BUILD LORD NELSON'S HMS VICTORY

Pack 9

Stages 81-90

DeAGOSTINI MODEL SPACE™

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Contents

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DeAGOSTINI MODEL SPACE™

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Stage 81: Assembling more yards and booms

This stage's parts are for the mizzen yards and the second of *Victory*'s two booms. You also continue fitting out the poop deck.

Wooden strips

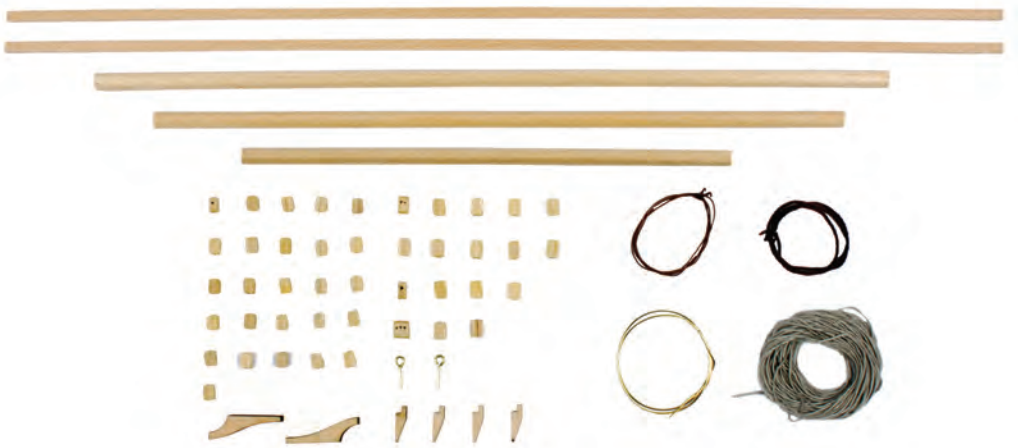
2 wooden strips, 2 x 3 mm, 300 mm long
1 wooden dowel 5 mm, 235 mm long
1 wooden dowel 5 mm, 205 mm long
1 wooden dowel 5 mm, 145 mm long

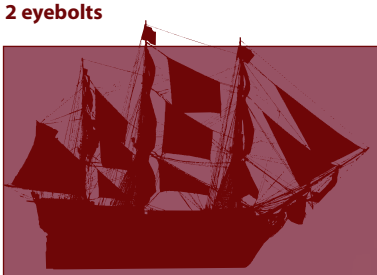
Shaped wooden parts

26 single blocks, 4 mm
10 double blocks, 5 mm
4 single blocks, 5 mm
3 triple blocks, 5 mm
2 boom jaws
4 yard slings

Fittings

200-mm brass wire
4.5-m natural thread
0.8-mm brown thread, 200 m
0.15-mm brown thread, 300 mm
2 eyebolts





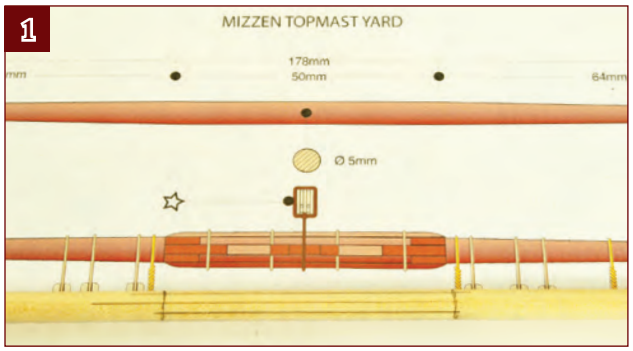
Where the parts fit

Victory's mizzen mast has a total of three horizontal yards, the largest of which you made in Stage 80. This stage, you will complete the smaller topmast and topgallant yards. You will also make the two booms that extend rearward from the mizzen. You will need parts supplied with Stage 77, together with the mizzen mast plans also provided with Stage 77. It's important to note that the driver boom jaws (with this stage) and the gaff boom jaws (Stage 77) are very similar, so use the picture below to tell them apart. When you have made all four spars, continue to add the poop deck fittings, using parts provided with Stage 66.

driver boom jaws **gaff boom jaws**

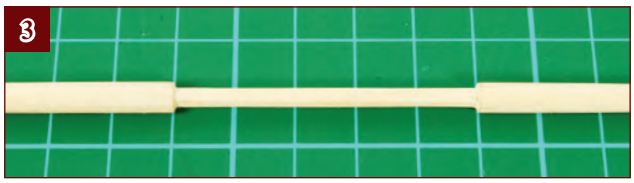
The mizzen topmast and topgallant yards

The parts for both these yards are supplied with this stage. However, the assembly is similar to previous yards and the basic techniques were more fully described in Stage 65.

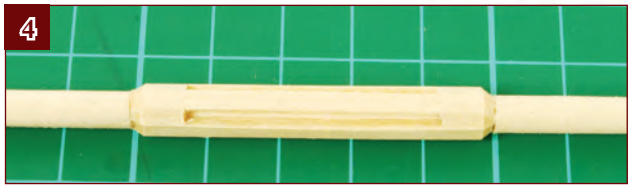


1. Take the 5-mm dowel for the topmast yard and mark the centre section. Make sure that the excess length overhangs each end of the yard fairly equally.

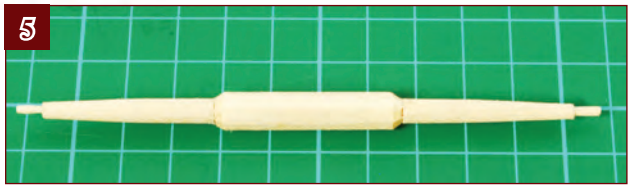
2. Taper each end of the yard to 3 mm, cut it to length, and then carve the thinner ends.



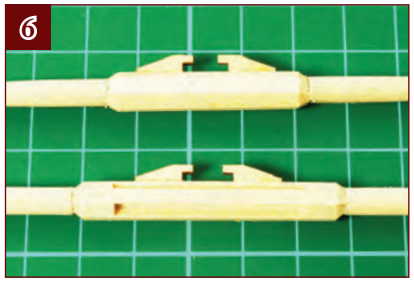
3. Carve the centre to a 4-mm octagonal section.



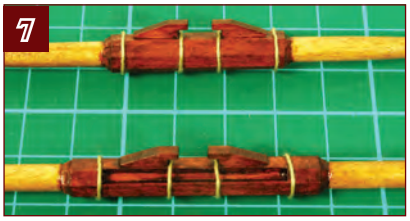
4. Use the 4 x 2-mm wood to build up the octagon. Note that the centre section has gaps in the octagon, similar to the main and fore top yards. The technique is fully described in Stage 72.



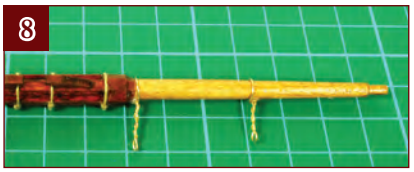
5. Repeat steps 1 to 4 to make the topgallant yard, noting that the centre section is a full octagon, which is built up using the technique described in Stage 65.



6. Add the yard slings to both yards



7. Stain the yards to match the existing yards, and then add the rope bindings, using the plan to gauge the positions.



8. Add the four footrope supports. You can use wire left over from previous stages, or wire from Stage 66 if you run short. Paint the yards black at this stage if you are painting your model.

9. Prepare blocks as follows, leaving tails of about 80 mm:

- One 5-mm double block with 0.8-mm brown thread.
- Two 5-mm double blocks with 0.25-mm natural thread.
- Two with a 4-mm single block doubled up with a 5-mm block, using 0.25-mm natural thread.
- 17 off 4-mm blocks using 0.25-mm natural thread.

10. Fit these blocks to the yards using the plan as a guide. Make sure you tie the odd 4-mm block at the correct end of the mizzen top yard.

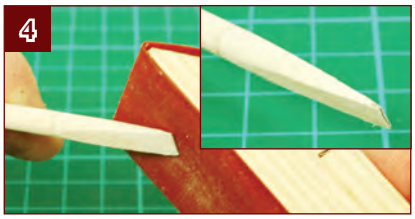
Assembling the booms

***Victory* has two booms, a horizontal driver boom and an angled gaff boom. You will need the boom parts supplied with Stage 77 as well as those supplied in this stage.**

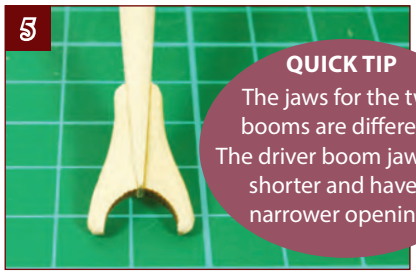
1. Start with the driver boom, which is the longer of the two booms. Mark the start of the taper using the plans.

2. Taper the boom to 3 mm at the opposite end, then cut it to length. Now carve the thin end to the boom.

3. With the aid of the centre finder, draw a line across the end of the boom.



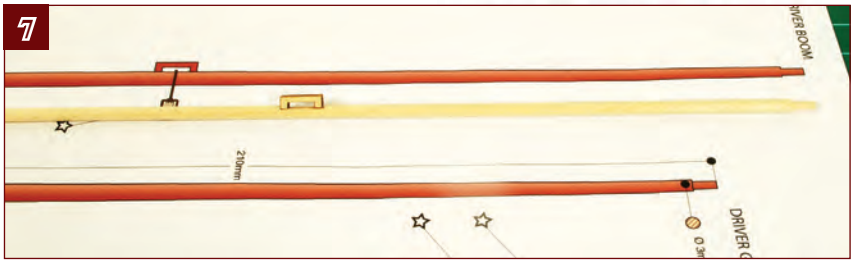
4. Chamfer both sides until the end is reduced to about 0.5 mm thick, similar to a flat-blade screwdriver. Use a sanding block to make sure that both sides of the chamfer are flat.



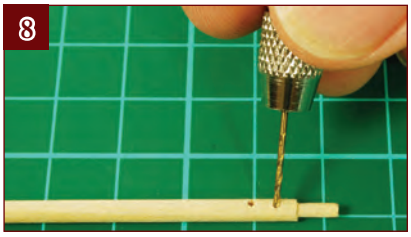
QUICK TIP
The jaws for the two booms are different. The driver boom jaws are shorter and have a narrower opening.

5. Take the two laser-cut boom jaws, and round off the outside edges. Then glue the parts to the end of the taper.

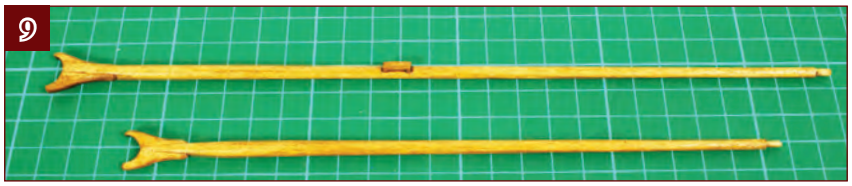
6. Taper off the projecting corners of the end of the boom above and below the boom jaws.



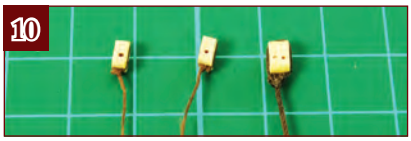
7. Add the shallow 'U'- shaped bracket to the top of the boom. For ease of rigging later on, place this bracket about 30 mm from its indicated position, at a distance of 115 mm from the end of the boom.



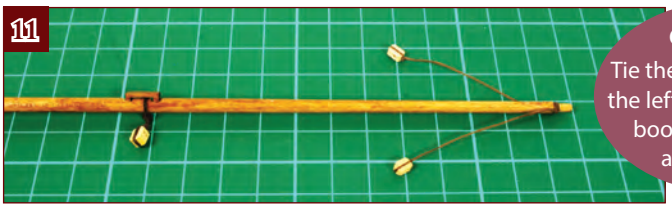
8. Hold the boom with the boom jaws flat to the work surface and drill two 1-mm holes vertically down through the boom, about 3 and 6 mm from the end.



9. Repeat steps 1 to 6 to construct the gaff boom in the same way as the driver boom (noting that the jaws for the gaff boom are longer and wider than those of the driver boom and that it does not have the holes you drilled in Step 8). Stain the booms dark oak or paint them black, to suit the finish you have chosen.

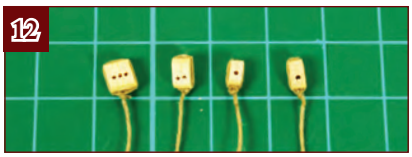


10. For the driver boom, prepare one double block with 0.5-mm brown thread, leaving an 80-mm tail. Prepare two 4-mm single blocks with 0.15-mm brown thread, leaving 120-mm tails.

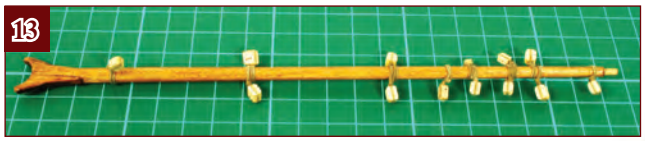


QUICK TIP
Tie the single blocks to the left and right of the boom, not the top and bottom.

11. Tie the double block under the bracket you fitted in Step 7. Tie the two single blocks to the end of the boom, wrapping the thread twice round the end of the boom before tying them off with two half-hitches, leaving 50-mm tails.



12. For the gaff boom, prepare two 5-mm triple blocks, five 5-mm double blocks, one 5-mm single block, and five 4-mm single blocks. Use 0.25-mm natural thread and leave 80-mm tails.

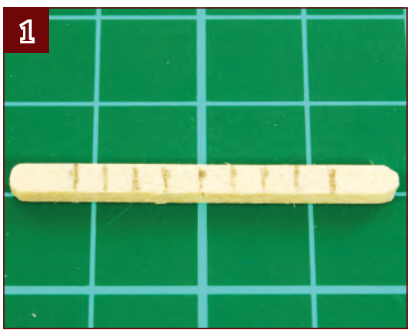


13. Fit the blocks according to the plans.

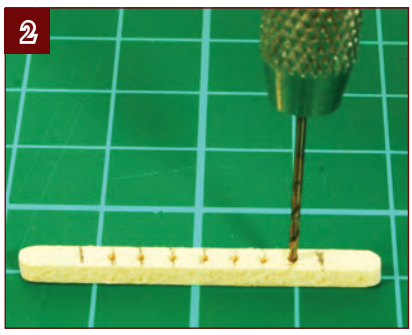
Completed booms and yards (natural and painted versions).

Making the poop deck pin rail

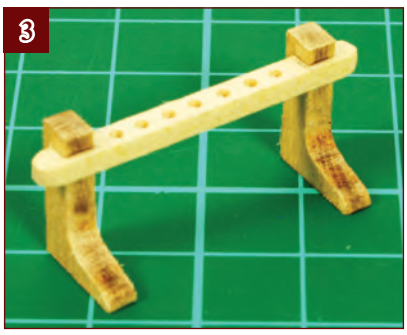
This goes behind the mizzen. You need the laser-cut legs and metal belaying pins supplied with Stage 66.



1. Cut a 36-mm length of 2 x 3-mm wood and round the ends. Mark the centre, then make eight marks, each 3 mm apart.



2. Drill seven 1.5-mm holes in the central marks. The two outermost marks are the positions of the legs.



3. Glue the two legs so that the inside of each leg aligns with the outermost marks made in Step 1.

4. Stain the pin rail walnut, or paint it black. Prime and paint the belaying pins black, then fix them in place with superglue.

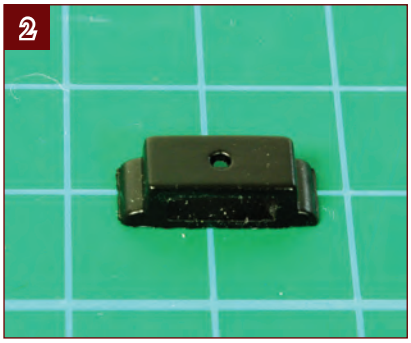
QUICK TIP
Sand the laser charring off the base of the legs so you get a stronger glue joint.

5. Glue the pin rail centrally to the deck, leaving a 10-mm space between the skylight and the back of the pin rail.

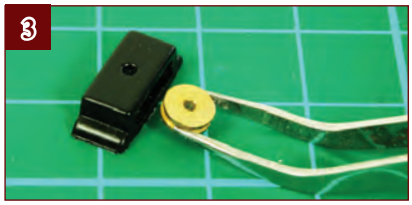
Fitting rigging mountings

The diecast cleats and other mountings for the rigging on the poop deck were supplied with Stage 66.

1. Drill a 1.5-mm hole in the right-hand (starboard) transom knee and glue a cleat in place with superglue. Drill three holes halfway up the bulwarks on each side: a 1.5-mm hole 57 mm from the rear transom and two 0.7-mm holes 69 mm and 75 mm from the rear transom. Glue a cleat into the larger hole on each side and glue eyebolts into the two smaller ones.



2. Take the two castings for the stern pulleys (snatch blocks), and prime them with an automotive primer. Then paint them black.



3. Apply a tiny drop of superglue to the bottom of a brass pulley ring, and glue it in place, making sure that the hole in the pulley lines up with the hole in the casting.

QUICK TIP
Check that the pin is short enough before applying glue.

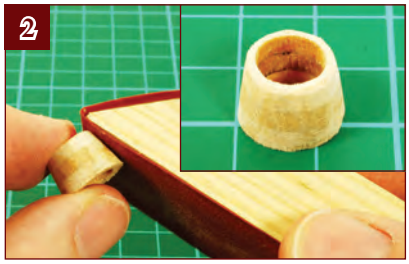
4. Cut a pin down to about 2.5 mm long, then glue it in the hole with a tiny drop of superglue.

5. Glue the two pulley assemblies to the top of the bulwark on each side, up against the transom.

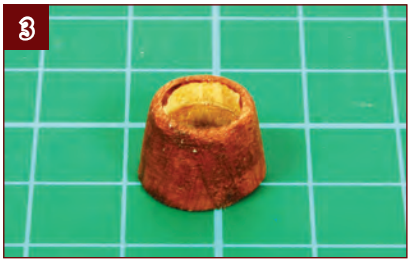
Making the mizzen mast collar

Assemble the ring that fits around the base of the mizzen mast. The parts were supplied with Stage 66.

1. Sand or file the inside of the three rings until they are an easy fit on the mizzen mast. Glue them together and allow to dry, then check that the collar still slides easily on the mast. You can sand or file the inside if it is a tight fit.



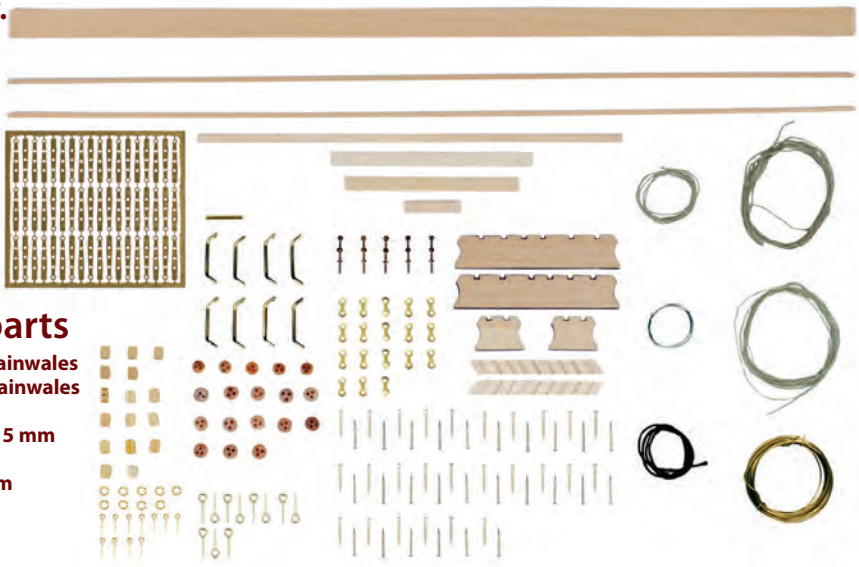
2. Sand the collar to a taper. Start with medium sandpaper and finish off with a finer grade.



3. Stain the collar walnut or paint it black as appropriate. Do not glue the collar in place yet.

Stage 82: Complete the mizzen mast

This stage's parts include components for *Victory*'s mizzen chainwales, plus deck fittings, rigging for the guns and parts to complete the mizzen mast itself.



Wooden strips

2 wooden strips 1.5 x 1.5 mm, 300 mm long
1 wooden strip 2 x 10 mm, 300 mm long
1 wooden strip 1 x 3 mm, 150 mm long
1 wooden strip 2 x 5 mm, 70 mm long
1 wooden strip 1 x 5 mm, 60 mm long
1 wooden strip 4 x 4 mm, 20 mm long

Fittings

2 x 1-m natural thread
natural thread 300 mm
brown thread 200 mm
steel wire 200 mm
1.5-m brass wire, 0.5 mm
52 brass pins
8 brass chainwale support brackets
5 stanchions
11 eyebolts
18 shroud chain links
54 gun port lid hinges
11 eyebolts, 7 mm
9 brass rings, 5 mm
10-mm brass wire, 1.5 mm

Shaped wooden parts

2 large mizzen chainwales
2 small mizzen chainwales
2 ladder sides
11 double blocks, 5 mm
5 deadeyes, 4 mm
13 deadeyes, 5 mm
5 blocks, 4 mm

Where the parts fit

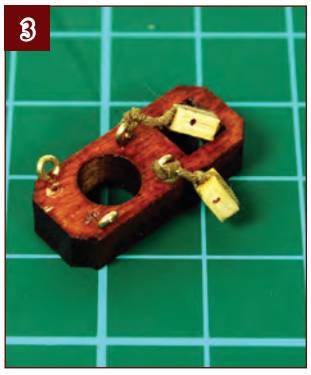
In the next stage, you will be preparing the mizzen chainwales in a similar way to the chainwales you rigged in Stage 75. Before fitting the chainwales to the hull, however, you need to fit the first few gun port lids to the ports that will be hidden behind the rigging. The hinges you will need are supplied on a sheet of photo-etched brass. Keep this intact and only cut the hinges off as you need them. Before fitting the gun port lids, start by completing the assembly of the mizzen mast using the final parts, which are supplied this time.

Completing the mizzen mast

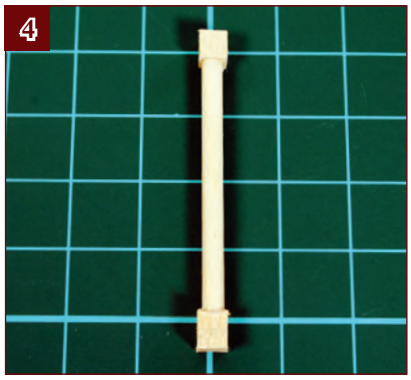
You can now assemble and rig the three sections of the mizzen mast. You will need the 1.5-mm square wood from this stage, and the remaining parts from Stages 78 and 79.

1. Add eight lengths of 1.5-mm square wood to the square section of the mizzen lower mast, then add a further 16 small spacers. This is similar to the construction of the main and fore masts, although the wooden strips are thinner.

2. Stain the mast cap walnut or paint it black as appropriate, then add the four brass eyes. Note that you should space the eyes as close to the edge as possible, as the hand mast has to fit between the eyes.



3. Bend the forward eyes out at an angle of about 45°, and add two 4-mm single blocks to the central eyes.



4. Dry-fit the mast cap to the mast (as in Step 5) to measure the height of the hand mast. Construct the hand mast from the 3-mm dowel and 4-mm square strip. Leave it slightly over-sized to allow a small margin for fitting. Stage 63 explains the process in detail.

5. Test-assemble the mast and mast cap, in order to construct the hand mast and check its fit (which should be slightly oversized). Do not glue together yet.

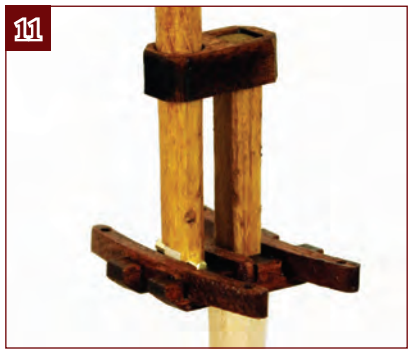
6. Insert the mizzen topmast into the mast cap (but do not glue it yet). Cut a piece of brass wire about 12 mm long and insert it through the bottom hole in the topmast.

7. Dry-fit the top mast to the lower mast, and check that the two sections of mast are straight and parallel. When you are satisfied, glue the parts firmly together.

8. Trim the hand mast to the exact size and glue it in place.

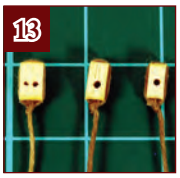
9. Glue the two parts of the rope guide together and file two notches in the top.

