

Chapter Eleven **Inboard Bulwarks and Carronades**

Now that the bulk of the work is completed on the exterior of the hull you can start on the inboard details. But before you start any actual construction this would be the perfect time to draw some reference marks on deck for the positions of the hatches, masts and other fittings. To do so, simply take a photocopy of the deck layout from Plan sheet one and cut out the hatches, mast locations and other shapes. This will create a stencil that will make it easy for you to transfer their locations. Leave the hatch coamings on the stencil only removing the gratings as this will be the way the construction will be described on the prototype. See the photo above for details. Line up the stencil with the opening you created for the companionway in order to establish its proper position. Be careful to also position the stencil along the center line of the deck. Then just trace the openings directly onto the deck with a pencil. It is better to do this now before you start rigging the guns and crowding the deck with other fittings.

With your reference marks completed you can start adding those details to the inboard side of the bulwarks. The swivel brackets for the carronades can be added first. These will be 1/16" thick and are laser cut for you. You can see in the photo provided that each bracket was glued into position so they are level with the gun port sills. This will leave a small amount space under each of them. They do not sit directly on the deck. This feature would have slowed the eventual rotting of these supports because it allowed air to circulate under them. You will also notice in the photo that a small round slot is shown on each bracket. This hole was where the pin of the carronade sled would have been inserted. It would allow the sled to be pivoted in either direction, side-to-side. Since this is a static model we won't

actually be creating the sleds with these pins. They were added to help you center the brackets within each port opening and to also help in establishing the correct placement of the carronade sleds on top of them. You will actually just be gluing the sleds permanently to the top of these brackets.

Fill in any gaps between the brackets and the sill with wood filler and sand them smooth. Paint them red as shown. The aft-most port and bridle ports will not have a swivel bracket as shown on the plans.

The pin rails are also 1/16" thick. They vary in length according to their purpose and placement along the bulwarks. Use the plans as a guide to shape them. You can use a strip of 1/16" x 1/8" basswood for most of them but those along the curved bow will need to be cut from a basswood sheet. The "actual" pin rails would have been





around 3" thick. This would be better represented if 1/32" thick rails were used on the model. However using such thin pin rails on the model would increase the possibility that they would break or pull free from the bulwarks. If you are concerned about the actual scale appearance of these fittings and want to go thinner, then you could sand the thicker rails a little bit, but 1/32" thick is probably too fragile to use. Either way, you should pin the rails into the bulwarks for added security. Simply drill a couple of holes along the edge of the rail and insert a length of wire or a wooden dowel into them. Make the pins long enough that 1/16" of each pin can be inserted into a corresponding hole drilled into the bulwarks.

Belaying pins are inserted into the holes you will drill along each pin rail. These holes are approximately 1mm in diameter. The belaying pins can be painted black or made to look like wood. The choice is yours. Use the belaying plan to find the locations for the pins. You only need to place them where a rigging line will eventually be belayed. A few others can be shown but you don't really need to fill every rail with pins. See the photos throughout this chapter.

In order to finish up the bulwark details many eye bolts and cleats need to be glued into position. Use the inboard plan to find the locations for them. There are two sizes of cleats (5mm and 10mm). Those shown over the aft-most port and bridle port can be made even smaller. The cleats can also be pinned into the bulwarks for added strength. Paint them black, red or to look like wood. The choice is



