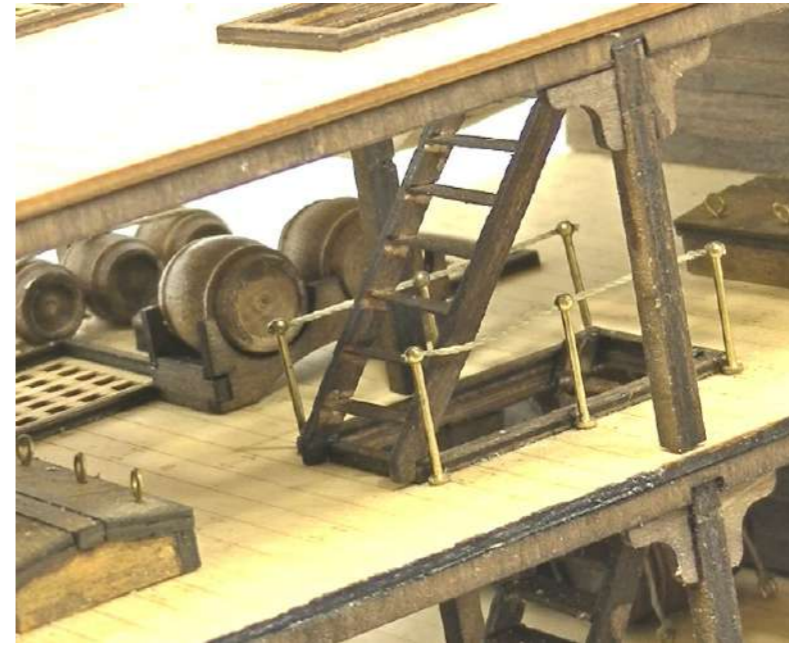
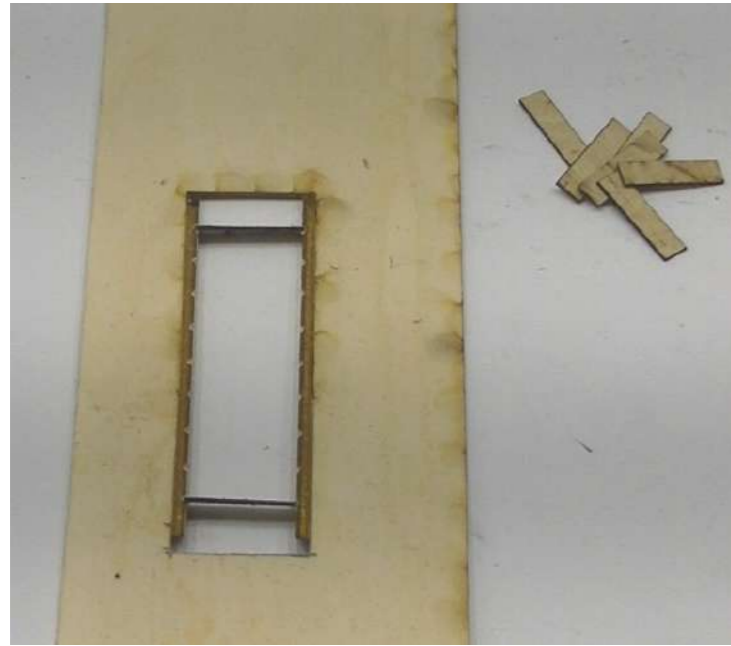
7.18 Take two eye pins P20 - open the eye of each slightly to allow the cord to be easily looped over the eye and place in the jaws of the holding tool as shown. Cut two 30cm lengths of 0.5mm grey cord P111. Tie a knot in one end of the cord and seize with a dab of glue. Apply a dab of super glue to the other end and twist quickly and cut the end at an angle to create a needle like point. Feed the cord from the underside of the hole at one end and make a loop and feed back down from the top side on the next hole - progress under and then up the next hole and make a second loop. Then feed back down from the top and come up the last hole - this finishes the sequence - leave this end of the cord loose for adjustment and tie-off later. Adjust the arms of the holding tool so that the holes of the eye pins are 75mm apart. Repeat the cord sequence for the other end of the hammock. Once completed remove the cord loops and hammock from the holding tool and fit to the eye pins on the cross beams as shown - adjust the cord loops to achieve the desired sag in the hammocks - once satisfied tie off the loose cord end to the eye pin and apply a dab of glue to seize. Repeat for the second hammock.



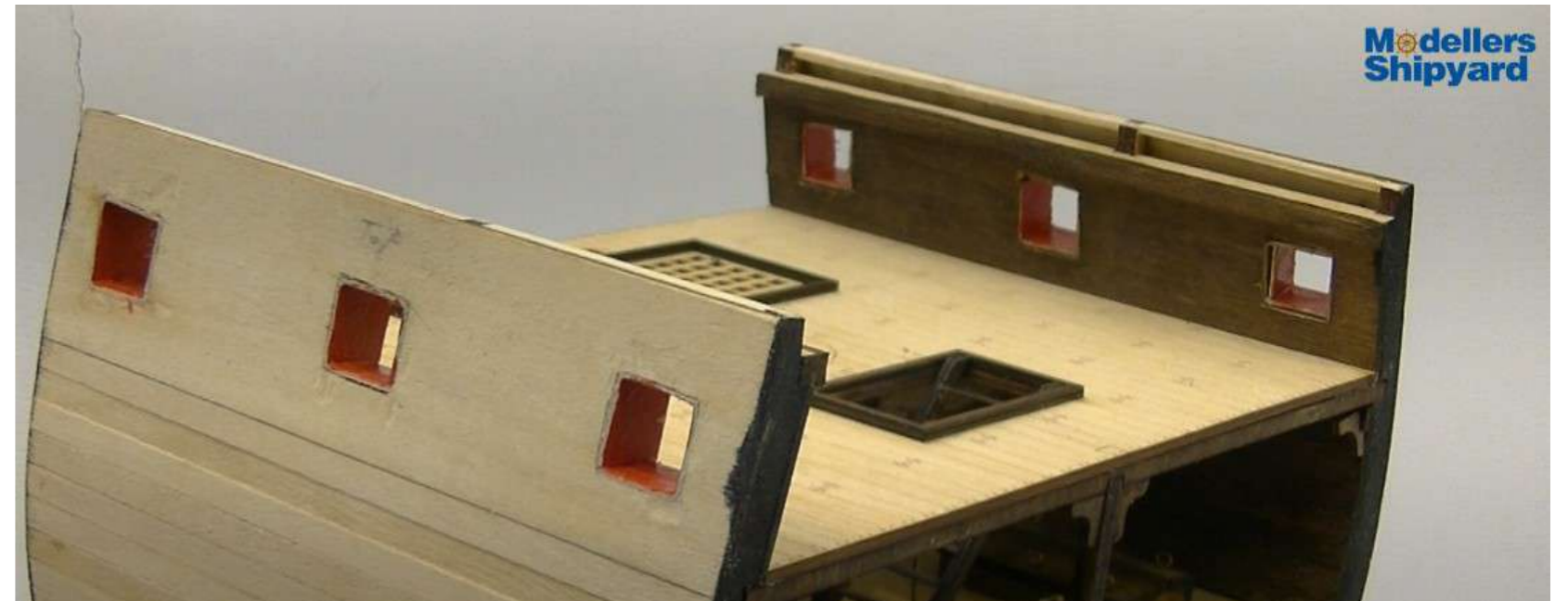
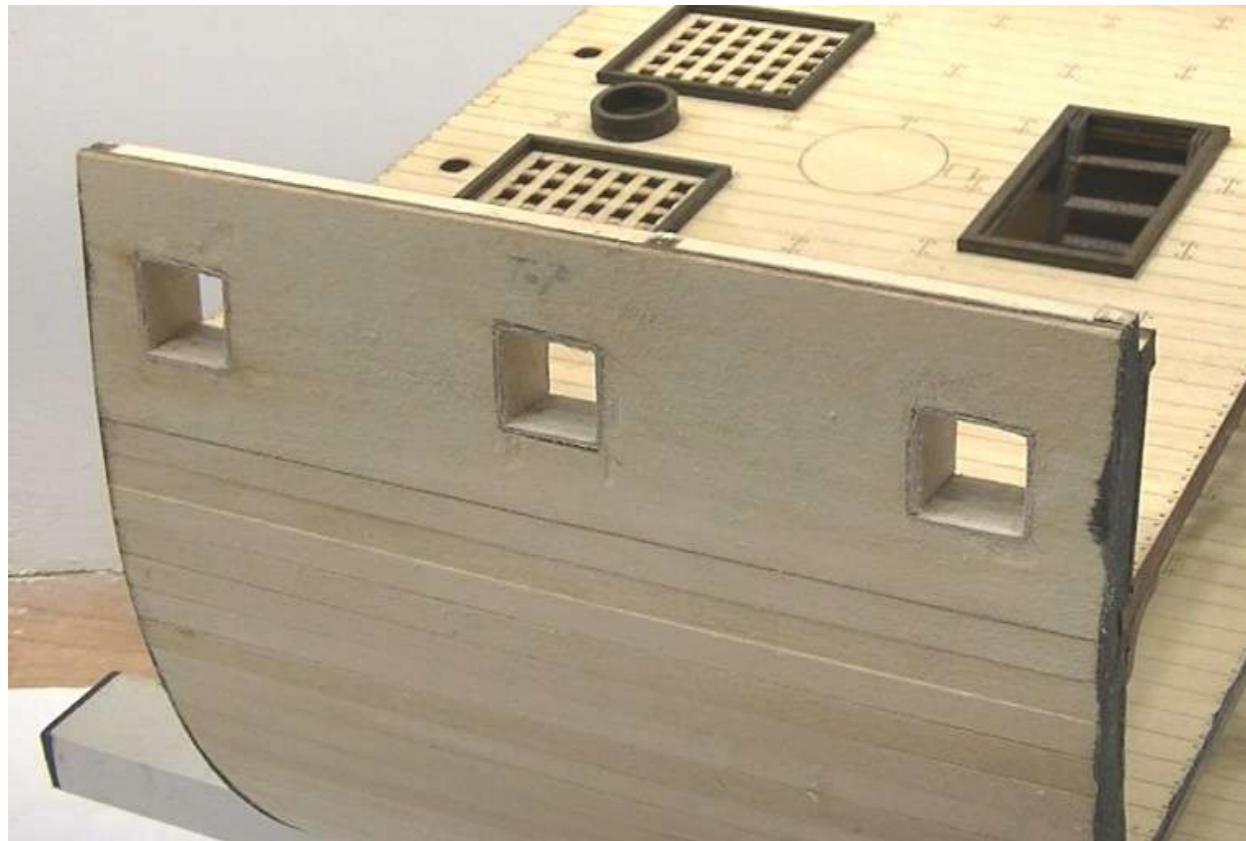
7.19 Identify the gun deck braces P30 and the central support braces P32. Trial fit the braces in place - fractionally adjust as required. Once satisfied glue each in place starting with the inner braces. Identify the gun deck P53. Glue in place the hatchway coaming P34, grating coamings P35 and the mast heel P16 as shown. Trial fit the gun deck in place - make sure the deck slides into place without being forced - some fractional adjustment of the deck width may be necessary. Once satisfied glue and clamp the deck in place.



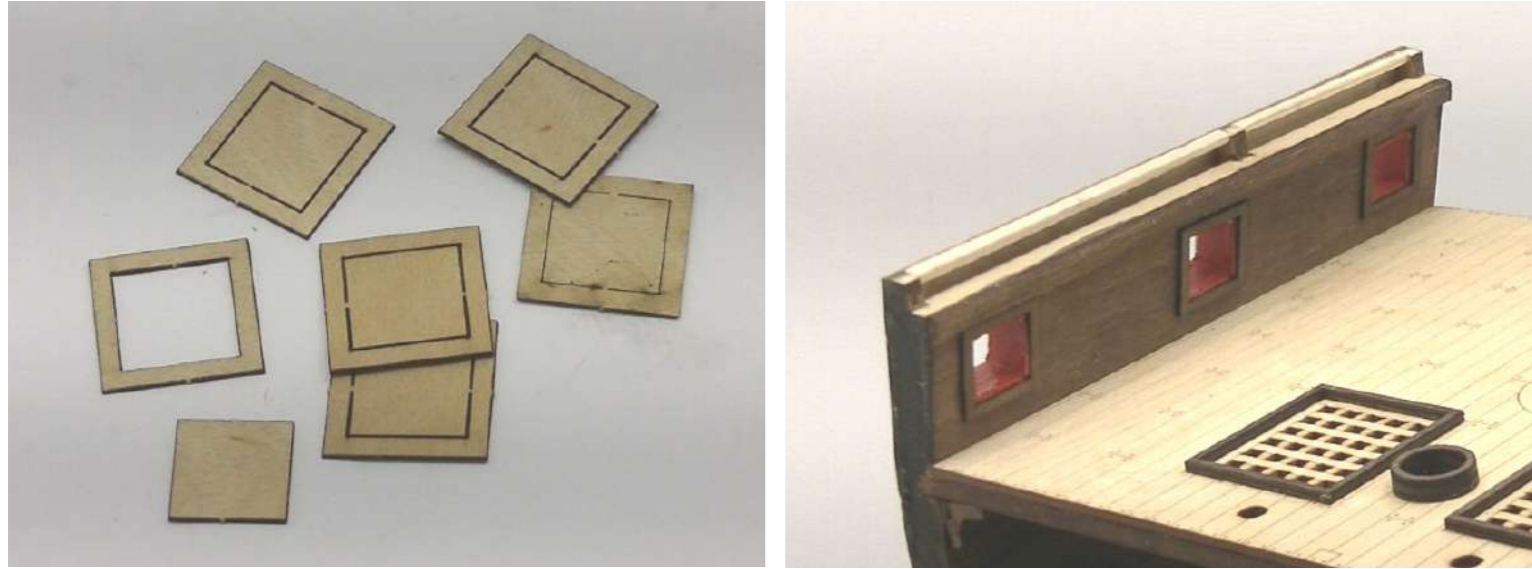
7.20 Identify the ladder jig P36, gun deck ladder runners P54 and the ladder steps P38. Follow the same approach to assemble the ladder as previously described for the lower deck. Stain the assembled ladder walnut. Trial fit in place - once satisfied glue in place as shown.



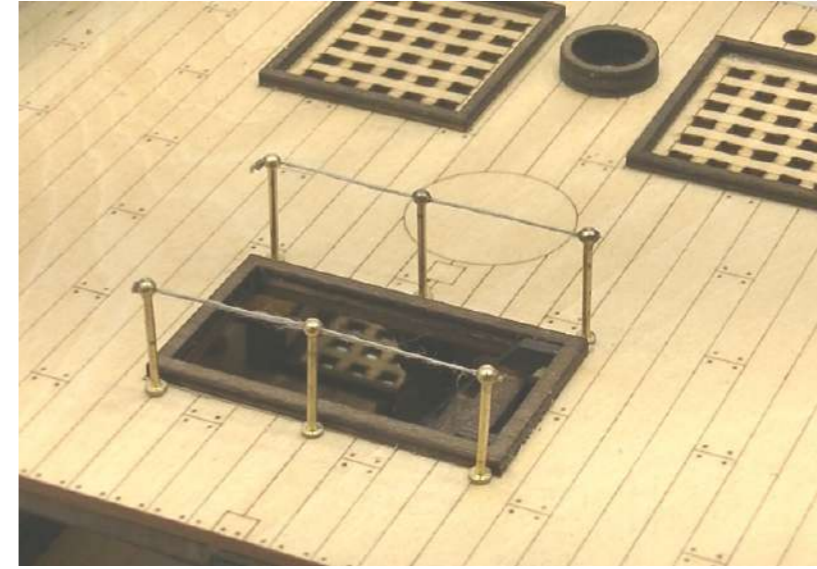
7.21 Identify the gun port hull fillers P55. Cut pieces to fill the gap between the outer and inner hull - glue in place the bottom and upper pieces first followed by the side pieces. Use sanding block to finish flush with freeboard area as shown. Next paint the interior red as shown.



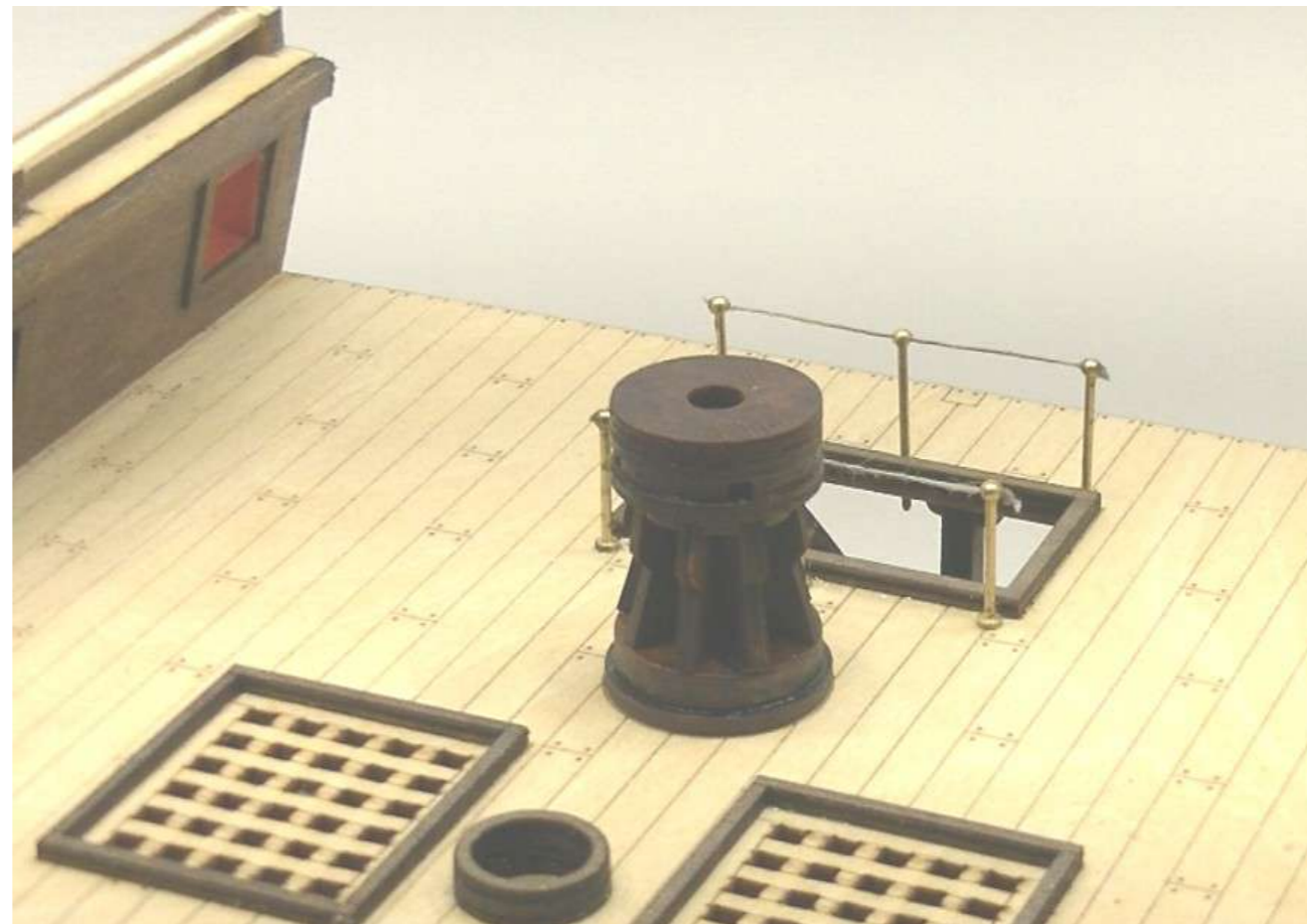
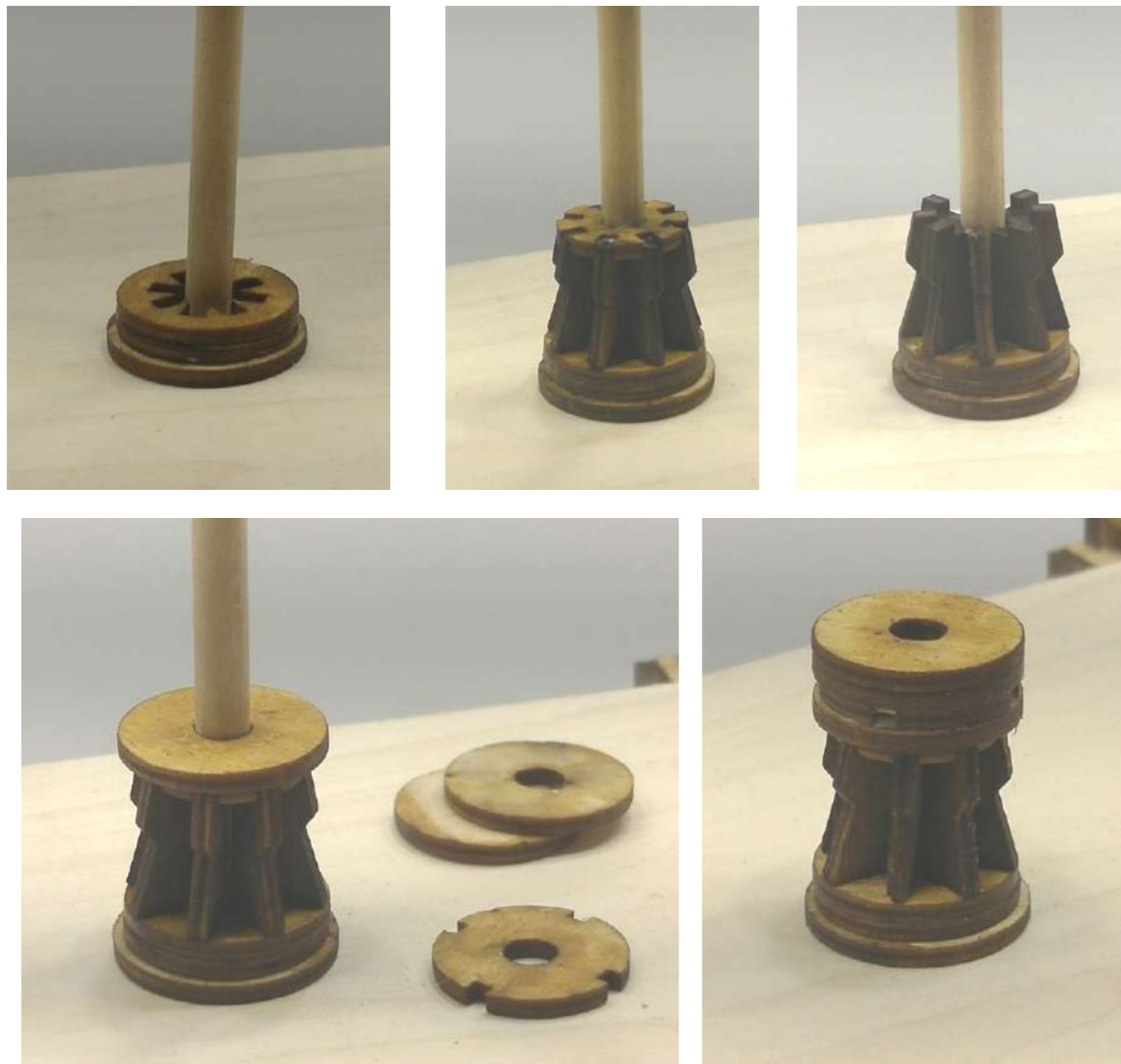
7.22 Identify the gun port frames P56. Stain walnut and glue in place on the inside of the hull around the gunports as shown.



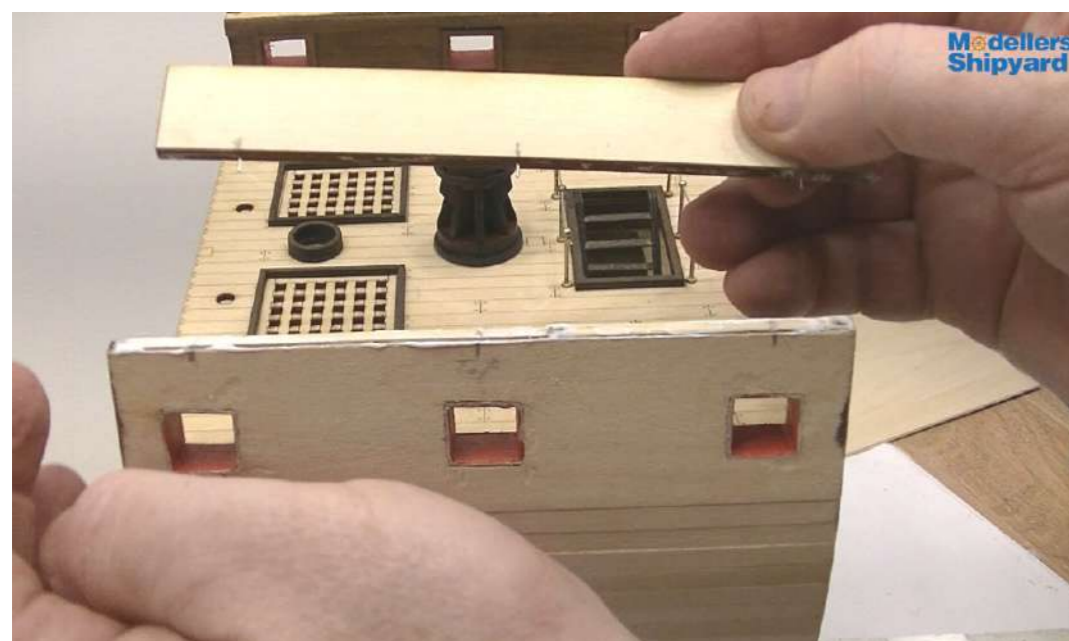
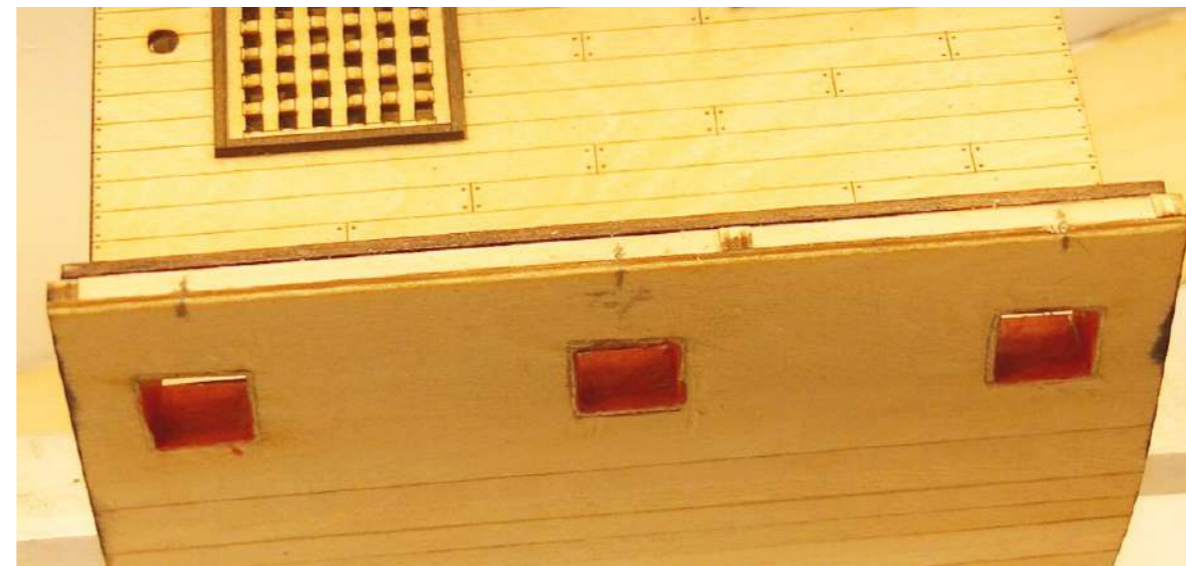
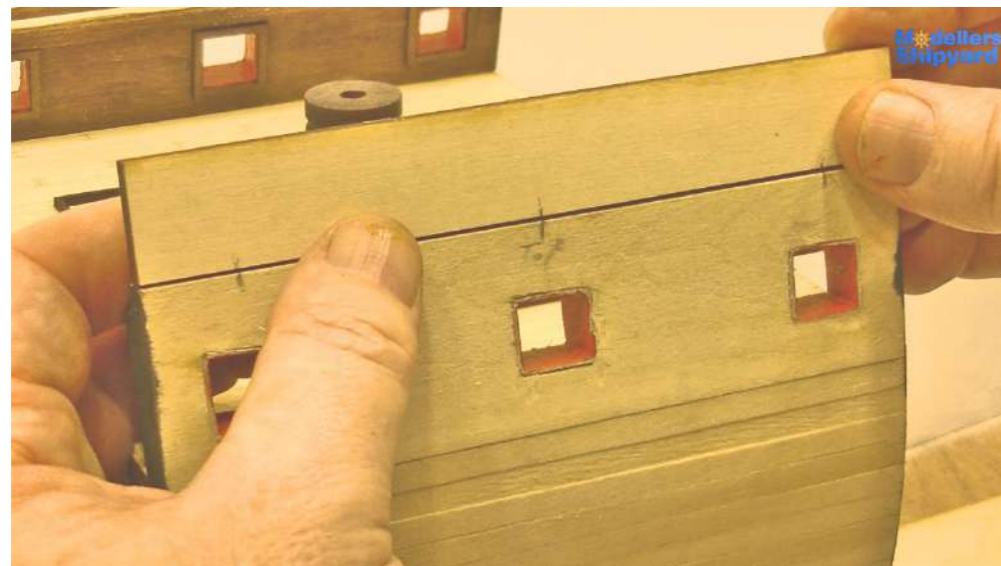
7.23 Identify the stanchions P50 - fix in place as previously presented. Run cord 0.75mm grey as shown.