10. Glue the rope guide to the mast cap.



11. Take the cross trees, topmast cap and topgallant mast, and dry-fit them together. You may need to trim the bottom of the topgallant mast so that it fits inside the cross trees. Cut a 10-mm length of the 1.5-mm brass wire to make the pin, which should rest on the cross trees. Once you are satisfied that the fit is correct and the topgallant mast is straight and parallel with the rest of the mast, glue the parts together.

12. Drill two 0.7-mm holes through the topmast cap and into the mast, and add two brass eyes.



13. Prepare two 5-mm double blocks, five 5-mm single blocks, and 10 off 4-mm single blocks, leaving 80-90 mm tails.

14. At the top of the mast, add a single 4-mm block facing aft. Then add a 4-mm and 5-mm single block facing port (left) and similarly to starboard (right).

15. Tie two 4-mm single blocks around the topmast cap. Then tie a 5-mm double block and a 5-mm single block around the cross trees. Tie a 4-mm single block to the port (left) brass eye.

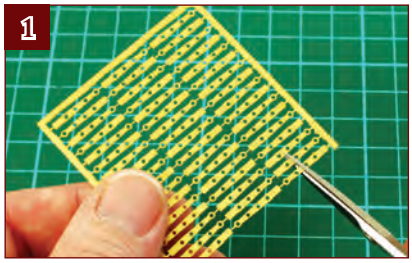
16. Tie two 4-mm single blocks around the mast cap. Add two 5-mm single blocks and a 5-mm double block tied around the top of the lower mast.

17. Add two 4-mm single blocks to the bottom of the mizzen mast.

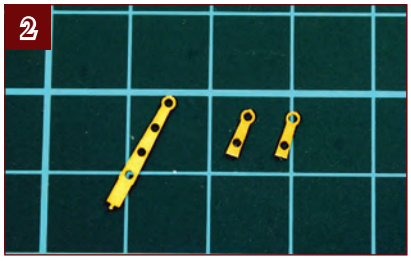
That completes the assembly of the mizzen mast (painted and natural versions are shown here).

Fitting the gun port lids

Although the gun port lids are vulnerable and most of them are best left until a late stage in the assembly, you need to fit the lids that will be covered by the rigging before you fit the chainwales.



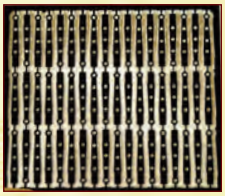
1. The hinges are supplied over-length so they can be cut to the exact size needed. A pair of needlework scissors is ideal, but don't use your best pair.



2. Start with the gun ports under the gallery. Cut four pairs of hinges, 1½ holes long. Check against your model (see Step 3) to gauge the exact length.

Painted finish

If you have chosen a painted finish, paint the hinges with a metal primer and then paint them black. A spray can will give the best results, but you can use a brush if you prefer.



3. Carefully turn the model on its side, making sure it is well protected and supported. Glue the hinges on the gallery gun port lids as shown.

EXPERT TIP

Apply mounting putty to the end of a toothpick to pick up the small hinges. Then apply a tiny amount of superglue to the hinge with a pin or another toothpick.

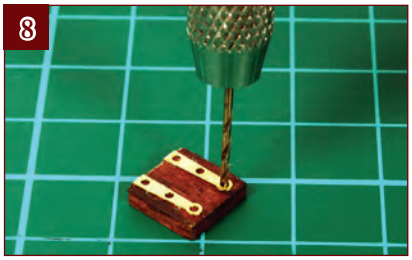
4. Drill 1.5-mm holes above the forward upper gun ports. They should be about 8-mm above the top of the port, but they must be below the channel wale (the top moulding).

5. Repeat the process to drill holes above the gun ports indicated by the arrows.

6. Cut a length of the 2 x 10-mm strip to about 10 mm long and trim it so that it fits the gun port.

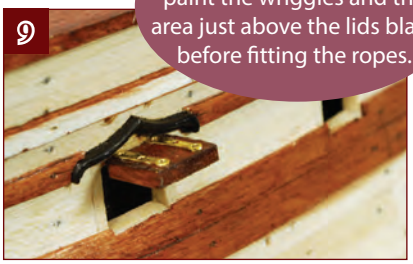
QUICK TIP
Apply a thin layer of superglue to seal the grain of the unpainted edge, and let it set.

7. Stain the port lid walnut on both sides, and three of the four edges. The unstained edge will be glued to the top of the gun port. If you are painting your model, paint the outside black, with the inside and three edges red ochre.



8. Cut two hinges to length as shown, and glue them to the port lid. Then drill a 1-mm hole in the lid through the last hole in the hinge.

QUICK TIP
For the painted version, paint the wriggles and the area just above the lids black before fitting the ropes.



9. Glue the port lid to the gun port, sticking out at 90°, or slightly higher. Use superglue, as it will stick while you hold the lid in position.

10. Rub some glue into a length of thread and let it dry. This will stiffen it, making it much easier to thread. Insert the end upward through the lid.

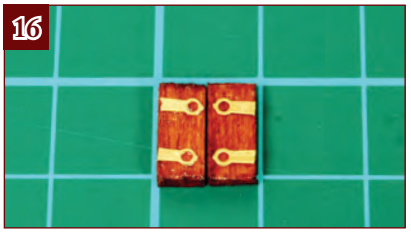
11. Apply a drop of glue to the end of the thread and push it into the hole in the planking. Allow the glue to dry.

12. Gently pull the thread back to pull it tight. Apply a drop of glue to the thread as you pull the last bit taut, so the glue is drawn into the hole in the lid.

13. Allow the glue to dry thoroughly, then slice the excess off with a sharp knife. A new blade is recommended.

14. Repeat Steps 9-12 with a second thread. Continue to fit lids to all the ports shown on the picture on the previous page.

15. Take some scraps of 2 x 5-mm wood and cut a pair of doors to fit the second to last port on the top row at the stern. Lightly sand the edges to emphasise the vertical join.



16. Stain these doors walnut or paint them black with red edges and insides, then add two pairs of hinges.

17. Glue these doors in place in the open position.

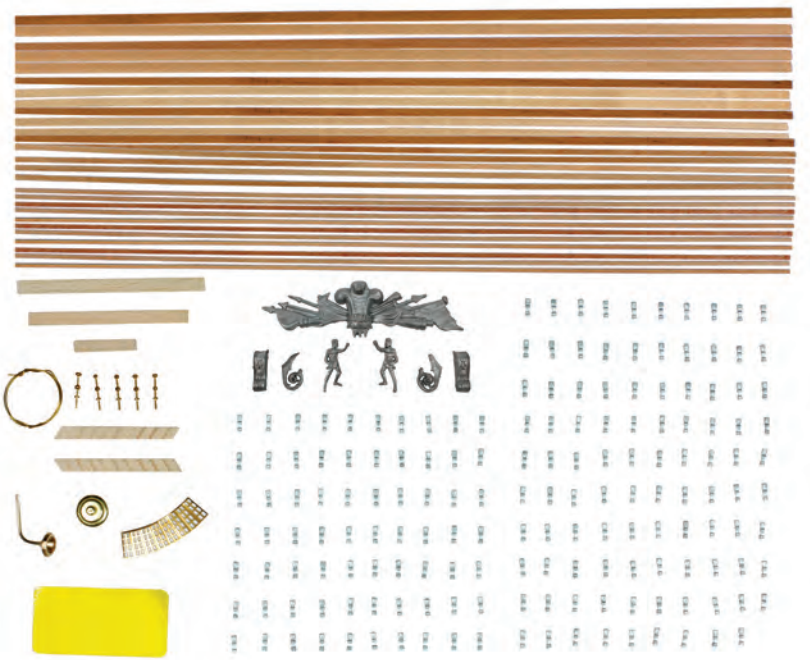
The starboard side

When you have fitted these gun port lids and doors to the port side of your model, repeat the procedure to fit the lids and doors to the corresponding ports on the starboard side.

When you have fitted all the gun port lids and doors necessary at this stage, your hull should look like this.

Stage 83: The gallery windows and frames

These parts are used to finish the gallery, make a compass deck ladder and add a stern lantern.



Wooden strips

5 wooden strips 1 x 4 mm, 300 mm long
7 wooden strips 1 x 3 mm, 300 mm long
11 wooden strips 1.5 x 1.5 mm, 300 mm long
5 wooden strips 2 x 2 mm, 300 mm long
1 wooden strip 2 x 5 mm, 70 mm long
1 wooden strip 1 x 5 mm, 60 mm long
1 wooden strip 4 x 4 mm, 20 mm long

Fittings

180-mm brass wire
170 balusters for stern gallery
7 die-cast gallery decorations
5 brass stanchions
Brass lantern top, base and side panel
Yellow acetate lantern window

Shaped wooden parts

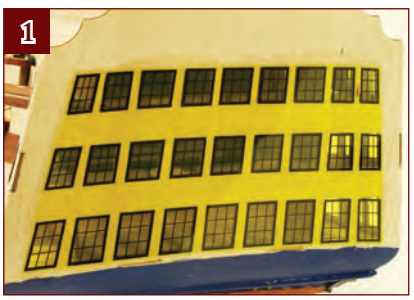
2 ladder sides

Where the parts fit

This time, you start finishing off the stern gallery by adding the windows and frames, before preparing the mizzen chainwales. Some of the decorative castings provided, plus the ladder and lantern parts, are not used until later on in the assembly. **Note that it is vital to use a suitable adhesive when gluing the wooden parts to the yellow acetate used on the stern windows.** The best choice is a clear glue designed for gluing the canopies to plastic model aircraft kits. You can also use contact adhesive, although you have to be very careful to keep it off the visible part of the windows if it does not dry clear. **Superglue is not recommended,** as this may cause the windows to fog. Test your chosen adhesive by gluing an offcut of the acetate sheet to a scrap of wood before starting to glue the windows in place.

Add the gallery windows and frames

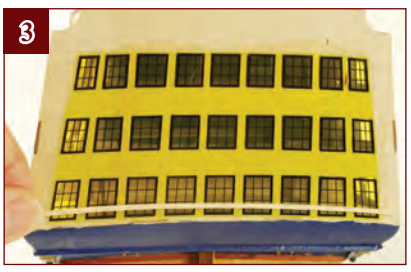
In addition to the wooden strips provided this time, you will need the yellow acetate sheet with the gallery windows printed on it. This was supplied with Stage 56.



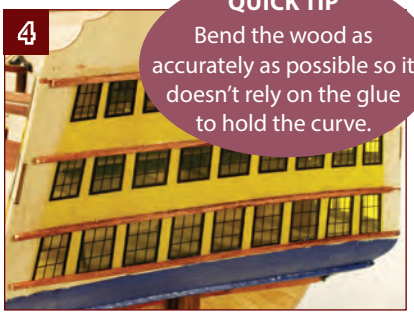
1. Cut out the back panel from the acetate, leaving about 1 mm excess around the windows. Glue in place with a suitable adhesive (see above), following the maker's instructions.

2. Repeat this with the side windows.

QUICK TIP
Warming the windows with a hairdryer will make it easier to bend the sheet around the curve.



3. Bend a 1.5-mm square strip to match the curve of the bottom windows. All the strips on the rear of the gallery will need bending in two directions – to match the window line and also the forward curve of the transom itself.



4. Stain the strip walnut or paint it black, and glue in place with the adhesive used in Step 2. Leave it overhanging the sides of the windows, so it can be cut to length later. Add similar strips along the tops of all three rows of windows.

5. Bend and stain three strips of 2-mm square wood and fix them as shown. The top strip can be glued with normal wood glue, but the other two must be glued with clear glue. If you need to pin the strips, place the pins close to the edge of the windows so that the holes will be covered by the strips in Step 10.

6. Curve and stain two more 2-mm square strips and glue them below the top rows of windows using clear glue. Use some of the baluster castings as spacers to make sure the gap between the strips is correct.

7. Make vertical frames between the lower two rows of windows using 1 x 4-mm strip, stained or painted.

8. Use 1 x 3-mm strip to add vertical frames to the top row of windows.

9. Use a steel ruler to cut the excess length of framing from the windows. Use several light cuts, as heavy pressure is likely to crack the gallery. You should also cut through the yellow sheet and carefully peel off the excess.

10. Fit two 1.5-mm square strips down the sides of the window frames. These can be glued with normal wood glue.

11. Stain and fit a 1 x 3-mm strip of wood the full width of the transom, at the bottom of the gallery windows. This will need pinning while the glue dries.

12. Paint the rest of the transom with French Blue paint. If you are painting your model, paint it black.

13. Fit four 1.5-mm square strips of wood to the side windows. Angle the front ends of the strips to fit against the hull planks. Leave the rear ends over-length to be cut back later.

14. Add three 2-mm square strips above the windows in a similar way to Step 6. Leave them over-length and chamfer the front ends to fit the hull as before.

15. Add two 2-mm square strips using baluster castings as spacers, and chamfering the front ends as before.

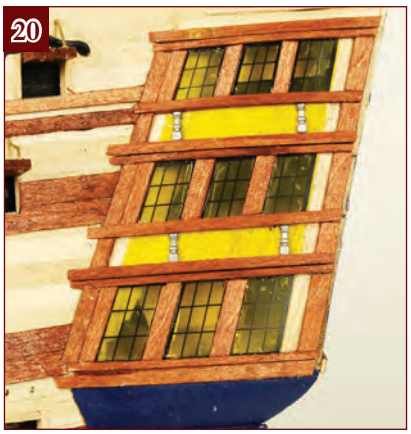
16. Cut back the rear ends of the frames as shown.

17. Add a 1 x 3-mm strip along the bottom of the gallery. Then add strips of 1 x 3-mm and 1 x 4-mm wood to make the vertical sections of the frames in a similar way to Steps 7 and 8.

18. Use 1 x 3-mm strips to make the forward window frames.

QUICK TIP
You can use 1 x 4-mm strips if 1 x 3-mm strips do not fill the gap fully.

19. Add 1 x 3-mm strips to trim the front edge of the gallery. You will need to cut back the ends of the wales so the trim strip sits against the planks neatly.



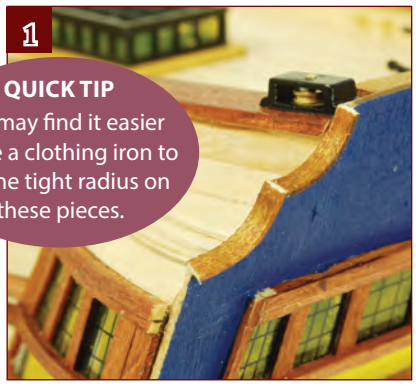
20. Add 1 x 4-mm strips along the rear edge of the gallery.

21. Fill in the gap between the aft windows and the aft strip with 1 x 4-mm strips. You can use 1 x 3-mm strips if they fit your model better.

Finishing off the transom

Edge the transom with a wooden strip, then touch up the paintwork and stain.

QUICK TIP
You may find it easier to use a clothing iron to get the tight radius on these pieces.



1. Bend two short strips of 1 x 3-mm wood. Stain them walnut or paint them black, then glue in place with one edge flush with the front face of the transom. Sand the ends flush to fit the adjacent strips. Repeat this on the other side.

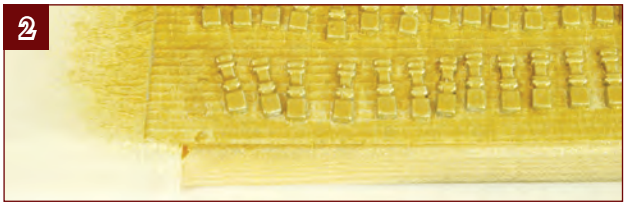
2. Fit strips of stained or painted 1 x 3-mm wood to trim the top and sides of the transom. Touch in any bare ends with stain or paint as appropriate.

3. The tops of the gallery are covered with sheet lead on the original ship, which you could simulate with lead foil. However, we have chosen to represent them with French Blue on the wood-finish model and black paint for the painted version.

Fitting the balusters

The metal castings supplied are sufficient for all the stern gallery balusters with some to spare.

1. Paint thin coats of your clear glue over the yellow strips between the windows, to help the paint adhere. Allow it to dry thoroughly. Then paint with black paint and allow it to dry.



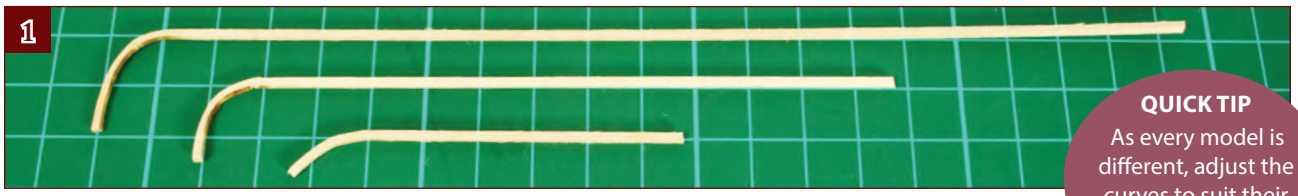
2. Fix some masking tape to a scrap of wood, sticky side up, to hold the balusters in place and make it easy to paint them. Spray them with an automotive primer, then paint them gold. Only apply very thin coats, to avoid leaving a lip of paint around the edges of the parts when you remove them.

3. Glue rows of 13 and 14 balusters along both sides, leaving even gaps between them. You can either use superglue, or paint a thin coat of clear glue on the strip and simply place the balusters on top. Glue only five or six pillars at a time.

4. Glue rows of 36 and 39 balusters across the stern, using a similar technique to Step 3.

Adding the stern mouldings

Apply a series of scrolled mouldings down the outside of the bulwarks around the poop deck.



1. Bend three strips of 1.5-mm square wood for each side, checking the curves against your model and using the photos below as a guide. Leave them over-length at this stage. Stain them to match the existing wales, or leave bare if you are painting your model, as they can be finished with the hull at the end.

QUICK TIP
As every model is different, adjust the curves to suit their position on your model.

2. Fit the longest moulding as shown.

3. Fit the other two mouldings forward of it.

QUICK TIP
Press in toward the hull to avoid breaking the strips.

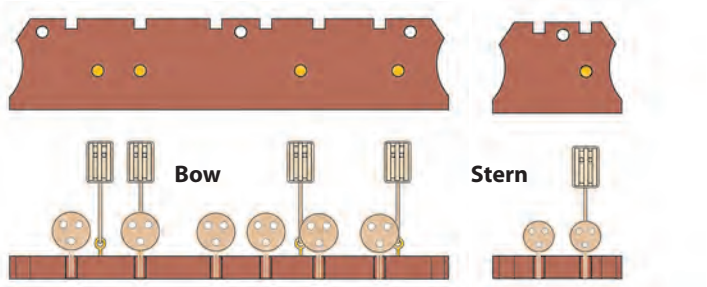
4. Cut the moulding away where it crosses the two gun ports.

If you are painting your model, paint the hull above the channel wale black along the entire length of the ship. Do not paint the wale itself as you need to glue the chainwales to it. If you are staining your model, you have the option to protect the bare wood with clear varnish. Again, do not finish the channel moulding.

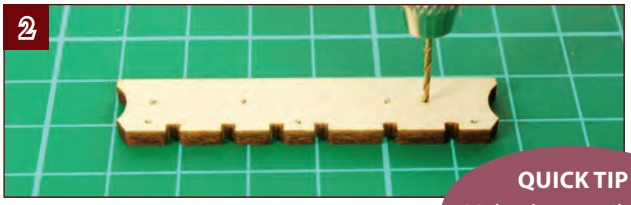
Preparing the mizzen chainwales

Assemble the parts supplied with Stage 82 now, although they are not fitted until later. The job is similar to the previous chainwales in Stage 75. Refer back to that stage for more details of the techniques used.

1. Try the chainwales in position against the model. The slots should roughly align with the sides of the gun ports above and below the chainwale. Sand the inside edge of the chainwale so that it sits flat against the channel moulding.

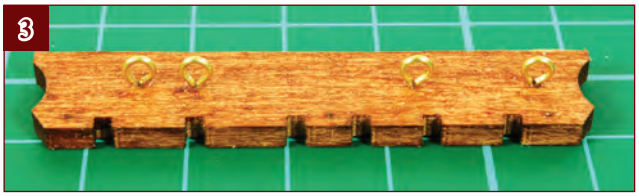


These plans show the starboard chainwales. Mark up the port side as a mirror image, placing the parts back-to-back.

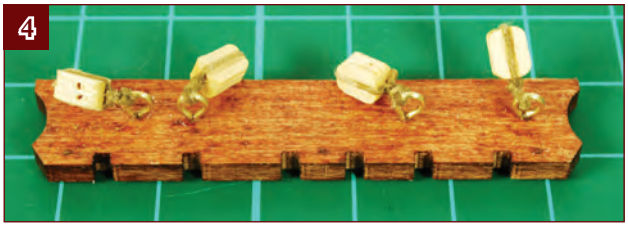


2. Mark holes using the drawings above, and drill them with a 0.7-mm drill.

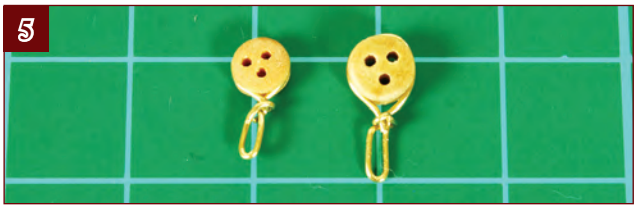
QUICK TIP
Make the pencil marks on the bottom.



3. Stain the parts to match the existing chainwales. Then glue the brass eyebolts in place.



4. Tie double blocks to the eyebolts.



5. Prepare the deadeyes using the same technique described in Stage 75. You will need a total of 12 large and 4 small deadeyes.

6. Glue the deadeyes in place with superglue. The large chainwale has 6 large deadeyes.

7. Glue a 1 x 3-mm strip across the front of the chainwale.

8. Stain the front strip using a small brush.

9. Construct the small chainwale in a similar way, using two of the small deadeyes. Then prepare the other large and small mizzen chainwales as mirror images of the first ones.

10. Paint the wooden parts black, rather than staining them, if you are painting your model.

Stage 84: Quarterdeck detailing

This stage includes components to add to the quarterdeck, including ladders, gratings and deck fittings.

Wooden strips

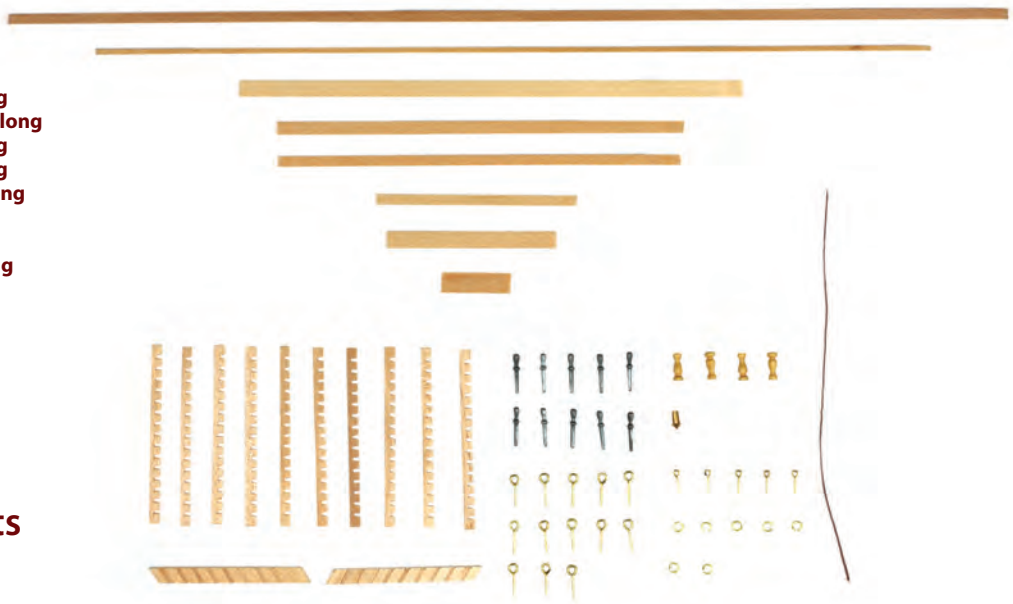
1 wooden strip 2 x 3 mm, 300 mm long
1 wooden strip 1.5 x 1.5 mm, 250 mm long
1 wooden strip 1 x 5 mm, 150 mm long
1 wooden strip 1 x 4 mm, 120 mm long
1 wooden strip 1.5 x 3 mm, 120 mm long
1 wooden strip 3 x 3 mm, 60 mm long
1 wooden strip 5 x 5 mm, 50 mm long
1 wooden strip 1.5 x 6 mm, 20 mm long

Fittings

100-mm cotton thread
10 belaying pins
13 eyebolts
5 small eyebolts
7 brass rings
1 chimney for binnacle

Shaped wooden parts

10 grating strips
2 ladder sides
4 pillars

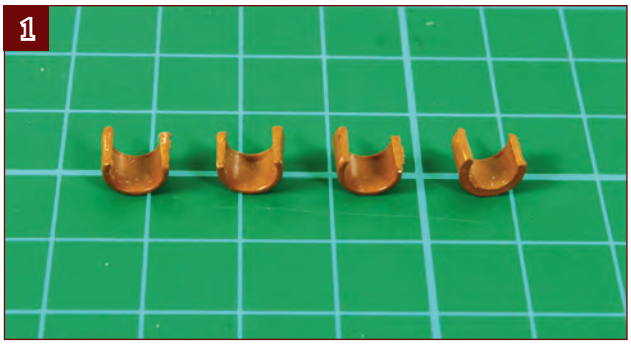


Where the parts fit

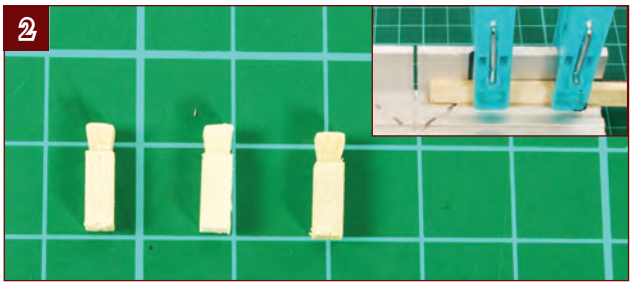
The parts supplied are all used to make deck fittings. Before you start to add these, it's time to complete the rails around the forecastle bulwarks and add the six guns fitted to the open gun ports around the rear of the quarterdeck. The parts for these were all supplied with earlier stages: Stage 60 for the parts used on the forecastle, and Stages 73, 76 and 82 for the tackle used to rig the quarterdeck guns. Once you have completed all these assemblies, you can start to fit out the quarterdeck, beginning with the companionway ladder that fills the opening between the mainmast and the stern cabins.

