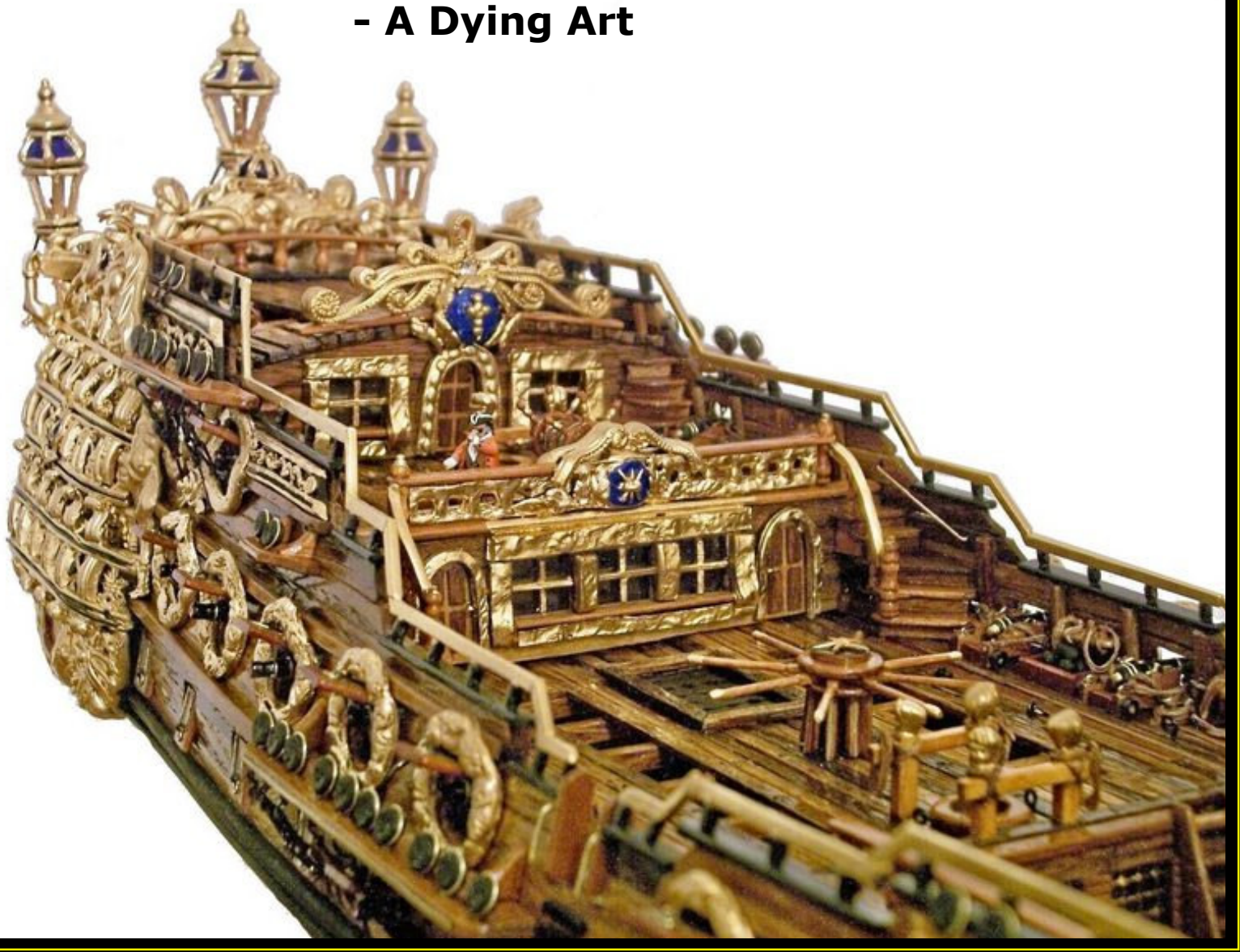
Volume II Issue I

In This Issue



The MSB Journal

The MSB Journal
ISSN 1913-6943

Volume II, Issue I

March 2008

Published by
www.modelshipbuilder.com

Front Cover
Photo
64-gun British Man 'o' War
Den Holmes

How to Contact The MSB Journal

By email:
msbjournal@modelshipbuilder.com

By Snail-Mail
ModelShipBuilder.com
c/o Winston Scoville
5 St. Charles Place RR 5
Clinton, Ontario, N0M 1L0
Canada

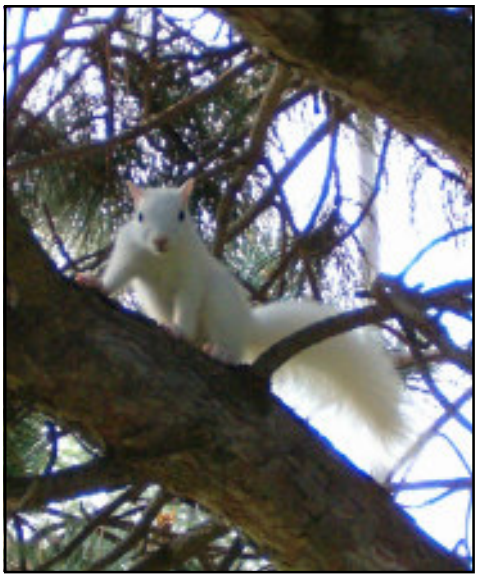
Article / Content Contributions

Please submit all article and content contributions to:

msbjournal@modelshipbuilder.com

In This Issue

Editors Notes



Ever have that strange feeling that you are being observed? I had that feeling this past summer while standing out on the deck BBQing and I was not disappointed. Luckily my camera was at hand and I was able to snap this picture of this rare white squirrel. He seemed quite interested in what I was doing and spent most of the afternoon with me. I wonder if it was the BBQ or the Beer??? :-)

Okay, on to this issue.

This is the first issue of our second year. Wow! It's hard to beleive that a year has gone by so quickly.

This issue we're carrying on with The Matthew Project. It will be coming to a close in the near future and we'll be moving on to the next Project. It's been a long time in the works and we hope that you have been enjoying the articles each month. This is perhaps the most comprehensive coverage I've seen of the building of a model from scratch. We'll soon be announcing information on the availability of a timber kit and plans. They are almost complete.

We have a few new articles for you this issue, one of which we will cover over the next few issues. It was written based on a request from one of our readers.

On that note, while we have had a few people contact us about submitting content for the Journal we'd like to extend that offer to anyone interested. As you know, there's no such thing as enough! :-) So if you would like to contribute material, don't hesitate to contact me at msbjournal@modelshipbuilder.com.

On a personal and sad note I would like to make everyone aware that Mr. Philip Eisnor (a dear friend an my modeling mentor) passed away this past week in Kentville Nova Scotia at the age of 76. I will miss him dearly. You may remember our interview with him in the December 2007 issue of the Journal.

Okay, on with the Journal. Happy Modeling!

Winston Scoville
www.modelshipbuilder.com

P.S. As always, when visiting the site don't forget to visit our sponsors!

Types of Hull Construction

Part I: Solid Hulls

by Gene Bodnar

This series of articles will introduce the beginning ship modeler to the various types of hulls that are available in kits or in scratch-building, explain the methods of constructing each type of hull, and discuss the advantages and disadvantages of building each of them. Hopefully, the beginner will be given some answers to questions like "Where should I start?" and "Where should I go next?"

Basically, there are three general types of hull construction: solid hull, plank-on-bulkhead (POB), and plank-on-frame (POF). However, within each of these types there is a wide variety of options that will be discussed in some detail. Let us start with the solid hull.

There are several methods of building the so-called solid hull model: the half-hull solid, solid hull, lift method, and semi-solid hull.

Half-hull Solid Method

Many modelers concentrate almost exclusively on this method of building a hull. It is a good choice for the modelers who wish to try their first scratch-built model, because its construction can be easily controlled, and it can provide a great deal of experience. Furthermore, the half-hull model can stand by itself as an interesting work of art, especially when attached to a backing and hung on a wall like a painting.

To build the half-hull model measure the length of the hull from the bow to the stern, the width of the hull at its maximum point (usually amidships), and the height of the hull from the top of its keel to its highest point (usuall
at the stern). Obtain a block of wood based on your measurements. For the beginner I would recommend basswood, which is an easy wood to work with, especially for a first attempt, but any close-grained wood may be used.

The following steps illustrate the procedure (see Fig.1 next page).

Step 1: Carefully draw the shape of the top view of the hull onto the block of wood, as taken from the plan view.

Step 2: Using a band saw, cut out the shape of the line you just drew in Step 1.

Step 3: Use a little rubber cement to glue the piece you just cut back into place. Don't use any other type of adhesive because you want to easily separate these parts later. Now turn the block of wood on its side and mark the profile line, as taken from the plans. Note that the profile line should not include the cutwater, keel, and sternpost, which will be attached later.

Step 4: Using your band saw, carefully cut out the profile line. Now separate the piece you rubber-cemented in the above step. You now have cut out the basic shape of the hull,

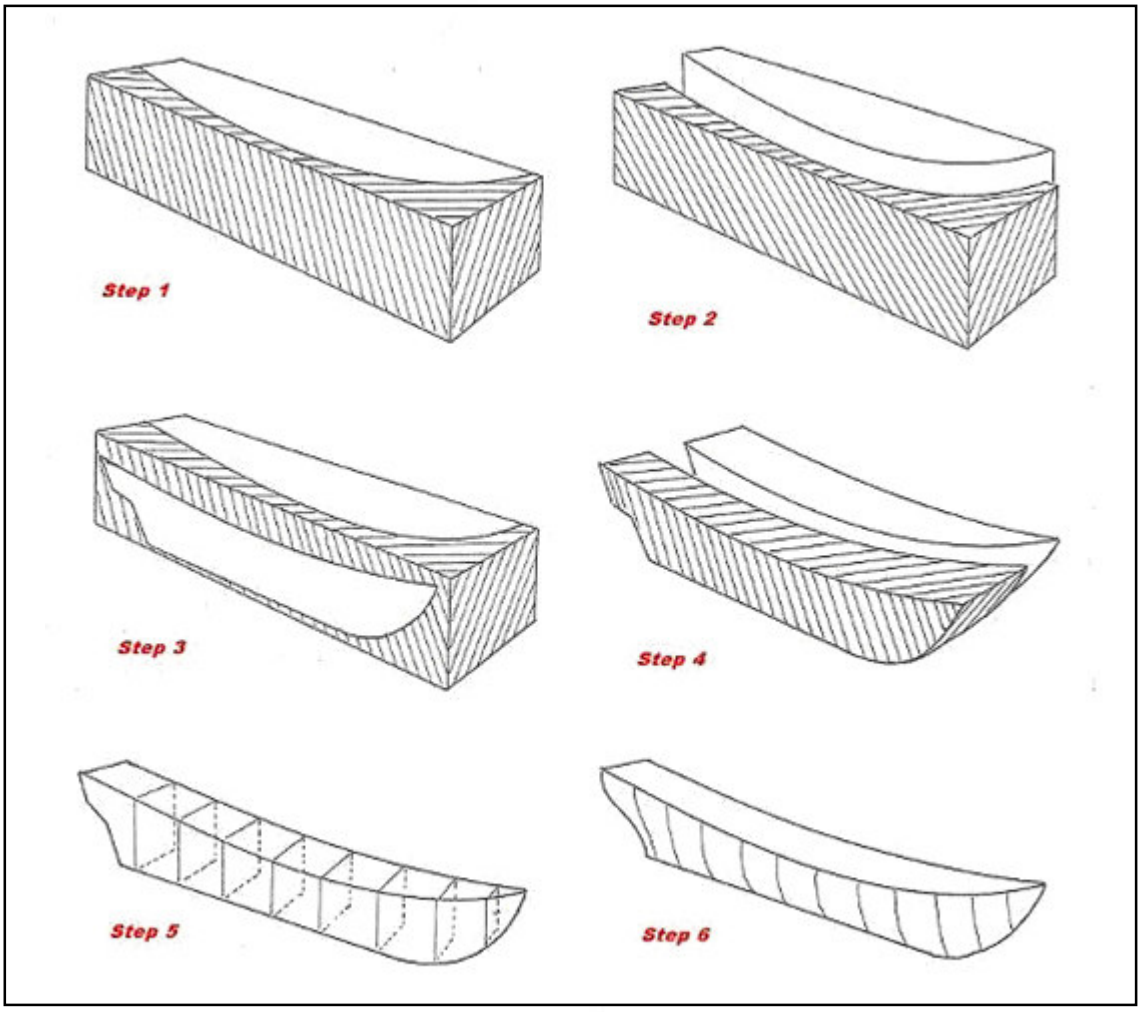


Fig. 1

which is ready for carving. The other pieces of wood may be scrapped or saved in your junk box for future use.