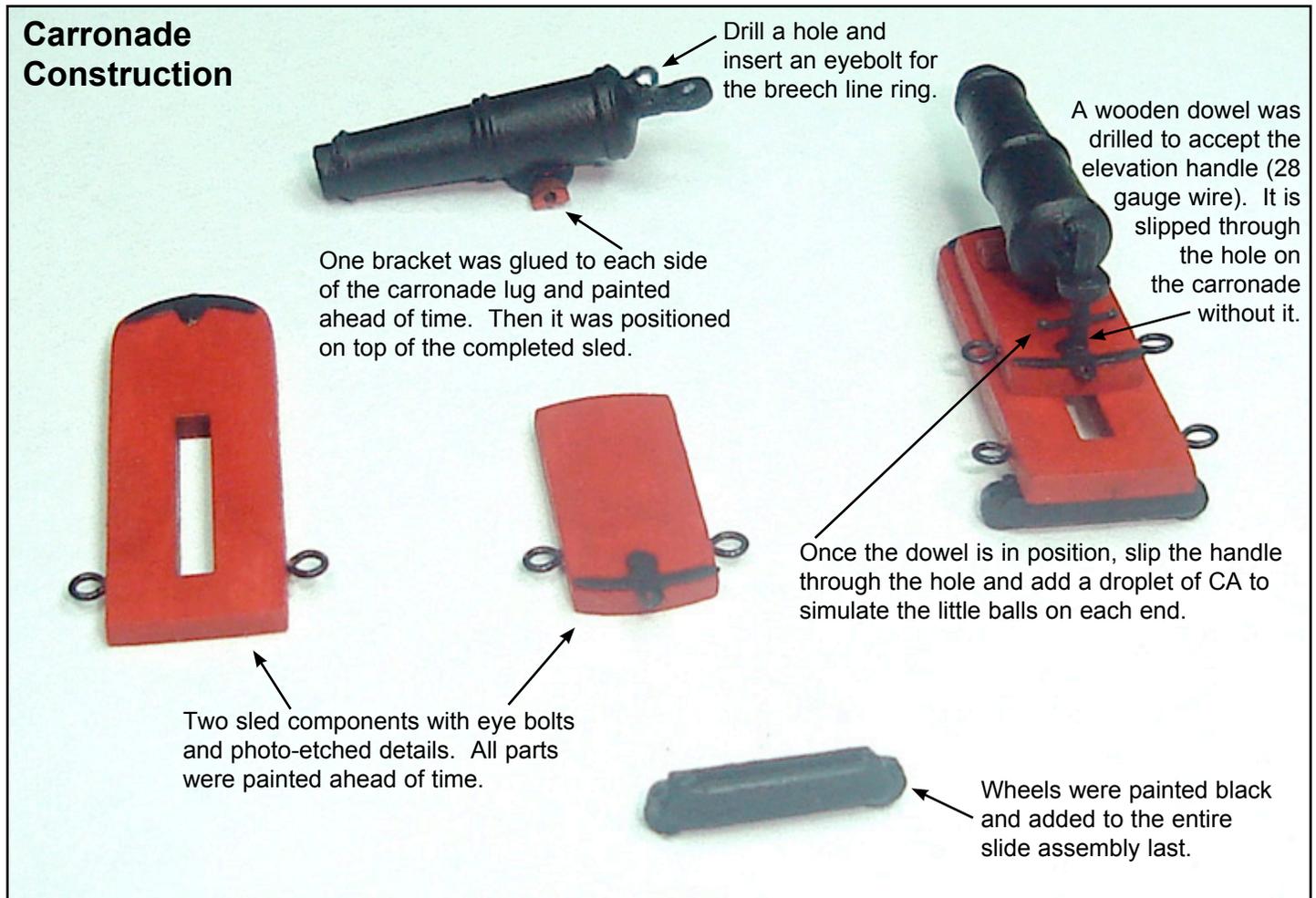
up to you. Here is one note about those cleats over the bridle port and aft-most port. There are two plausible ways to model them. The rigging line used to open and close those port lids could have led through a hole in the bulwarks or they could have simply ran this line over the rail. The location for these cleats will depend on which method you ultimately choose. If you decide to run the line through the bulwarks, the hole should be drilled directly above each port. The cleat would then have to be moved to either side of this hole accordingly. But if you plan to show this line seized to the eyebolt of the lid and run over the cap rail, the cleat can be centered above the port opening inboard. Both scenarios are equally plausible and you can choose which method appeals to you most.

The inboard side of the stern requires much of the same detailing. There are more eye bolts and cleats to add which are shown on the belaying plan. In addition to these, there is the traveler for the boom sheet. This is the bar above the rudder head. It was made from 22 gauge wire and glued into pre-drilled holes. A 1/8" double block was then stropped to it as shown in the photo provided.

Carronade Construction...There were sixteen 24lb carronades on the Syren when launched. Paint the carronades black and set them aside while building the sleds for them. Drill a hole in the arse end of the carronades for the breech line ring. The metal casting is very soft and this should not be difficult to do. Then insert an eye bolt into the hole which will simulate the breech line ring. You will need to shorten the tail of the eyebolt since only a short



Carronade Construction



piece is needed. Glue the eye bolt in position before you paint them.

