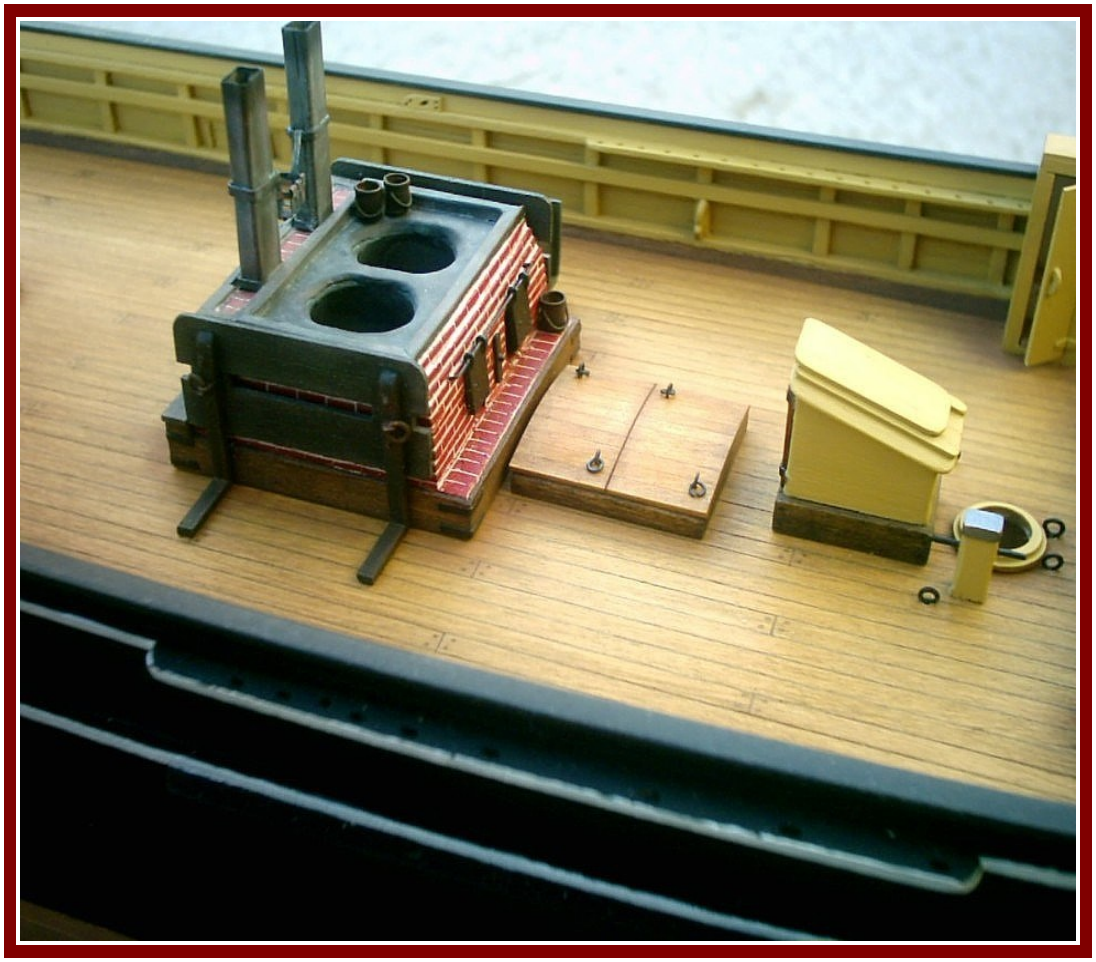
A Guide to Scratch-building the Tryworks for Model Shipways Charles W. Morgan kit (Scale 1:64)

Written by Gerald Spargo and ed. by NRG staff



Introduction

When I started building the Charles W. Morgan, my original plan was to build it just the way the plans instructed. Well that didn't happen. The first deck furniture I built was the tryworks. I started building it by the instructions given. Then decided that it should not be too difficult to build it brick-by-brick just like the original. It turned out quite well so thought I would draw up some plans and instructions and let others have a try at it. These instructions can also be applied to any whaling ship. One will just have to scale the plans to fit.

Building the Base

Two sheets of thin basswood (1/32” x 2” x 24”) are supplied in the kit. The plans call for the base to be completely made from this 1/32” sheet but I used 1/16” basswood sheet for the Floor Base and the 1/32” sheet for the rest of the base structure to prevent running out of the 1/32” material for later construction.