Step 5: Now mark the positions of all the sections around the block. The precise location of each section line is important. They are found in the sectional view of the plans. After marking these lines, make templates for every section shown on the plans from thin pieces of wood or heavy cardboard. Each template represents the exact shape of the hull at each section, and they are used constantly to check the shape of the hull as you proceed to carve. Now start to carve the shape of the hull. Use whatever tools you feel comfortable with, including chisels, spokeshaves, or even saws. You'll find that the closer you get to the finished shape, the more you will use your spokeshaves, so that you only remove small amounts of wood. When you start, there is no particular guide for the carving, so make sure you only rough-carve it, striving for its approximate shape, without cutting too deeply. As you progress, use the templates frequently to check the shape at each section. Keep refining the cuts as you go, and keep checking with your templates. Eventually, you will reach a point where you will only use sandpaper to smooth the hull, using finer and finer paper as you progress.

Step 6: Finally, you have achieved the finished hull to your satisfaction. It is now time to add the keel, cutwater, and sternpost, all of which are securely glued to the hull. Using a mortise, you may also wish to add bulwarks to the top edges of the hull, if the plans show them.

Solid Hull Method

Many scratch-builders build hulls using the solid hull method. There are at least three variations of this method.

1. Whole-hull Solid: This method is almost identical to the half-hull model described above; however, instead of making a half hull, the modeler uses a larger block of wood to form the entire hull from that single block of wood. The entire shape of the hull is marked on the block, cut out on a band saw, and carved, using templates for each section of the hull. The keel, cutwater, and sternpost are added after the hull is finished.

Many kits include a solid hull. For example, a New York pilot boat called Phantom of 1868 has one, but it, too, requires a bit of shaping and finishing to produce the final hull.

2. Whole-hull Solid in Three Sections: In this method, the modeler makes two mirror-image half-hull models, using the principles already described. The two half hulls, when completed, fit together snugly for testing purposes. How ever, instead of making and installing the keel, cutwater, and sternpost as separate pieces of wood, the modeler lays out the entire hull shape, including the keel, cutwater, and sternpost, on a sheet of plywood of appropriate thickness, taking all lines from the plans. The entire shape is then cut out and glued between the two hull halves.

3. Waterline Hull: This is another variation of the solid hull. Here, however, the waterline is the base of the model. It is build exactly like the whole-hull solid model, with the exception that nothing below the waterline is included. This method of building a ship is effective for a model used in a diorama, where it can be displayed as a ship in apparent motion, forging its way through choppy seas, for example.

Waterline Lift Method

This method is also called the "built-up" method or the "bread-and-butter" method or the "laminated" method. Essentially, this method uses a series of boards stacked on top of each other, glued together, and carved just like the whole hull method described earlier. However, each of the boards in the stack is shaped to the shape of the various waterlines shown on the plans.

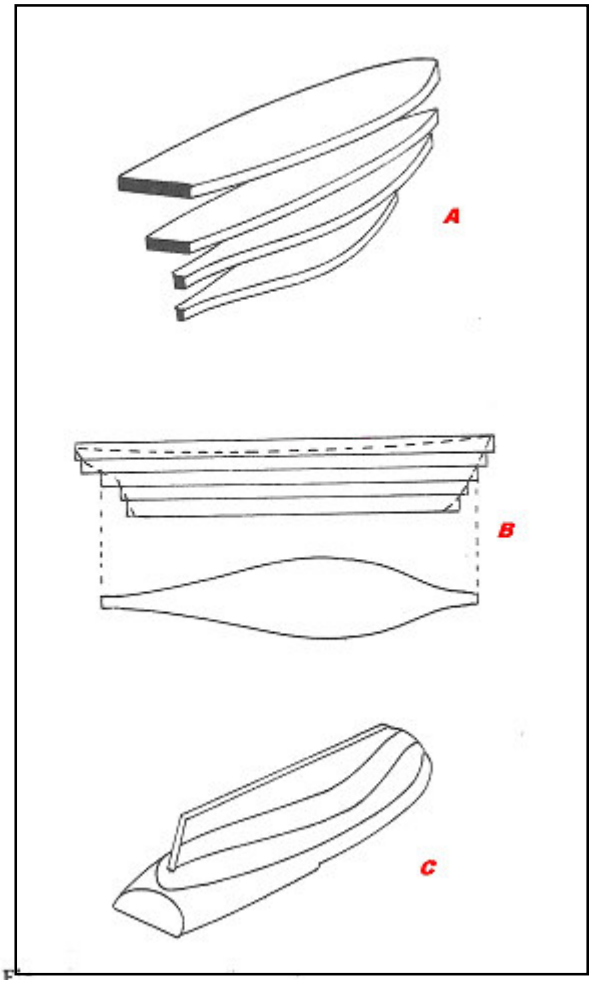


Fig. 2

Take a look at a set of plans, especially the half breadth plan – the one that shows the top view with the locations of the so-called waterlines. The sheer plan shows these same waterlines from the side view. Also note that the sheer plan shows the distance between each of the waterlines. This distance represents

the precise thickness of each board you will use to make each of your "lifts." To start building with this method, obtain as many boards of the requires thickness you will need. Draw a centerline down the middle of each board, which will be used as a reference point later. Starting with the lowest waterline, draw the top edge of that waterline on your first board. Repeat the process for each waterline, always remembering to use the top edge of each waterline, which is the widest portion. Illustration "B" (fig.2) shows an example of the third lift from the bottom.

Cut out all the lifts on a band saw very carefully. Glue them together with a white glue, such as Elmer's Carpenter's Glue, aligning them perfectly with your reference lines.

Make yourself a set of templates that will help you determine the precise shape of the hull at each of its section points, just as you did for the half model. However, the board seams will be your main guides in carving.

The next step is to carve the lifts, just as you would for the half hull or whole hull model, as already described. One of the advantages of using the lift method is that you can see exactly when to stop carving, because the intersection point between two lifts will disappear when carved to precision. Be careful not to remove too much wood. Finish with successively finer and finer sandpaper.

Buttock Line Lift Method

A variation of the lift method is to use the buttock lines instead of the waterlines The only difference between this method is that the buttock lines fall in a vertical plane rather than a horizontal plane. Here, the only real advantage is that the shape of the deck can be determined more accurately.

The illustration (fig.3) shows the basics of the buttock line lift method. It is a method that is used rarely; in fact, I have never seen such a model.

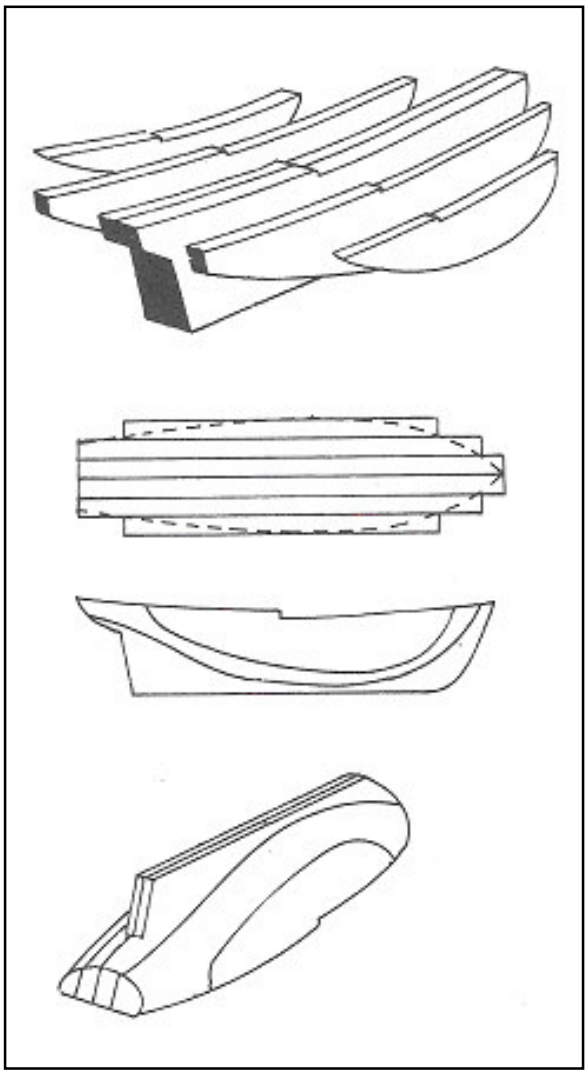
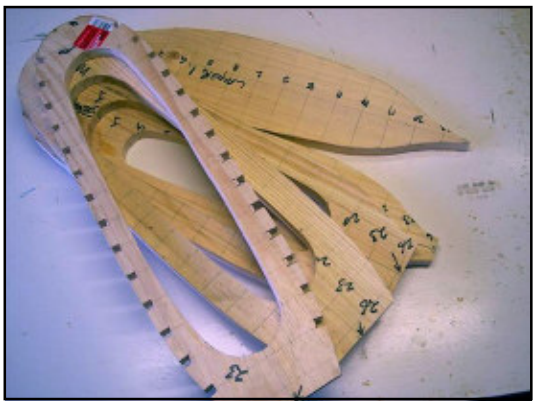
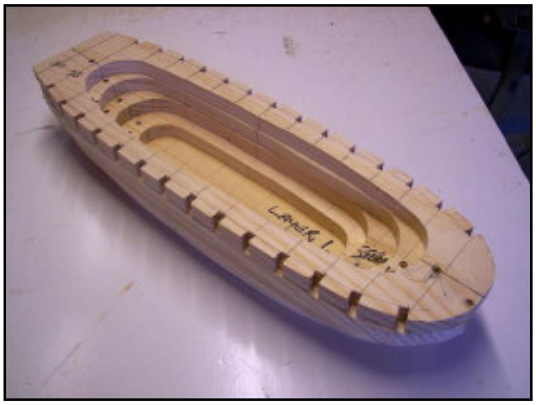


Fig. 3

Semi-Solid Hull Method

This method is quite similar to the waterline lift method, with the exception that the full boards are not used. Instead, only the outer inch or two of the board is used for each lift, thus making a hollow interior. The advantage of using this method is that some of the interior of the model, such as ladders down to a lower deck, can be displayed, giving the model the feeling of depth. It also saves more wood for other uses. Building the semi-solid hull uses the same basic principles already described for the lift method. A couple of pictures will suffice to illustrate the method.