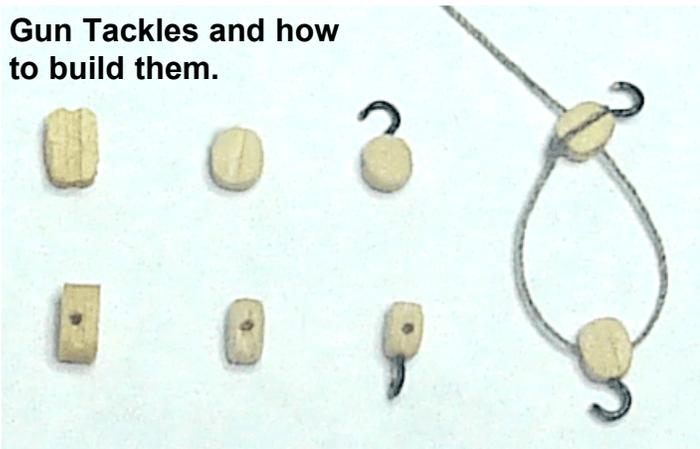
The sleds for the carronades have two major components. There was a longer base which has a slot for the smaller carronade mount to slide on top of. Both will be 1/16" thick on the model. Paint both of these elements red. Before you glue the carronade mount on top of its base, glue the four eye bolts and photo etched details to them. These features are painted black as shown in the photo provided. These two pieces can now be glued together. Set them aside for the moment.

On the bottom of each carronade you will see the "lug". This was used to secure the carronade to the sled. It was placed between two brackets on the sled and a pin was run through all three. The brackets are laser cut from 1/16" thick basswood. You don't have to show this pin,

but in the end the level of detail you decide to model is up to you. It will depend on your level of experience and how comfortable you are working with such small parts. It is much easier to glue these two brackets to each side of the carronade lug first. Then glue the carronade to the top of the sled. But before you do this, take each carronade and test it in each port opening to check its height. The carronade muzzle should be centered within the port opening



Gun Tackles and how to build them.



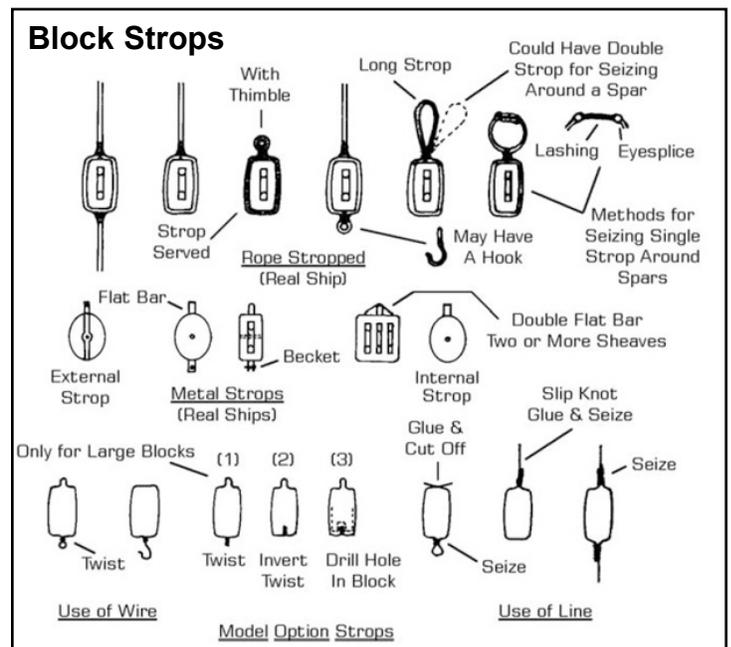
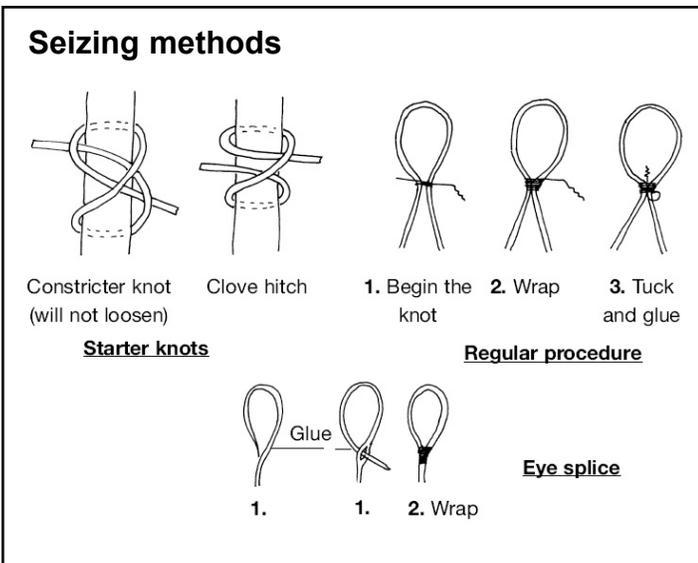
or nearly so. Place the sled temporarily into position and hold the carronade on top so you can see how it looks. If the carronade sits too high in the port opening then simply sand the bottom of the lug until it looks right. Then you can glue the brackets on either side of the lug and then glue the carronade to the top of the sled. Be careful to line up the carronade so the elevation screw will be positioned directly over the photo etched plate on the sled. See the photos for details. We will create the elevation screw next but the carronade should be glued into position on the sled first.