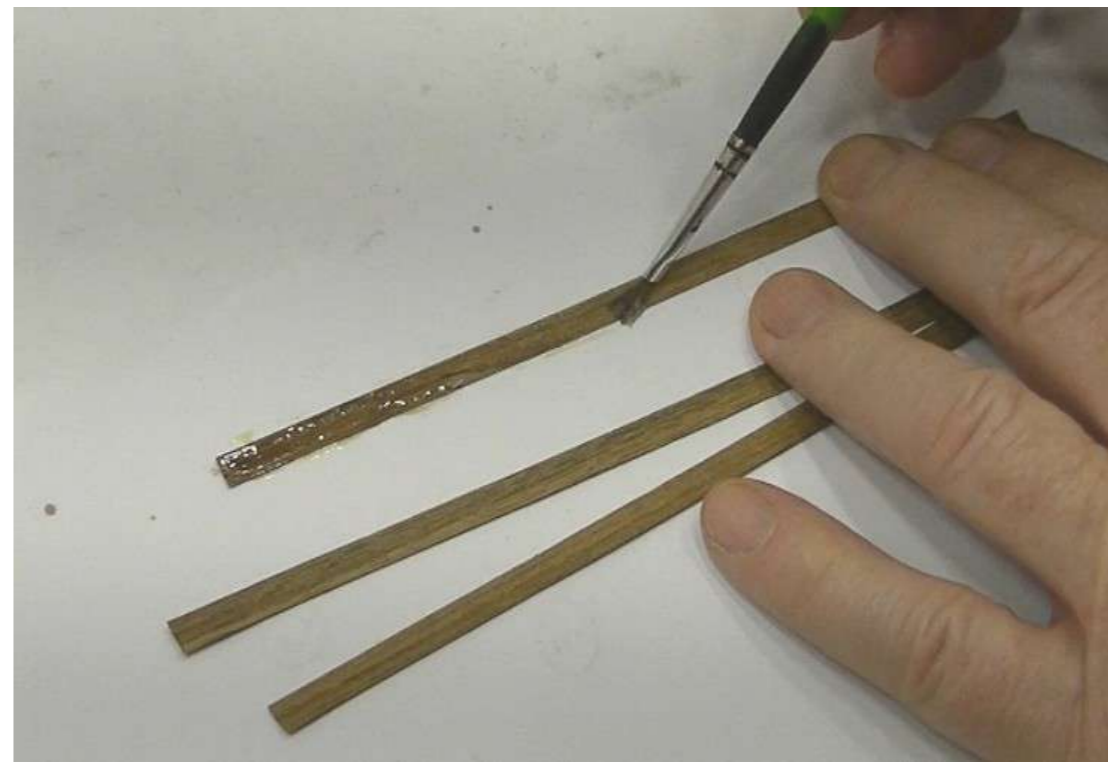
7.24 Identify the 5mm dowel P57. Identify Disc A P58, Disc B P59, Disc C P60, whelps base P61, whelps P62, whelps top P63 and slotted bar disc P64. Stain P58 to P64 walnut. Take the 5mm dowel and fit disc A, disc B and whelps base over the dowel as shown - glue these parts together as shown. Glue in place the whelps as shown. Glue the whelps top in place as shown. Glue disc A in place as shown. Glue the slotted bar disc in place. Glue two disc B in place as shown. Remove the 5mm dowel. Set aside for the glue to set. Glue the assembled capstan to the deck over the pre-scribed location as shown - take care as the gun deck capstan must align with the main deck capstan to be fitted later.



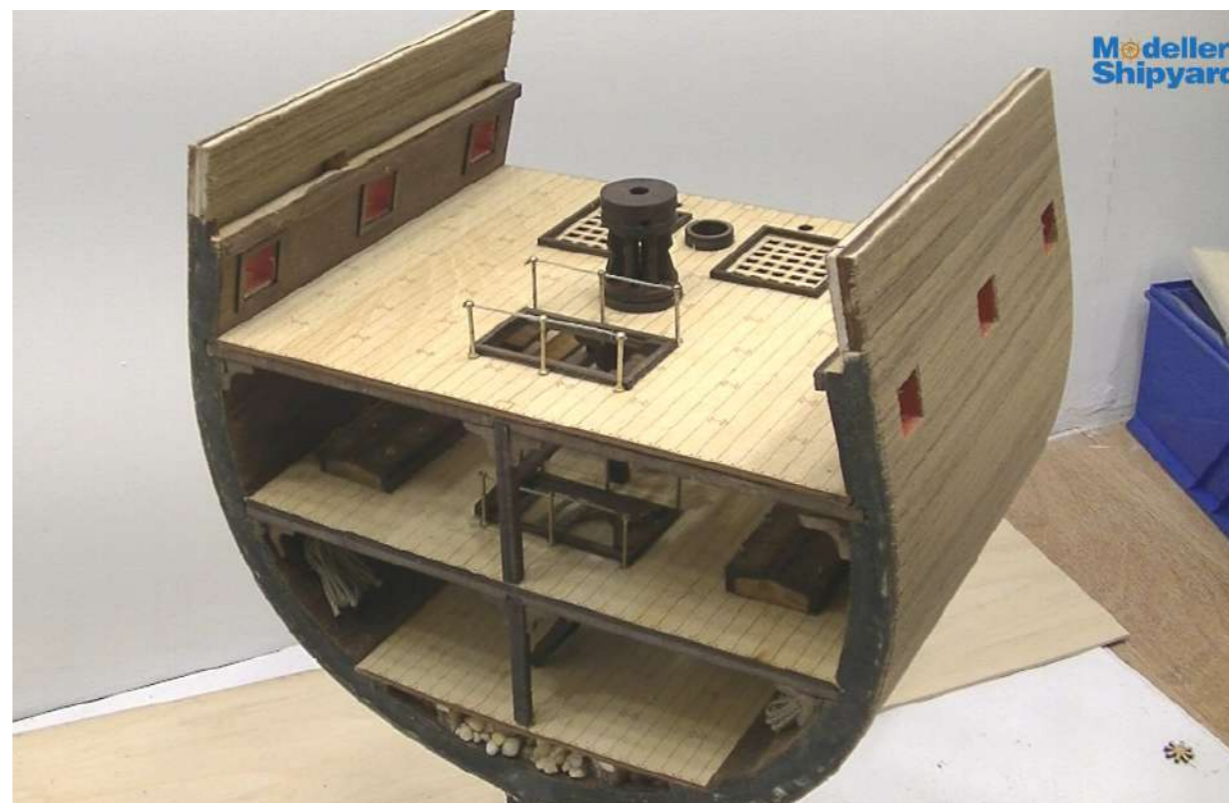
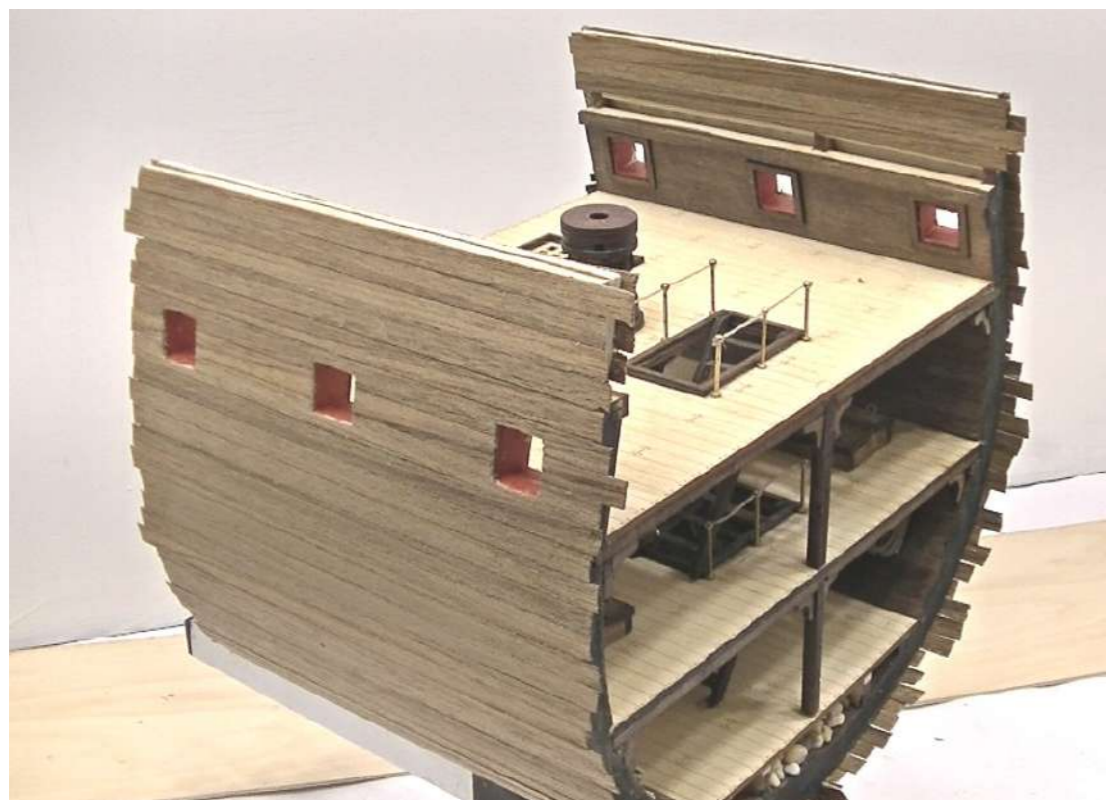
7.25 Identify the bulwarks P65. Make 3 pencil marks on the lower edge of the bulwark and then place the bulwark on top of the freeboard and transfer the pencil marks to the top of the freeboard. Drill 0.7mm holes 2mm in from the outer edge of the top of the freeboard at these pencil marks. Drill 0.7mm holes into the centre of the base of the bulwark as shown and glue pins into each hole. Trial fit the bulwark in position fitting the pins into the pre-drilled holes in the top of the freeboard. Once satisfied glue the bulwark in position. Repeat for the other side of the hull. Next identify the inner bulwark P 66 - glue and clamp in position aligning with the top of the bulwark as shown.



7.26 Second Layer of Planking Identify the 0.6x5x500mm teak P67 - this is the second layer of planking. Cut lengths to 150mm. Use a contact adhesive such as Sellys Quick Grip. Glue in place 3 planks at a time - apply the glue to the required area on the hull - also apply the glue to three planks - allow both surfaces to completely dry - once both surfaces are touch dry carefully place a plank in place. Repeat for the other planks. Progress down the hull - mark the location of the gun ports and use a pointed blade knife to cut out the gunport as shown.



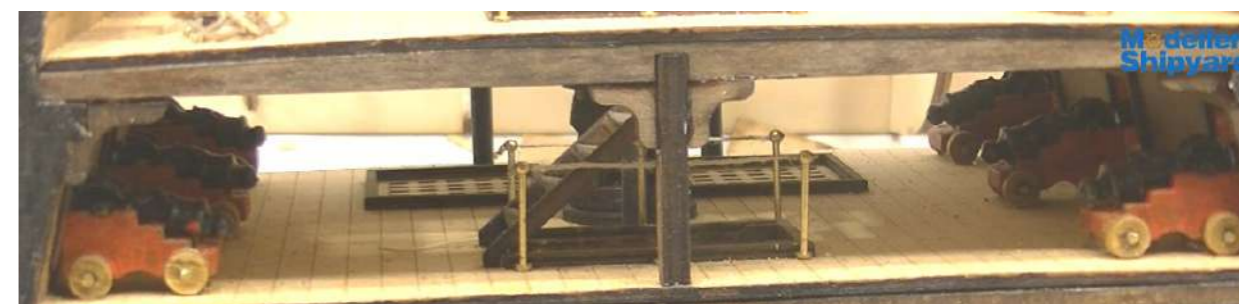
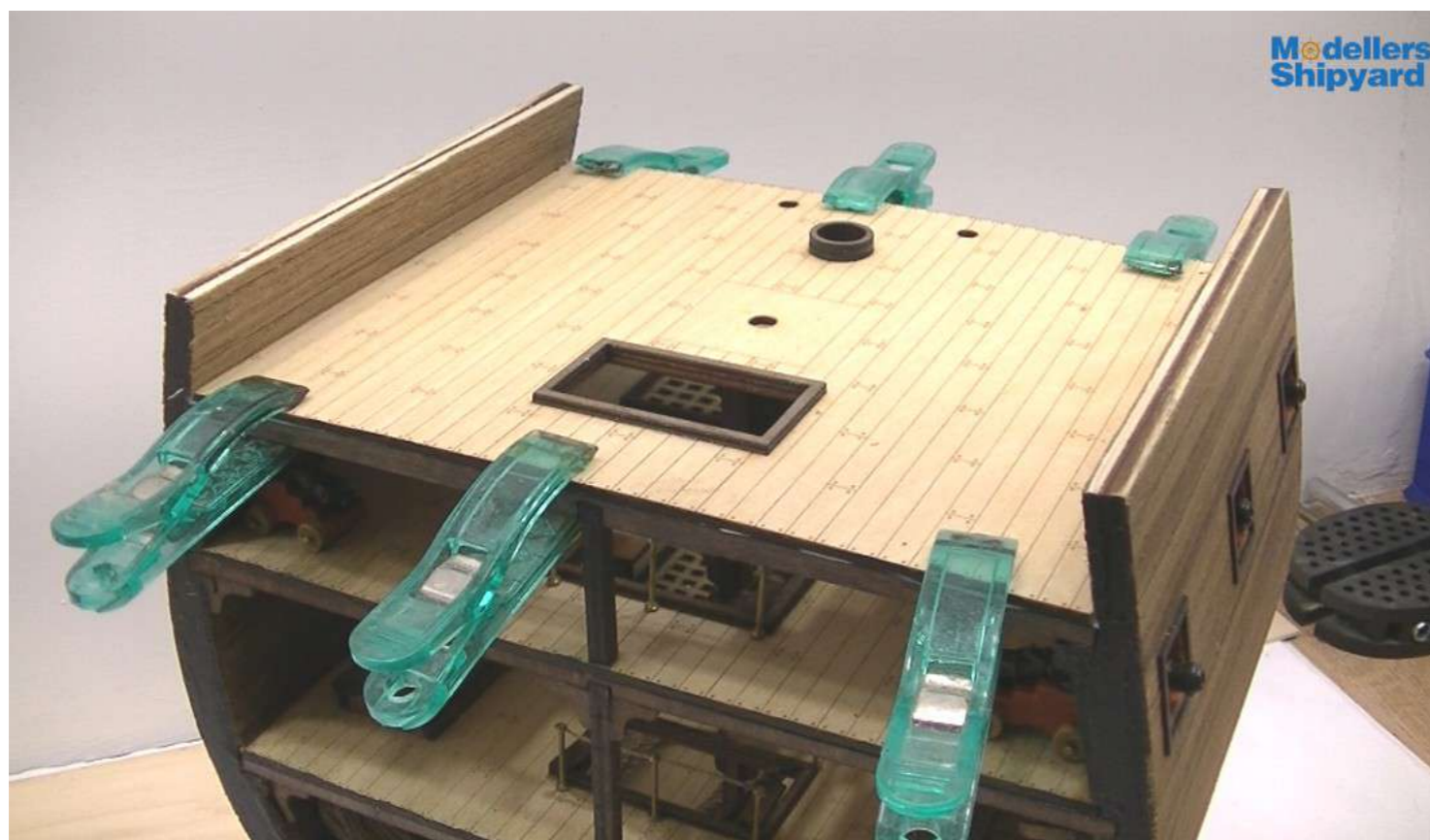
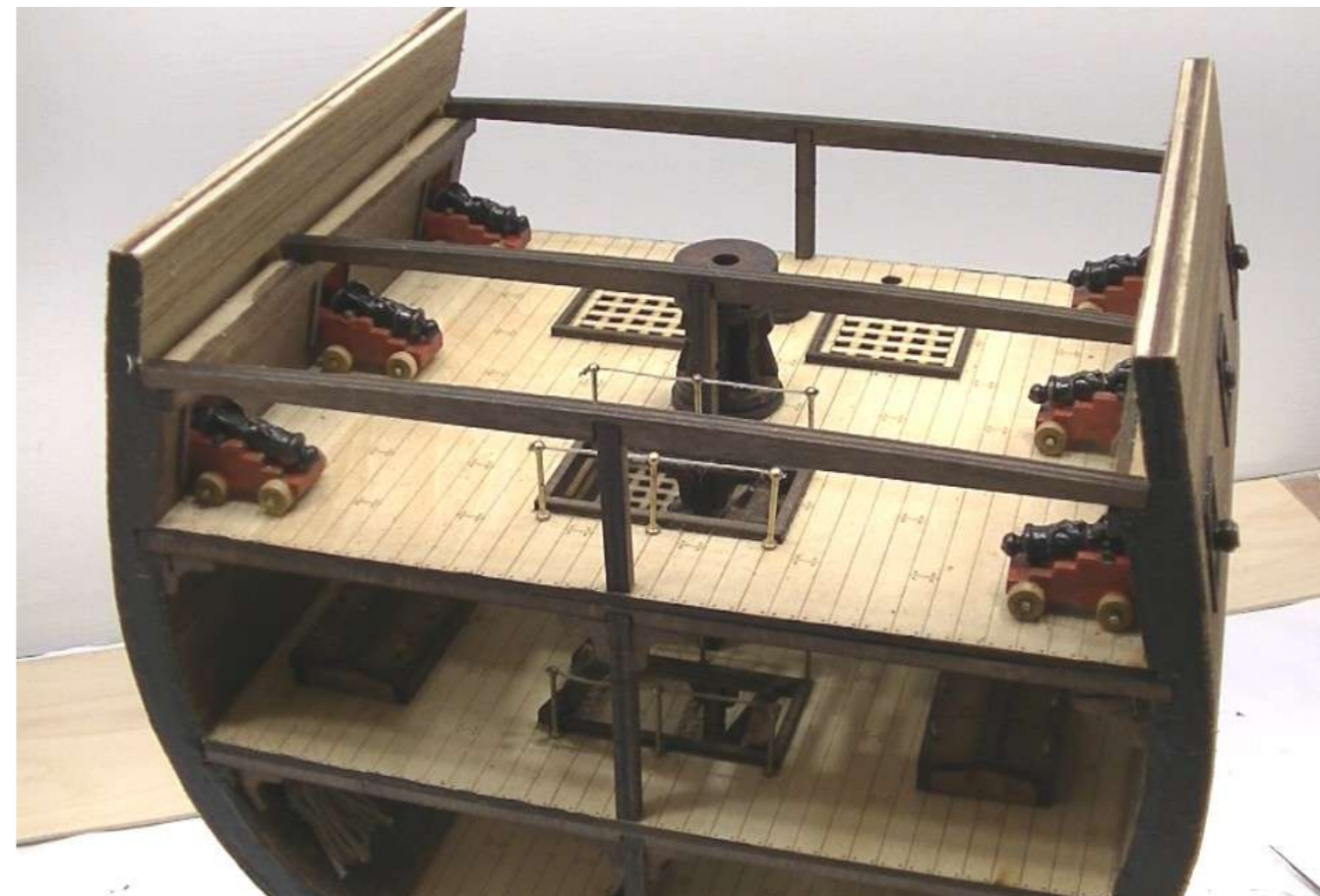
7.27 Finishing planking the hull with the teak veneer. Also plank the inner bulwark as shown. Once finished use a pointed blade knife to carefully remove any excess overhang of the planking then lightly sand both ends of the hull. Paint the outer frame ends matt black as shown.



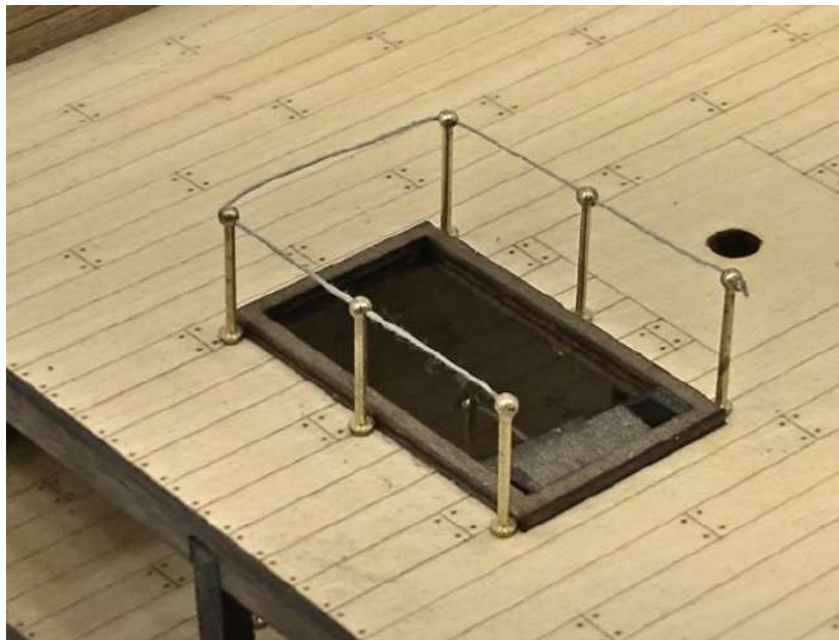
7.28 Identify the cannon carriages P68A-D. Assemble and paint the carriage red and wheels walnut as shown. Identify the cannon barrel P69 and the 0.75mm brass wire. Cut a 10mm length of the wire and glue in place in the hole in the barrel. Paint the barrel and wire black. Glue the assembled barrel onto the carriage as shown. Repeat for the remaining five deck cannons.



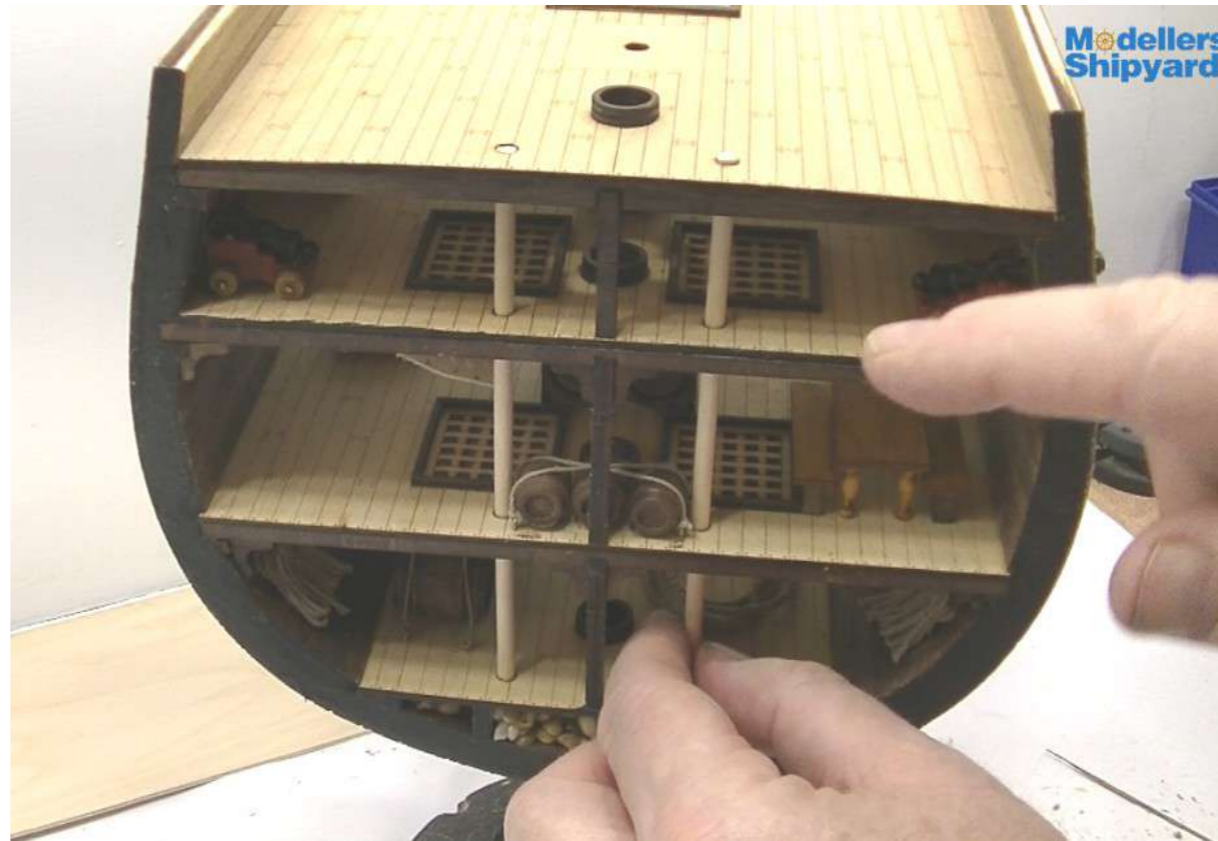
7.29 Identify the gunport frames P56 - stain walnut and glue in place around the gunports as shown. Glue the six assembled deck cannons in place on the deck as shown. Identify the main deck cross beams P25 and the main deck supports P28. Fix pins to the base of the deck supports and drill 0.7mm holes at the score marked locations. Glue the supports in place. Trial fit the deck cross beams - once satisfied glue in place as shown. Identify the main deck braces P31 and central support braces P32 - trial fit and glue in place starting with the central beam braces. Identify the main deck P71. Identify the hatchway coaming P34 and mast heel P16 - glue both in position. Trial fit the deck in place - fractionally adjust as required. Once satisfied glue and clamp the deck in place as shown.