Summary

As you can see, there are many methods of building a solid-hull model. The solid hull is an ideal way for novice modeler to gain experience in interpreting plans and using tools. Each method has its own particular uses and advantages.

Fig. 1 : Illustrations from *Ship Modeling from Scratch* by Edwin B. Leaf, p. 46, International Marine, Camden, Maine, 1994. ISBN 0830628444

Fig. 2 & 3: Illustrations from Ship Modeling from Stem to Stern by Milton Roth, p.100, TAB Books 1988.
ISBN0070368171

You can get these books throught the Model Ship Builder Amazon Store:
www.modelshipbuilder.com/store.html

Photo's courtesy Dirk De Bakker of www.modelshipworld.com (ship is British 100-gun Royal Albert

Next Month's Article

Part II of "Types of Hull Construction" will concentrate on Plank-on-Bulhead Hulls (POB). The vast majority of the kits on the market and many scratch-built models used this method of construction. We will take a look at how the basic POB model is built in kits as well as in scratch building, and we will also look at a few of the variations.

The USS San Diego

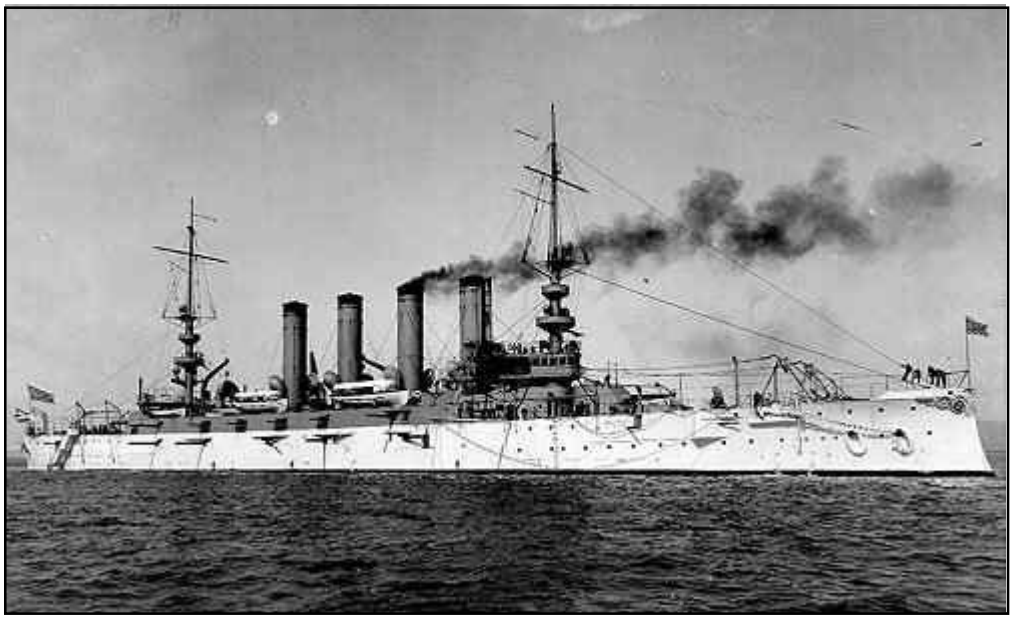
From the Files of Ship Wreck Central

Originally launched as the California on April 28, 1904, by Union Iron Works in San Francisco, she was commissioned on August 1, 1907. She was 503'11" long by 69'7" wide and had a displacement of 13,680 tons. She served as part of Theodore Roosevelt's Great White Fleet. Her twin props pushed her at a top speed of 22 knots. The warship's armament consisted of 18 three inch guns, 14 six inch guns both mounted in side turrets, four eight inch guns and two 18 inch torpedo tubes.

On September 1, 1914, she was renamed San Diego and served as the flag ship for our Pacific fleet. On July 18, 1917, she was ordered to the Atlantic to escort convoys through the first dangerous leg of their journey to Europe. The Diego held a perfect record, safely escorting all the ships she was assigned through the submarine infested North Atlantic without mishaps.

On July 8, 1918, the San Diego left Portsmouth, New Hampshire, en route to New York. She had rounded Nantucket Light and was heading west. On July 19, 1918, she was zigzagging as per war instructions on course to New York. Sea was smooth, the visibility 6 miles. At 11:23 AM, an ear shattering explosion tore a huge hole in her port side amidships. Captain Christy immediately sounded submarine defense quarters, which involves a general alarm and the closing of all water-tight doors. Soon after, two more explosions ripped through her hull. These secondary explosions were determined later to be caused by the rupturing of one of her boilers and ignition of her magazine. The ship immediately started to list to port. Officers and crew quickly went to their stations. Guns were fired from all sides of the war ship at anything that was taken for a possible periscope. Her port guns fired until they were awash. Her starboard guns fired until the list of the ship pointed them into the sky. Under the impression that a submarine was surely in the area, the men stayed at their posts until Captain Christy shouted the order " All hands abandon ship ". In a last ditch effort to save his ship, Captain H. Christy had steamed toward Fire Island Beach, but never made it. At 11:51 AM the Diego sank, only 28 minutes after the initial explosion. In accordance with navy tradition, Captain Christy was the last man to leave his ship. As the vessel was turning over, he made his way from the bridge down two ladders to the boat deck over the side to the armor belt, dropped four feet to the bilge keel and finally jumped overboard from the docking keel which

USS San Diego ACR-6 about 1917. Officers are Rear Admiral W.B. Caperton and his staff



The USS San Diego

was then only eight feet from the water. As the Captain left his ship, men in the life boats cheered him and started to sing our National Anthem. Most survivors were picked up by nearby vessels, but at least four life boats full of men rowed ashore, three at Bellport and one near the Lone Hill Coast Guard Station. The San Diego was the only major warship lost by the United States in World War I.

The original casualty reports ranged from 30 to 40. Apparently, the muster roll on the San Diego was not saved. The only list of men on board was the payroll of June 30, but since the end of June, they had received and transferred over 100 men. When the Navy eventually finalized the death toll, the official count was only six.

Since her sinking, there has been much debate about whether it was a torpedo, German mine or U.S. mine that sent the cruiser to Davy Jones Locker. Captain Christy wrote in his final log that they had been hit by a torpedo. The Navy, however, found and destroyed five or six German surface mines in the vicinity, so it is generally accepted that a mine laid by the U-156 did the job. Ironically, the U-156 was sunk on its homeward journey possibly by a U.S. mine.

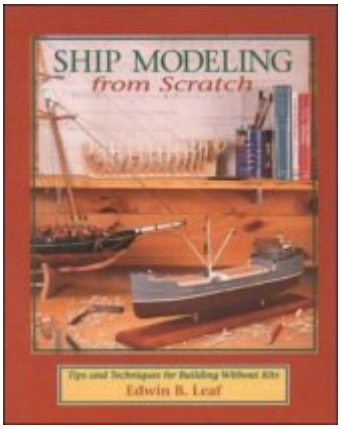
You can learn more about the USS San Diego and other ships at ShipWreck Central

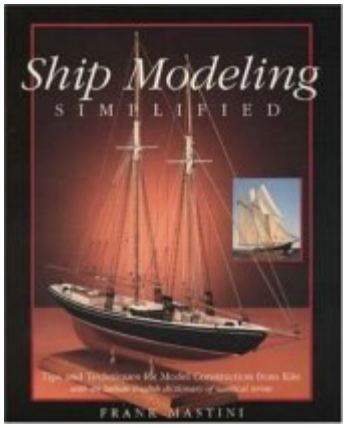
Pictures Source: Ship Wreck Central, The California State Military Museum

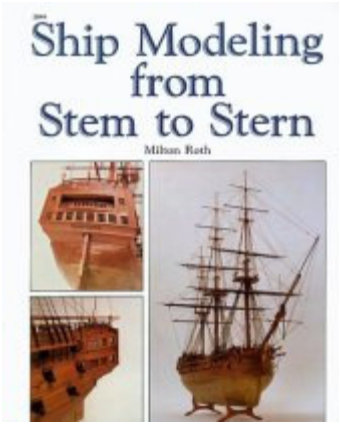
Some of the Most Popular Books

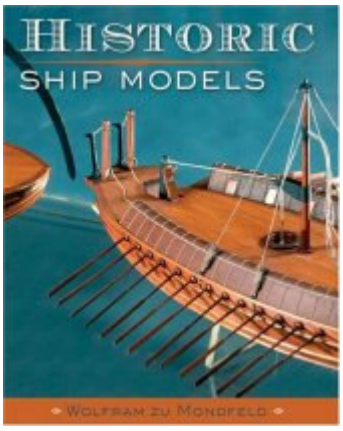
In our Amzon Store

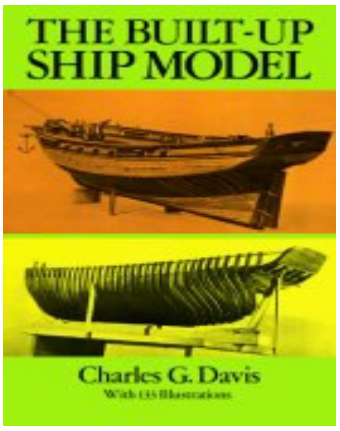
www.modelshipbuilder.com/store.html

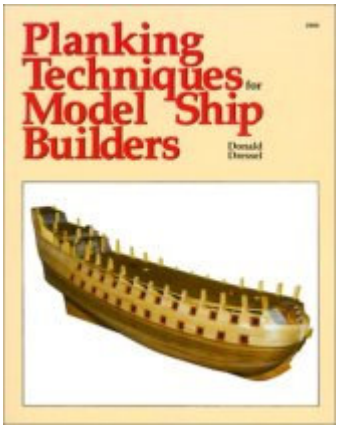


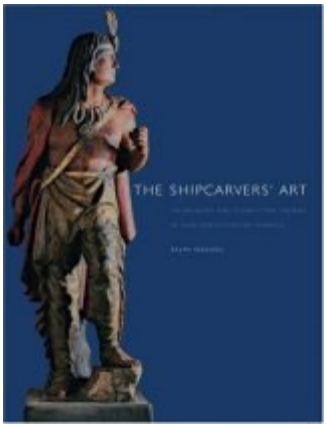




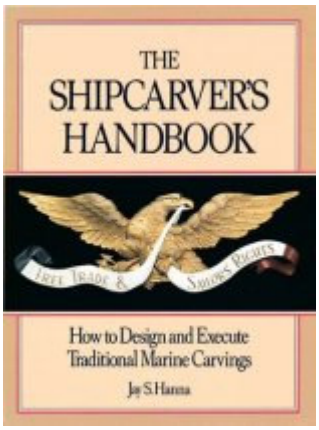








Looking for a particular book?
Can't find it? Let us know.
We'll track it down for you.