To complete the entire carronade assembly a few details remain. The carronade was elevated with the use of a screw. The screw passed through a threaded hole at the back of the carronade and rested on an iron plate. The screw was turned using small handles that extended out from the base of the screw. You can see these details on the plans and in the corresponding photos.

To simulate the elevation screw you can use a small wooden dowel or toothpick cut to length. Shape it until it fits through the ring on the carronade and sits comfortably on the photo etched plate. But don't glue it into position just yet. Drill a small hole through the elevation screw at its base. We will insert a small length of 28 gauge black wire through this hole to simulate the handle of the eleva-

tion screw. But this must be added only after the screw is glued into position on the carronade. After you drill the hole go ahead and glue the screw on the carronade assembly. Then insert the 28 gauge wire into position by pushing it through that hole. These are quite small so you might need to use a set of tweezers. Finally, to simulate the "ball-like" handles on the end of the wire a droplet of super glue was added and left to dry completely before painting. These droplets of CA can be added with the help of an applicator. The applicator can be something as simple as a tip of another length of wire or awl. Just touch the end of the handle with the applicator until a droplet of glue is transferred onto its end. Don't touch it too often as it will ruin the perfectly circular shape of the droplet as the glue dries.

The final detail for the sleds would be to add the casters or wheels to the bottom of the inboard side. See the photo provided. When the carronade assemblies are finished you can glue them into position on the model.





Rigging the Carronades...

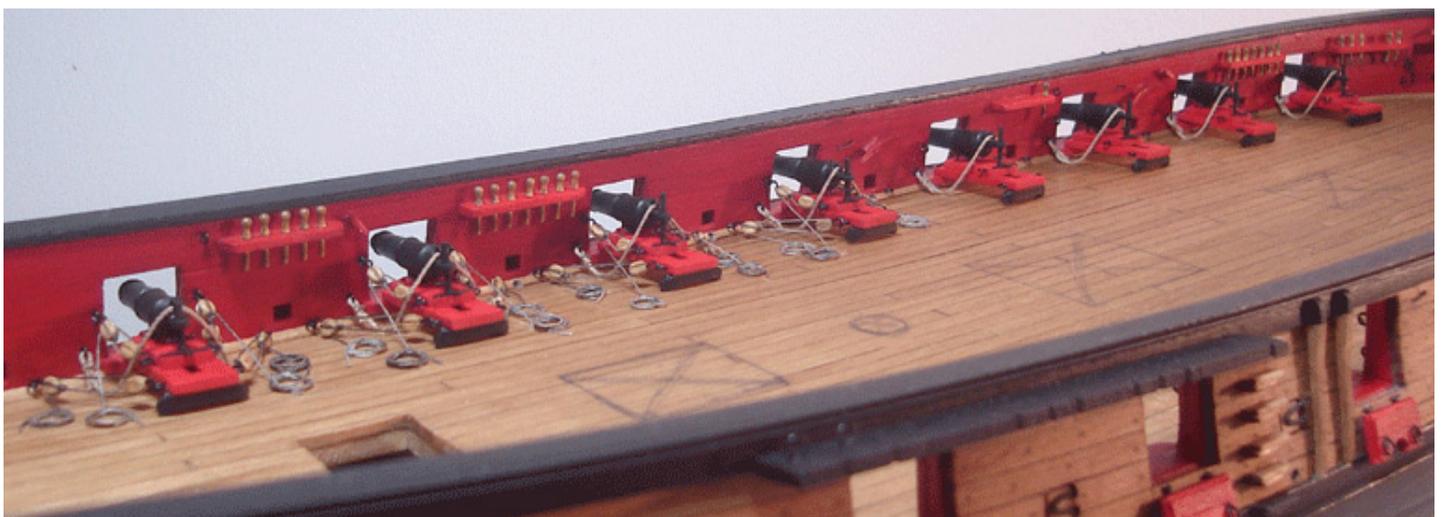
Before you start rigging the breech lines and tackles for the carronades please note that many options exist. At 3/16" scale, rigging all of the details as they would exist on the real ship becomes difficult. Depending on your skill level you may opt to omit some features. For example, you may only want to show the breech lines for the carronades and not the tackles. If you do decide to rig the tackles, maybe you will do so without the hooks shown on the prototype. Rather than actually seize the lines to the blocks or stop them according to actual practices, maybe a simple overhand knot will do. Read through these instructions carefully and then decide on just how much detailing you "can" or "want to" show.