Adding the forecastle timber heads

The rows of timber heads that project upward from the bulwarks through the fiferails around the forecastle are made from parts supplied in Stage 60.

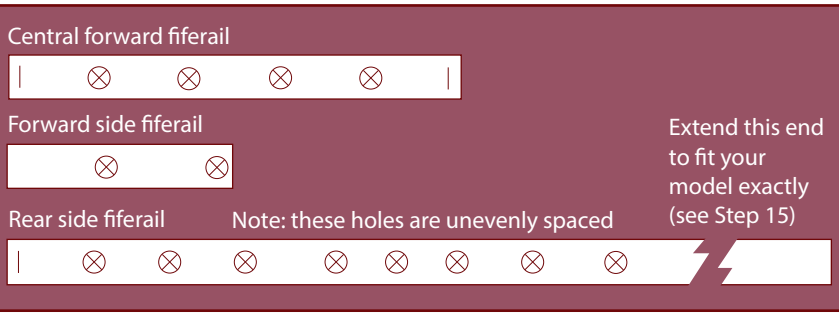


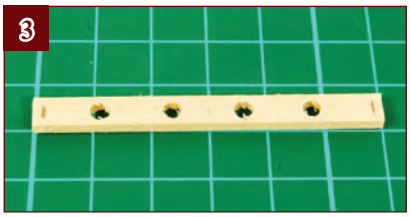
1. Take the four semicircular castings, paint them with a metal primer and paint them brown to match the walnut wood stain, or black for the painted version.



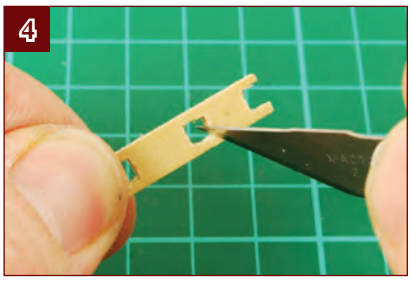
2. Construct 34 timber heads from 3 x 3-mm wood. Each of them should be 10 mm long with a 3-mm tapered top section. You can make a jig from a mitre block with a wooden stop clamped in it (as used in Stage 79) to ensure the posts are all cut to the same length, and to make the tapered tops uniform.

CUTTING AND DRILLING PLANS
The plans on the right show how long to make each section of the fiferails and where to drill holes for the timber heads. Note the broken line in the rail at the bottom. Extend this end so that it stops 5 mm short of the bulwark cap on your model (as in Step 15), rather than basing its length on the plan.

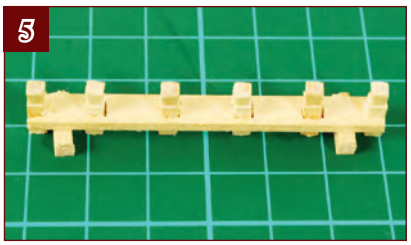




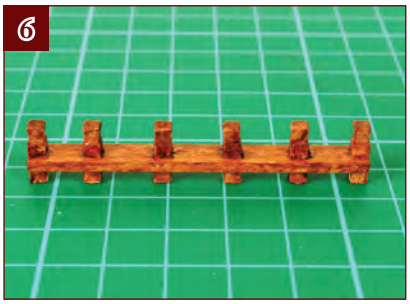
3. Cut 60 mm from a 2 x 6-mm strip to form the central forward fiferail. Mark and drill 3-mm holes using the plan above. It is difficult drilling close to the end of the wood, so it will be easier to make the end holes in the next step.



4. Use a sharp, pointed knife to form the round holes into squares. Cut square notches in the ends. Try the 3-mm timber heads in the holes to make sure they fit.

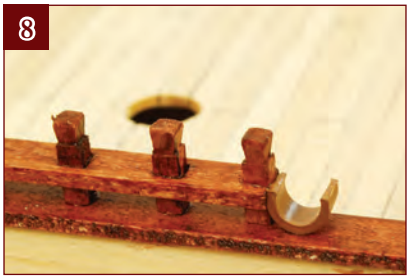


5. Rest the fiferail on two offcuts of 3-mm wood to ensure that it is at the right height. Glue six posts in position, being careful not to stick the temporary spacers to the fiferail by mistake.



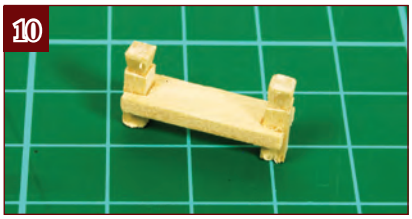
6. Stain the assembly walnut to match the bulwark caps.

7. Glue this in place centrally on the forward bulwark, using superglue. The rear edge of the fiferail should be in line with the rear edge of the bulwark cap.

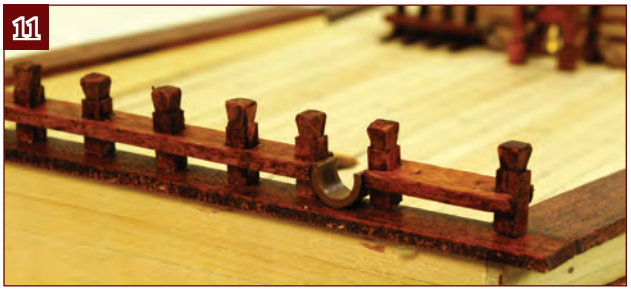


8. Glue a metal casting on either side of the central fiferail, using superglue.

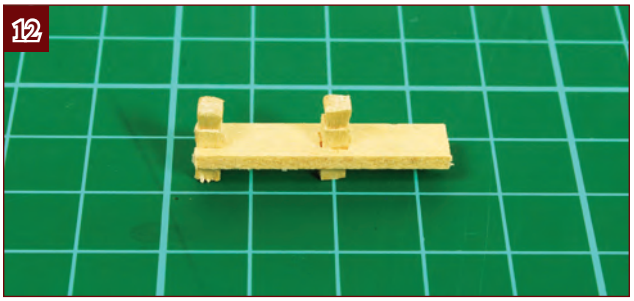
9. Cut a strip of 2 x 6-mm wood so it fits as shown, leaving a 6-mm gap between the end of the wood and the outer side of the bulwark cap.



10. Cut a 3-mm notch in each end and glue two posts in place. Use the 3-mm temporary spacers to make sure the fiferail is at the same height as before.

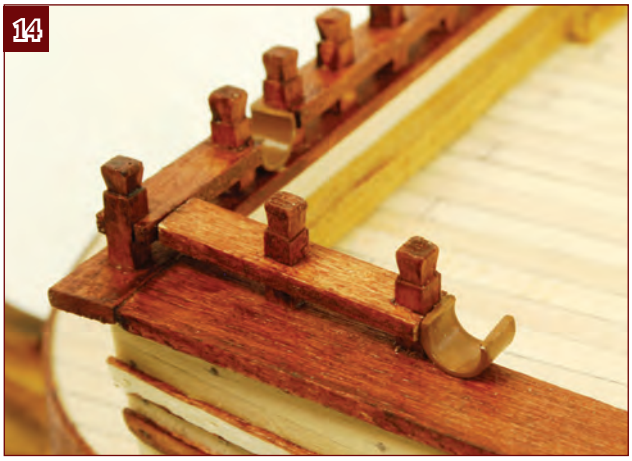


11. Stain this part and glue it in place. Then repeat Steps 9 to 11 to make a similar piece for the other side of the model.



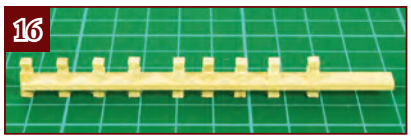
12. Use the plans to measure two forward side fiferails. Glue two timber heads in each rail, using the spacers as before.

13. Try these short rails in position. You will have to trim the front end to a slight angle so it fits against the forward beam. When you are satisfied with the fit, stain the parts and glue them in position, fixing the timber heads as close to the edge of the bulwark as possible.

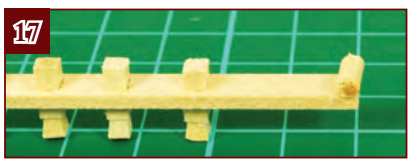


14. Glue the semicircular castings at the end of these rails.

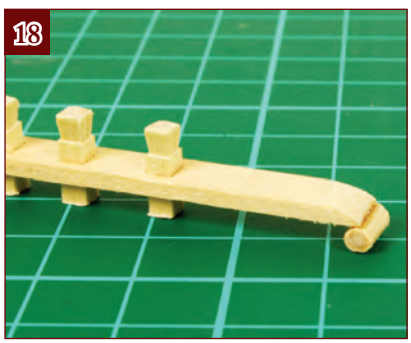
15. Take a 2 x 6-mm strip and fit it against the metal casting, running along the bulwark. Measure its length against the model and make a mark so you can cut the rear side rail to finish 5 mm short of the end of the bulwark cap.



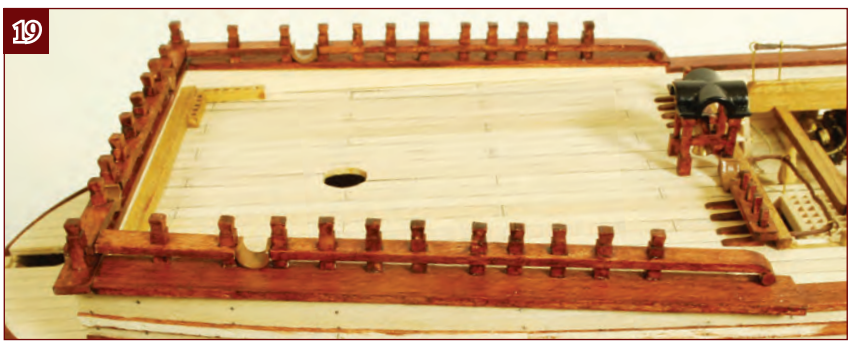
16. Mark the position of the nine timber heads using the plans, drill and cut the holes and fit the posts using spacers.



17. Cut a 6-mm length of 3-mm diameter dowel. Turn the assembly upside down and glue the dowel as close to the end of the beam as possible.



18. Allow the glue to dry thoroughly. Then turn the assembly back the right way up, and sand the end of the fiferail so that it blends into the dowel.

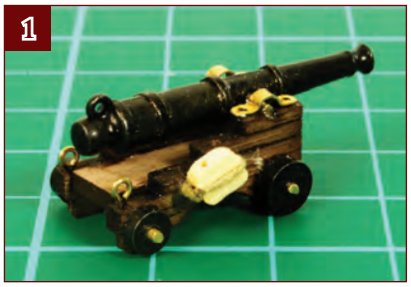


19. Stain the assembly and glue it in position. Then repeat Steps 15 to 19 to make a second fiferail for the other side of the model. (Measure each side individually in case your bulwark caps are slightly different lengths.) Keep the two remaining timber heads, as you will need them later.

If you are painting your model, paint the parts black rather than stain them.

Rigging the deck guns

You will need the six deck guns that were provided in previous stages, plus the parts of the gun tackle that were provided in Stages 73, 76 and 82.

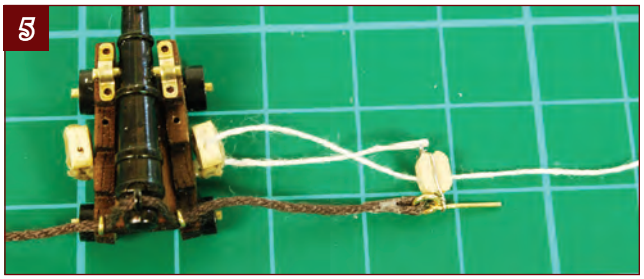


1. If you haven't already done so, rig six guns as shown in Stage 49, Preparing the Gun Tackle, Steps 1-6.

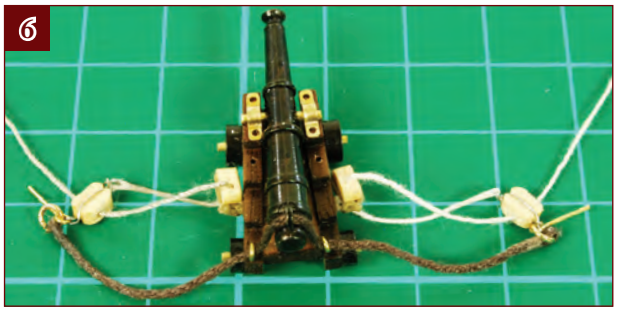
2. Rig a block and eyebolt as in Stage 49, Steps 7-12. Take about 100 mm of thin cream thread, pass 5 mm of the end through the rigging wire and glue it back on itself. Rub a little glue into the free end to stiffen it. Make 12 sets.

3. Thread a brass ring onto 85 mm of the brown thread. Fold 5 mm over and glue it to itself. Again, rub a little glue into the free end to stiffen it.

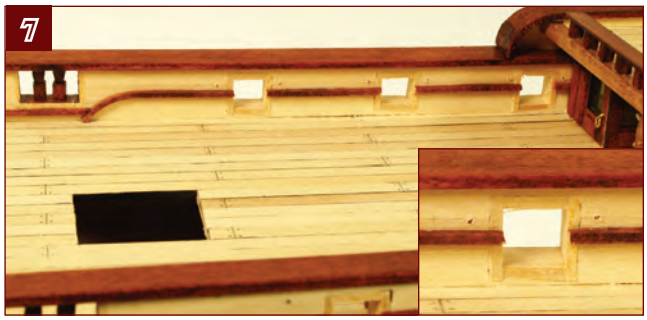
4. Twist the ring to open it. Link the brass eyebolt onto it and close the ring again.



5. Pass the brown thread through the eyes at the back of the carriage and the thimble of the gun. Loosely pass the cream thread upward through the block on the side of the carriage and back through the block attached to the thread.



6. Add another brass ring to the brown thread to make the breech rope, then repeat Steps 4 and 5 to complete the gun tackle. You need to rig six guns in total.

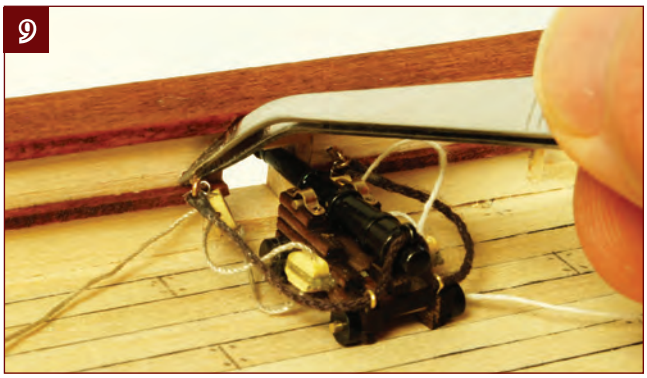


7. Drill two holes on either side of each gun port. (The hole nearest the cabin bulkhead will have to be drilled at an angle.) Each hole should be 5 to 6 mm deep, so wrap a bit of tape around the drill bit to act as a depth gauge.

8. Apply a tiny drop of superglue to one of the brass eyebolts and insert it into the appropriate hole in the bulwarks.

EXPERT TIP

Steps 8-13 show a forward gun for clarity, but start with the gun nearest the cabin, or the others will get in the way. You will only be able to insert one pin at Steps 11-12, and you may wish to omit this gun's rigging, as it is quite tricky to fit. This gun has a ladder over it, so the rigging will not be conspicuous.

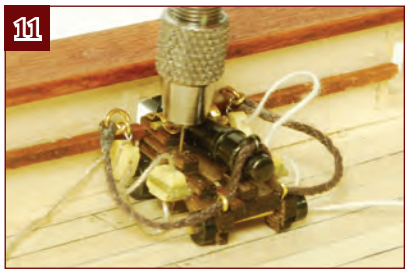


9. Glue the second eye into the other hole in the bulwarks.

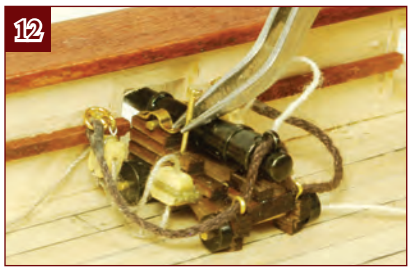
QUICK TIP

If your guns are a little high, you can lower the barrel by making the slot in the top of the carriage slightly deeper.

10. Carefully lift the gun with tweezers and apply a drop of superglue to the wheels with a cocktail stick. Place the gun in its correct position, so the barrel protrudes by about 2 mm. You will have to fit it very close to the bulwarks to achieve this.



11. Drill 0.5-mm pilot holes through both holes in the carriage and into the deck. This will prevent the deck planks from splintering in the next step.



12. Insert a pin though both holes in the carriage and push them into the deck. Drill out the holes in the carriage if the pins do not slide through easily.

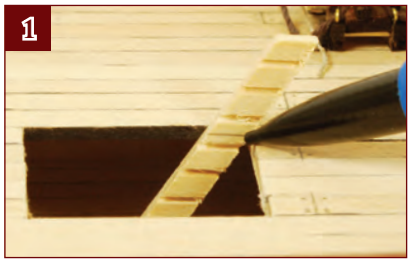
QUICK TIP
Apply a tiny drop of superglue to the brass rings if they will not stay in the right position.

Your completed assembly should look like this.

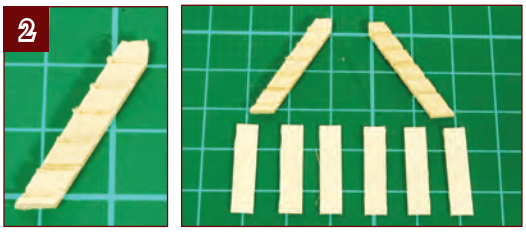
13. Tighten up the tackle and cut the tails to length.

Adding the companionway ladder

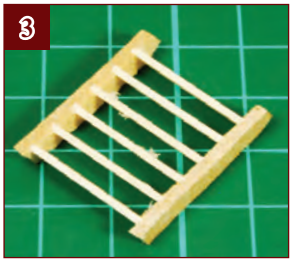
***Victory*'s companionway is dark wood, so the finish is the same for both natural and painted versions.**



1. Take one ladder side and hold it in place in the opening so that the slots for the steps are level. Mark the top of the ladder for cutting flush with the deck.



2. Cut the wood here, but use this end as the **bottom** of the ladder, so the top has a full-height step. Trim the back corner above this step so the ladder can rest against the deck. Make the other side a mirror image, and cut six 21-mm wide steps from 1 x 5-mm wood.



3. Assemble the ladder, making sure it is square, and allow the glue to dry thoroughly.

4. Glue the ladder in place.

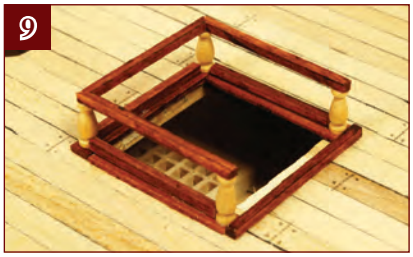
5. Cut two pieces of 1 x 4-mm strip just shorter than the sides of the opening. Stain them walnut, and fit them so they overhang the opening by about 1 mm.

6. Glue a 1 x 4-mm strip across the front of the opening, and a 1.5-mm square strip across the rear of the opening.

QUICK TIP
Sand the ends of the pillars to leave a flat surface.

7. Glue the four pillars at the corners of the opening. Leave them unstained for the natural wood finish, but stain them walnut for the painted version.

8. Fit 1.5-mm square strips between the pillars on the sides without the ladder.



9. Glue 1.5-mm square strips on top of the pillars to finish the companionway. Mitre the corners to make a neat join.

Stage 85: Building the poop deck ladders and beakhead bulkhead

This stage includes components to add to the bow, including the roundhouses and decorations on the beakhead, the heads and parts of the beakhead framework.

Wooden strips

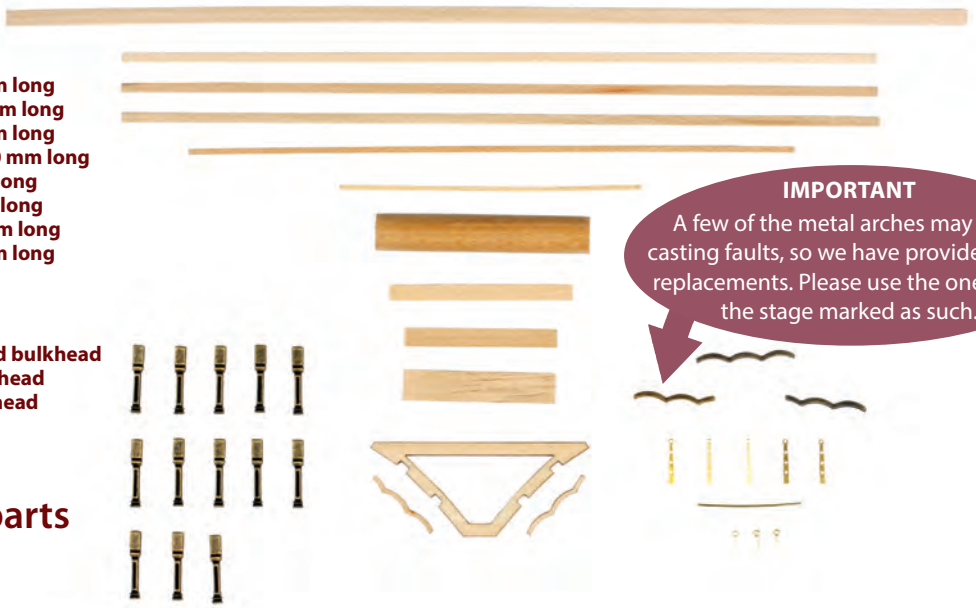
1 wooden strip 2 x 5 mm, 320 mm long
3 wooden strips 2 x 3 mm, 250 mm long
1 wooden strip 2 x 2 mm, 200 mm long
1 wooden strip 1.5 x 1.5 mm, 100 mm long
1 wooden dowel 12 mm, 70 mm long
1 wooden strip 5 x 5 mm, 60 mm long
1 wooden strip 1.5 x 6 mm, 50 mm long
1 wooden strip 2 x 10 mm, 50 mm long

Fittings

13 pilaster columns for beakhead bulkhead
1 central arch for beakhead bulkhead
2 side arches for beakhead bulkhead
5 bow port hinges
3 small eyebolts

Shaped wooden parts

2 roundhouse arches
1 beakhead frame



IMPORTANT
A few of the metal arches may have casting faults, so we have provided extra replacements. Please use the ones from the stage marked as such.

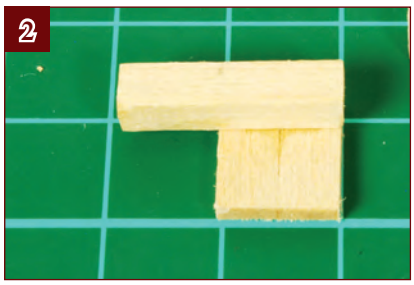
Where the parts fit

The parts supplied with this stage are all used to trim the forward end of the ship, by finishing off the beakhead bulkhead and starting to make the framework of the beakhead itself. The parts include the two roundhouses and the decorative colonnade of arches and pilasters (dummy pillars) that run along the back of the bow deck. Before you start to fit these parts, it's time to add some more fittings to complete *Victory*'s upper decks, by making the two ladders that lead from the quarterdeck up to the poop deck, and adding the handrails. Parts to make these were supplied in Stages 82 and 83.