The Matthew Project
Part 7 - Planking the Hull

A question often asked by the beginner is where do you start planking the hull? From the keel up or from the rail down? Without a doubt the hull planking begins at the keel because of the difficulty of shaping and installing the garboard and bottom planks. Once you planked up to the sheer line then you plank from the rail down to the sheer to meet the hull planking. The garboard used a 3/8 wide plank and the two bottom planks were ¼ wide. The width is needed for these three planks because of the excessive amount of shaping needed. Once the bottom planking is installed it is easier to sand the planks to their final finish. This is done because the wale sticks up above the planking and it will be difficult to sand the hull once the wales are in place.

Plank by plank instructions would be a bit long winded so in this part of the build only the general information will be covered. Once you get the idea of shaping and installing a plank you will find the rest of the planks are pretty much the same.

The Matthew has five wales the first is located along the bottom planking. These wales are 1/8 square stock and are a

little tricky to install. Problem one is clamping the wales, second is they tend to want to roll so it is necessary to twist them in order for them to lay flat and finally they take a sharp bend at the bow and stern. In midship problems with clamping and the wale sitting flat is minimal, its at the bow and stern where one will encounter problems. It takes a lot of clamping pressure to hold the wales in place at the bow and stern. Pressure of the clamps will dent the wood so an alternative method is needed. Ends of the wale were first glued in place at the bow and stern to the second bulkhead. This required no clamps or force to hold them in place. Once the glue sets carefully bend the wales until they sit flat. No wetting or heating was used to bends the wales, they were bent dry. If you have problems with bending the wales all that is needed is to run the ends under hot water for a minute. Then bend and clamp the wales until they dry.

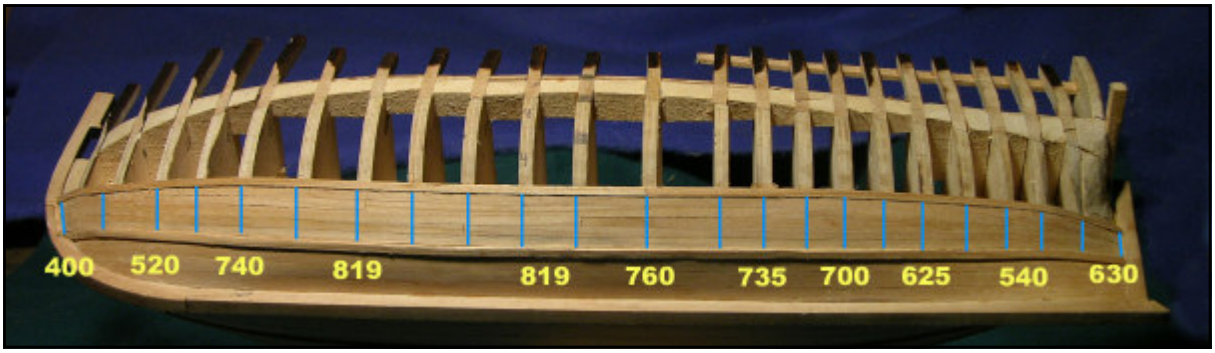
Creative clamping is needed to install the wales as well as the rest of the planking.

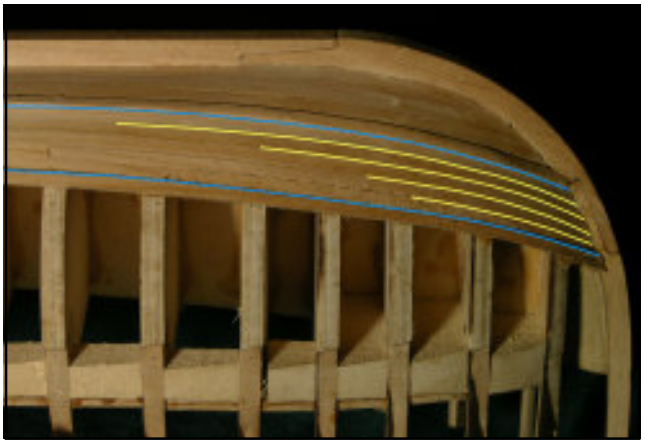
At the stem a bur was used to deepen the rabbit so the end of wale will be able to seat itself. The end of the wale is notched so the bottom part will sit into the rabbit and the upper section will sit against the stem.

With half of the wale from the stern secure to the hull bend the second half from the bow to the end of the first wale section. Mark and cut the wale sections to butt.

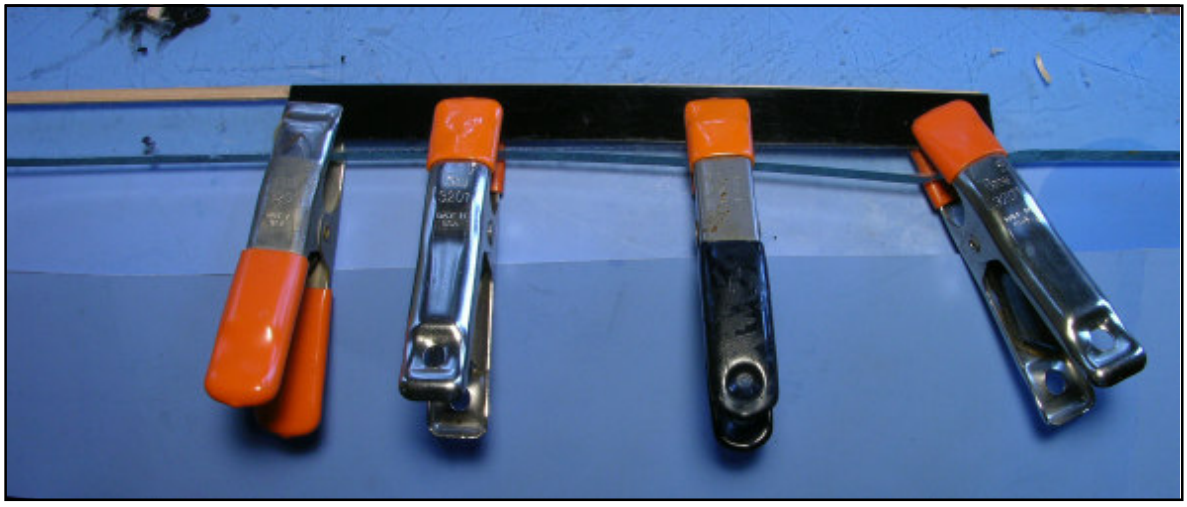
With the bottom planking finished and the first wales on the hull recheck the location of the next wale and mark it. The first lining off of the hull was a general location for each wale. As each belt of planking is installed there will be variances so slight adjustments might have to be made as you work your way up the hull. You can see the dark markings on the center bulkhead for the location of each wale.

The next section of planking will require five strakes of planks. Planking this section differs in method from the bottom planks. Because the bottom planks required such extensive shaping, the spiling was done by cutting the planks after they were on the hull. In this section of planking the planks are tapered first then glued on the hull.

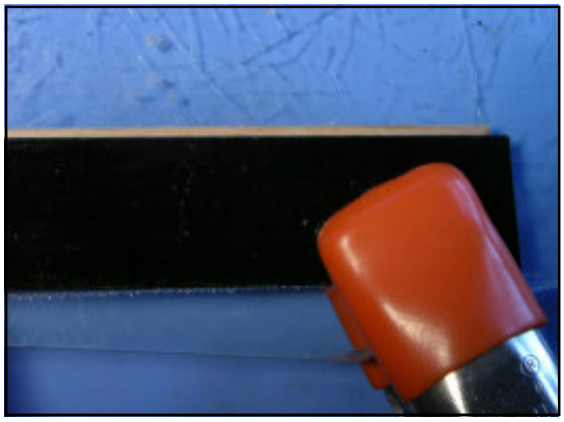




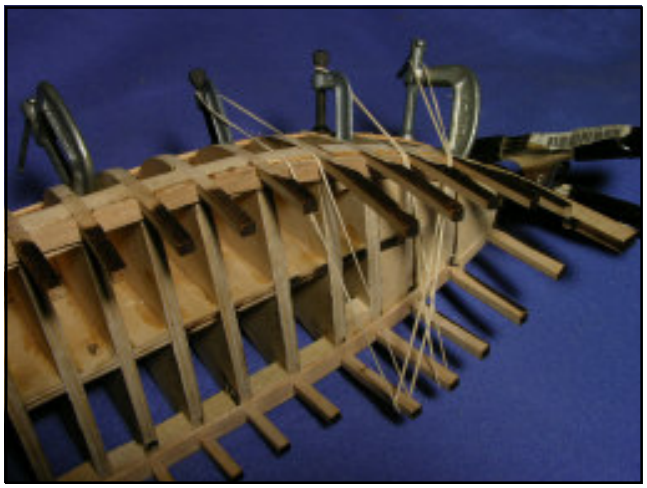
Measuring off the belt of planking will give you a better idea of how the planks will taper. At midship five full width planks are used and at the bow the distance is half that at midship, at the stern the planks taper then right at the sternpost the planks will take a slight flare. At the bow the tapers begin at about bulkhead number 6, the first plank up from the bottom will have the longest taper and progressively get shorter as the planking works it way up the hull. The yellow lines show the lengths of each taper. Each belt of planking is done the same way, after the next wale is put on to the hull a check it made as to how close you are working to the projected location of the next wale up. The first belt of planking used five strakes of planking the next two belts use 4 strakes each and the final belt used three strakes.



Cutting the taper in a plank is done by using a piece of plate glass and clamping the plank under a piece of steel banding strap. The straps use for banding have a spring to it so when it's clamped it will bow slightly and hold the plank quite securely. Use a new, sharp knife blade and run it down the edge of the strap. After you have made the taper cut run a block of sandpaper where the taper runs off the plank. This is to blend the taper into the full width of the plank.



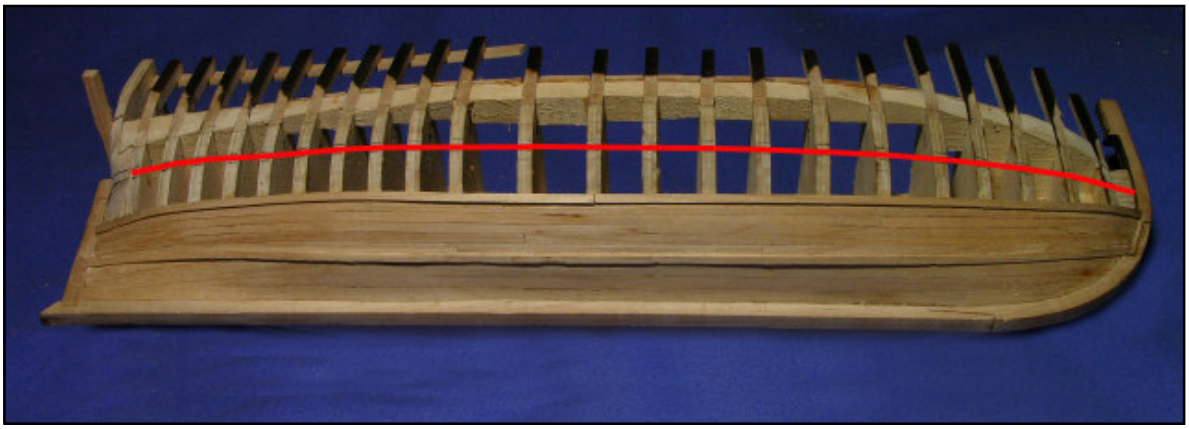
At the turn of the bilge the hull is taking a tight curve and the planks will not want to sit against one another very close. By using a sharp blade a fine shaving is done to the edge of the plank to bevel it. Before a plank is glued to the hull you can run a razor blade along the edge giving it a slight bevel. Another problem is the planking will not want to sit flat against the curving edge of the bulkhead. This creates stepping of the planks from one to the next. There will be some stepping of the planks unless you hollow out the back of the plank to form a concave surface. This is one way to solve the problem but a bit extreme. The thickness of the planking is a little oversize to compansate for any illregularties such as stepping. Once the planking is glued to the hull a sanding will eliminate the stepping problem. You do however want to minamize the stepping as much as possible or you will be sanding the planking paper thin. A creative way to solve the stepping is to use C clamps and clamp on to the plank. By using rubber bands pull the C clamp down and towards the hull until the plank sits flat on the edge of the bulkhead.