First, cut all four sides and corner braces. The outside dimension of the base is 1 ¾” square. See Diagram 1. Glue the four sides and the corner braces together, keeping the four sides square while the assembly dries. Next, cut the floor base to fit within the sides and install it 0.02” below the top edge of the base. This allows the first row of bricks to be half their vertical dimension above the frame.

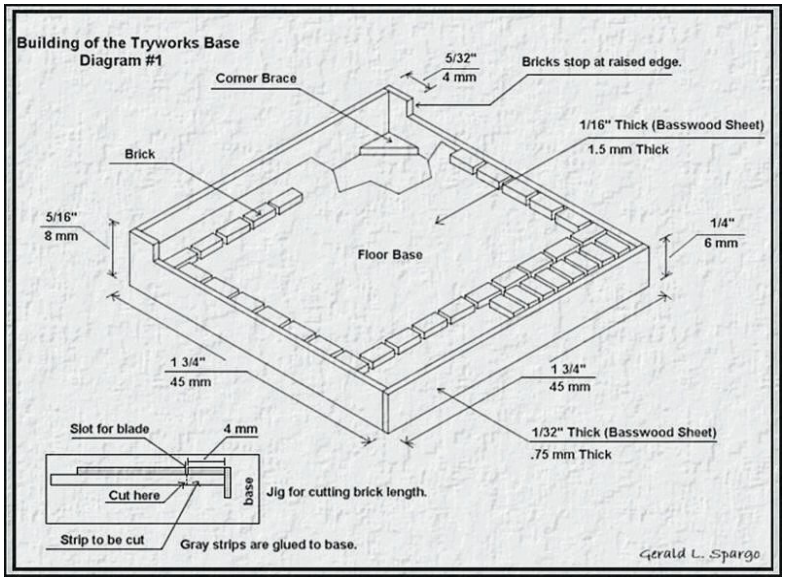


Diagram1

Now it is time to cut the bricks. It required approximately 450 brick to build the tryworks. Full scale bricks measure 2 ½” x 5” x 10”. In 1:64 scale that is approximately 0.04” x 0.08” x 0.20”. There are no strips this size in the kit. You can either mill your own strips or take 1/16”x 3/32” strips suppled in the kit and sand them down to the correct size. To cut them to the correct length (0.20”), I used a Chopper. Regardless of what you use to cut the bricks, you will need to set up some way of cutting these to length and square. In Diagram 1 is a drawing for the jig I used to do this. Once you have the jig set up, all the bricks will be cut to the same length.

Card stock is to be used for spacing in between the bricks. Have plenty on hand because it does not take long for the piece of card to get glue built up on it. The thicker the layer of glue on the card, the wider the spaces between the bricks become. Once the bricks are cut, the first ones to be laid are the front row. The bricks will rise above the top edge of the base. For this row you will need to sand the bricks down to be flush with this edge. Remember also that the front row has a space between the baseboard and the brick. Once the front row is finished you can lay the first layer of brick around the inside of the base, right up against the baseboard. Do not sand these bricks flush. The back part of the base where it rises in height, does not get any bricks; it is left open for now.

Brick-by-Brick

Now that the base is complete, you can start laying the brick. Initially we will only lay seven rows of bricks. The bricks are 0.08” wide, so in order to get the spacing between the bricks, card-stock cut into 0.04” strips will be glued to the back half of the rows of brick, as shown in diagram #2, leaving a 0.04” gap in front of it. These strips are only glued to the top surface. There is no need to leave the strips in the end spaces. Make sure the rows run straight up and down. Work on one row at a time because you may need to do some light sanding to make the bricks flush on top. They do not necessarily need to be perfectly flush on the outer surface. If it is too perfect it will not look realistic. You will find that as you build these walls, they are very fragile, so be very, very careful.

Refer to Diagrams 2 and 3 and Photograph 1 as you lay the front rows. From corner to door opening should be ½”. The door openings should be 0.2”. Because of the spacing between the openings, I did not continue with the same bricklaying arrangement in-between the openings as I did on the outer sides. A spacer was added to make up the difference as seen in the Diagrams.

Once row 7 is finished, the wall will be close to 0.35” tall. Use a piece of 1/64” x 1/16” brass strip supplied in the kit to form the top and sides of the doorway. Blacken or paint the brass to simulate iron. The top of the strip should be flush with the 7th row of brick. After the brass strips are in place, lay another row of brick.