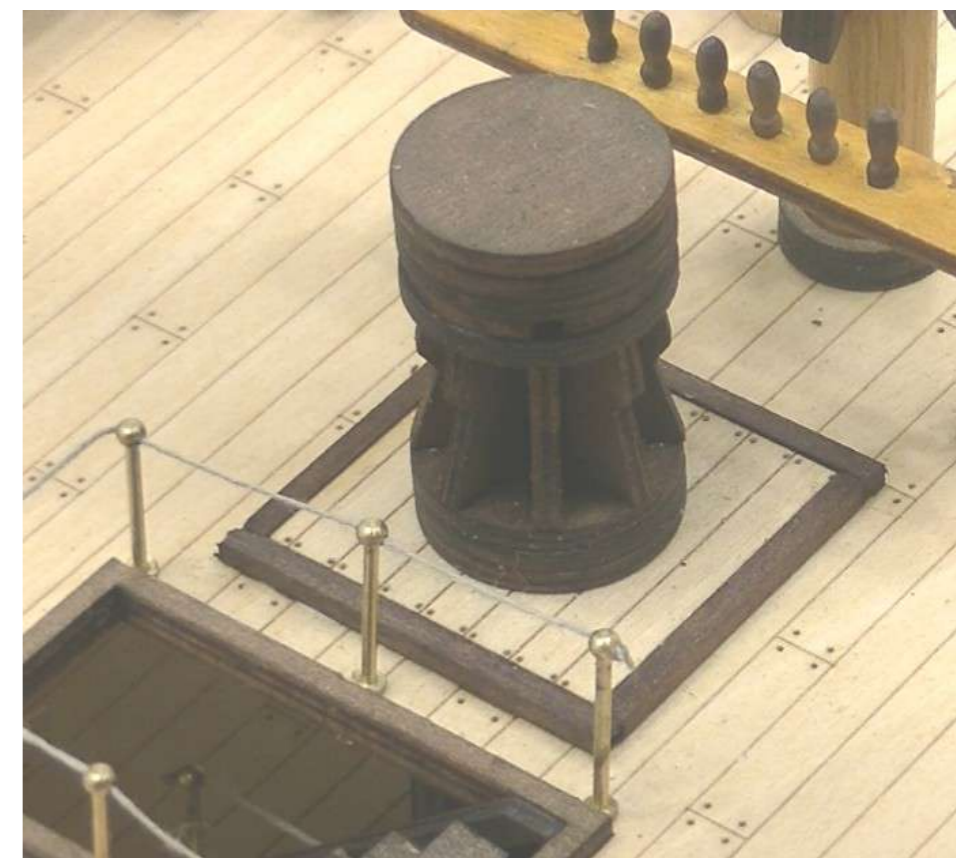
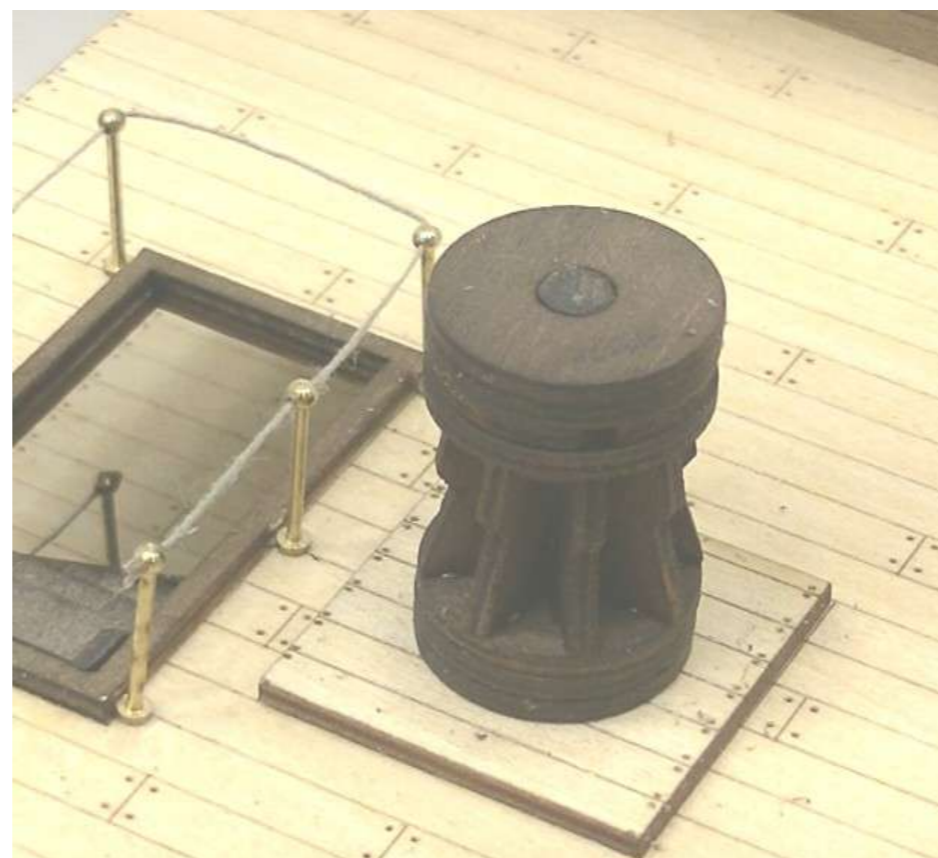
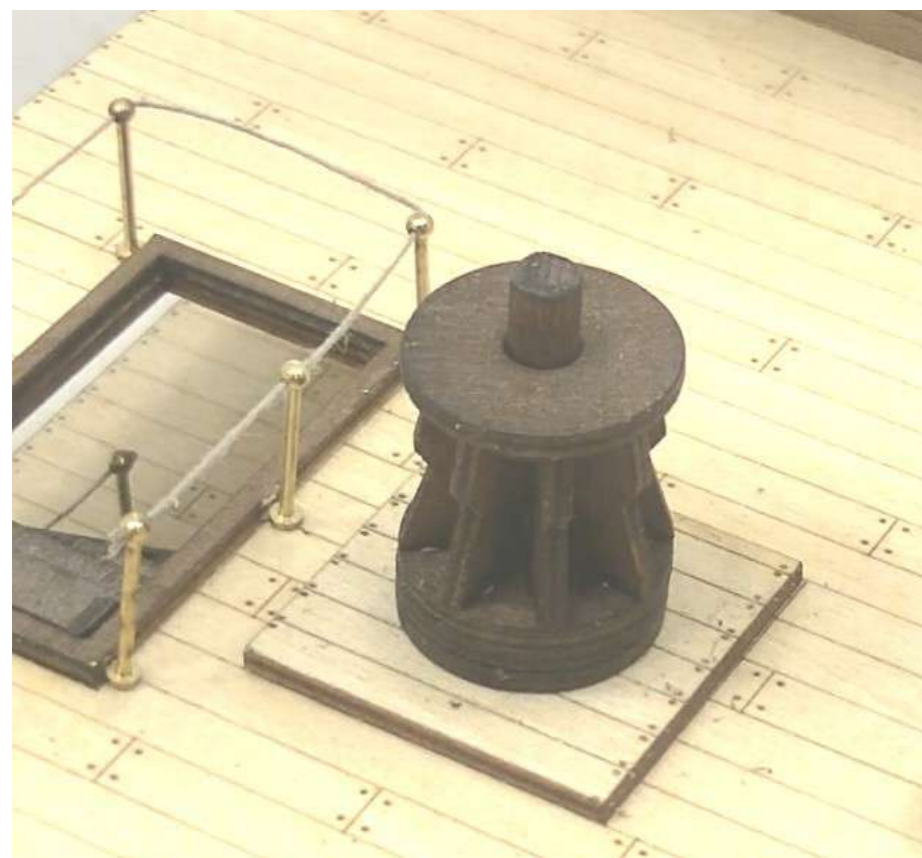
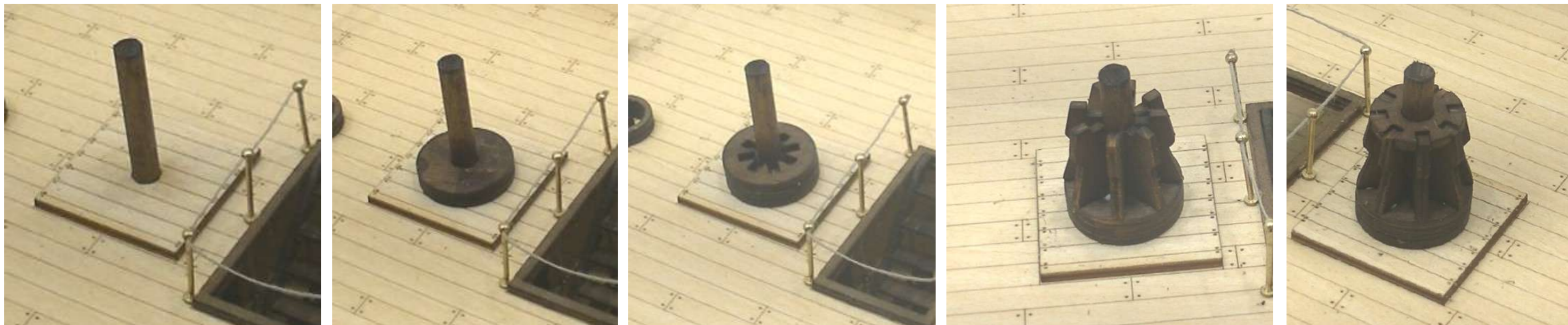
7.30 Identify the ladder jig P36, gun deck ladder runners P72 and the ladder steps P38. Follow the same approach to assemble the ladder as previously described for the gun deck. Stain the assembled ladder walnut. Trial fit in place - once satisfied glue in place as shown. Identify the stanchions P50 - fix in place as previously presented. Run cord 0.75mm grey as shown.



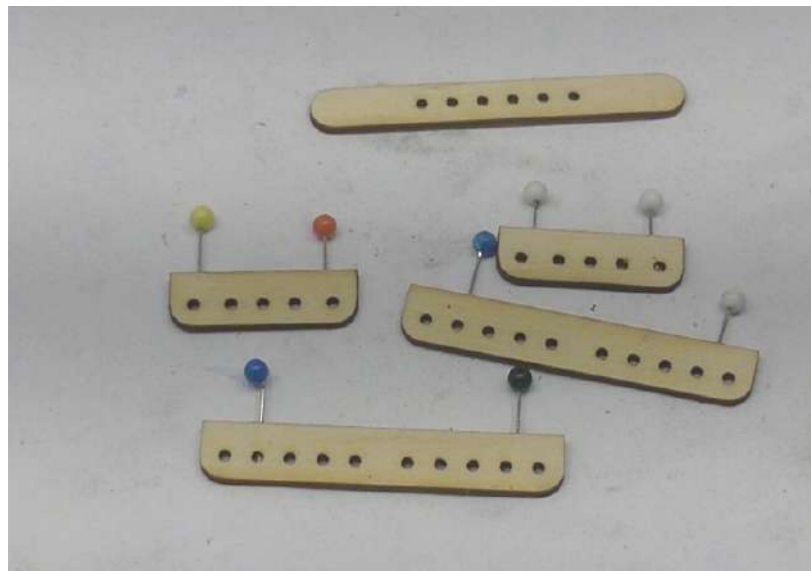
7.31 Identify the 4mm dowel P73 - cut two 135mm lengths. These will represent the bilge pump pipes. Trial fit in place - fractionally adjust so each length is flush with the deck. Once satisfied remove each dowel and paint black. Then reinsert - probably no need to glue in place. Identify the pumps P74 - assemble each pump and glue in place as shown.



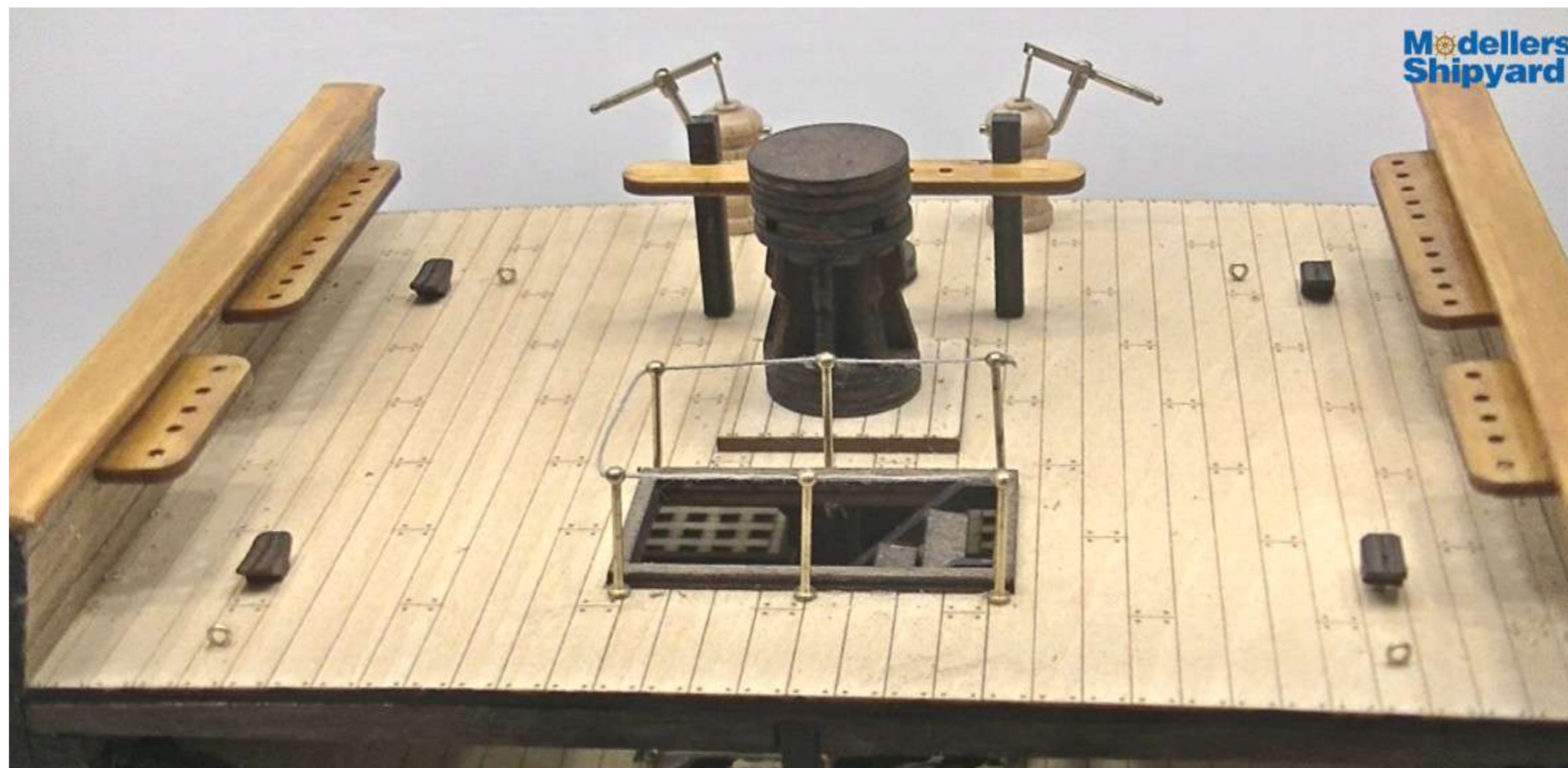
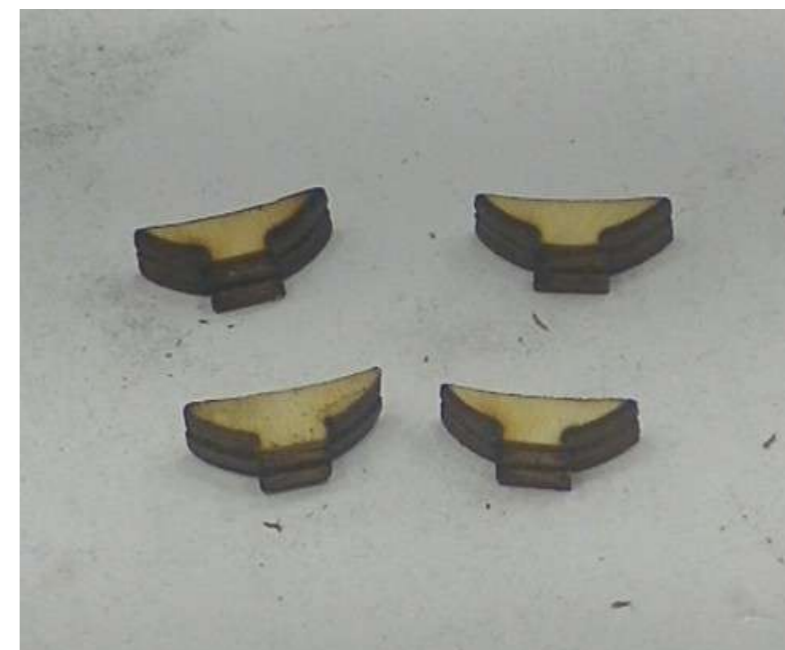
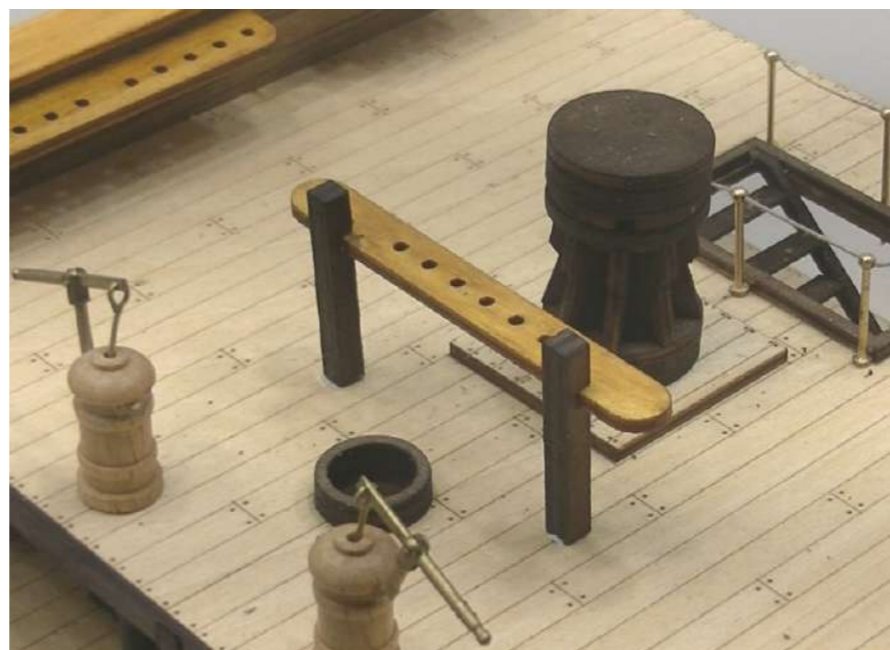
7.32 Identify the capstan base P75 - glue in place on the deck making sure the planking is aligned with the direction of the deck planking . Identify the 5mm dowel P57 - cut a length 67mm - stain walnut. Insert the dowel so it fits down into the gun deck capstan - fractionally sand the dowel to easily fit into place. Next glue two disc B P59 pieces in place followed by the whelp base P61. Glue the whelps P62 in place. Glue the whelp top P63 in place. Glue disc A in place. Glue the slotted bar disc P64 in place. Next glue two disc B P59 in place followed by disc C P60. Identify the capstan base coaming P76 - glue in place around the base as shown.



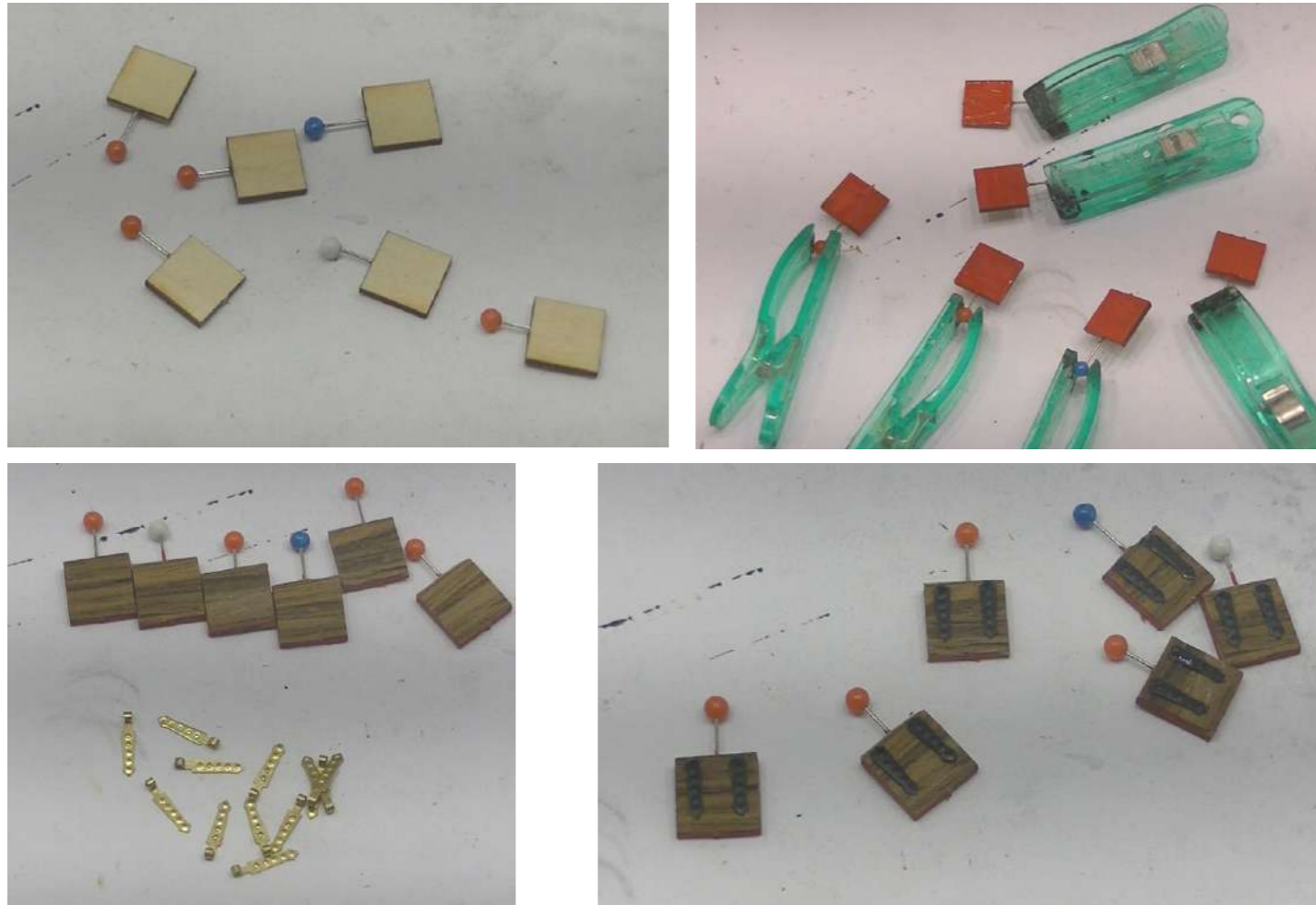
7.33 Identify the belaying pin rails A P77 and belaying pin rails B P78 - fix pins into the rear edge as shown. Stain the pin rails with shellac. Identify a length of the 2x5mm limewood planking - cut to 140mm length. Now cut this length in half length ways—to create a 2.5mm width length. Temporarily clamp this length of timber in place flush with the top of the bulwark as shown. Measure 20mm in from the mast end of bulwark and make a pencil mark - repeat for the other end. Taking pin rail A align its end with the 20mm mark and the underside of the timber piece and push the pins into the inner bulwark to create indents in the planking. Now take pin rail B and repeat for the other end of the bulwark. Drill 0.7mm holes at these indents and then glue the pin rails in place as shown. Identify the cap rails P112 - use sand paper to round the edges and stain with shellac - glue in place on top of the bulwarks as shown.



7.34 Identify the main mast pin rail P79 - stain with shellac. Identify the pin rail posts P80 - stain walnut. Fix pins to the base of the posts and drill 0.7mm holes at the pre-scribed locations. Glue the pin rail to the posts and glue the assembled pin rail and posts in place as shown. Identify the cleats P81 - use a flat needle file to slightly round the edges - stain walnut. Fix pins to the base of each cleat. Drill 0.7mm holes at the pre-scored locations and glue the cleats in place. Drill 0.7mm holes at the pre-scored locations and fix eye pins P20 at each location.



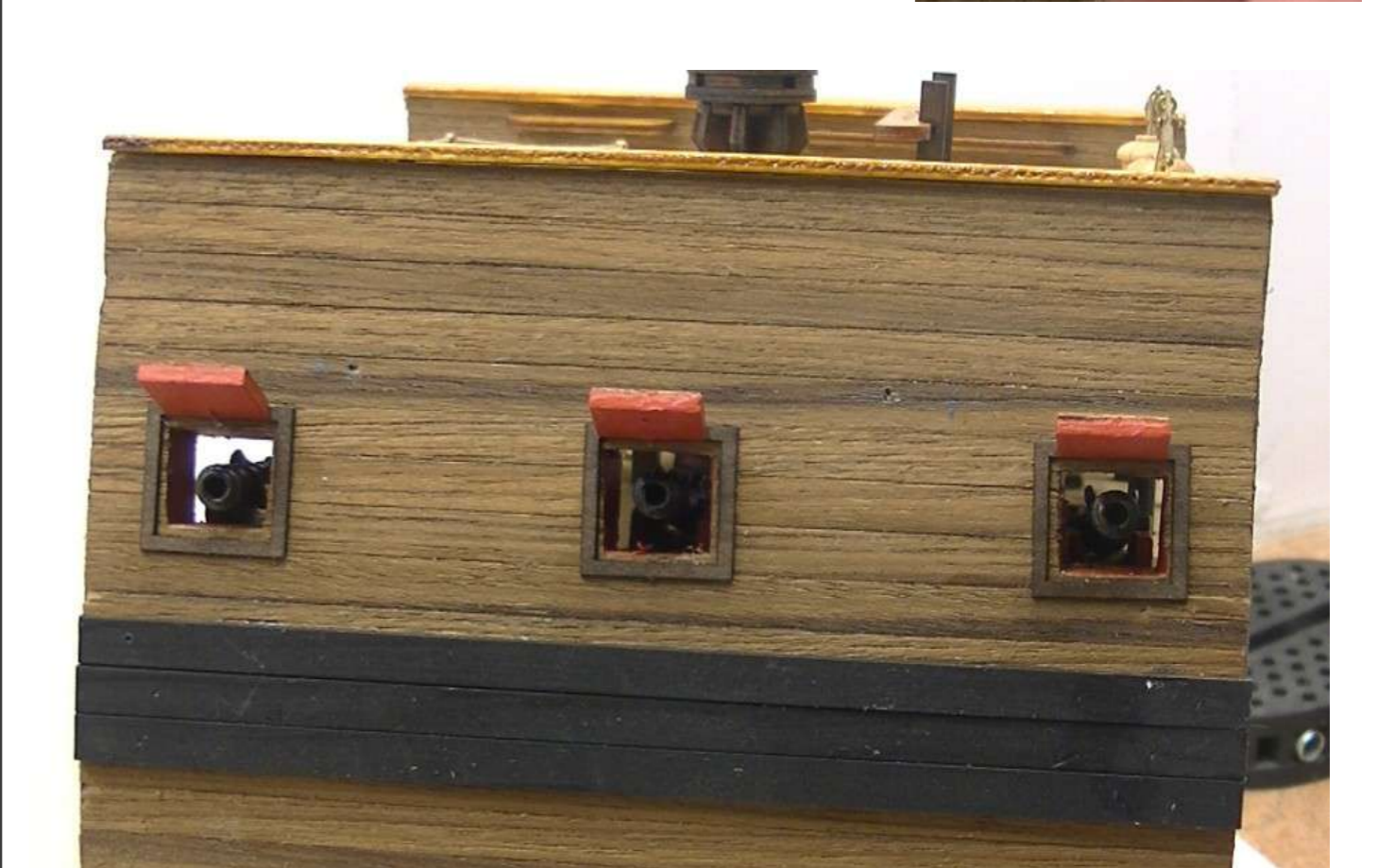
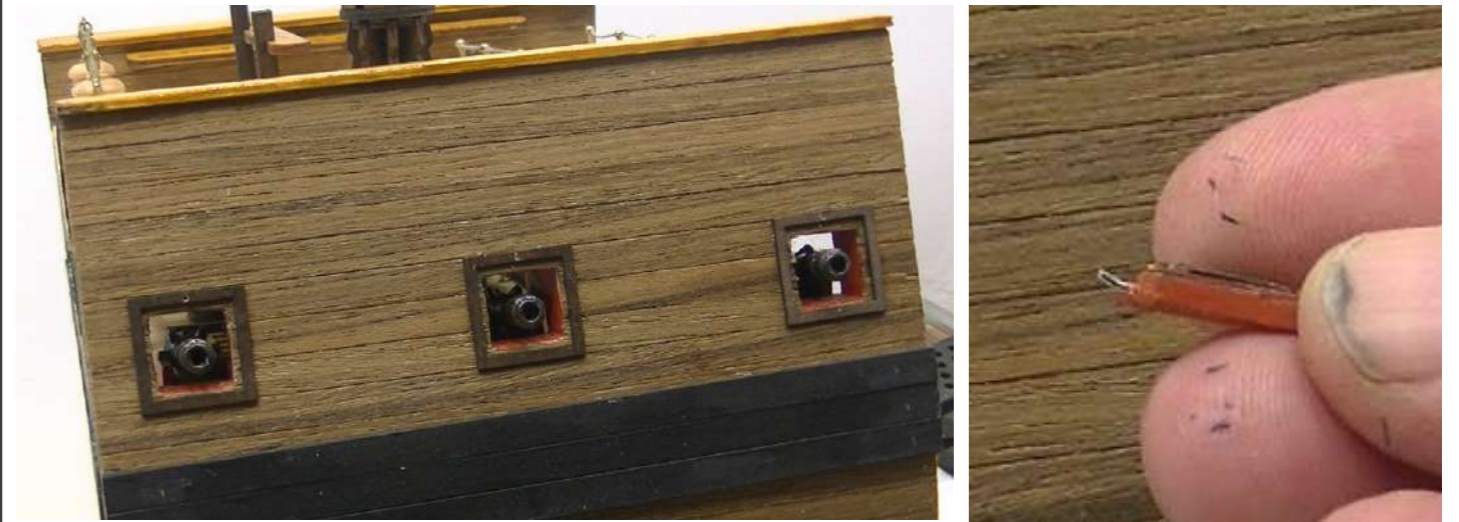
7.35 Identify the gunport lids P6 - fix pins into one edge. Paint the inside face of each lid red. Use the teak planking P67 to plank the outside face of each lid as shown. Identify the gun port hinges P82 - snip the top end off. Paint each hinge black and glue to the outside face as shown. Set aside to be fitted later.