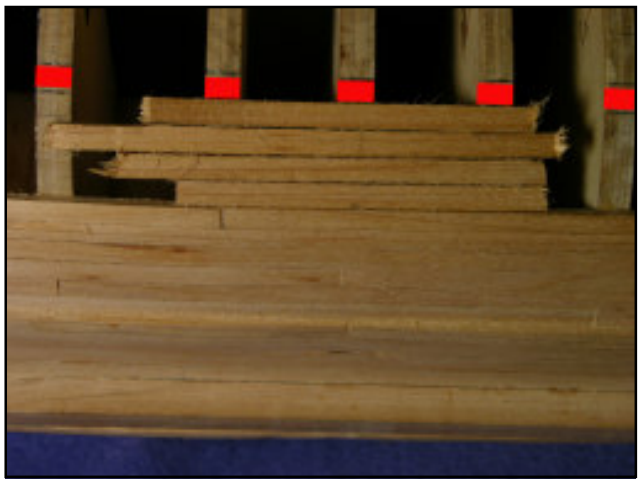
Aside from using spring clamps and C clamps to hold the hull planking while the glue sets there is nothing more useful than a good old block and rubber band. By adjusting the pressure point of the rubber band on the block you can use the block to push the planks against each other or apply pressure straight down so the plank fits tight to the edge of the bulkhead. Placing a block up on end you can pin point pressure to a location on the plank or use longer blocks to hold long sections of a plank in place.

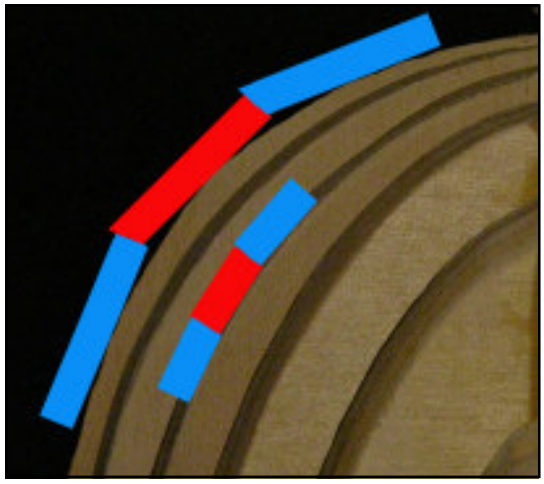
Before laying planking for the third belt, line off the hull for the location of the next wale. Belt three of planking presents a unique problem as the belt takes a drastic taper at the bow and

almost no taper at the stern. The main focus of the planking job is to maintain a smooth run of the planks from bow to stern. Planks at the stem will want to naturally run upwards, however there is a limit to how far up the stem the planks can go, the hull planking has to stop at the deck line. The planking has to be cut to fit as apposed to allowing it to creep upward at the stem.

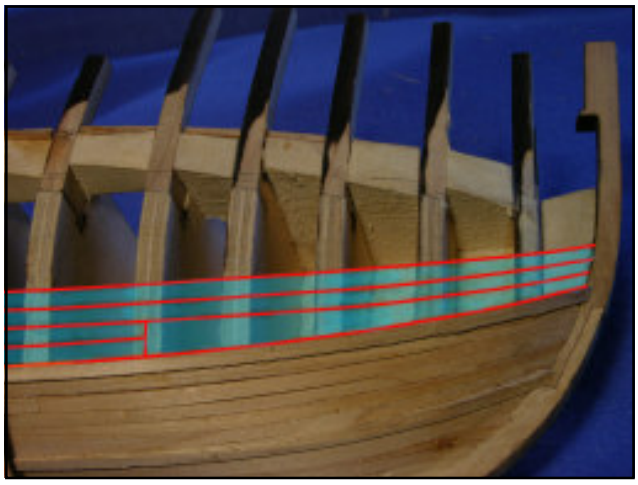


At midship four strakes of planking will fill the third belt. If all four planks were run to the bow each plank would taper to almost a point. Planks which are too narrow at the end of the taper are a problem to fasten to the hull. One way to solve the planking for the third belt is to use wider planks. Divide the distance you need to cover at midship by three and cut you planks to that dimension. Each wider plank will have more of a taper but the ends of three planks will fit at the stem as apposed to four. There is a limit to the width of a plank that can be used. In the photo it shows wide planks will not conform to the shape of the hull as apposed to a narrower plank. Wide planks also cause stepping from plank to plank.

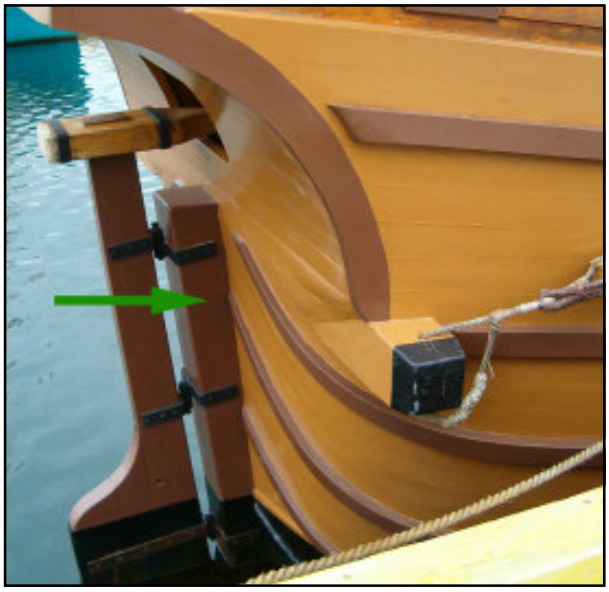


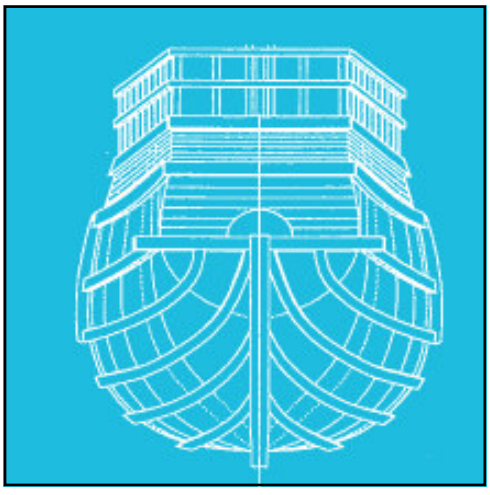


A common method used by ship-wrights is to replace the two narrow planks with a stealer. Run the first two strakes of planking above the wale forward to a point where the taper begins. These two strakes of planking will both stop at the same bulkhead. Now take the space at the bow and divide it in thirds. The width of the stealer will not want to sit flat to the bulkheads so a little coaxing with C clamps and rubber bands may be necessary. The use of stealers are always kept as low as possible on the hull, preferably below or as close to the waterline as you can get. By the time planking reaches the sides of the hull each strake of planking should have a smooth run from bow to stern.



Looking at the stern the main concern is the location and bend-ing of the third wale. On the Mat-thew the third wale ended below the top of the sternpost. On the model the wales ended about the same location. On the drawings the third wale is shown ending at the intersection of the sternpost and the stern transom timber. The two different locations for the end of the third wale gives the model builder a little latitude as to where the wale ends up.





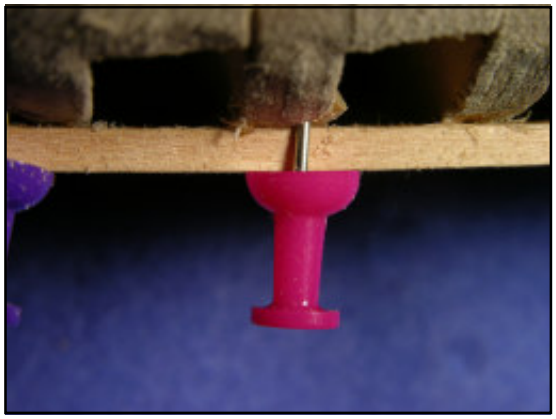
Note in the photo the stern block inserted earlier in the build acts as a backing for the planks and wale. Without the stern block it would have been very difficult to maintain a nice curve of the planks and wale. Some minor reshaping was done to the stern block and last couple bulkheads as the planking was done to allow a better bending of the planks.

By using a heated plank bender the end of the wale was soaked in water and the hot plank bender was then used to bend the wale. Sounds simple enough. The Willow up to this point took bending quite well without the use of steam so by just adding a little heat and water bending should be a breeze.

Not so, five out of five tries and the wale broke. I tried taking the process slow and easy soaking the wale, then only a slight pressure of bending soaking again and again only a little bending at a time. The results were the same, breakage. The longer you leave the end of the wale soaking in water the easier it is to bend, but the longer the wood soaks the softer it becomes which will result in a tendency to crush. I tried several more times until the lights up stairs went on and I realizes all the heat and steam was being applied to the inside of the bend between the heated plank bender and the wale. The outer edge of the wale was sitting in a puddle of water on a cold block of steel. I took the steel block and heated it up on the kitchen stove and soaked the end of the wale again.

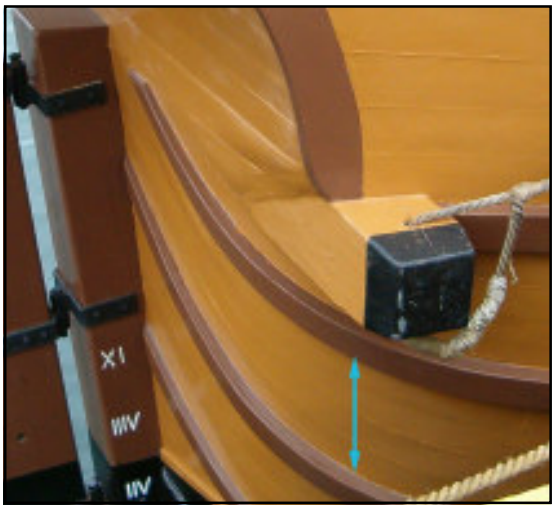
Eureka ! success at last. Sandwiching the damp wale between the heated

bender and warm block I got steam on both sides of the wale and it took the extreme bend without breakage. The final step for the third belt of planking is adding the wale. Another way to secure a plank or in this case the wale to the hull while the glue sets is to use push pins. Plywood is to hard to push the pins in so a little tapping with a small hammer works the best. Then you need pliers to pull them back out.