Fitting the poop deck ladders

Parts to make the poop deck ladders were supplied in Stages 82 and 83. The following steps show only the starboard (right) side, but repeat the instructions as a mirror image to construct both ladders.

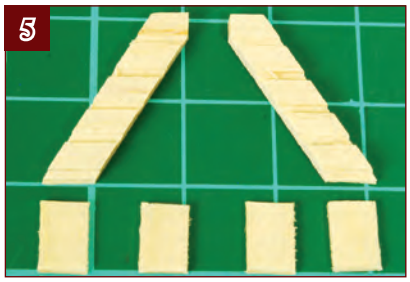
1. Take the 20-mm-long 4 x 4-mm strip of wood, and hold it in place against the bulwark. Trim as necessary so that 12 mm protrudes beyond the bulkwark cap.



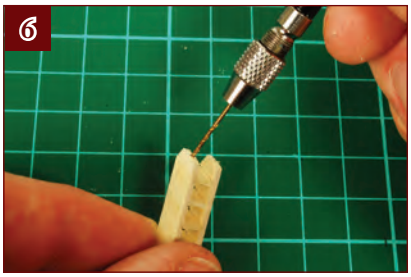
2. Cut two 10-mm lengths of 2 x 5-mm wood. Glue them together side by side, then glue the 4 x 4-mm strip on top, flush with the edge.

3. Stain the platform dark oak, or paint it black if you are building the painted version. Glue it in place straight and level with the 4 x 4-mm strip overlapping the bottom 1 mm of the poop deck front beam. Use superglue for this, as you are gluing stained or painted surfaces.

4. Put a ladder side in position, mark the height to the top of the platform and cut it to length. As in Stage 84, the cut end becomes the bottom of the ladder, so there is a full height step at the top.



5. Cut a second ladder to match the first, and cut the top back corners square. Cut four matching steps 7 mm long from 1 x 5-mm wood.



6. Assemble the ladder. When the glue is dry, drill 1-mm holes in the top. Drill them parallel to the back corner you cut off, to a depth of about 5 mm.

7. Glue the ladder to the deck and the edge of the platform.

8. Drill two 1-mm holes in the deck, 2 mm from the base of the ladder sides.

9. Superglue four brass stanchions in place, with the holes in them all facing forward so you can fit the handrails.

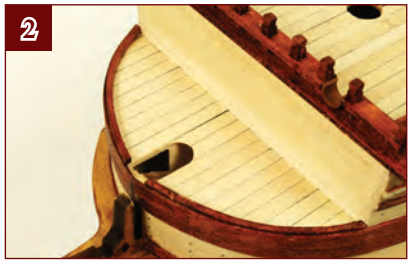
10. Hold the brass wire against the stanchions and bend it to shape.

11. Once the shape is correct, thread the wire through the holes in the stanchions and fix it with superglue. Bend the inboard wire to land on the poop deck rail, cut it to length and glue it in place. The outboard wire will be glued to the hammock net brackets, so leave it overlength for now and just tuck it under the bulwark cap, so it doesn't catch on anything.

Making the roundhouses

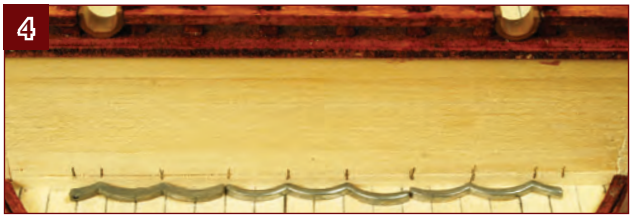
Make the roundhouses for the beakhead bulkhead using the parts supplied with this stage.

1. Cut and bend two 2 x 2-mm strips to match the curve of the bow.

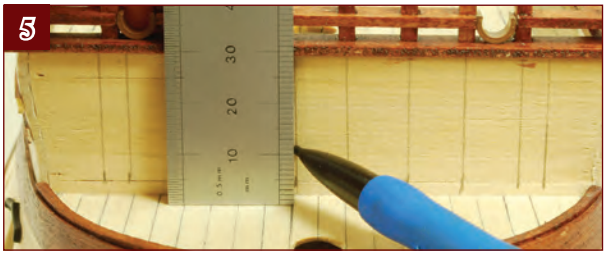


2. Stain or paint these parts and glue them tight against the lip of the bulwark.

3. If you are painting your model, protect the bow deck with masking tape and paint the bulkhead French Blue. Omit this step for a natural-finish model.



4. Lay the three arch castings on the deck, ensuring they are central. Mark where the points of the arches and the end of the castings fall on the bulkhead.



5. Extend vertical lines from these points using a ruler and pencil lines. Keep the lines very light.

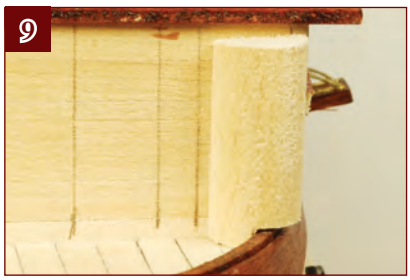
6. Cut a 30-mm length of the 12-mm dowel, and saw the dowel in half along its length.

EXPERT TIP
Use this centre finder to mark the dowel, and use a razor saw and mitre block to keep the cut square.

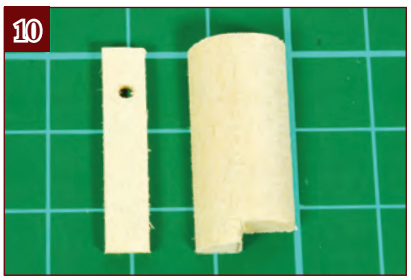
7. Place one half dowel on the bow, flush with the side of the hull. Mark where the dowel rests on the strip placed in Step 2.

QUICK TIP
Cross-hatch the area to be cut away to avoid cutting the wrong section.

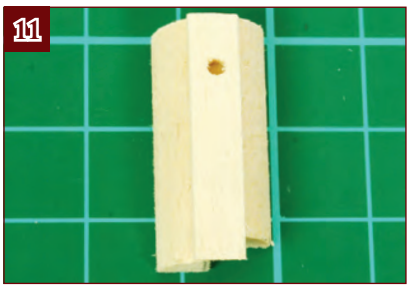
8. Saw off a 2-mm strip up to the mark just made, so that the dowel can fit right down flat on the deck.



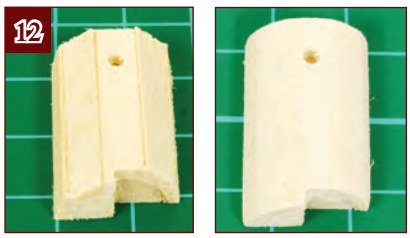
9. Trim the dowel if necessary, to leave a 2-mm gap between the dowel and the bulwark cap.



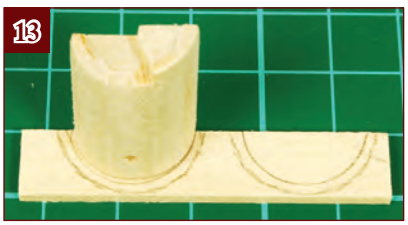
10. Cut a strip of 2 x 5-mm wood the same length as the dowel, and drill a central 2-mm hole, 6 mm from the top.



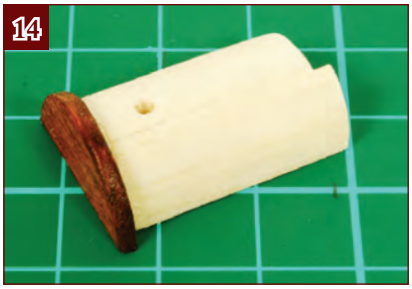
11. Glue the strip down the middle of the dowel, then trim the base flush.



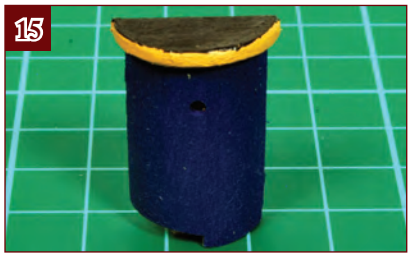
12. Continue to plank the dowel with 2 x 5-mm wood. You will need to chamfer the edges of the strips to get a neat join. Then sand the roundhouse smooth.



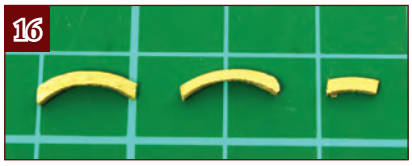
13. Place the assembly on the 2 x 10-mm strip of wood and draw an arc about 1 mm larger to make a roof that overhangs by this amount.



14. Cut the roof, sand the edges smooth and stain it walnut. Then glue it in place.

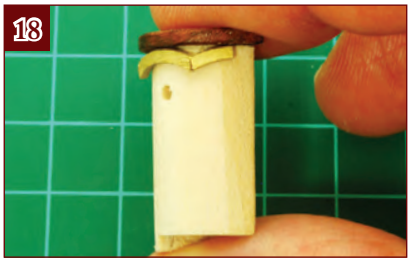


15. If you are painting the model, paint the roof black, with yellow ochre edges. Paint the roundhouses French Blue.



16. Cut the wooden arches into individual sections. Bend them backward to match the curve of the roundhouse as far as possible. Then paint them gold for the natural finish or yellow ochre for the painted finish.

17. Glue the centre arch centrally over the porthole.



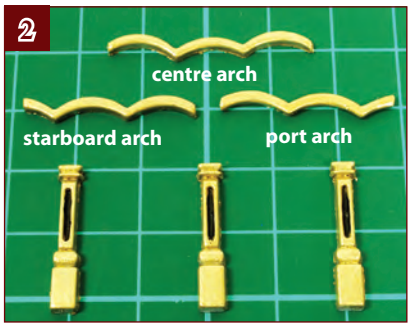
18. Add the half-arch section to the outboard side of the roundhouse.

19. Add the full arch to the inboard side. Sand any excess off flush with the back of the dowel. Repeat Steps 6-19 to make the other roundhouse as a mirror image.

Finishing the beakhead bulkhead

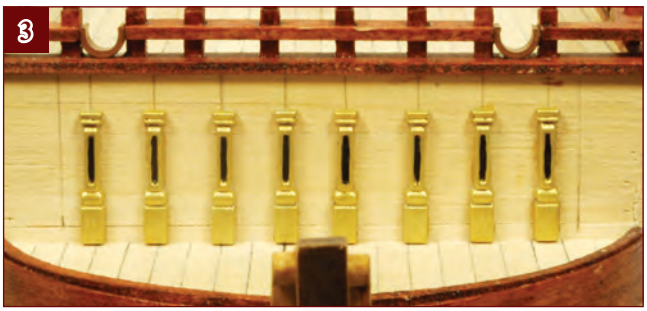
Add the decorative pilasters and arches to the bulkhead using the parts supplied with this stage.

1. The three triple-arch castings provided are identical. As you will see from Steps 2 and 10, the port and starboard sides end with half an arch, so use side cutters to cut the **opposite ends** off two of the castings.



2. Paint the arch castings gold (yellow ochre for the painted model). Prime with a metal spray primer as usual, before painting them in colour. The pilasters already have an antique brass surface, and can be used as they are. For added detail, you can paint them gold or yellow, and carefully fill in the recesses with black.

QUICK TIP
Sand the backs of all the castings to prep the surface for a stronger glue joint.



3. Glue eight of the pillars in place using the pencil lines as a guide. Use superglue for this.

4. Sand off any visible pencil lines remaining. A nail file (emery board) cut to size is ideal, or you can just scrape the pencil lines off with a sharp knife blade. Simply touch over any pencil lines with blue paint for the painted version.

5. Draw pencil lines for the shutters and doors, positioned as shown, using a 5-mm wide plank as a guide. Note that the bottom of the door is a couple of millimetres above the deck.

6. Cut the hinges to length and glue them in place. Drill 0.7-mm holes for the eyebolts that represent the handles.

7. Glue the roundhouses in place, overhanging so that the outboard edge is flush with the channel wale.

8. Glue a pilaster to each roundhouse as shown. Keep the remaining pilasters as they will be fitted later.

9. Glue the central arches on top of the four central pilasters, using superglue.

10. Add the left and right cast arches. You may need to trim the outboard ends with a file to make them fit.

Starting the beakhead

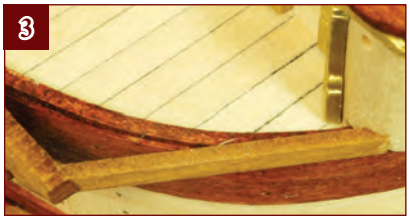
You will need the parts from this stage to start assembling the network of thin rails around the stem.

1. Take the triangular beakhead frame and stain it dark oak or paint it black. Slide it down the slot in the stem, gently using a thin steel rule or similar to shoe-horn it past the wale at the top.

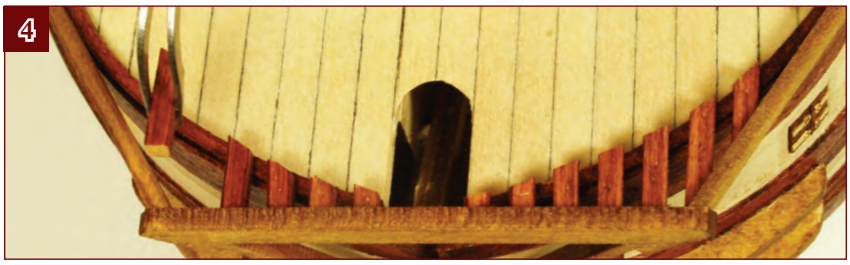
EXPERT TIP

The upper part of the slot in the stem should have enough spring to carry out Step 1 without breaking off, so long as you do not apply undue force. If you are unlucky and the wood does snap, do not worry, as it will be a clean break. Apply a thin coat of glue and push the part carefully back into place for an invisible repair.

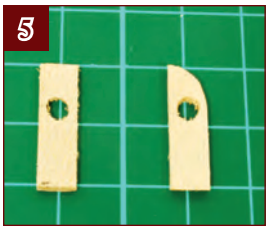
2. Glue the frame into the base of the slot, making sure that it is straight and square in all planes: front, side and top.



3. Cut two lengths of 2 x 3-mm wood to fit from the roundhouses to the ends of the bracket as shown. The rear ends sit on the ledge created by the strips added in Step 2 of the Making the Roundhouses section of this stage. Stain them dark oak or paint them black and glue in place.

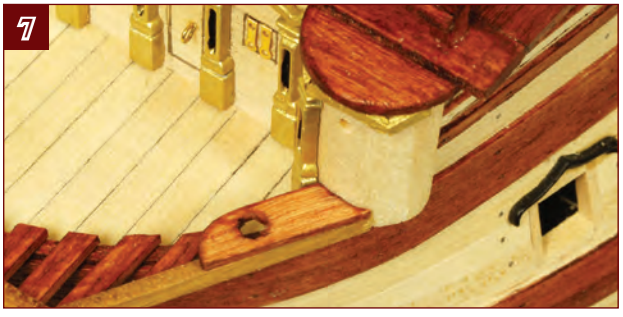


4. Finish the length of 2 x 3-mm wood with walnut stain or black paint. Starting either side of the bowsprit socket, cut strips so that the front end butts up against the bracket, and shape the rear end to fit on top of the strips fitted in Step 2 of the Making the Roundhouses section. Make the strips 3-mm wide, and leave a 2-mm gap between them (use a 2-mm wide plank to gauge the gap). Glue them in place with superglue.



5. Make two heads (toilet seats) from 20-mm lengths of the 6 x 1.5-mm wood. Drill a 3-mm hole, 8 mm from one end. Then sand a radius on this end.

6. With the heads fitted on top of the rails added in Step 3, carve the aft ends to a curve to fit around the roundhouses.

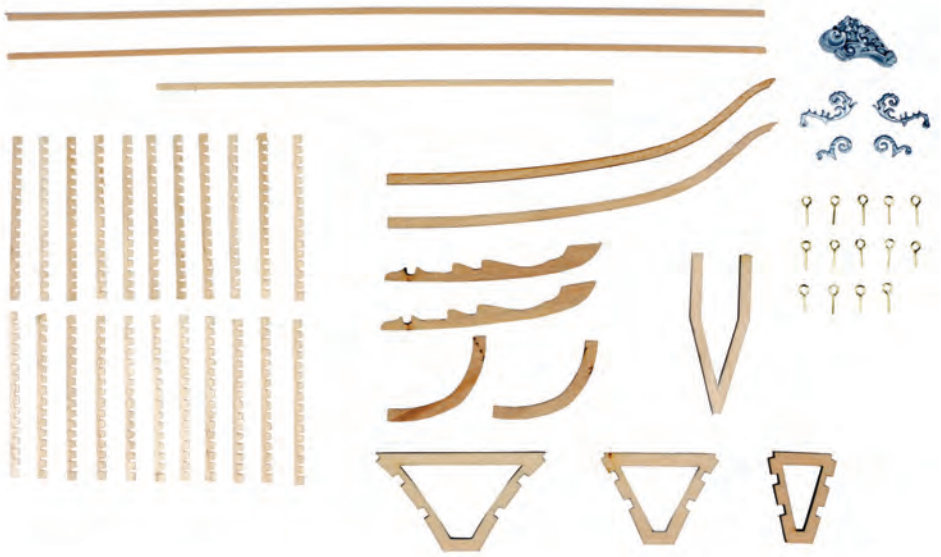


7. Stain the heads walnut or paint them black, then glue them in place using superglue.

8. Using a razor saw, carefully cut away the centre of the beakhead frame where it blocks the bowsprit socket. Touch up the cut ends with stain or paint as appropriate.

Stage 86: Fitting the beakhead frames and grating

This stage includes components to add to the bow, including the beakhead rails and grating, plus decorative trims.



Wooden strips

2 wooden strips 2 x 2 mm, 250 mm long
1 wooden strip 2 x 2 mm, 150 mm long

Shaped wooden parts

22 grating strips
10 parts for beakhead framework

Fittings

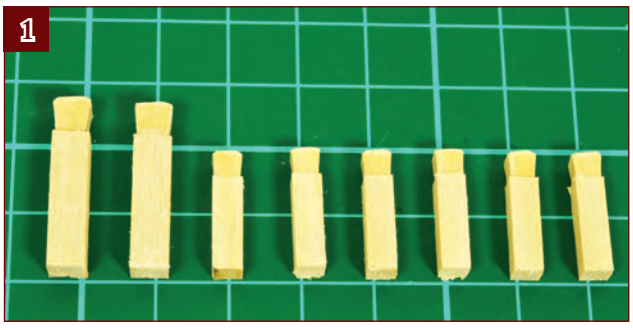
14 eyebolts
2 upper embellishments for stem
2 lower embellishments for stem
1 figurehead support bracket

Where the parts fit

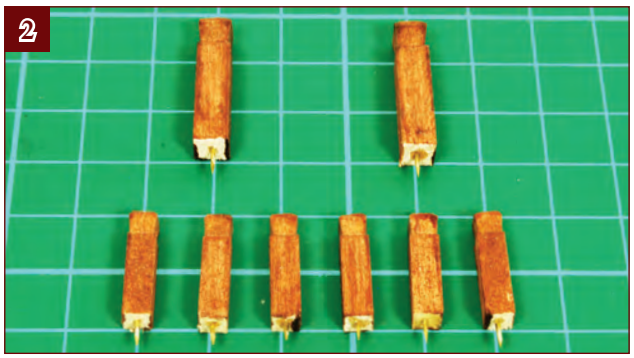
The parts supplied in this stage are all used to trim the bows of the ship. The wooden parts are used to assemble the framework of the beakhead bulkhead and the grating that goes on top. You'll also fit the rigging eyebolts and four of the five decorative trims supplied for the stem. Before you start to fit these parts, it's time to add a few more deck fittings, by making the bitts that are used to hold the rigging on the forecastle and bow deck. Parts to make these were supplied in Stages 60 and 85. You'll also add some small details around the bow bulwarks, using parts provided with Stages 62 and 84.

Fitting the bow bitts

Parts to make the bitts (known as knightheads and kevels) fitted around the forecastle and bow deck were supplied in Stage 60 and Stage 85.

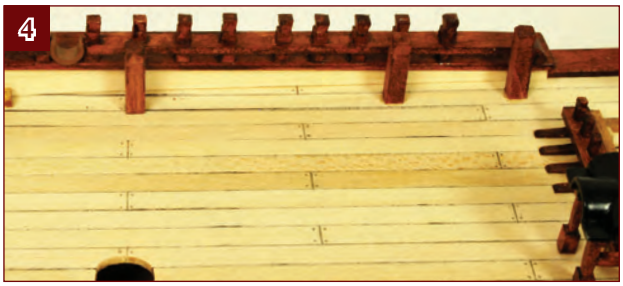


1. Cut two large knightheads from 5 x 5-mm wood, each 28 mm long. The tapered top section should be 5 mm high. Repeat the process to make six smaller kevels 18 mm tall, using 4 x 4-mm wood supplied in Stage 60. The tapered top section is 4 mm tall.



2. Stain the knightheads and kevels walnut, or paint them black. Drill a 0.7-mm hole in the bottom of each one, and superglue in a nail, with the head cut off.

3. Drill two 0.7-mm holes in the bow deck and fit the two knightheads either side of the bowsprit socket as shown. Make sure the gap between them is 10 mm wide so that the bowsprit can fit between them.



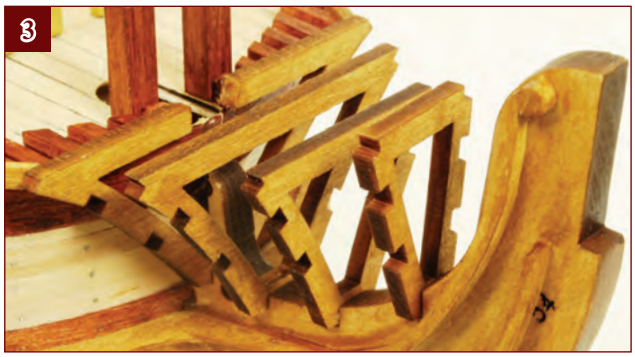
4. Fit the six smaller kevels to the fore deck as shown, butting them close up to the bulwarks. Line up the front two pairs beside the adjacent timberheads, and place the rear kevels in line with the front of the belfry.

Fitting the beakhead frames

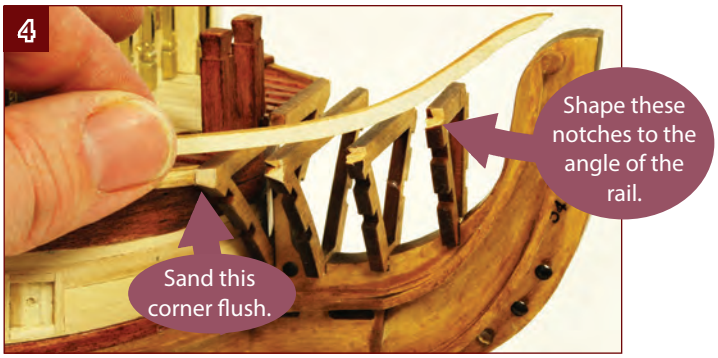
The parts to make the beakhead frames and rails are supplied with this stage.

1. Take the three triangular beakhead frames and try them in position. You may need to sand the bottoms of the frames a little so they slide easily into the slots.

2. Check that the tops of the aft two frames are level with the frame fitted in Stage 85. To adjust the height, sand the bases of the frames or stage them out with scrap wood or thin card stock.

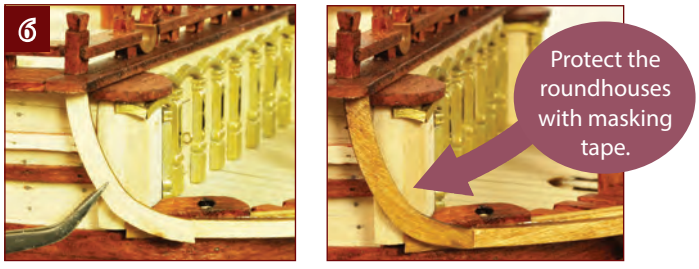


3. Stain the frames dark oak (or black for the painted version) and glue them into the slots, making sure that they remain square and upright.



4. Try the main beakhead rail against the frames and stem to fit as in Step 5. Shape the notches to follow this line, and sand the rearmost frame flush with the strip added in Stage 85.

5. Bend the rail with a plank bender or iron so that it follows the curve of the beakhead. Note how the curved end of the strip sits over the piece of dowel in the top of the stem, and cut the rail to length, so that it finishes just aft of the hole in the head. Glue it in place, then repeat on the other side.

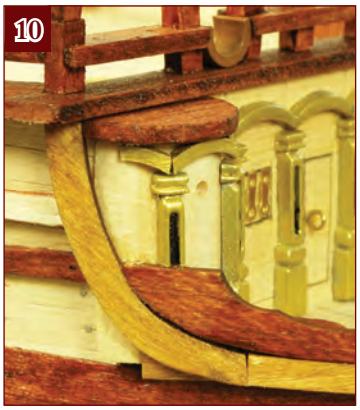


6. Try the curved ends of the beakhead rail in position. They are not symmetrical, so check they are the right way around. The top fits directly below the timberhead, and you need to cut the other end flush with the end of the main rail. Glue the curves in place, then finish the whole rails dark oak or black.