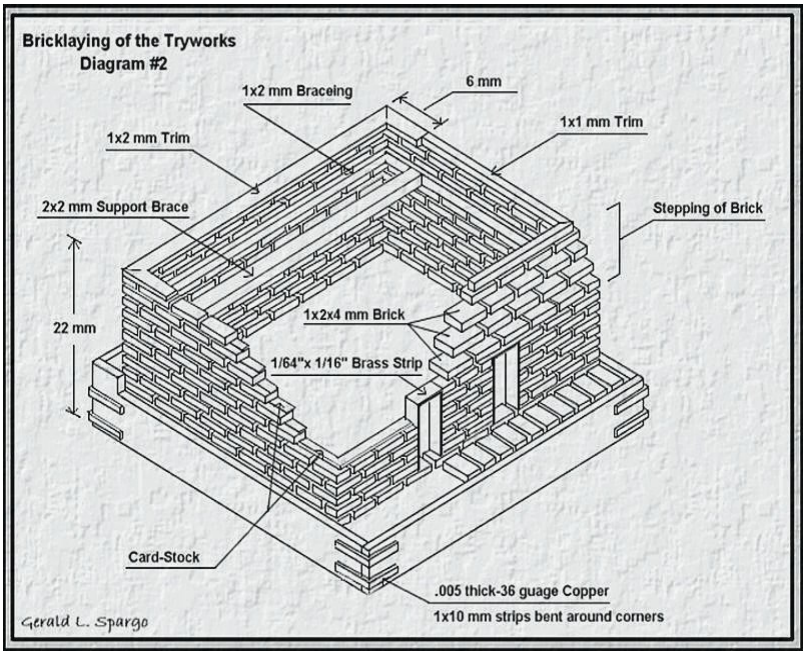


Diagram 2

Now things begin to change slightly. As you can see in Diagram 2 and Photograph 2, the next three rows of brick in the front, are 1/8” wide instead of 0.08”. The reason for this is that, the top four rows of brick step back 0.04” in each successive row. We still need that 0.04” space in front, so we need to make these bricks wider to accommodate for it. You will also have to accommodate for this setback on the sides. The very top row will be “normal”.

Now we must prepare for the top plate. On the inside of the walls there is to be a 0.04” x 0.02” (1 x 2 mm) strip glued to the second row of brick from the top. Make a mark from the inside surface of the back wall inward 1/8”. Place a 0.08” x 0.08” support brace at this mark. This will support two different sections on the top. You should be able to lay a brick from the back wall to the middle of the support brace and still have enough room left over to support the top plate.

Once the braces are in place, use an old paintbrush and apply a coat of carpenter’s glue on the inside surface of the walls, making sure you do not close up the outside gaps. After the glue dries, paint the inside lower half black. Believe me you’ll be glad you did this ahead of time. Now lay the top row of brick on the support braces, being sure to space them properly. If done correctly, the holes for the smoke stacks will automatically be in the right place.

Cut the top plate to fit inside the remaining opening in the top using the 1/16” thick sheet of basswood but do not glue it in place yet. Next glue the four cauldron halves together and then glue the two cauldrons to each other. Turn the cauldrons upside down and center them on the top plate. Trace around them to get the cutout line. When you cut the opening in the top plate for the cauldrons, cut it at an inward and downward angle so they will not fall through the opening. Once you are happy with the fit, glue the cauldrons to the plate. If it will make you feel more secure, you can glue footpads to the floor base for the cauldrons to rest on when put in place, make sure you paint these black. When you are satisfied with the appearance, glue the top plate in place. 0.04” square trim sits on top of the brick around the top plate and the back edge of the plate; 0.04” x 0.08” trim sits on the back and sides of the back row of brick, as shown in the top view in Diagram 3.