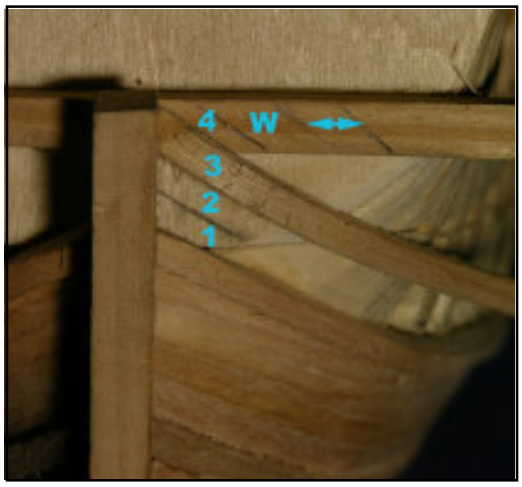


The Fourth Belt of Planking

The blue arrow is showing the fourth belt of planking at the stern where the planks are taking a drastic taper where they meet the stern post.



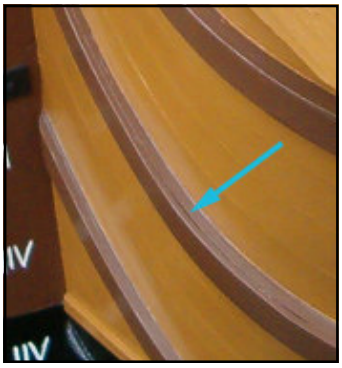
With the third belt of planking completed up to the wale we start planning the fourth belt beginning at the stern. When the hull was lined off four planks were figured at the center. If the planking so far has ended to far up the stem now is the time to correct the sheer. A wider plank is used above the wale, this is done to take up more space midship and flatten out the sheer just a little. Lining off the planks at



the stern plank number 3 ends at the top of the sternpost so planks one and two fill in the shaded blue area.

Here you can see the lining of the four planks and the W is the location of the wale. The short arrow is where the first plank of the next belt will end.

Now it is apparent why the stern was not built when the bulkheads were being set up. They would have been in the way, making clamping of the planking very difficult. All the planks in belt four had to be steam bent and clamped in place to set. Even though the Willow worked very well for bending the extreme bending at the stern required the planks to be soaked in water for about 30 minutes and then bent with a hot plank bending tool on a hot surface. Don't give up it took several tries because the plank insisted on breaking, but finally it does bend.



Bending must have been difficult in the building of the Matthew because close inspection of the wale it looks like they were laminated.

Planks were extended beyond the transom timber because the soaking makes the wood soft and the clamps will indent the ends of the plank. So make sure you have enough length on the planks to trim off the indented section.

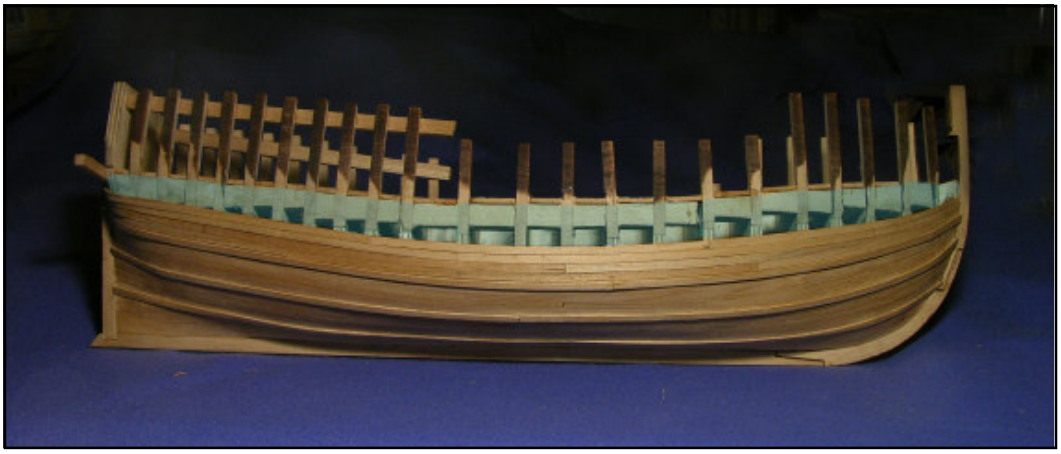
These planks take an uneven taper so it is better to glue the plank in place and trim the taper on the hull. Start by drawing the taper and use a sharp blade and slice the plank.

Looking at the hull upside down you can see the stepping in the planking. Bending around the stern then a sudden sweeping upward cause a drastic step from plank to plank. Sanding will take care of the steps but it is best to try and keep them at a minimum.

Once again when all the planking is done it is sanded to a final finish and the next wale is set in place. None of the planks or wales were laminated. Steam bending worked quite well.

All the attention was focused at the stern in the fourth belt of planking. Planks at the bow were simply tapered as was done in the second belt of planking so there is no need to repeat the process.

The Shutter Planks



The final belt of planking is called the shutter planks. In some hulls this may be the last one or two strakes of planks between the lower hull planking and the upper planking. The upper planking of the hull will follow the sheer line and the

bottom planks are tapered or cut to fit the shape of the hull. Looking at the run of planking it produces a nice flowing curve from bow to stern. In the case of this particular hull the lining off of the planking could have been a little flatter by the time it reached the shutter planking. Then again it's up to you as the shipwright as to how you want the run of planking to look. Personally I like the flowing sweep of the plank run.

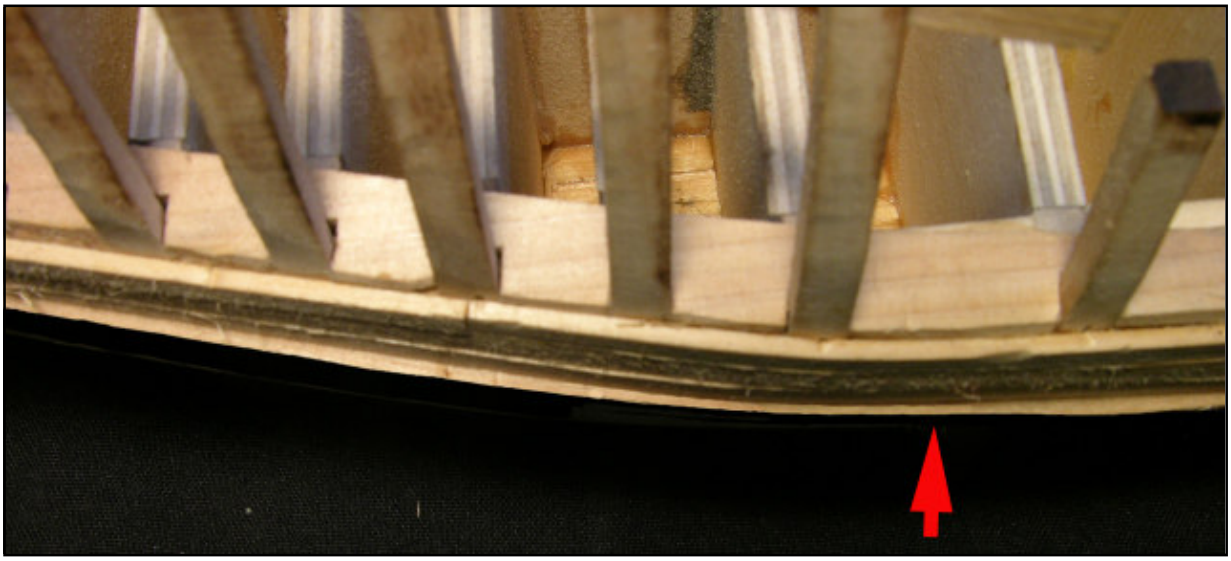
Begin the last belt of planking by measuring off the space to be filled at the midsection. Start by placing a piece of wale at the top of the fourth belt and at the deck line. Next divide the distance between the two wales by the number of planks you intend on using, in this case three will be used to fill the last belt. The width and number of planks will vary according to each hull and the final run of the planks done by the shipwright. These planks are given a special name of "shutter planks" maybe because they have to be carefully shaped and fitted and the plankers doing the job just shutter at the thought of have to do the job, or maybe it's a slurred slang for "ok guys shut her up" meaning close up the hull with the final strakes of plank. Whatever the reason these planks got the name of shutter there is no doubt they are the most difficult to do. The first two planks above the wale are the most difficult to shape and bend. These two planks take a sharp bend and rest on the face of the transom timber.

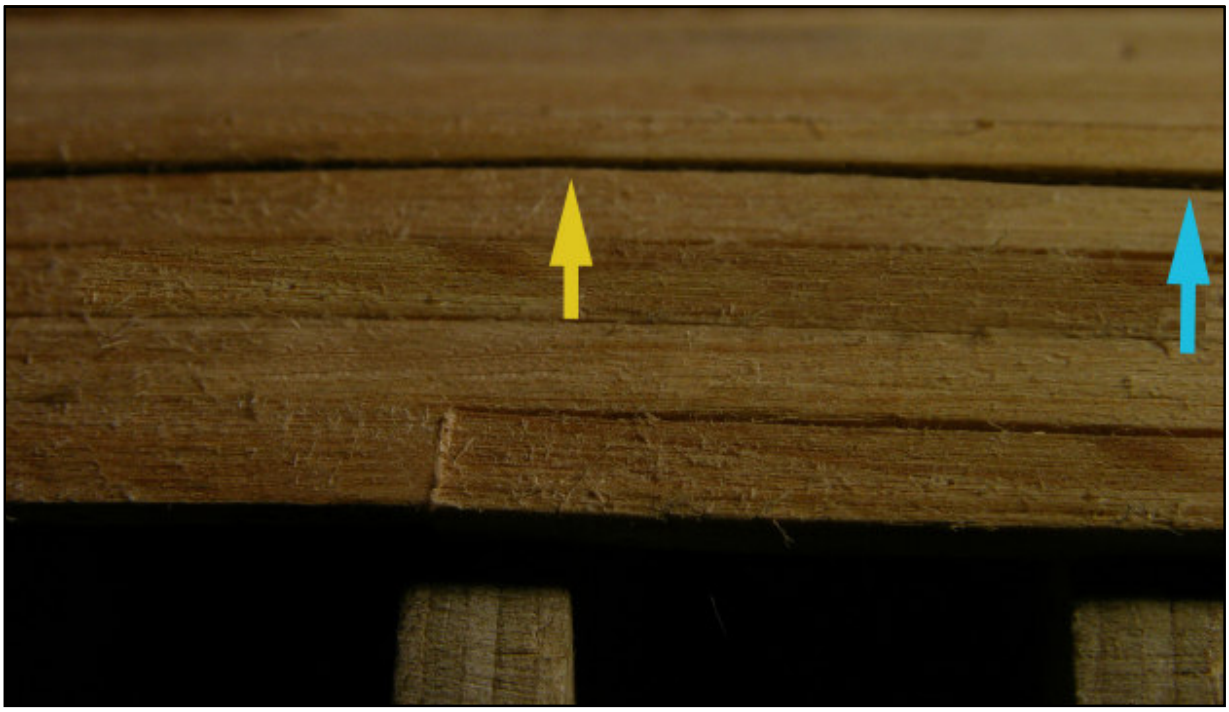
The first one will need a long taper, which runs almost a third of the planks length. Once the plank is in place its upper edge will have to be trimmed slightly, starting at the stern skip the last bulkhead and trim the next four to give the plank a smooth run.