7. Try the boomkin supports in place. Ensure that the front ends are level by sanding the rear curve if necessary. Paint them walnut or black and glue them in place with superglue.

8. Bend some 2 x 2-mm strip to fit in the upper slots in the beakhead frames. Chamfer the ends to fit against the hull and stem. Stain the strip or paint it black and glue it in position.

9. Repeat Step 8 to add strips to the lower slots in the frames and complete all four beakhead supports.



10. Take two pilasters left over from Stage 85. Trim the bases with wire cutters to fit the beakhead side and file the ends smooth. Glue them in place with superglue. (On the real ship, these fit behind the beakhead sides. However, at this scale, they have to be made slightly oversize and then fitted as shown.)

Fitting eyebolts

Fit the rigging eyebolts to the beakhead area now, as access becomes difficult later on.

1. Fit four brass eyebolts to the knightheads as shown. Drill 0.7-mm holes, and cut the shanks of the eyebolts to about 3 mm.

2. Fit an eyebolt to each of the roundhouses, positioned as shown.

3. Fit two eyebolts to the stem.

4. Place the V-shaped gangboard pillar frame in position, and use a ruler to check that it's level with the top of the forward bulwark. You can either sand the bottom a little to reduce the height, or glue a small piece of wood to the bottom to raise it.

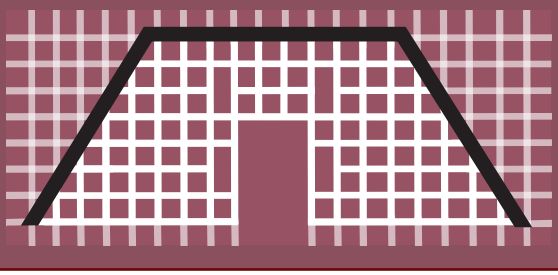
5. Glue the gangboard pillar frame in position using the test dowel (supplied in Stage 41) as a guide to make sure that it is fitted squarely.

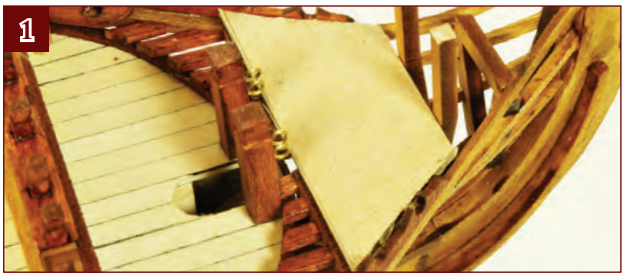
Making the beakhead grating

You will need the parts supplied in this stage.

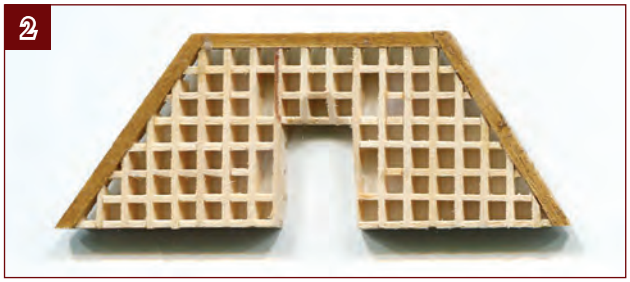
GRATING TEMPLATE

This template is drawn actual size. As noted in Step 1, you may need to adjust the overall dimensions a little to suit your own model.

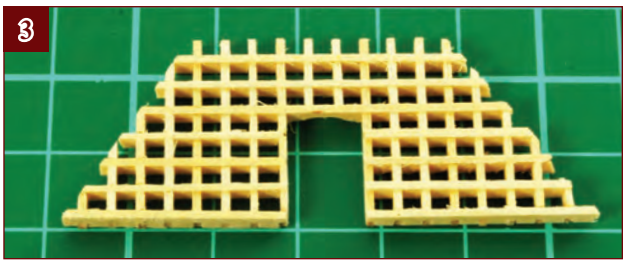




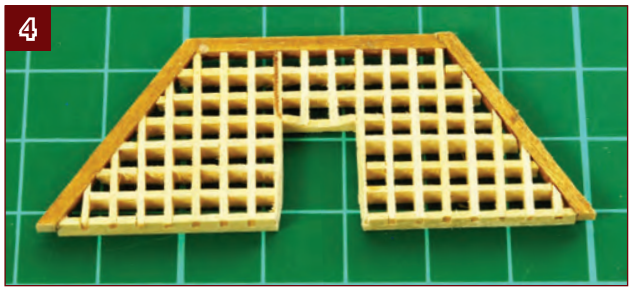
1. Copy the overall shape of the grating onto a piece of card stock to check it fits your model. You may need to make it slightly larger or smaller to fit, leaving a slight gap along both sides. When your card stock fits, place it back on the template and pencil around the edges as a guide to the final size you need to make the grating.



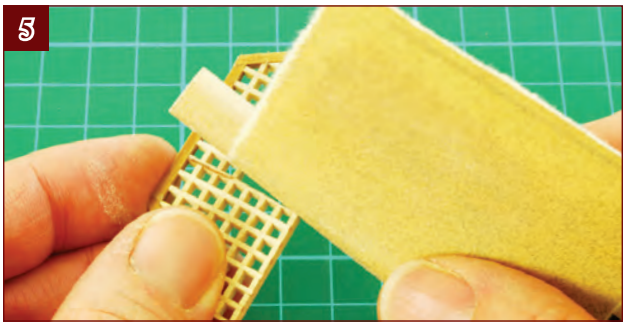
2. The finished grating has 2-mm edgings along the front and sides, while the back edge finishes flush with one of the grating strips.



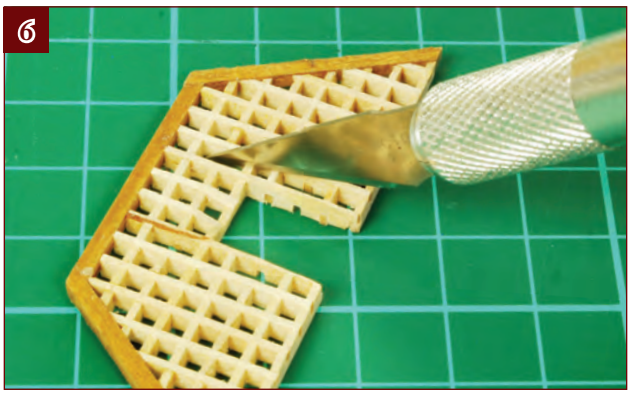
3. Assemble a grating over your modified template, making it slightly wider than needed. Then sand it to its exact width (allowing for the edging strips) using very fine sandpaper.



4. Stain some 2 x 2-mm wood dark oak, and use it to make the edgings. As the grating is slightly thicker than 2 mm, make sure that the frame ends flush with the top of the grating.



5. Wrap some fine sandpaper round the test dowel and sand the slot so that the bowsprit will fit in it (as shown below).

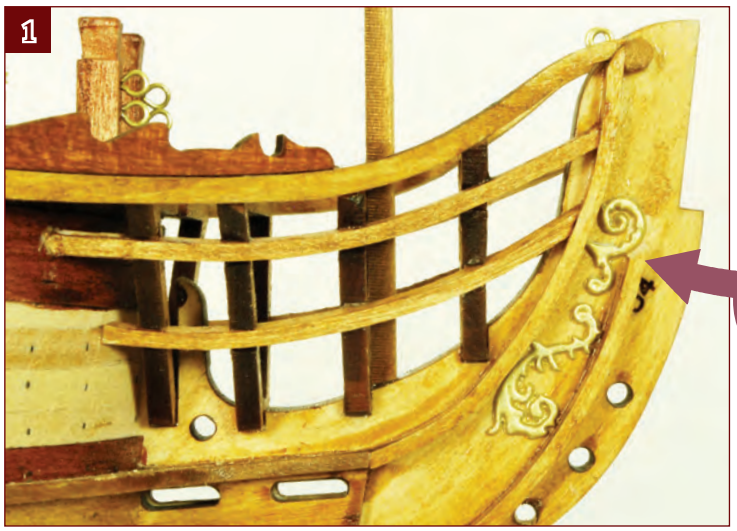


6. Use a very sharp blade to cut away four small sections of grating to make the small slots shown on the template.

7. The grating fits under the bowsprit like this. Use the test dowel to make sure you have sanded enough to clear the bowsprit comfortably. Do not glue the grating in place at this stage, as you will fit it at the same time as the bowsprit.

Fitting the stem decorations

Finish off the stem by adding the four small decorative scrolls. The largest decorative casting is used to support the figurehead, and will be added when the figurehead is fitted, at a later point.



1. Paint the decorations gold for the natural finish, or yellow ochre for the painted model. Glue the scrolls to the stem in the positions shown, using superglue. The top of the smaller decoration should be approximately in line with the step in the stem post. You may need to cut back the vertical wooden strip to get it to fit in the correct position. Any exposed wood can be touched up with stain or paint as necessary.

QUICK TIP
The figurehead support will cover the part number that is visible in some views of the stem.

Finishing off the bow bulwarks

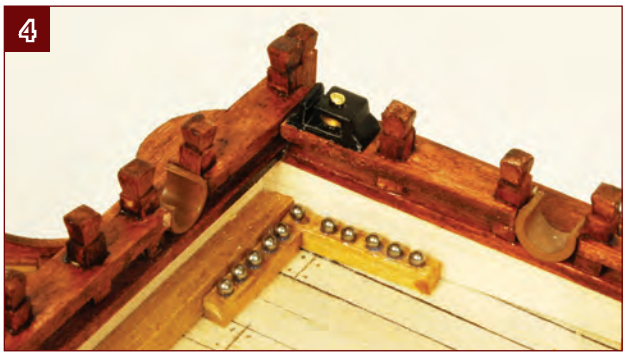
Add some small parts to trim the forward corners of the bulwarks.

QUICK TIP
Do not sand the bulwark cap any further aft than shown, as you need to fit hammock nets to it.

1. Sand the corner off the bulwark cap until there is a 3-mm gap between the existing timberhead and the edge. However, make sure the bulwark cap protrudes beyond the roundhouse roof, even if you have to leave a gap of slightly more than 3 mm.

2. Take the two remaining timber heads made in Stage 84 and glue them in place. There is no need to pin these, as they are glued against the existing timberhead. Touch up the bulwark cap with wood stain or paint where it was sanded.

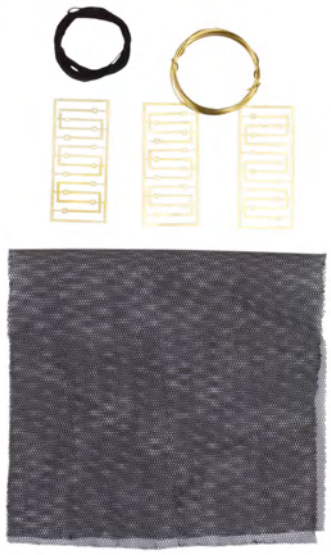
3. Take the snatch block parts supplied in Stage 62. Assemble them in the same way as you did the stern pulleys (refer to Stage 81 for more details). Glue this in place.



4. Use some clear glue or clear varnish to glue cannonballs in place in the bow racks. The type of clear glue you used to fix the gallery windows in Stage 83 is ideal for this.

Stage 87: More quarterdeck detailing

Parts to make the hammock holder nets and hammock rolls that surround *Victory*'s upper decks.



Fittings

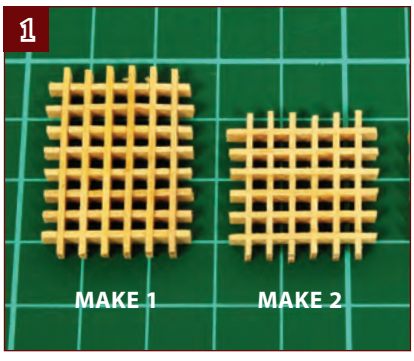
brass wire 0.8m
brass wire 1m
thread 3.5m
net 200 x 100mm
18 brass stanchions
cotton cloth 130mm x 1.1m

Where the parts fit

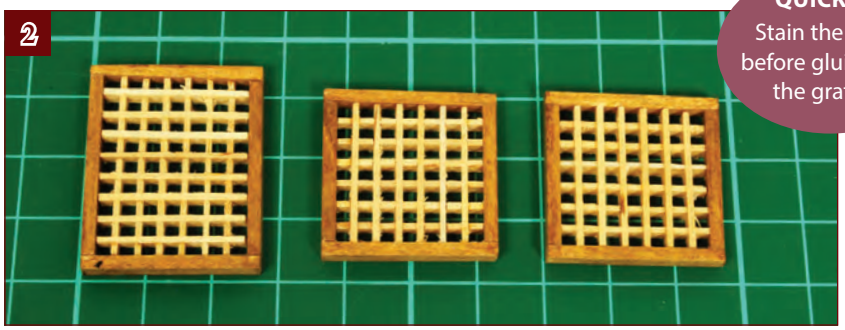
The parts supplied in this stage are all used to make the hammock nets that surround *Victory*'s bulwarks, and the rolled hammocks that were kept in them by day, or when going into battle. These parts are quite delicate, so they won't be added until you have completed the other fittings on the decks and around the hull. This work continues now by adding gratings and other details, and making the compass binnacle. You'll also start to add the chainwales, which will soon be rigged ready to add the masts you have made. Parts to assemble the new fittings for the decks were supplied in Stages 60 and 84.

Adding fore deck details

Use parts from Stage 60 to make these fittings, which will complete the fore deck with the exception of the pin rails, which will be constructed later on.



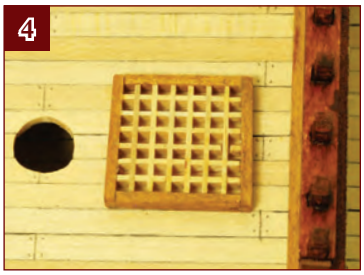
1. Assemble three gratings. One should be 6 strips wide by 8 strips long, and two should be 6 strips wide by 6 strips long.



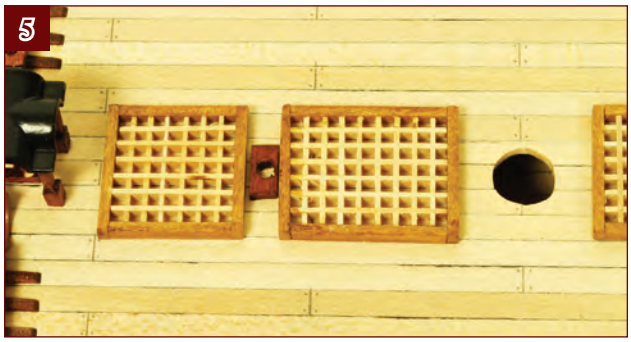
2. Frame these with 2 x 3-mm wood set on edge. As this is taller than the grating, ensure the top of the grating is flush with the top of the frame. We have used dark oak stain for the natural version. The frames are a dark wood on the real HMS *Victory*, so a walnut stain is more suitable for the painted version.

QUICK TIP
Stain the wood before gluing it to the grating.

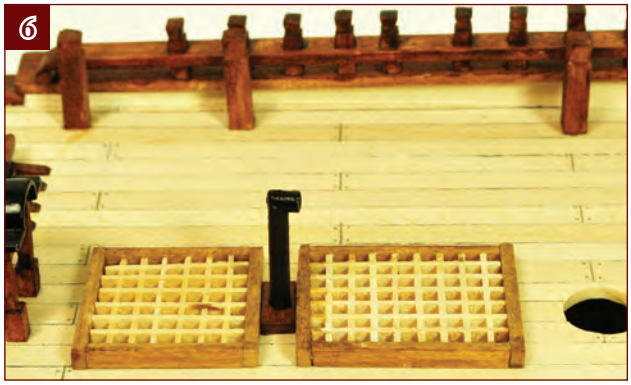
3. Make a chimney base from an offcut of 2 x 5-mm wood. Drill a 3-mm hole in it, then cut it to a length of 10 mm. Finally, stain it walnut.



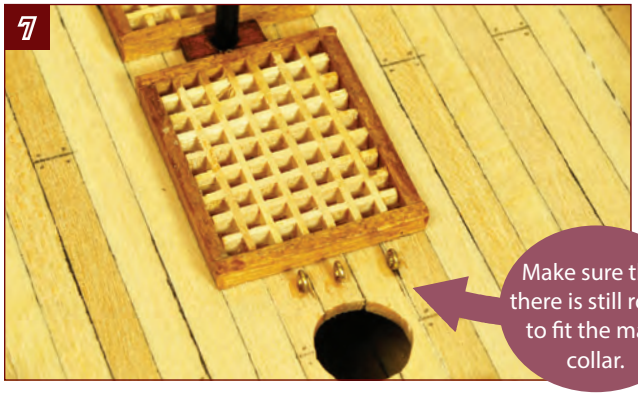
4. Glue a square grating in front of the fore mast socket, leaving a gap of 7 mm between it and the edge of the mast socket.



5. Glue the larger grating 7 mm behind the mask socket. Follow this with the chimney base and the second square grating.



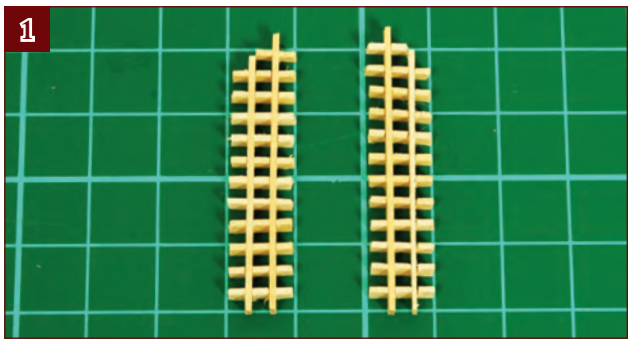
6. Glue the chimney in place with superglue. Note that it faces forward.



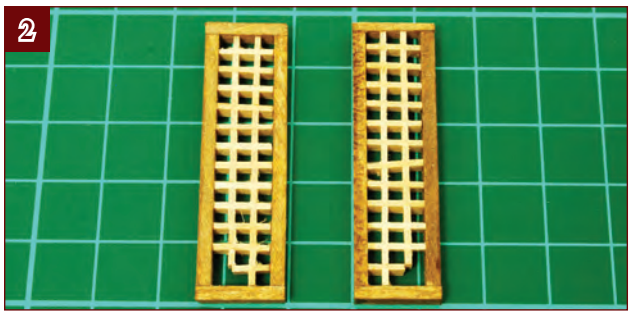
7. Drill three 0.7-mm holes and superglue three eyebolts ahead of the larger grating.

Adding quarterdeck details

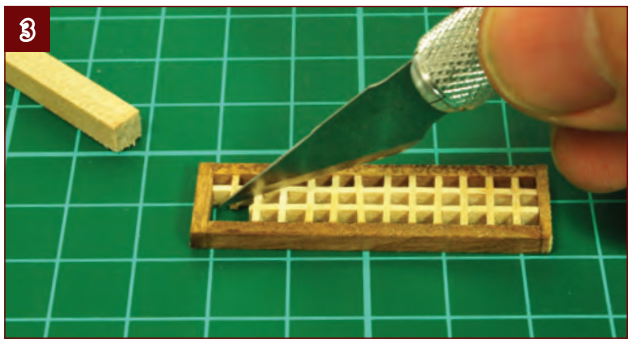
Use parts from Stage 84 to make gratings and fit eyebolts to the quarterdeck.



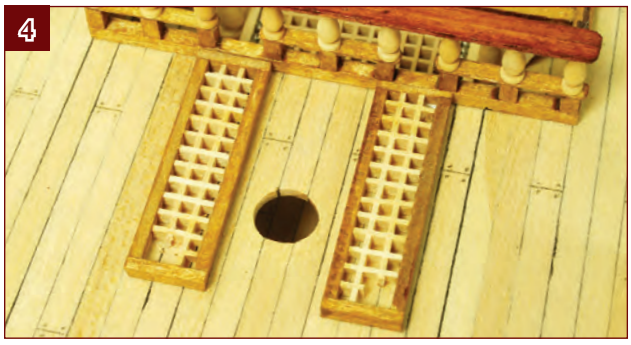
1. Construct two gratings, 2 strips wide and 12 strips long, leaving out a whole square in one corner of each.



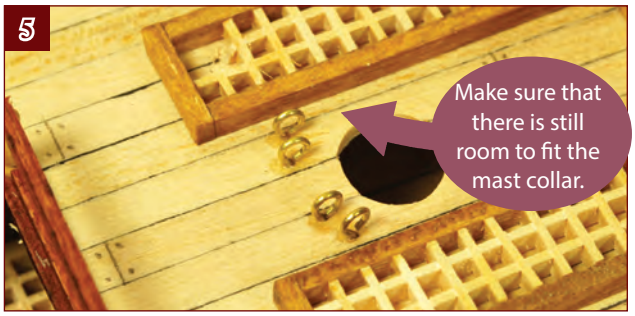
2. Frame the gratings with 2 x 3-mm wood, finished the same way as those on the fore deck. Ensure that you make the holes left- and right-handed.



3. With a sharp knife, carefully enlarge the hole so that the 5 x 5-mm strip will stand inside it. This will be used to fit the pin rails that will be completed later.



4. Fit the gratings either side of the main mast socket. They should butt up against the cockpit rail, and there should be a 20-mm gap between them.



5. Drill four 0.7-mm holes just ahead of the mast socket, and superglue four eyebolts in place.

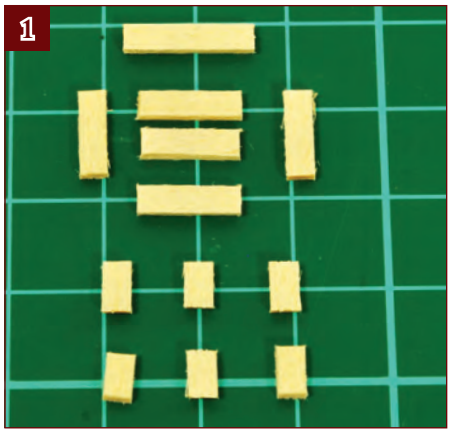
6. The quarterdeck can now be varnished to protect it if desired, although this is not essential.

7. Take six eyebolts and six rings. Twist the rings to open them, thread them onto the eyes of the eyebolts, and then close the rings again.

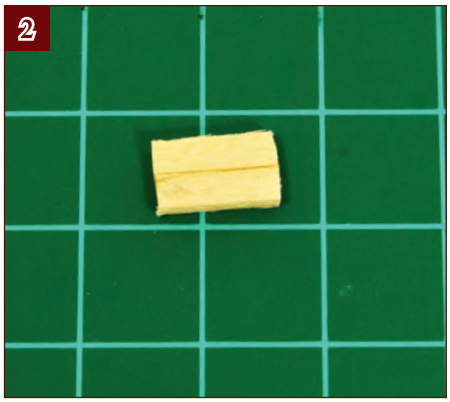
8. Drill 0.7-mm holes in the deck and glue the eyebolts and rings into them about 10 to 12 mm behind each deck gun.

Constructing the compass binnacle

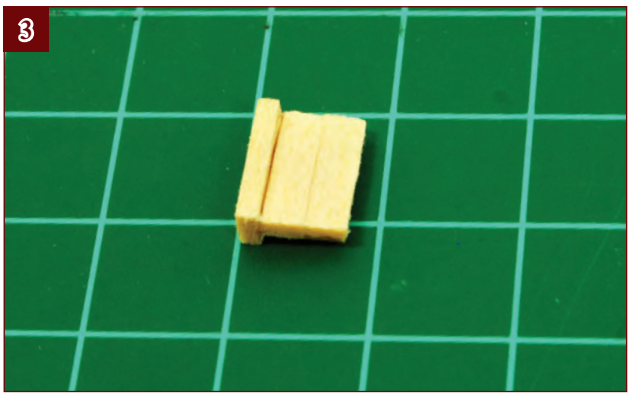
Use parts from Stage 84 to make the cabinet that held the compass.



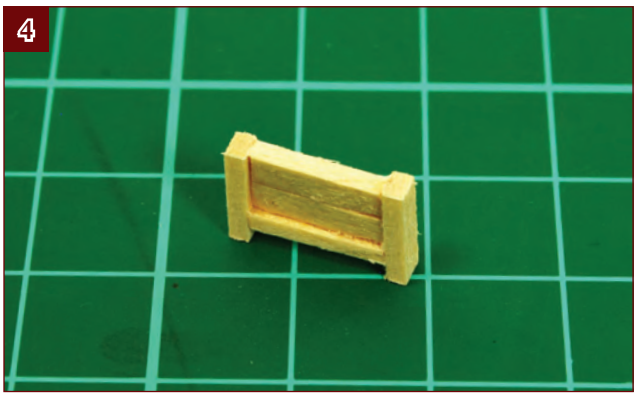
1. Cut the following parts to make the body of the cabinet from the 1.5 x 3-mm strip of wood:
Top: one piece 14 mm long
Body: two pieces 11 mm long
Base: one piece 11 mm long
Sides: two pieces 10 mm long
Panels: six pieces 5 mm long
You will also need a piece of 1.5 x 6-mm wood to roof the cabinet, which is cut to fit it after assembly, as shown in Step 7.