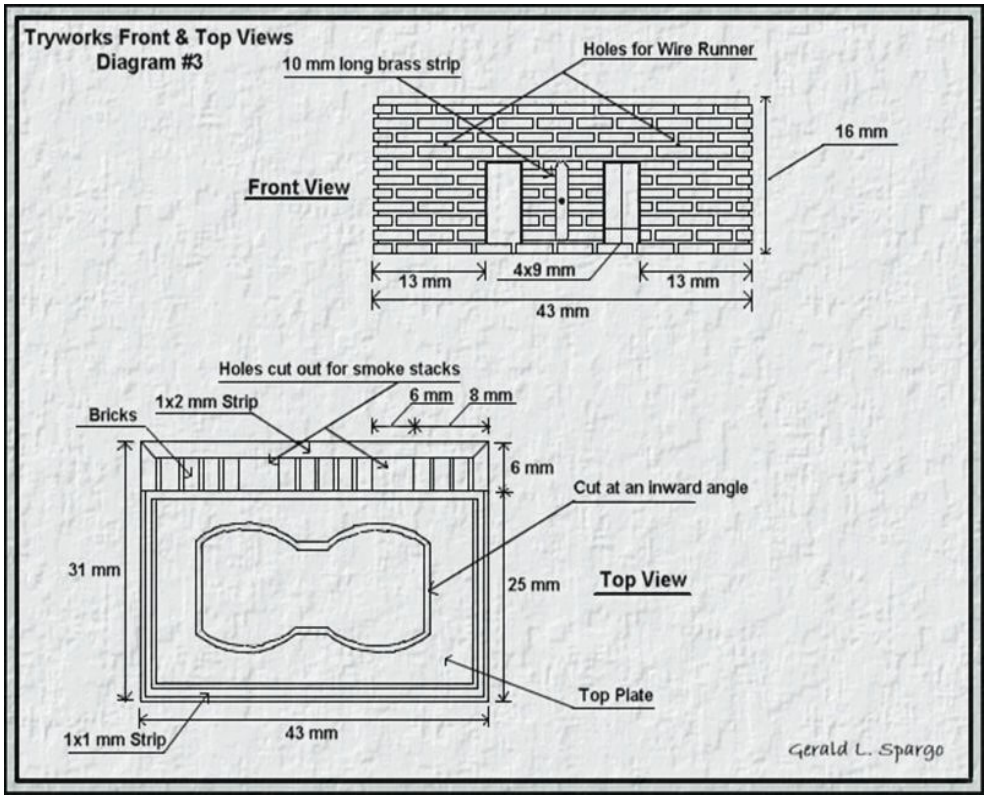


Diagram 3

Finishing it up:

Mortar - Now it is time to fill in the gaps between the bricks, simulating mortar. But, before you can do that, you need to stain the baseboards walnut and paint the brick. I suggest using enamel paint for this. I used acrylic and regretted it. After the brick has been painted and allowed to thoroughly dry, use Spackle to fill in the gaps, wiping off the excess. After the Spackle is dry, paint the trim around the top row of brick iron black. Add the lid to the back-duck pen and either paint or stain it.

Chimneys - You can either use the kit-supplied chimneys or scratch build them. I built mine using .005" thick 36-gauge copper sheet. Cut strips 1 5/8" long and at least ¾" wide. These should extend all the way to the base of the tryworks with ¾" sticking out the top. Cut four 0.08" strips from the copper sheet. Wrap one of these around the stack just above the bricks and another one halfway up. A note about the upper strip; if you want to make and include the basket that hangs in between the stacks, then you need to leave a gap big enough for the copper to fit between the stack and the trim.

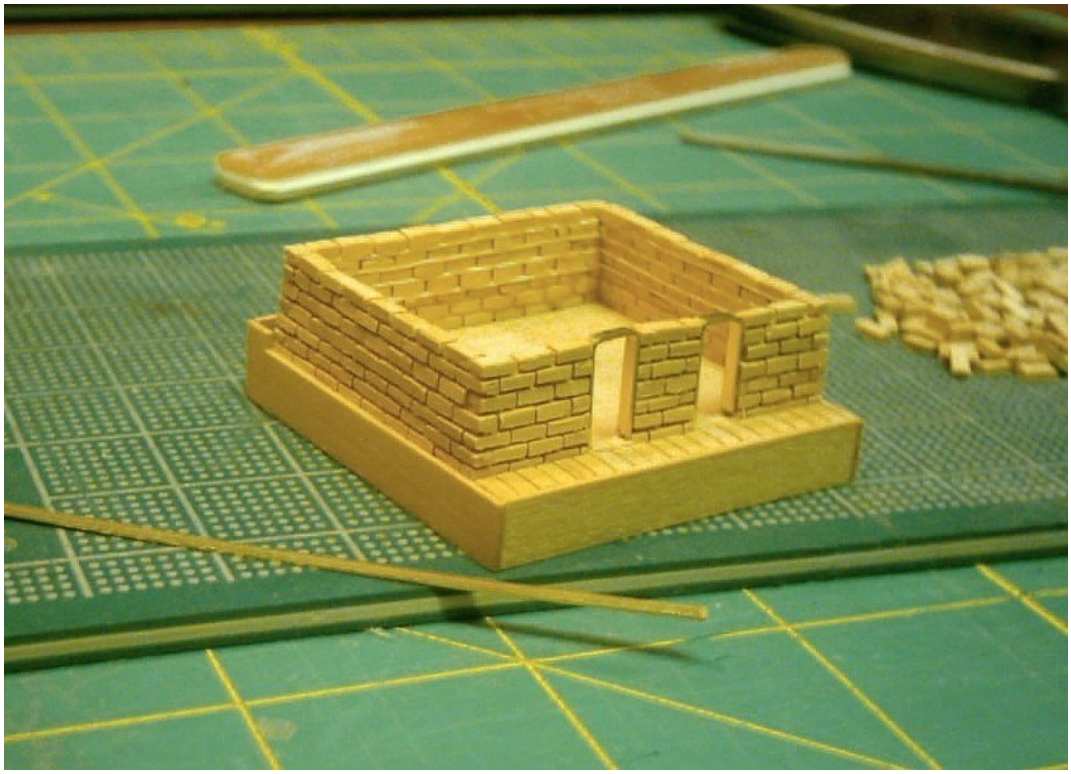
The copper stacks and strips are cleaned of any fingerprints and then heated over a flame to turn them a worn out black. Alternatively, they could be blackened with liver of sulfur. Wrap the large copper strips around a piece of wood 1/8"x 3/16". Although not the best way to do this, I glued the chimneys together with CA glue. If the stack has been formed well enough, it will not come apart as it is held in place by being inserted into the tryworks. Wrap the narrow strips at the appropriate locations and use CA glue or epoxy to secure them in place. After you make the smokestacks set them aside.