The second plank fits snug under the transom timber and bends up to the transom timbers face. This plank will require a very sharp bend right at its end.

Looking at the photo you can see the sharp of the first two planks. These two planks will not bend around the square bottom edge of the transom timber so a slight rounding off of the bottom of the timber was done.
Finally the third plank to go on, butts against the forward face of the transom timber. And the top edge is about one half the distance up the timbers face leaving enough room for the wale.

This completes the hull planking. On a final note, the planking may differ slightly from one hull to the next. The shape and amount of planks used depends on how each person lines off the hull. This part of the build provided enough information to plank this hull as well as a basic instruction on planking hulls in general. One unique feature of the Matthews hull is the wales. When the hull is first planked each plank may or may not sit perfectly even with the plank next to it. The final look of the planking job rests on the sanding and finish. Looking at the photo the red arrow is pointing to a section of a wale where the planking is sticking out to far making the wale look narrow.





Taking another look at the wale from a different angle the blue arrow is showing the correct height of the wale from the planking and the yellow arrow is showing where the planking is to high.

An easy correction to make the wales all appear to be evenly raised above the planking is to shave down the plank. This can not be done with an Exacto blade the knife in the photo is a surgical scalpel. These blades are flexible and you are able to bend them to the contour of the hull planking and they are also very sharp. Just lay the blade flat on to the planking and cut off paper thin shavings until you get an even edge along the wale. For a finish a coat of Tung oil is used, let it dry and apply a coat of finishing wax by Minwax buff out the hull to a de sired sheen. Willow will take an excellent satin smooth finish and the tan color gives the hull a rich look.

Thus ends part 7 and in the next issue we'll move on to the upper works and the building of the stern.

What Ship Is This?

See if you can recognize this painting.

The ship in our last issue was the Russian ship Marat. Here seen in Poland prior to WWII

A dying art

AARON BESWICK
Northern Pen
Serving the Great Northern Peninsula of Newfoundland, Canada

In spite of the know-how and time-honoured practices, the wooden boat appears to be on the way out

No one is suggesting there's anything wrong with fiberglass boats.

They're watertight, strong and might just last forever if taken care of.

The harm, however, often inflicted by new technologies, is the loss of the old skills they replace.

Wes Pilgrim’s hands have aged since this photo was taken. He is shown a younger man standing beside a 32-foot trapskiff he built all alone in a month and five days.

The Northern Peninsula's small wooden boats evolved from row boats and sailing punts to rodneys, trapskiffs and speedboats. With each new demand in the fishery and engine design, the boat builders of each cove turned new hull designs over in their mind's eye.

Each community had their boatbuilders - Green Island Brook had Nicholas Hughes and his four brothers.

"I suppose we built as many boats as anyone on this coast," said Mr. Hughes of his steam-timbered speedboats. "The five of us could build one in five days."

The only grown timbers in the Hughes' steam-timbered boats were the stem and transom knee. Once the boat's backbone was cut, milled and set in blocks, three frames were attached to the keel.

Many communities in the Straits had one or two sets of frames that were passed around for each boat, giving each cove a particular hull shape. The frames formed the three bends of the hull - the fore hook, midship bend and the after hook.

The five Hughes brothers would plank the boat on the three frames, each nail pounded through a piece of fiberboard so it could be removed later.

Juniper timbers were placed in a steam box, mounted over a boiling pot of water, and let sit for 20 minutes. The 2.5-inch wide timbers were then bent into the boat at three-inch intervals - a single timber forming a half-circle as it wrapped from port to starboard. The planks were then nailed to the timbers.

Moulds were removed and caulking or corking, as it's known on the peninsula, followed.

Mr. Hughes isn't sentimental about his craft - he enjoyed building boats but acknowledges the superiority of fiberglass on the water. Wood boats, if maintained, had a lifespan of 10 years before they'd begin to rot and leak heavily.

"Wood is finished," said Mr. Hughes. "You get a wood boat out in rough water, you'd soon make her leak."

Before the highway traced a convenient line up the peninsula during the early 1960s, communities were connected by boat and dogteam. Boat styles and building methods couldn't be passed on electronically - they were learned over decades-long mentorships with fathers, grandfathers and friends.

Consequently, the steam-timbered speedboats of Port au Choix are built with raking stems while those of the Straits aren't - better for hauling cod traps. Farther north, the boats were built with grown timbers for added strength. Boat styles weren't standardized, but remained as varied as the accents of the people who built them.

Sitting at his Main Brook kitchen table, Wes Pilgrim plays with a picture of himself filled with youthful strength, standing before a partially planked 32-foot trapskiff.

Trapskiffs were more common north of Eddies Cove East.

These hulking open boats were built with a transom beam stern - which allowed room underneath the boat for the propeller of an inboard engine. Speedboats, meanwhile, possess a full counter and the outboard engine simply drops its blade beneath the bottom of the planing hull.

Trapskiffs were also made with moored timbers - Mr. Pilgrim spent many hours digging up roots to cut trees down - getting the angle from where the root meets the tree for his timbers.

Mr. Pilgrim worked with Bowaters in the woods, but found himself needing a trapskiff to make some extra money on the water. His father was sick and there was no one to help, though all his timbers were cut.

"I tell ya, I never stopped," said Mr. Pilgrim. "I'd be out at her at 4 a.m every day - as soon as I got light to drive a nail. I'd stop when it was too dark to drive a nail."

The boat's backbone was laid much the same as with Mr. Hughes' speedboats, except for a set of knees building up the stern off the keel to make room for a propeller.

Mr. Pilgrim then moved to building the three sets of timbers that would make his boat's three bends and counter - determining how she would handle the water. Battens were run around the bends giving Mr. Pilgrim an early vision of his boat's lines. As dawn wore into dusk, he'd fit a lead mold snug tight against the battens then lay it on his timber.

The timber would be sawed to fit the shape of the boat, filling out the boat one at a time. Next came the planking - each one with its own peculiar shape and need to be fit perfectly to keep the briny depths at bay. Then came caulking and painting.

From start to finish, stem to stern, Mr. Pilgrim had himself a boat in a month and five days - an impressive feat fully understood by those who've slaved and swore over plank and timber.

There was a time when a man Mr. Pilgrim's age would be the community's encyclopedia - having spent a life collecting and learning everything a man needed to know how to survive. How to fill a pair of rackets, frame a house, mend a cod trap or build a boat.

But men and women are specialized labourers now - learning to do a few tasks well and paying others to do the rest.

Mr. Pilgirm, however, has been blessed with two interested sons. Reuben and Bob Pilgrim both live in Main Brook and both learned to build their own boats.

While the skill sets of the wooden boat builder grow rare, some demand continues. When fibreglassed over, they become strong boats perfect for sealers navigating the ice floes.

"By rights, you want to copy it down now, how it's done, so it's not lost," added Rossanna Pilgrim, Mr. Pilgrim's wife, while pouring a cup of tea.

This article originally published in the Northern Pen
www.northernpen.ca

Contributors Pictures

Mike Pendlebury has sent in some updates of his current project.

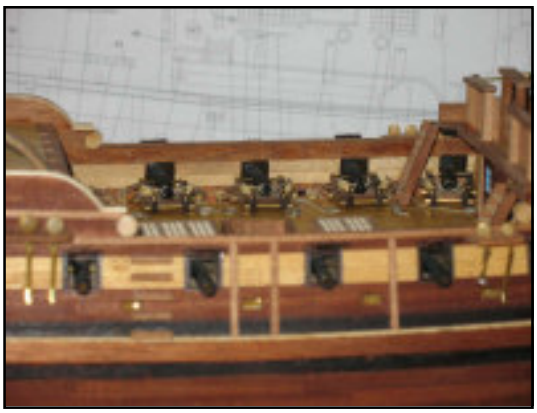
Since the last update I have sprayed /filled and sanded down the hull several times to give me a surface I am satisfied with!

The waterline was plotted and the hull masked off to allow the white areas to be painted.

After spraying the boat with white paint the whole thing was re-masked to protect the white areas and the blue hull band sprayed on. When this had dried for about an hour all the masking was removed with great trepidation and anticipation to reveal the painted hull.....!

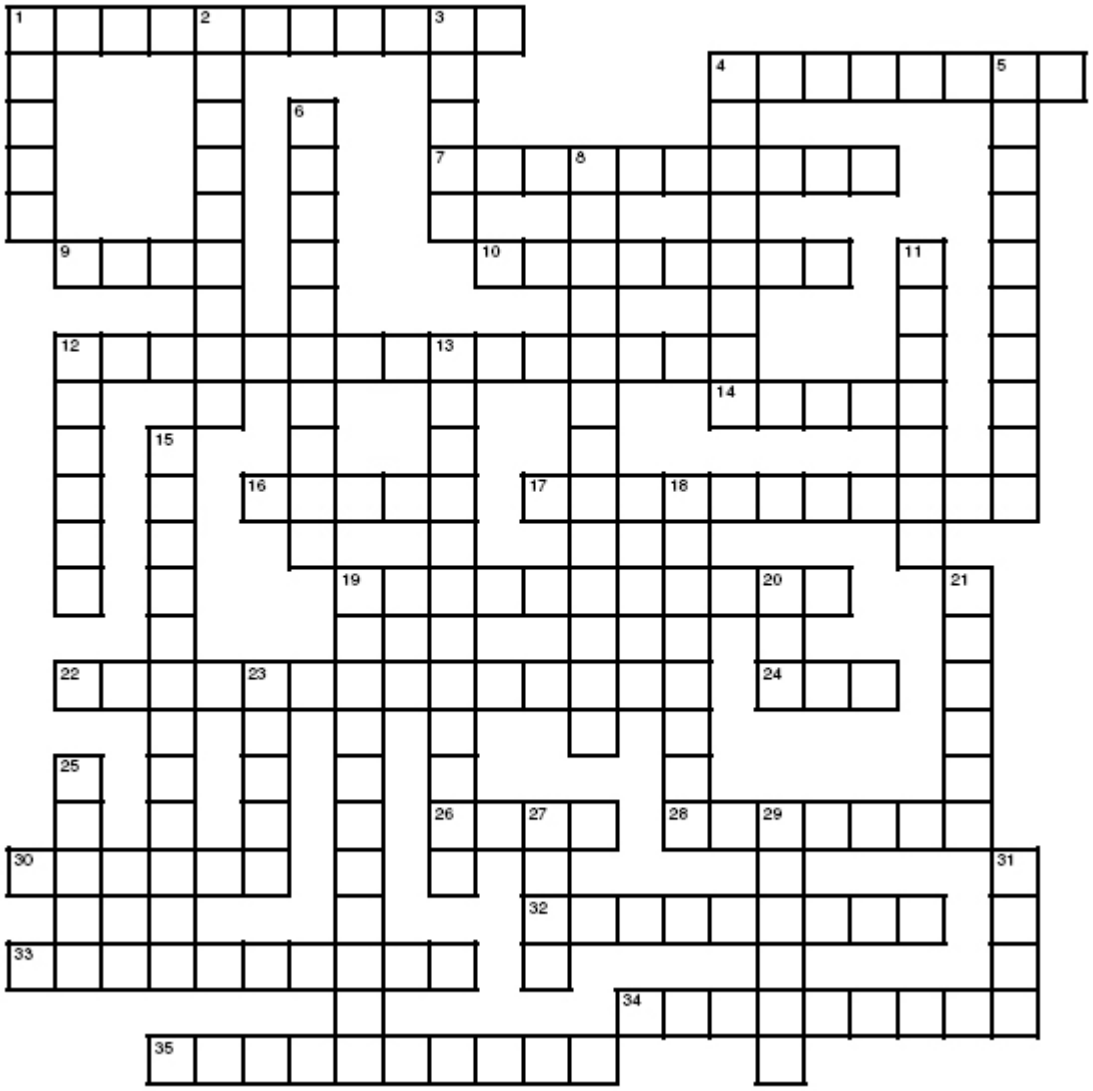
The rubbing strake has yet to be painted red around the hull and then it will be on with the inside of the boat after the hull has had a couple of days to harden off. If you look carefully at the last picture you can see the 'ghosts' of the diagonal planking showing up on the blue band. This is the same effect that you see on diagonal planked and painted full size lifeboats!!