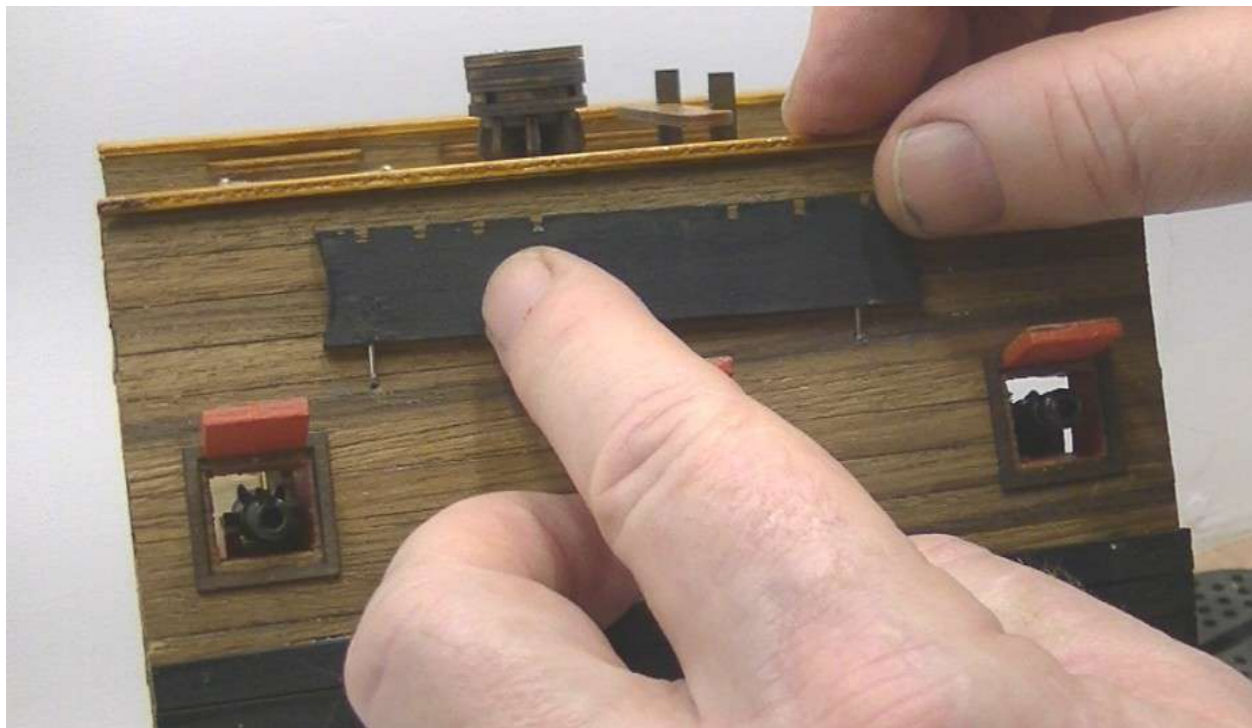
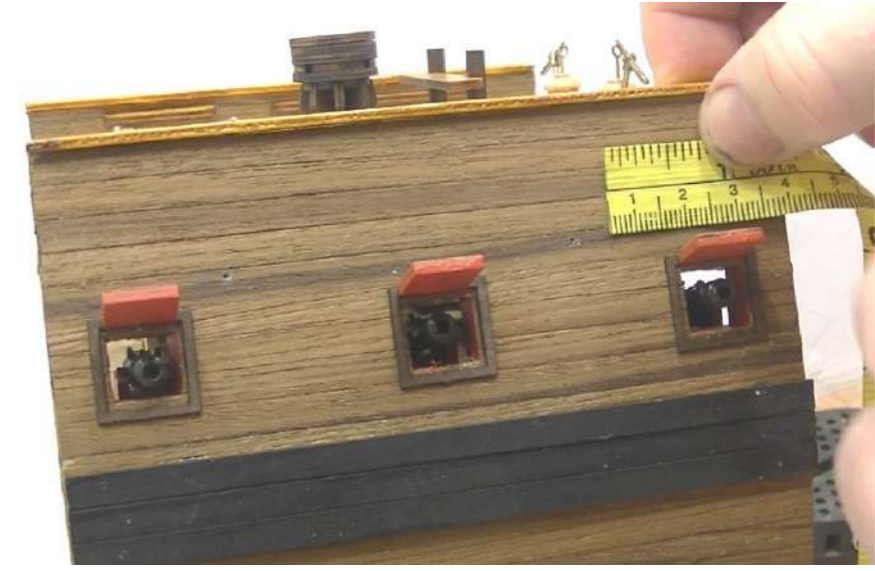
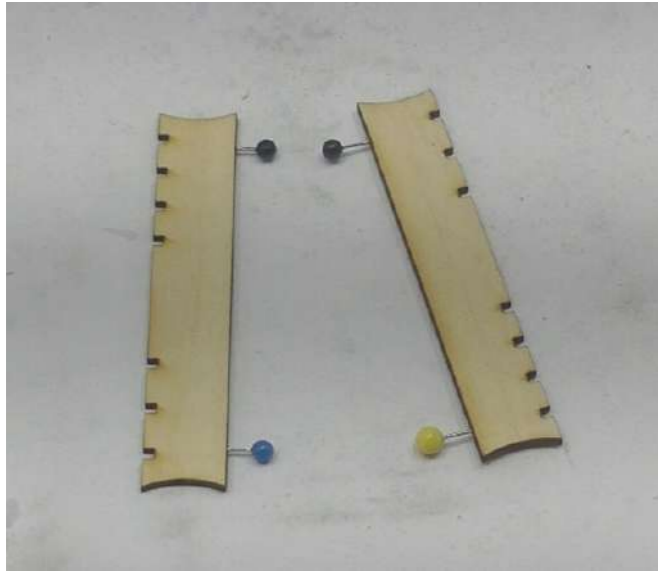
5.1.44 Identify the wales P83. Paint the wales black. Use a dressmakers tape measure to measure down 55mm from the underside of the cap rail - do this at both ends of the hull and make a pencil mark. Glue the first wale in place at the 55mm line. Glue the next two wales in place as shown. Repeat for the other side of the hull.



7.36 Drill 0.7mm holes into the centre top face of each gunport frame as shown. Snip the pin heads off and using pliers make a slight upward bend in the remaining pin as shown. Trial fit the lids in place fractionally adjusting the angle of bend to ensure each lid is at the same angle. Once satisfied glue the lids in place as shown.

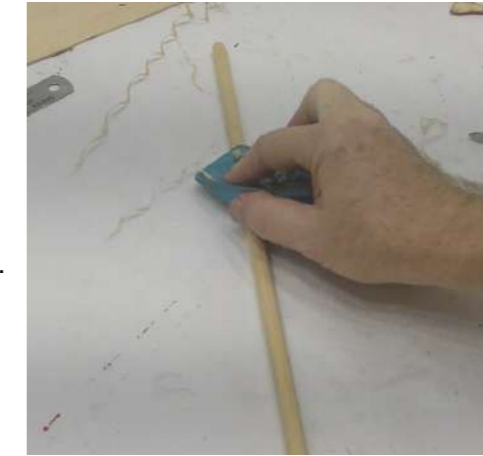


7.38 Identify the channels P84 - fix pins to the base edge as shown. Paint black. Use dressmakers tape measure to measure 30mm down the hull from the underside of the cap rail. Repeat at the other end of the hull—use a length of planking to draw a faint pencil line along the hull. Measure 40mm from the front end of the hull (main mast end) and make a pencil mark. Take the channel and align the end with three slots with the 40mm mark - place the channel along the pencil line and push the pins in to make an indent in the planking - drill 0.7mm holes at these indents. Trial fit the channel in place - once satisfied glue the channel in place.



8.0 Mast & Yards

The next step is to shape and assemble the mast and yards - identify the various sizes of dowels, blocks and fittings to be used for this stage. To shape and taper the various dowels use a mini plane, a flat file and sandpaper. Continually rotate the dowel during the process - use a vernier caliper to continually check for the required dowel diameter. Once they have all been shaped and tapered apply a shellac finish and then a clear matt polyurethane spray finish. Fit any eye pins, blocks and stirrups as shown. **Do not fit the mast or yards to the model yet.**



8.1 Mast

The mast is made in three sections - lower mast, topmast and topgallant mast. The size of dowels and dimensions to shape each mast part are presented below. Cut and shape each dowel as shown and then stain with shellac.

NOT TO SCALE

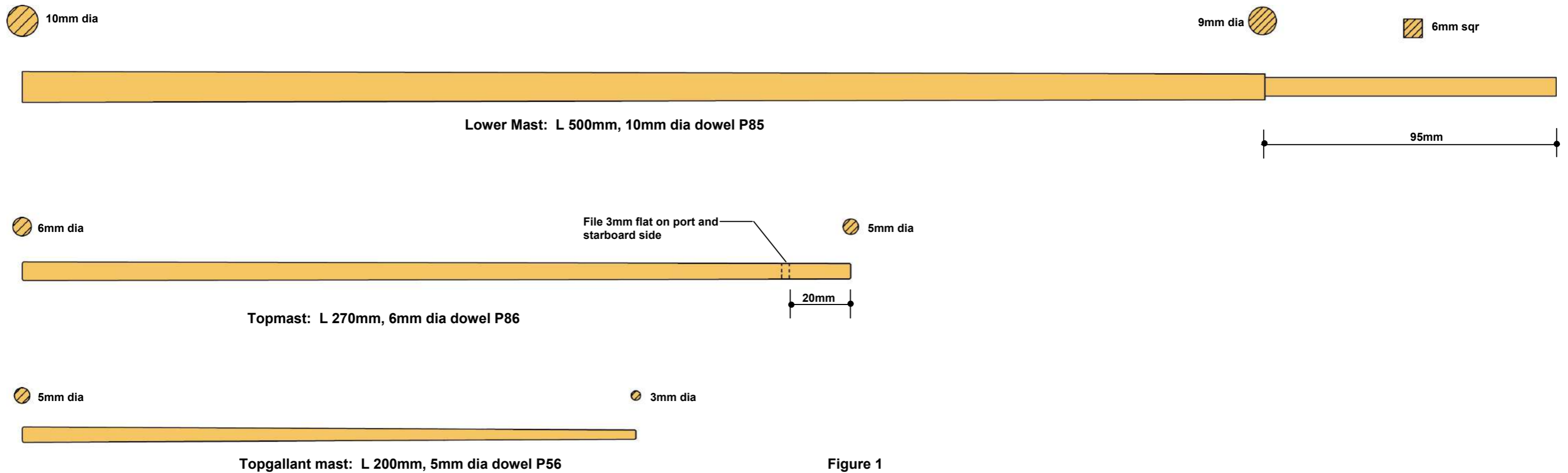
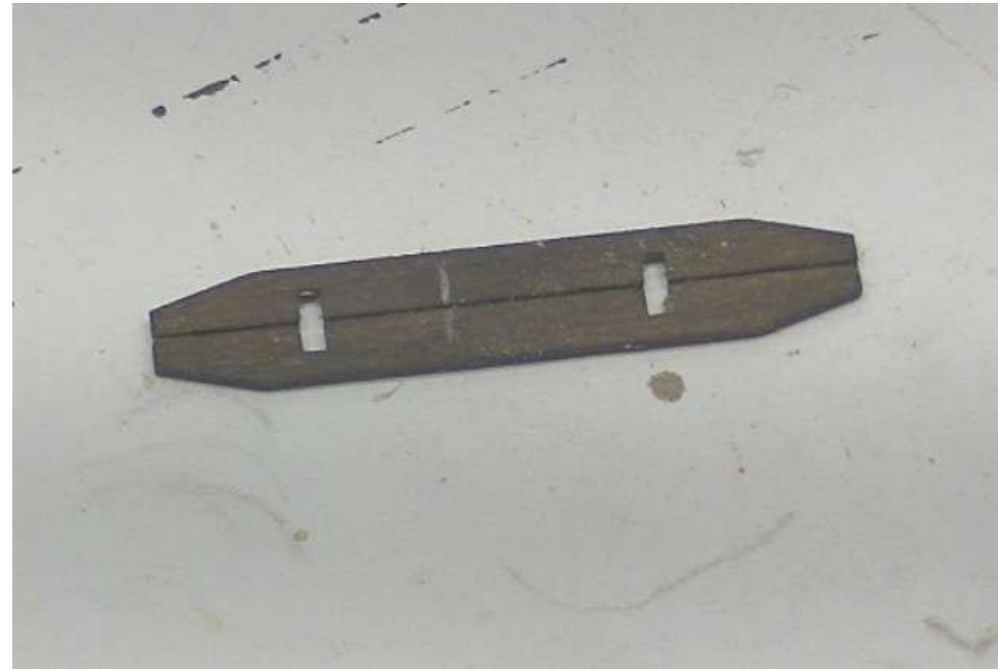


Figure 1

8.2 Identify the mast cheeks P87, trestle trees - lower mast P88, cross trees - lower mast P89, mast cap - lower mast P90 and mast cap - topmast P91. Take the lower mast and trial fit the mast cheeks in place with the bottom edge of each cheek resting at the base of the square section of the mast - once satisfied glue and clamp in position as shown. Take the trestle tree and align as shown - noting that the slots on the left hand end are a shorter distance from the end than the other end - the left hand end is the rear or aft end of the trestle tree. Measure 10mm from the inside end of the aft slot and make a pencil mark on the trestle trees as shown. Glue each trestle tree in place aligning the pencil mark with the back end of the square section on the mast - clamp in place and allow glue to set. Glue the cross trees in place as well as the mast cap as shown.



8.3 Identify the cleats P81 - stain walnut. Fix pins into the base of four cleats - cut the heads off each pin. Measure 175mm from the base of the lower mast and drill 0.7mm holes on the fore, aft, starboard and port sides of the mast. Glue the cleats in place around the mast. Identify the 2x4mm limewood P92 - cut two lengths 160mm - paint black. Glue and clamp in position on the port and starboard sides of the mast 20mm immediately below the mast cheeks. Identify the 1mm black cord - cut a 300mm length and lash the cord around the mast and mast strengtheners as shown - start at top and repeat at equidistant locations down the mast as shown. See Figure 2 for steps to lash the cord. Apply a dab of glue to seal the cord.

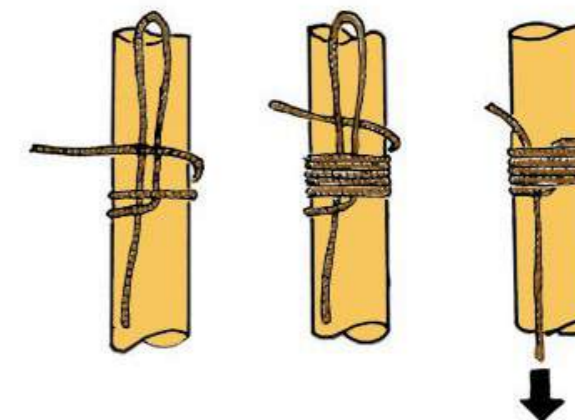
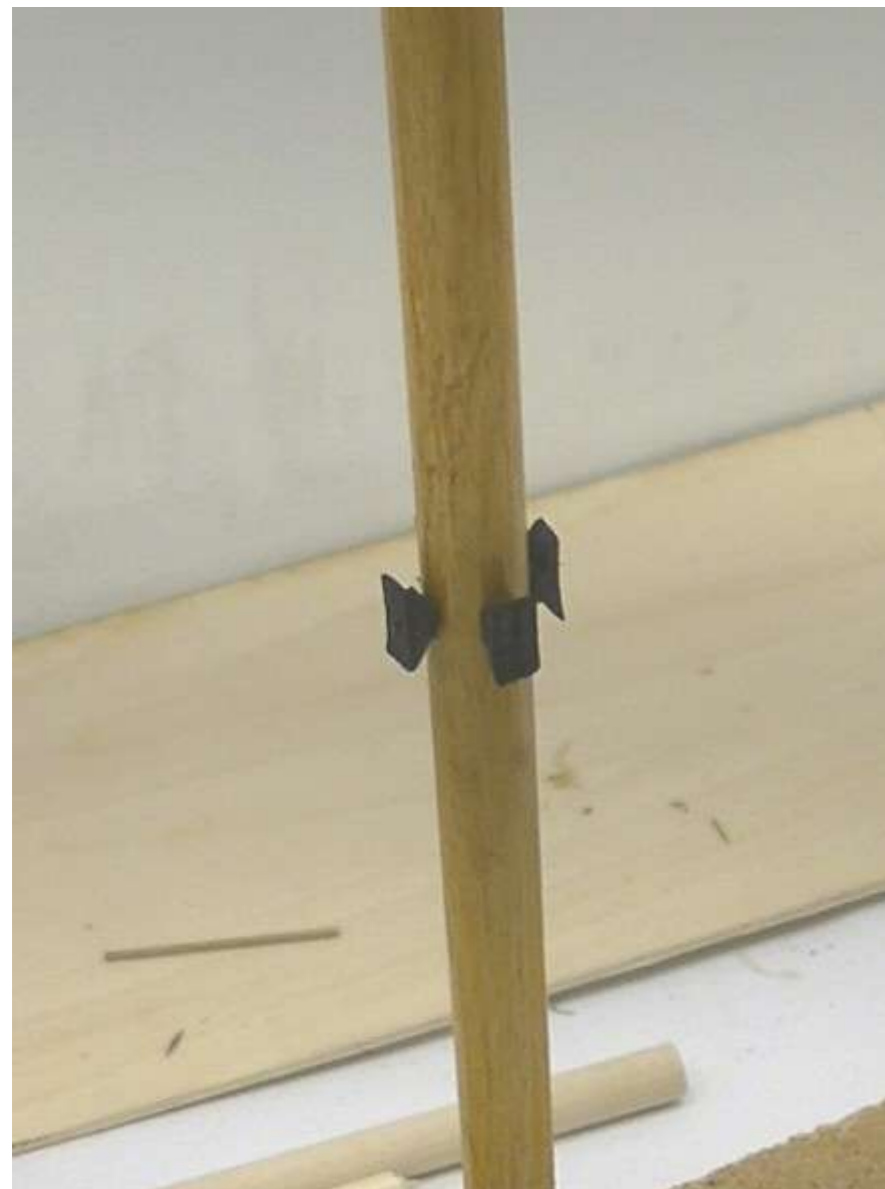
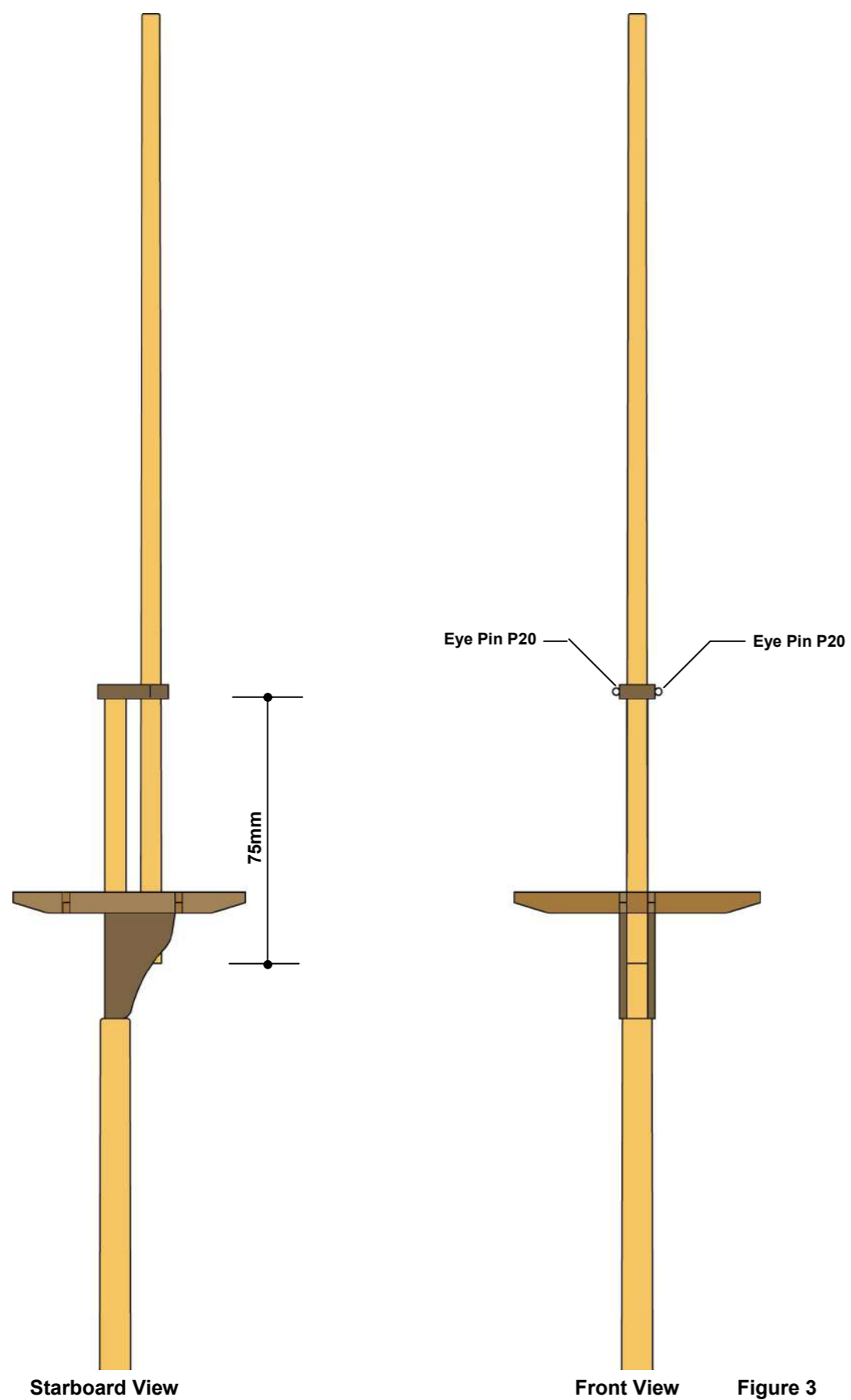
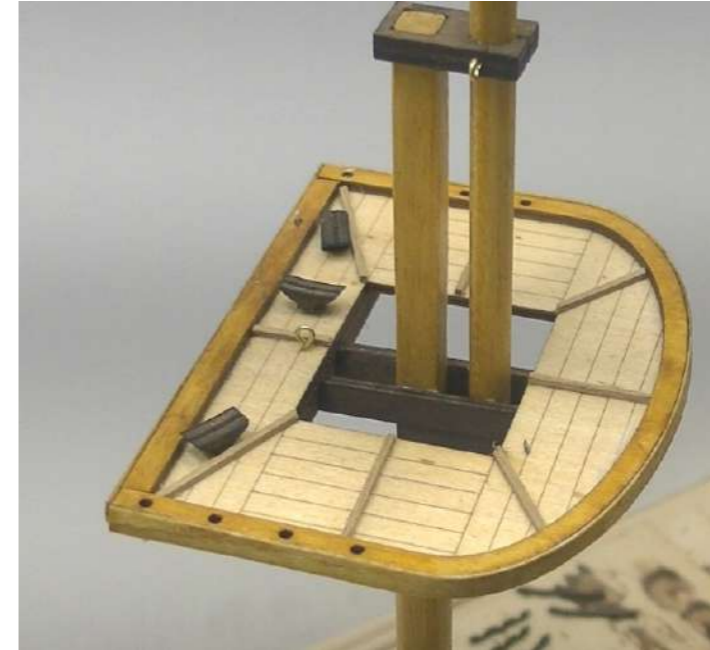
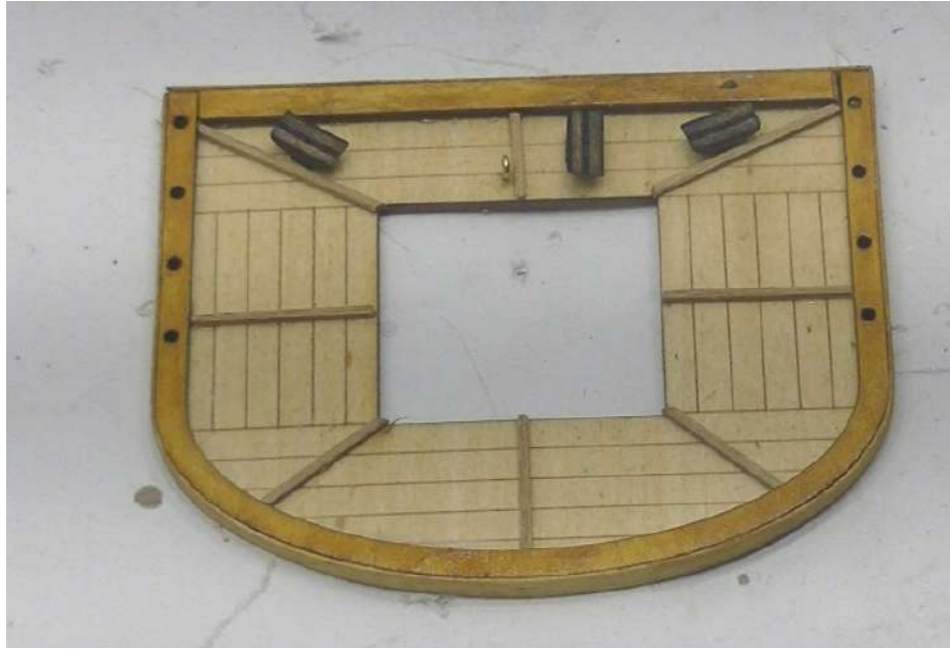


Figure 2

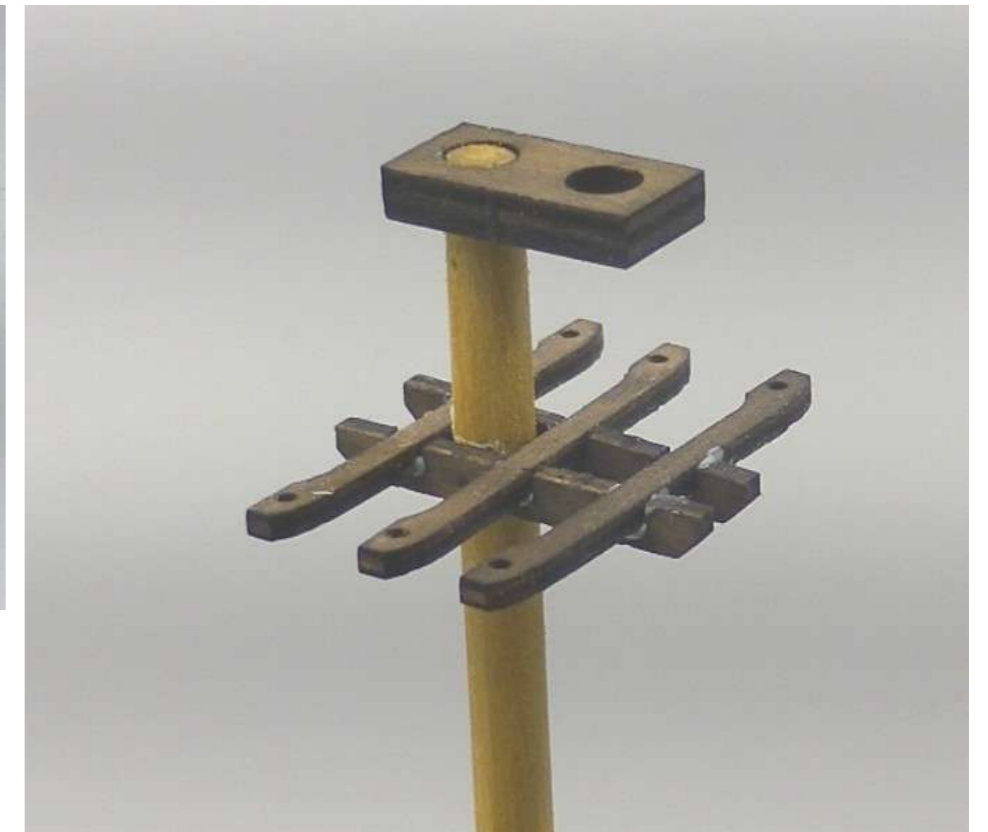
8.4 Topmast Trial fit topmast in position as shown Figure 3. Adjust the location of the topmast according to the dimension shown - once satisfied glue the mast in position as shown. Fix eye pins P20 either side of the mast cap as shown.