Fire Doors - Drill holes in the door tabs for small wire to fit though. Cut a thin piece of wire long enough to be bent at the ends and fitted through the holes on the front of the tryworks, as shown in Diagram 3. Put the doors on the wire before bending both ends. Glue the wire into the holes, allowing it to stick out far enough for the doors to hang naturally. You can either show the doors open or closed.

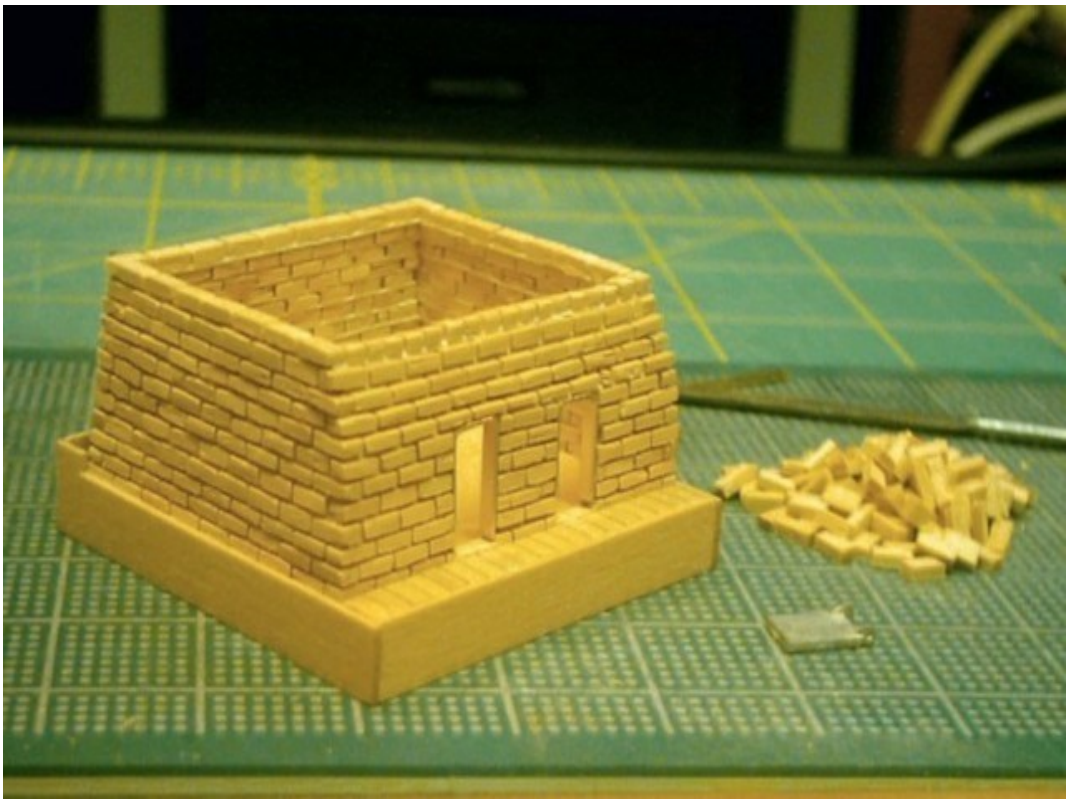
Top Plate - You can either paint this area black or copper or, as I did, use a piece of copper sheet. If scratch built your chimneys, then I suggest applying real copper to the top plate. All you need to do is cut a piece of copper to lay on top of the plate, with the hole, cutout for the cauldrons. You should also make copper covers for the trim around the top plate. Blacken them the same way as done for the chimneys and glue them, along with the chimneys, in place. Add the corner strips to the baseboards.