Next are a few pictures sent in by Al Blevins of his 1/96 scale scratch built NY Central No. 1 tugboat. The original was used in New York Harbor to ferry car floats between New York and New Jersey



And here are some pictures sent in by Doug Shorr of a couple of his models

Just Around the Block by Gene Bodnar



Across

1 It has an opening on one side so that a rope can be fixed around the sheave
4 One is bolted on each side of the bowsprit, with the bolts serving as sheave pins
7 One is located amidships, on the bulwarks
9 Extension of rope strapping to form one or two ends by which the block may be attached to the place required
10 Arrangement of small lines fanning out from one long block, used for suspending awnings
12 It has a rope fitted in scores from top to bottom of the cheeks and serves to hold a hook or swivel
14 The outer frame or casing which contains the sheave
16 Groove cut on the outside of the shell
17 It has three sheaves on one pin, the whole encased in a single shell
19 It's pivoted in the leg or hook by which it is attached, so that it turns in any direction
22 Two of them are used as part of a tackle
24 Steel rod through the block upon which the sheave revolves
26 Cylindrical metal bush let into the middle of the sheave to take the pin
28 An oblong device without sheaves, having several holes through it at equal distance
30 The opposite end of a block to that through which the fall runs
32 It consists of two single blocks cut out of one piece of wood, with sheave pins at right angles, sometimes used for falls of the buntlines
33 It's found at the end of the main and foretop yard-arms, through which the studding-sail halyard is run
34 Another name for a built-block
35 It has its dimensions in proportion to the thickness of the topmast head to which it is fastened by an iron pin

Down

1 Piece of rope spliced into a circular wreath, used to surround the block so that it can be suspended
2 Fitting used to keep ropes from fouling each other, having two holes cut into the lower edge
3 The top of the block
4 Blocks in the center portion of the topsail through which topsail ties are rove
5 It has a length twice the circumference of the rope taken
6 It has its shell or outer casing made of several pieces of wood
8 It's almost square at the lower end and sloping in towards the sheave, used on lower yard-arms and on topsail yards
11 Space between the sheave and the shell of a block
12 Solid grooved wheel fixed in a channel and revolving about an axis, which guides a rope in a block
13 It is fixed under the cross-pieces of the quarterdeck and forecastle bitts, used to lead running rigging on a horizontal plane
15 It is a metal bush with devices that revolve around the pin
18 Solid block with one or more holes drilled through its center and a groove cut around its edge
19 It's used to reeve the lifts and reef tackle pendants of the topsail yards
20 Semi-circular projection from the sides and around the end of a block above the pin
21 Section of a monkey block, hollowed out to fit the convexity of the yard to which it is attached
23 Type of deadeye with only one large hole through it, used as a purchase for a stay
25 Another name for a swallow
27 Choke end of a block; the hole through which the fall runs
29 Wheel turning freely on a pin, which is also known as a sheave
31 Device attached to a rope strapping by which the block is attached

Answers on page 42

Books of Interest

Most people think of ship figure-heads as being comely maidens (often in a state of partial undress) but in earlier centuries, when superstition dominated thought among the illiterate, much fiercer symbols were used. The front cover has just such a design, but these were rare after the 1500s. Pride rather than fearsomeness became the dominant factor in ship ornament by Cromwell's time. It became common for ship captains who could afford it to pay for gilt work out of their own pockets, just as it was once common for sailors to wear beribboned clothing on shore leave.

This book is the standard reference for the nature of sailing ship ornamentation. It covers some 500 years, from the 1400s to the 1900s, the period when the great navies of the world were powered by sail and oar.

Whether your interest is in history or in authentic modelmaking, this is the standard reference, with hundreds of illustrations and dozens of plates covering all matters "that concern the grace and countenance of old sailing ships" as the author so charmingly states it.

Smyth-sewn softcover, 8-1/2" x 11", 296 pages, 8 full-color pages. First published in 1925. Reprinted in 2006 as part of our Classic Reprint Series.

You can purchase this book at your local Lee Valley Tools Store

Ship Replicas

Naga Pelangai II

You can see some detailed information on this replica including pictoral building log at:
http://www.naga-pelangi.de
(various language selections)

The Galleon "Neptune"

Here's another interesting build. You can see more of it here:

http://www.foto.genova.it/z04cGaleone.htm

Online Discussion Forums

The following are a list of online discussion forums of interest that I have become acquainted with. They only order they are listed in is the way they are listed in my favorites list. Which, if you seen my favorites list would know that there is absolutely no order of importance. I can be good at finding things but am terrible at taking time to reorganize them! :-)

If I happen to be a member of your forum and you don't see it listed below, don't fear, I'll be adding more next issue. All the same, don't hesitate to drop me a line to remind me. (msbjournal@modelshipbuilder.com)

Royal Navy Sail and Steam
http://groups.yahoo.com/group/RoyalNavy_SailandSteam/

This is a Yahoo group and is for discussions about the British Royal Navy from The Napoleonic Wars to the end of the 19th Century. All related subjects are acceptable, factual or fictional.

Ship Modelers Forum
http://www.shipmodeling.net

The Ship Modelers Forum is an active discussion group with model builders from around the world. The forum admin is Wirewolf (John). The forum recently held an online modeling competition and I suspect because of its popularity we'll see it again this year.

Model Boat Mayhem Forum
http://www.modelboatmayhem.co.uk/forum/index.php

Though it covers various types of boat/ship modeling, ModelBoat Mayhem seems to have a very active group lot of RC modelers. I'm not much of an active poster there but I do drop in quite often to see what's happening. Be sure to drop by and have a look and say hi!

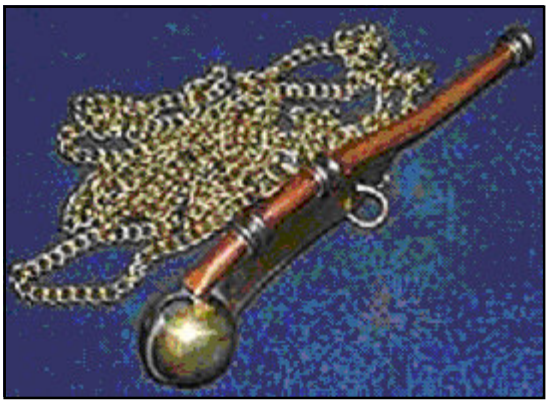
On the Cover

On the cover this issue is a pictrure of a 64-gun British Man ‘o’ War by model builder Den Holmes. You can see more pictures of this model at the Model Ship Builder Website.

www.modelshipbuilder.com

The Boatswain's Pipe

by Gene Bodnar

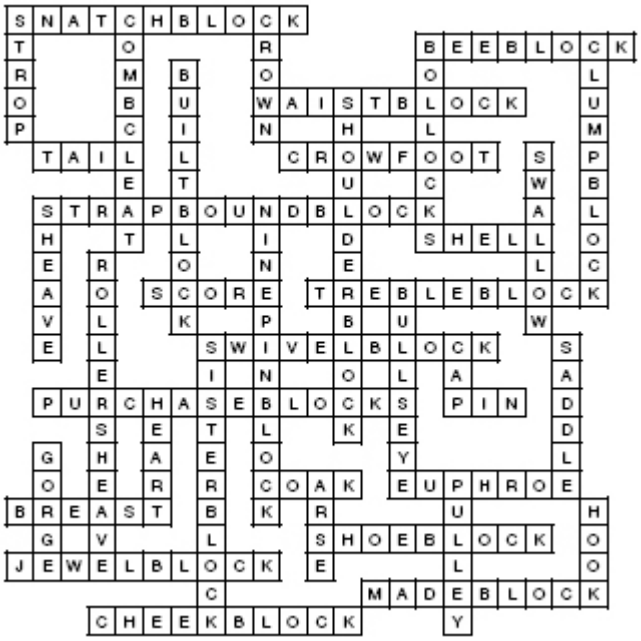


Historically, the boatswain's pipe is one of the oldest pieces of sailing equipment in existence, extending all the way back to ancient Greece and Rome, where it was used to indicate the strokes pulled by galley slaves. During the Crusades it was used to call the English crossbowman on deck for attack. Later, it came into use to signal the boarding of officials. Eventually, it became a badge of honor worn by officers in the British Navy and the American Navy, and it is still used today.

A variety of tones can be produced on the boatswain's pipe. The old-time boatswain's mate had to learn over fifty different calls with some precision, which required many hours of practice and lots of experience, because even a slip of the finger or a slight hesitation could change a command and throw a crew into confusion. Playing the boatswain's pipe was as difficult to master as any musical instrument.

In the old sailing ship days, every member of the crew knew what every call meant, but nowadays the boatswain's call is immediately followed by an announcement of the command over a loudspeaker. Today, four basic calls are commonly recognized by crew all members, including a call for Chow, one for All Hands, another for a Call to Colors (the raising or the lowering of the flag), and one for Stand By. To make such a call the boatswain's mate places the stem of the pipe in his mouth and cups his hand over the round bowl. His hand, depending on the desired sound, may be left opened, closed, curved, or clenched. A clenched hand along with a hard blow results in a high-pitched beep. Of course, the pitch of the boatswain's pipe had extraordinary carrying power and could be heard even over the firing of cannons.

The Boatswains Pipe answers



Dates of Interest in American Naval History

February 14, 1778 - *John Paul Jones in Ranger receives first official salute to U.S. Stars and Strips flag by European country, at Quiberon, France.*

March 10,1783 - USS Alliance (CAPT John Barry) defeats HMS Sybil in final naval action of Revolution in West Indies waters.

March 25, 1813 - USS Essex takes Neryeda, first capture by U.S. Navy in Pacific.

March 23, 1815 - USS Hornet captures HMS Penguin in battle lasting 22 minutes.

March 6 1822 - USS Enterprise captures four pirate ships in the Gulf of Mexico.

Badges: Heraldry of Canadian Naval Ships

HMCS Acadia

Description:
Azure, a seme-de-lis or, the head and shoulders of a young woman wearing a cap and shoulder scarf of the period (1755) all in the colour of a cameo stone.

Colours:
Gold and blue

Source: readyayeready.com