

A look at the square tuck on the original draft. Note the vertical planking.

Chapter Five

Finishing the Square Tuck...Finishing the External Planking

Before I moved ahead to the bottom belt of planking, I thought it would be easier to complete the square tuck first. My thinking was that it would be easier to position the first plank in that second belt if the square tuck framing was in place.

To begin, we will be completing the frame of the square tuck. This was done in several steps. To give you an idea of what the square tuck looks like on the contemporary model in the Rogers Collection, see the image above right.

I started by adding a 1/8" thick by 7/32" wide strip down the center of the square tuck. This strip divided the square tuck into two halves port and starboard. It was essentially the same width as the keel and stern post.



The rabbet strip should be flush with the outside of this strip so the stern post will sit flush against both later in the project. You can see this strip in the image below.

Also shown in that photo is the second piece of the square tuck framing. This timber represents the top of the square tuck frame. I took a piece of 1/8" thick boxwood and shaped one edge so it fit snug against the lower counter. It should be flush with the lower counter planking or nearly so. Once we are finished with the square tuck we can sand it down so it is perfectly flush.

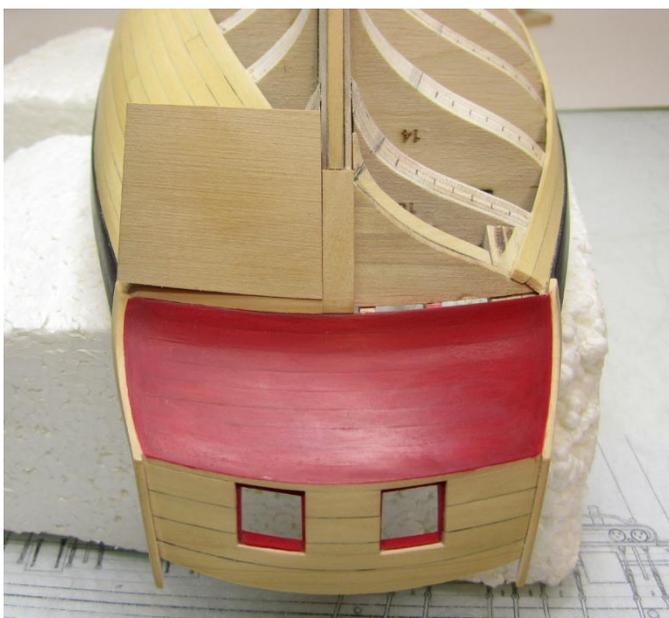


This strip was extra wide so after establishing the curve to match the counter shape, I could draw

another line that references the timber at 1/8" wide. You can see my reference line in the photo. I removed the piece and cut it to its final shape. Then repeat the process for the other side. After gluing this timber in position, sand the outside end to be flush with the external planking. Below.



The final piece of square tuck framing is a bit tricky. Hold a piece of 1/8" thick sheet against the square tuck. You need to first create the same curve so it sits snug against the timber you just finished. It also needs to sit flush against the center strip, see below.



Then take a pencil and trace the shape of the hull on the other side as it sits against the hull. You can see my reference line below after removing the piece.



Cut it out with your scroll saw. You can make it slightly over-sized at this point. Here is the tricky part. Go ahead and glue this to the square tuck...but not permanently. You need to be able to remove it after you fair it. I did this by adding just one or two drops of CA to the square tuck. It was just enough to hold it securely but still allow me to pry it off after I was done.



With this piece temporarily glued in place, fair its edge to the hull planking. You can see this has been completed in that same photo on the previous page. With its true shape now defined, draw another reference line along the edge so you have the last timber measured at $1/8$ " wide.

Cut this with you scroll saw and smooth out the edge. You are now ready to glue the final frame piece to the hull permanently. Clean it all up with some sandpaper and trim the bottom as shown in the photo below. Another angle is shown top right. You can now see how it will be easier to add that first plank in the second belt of hull planking.



The square tuck planking can be seen below after I completed one side.

You can repeat the process on the other side or do as I did and take a break from the square tuck to complete the second belt of planking on this side first. Note that there are five planks inside the frame just as it was shown on the original draft.



All that remains is to plank inside the frame. The planking is vertical and I started against the middle strip. The planking is $1/8$ " thick by $3/16$ " wide.

I simulated the tarred seams with a pencil just like I did on all of the hull planking. These small pieces need to be cut and added carefully. There are some funky angles needed and some trial and error was used. Slowly adjusting the ends to create the proper angles, test each plank in place periodically so it fits snug and tight before you glue it on permanently.





Finishing the Final Belt of External Planking

To finish the bottom belt of planking it is just a matter of lining off the hull as you did for the first belt. Use a tick strip and your planking fan to divide up the space at every bulkhead edge. You will need to break up each bulkhead to fit ten remaining strakes. Your last strake is the garboard plank. This is the plank that sits along the keel. If your math doesn't work out evenly at mid ship to make ten $3/16'$ wide strakes, it would be ok to make this garboard plank a little wider. I actually used a $7/32''$ wide strip for the garboard at mid ship.

Note in the photo above where the fore end of the garboard begins. It is tapered to a point and starts just a bit forward of the scarf joint of the keel and stem. This is important. If your garboard is too far forward then your hull strakes will need to taper too much in order to fit properly along the stem. If it is started too far back, the opposite is true. Carefully plan this out while lining of the

remaining belt of strakes. The strakes at the stern along the stern post will get a bit wider than $3/16''$.