The breech lines were completed first. These are the heavier ropes that secured the carronade after it was fired. Tan .028 rigging was used for the breech ropes. One end is seized to the lower eye bolt on each side of the port opening. Then it was taken through the ring on the carronade and set up similarly to the other side. But before seizing the other side of the line, attempts were made to make the breech line hang properly. At this scale they will have a tendency to flip up rather than hang naturally. The breech line should not be pulled tight. Instead it should be left slack if the guns are run out. So in order to make them hang naturally, a drop of glue was used to secure

them to the deck. This was done on one side of the carronade before the other was even seized to the eye bolt along the bulwarks. After one side is secured and hanging properly it is easier to establish the correct length and "slackness" of the breech line on the remaining side.

Tackles were used to pivot the carronade sleds from side to side. Another tackle (the outhaul) was used to pull the cannons into firing position. Two pairs of these are used on each carronade. This means you will need to create four tackles for each gun and a total 64 tackles in order to rig them all. Each tackle has two 3/32" single blocks with hooks stropped to each of them (128 blocks in all).

The typical "kit block" is somewhat square. The actual blocks were rounded and those supplied can be modified accordingly. This is of course optional since it isn't very enjoyable to sand blocks this small to their proper shape. But the difference will be noticeable. Whatever you decide, a small hook is shaped out of 28 gauge wire using needle nosed pliers. These hooks were glued into pre-drilled holes on one end of each single block. Use the end of the block that has the sheave hole closest to it. This is how it was done on the prototype but other methods can be used depending on your level of experience. As mentioned earlier, 128 blocks should be set up this way. Seize a generous length of .008 tan rigging line around one of those blocks. (See the photo provided) A



simple knot could also be used. Run the loose end of the line through another hooked block and then back through the sheave of the first one. This will complete your tackle which is now ready to be rigged on your model. Pay close attention to the direction of each hook on the tackles. It will make a big difference with how easy it will be to rig them. Although simulated, these are actually working tackles. Take a look at the photos that follow. Hook the tackle to the eye bolts along the bulwarks first and then use a tweezers to hook the other end to the eye bolts on the carronade sleds. Pull the tackles to tighten them up (remember they actually work). Then apply a drop of glue to the block on the bulwarks to hold the tension. Finally, the running end of each tackle can be cut so you can glue it

to the deck. A small rope coil is made and glued on top of this to finish it off. Once again...examine all of the photos and take your time. Rigging the carronades is not a task that can be completed quickly. But it is easier to do now before any other deck structures make it more difficult. The deck is wide open and getting those tweezers into those tight spots will be easier. It is best to finish them all up now before moving ahead to the next chapter. Please note that the last two photos in this chapter show four carronades rigged with tackles and four rigged without them. Only the breech line is shown on the later. This was done to help you decide whether or not you want to rig the tackles. As always, the choice is yours.

KNOTS FOR SHIP MODELS