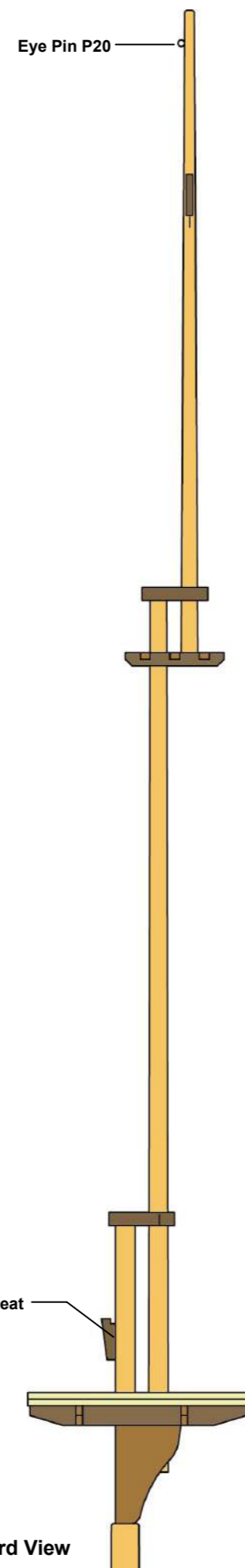
8.5 Mast Top Identify the mast top P94. Identify the top rim P95A-B. Apply shellac to the underside of the mast top and to the top rim. Glue the top rim in place as shown. Identify the 1x1mm walnut P96 - cut lengths to glue in place on the mast top as shown. Identify the cleats P81 - glue in place as shown. Fix an eye pin P20 in place as shown. Identify the silver ash timber strip P97 - cut lengths to wrap around the mast top edge. Stain with shellac. Glue the assembled mast top in place aligning the aft edge of the mast top hole with the aft cross tree.



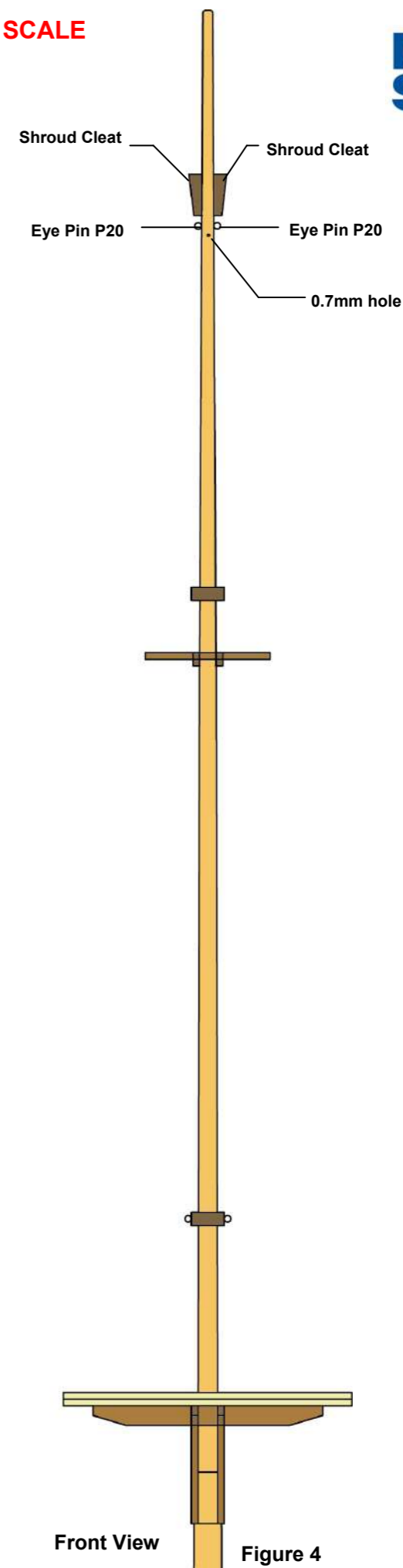
8.6 Topmast Trestle Tree & Cross Tree Identify the topmast mast cap P91 - stain walnut and glue in place as shown. Identify the topmast trestle trees P98 and the topmast cross trees P99 - stain walnut. Glue the trestle trees in place against the previously shaped flat area on the topmast - make sure the trestle trees are parallel with the mast cap and that the aft cross tree slot is flush with the mast. Glue in place the cross trees as shown - adjust to ensure the trestle trees are equidistance apart.



8.7 Topgallant Mast Trial fit topgallant mast in position as shown Figure 4. Adjust the location to ensure the base of the mast is flush with the bottom edge of the trestle trees as shown - once satisfied glue the mast in position as shown. Identify the mast cleat P100 and shroud cleats P101 - glue each in position as shown. Fix eye pins P20 either side of the mast cap, immediately below the shroud cleats and at the aft side of the top of the mast as shown. Drill a 0.7mm hole through the mast as shown. This completes the assembly of the mast.



NOT TO SCALE

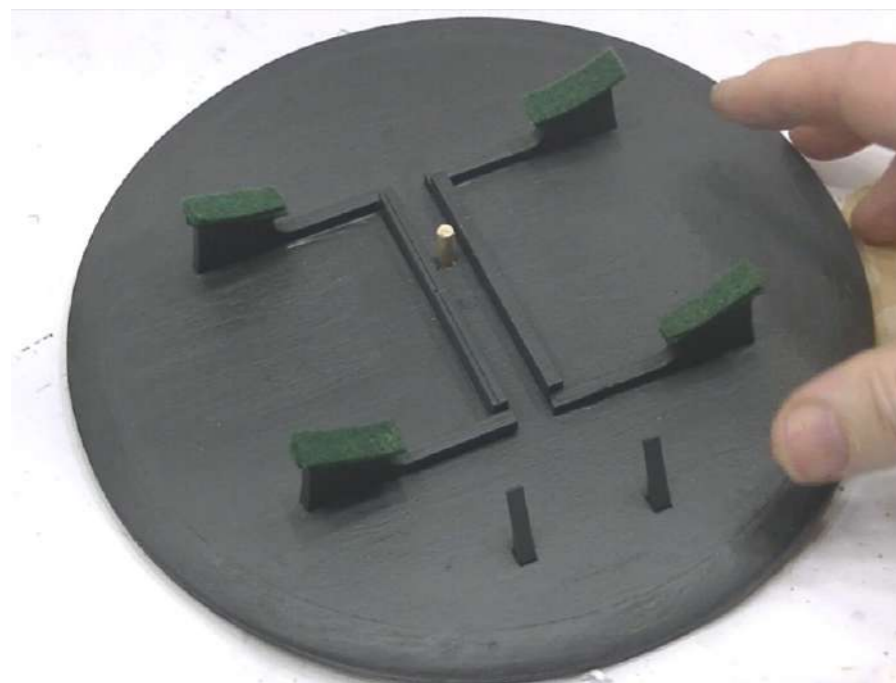


Starboard View

Front View

Figure 4

8.8 Fit Mast Retrieve the assembled display base. Cut an 18mm length of 4mm dowel P73. Insert into the hole in the base as shown and glue in position. Cut and glue pads of felt onto the cradles as shown. Place the assembled hull onto the cradle aligning the locating dowel with the keel hole. Do not glue the hull to the display board yet. Trial fit the assembled mast in place - you may need to fractionally reduce the mast diameter so it fits easily through each deck. Once satisfied pour some glue into the orlop deck mast hole and press home the mast.



9.0 Yards

The next step is to cut, taper, shape and assemble the yards and stunsail booms

9.1 Main, Top and Topgallant Yards Identify the relevant dowels as shown below - taper dowels as previously described. Once all yards have been tapered and shaped stain with shellac. Finish by spraying with a clear matt 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.**

NOT TO SCALE



Main Yard - L395mm, 8mm dowel P102 tapered to 6mm at each end



Top Yard - L 295mm, 6mm dowel P86 tapered to 4mm at each end



Topgallant Yard - L 180mm, 4mm dowel P73 tapered to 3mm at each end

Figure 5

9.2 Stunsail Booms

Identify the dowels. Cut two lengths of each dowel - taper and shape according to the dimensions given below.



Stunsail Boom Main Yard - L 195mm, 3mm dowel P103 tapered to 2mm - two lengths

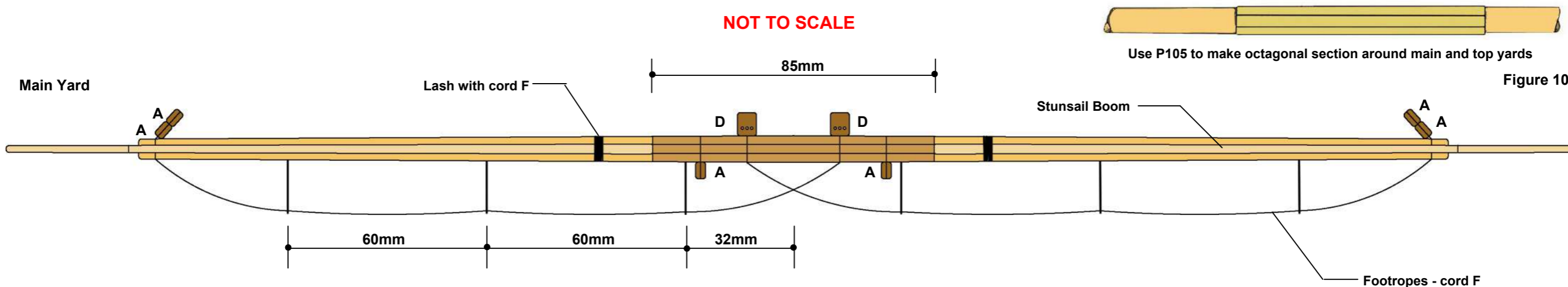


Stunsail Boom Top Yard - L 155mm, 2mm dowel P104 tapered to 1.5mm -

Figure 6

9.3 Yards - Assembled Identify the 0.5x3mm walnut P105 - cut lengths to fit around the central part of the main and top yards as shown. Identify the relevant blocks - use cord F to make ties around the blocks. Tie blocks to the yards as shown and seize knot with a dab of glue. Identify the eye pins P110 - drill 0.7mm holes into the underside of the yards at the locations shown and glue the eye pins in place. Use cord F as the footropes - thread and tie-off as shown. Cut a 20mm length of the 0.75mm brass wire P70 - use round nose pliers to shape as shown - drill 0.7mm hole into end of relevant yard and glue outer stunsail boom support in place as shown. Glue the stunsail booms in place to the front of the yard and use cord F to lash inner end in place as shown. On the aft face of each yard drill a 0.7mm hole in the centre of the yard - glue a pin in place - this pin will be used later to locate the yard on the mast.

NOT TO SCALE



Use P105 to make octagonal section around main and top yards

Figure 10

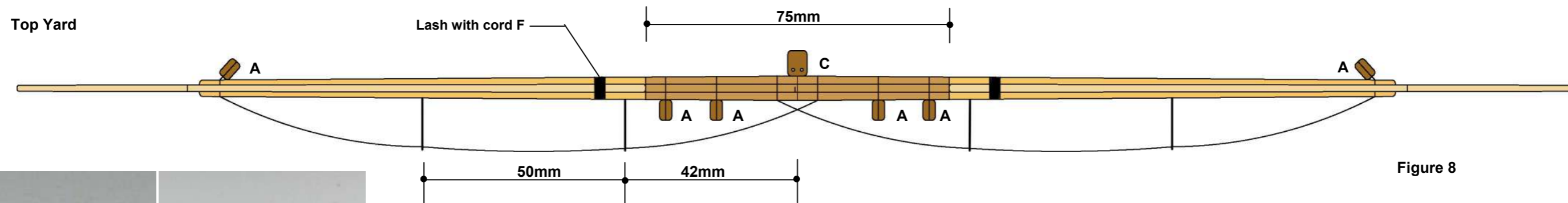


Figure 8



Outer stunsail boom support

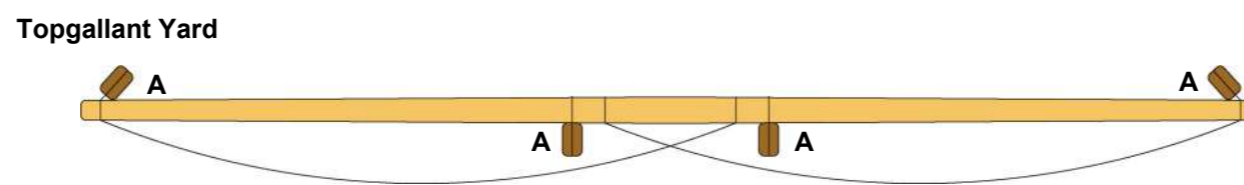
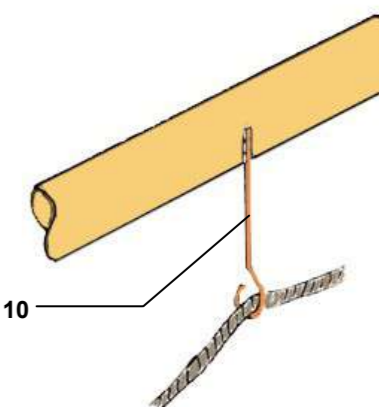
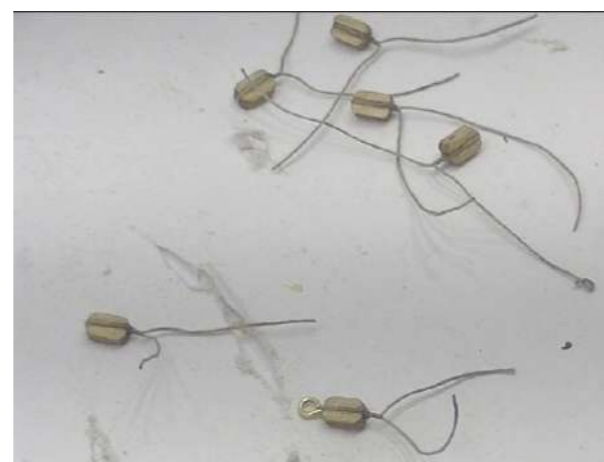


Figure 9



Foot rope stirrup P110

Figure 11

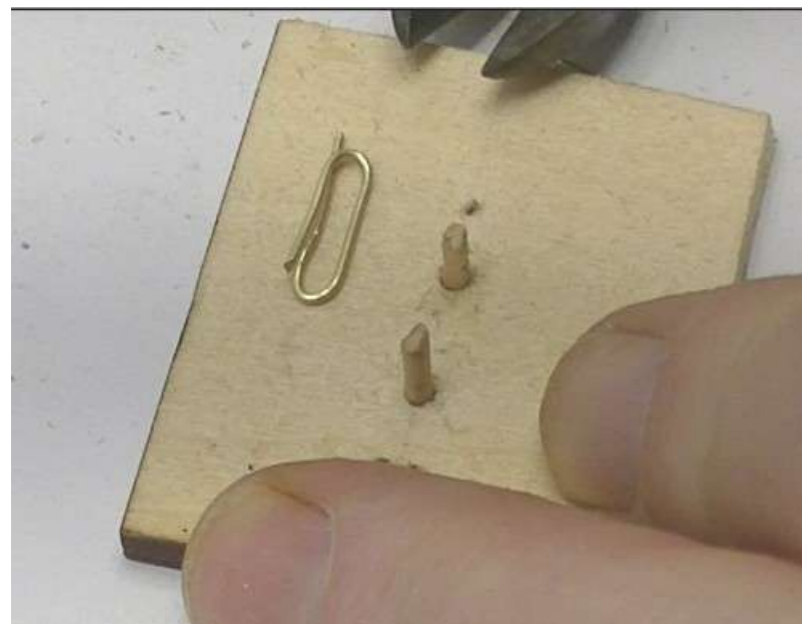
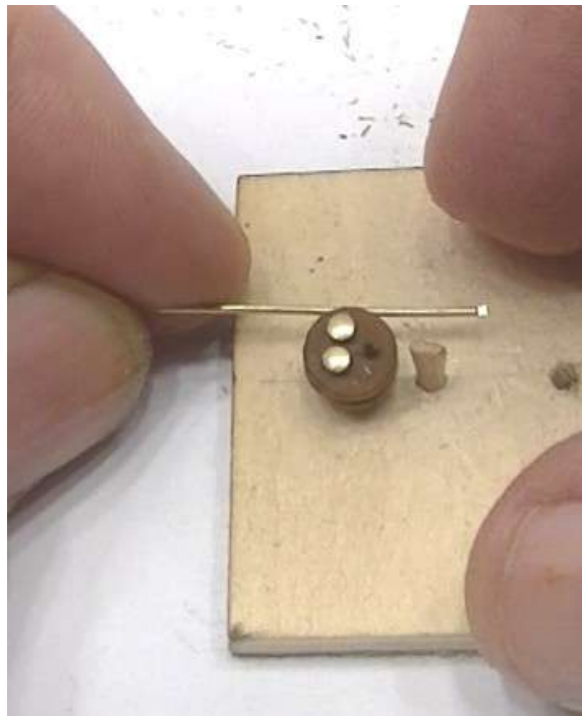


Use cord F to make tie-offs for the blocks.

CORD KEY		
Size	Grey	Black
0.25mm	E	
0.5mm	F	
0.75mm		G
1.0mm		H
1.25mm	I	
2.0mm	J	

BLOCK KEY			
Size	1 hole	2 hole	3 hole
5mm	A	—	—
7mm	B	C	D

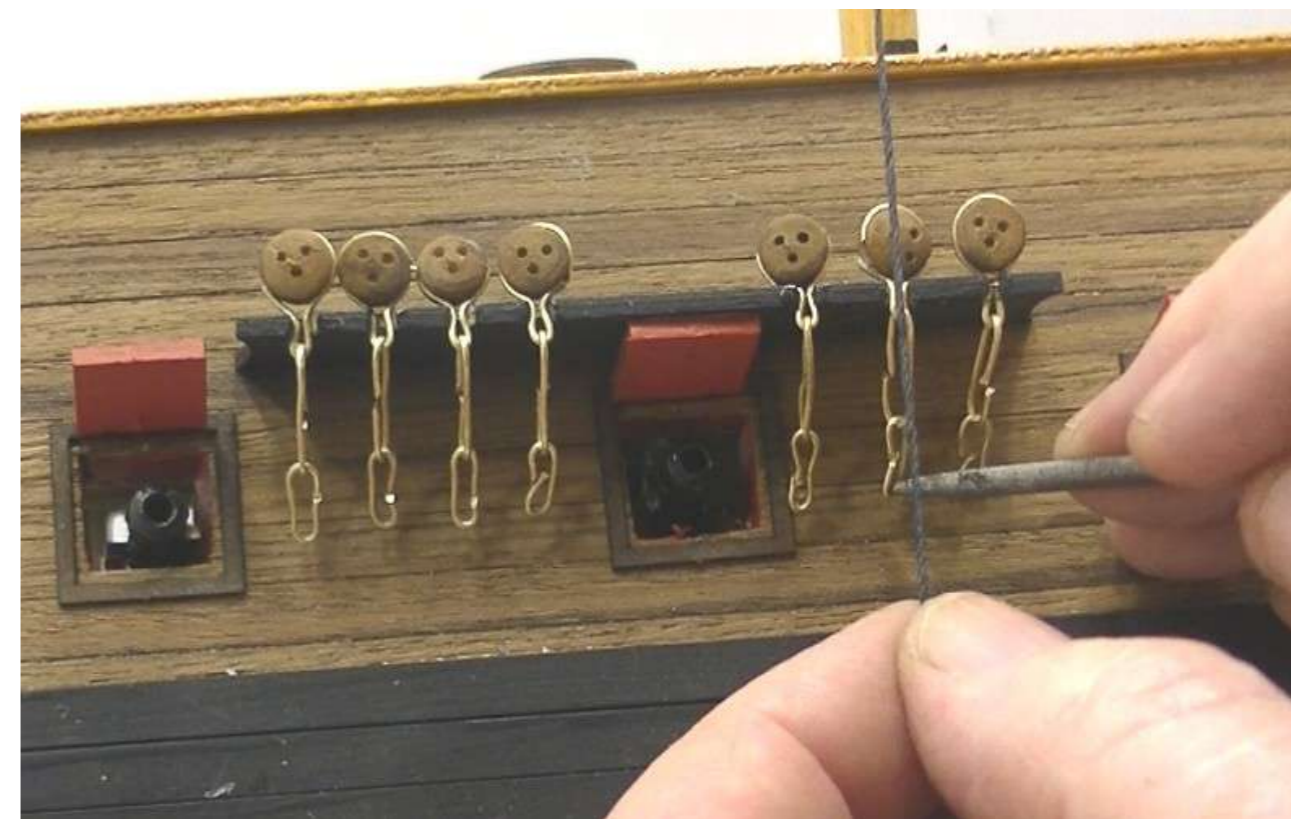
9.4 Chain Strap Assemblies Identify the chain strap assembly jig P114. Cut a 15mm length of 2mm dowel P104. Identify the brass nails P115. Identify the 7mm deadeye P116. Fit the deadeye to the jig with two nails as shown. Take a 50mm length of the 0.75mm brass wire P70 and wrap around the groove in the deadeye and the dowel as shown - use long nose pliers to shape and slightly close the loop around the dowel. Use side cutters to remove excess wire so that the ends of the wire meet at the lower side of the deadeye. Next cut a 50mm length of the 0.75 brass wire. Cut another 15mm length of 2mm dowel and fit in place on the jig as shown. Wrap the wire around the dowels and use side cutters to remove excess wire with the two ends being mid-length on one side. To make the lower link cut a 20mm length of 0.75mm brass wire and fit a nail in the bottom hole of the jig - wrap the wire around the dowel and nail - use long nose pliers to shape and close the link around the nail. Assemble as shown. Make another 13 deadeye chain strap assemblies.



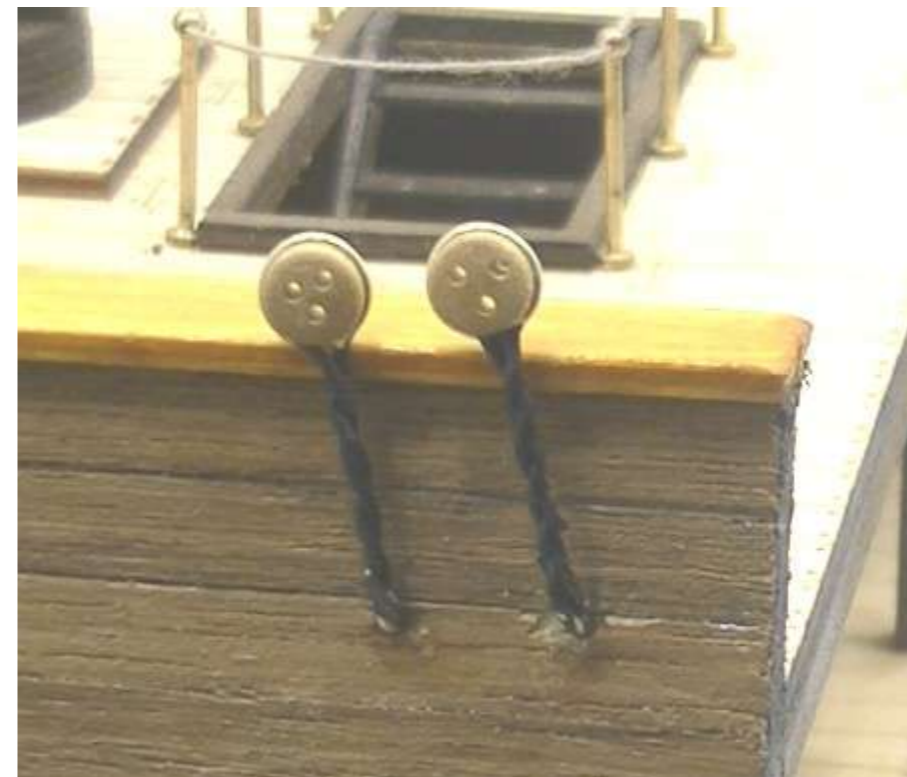
9.5 Fit the assembled chain straps into the channel slots as shown - some fractional adjustment of the slot may be necessary to achieve a good fit - apply a dab of super glue to the deadeye loop and channel slot - do not nail the bottom link to the hull yet. Each chain straps need to be fitted to the side of the hull at an angle that is as an extension of the angle of the shroud to which it is attached. Before fixing the chain straps to the side of the hull we need to determine this 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 laying over the selected chain strap.
2. Align the chain strap with the angle of the cord and mark on the hull the location of the bottom of the lower strap link fixing holes using an awl or similar tool.
3. Drill a 0.8mm hole in each marked location and fix the lower strap link in place with a nail - brass P115 - apply a dab of super glue to the nail before inserting. Repeat for each strap.

Identify the limewood 1x2mm P118 - cut two 80mm lengths - glue in place as the channel capping as shown - paint black. If you wish also paint the straps black.



9.6 Backstays The backstays are located on the aft sides of the hull. For the location of the backstays to be fitted measure down 12mm from the underside of the cap rail - measure in from this line 20mm and 10mm making a pencil mark at both points. Drill a 1.5mm hole at these points. To make the back stay use a 70mm length of 0.75mm brass wire P70 and wrap it around a 5mm deadeye P117—the use pliers to twist the wire as shown - straighten the wire if needed. Hold the back strap against the hull with the deadeye level with the cap rail - bend the lower end of the strap at a right angle so it fits into the pre-drilled holes. Trim-off and excess length of strap - once satisfied glue the strap in to hole. Paint black if desired.



9.7 Shrouds

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

9.7.1 Lower Shrouds - General

The first step in preparing to make the shrouds is to make two deadeye wire jigs - to make the jig straighten a paper clip and then make a right angle bend at each end with the distance between the bends being 30mm. The jig will ensure the upper and the lower deadeye are all parallel with the channel.

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 1mm black cord long enough to go from the mast top to the channel twice with approximately 50mm overhang. At the mast head use 0.5mm grey cord to seize this pair of shrouds together as shown Figure 12. For the first shroud of this pair start at the fore most channel slot. Using an alligator clip glue one end of the rigging cord around a deadeye. Using 7mm deadeyes P116 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 port-side lower deadeye using the deadeye wire jigs as shown. Using 0.5mm grey cord bind the double thickness of the 1mm black cord wrapped around the deadeye and continue to wind around for a short distance up the shroud - tie off and apply a dab of glue to seize the knot - cut-off any 1mm black cord over hang. Remove the deadeye jigs from this first shroud of this pair. For the second shroud of this pair attach a deadeye to the shroud as previously presented. This deadeye should then be temporarily connected to the lower deadeye immediately **behind** the first using the deadeye wire jigs. Repeat the process as presented for the first shroud of this pair. 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. Repeat this process for the next shroud pair and so on - see Figure 12 making sure to alternate the fitting of the shrouds from port to starboard and how they overlap with each other. Where there is an odd number of shrouds wrap the cord around the mast and seize & glue to its self at the mast head - Figure 13.

The next step is to fit the lanyards - the lanyards are used to tie (reeve) the upper and lower deadeyes together and to tension the shrouds. To reeve the deadeyes use 0.5mm grey cord and follow the sequence shown in Figure 14. Reeve the deadeyes in the same sequence as they were fitted alternating between port and starboard. Repeat until all shrouds are completed.