When the second belt has been completed on both sides of the hull along with the square tuck, you can add the stern post. The shape of the stern post can be found on sheet one of the plans. I used a soft pencil to darken the inside edge. You can see the darkened seam between the stern post and the planking above. Carefully shape and adjust the inside edge so it fits snug against the planking and square tuck with no gaps between the two.

Time to treenail...

This would be a good time to treenail the hull planking and square tuck planking. The treenail pattern is shown on the plans. I prefer to simulate the treenails rather than go through the whole bamboo/drawplate ordeal. To simulate the treenails as I have done, follow these steps.

A # 78 size drill bit was used to drill all of the holes for the treenails.

- Drill the holes for all of the treenails following the pattern shown on the plans.

- Sand the area smooth

- use a sharp awl and GENTLY insert into each. Dont push it too hard or you will distort the hole shape.

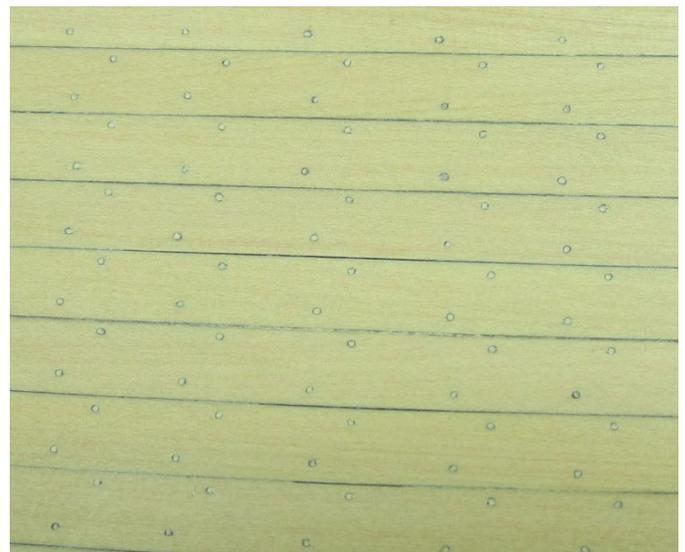
- Take a very, very, very sharp #2 pencil. Insert point into each hole and twist lightly. You must keep a sharp point and sharpen the pencil every ten or so holes. Use one of those cheap kids pencil sharpeners. A battery operated version is a great time saver.

- Then fill each hole with Elmer's wood filler. Scrape off excess with a piece of wood.

- Sand it smooth to get a nice surface.

- Then apply some wipe-on-poly.

Here is a close-up of the treenailing.

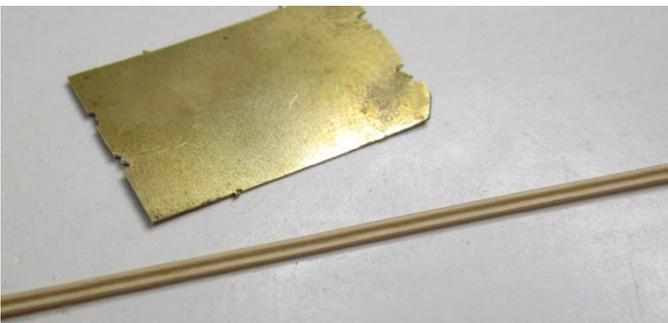




Fancy molding and horse shoe plates...

At this stage I thought it would be good to add the fancy beaded molding and keel plates. The molding was made using the scraper technique. Each strip was started by milling a length of 1/16" x 1/32" boxwood. The actual finished thickness was slightly less than 1/32" thick after the scraping was completed.

I made a scraper with a scrap piece of brass sheet. The profile I decided to use was filed into the edge of the brass sheet.



Several light passes were made across the strip until I was satisfied with the profile of the molding.

There are two molding strips along the side of the hull. I tried to mix it up a bit and created two different profiles. I didn't want the strips identical. You can select any profile you wish. I just picked a simple profile due to the small width of the molding strips. They are not too fancy.

At the bow, only the lower molding strip was added. The small length of the top molding will not be completed until after the hawse plate is positioned above it. There is however one unique detail about the lower molding strip at the bow. It carries onto the stem. See below.



Its best to fit the small "ear" that crosses over onto the stem first. Then add the small length of molding behind it. The tricky part will be matching the beaded profile along the edge of the ear. This was scraped into the edge of the "ear" using the same scraper.

Pictured below is an image of the ear after it was shaped and scraped.



I found it was easier to make a template out of card stock first. Then use the template to cut a slightly over-sized blank. After sanding it so it fits snug against the hull and stem, I scraped the profile to match the beaded molding. The edge that fits along the hull and stem needs to be beveled because of the complex angles involved.

I made two of these at one time using the template so they would match port and starboard.

The stern of the Cutter also has two strips of fancy molding. The same two different profiles were used. These are shown below after being added to the stern below the square tuck and along its top edge.



To complete this chapter, I added the keel plates and horse shoe Plates to the keel as shown on the plans. Normally these are made from thin brass sheet and blackened. Instead I used the laser cut parts available from siren Ship Model Company.

These are cut from "laser board" and were painted to simulate blackened metal.