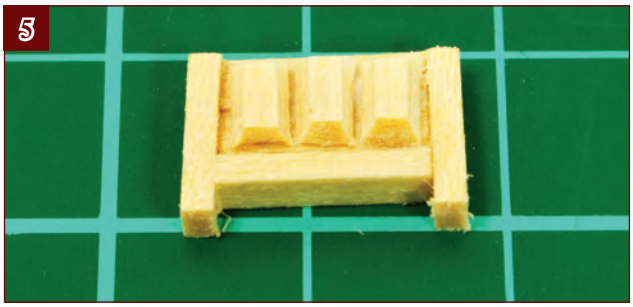
2. Glue the two body pieces edge to edge.



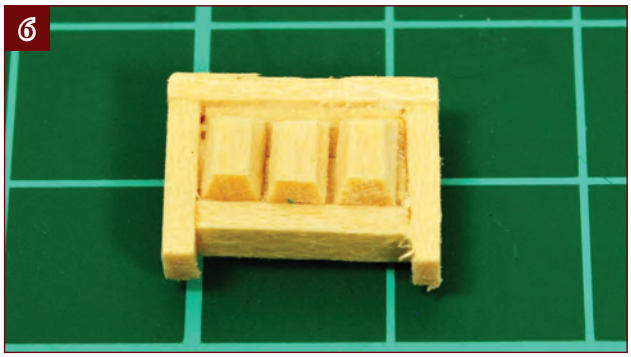
3. Glue the base along one side of the body to form an inverted T shape.



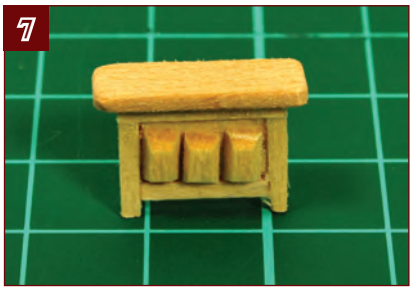
4. Sand the edges smooth, then glue the sides in place. Note that the tops of the sides are flush with the top of the body.



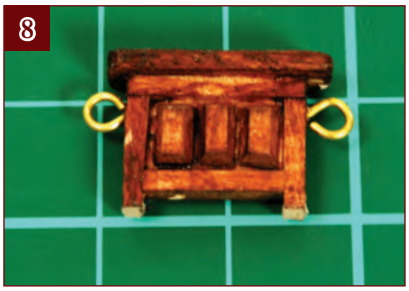
5. Sand the whole assembly smooth. Take the six side panels and chamfer all four sides. Then glue three of them to the front and back of the cabinet as shown.



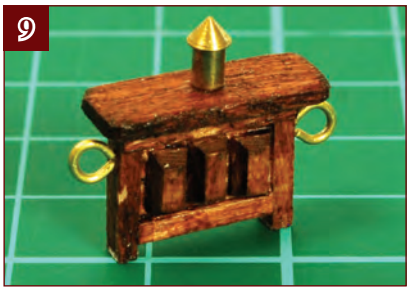
6. Glue the top in position.



7. Take the 1.5 x 6-mm wood and cut a length that overhangs each end by 1.5 mm. Sand off the corners and glue it on top.



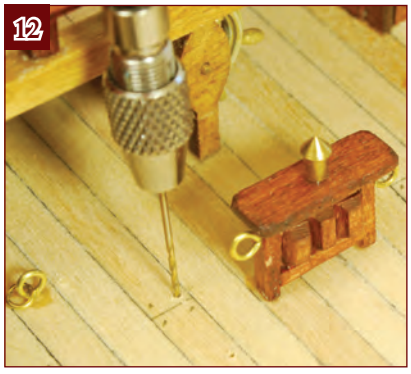
8. Stain the cabinet walnut or paint it black, for the stained and painted versions, then fit a brass eyebolt in each end.



9. File the bottom of the chimney so it is flat, and glue it in place centrally on the top of the cabinet.

10. Glue the binnacle centrally on the deck, just in front of the wheel.

11. Cut the thin brown thread in half, and tie each half to a small brass eyebolt. Seal the knots with diluted glue and trim the excess when the glue is dry.



12. Drill four 0.7-mm holes, about 7 mm diagonally out from the corners of the cabinet.

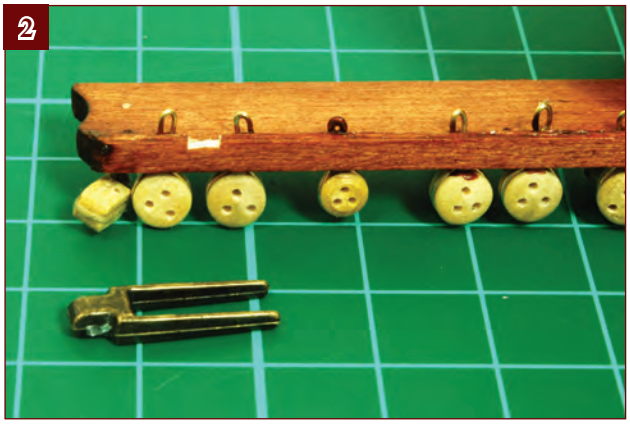
13. Glue the eyebolts with the thread attached to the two rearmost holes. Glue two more eyebolts in the forward holes.

14. Pass both threads through the eyes in the cabinet and tie the ends to the forward eyebolts, then trim the excess.

Attaching the chainwales

Start attaching the chainwales, which you assembled in Stages 75 and 83.

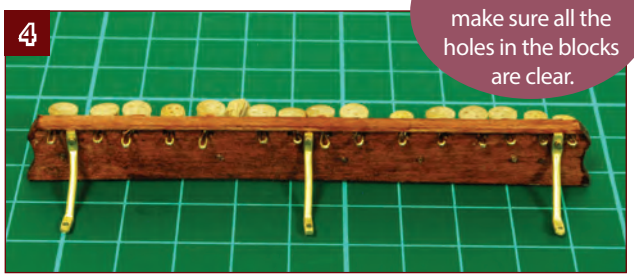
1. Take the four castings from Stage 72. Two are topped with a hook, and the other two with a post. Drill a 1-mm hole vertically through the side of each post. You can omit this difficult step if you prefer: there is an alternative that will be explained in a later stage.



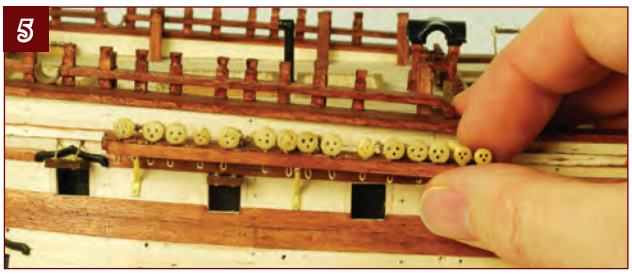
2. If the facing strip of the main mast chainwale is wider than the wale itself, cut a notch where the casting fits. Refer to Step 7 to see the positions.

3. Glue the castings in place, with the hook at the aft end and the post at the forward – see the plans in Stage 75 to check which way the wales fit. Paint the castings black if your model has a painted finish.

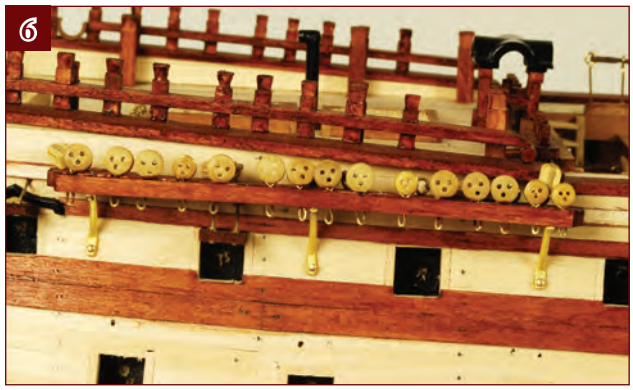
QUICK TIP
Use a 0.7-mm drill to make sure all the holes in the blocks are clear.



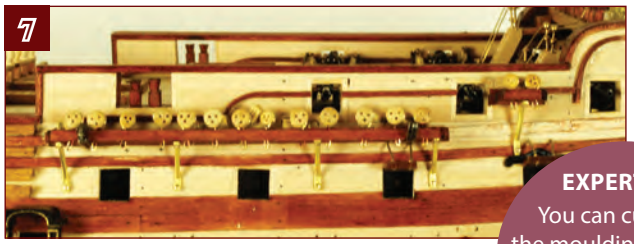
4. Cut nails to about 3 mm long, and use them to pin the brass supports to the wales. The plans in the relevant stages show the positions of the nail holes. Paint these supports black for the painted version.



5. Try the wale in position. Bend the brass supports so that they sit neatly against the hull. When you are satisfied that the supports are at the correct angle, use superglue to reinforce the nailed joints that hold them to the wales.



6. Glue the chainwales to the channel wale. You may have to move the wale forward or backward slightly (1 or 2 mm at most) so that the bottom of a deadeye is not over the centre of a gun port. The wire fixings by the gun ports will be fixed at an angle so it is not necessary to keep the ports completely clear, as per the original ship. Pin the bottom of each brass support with a nail, and reinforce the joint by putting a tiny drop of superglue on the nail before inserting it.



7. This photo shows the position of the main mast chainwales.

EXPERT TIP
You can cut away the moulding strip if it interferes with the position of the small chainwale.

8. This shows the position of the mizzen mast chainwale. Refer to the plan in Stage 83 to check which way round this wale fits.

EXPERT TIP
Drill 2-mm holes to mount the false cannons if you haven't done so already.

Stage 88: Complete the chainwale rigging

Parts to make *Victory*'s bowsprit and forward spars, plus the plans needed to assemble them.

Wooden strips

1 wooden dowel 10 mm, 270 mm long
1 wooden dowel 4 mm, 240 mm long
1 wooden dowel 5 mm, 205 mm long
1 wooden dowel 4 mm, 90 mm long
1 wooden dowel 3 mm, 90 mm long
1 wooden strip 3 x 3 mm, 100 mm long
1 wooden strip 2 x 3 mm, 100 mm long
1 wooden strip 1.5 x 6 mm, 60 mm long
1 wooden strip 7 x 7 mm, 30 mm long

Shaped wooden parts

1 masthead truck
1 bowsprit cap
12 x single blocks 4 mm
2 x deadeyes 7 mm

Fittings

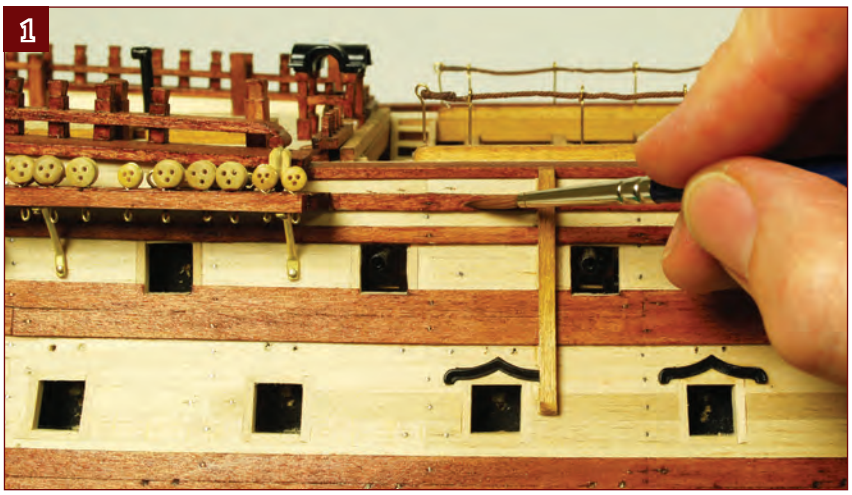
black thread 2m
natural thread 1m
0.5-mm brown thread, 1.5m
0.8-mm brown thread, 4m
2 boom joining rings
8 eyebolts
brass wire 100 mm
2 castings

Where the parts fit

This stage, start by finishing off the rigging of the chainwales, using the wire and brass parts supplied with Stages 72, 75 and 82. Then start assembling the bowsprit using the parts supplied this time. You will also need the full-size plans provided.

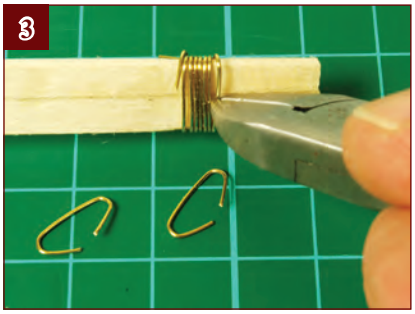
Completing the chainwale rigging

The remaining parts for the chainwales were supplied with Stages 72, 75 and 82.

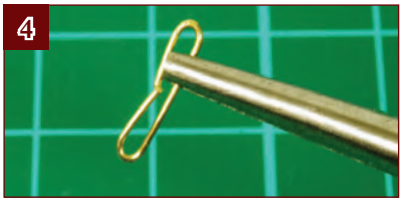


1. Touch up any bare patches on the channel wale with a fine brush. It should either be stained to match the existing wales, or painted black.

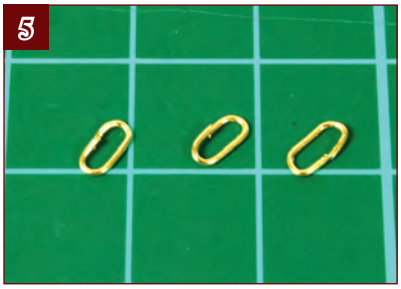
2. Glue two offcuts of 5 x 2-mm wood edge to edge. When the glue is dry, sand the resulting piece of wood until it is 9 mm wide. Then wrap the brass wire tightly around the wood.



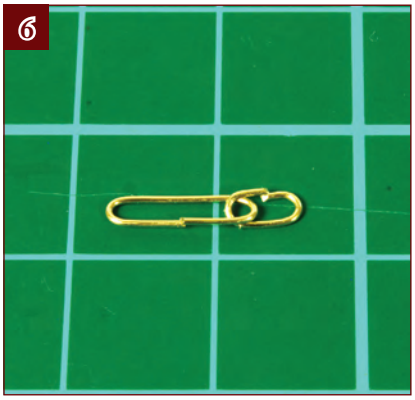
3. Carefully cut down the centre of the wire to make a series of loops.



4. Use pliers to flatten the loops into straps. Try the first few in place, as in Steps 7 and 11. You may find you need slightly longer or shorter straps to fit your hull properly, so adjust the wood in Step 2, then make a total of 132 straps.



5. Using an offcut of 4 x 2-mm wood as the former, make 20 smaller straps in a similar way to that shown in Steps 1-4.

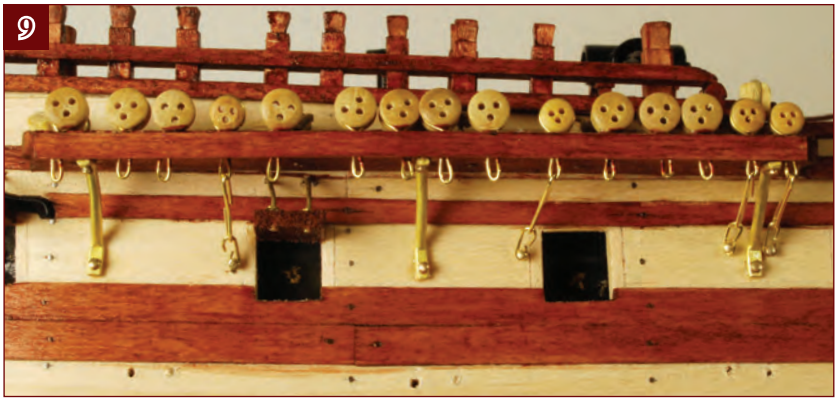


6. Take the 20 small straps, and 20 of the larger straps, and link them together.

7. Locate the smaller deadeyes on the chainwales. There are 10 on each side of the ship: 4 on the fore chainwale, 2 on the main chainwale, 2 on the small chainwale aft of that, and 2 on the small chainwale aft of the mizzen mast chainwale. Hook the larger loops of the straps from Step 6 onto the brass loop under the first of these.

EXPERT TIP
Squeeze the small loop to ensure that it is narrower than the pin head.

8. Use a small drill or similar tool to hold the smaller loop against the hull. Then insert a pin to hold it in place.



9. Repeat this process to rig all the smaller deadeyes in Step 7. These are the four on the fore chainwale. You may need to angle some slightly to clear the gun ports.

10. Link the remaining larger loops together in pairs.

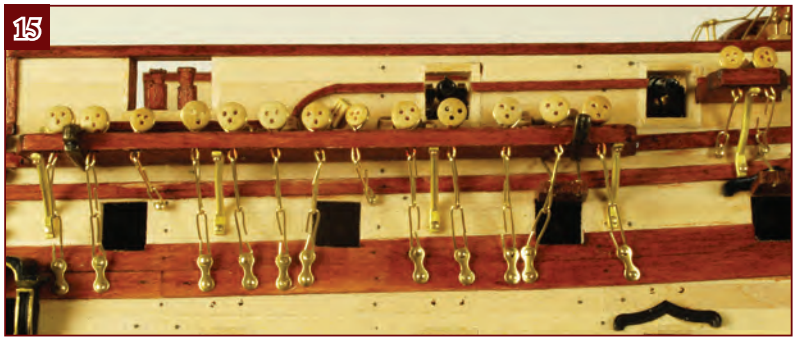
11. Hook one of the loops below the first of the larger deadeyes on the fore chainwale. Pin the lower end to the hull in the same way as Step 8, but add a fore strap under the head of the pin.

12. Fix the bottom of the fore strap with a second pin, keeping the strap in line with the wire loops.

13. Repeat this for all the remaining deadeyes. The straps should be vertical at the forward end, and angled slightly aft as they move toward the stern.

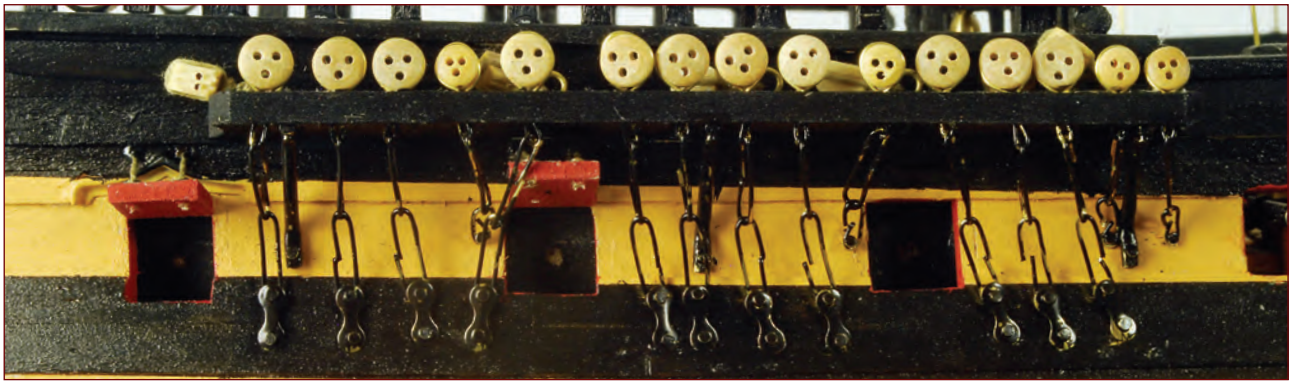
14. Angle the straps forward where you need to clear a gun port.

QUICK TIP
It may help to make a slightly longer strap to fit here (use a 10-mm wide former).



15. Repeat the same process to complete the main chainwales.

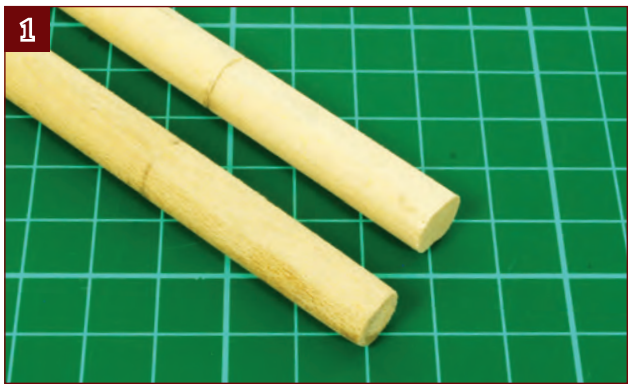
16. Rig the mizzen chainwales like this.



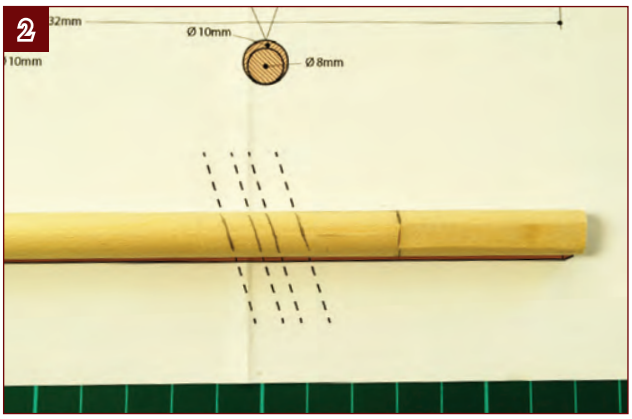
On a painted model, the brass wire and fore straps should be finished in black.

Starting the bowsprit

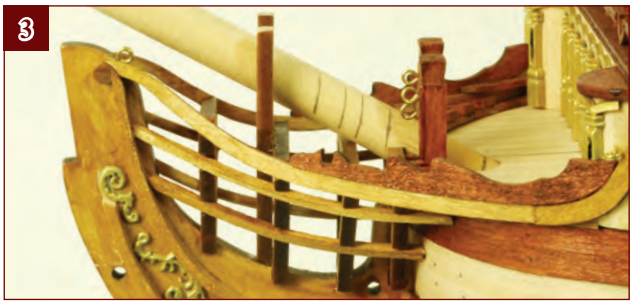
Make the main section of the bowsprit from parts supplied with this stage, following the plans provided.



1. Sand two flats on the 10-mm dowel using your original test piece as a guide. (Refer to Stage 41 for instructions on how to fit the dowel if you do not have the test piece.) Make sure that the dowel slides into the socket easily.



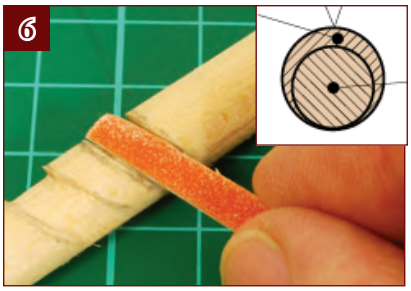
2. Place the dowel on the bowsprit plan, in line with the end and with one of the flats facing upward. Mark four angled lines on the upper side following the dotted lines on the plans.



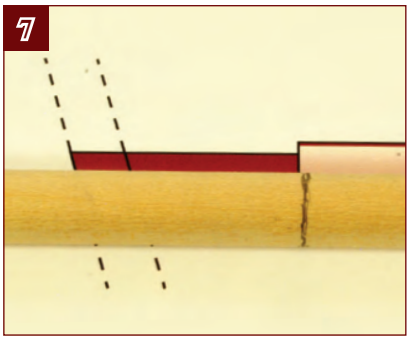
3. Place the bowsprit in its socket and make sure that the lines are parallel to the frames in the beakhead and the slots underneath the dolphin. Adjust them if necessary.

4. Extend the lines all the way around the bowsprit.

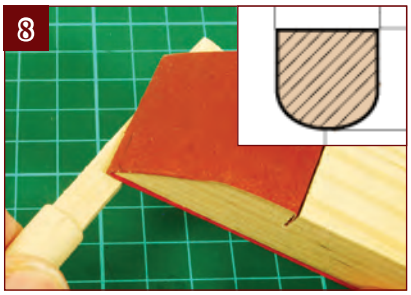
5. Carve slots between the outer pairs of lines. Make them 2 mm deep across the top of the bowsprit, and 1 mm deep down each side.



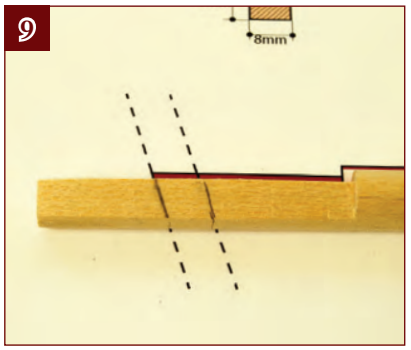
6. Continue carving to form the 8-mm radius shown in cross-section. Sand the slots smooth with a strip cut from an emery board (nail file).