Deadeye Wire Jig

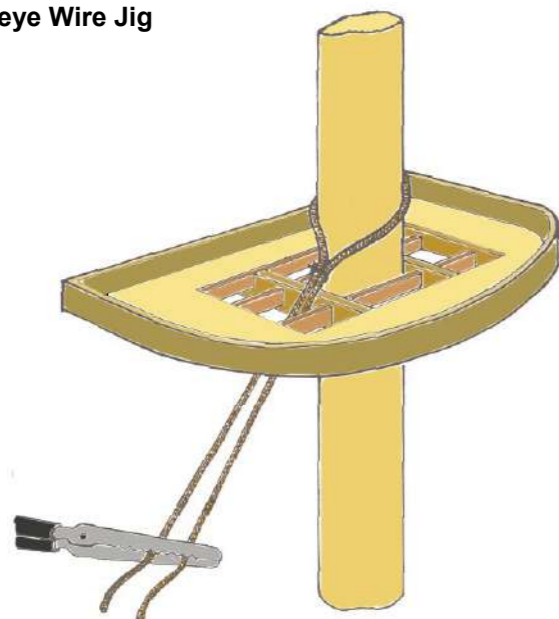


Figure 12

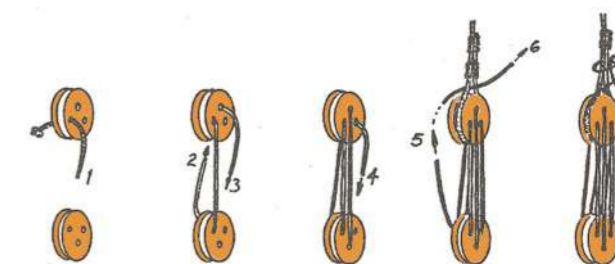
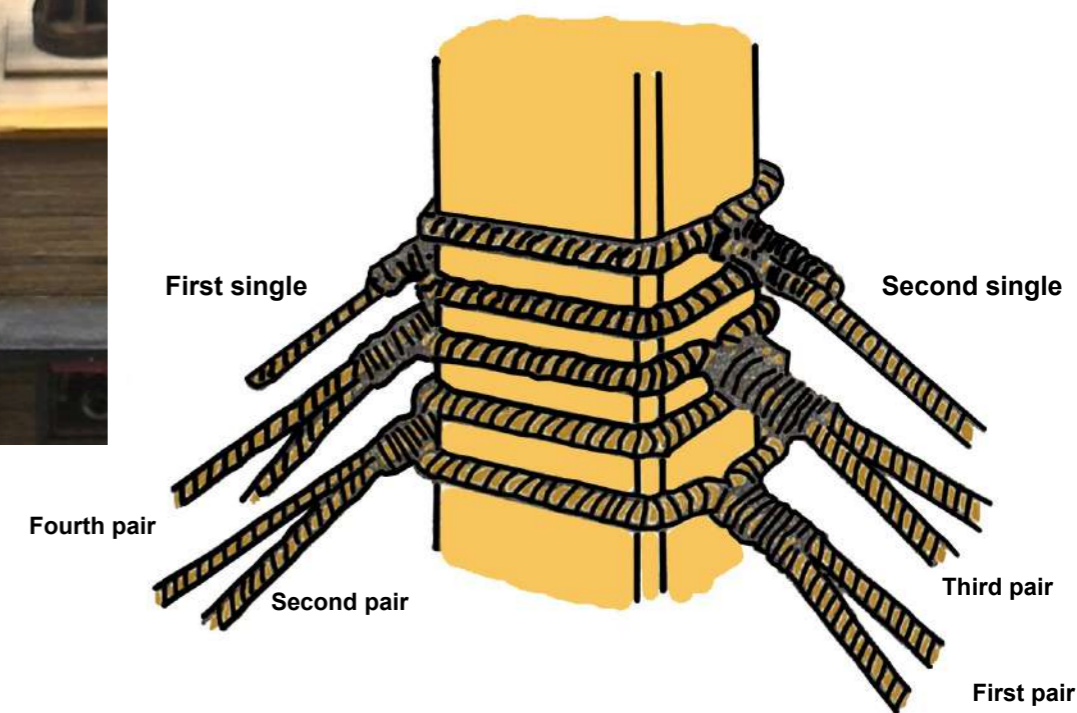


Figure 14



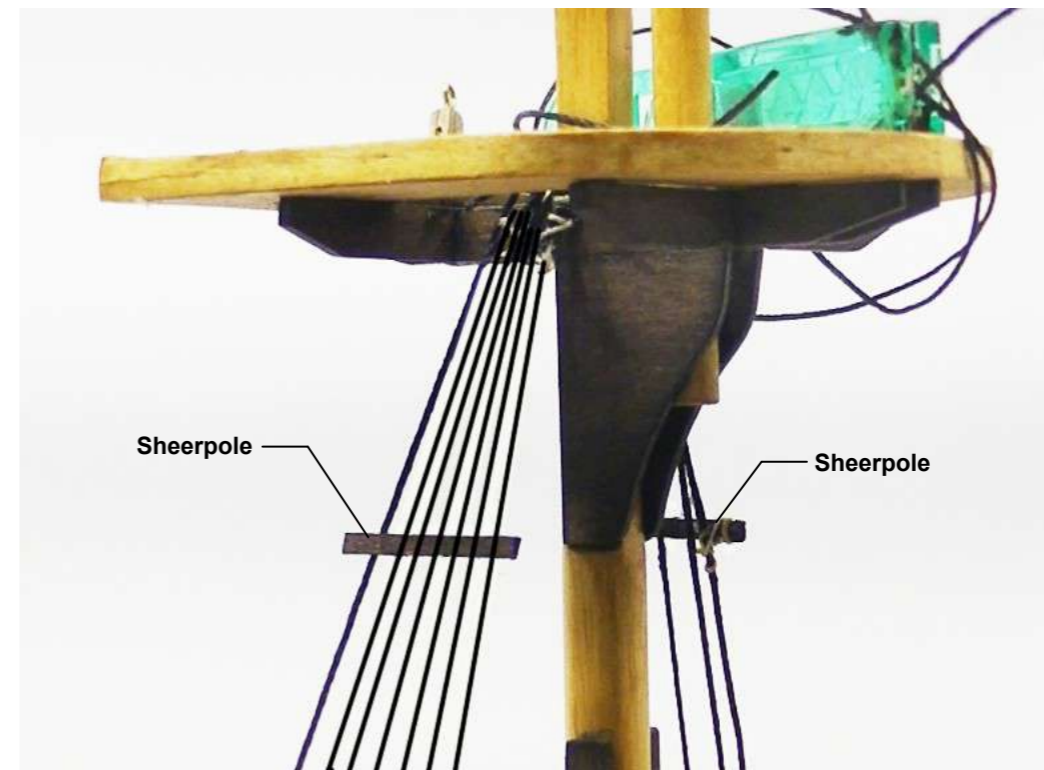
Shroud Placement Sequence Example

Figure 13

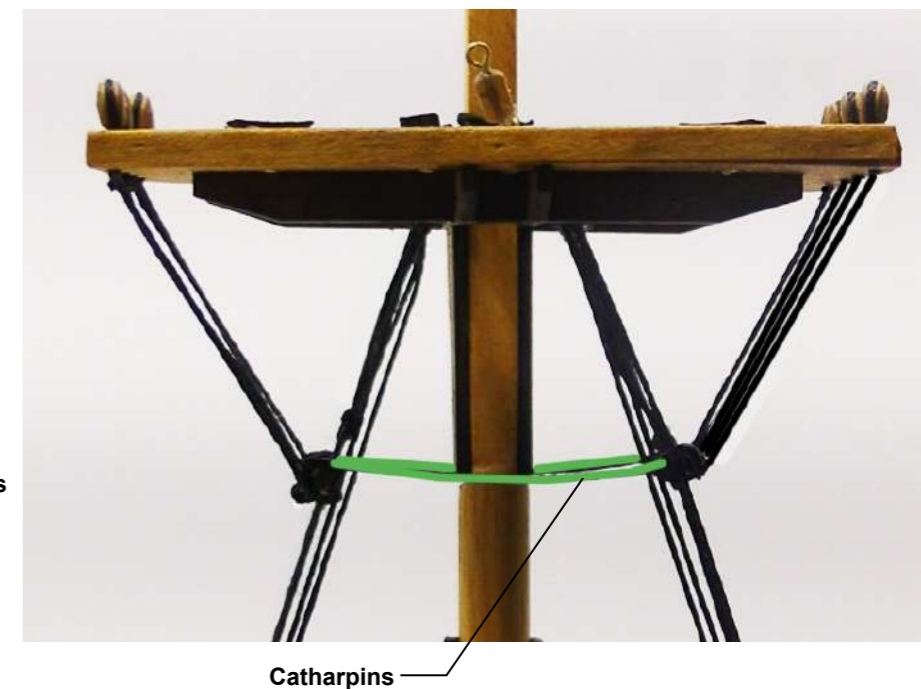
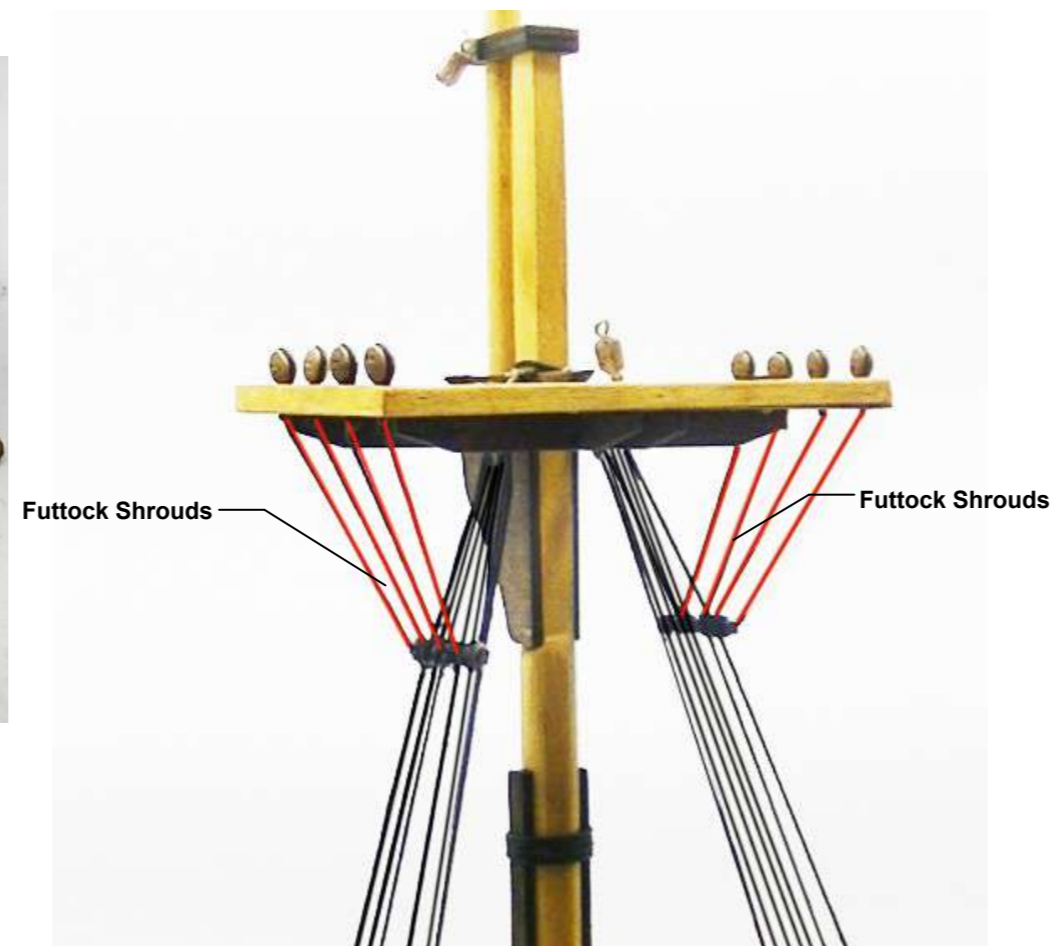
CORD KEY		
Size	Grey	Black
0.25mm	E	
0.5mm	F	
0.75mm		G
1.0mm		H
1.25mm	I	
2.0mm	J	

BLOCK KEY			
Size	1 hole	2 hole	3 hole
5mm	A	—	—
7mm	B	C	D

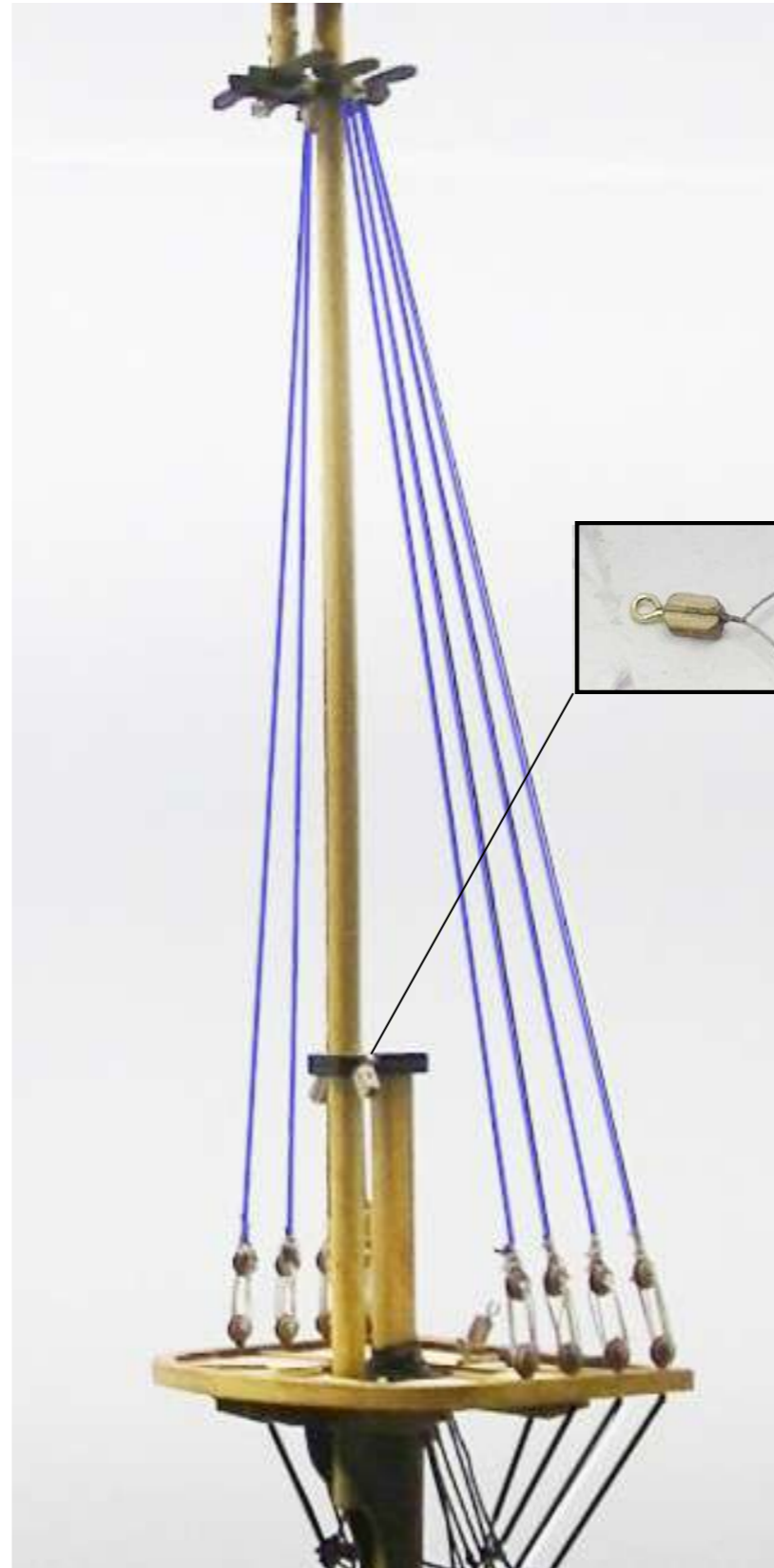
9.8 Lanyard Strip Cut two 65mm lengths of 1x2mm limewood P118 as lanyard strips - stain walnut - tie lanyard strip to each shroud with 0.5mm grey cord making sure each lanyard strip is parallel with the channel. Cut two 20mm lengths of 1x2mm limewood as sheerpoles or futtock staves - stain walnut - glue and tie-off to the shrouds in line with the bottom of the mast cheek as shown.



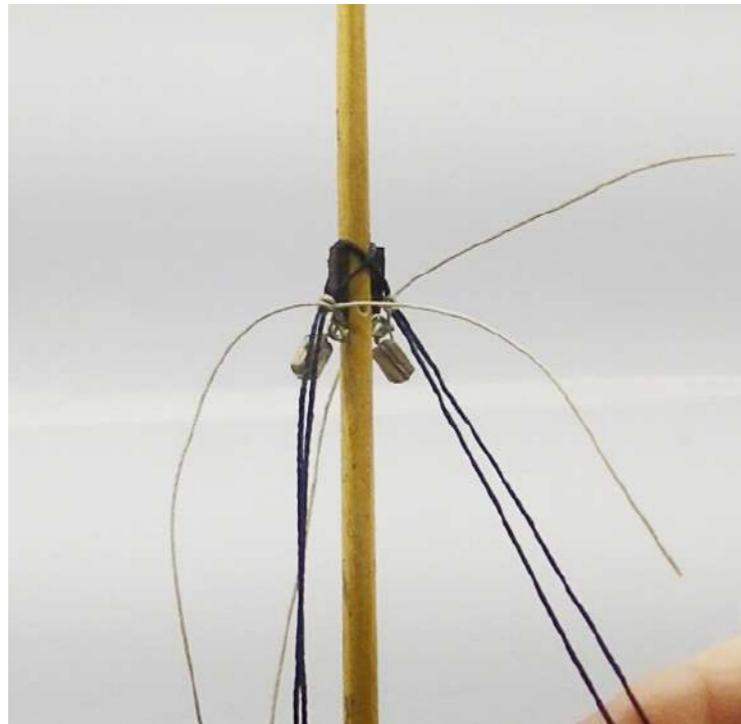
9.9 Futtock Shrouds Cut 8 x 150mm lengths of 1mm black cord P93 - seize a 5mm deadeye P117 to one end of each cord as shown - these will be the futtock shrouds. Fit each futtock shroud in place as shown - tie-off each shroud to the sheerpole. Using 1mm black cord tie catharpins between the sheerpoles either side of the mast as shown.



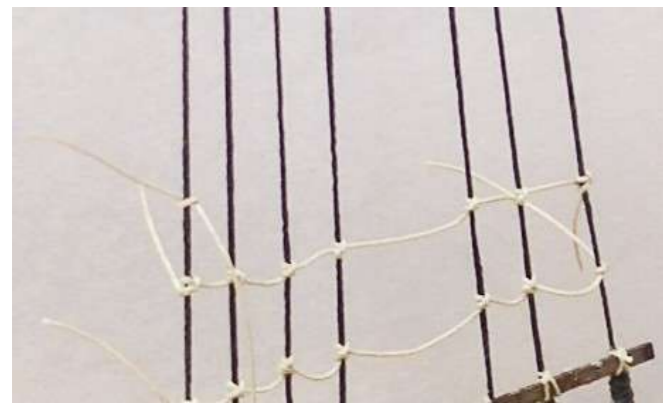
9.10 Topmast Shrouds Cut four 560mm lengths of 1mm black cord P93 to make the topmast shrouds. Make two pair for each side - follow the approach previously used to seize each pair at the mast head. Make new deadeye jig using the 0.75mm brass wire P70 - cut a length so the distance between the two right angles is 15mm. Use 5mm deadeyes P117 - use a drill to clear the deadeye holes. Using one jig and fit its ends into the lower and upper deadeyes as previously presented. Attach the shroud to the deadeye as previously presented. Use 0.5mm grey cord to seize the shroud above the deadeye and to reeve the deadeyes. Cut two 35mm lengths of 1x2mm limewood as the lanyards - stain walnut and glue and tie in position as shown. Cut two 14mm lengths of 1x2mm limewood as the sheerpoles - glue and tie in position. Using 1mm black cord tie catharpins between the sheerpoles either side of the mast as shown. Identify the 5mm 1 hole blocks P106 - drill a 0.7mm hole in one end - take an eye pin P20 and shorten the shaft and use super glue to fix the eye pin into the hole. Next use 0.5mm grey cord to make a tie around the block as previously done. Make two of these blocks - attach to the eye pins on the mast cap as shown.



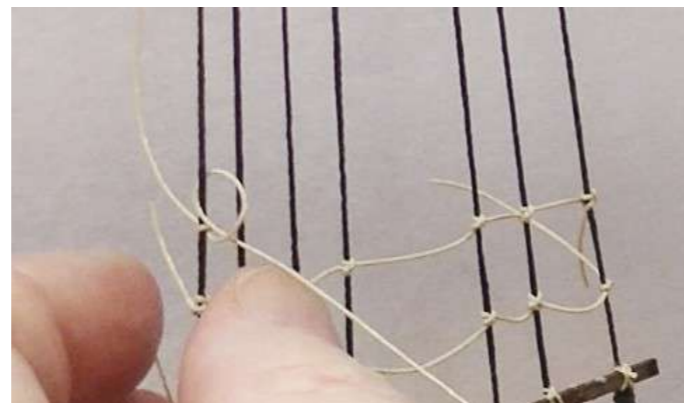
9.11 Topgallant Shrouds Identify the 5mm 1 hole blocks P106 - tie a block to each of the previously fitted eye pins immediately below the shroud cleats. As there are 3 topgallant shrouds cut two 360mm lengths and two 180mm lengths of 0.75mm black cord P113. Using one 360mm length make one shroud pair - wrap around the mast and over the cleat and tie-off as shown. Repeat for the other pair. Taking one single shroud length wrap it around and over the first shroud pair and tie-off on itself. Repeat for the remaining single shroud. Take the shrouds down passing through the crosstree holes and tie-off at the sheerpole as shown.



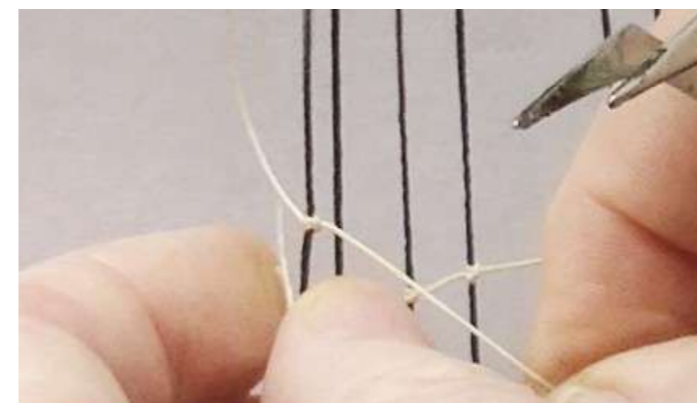
9.12 Ratlines Use 0.5mm grey cord for the ratlines. Follow the steps below to fit the ratlines. Between shrouds leave a little slack in the cord. Do not glue any knots until all ratlines are completed and the spacing has been adjusted to ensure they are spaced 12mm apart - cut a 12mm wide length of ply and use as a guide to adjust spacing between ratlines. Once satisfied apply a dab of PVA glue to the first & last knot on each line. Carefully trim-off excess cord.



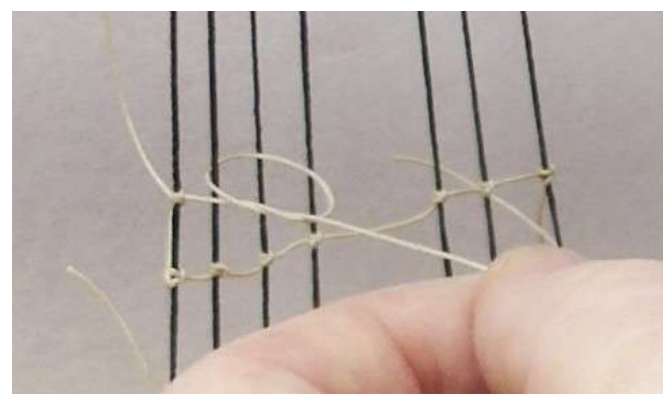
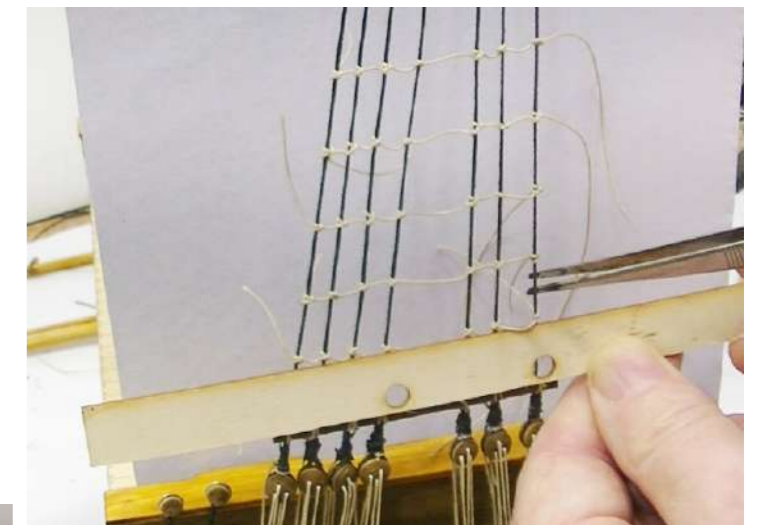
Step 1: Tie a simple know around the first shroud.



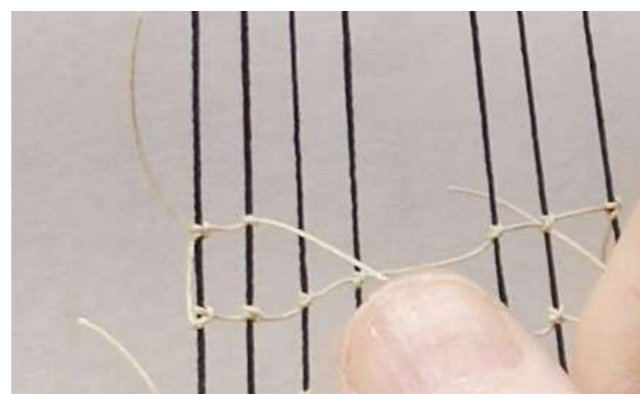
Step 2: Tie a half hitch around the shroud above the first knot.



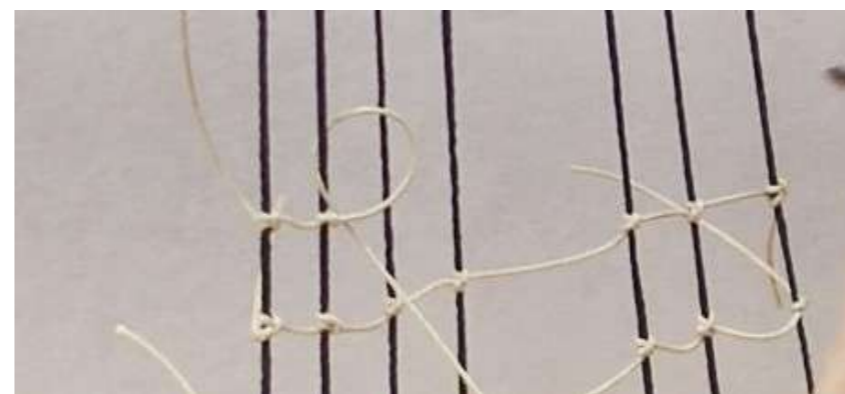
Step 3: Tighten the half hitch



Step 4: Progress onto next shroud and repeat Steps 1 to 3



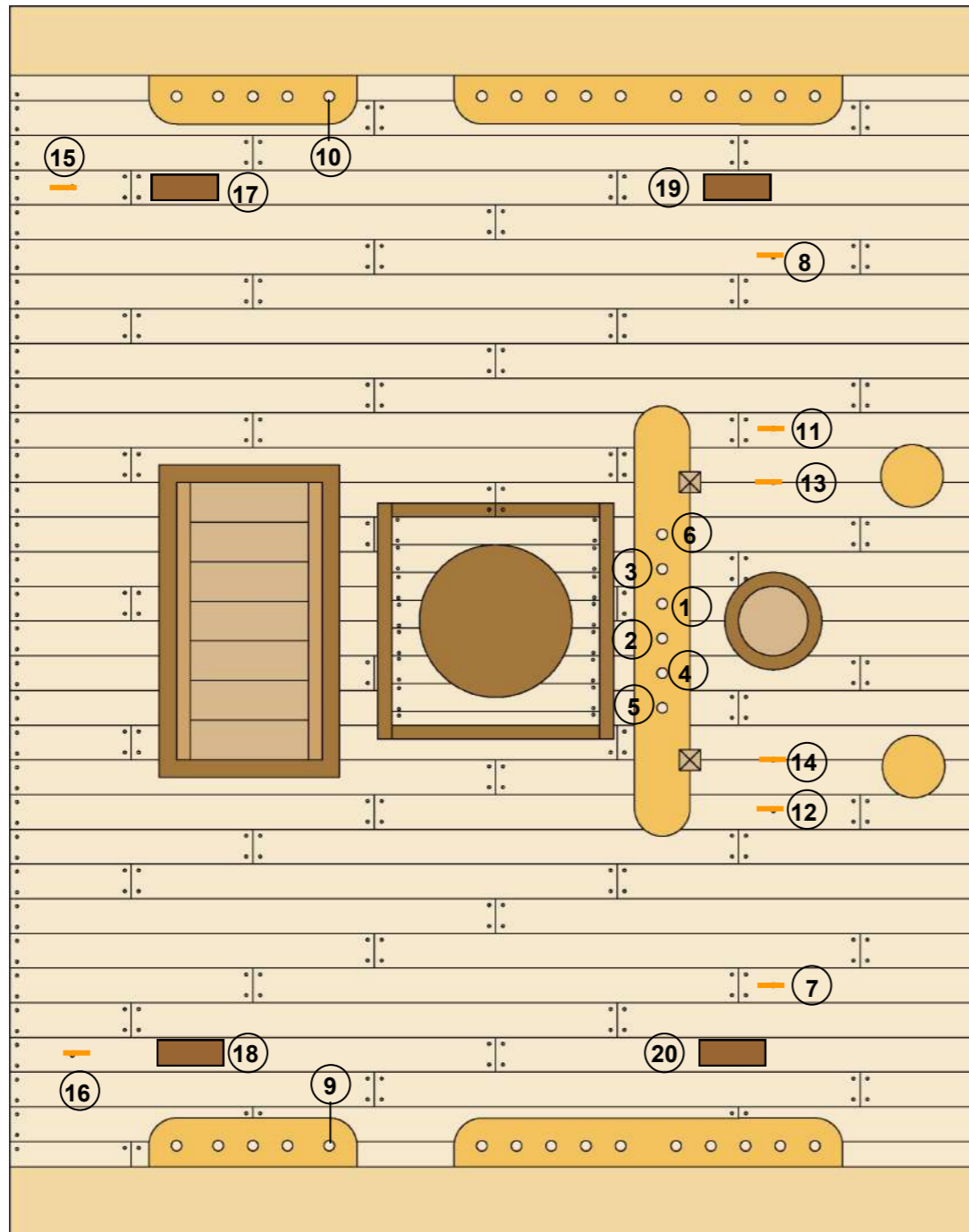
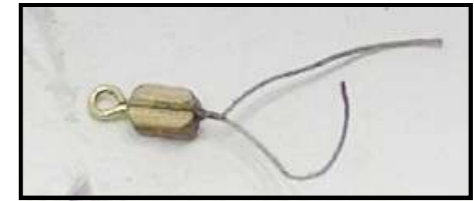
Step 5: Continue steps across the shrouds.