Basket - There is a small basket that hangs between the smoke stacks. This is made up of little strips of 0.04" copper. Take a strip and bend it into a 0.02" square, forming the rim. To form the basket itself, take three strips and form a three-sided rectangle, with the sides long enough to wrap around the fore and aft sides of the rim and have a basket depth of 0.02". Take a fourth strip and bring it under the other three strips and run it inside the port and starboard sides of the rim. This fourth strip is then hooked into the gaps that were left in the chimney trim, suspending the basket from the chimney. See Photograph 3.

Build Photographs



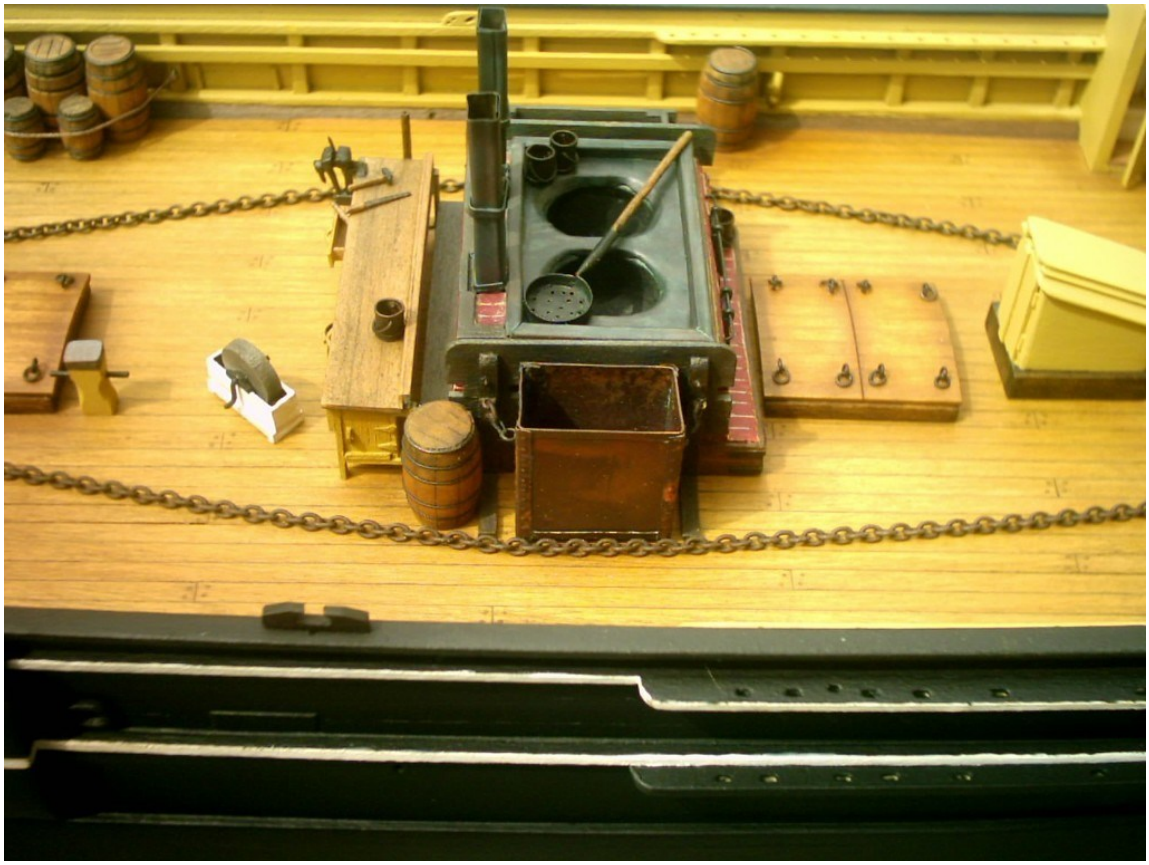
Photograph 1



Photograph 2

Photograph 3

Photograph 4



Photograph 5