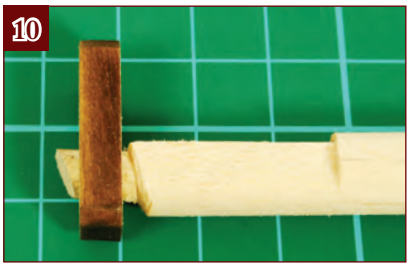
7. Place the bowsprit on the plan and mark where the step at the end starts.



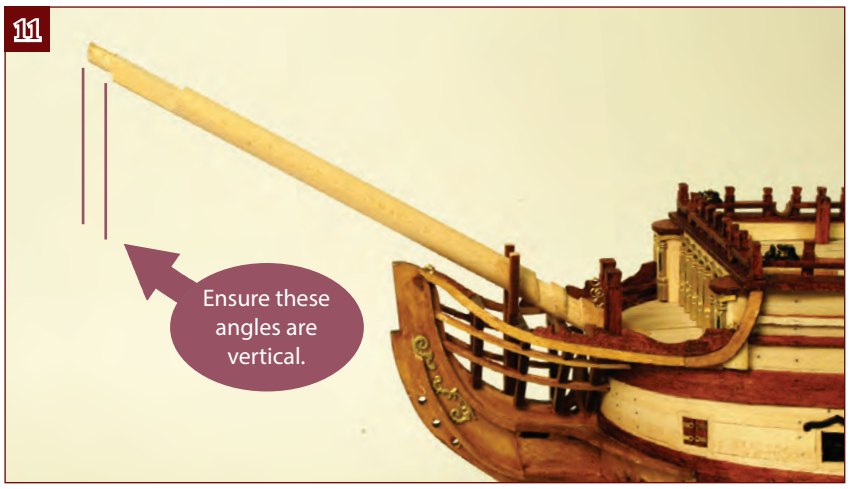
8. Carve or sand off a 2-mm flat on the top, and 1 mm off each side to form a square section with a rounded base. Make sure that you align the top of the square with the top of the slots.



9. Mark the end of the two lines, then saw the end to length. Leave it slightly over-length for final fitting.

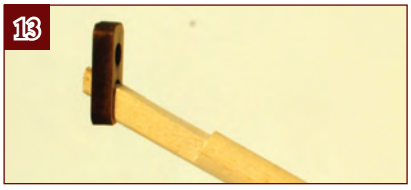


10. Carve the end between the lines down to a 6-mm-diameter circle. Start by removing 2 mm from the bottom and 1 mm from each side. Do not remove anything from the top. Sand it until the bowsprit cap will fit on the tip.

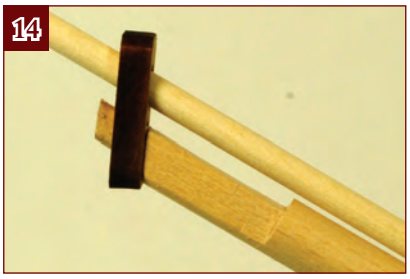


11. Put the bowsprit in place, and make sure that the angles at the end are vertical. Adjust them with a sharp knife if necessary.

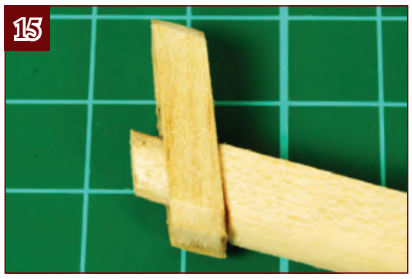
12. File or carve the larger hole in the bowsprit cap to a matching angle.



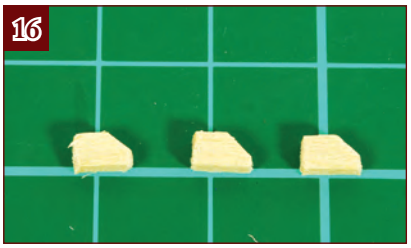
13. Try it on the end of the bowsprit to make sure that it will fit vertically.



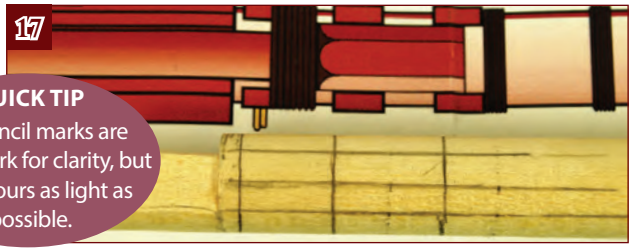
14. File the smaller hole until the 5-mm dowel fits parallel to the bowsprit.



15. Sand the top and bottom ends of the cap to follow the angle of the bowsprit.

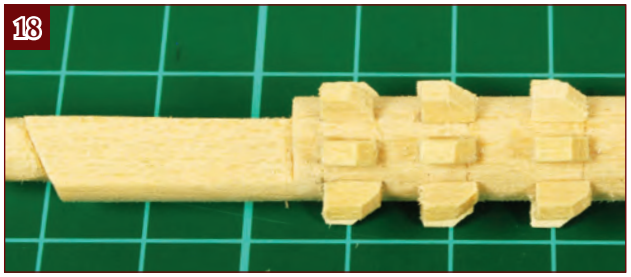


16. Cut 18 brackets from the 2 x 3-mm wood. Make each one 5 mm long, with one corner cut at an angle as shown.

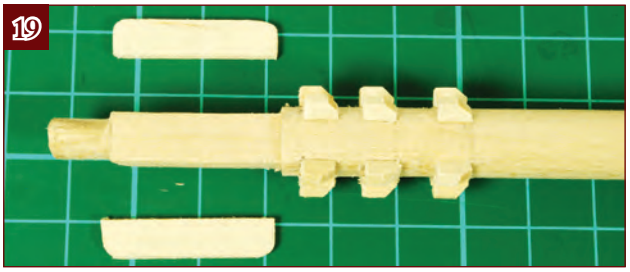


QUICK TIP
The pencil marks are shown dark for clarity, but make yours as light as possible.

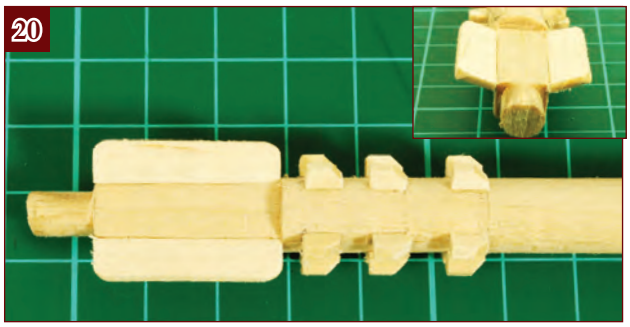
17. Use the plan to mark the front of each set of brackets and mark guide lines to their positions along the side of the bowsprit. There are three rows on each side: one horizontal, and the other two about 45 degrees from the horizontal.



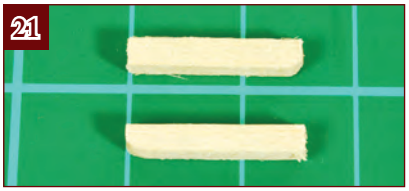
18. Glue the six rows of three brackets in place, then remove the pencil marks. They are easily removed by scraping with a sharp blade held vertically.



19. Cut two lengths of 1.5 x 6-mm wood to make the platforms known as "bees." Make them the same length as the squared section with rounded outside corners. Sand a slight chamfer on the inside so that they can be angled upward a little.

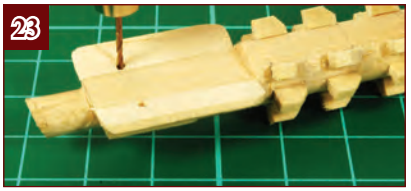


20. Glue the bees to the sides of the bowsprit, making sure that they are both angled up by the same amount.

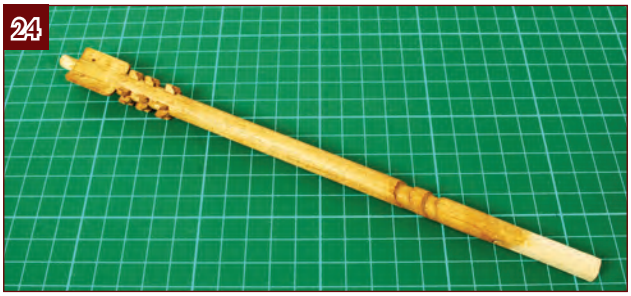


21. Cut two 15-mm lengths of 3 x 3-mm strip. Chamfer one edge so they will fit under the bees, and radius the aft end.

22. Glue the bee blocks under the bees. Sand the front ends to match the angle of the bowsprit.



23. Drill 1-mm holes vertically through the bees as shown on the plan, making sure they go through the bee blocks.



24. Stain the bowsprit to match the other masts. If you are painting your model, leave it unpainted until after adding the bindings. Painting instructions will be provided next stage.

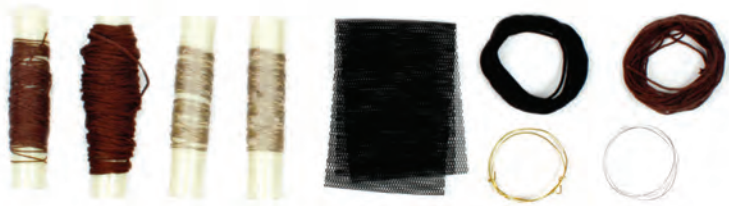
25. Use the black thread to make the mast bindings in the positions indicated on the plan.

Stage 89: Continue working on the bowsprit

This stage includes parts to continue *Victory*'s bowsprit and add details around the beakhead.

Wooden strips

2 wooden strips 2 x 4 mm, 300 mm long
1 wooden dowel 5 mm, 259 mm long
2 wooden dowels 4 mm, 200 mm long
2 wooden strips 2 x 2 mm, 200 mm long
1 wooden strip 2 x 4 mm, 150 mm long



Fittings

black thread 0.75 mm x 1.4m
natural thread 0.15 mm x 0.6m
brown thread 0.8 mm x 9m
brown thread 0.5 mm x 7m
brown thread 0.15 mm x 30m
black net 250 x 40 mm
brass wire 200 mm
steel wire 200 mm
double block 4 mm x 4
double block 5 mm x 9
single block 4 mm x 13
single block 5 mm x 2
10-mm eyebolts x 9
7-mm eyebolts x 4

Shaped wooden parts

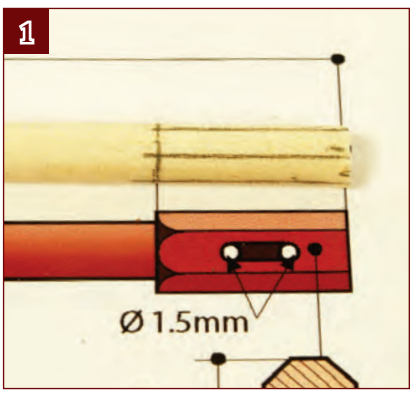
29 grating strips

Where the parts fit

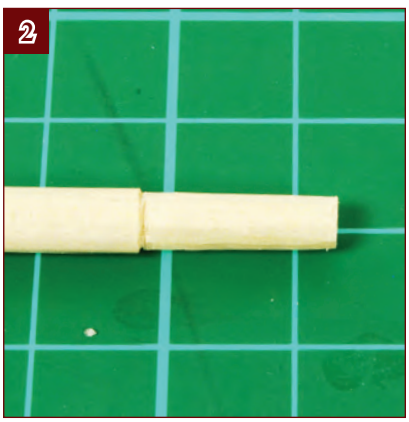
This stage, start by extending the bowsprit with the two upper sections known as the jibboom and flying jibboom. Then add the dolphin striker (which points down) and the jack staff (which points up). Continue by rigging the bowsprit, ready to attach the spars at a later stage. Most of the parts for all this were provided in Stage 88. With this done, continue fitting out the hull by rigging the carronade and adding some stern gallery decorations.

Completing the bowsprit

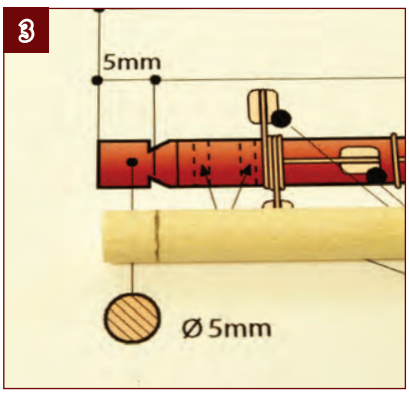
Finish the bowsprit by making the jibboom, flying jibboom, dolphin striker and jack staff. The parts were supplied in Stage 88, with the exception of the 2 x 4-mm strip.



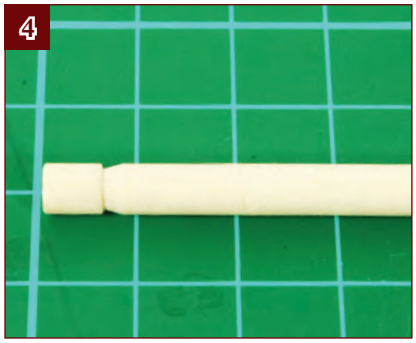
1. Take the 5-mm dowel, lay it on the jibboom plan and mark guidelines for the octagonal section on the end using the centre finder.



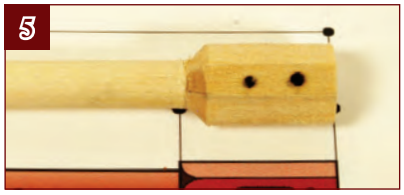
2. Carve and sand eight flats to create a 4-mm octagonal section at this end of the dowel.



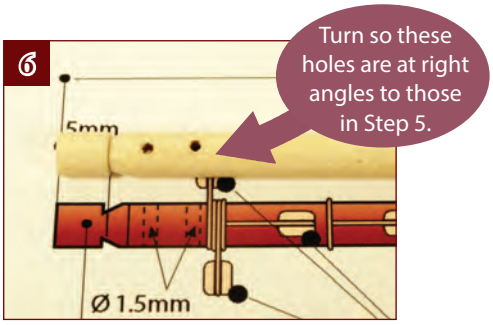
3. Place the dowel back over the jibboom drawing. Cut it to the length shown, and mark the position of the groove near the end.



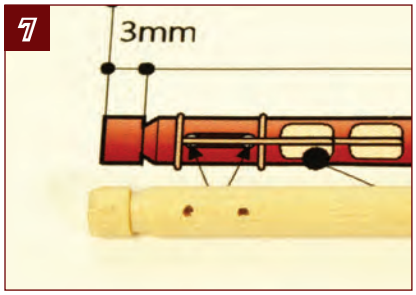
4. Carve the groove with a sharp knife.



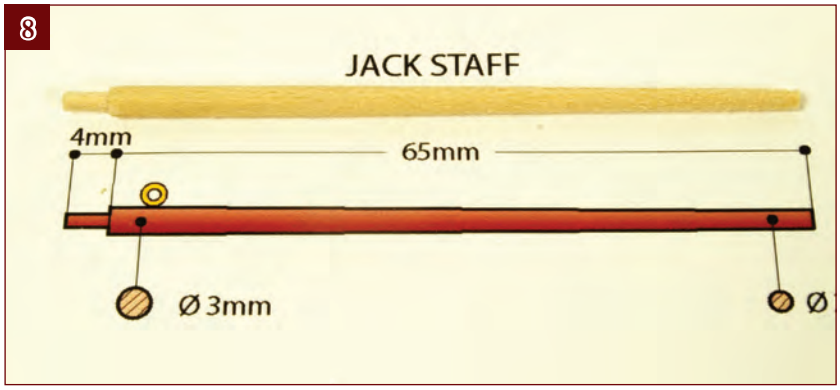
5. Use the 2 x 4-mm wood supplied in this stage to form the octagonal section. The technique is the same as used to construct the yards, so refer to Stage 72 for more details. Then drill the two 1.5-mm holes as indicated.



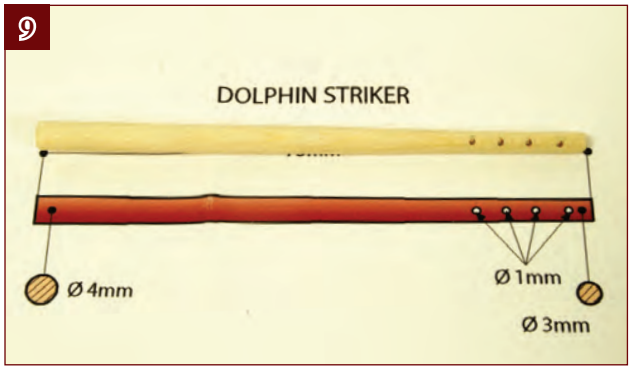
6. Rotate the boom 90 degrees and drill the two 1.5-mm holes at the opposite end.



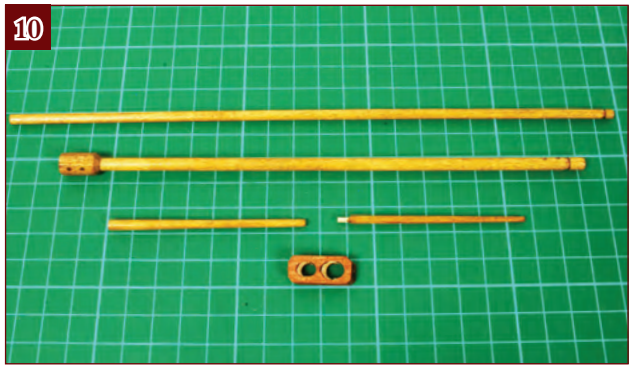
7. Now make the flying jibboom. Place the 4-mm dowel over the drawing for the flying jibboom. Cut it to length and carve the groove near one end. Then drill the two 1-mm holes as shown.



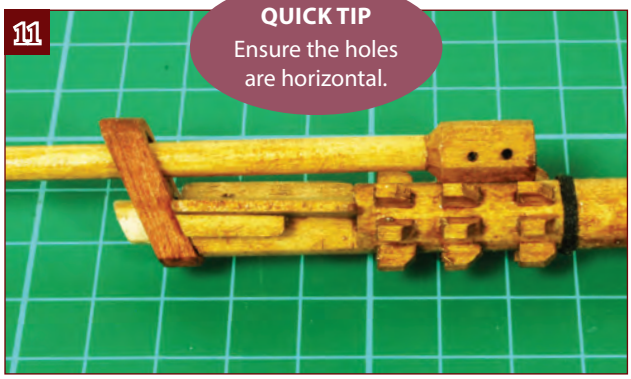
8. Taper the jack staff from 3 mm to 2 mm and cut it to the length shown on the plan. Then carve a 2-mm diameter spigot in the thicker end.



9. Taper the dolphin striker from 4 mm to 3 mm, and drill the four 1-mm holes in the thinner end.

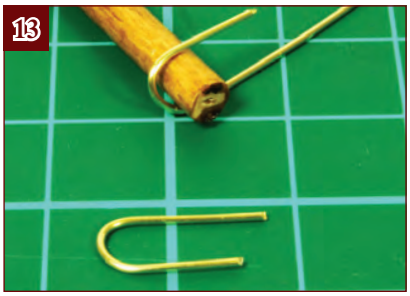


10. Stain the jibbooms, dolphin striker and jack staff dark oak, and stain the bowsprit cap walnut. Omit this step if you are painting your model.

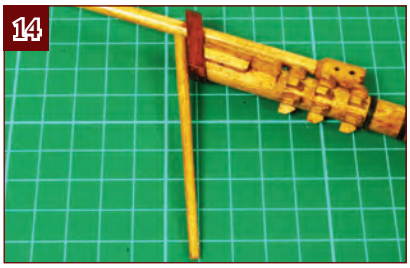


11. Assemble the bowsprit, jibboom and bowsprit cap as shown. Make sure the jibboom is parallel to the bowsprit. To adjust it, you can either sand wood off the octagonal section or pack it up with a thin strip of wood as necessary.

12. Once you are happy with the fit, glue the parts together. When the glue is fully set, cut the excess off the bowsprit and sand the end smooth. Touch up the end of the bowsprit with walnut wood stain.

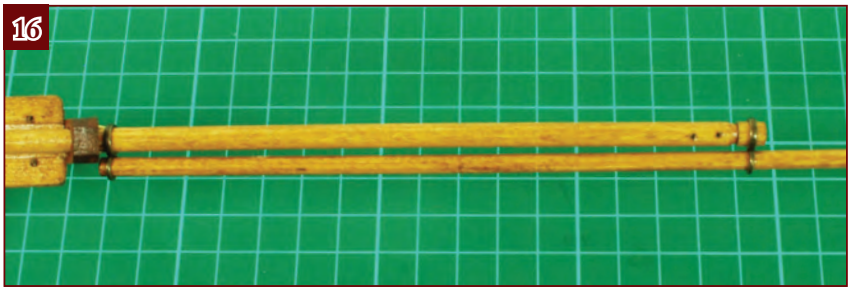


13. Form three U-shaped straps from the brass wire by wrapping it round the dolphin striker. Cut the legs back to about 7 mm long.

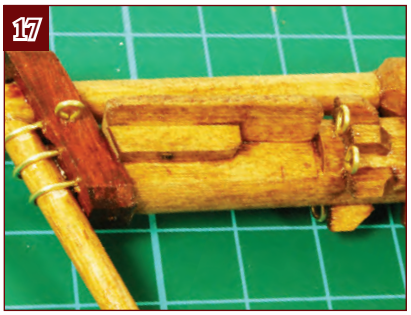


14. Cut the end of the dolphin striker to match the angle of the jibboom, making sure that the holes in the dolphin striker face forward and aft. Then glue it in place using superglue.

15. Drill three 0.7-mm holes into the bowsprit cap on each side of the dolphin striker, about 3 mm deep – be careful not to drill all the way through the bowsprit cap. Then glue the brass straps in position with superglue.



16. Slide the figure 8-shaped boom joining rings onto each end of the jibboom, and then slide the flying jibboom in place. (You may need to file out the holes a little to get a sliding fit.) Make sure that the flying jibboom is on the right hand side of the jibboom and parallel to it. Then turn it so the holes in the flying jibboom are vertical. Finally, fix the parts with superglue.

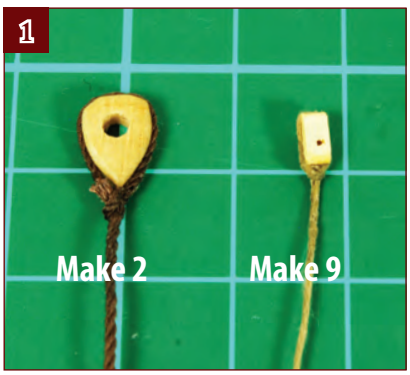


17. Drill 0.7-mm holes in the bowsprit and the bowsprit cap and glue in brass eyebolts as shown. There are three eyebolts to be fitted each side.

If you are painting your model, paint the lower section of the bowsprit yellow ochre, and paint everything else black.

Rigging the bowsprit

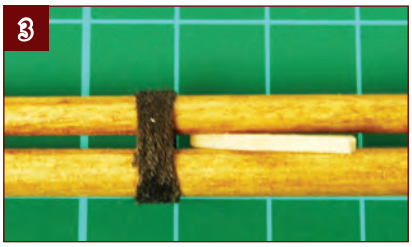
The blocks you need to do this were provided with Stage 88.



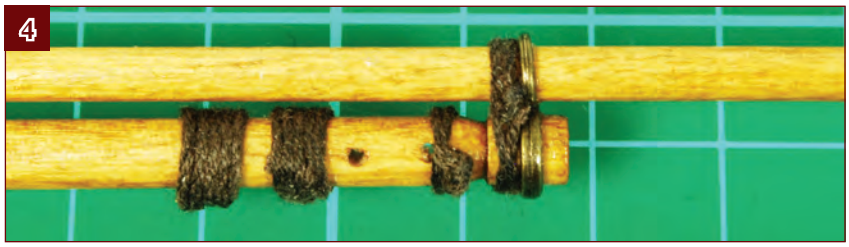
1. Prepare two heart blocks with 0.8-mm brown thread, leaving a tail of about 100 mm. Prepare nine 4-mm blocks with 0.15-mm natural thread, leaving tails of about 100 mm.

2. Tie a heart block to the bowsprit using two half hitches as usual. Then bind the jibboom to the bowsprit with 0.5-mm brown thread. The technique is the same as used to fit the bindings to the masts, and the binding consists of four turns of thread.

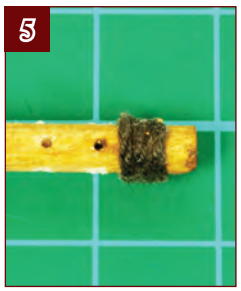
QUICK TIP
Place the knots of the bindings underneath the bowsprit where they will be inconspicuous.



3. Add the binding halfway up the jibboom. Insert a piece of 1.5-mm wood to prevent the booms being pulled together, then use 0.5-mm brown thread and make four turns.