9.2 Ratlines continued Once the lower mast ratlines are completed on both sides of the mast progress on to the topmast shrouds. Do not fit ratlines to the topgallant mast shrouds. Identify the belaying pins P119 - stain walnut if desired - fit them in place on the side pin rails and mast pin rail as shown - do not glue in place. Identify the brass stanchions P50 - fix 3 stanchions in place across the back of the mast top and run a length of 0.5mm grey cord through the stanchion holes and seize at either end as shown.

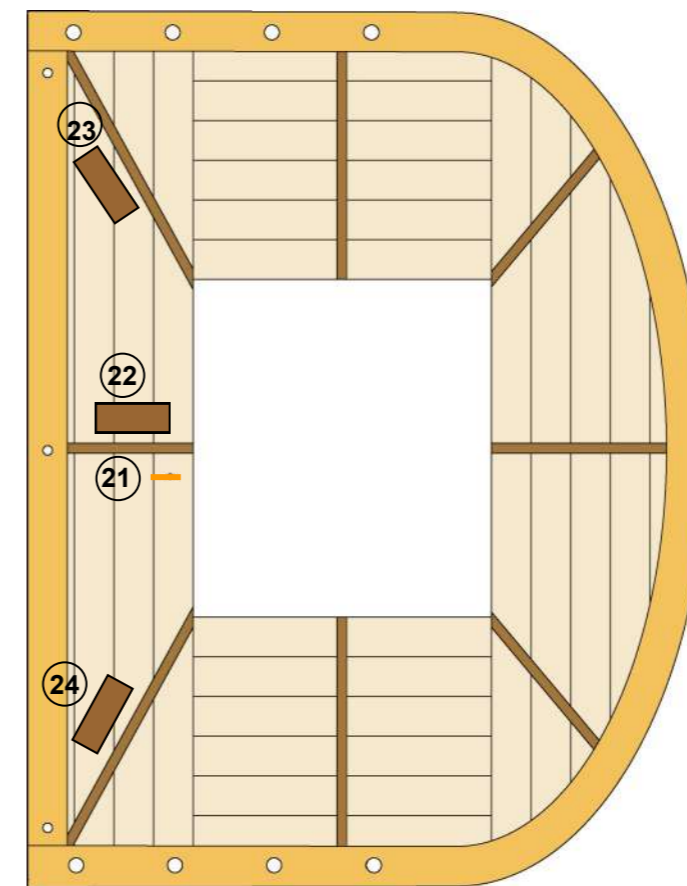


10.0 Belaying Plan The belaying plan shows where rigging cords are terminated. Fix eye pins P20 to belaying points 7, 8, 11, 12, 13, 14, 15, 16 & 21. Identify the 5mm 1 hole blocks P106 - drill a 0.7mm hole in one end - take an eye pin P20 and shorten the shaft and use super glue to fix the eye pin into the hole. Next use 0.5mm grey cord to make a tie around the block as previously done. Make five of these blocks. Tie-off these blocks at belaying points 7, 8, 15, 16 and 21. Identify the cleats P81 - fix cleats to belaying points 17, 18, 19, 20, 22, 23 & 24. Follow the rigging presented in the following photos and rig and terminate the cords as shown.



Main Deck

Figure15



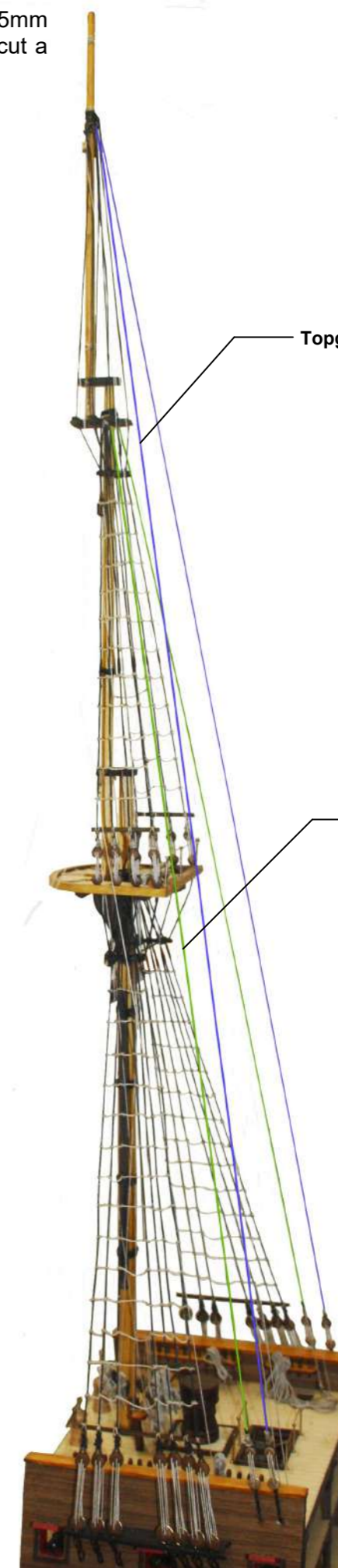
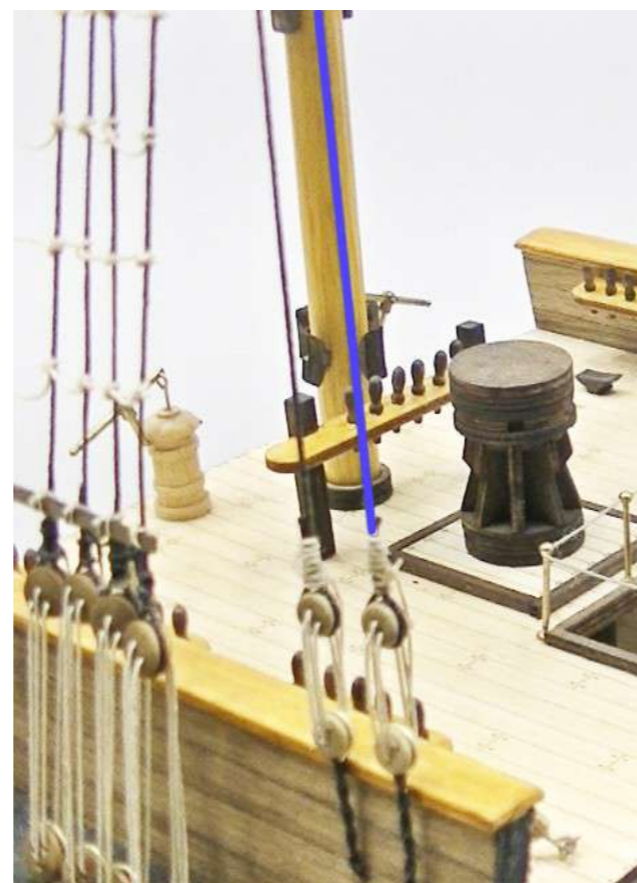
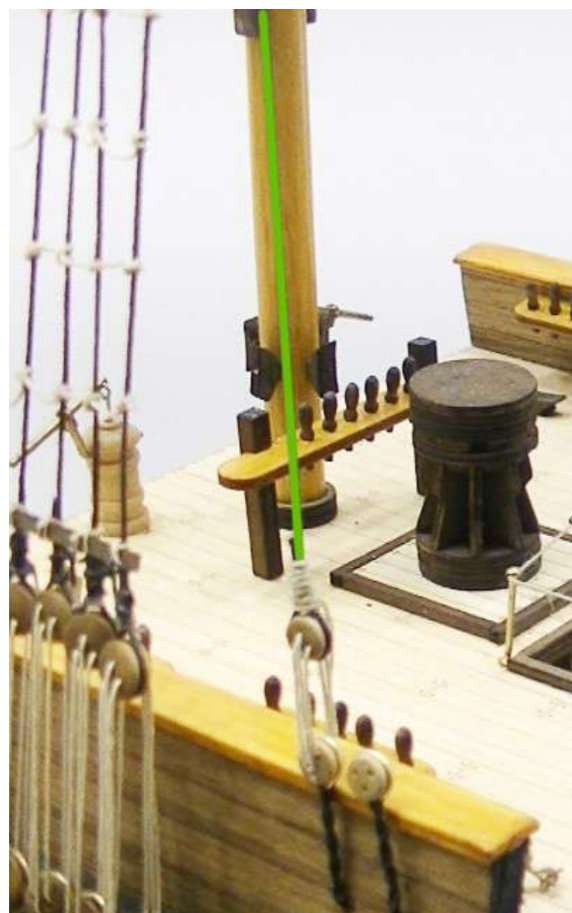
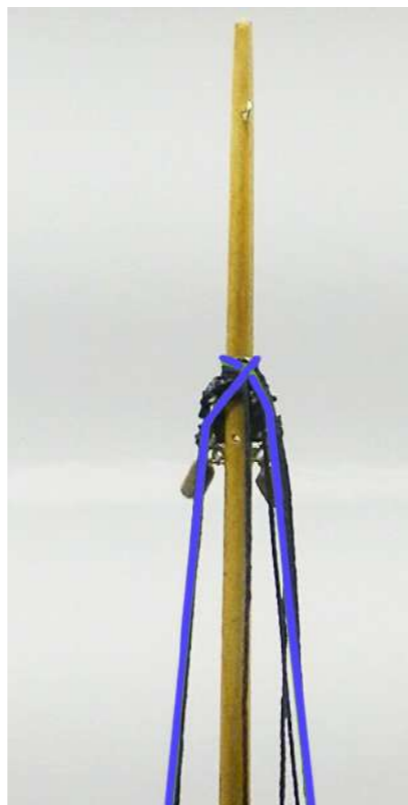
Mast Top

11.0 Backstays For the topmast backstay cut a 1100 mm length of 1mm black cord - fit the cord around the topmast head and seize as shown. Use the 15mm deadeye jig to fix a 5mm deadeye to the cord end - tie off as previously done and reeve backstay lower deadeye as shown. For the topgallant back stay cut a 1500mm length of 1mm black cord - tie-off and reeve as for the topmast backstay.

Topmast Backstay



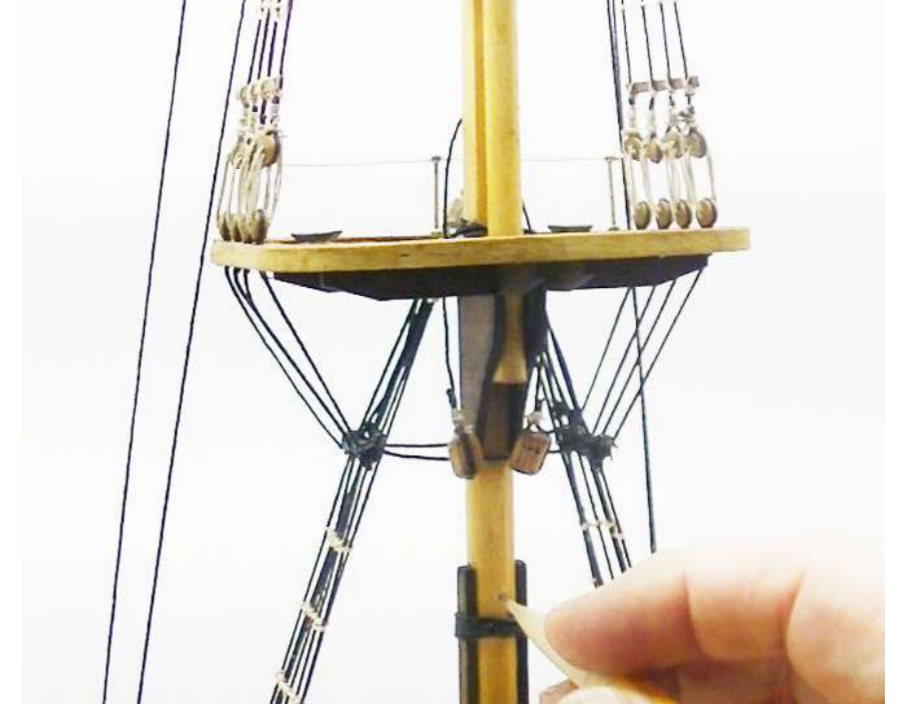
Topgallant Backstay



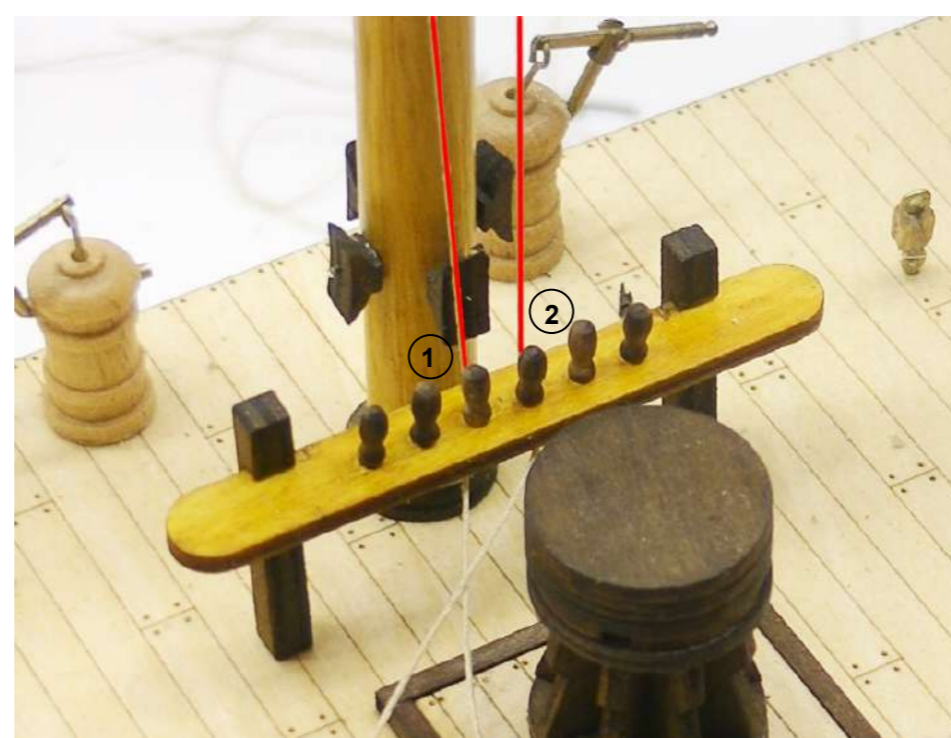
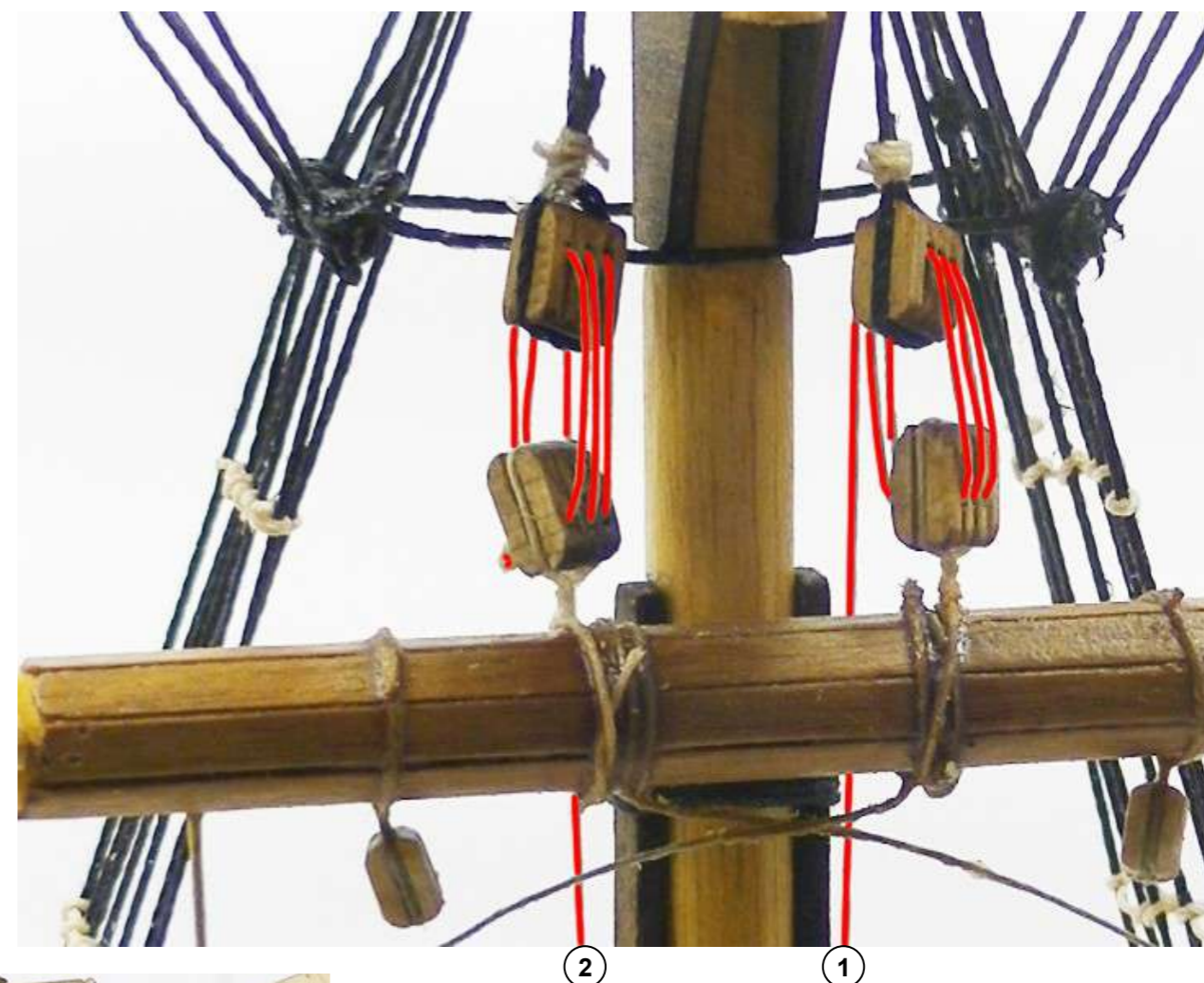
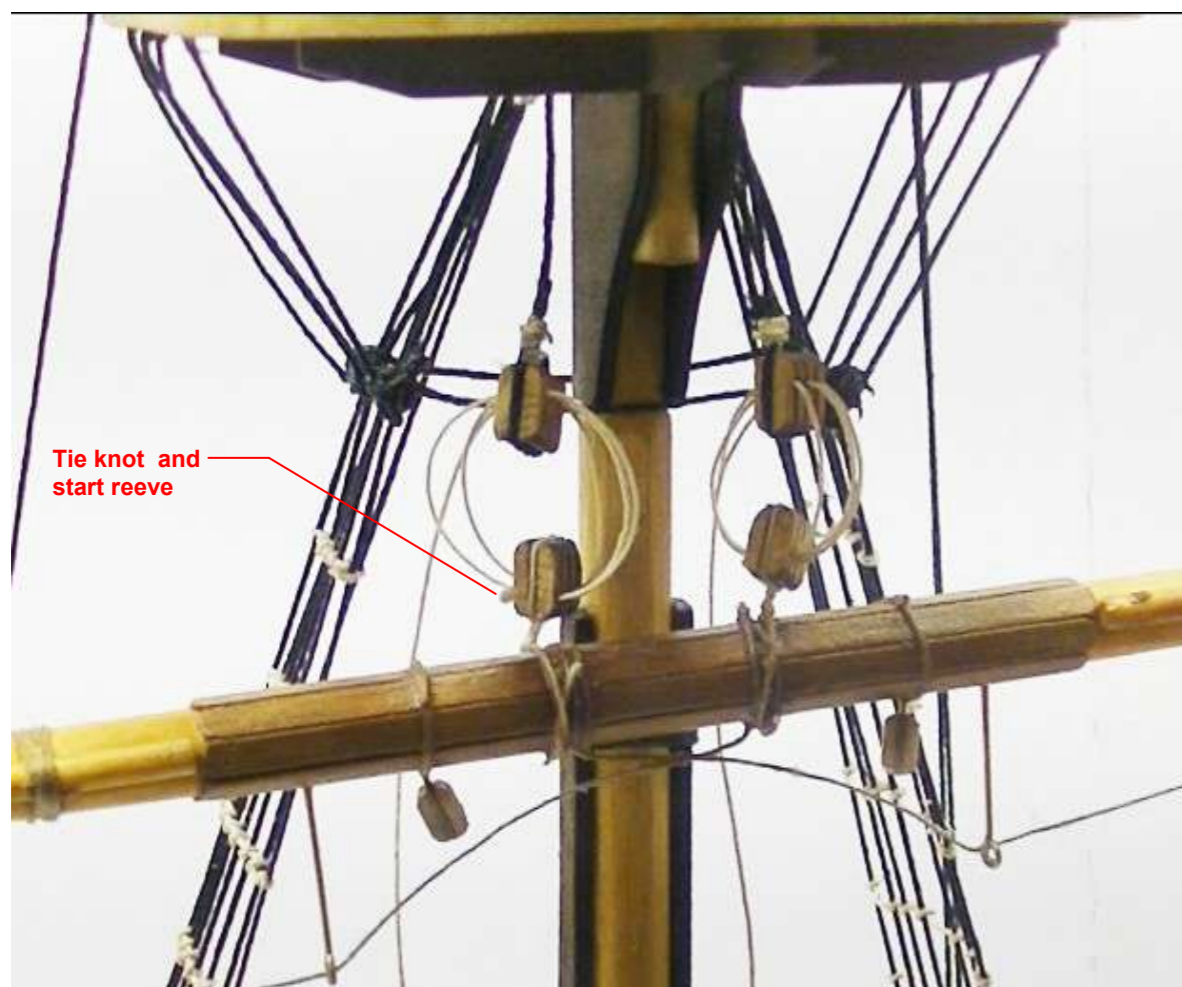
Topgallant Backstay

Topmast Backstay

11.1 Jeer Blocks and Main Yard Identify the 7mm 3 hole blocks P109 - use 1mm black cord - seize cord around one block and take remaining length up and over the mast cleat previously fitted - tie and seize the cord around the second block so that the blocks are approximately level with the catharpins as shown. Apply a dab of glue to the cord where it passes over the cleat to hold it in position. Drill a 0.7mm hole in the centre of the mast 5mm below the top of the mast strengtheners. Take the main yard previously assembled - fit the pin previously fitted to the yard into this hole and apply glue to the joint between mast and yard.



11.2 Main Yard Jeer Blocks Use 0.5mm grey cord to reeve the jeer blocks - cut a length of cord long enough to be terminated at the mast pin rail as shown. To start the reeve tie a knot in one end of the cord and feed through the first hole - follow the sequence as shown. Repeat for the second pair of jeer blocks. Run the cords down behind the yard and terminate at belaying points indicated - remove the belaying pins and pass the cord through the holes and replace the belaying pin - do not glue the belaying pins in place yet - we will need to make adjustments later with other rigging to ensure the yard is horizontal.



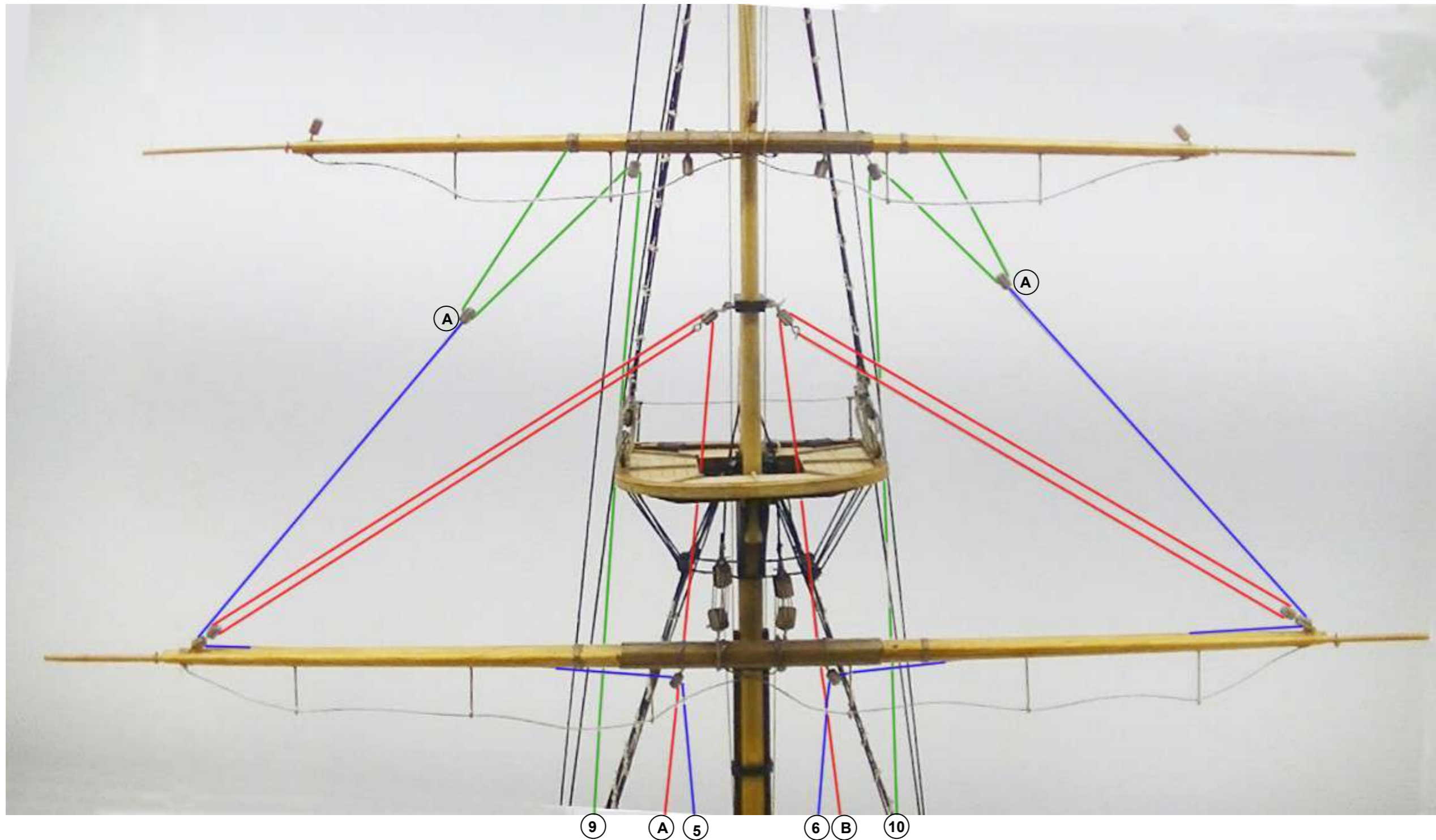
11.3 Top Yard Measure 50mm up from the top of the mast cap and mark the location in the centre of the topmast - drill a 0.7mm hole in the mast at this point. Take the top yard previously assembled - fit the pin previously fitted to the yard into this hole and apply glue to the joint between mast and yard. Identify the parrels P120 - use 0.5mm grey cord - tie one end of the cord around the yard and fit the parrels and tie-off again on the yard - apply a dab of glue to each tie-off.



11.4 Top Gallant Yard Measure 15mm up from the topmast mast cap 15mm and mark the centre of the topgallant mast as shown - drill a 0.7mm hole and fit the assembled topgallant yard in place.



11.5 Main Yard Lifts, Cluelines and Sheets Use 0.5mm grey cord to rig as shown. Fit 1 hole 5mm blocks P106 as shown. Terminate at the belaying points as shown

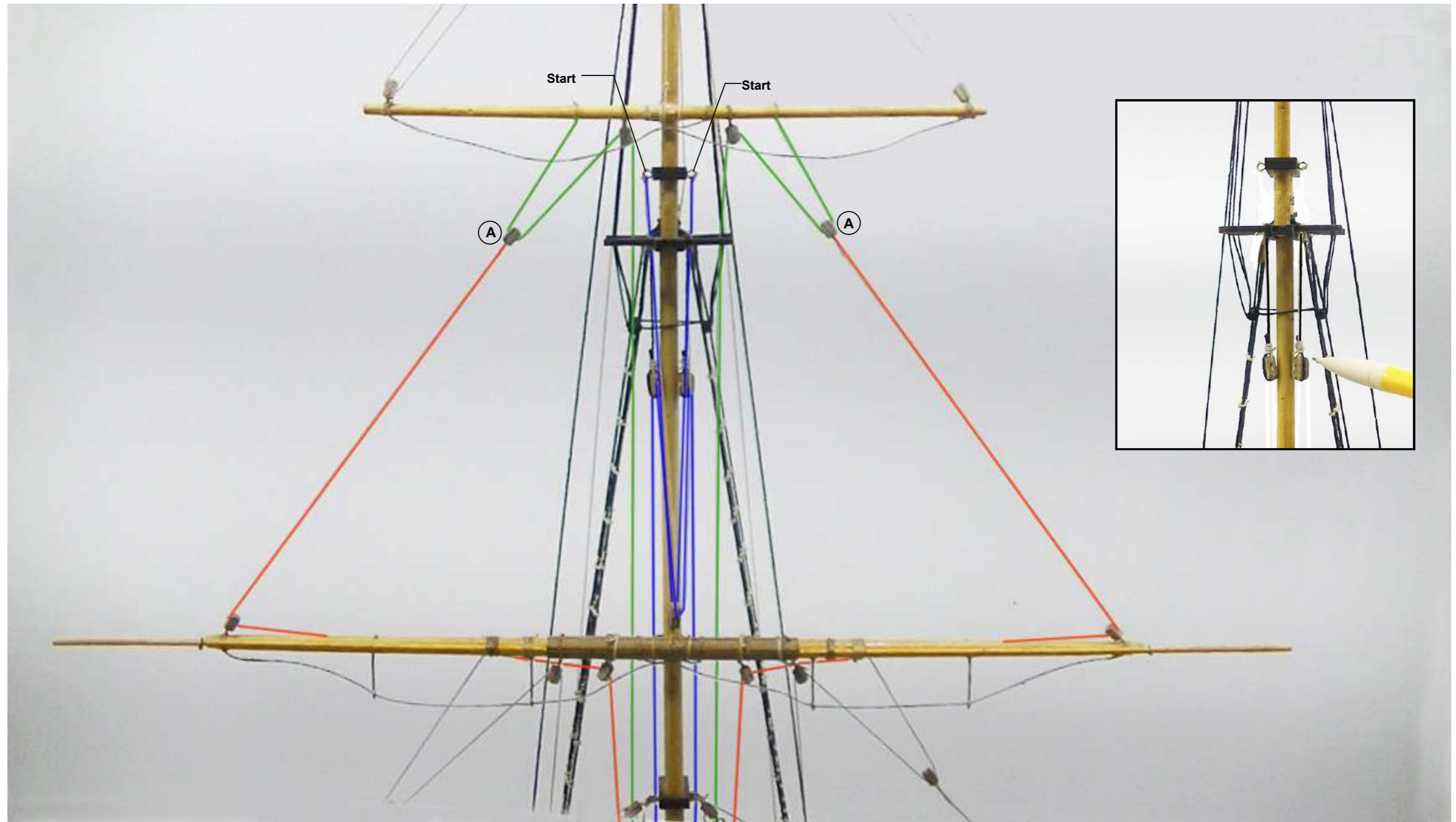


A & B - See Sheet 59

BLOCK KEY			
Size	1 hole	2 hole	3 hole
5mm	A	—	—
7mm	B	C	D

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11.6 Top Yard Lifts, Cluelines and Sheets Identify the 1 hole 7mm blocks P107. Cut a 100mm length of 1mm black cord - seize the cord around one block and take remaining length up and over the mast head between the first and second crosstrees - tie and seize the second end around the second block as shown. Use 0.5mm grey cord to rig the top yard lifts starting at the eye pins as shown - run the cords down to the 2 hole 7mm block previously attached to the yard then back up to the 1 hole 7mm blocks then down behind the yard to the belaying points as shown. Use 0.5mm grey cord to complete the cluelines and sheets as shown - fit 1 hole 5mm blocks P106 as shown.

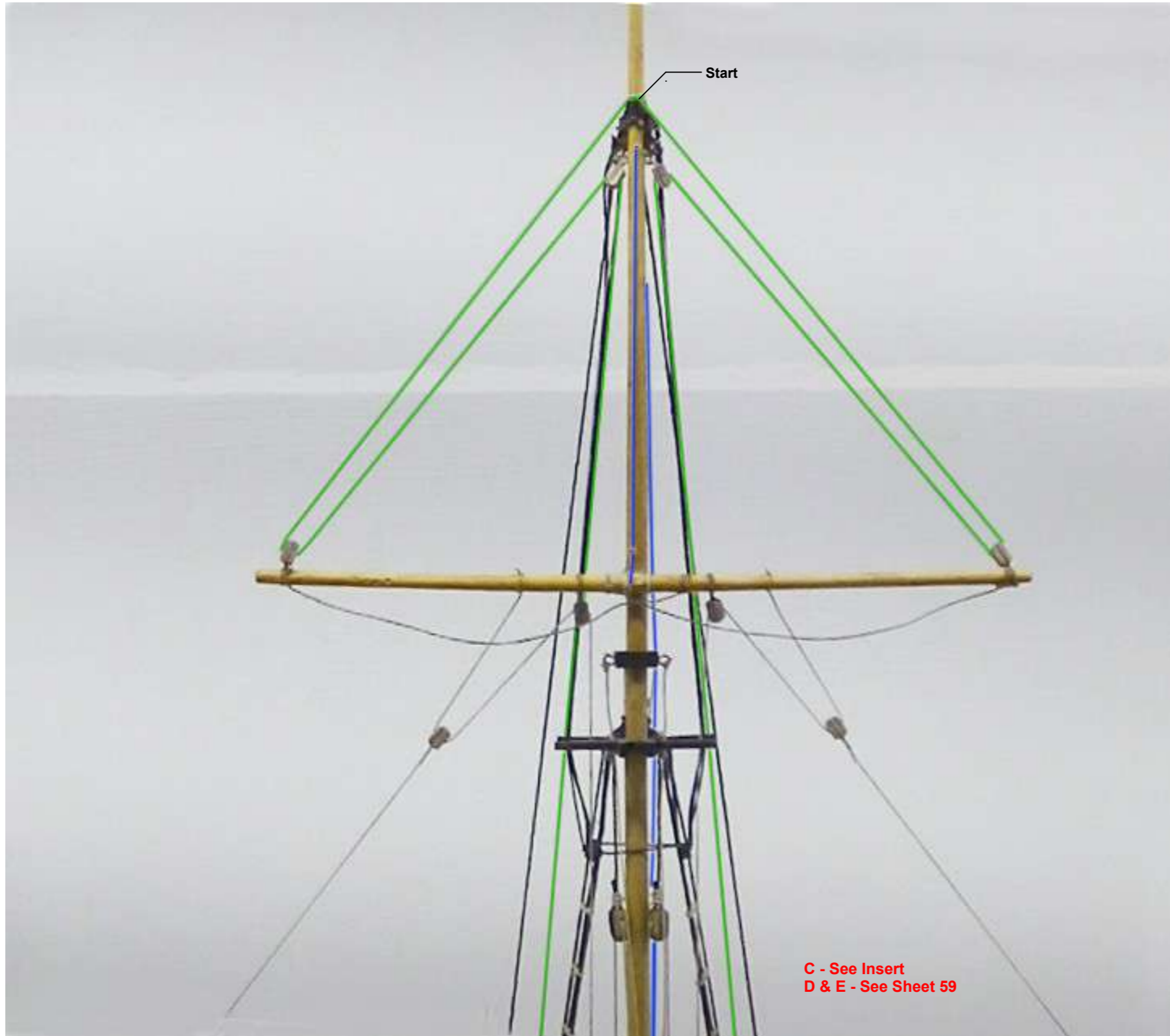


14 12 4 3 11 13

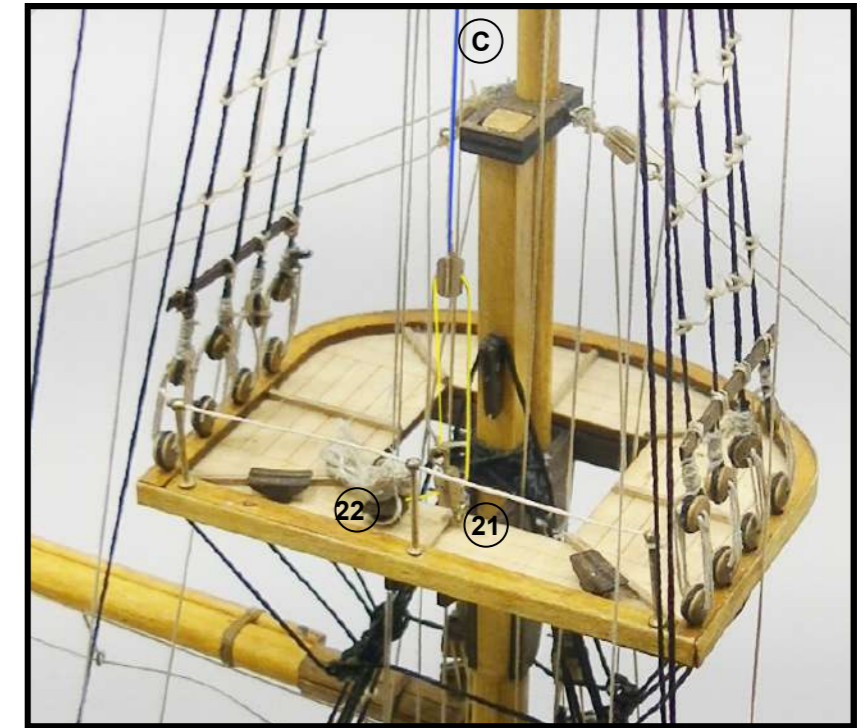
BLOCK KEY			
Size	1 hole	2 hole	3 hole
5mm	A	—	—
7mm	B	C	D

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11.7 Top Gallant Yard Measure up from the mast cap 15mm and mark the centre of the topgallant mast as shown - drill a 0.7mm hole and fit the assembled topgallant yard in place. Make sling using 0.5mm grey cord - attach to the yard as shown. Use 0.5mm grey cord to rig a sling around the yard as shown - run up to the mast top and through the previously drilled hole as shown - then down to the mast top - fit a 1 hole 5mm block P106 to the end. Reeve this block to the previously fitted block on the mast top point 21 and terminate the cleat point 22 as shown. Continue to rig the lifts using 0.5mm grey cord starting at the mast top and terminating as shown.



C - See Insert
D & E - See Sheet 59

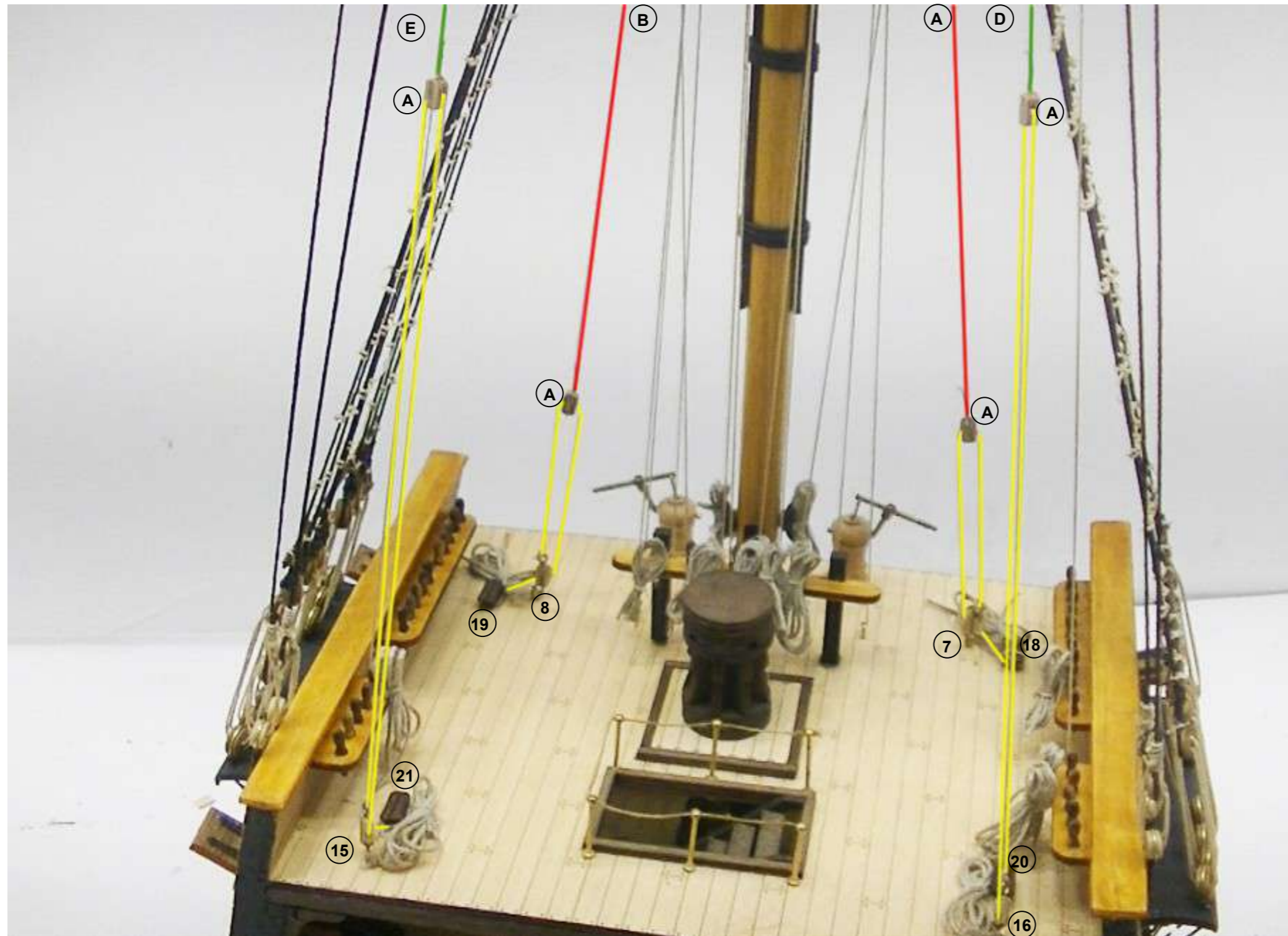


Insert

(D) (C) (E)

11.8 Fit 5mm 1 hole blocks A as shown and reeve blocks on deck and terminate as shown.

11.9 Use 0.75mm grey cord to make rope coils as previously presented - glue in place on the belaying rails, mast cleats and deck and mast top belaying points.



BLOCK KEY			
Size	1 hole	2 hole	3 hole
5mm	A	—	—
7mm	B	C	D

11.10 Pennant Flag Identify the Pennant P121. Follow the steps below to set the pennant so that it is waving in the wind. Tie-off pennant lanyard at eye pin at mast top and terminate at starboard side of mast pin rail as shown.

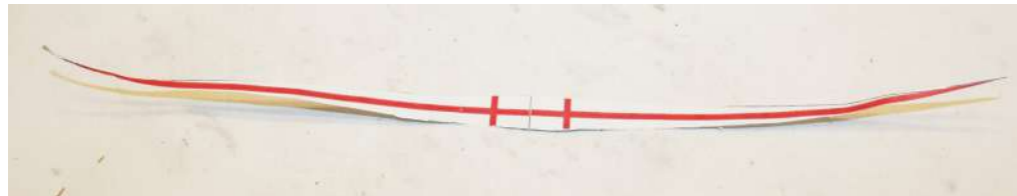
Step 1: Cut-out pennant. Use a length of aluminium foil - enough for the pennant to fit over



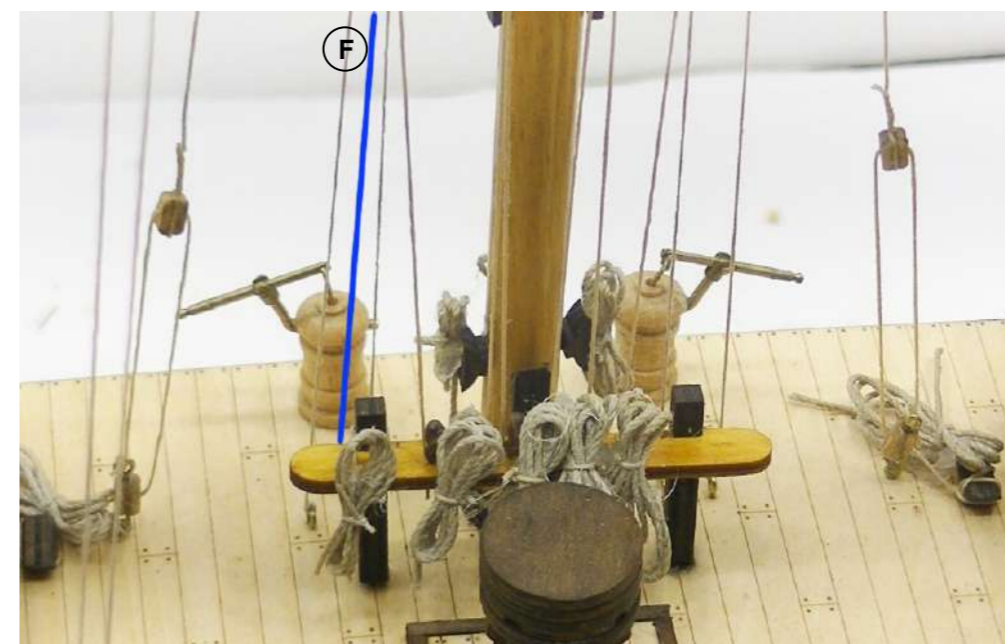
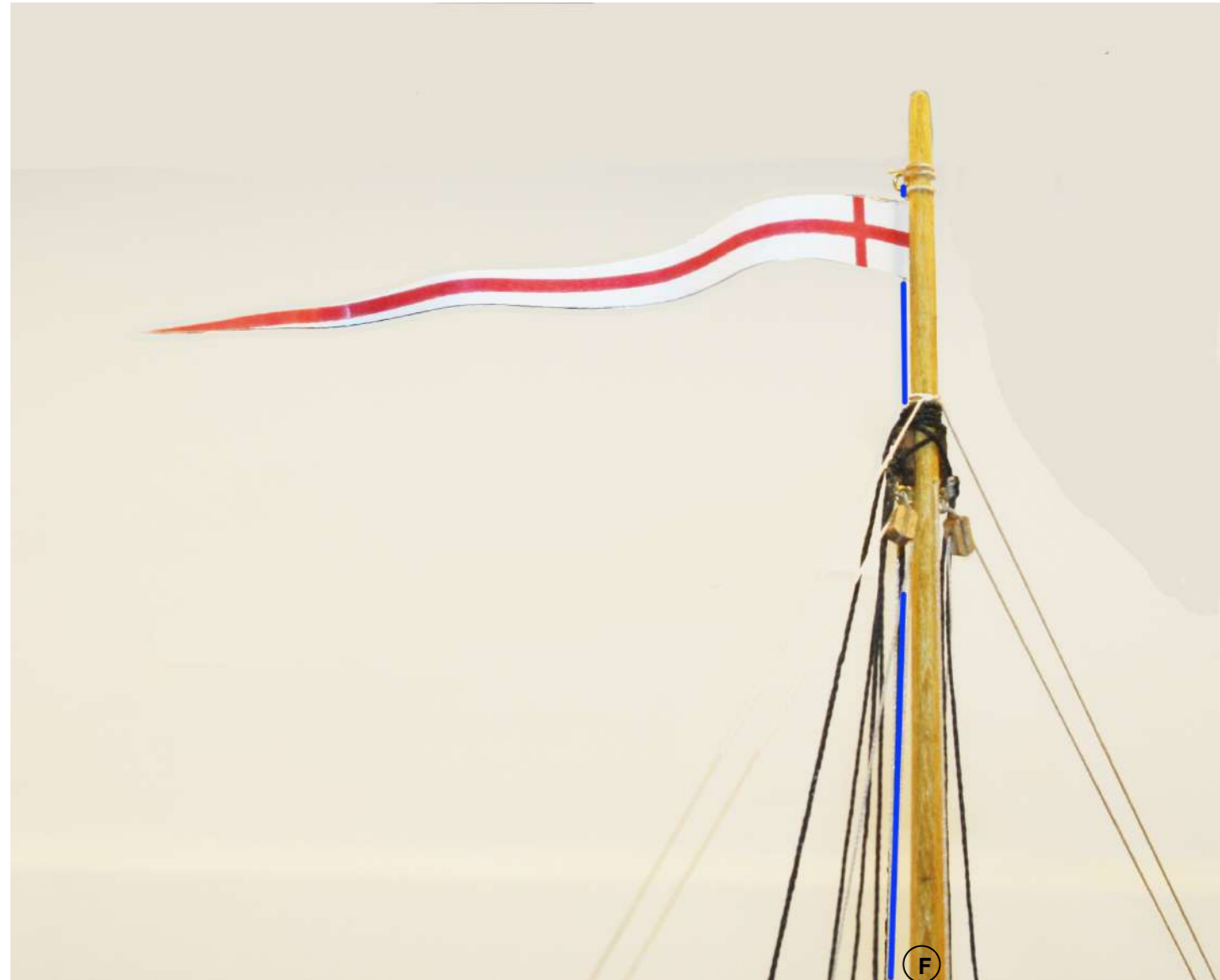
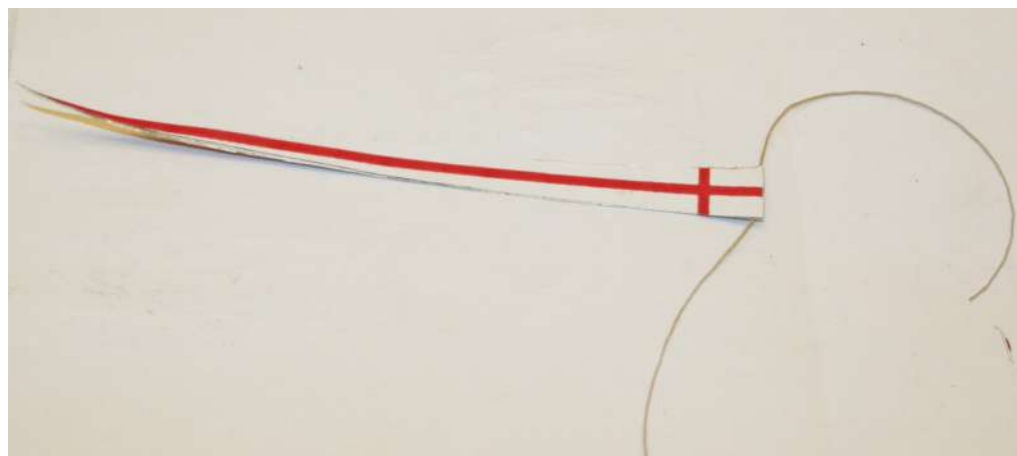
Step 2: Apply a paper based glue to the face of the foil - lay the pennant on the foil and press firmly down.



Step 3: Cut away the excess foil



Step 4: Cut a length of 0.5mm grey cord - enough to run from the mast top down to the mast pin rail with some extra. Fold the pennant in half and open out again. Turn the pennant over and apply the paper based glue to this surface. Lay the cord in the fold of the pennant with a short length over-hang at the top as shown. Fold the pennant onto its self and press firmly.



11.0 Name Plate

Identify the name plate P122 - stain with shellac and glue in place as shown.

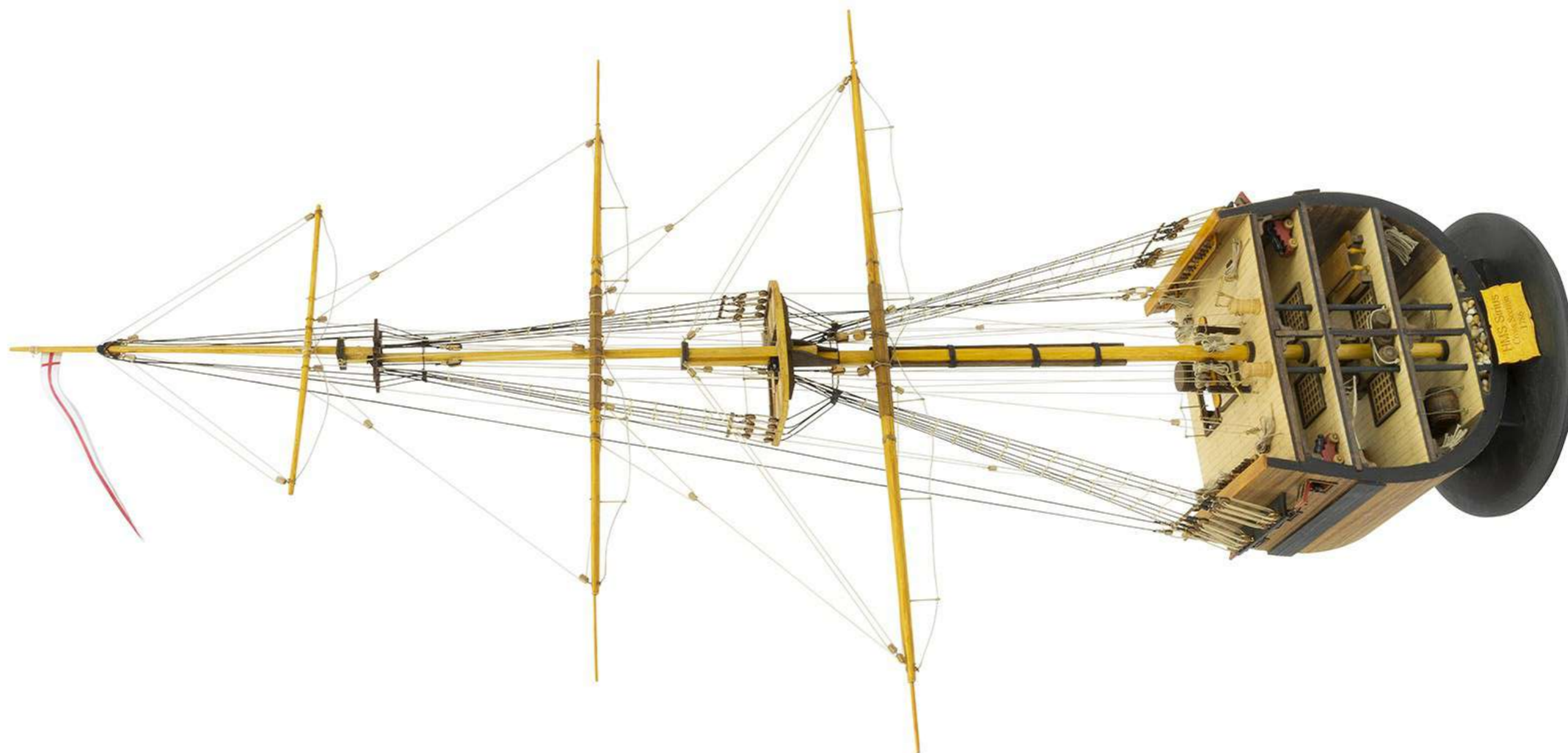


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12.0 Completed Model

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 and a model that has great significance to Australian maritime history.



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