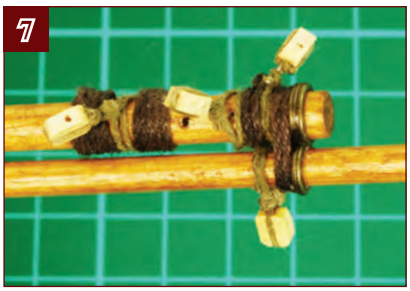


4. Add two more bindings near the end of the jibboom. Cut 200-mm lengths of 0.5-mm brown thread, and make four turns. Then add the two small bindings at the end. These are only two turns, so tie them off with a reef knot rather than trying to do a binding. Make all the knots at the bottom, where they will be inconspicuous.



5. Add a final binding at the end of the flying jibboom, with the usual four turns.

6. Add the second heart block as shown. Add two 4-mm blocks to the jibboom just in front of the bowsprit cap. Fit them horizontally, to the left and right with the right-hand block leads underneath the flying jibboom.



7. Add four blocks to the front of the jibboom. Fit two horizontally, and two on top of the boom as shown. Keep the ties clear of the holes in the jibboom.

8. Add two blocks to the tip of the flying jibboom. These are fitted to the top.

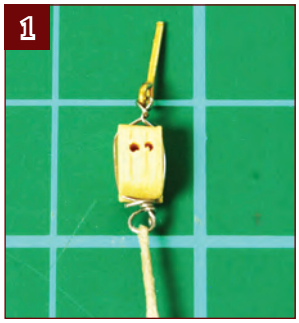
9. Add the jack staff last, as it is fragile. Drill a 2-mm hole between the bowsprit and the bee, about 0.5 mm from the bowsprit cap.

10. Glue the jack staff in place. Add the mast truck (the small bead) to the top of the jack staff. If you are painting your model, paint the jack staff black. Finally, tie the last 4-mm block to the top of the jack staff and fit an eyebolt to the bottom. (Drill into the bee rather than the jack staff to avoid weakening the dowel.)

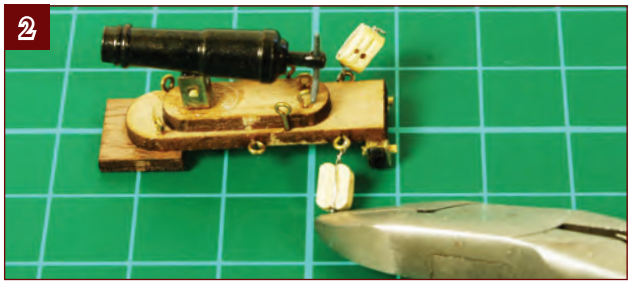
You can try the completed bowsprit in position, but do not glue it yet.

Fitting the first carronade

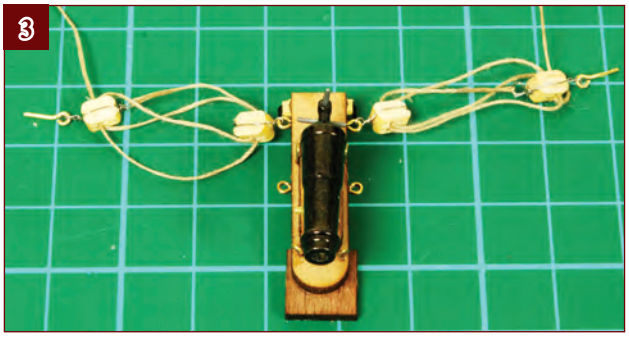
There are two carronades on *Victory*'s fore deck. You assembled the first of them in Stages 3 and 4.



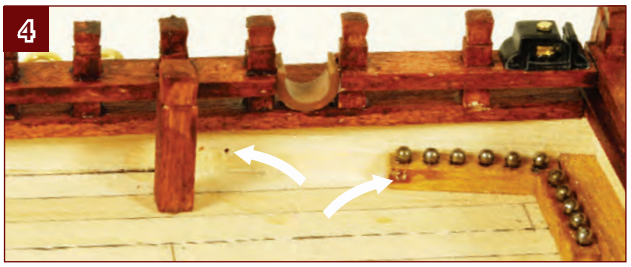
1. Attach four double blocks to small eyebolts with the fine wire. Then attach 150 mm of 0.15-mm natural thread to each block. This is described in Stage 49. Rub some glue into the thread to stiffen it, which will make it easier to thread the blocks. Keep the two unused blocks safe for later use.



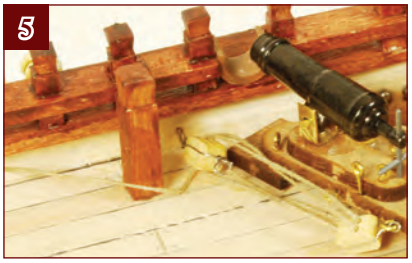
2. Trim the loops of wire off the blocks fitted to the carronade.



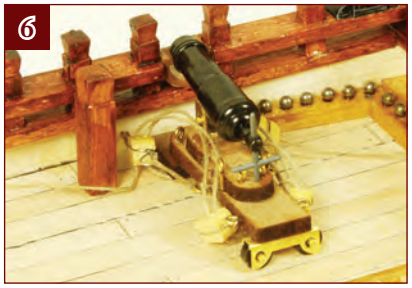
3. Rig two of the blocks you prepared in Step 1 loosely onto the blocks as shown.



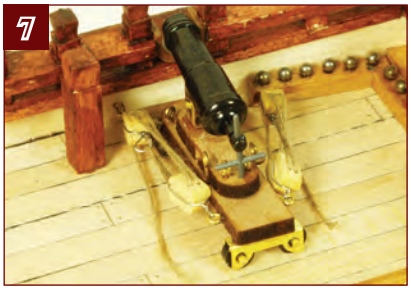
4. Drill two 0.8-mm holes for the eyebolts. As shown by the arrow, drill one into the corner of the shot garland and the second about 4 mm in front of the large bitt. Repeat this on the other side of the model ready to fit the second carronade.



5. Glue the two eyebolts into the holes, making sure that the rigging thread is not tangled or twisted. It is easiest to fit the block next to the bitt first.



6. Glue the carronade in place on the deck and allow the glue to dry thoroughly.

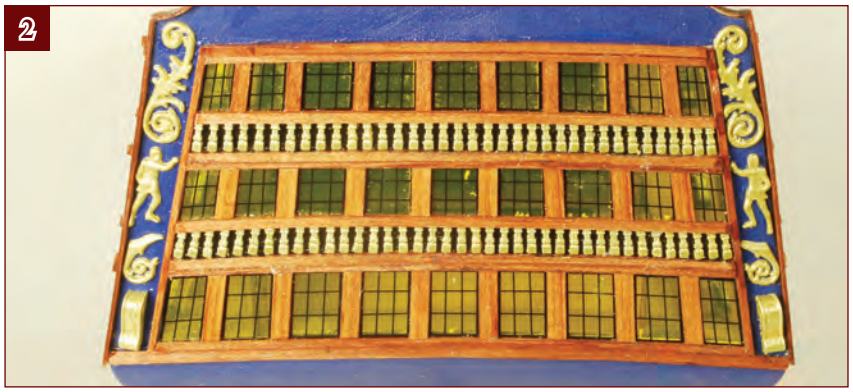


7. Gently pull the thread tight and cut it off neatly. Secure the loose ends to the deck with a spot of glue.

Fitting the stern decorations

Add the metal castings provided with Stage 88 to the stern gallery.

1. Paint the castings gold for the natural finish model, or yellow ochre for the painted version.



2. Glue them in place with superglue, spacing them evenly. Pay attention to the bottom castings as there is only a slight difference between the left and right sides.

Stage 90: Decorating the stern gallery

This stage includes parts for *Victory*'s hammock nets, beakhead detailing and rigging.

Wooden strips

1 wooden strip 4 x 4 mm, 250 mm long
2 wooden strips 2 x 5 mm, 250 mm long
1 wooden strip 2 x 2 mm, 100 mm long

Fittings

beakhead grating frame
black net 180 x 60 mm
black thread 0.8 mm x 45m
black thread 0.15 mm x 37m
brass wire 1 mm x 200 mm
brass wire 0.5 mm x 800 mm
24 x brass stanchions
3 x brass strips 0.3 x 2 mm, 20 mm long

Shaped wooden parts

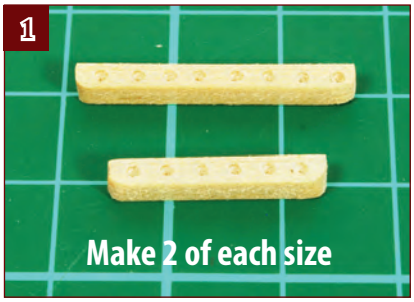
deadeyes 5 mm x 46
deadeyes 4 mm x 9

Where the parts fit

In this stage, continue fitting out the deck by adding rigging components to the quarterdeck. The wood used is supplied in this and earlier stages. It's then time to continue fitting out the stern gallery by adding the carved trophy of arms above the windows and the curved rails below it. If you are making the painted version of the model, there is an extra stage of painting – adding yellow ochre details around the windows – but the natural version requires no extra work.

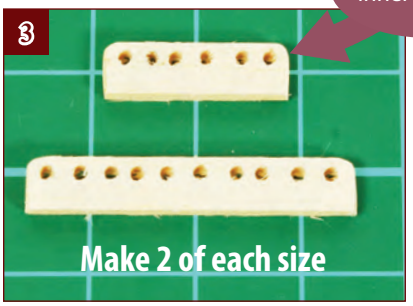
Making quarterdeck fittings

Construct the shot garlands (racks for cannonballs), pin rails and staghorns used for securing the rigging lines around the quarterdeck.

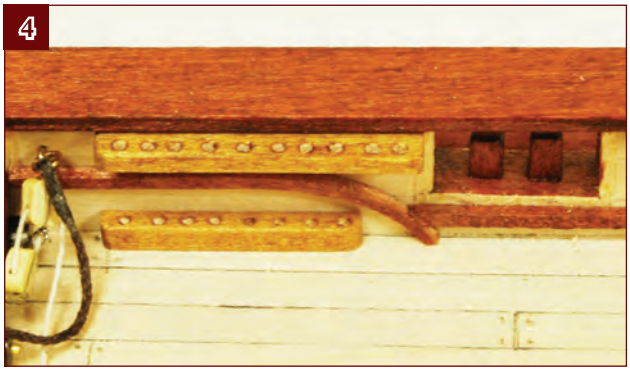


1. Make two pairs of shot garlands from 3 x 3-mm wood with 1.5-mm-diameter holes drilled partway through. The longer pair is 25 mm long and has 8 holes. The shorter pair is 19 mm long and has six holes. Space the holes 3 mm apart leaving 2 mm at each end.

2. Stain the shot garlands dark oak, or paint them black. Then glue them in place between the quarterdeck guns.

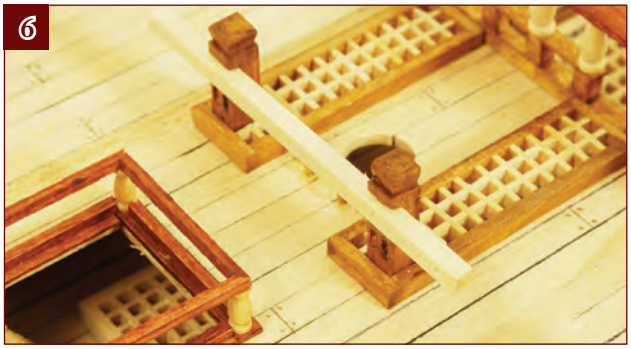


3. Make two pairs of bulwark pin rails from 2 x 5-mm wood drilled with 1.5-mm holes. The shorter pair is 19 mm long and has six holes. The longer pair is 31 mm long and has 10 holes. Place the holes 3.5 mm from the inside edge, 3 mm apart, with 2 mm left at each end.

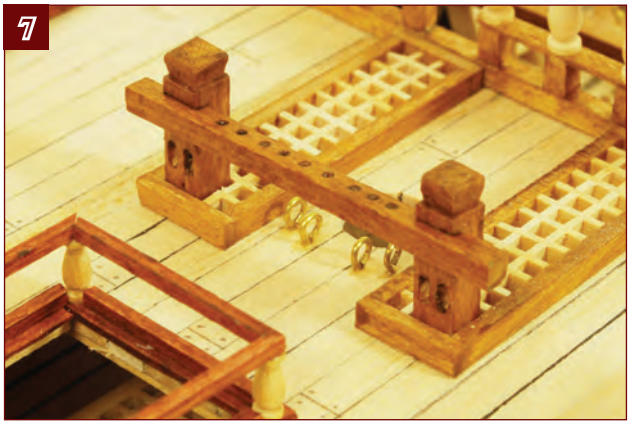


4. Stain the bulwark pin rails dark oak, or paint them black. Glue the longer one above the shot garland on the deck.

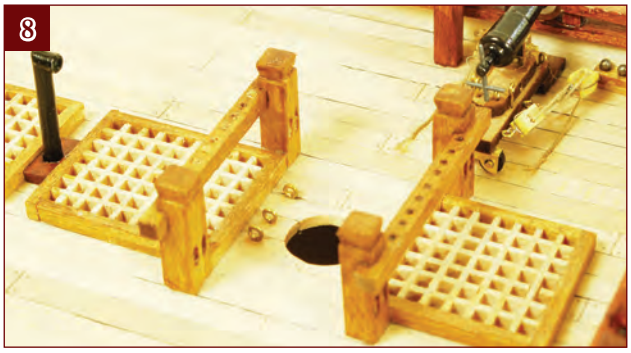
5. Glue the shorter bulwark pin rails near the end of the bulwarks.



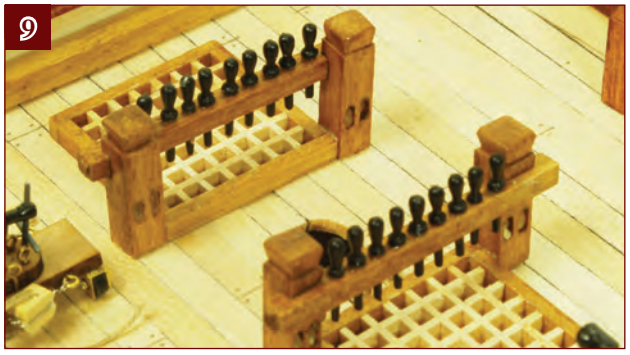
6. Glue the pin rails into the holes in the main mast gratings. Temporarily place an offcut of 3 x 3-mm wood in the slots to make sure the posts are straight and square. The posts can be reinforced with pins, using the technique described when fitting the timber heads in Stage 59.



7. When the glue is dry, remove the temporary strip and glue the longest of the three pin rails in place with superglue.

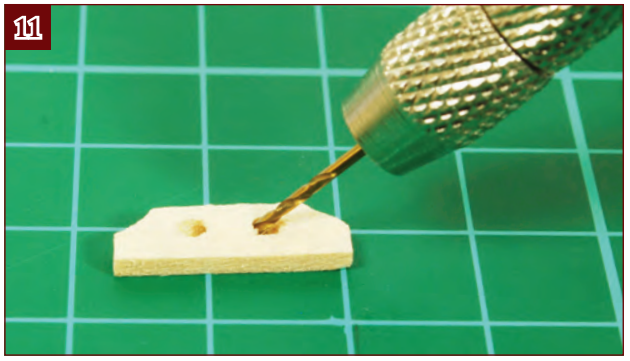


8. Repeat the process to fit the two pin rails by the fore mast. Note that the posts are fitted against the outside of the gratings, in line with the end frames.

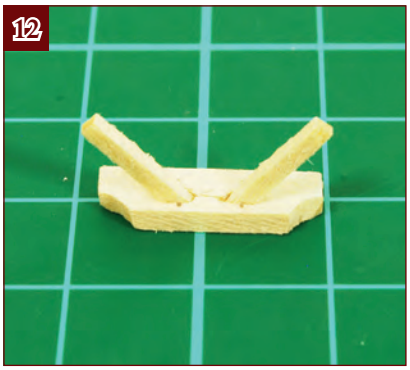


9. Paint the belaying pins black and glue them in place in the centre pin rails. Additional belaying pins will be supplied for the bulwark pin rails in a future stage.

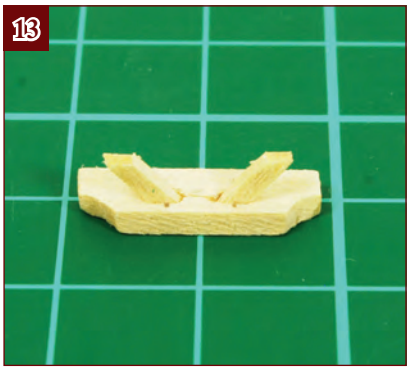
10. To make the staghorns, cut 16-mm lengths of 2 x 5-mm wood. Scallop the corners by cutting them off at 45 degrees with a knife, then sanding the corners concave using a piece of sandpaper wrapped around the handle of a small paint brush. Then mark the position of the two holes, one-third and two-thirds of the way along and 3.5 mm from the inside edge.



11. Drill 1.5-mm holes at an angle of about 45 degrees.



12. Insert about 10 mm of 1.5-mm square wood. Sand the corners off one end of the wood to make it easier to insert. Glue it in position, cut the bottom flush, and then add a second piece of wood.

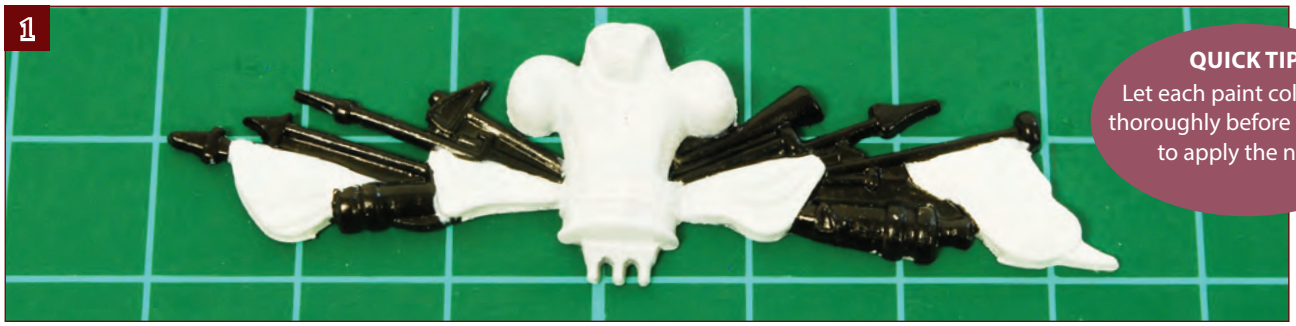


13. When the glue has set, cut the strips parallel with the base, leaving pegs that are 3 mm long. Repeat steps 10 to 13 to make a second cleat.

14. Stain these dark oak, or paint them black. We will fit these after the cannonballs have been added to the shot garlands.

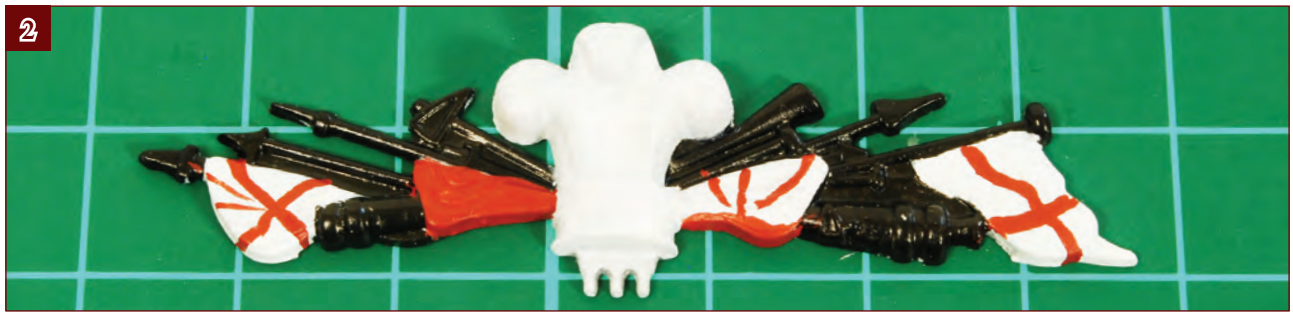
Painting the stern decoration

***Victory*'s trophy of arms includes numerous small details. Painting them in colour gives an excellent finish but takes some time to do, and needs a steady hand, so you may prefer to paint the entire casting gold.**

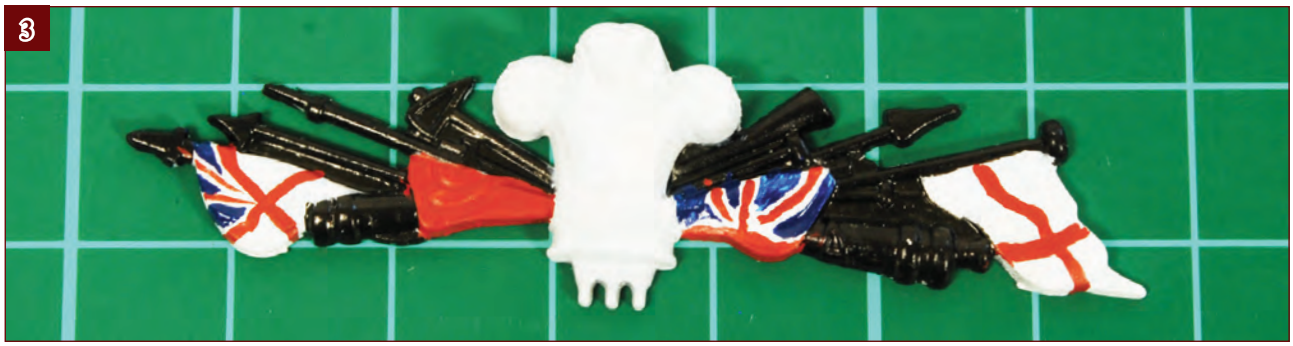


QUICK TIP
Let each paint colour dry thoroughly before you start to apply the next.

1. Take the casting supplied in Stage 83. Spray it with a coat of automotive primer, and then give it a coat of white paint. Next, paint the black parts as shown. You will need a fine brush, and a steady hand. Leave the fleur-de-lys and flags white.



2. Use a very fine brush to add the red crosses to the White Ensign, admiral's flag, the Union Flag and the St. George's Cross.

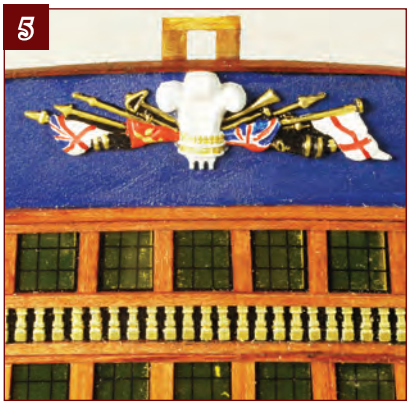


3. Add blue to the White Ensign and the Union Flag. Leave a thin white border between the blue and the red.

4

4. Add the gold highlights to the red flag, the flag posts, spears, trumpets, cannons, etc. and the bands round the fleur-de-lys.

5



5. Use superglue to fix the trophy to the top of the stern as shown. If there are gaps under it because of the curve of the gallery, do not try to bend the casting, as it is likely to break rather than bend.

6

6. Take a piece of the 1.5-mm square wood supplied with Stage 83 and curve it to fit under the trophy, ending just before the last window on each side. Trim the ends to fit on top of the window frames. Leave the strip in place but do not glue it – hold it with a piece of masking tape if it will not stay in position.

7

7. Bend a piece of 1.5-mm square wood to a tight curve as shown. Trim the ends to fit against the end of the curved strip and the top of the uppermost decorative scroll. Repeat to make a matching trim for the other side.

8

8. Stain these pieces walnut and glue them in position.

Lining the gallery

This only applies to the painted version. The natural version does not need any further finishing.

1. Follow the Painting the Stern Decoration steps, but paint the strips yellow ochre rather than staining them.

2. Use a fine (000 size) brush to paint the frames surrounding the rows of windows yellow ochre. You should also over-paint the balusters yellow ochre.

3. Line the edges of the gallery, the strip below the window frames and the strip above the stern gun ports.

4. Use the 1-mm-wide micro masking tape that was used for the barrel bands in Stage 19. Paint it yellow and apply strips to represent the vertical window frames.

5. An alternative to fitting the masking tape frames is to paint the vertical strips of wood yellow ochre.

6. Repeat Steps 2 to 4 on the sides of the galleries, noting carefully where the masking tape strips are fitted.

7. Carefully fill in the lower forward panels with yellow ochre.

BUILD LORD NELSON'S HMS VICTORY

Coming in Pack 10

Stages 91-100 add the davits, hammock nets and hammocks, and begin fitting the sails.

Adding the hammock nets and hammocks

Adding the davits

Begin fitting the sails